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G. Pe-Piper, E. Brown, D. J.W. Piper and A. DeCoste

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Preface

This Open File is one of a series on detrital and diagenetic mineralogy of the Lower Cretaceous rocks of the Scotian basin resulting from a collaborative program initiated in 2001 between Saint Mary's University and the Geological Survey of Canada. This report provides the results of a study of detrital mineralogy and geochemistry from Lower Cretaceous rocks of the Louisbourg J-47 well, one of the more distal wells on the eastern Scotian Shelf. Analyses from this well contribute to a growing database on the provenance of different parts of the Scotian basin. An understanding of provenance is an exploration tool for major sandstone distribution. Detrital minerals play an important role in influencing diagenesis and hence reservoir quality.

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Authors' addresses:

Georgia Pe-Piper, Emma Brown, Alison DeCoste

Department of Geology, Saint Mary's University, Halifax, Nova Scotia, B3H 3C3, Canada

gpiper@smu.ca

David J.W. Piper, Geological Survey of Canada (Atlantic), Bedford Institute of Oceanography, P.O. Box 1006, Dartmouth, Nova Scotia, B2Y 4A2, Canada

dpiper@nrcan.gc.ca

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ABSTRACT

The sedimentary petrography of the Lower Cretaceous and Upper Jurassic in the Louisbourg J-47 well has been studied from five conventional cores. The core was logged sedimentologically and sampled for petrographic thin sections. Detrital minerals diagnostic of provenance were analysed by electron microprobe and their chemical composition compared with elsewhere in the Scotian basin and with bedrock in the hinterland. Diagenetic minerals were characterized by backscattered electron images of thin sections, and electron microprobe analysis.

Conventional core shows three facies associations. 1) In the Verrill Canyon Formation, thick blocky mass-transport deposits predominate. (2) In the Upper MicMac Formation, the cored succession is similar to coeval rocks assigned to the Lower Missisauga Formation at Venture and Thebaud. Delta-front turbidites pass up into tidal channel sands in parasequences that are characteristic of shelf-margin deltas with adequate accommodation. (3) In the Middle Missisauga Formation, a delta-top succession is present in which tidal flat and thin shelf sediments predominate.

Some 60-70% of the detrital quartz is interpreted to be derived from granitoid rocks. Feldspars more abundant in the Missisauga Formation (predominantly K-feldspar) than in the Mic Mac Formation (predominantly plagioclase). Feldspar abundance, lithic clasts, and the chemistry of detrital spinels and tourmaline is similar to that found in the Peskowesk A-99 well.

Compared to the Lower Missisauga Formation of the Venture and Thebaud fields, chlorite rims on detrital grains are strikingly absent in the coeval and sedimentologically similar Mic Mac Formation sandstones at Louisbourg. Quartz overgrowths are present in almost all sandstones, which also contain early diagenetic kaolinite, likely formed by meteoric water diagenesis. The Fe-silicate precursor of chlorite rims is likely oxidised and destroyed under conditions of meteoric water diagenesis. This study has also shown the occurrence of diagenetic apatite and sphalerite. It suggests that care must be taken in selecting apatite grains for fission track thermochronological analysis. Sphalerite suggests the availability of hot, saline formation waters.

1. Introduction

The development of the North Atlantic Ocean basin and the associated sedimentation resulted in a complex of interconnected Mesozoic-Cenozoic depocentres, which make up the Scotian Basin. The basin was initiated as a northeast trending complex of grabens, which were filled with middle to late Triassic redbeds and in places, also late Triassic to early Jurassic salt. From west to east, the subbasins of the Scotian Basin are: Shelburne, Abenaki, Laurentian, and South Whale, with the Sable subbasin lying outboard of the Abenaki subbasin. These are interconnected areas of thick sediments (>12 km) within the main basin.

The Scotian Basin (Fig. 1) covers an area of approximately 300,000 km^2, stretching from the eastern part of Georges Bank to the central Grand Banks (Wade and Maclean, 1990). The Scotian Basin is a part of a wedge of Mesozoic-Cenozoic sediments deposited on the south eastern flank of the Appalachian Orogen. During the late Jurassic and early Cretaceous, Nova Scotia was located approximately 30°N of the equator (Irving et al., 1993), the Atlantic Ocean was approximately 1,000 km wide (Ziegler, 1989), and the climate was warm and temperate (Rees et al., 2000).

The Louisburg J-47 well is located on the Scotian Shelf, in the eastern Sable subbasin, 420 km east of Halifax, Nova Scotia. This well was drilled by Home Oil Company Limited in 1984. Pore pressures increased within the normal hydrostatic pressure gradient down to a depth of 4420 m. Below this depth, major overpressured zones were encountered. The well penetrated 6045 m of sediments from Cenozoic, Cretaceous to Jurassic age (Fig. 2). Minor hydrocarbon shows were encountered in generally thin sandstone intervals within the Missisauga and Mic Mac Formations, with major hydrocarbon shows encountered in thicker sandstone and limestone intervals within the Abenaki Formation (Home Oil Company Limited, 1984). Five conventional cores (Fig. 3) were taken at the following intervals: 4072.1–4091.3 m, 4405.3–4408.9, 4408.0–4422.8, 4527.2–4531.5, and 5436.67–5455.01; in total 53.4 m of core were recovered.

According to the well report, the Missisauga Formation in this well can be subdivided into an upper unit (2847–3630 m) dominated by deltaic channel sandstones and a lower unit (3630-4040 m) which contains delta front and bar type sandstones. Maclean and Wade (1993) on the other hand have extended the base of the middle Missisauga to 4290 m. The conventional

cores studied in detail have sampled the middle Missisauga (core 1), upper Mic Mac (cores 2–4) formations. The sampled sandstones are white to clear, very fine to coarse grained, angular and subangular, moderately to poorly sorted and siliceous. Quartz recrystallization is common. The siltstones and shales are gray to dark gray, carbonaceous, relatively hard and occasionally splintery.

In addition, we have examined conventional core 5, at 5437–5456 m, variously assigned to the Baccaro Member (Home Oil, 1984) or the lower Mic Mac Formation (Maclean and Wade, 1993). It has been most recently dated as mid to late Kimmeridgian (Robertson Research International Ltd, 2004). Given its paleogeographic position as illustrated in Fig. 5.30 of Wade and MacLean (1990) seaward of the shale-out of the Mic Mac Formation limestones, it should be assigned to the Verrill Canyon Formation.

This Open File report documents studies on lithofacies, petrology and chemical mineralogy of both detrital and authigenic minerals in sandstone samples from the Louisbourg J-47 well. It complements previous studies of other wells on the La Have Platform (Pe-Piper and Piper, 2007), Sable subbasin (Pe-Piper et al., 2004, 2009; Karim et al., 2008) and the Abenaki subbasin (Pe-Piper et al., 2005, Pe-Piper and Piper, 2009).

2. Methods

Conventional cores from the Louisburgh J-47 well were logged and sampled at the Canada-Nova Scotia Offshore Petroleum Board Geoscience Research Centre in Dartmouth, Nova Scotia (Tables 1a and 1b). The core samples were carefully brushed and washed to remove any remnant drilling mud and other contaminants such as minerals evaporated from residual seawater. Polished thin sections, impregnated with blue epoxy, were made for most of the sandstone samples.

The polished thin sections were analysed (Table 2) under a polarized transmitted light petrographic microscope to determine the percentages of grains, matrix, cement, and porosity, as well as the mean grain size, sorting, and the roundness of the quartz grains. Grains were identified and the percentages for each mineral or rock-type represented within the grain fraction

was estimated. The different types of cement and their order of formation were also identified. Photos were taken to demonstrate the different orders of cement formation present and noteworthy fossils and minerals.

The Scanning Electron Microscope (SEM) at the Regional Analytical Centre at Saint Mary's University was used to locate grains of both detrital and diagenetic minerals for future analyses with the electron microprobe (Appendices 1 and 2). It is a LEO 1450 VP SEM with a maximum resolution up to 3.5 nm at 30 kV. Detection limit is >0.1%. The SEM uses a tungsten filament to supply electrons to produce a back-scattered electron image (BEI) of the grains on the polished thin section and return an atomic number. The SEM was also used to confirm the identification of minerals that were not easily identified by petrographic microscope through the use of energy dispersive spectroscopy (EDS) (Appendix 2). However, only analyses from the electron microprobe are used to evaluate detailed mineral chemistry in this report.

Polished thin sections were analysed at the Regional Electron Microprobe Centre located at Dalhousie University to determine the composition of both detrital and diagenetic minerals (Table 3 and Appendix 1). The microprobe is a JEOL-8200 electron microprobe with five wavelength spectrometers and a Noran 133 eV energy dispersive detector. The beam was operated at 15 kV and 20 nA, with an average beam diameter of 5 microns. Elements measured were Si, Al, Ti, Cr, Fe, Mn, Mg, Ca, Na, K, P, Zr, and Ba. The energy dispersive spectrometer (EDS) was used for fast and easy identification of minerals such as quartz, calcite, barite, rutile, and staurolite. It was used to find elements not set up to be measured by the microprobe, such as S to identify pyrite, Zn and S to identify sphalerite, and Pb and S to identify galena.

3. Description of lithofacies in cores

Identification of lithofacies in cores is based on a numbering scheme (facies 0 to 10) originated by MacRae and Jauer (2001) and modified by Piper et al. (2004) and Karim et al. (2008). The nomenclature of subfacies is based on Gould et al. (2010b) and is summarized in Table 1b.

Core 1, from the Middle Missisauga Formation, is dominated by tidal flat facies 5 and 6, shore-face facies 2 and sediment-starved shelf facies 3 (Fig. 3). Bioturbated sandstones of facies 3y in places contain rounded intraclasts of carbonate-cemented sandstone (Fig. 4a), probably resulting from erosion on a ravinement surface during marine transgression, whereas bioturbated mudstones of facies 3x may represent highstand deposition, with river supply trapped farther north in the coastal zone. Shore-face sandstones (Fig. 4b) with the predominance of *Cruziana* ichnofacies are distinguished from tidal flat sandstones (Fig. 4c, d) with *Skolithos* ichnofacies by the much lesser amount of bioturbation in the latter.

In the upper Mic Mac Formation, the facies assemblage is similar to that found in the coeval Lower Member of the Missisauga Formation in the Venture and Thebaud fields (Gould et al. 2010a). In cores 2 and 3 (Fig. 3), the predominant sediments are progradational parasequences that pass upwards from a transgressive unit of facies 3 (Fig. 5e), through distal prodeltaic turbidites of facies 0, in one case proximal prodeltaic turbidites of facies 9, tidal channel deposits of facies 4 (Fig. 5a), and in one case tidal flat deposits of facies 5b. Evidence of sediment instability is present in load casts at the base of some sandstones (Fig. 5c), liquefied sandstones, and foliated mudstones (both in Fig. 5d). The thin-bedded delta-front turbidites of facies 0g also include climbing ripples (Fig. 5b), evidence of rapid deposition from suspension, and are interpreted as deposited in a by-pass zone near the river mouth. Core 4 consists predominantly of sandstone of facies 4, deposited in estuarine tidal channels, with minor interbedded tidal flat mudstone (facies 6) (Fig. 3).

Core 5 from the Kimmeridgian interval of the Verrill Canyon Formation (Fig. 3) appears to be entirely a blocky mass-transport deposit, with similarities to deposits described from Alma (Piper et al. 2004) and Tantallon (Piper et al. 2010). The blocks appear to be mostly prodeltaic mudstones and silty mudstones of facies 0, with sparse bioturbation and common diagenetic siderite that shows soft-sediment deformation (Fig. 6). No basal foliated unit was cored, indicating that the blocky mass-transport deposit is more than 20 m thick.

4. Sedimentary petrography

The general sedimentary petrography of representative sandstones, transgressive lag conglomerates and mudstones for the Louisburg J-47 well is given in Appendices 1 and 2, Table 2 and Figures 7 and 8, so that only a brief summary is given here.

Many sandstone samples from the Middle Missisauga Formation show fair to poor sorting, whereas several sandstones from the Mic Mac Formation show good sorting. A number of samples from the Middle Missisauga Formation are from facies 3, which usually shows poor sorting.

Quartz is the main detrital mineral in the sandstones ranging from about 88 to 98 % of total grains (Table 2) for the Middle Missisauga Formation and 96 to 100 % for the Mic Mac Formation (Fig. 7). The percentage of modal quartz in the facies 3 samples from both formations is very variable, depending on what other grains, especially fossils and intraclasts, are present. Polycrystalline quartz in most samples makes up < 1 % of the total quartz (Table 2; Fig. 7). Textural evidence indicates that the source for most of the polycrystalline quartz is probably granitoid rocks. To assess the source for the monocrystalline quartz we have used the mineral type of the inclusions in such grains and the textures of the same grains as seen under the petrographic microscope. The inclusions seen in monocrystalline quartz in samples studied in detail (Appendix 2) for the Middle Missisauga Formation samples consist of: biotite, ilmenite, muscovite, monazite, chalcopyrite, chlorite and siderite . Such mineral inclusions suggest an origin mostly from felsic igneous rocks and quartz veins. Biotite, ilmenite, muscovite, and monazite inclusions, for example, indicate an origin of quartz from either metaluminous or peraluminous felsic igneous rocks, whereas chalcopyrite may indicate vein quartz. The mineral inclusions in the mocrystalline quartz from the Mic Mac Formation samples include albite, biotite, plagioclase, muscovite, rutile, chlorite and apatite. This mineral assemblage would again support a major contribution from igneous rock sources, although metamorphic rock sources cannot be excluded.

Quartz textures that we used for determining the nature of rock sources can be summarized as follows:

- Plutonic quartz: Nearly straight sub-grain boundaries (not sutured); crystal embayments;

conchoidal fracturing

- Volcanic quartz: Rounded habit; crystal embayments; compositional zoning; conchoidal fracturing
- Vein quartz: Crystal embayments; rare conchoidal fracturing; often with fluid inclusion trails
- Medium to high grade metamorphic quartz: Deformation lamellae; crystal embayments
- Low grade metamorphic quartz: Fractures with preferred orientation; sutured sub-grain boundaries; irregular grain margins.

In the studied samples, quartz grains are common with nearly straight subgrain boundaries, various degree of crystal embayment, rare conchoidal fracturing, fluid inclusion trails and some irregular grain margins. The only mineral seen as inclusions that may be more indicative of metamorphic source rock is chlorite. Taking into account both crystal textures and mineral and fluid inclusions it seems that 60–70% of the detrital monocrystalline quartz may be ultimately coming from felsic igneous rocks and quartz veins and only about 30% from metamorphic rock sources.

The stratigraphic variation of feldspar, muscovite, monocrystalline, polycrystalline, matrix and cement are as follows (Figs. 7, 8): Feldspar occurs throughout the well, but in higher concentration in the Middle Missisauga Formation compared with the Mic Mac Formation. Half of the samples from the Mic Mac Formation contain <1% feldspar. Muscovite in appreciable amounts (>1%) is limited to the lower parts of both the Middle Missisauga and Mic Mac formations. The abundance of polycrystalline quartz is very limited. The monocrystalline quartz shows no variation with depth in this well. Both matrix and cement are rather uniformly distributed with depth, with only occasional peaks that depend on the nature of the sample studied. Samples with high amounts of matrix are almost always those samples from lithofacies 3 (Table 2). The matrix consists mainly of detrital quartz silt and clays.

No lithic clasts are shown in Table 2. Since the mean grain size of the studied samples is >63 microns, we have applied the Gazzi-Dickinson method, in which the individual minerals making up lithic clasts are counted as grains and not as a lithic clast. Lithic clasts are common in the studied samples. They consist (Appendix 2) of:

a) Plutonic rocks, especially microgranite (Fig. 9l,n,o).

b) Volcanic rocks, mostly porphyries (Fig. 9k) and rhyolite (Fig. 9p).

c) Sedimentary rocks (Fig. 9j).

The igneous rock lithic clasts (e.g. Fig. 9 l,n) are very similar to clasts described from the Logan Canyon Formation sandstones of the Peskowesk A-99 well (Pe-Piper et al., 2004).

Using the relative proportions of quartz, feldspar and lithic clasts (plots not shown here) the sandstone from both formations are quartz arenites and plot within the "Continental Block" source field of Dickinson et al. (1983).

5. Mineralogy

5.1 Detrital Minerals

Introduction

For the study of the detrital minerals present, and hence of the provenance of the sedimentary rocks of the Louisburg J-47 well, we used polished thin sections. Individual analyses of identified minerals are listed in Tables 3a and b, and Tables A, B, C, and D (EDS analyses) that accompany Appendices 2A, 2B, 2C, and 2D. Representative BSE images are also shown in Appendices 2A, 2B, 2C, and 2D.

The identified mineral assemblages, using petrographic microscope, scanning electron microscope, and electron microprobe, for both detrital and neomorphic minerals are listed in Table 4. This table does not list detrital quartz, ilmenite and magnetite and diagenetic titania minerals, which are present in all studied samples. Analysed detrital minerals include plagioclase, K-feldspar, muscovite, garnet, chromite, chrome spinel, tourmaline, zircon, chalcopyrite, sphalerite, biotite, apatite, monazite, and xenotime.

Muscovite

Muscovite and feldspars are the most common detrital minerals, after quartz, in the studied samples. However, it was difficult to get good chemical analyses of muscovite, even using the electron microprobe, because of alteration. Most of the analyses have low totals, which

suggest that the muscovite is at least changing to hydromuscovite, although replacement of muscovite by kaolinite, chlorite and illite has also been seen (Fig. 10f,h; App. 2). Therefore we could not used its chemical composition as chemical fingerprinting tool. One detrital muscovite from the Mic Mac Formation has been seen with sphalerite inclusions (Fig. 9h).

Biotite

Biotite has been seen as inclusions in detrital quartz grains in studied samples from both the Middle Missisauga and Mic Mac formations, but also as rare detrital grains. The very few biotite grains analysed have Ti and Mg-rich compositions (Table 3b). The discrimination plot of Fleet (2003) (not shown here) for such biotite grains suggests an origin from metaluminous felsic igneous rocks.

Tourmaline

Tourmaline is not a common detrital mineral in this well. Rare tourmaline grains have been seen in small number of samples from both studied formations in this well (Tables 2, 3). Tourmaline has not been seen as inclusions in detrital quartz in these rocks. The small number of chemical analyses that we obtained for this study are used to compare tourmaline compositions (Fig. 11) with source rock fields identified by Henry and Guidotti (1985) and Kassoli-Fournaraki and Michailidis (1994). Five of these analyses plot in field 10 (Fig. 11a: Ca-poor metapelite) and three plot in field 2 (Fig. 11a: Li-poor granite) of these authors' discrimination diagram. Pe-Piper et al. (2009) have used the fields of Henry and Guidotti (1985) and Kassoli-Fournaraki and Michaidilis (1994), in combination with natural clusters in chemical composition of the tourmalines they had analysed from the Lower Cretaceous sandstones from Scotian Basin, to identify four types of tourmaline (Fig. 12). The analyses of the tourmalines from the Louisburg well plot in the field of type 1 (granitic source) and type 4 (metapelitic and psammitic source) of Pe-Piper et al. (2009). All analyses of tourmalines are from the Mic Mac and Verrill Canyon formations, but the overall abundance of different tourmaline types is similar to that found in the Missisauga and Logan Canyon formations in the Peskowesk A-99 and Dauntless D-35 wells (Pe-Piper et al., 2006; Pe-Piper and Piper, 2009)..

Chromian spinel and chromite

The total range of chemical composition of chromite and chromian spinel (Fig. 13) falls in all three compositional fields distinguished by Pearce et al. (2000): Boninite, Ocean Ridge Basalt (MORB) and Island-Arc Tholeiite (IAT). Spinels from the Missisauga Formation are predominantly boninitic and show a similar range of composition to that in the Missisauga Formation of the two other wells from the Eastern Scotian basin: Peskowesk A-99 and Dauntless D-35. Spinels from the Mic Mac Formation have a higher proportion of IAT and MORB compositions and in this regard resemble those of the Logan Canyon Formation at Peskowesk A-99. Ferrian chromites (Tables 3a,b) have also been identified in this well, similar to those found in the Dauntless D-35 well (Pe-Piper and Piper, 2009). The textures seen in these chromite grains (e.g. Fig. 9c) are very similar to chromite grains from contact metamorphosed ultramafic rocks in the western Sierra Nevada Foothills, California (Springer 1974, his Plates 1E and F). As it has already been discussed for the Dauntless D-35 well (Pe-Piper and Piper, 2009), there are strongly (amphibolite-granulite facies) metamorphosed ultramafic rocks (ophiolites) in the Dashwoods subzone of western Newfoundland: they are the pre-490 Ma Long Range mafic-ultramafic complex and correlatives and parts of the 480-477 Ma Annieopsquotch belt. They both contain chromite-bearing metaharzburgite, lherzolite (rare) and dunite. The high-grade metamorphism is regional, but the accompanying penetrative deformation is highly heterogeneous, such that it is weak to absent in several places and hence had the same imprint on the rock textures as thermal metamorphism would (personal communication, C. Van Staal and V. Owen, 2009).

Garnet

Garnets in the well are rare and were only identified using optical crystal properties such as relief and crystal outlines (e.g Fig. 9e; App. 2A-Fig. 20). They were only seen in the Middle Missisauga Formation samples. When such crystals were analysed by electron microprobe or SEM, they were either Mg-rich chlorite or just mineral mixtures. These findings are not surprising, since detrital garnet becomes corroded as burial depth increases. In one study in the North Sea basin, the garnet completely disappeared below 3500 m (Morton, 1987). Our samples appear to be too deep (>4,000 m) to preserve fresh detrital garnet.

Feldspars

Based on the analysed feldspars, K-feldspar seems to be the dominant feldspar in the Middle Missisauga Formation samples, while plagioclase (albite to oligoclase in composition) predominates in the Mic Mac Formation samples (Fig. 14). In this respect, the overall feldspar composition in this well is comparable to that of other East Scotian basin wells (Peskowesk A-99 and Dauntless D-35). The albite analyses shown in Fig. 14 for the Middle Missisauga samples are from diagenetic albite patches developing in detrital grains of K-feldspar (e.g. Fig. 10 j,k). Of the K-feldspar grains, microcline seems to be very common and both perthitic and antiperthitic textures (Fig. 10f) have been seen.

Phosphate Minerals

The detrital phosphate minerals identified in the Louisburg J-47 well are as follows:

Apatite has been identified both as detrital grains and as inclusions in detrital quartz and detrital biotite. The detrital grains in the Middle Missisauga Formation sandstones are either anhedral (App. 2A-Fig. 50) or subhedral (App. 2B-Fig. 11) or euhedral (App. 2B-Fig. 71). However most of the identified grains show evidence of dissolution. In the Mic Mac Formation sandstones, detrital apatite is more scarce and the rare grains seen are corroded (App. 2D-Fig. 55). The scarcity and corrosion of the apatite in the Mic Mac Formation samples may indicate complete dissolution of apatite with depth.

Monazite occurs as detrital grains in the Middle Missisauga and Mic Mac formation samples. It has also been found as inclusions in detrital quartz crystals (e.g. App. 2B-Fig. 21). This may suggest peraluminous granites as the source lithology for at least some of the detrital monazite grains. Pelites and peraluminous granites are considered the main source lithologies for detrital monazite, although rare monazite grains also occur in metaluminous igneous rocks as well. Many detrital grains of monazites show dissolution (e.g. Fig. 10b). Similar dissolution features have been seen in detrital monazites from other wells. Such monazites cannot be dated (Pe-Piper and Mackay, 2005, 2006).

Xenotime: Rare grains of the Y-phosphate mineral xenotime have been identified in Middle Missisauga Formation samples. The grains of this mineral have ragged edges (Fig. 10a), corrosion and pores, suggesting a detrital rather than a diagenetic origin. Similar grains have also

been reported by Pe-Piper et al. (2004) from borehole RR-97-23 in the Lower Cretaceous Chaswood Formation in the Elmsvale basin, Nova Scotia.

Sulfide Minerals

The only detrital sulfide identified in this study is chalcopyrite. Only one grain of chalcopyrite has been identified in a Middle Missisauga Formation sample and it appears to be an inclusion in detrital quartz (App. 2A-Fig. 58).

5.2 Diagenetic Minerals

Chemical analyses of diagenetic minerals (Tables 3a and b) include silica and quartz overgrowths, Mg-calcite, Fe-calcite, ankerite, chlorite, albite, hydromuscovite, illite and sphalerite. In addition pyrite, glauconite, siderite, kaolinite, titania minerals and phosphate minerals have also been identified using optical microscopy and scanning electron microscopy with EDS analysis (Table 2; Appendices 2A, B, C, D and Tables A, B, C, D in these appendices). Two samples from each formation were studied in greater detail by both SEM and electron microprobe. A summary of these data (as shown in Table 2, Tables 3a and b, Appendix 2 and associated tables A, B, C, D) is given in Table 4 and the highlights are presented below.

Middle Missisauga Formation samples

The diagenetic minerals replacing detrital K-feldspars are either albite prisms and patches (Fig. 10j, k; App. 2A-Fig. 6; App. 2B-Figs. 35, 50) or barite and Fe-calcite (Fig. 10 l). In some grains, a large part of the detrital K-feldspar grain has been replaced by a fine grained assemblage of albite and ankerite (App. 2A-Fig. 7), or albite and Fe-calcite (App. 2B-Fig. 73), or only Fe-calcite (App. 2B-Fig. 5). The detrital muscovite is commonly replaced by chlorite (Fig. 10c; App. 2A-Figs. 15, 42, 53; App. 2B-Figs. 7, 14), in some samples associated with specks of titania (App. 2B-Fig. 49). Muscovite also commonly alters to hydromuscovite (App. 2B-Fig. 48). Chlorite, commonly Mg-chlorite, is the diagenetic mineral replacing other ferromagnesian minerals such as biotite and garnet (App. 2A-Fig. 30).

Detrital ilmenite is always partly or completely replaced by titania minerals (e.g. App. 2A-Fig. 25; App. 2B-Fig. 37). Pyrite is also a common diagenetic mineral. It occurs either as

framboids (Fig. 10g), plates or ragged grains. Barite is a relatively common mineral in samples from both formations (App. 2B-Figs. 9, 10, 25, 67; App. 2C-Figs. 22, 23, 24; App. 2D-Figs. 51, 62, 63, 70, 72). However, in only one sample (Fig. 10 l) from the Middle Missisauga Formation does its relationship to Fe-calcite and K-feldspar suggest a diagenetic origin rather than being a drilling mud contaminant. Where barite is associated with pyrite and quartz (App. 2B-Fig. 67) it may also be diagenetic. Other diagenetic minerals seen in the studied samples from this formation include siderite (App. 2A-Fig. 40; App. 2B-Fig. 60), apatite in small euhedral grains (App. 2A-Fig. 45), and an Al-sulfate phosphate mineral (App. 2B-Fig. 54).

Coated grains are present in a number of samples (Table 2; Figs. 10a, b; App. 2A-Figs. 14, 16, 21, 22, 23, 24, 26, 27,33). These coated grains show a variable number of zones and most of them contain glauconite partly replaced by chlorite (App. 2A-Fig. 26) or chlorite and Fe-calcite (App. 2A-Fig. 22). Glauconite was a product of sea-floor diagenesis and was replaced during early diagenesis or mesodiagenesis by chlorite, carbonate and illite. Kaolinite forms the core of some of these coated grains (App. 2A-Fig. 22). This kaolinite may be the alteration product of a detrital feldspar or less likely a muddy intraclast in the core of the coated grain.

Mic Mac Formation samples

Albitisation of detrital K-feldspar grains has not been seen in the studied samples. This may be due to the fact the K-feldspar is not the dominant detrital feldspar in the samples from this formation and it is thus difficult to find K-feldspar grains. Diagenetic minerals that replace detrital muscovite include hydromuscovite (App. 2C-Fig. 43), illite, chlorite, a mix of chlorite and siderite (App. 2D-Figs. 19, 24, 33, 41), kaolinite (App. 2D-Figs. 22, 49, 75) or ankerite (App. 2D-Fig. 34). Sphalerite has also been found to have grown along the cleavage directions of detrital muscovite (Fig. 10h). The diagenetic sphalerite has straight crystal edges (App. 2D-Figs. 48, 53, 69) and commonly fills pore space with or without kaolinite (App. 2C-Figs. 1, 6). Detrital ilmenite is found to be completely altered to titania minerals (App. 2C-Fig. 38; App. 2D-Figs. 7, 39). Mg-chlorite and phosphate minerals are observed pseudomorphing a detrital mineral, probably a ferromagnesian mineral (App. 2D-Fig. 30). Clots of euhedral apatite, probably diagenetic, filling pore space, are present (Fig. 10n; App. 2C-Fig. 39), as are grains of a porous aluminium-sulfate-phosphate mineral. Pyrite is a common diagenetic mineral occuring either as

framboids (App. 2D-Fig. 43), plates, or ragged grains. Coated grains have been seen only in one sample, at 5447.12 m (Table 2).

6. Discussion

Sedimentary environments

Three major sedimentary facies associations are recognised in the studied cores. (1) In the Verrill Canyon Formation, thick blocky mass-transport deposits predominate in the cored succession, similar to those found in cores from the Alma (Piper et al., 2004) and Tantallon (Piper et al., 2010) wells. We do not know if cores were preferentially drilled on seismic anomalies representing mass-transport deposits or if the greater part of the slope is represented by mass-transport deposits.

(2) In the Upper MicMac Formation, the cored succession is similar to coeval rocks assigned to the Lower Missisauga Formation at Venture and Thebaud (Gould et al., 2010a). Parasequences of distal delta-front turbidites pass up into thick bedded proximal delta front turbidites, overlain by tidal channel sands. Such assemblages are characteristic of shelf-margin deltas with adequate accomodation.

(3) In the Middle Missisauga Formation, the conventional core sampled a delta-top succession similar to that at Peskowesk A-99 (Pe-Piper et al., 2006) and at the Panuke-Cohasset field (Cummings et al., 2006). Tidal flat and thin, commonly condensed, shelf sediments predominate.

Detrital petrology

The detrital mineral assemblage differs in the Middle Missisauga and Upper Mic Mac formations. Most striking is the predominance of K-feldspar in the Middle Missisauga compared with plagioclase in the Mic Mac Formation. 60-70% of the quartz is interpreted to be derived from granitoid rocks, but feldspars are more abundant in the Missisauga than in the Mic Mac Formation. Middle Missisauga Formation spinels are like those in the Missisauga Formation at Peskowesk A-99 and Dauntless D-35, whereas Mic Mac Formation spinels are more like those in the Logan Canyon Formation at Peskowesk. The overall abundance of different tourmaline types

is similar to that found in both the Peskowesk A-99 and Dauntless D-35 wells.

The lithic clasts of microgranite, porphyry and rhyolite in the Logan Canyon Formation at Peskowesk A-99 were interpreted as derived either from Cretaceous volcanoes in the Laurentian sub-basin or from the alkaline granites and subvolcanic rocks of the Topsails Complex of Newfoundland. The presence of similar lithic clasts in the Middle Missisauga Formation at Louisbourg might indicate the presence of Berriasian to Hauterivian volcanism in the Laurentian sub-basin, also indicated by sparse detrital zircons of that age (Pe-Piper, unpublished data). However, similar lithic clasts are also found in the Mic Mac Formation, and evidence of Upper Jurassic volcanism in the Laurentian sub-basin is lacking. It is therefore more likely that these lithic clasts are derived from Paleozoic rocks in Newfoundland.

Diagenesis

Compared to the Lower Missisauga Formation of the Venture and Thebaud fields (Gould et al. 2010a), chlorite rims on detrital grains are strikingly absent in the coeval and sedimentologically similar Mic Mac Formation sandstones at Louisbourg. Quartz overgrowths are present in almost all well-studied sandstones (Table 4). These sandstones also contain early diagenetic kaolinite, likely formed by meteoric water diagenesis (Karim et al., 2010). Kaolinite is rare in the intervals at Venture and Thebaud with chlorite rims. This suggests that the Fe-silicate precursor of chlorite rims is oxidised and destroyed under conditions of meteoric water diagenesis. We have hypothesised that the rapid growth faulting at Venture and Thebaud led to rapid burial of sandstones beyond the influence of meteoric water at marine lowstands (Pe-Piper and Piper, 2010). In these wells, diagenetic kaolinite is much less abundant than at Louisbourg J-47 (Gould et al., 2010a).

This study has also shown the occurrance of diagenetic apatite, barite and sphalerite. It suggests that care must be taken in selecting apatite grains for fission track thermochronological analysis. Sphalerite suggests the availability of hot, saline formation waters.

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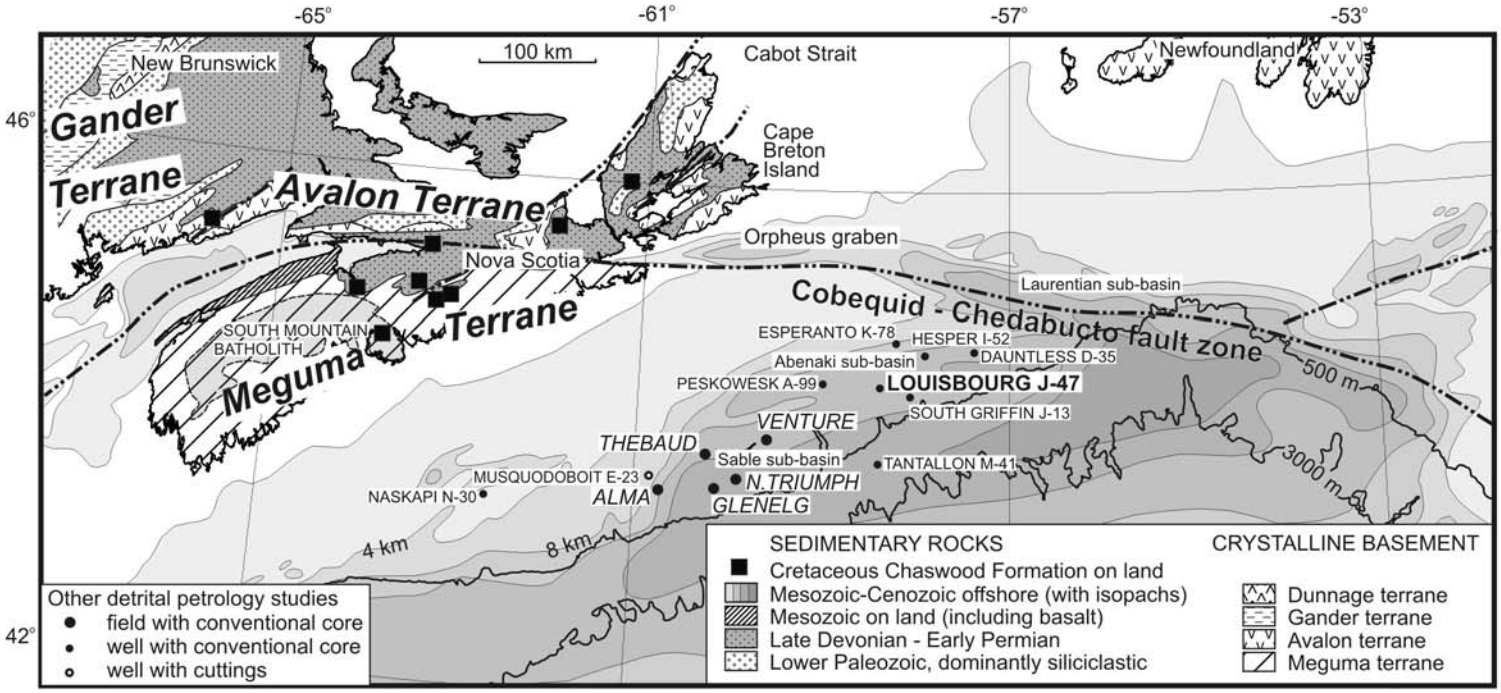


Figure 1: Location of Louisbourg J-47, other wells and fields on the Scotian Shelf with detailed petrographic studies, and Chaswood Formation localities on land. Also shows isopachs of Scotian basin and generalized geology on land (modified from Williams and Grant, 1998).

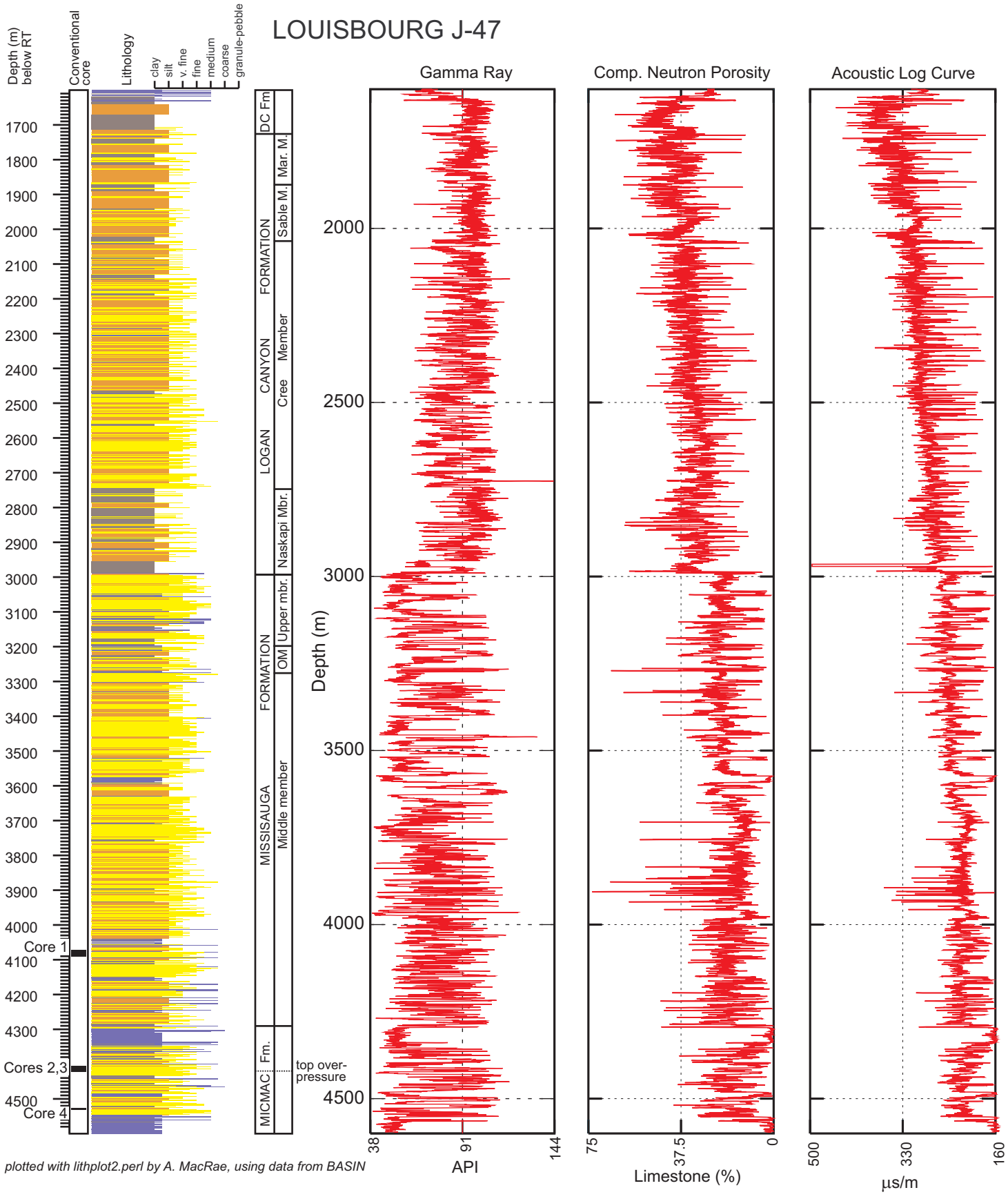
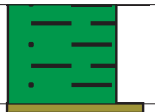
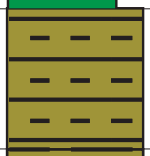
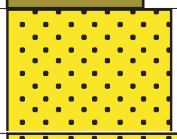
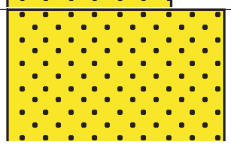


Figure 2: Lithological summary of uppermost Jurassic and Lower Cretaceous of the Louisbourg J-47 well, showing location of conventional cores 1-4. Lithostratigraphy from MacLean and Wade (1993): DC Fm = Dawson Canyon Formation; Mar. M. = Marmora Member; OM = O marker.

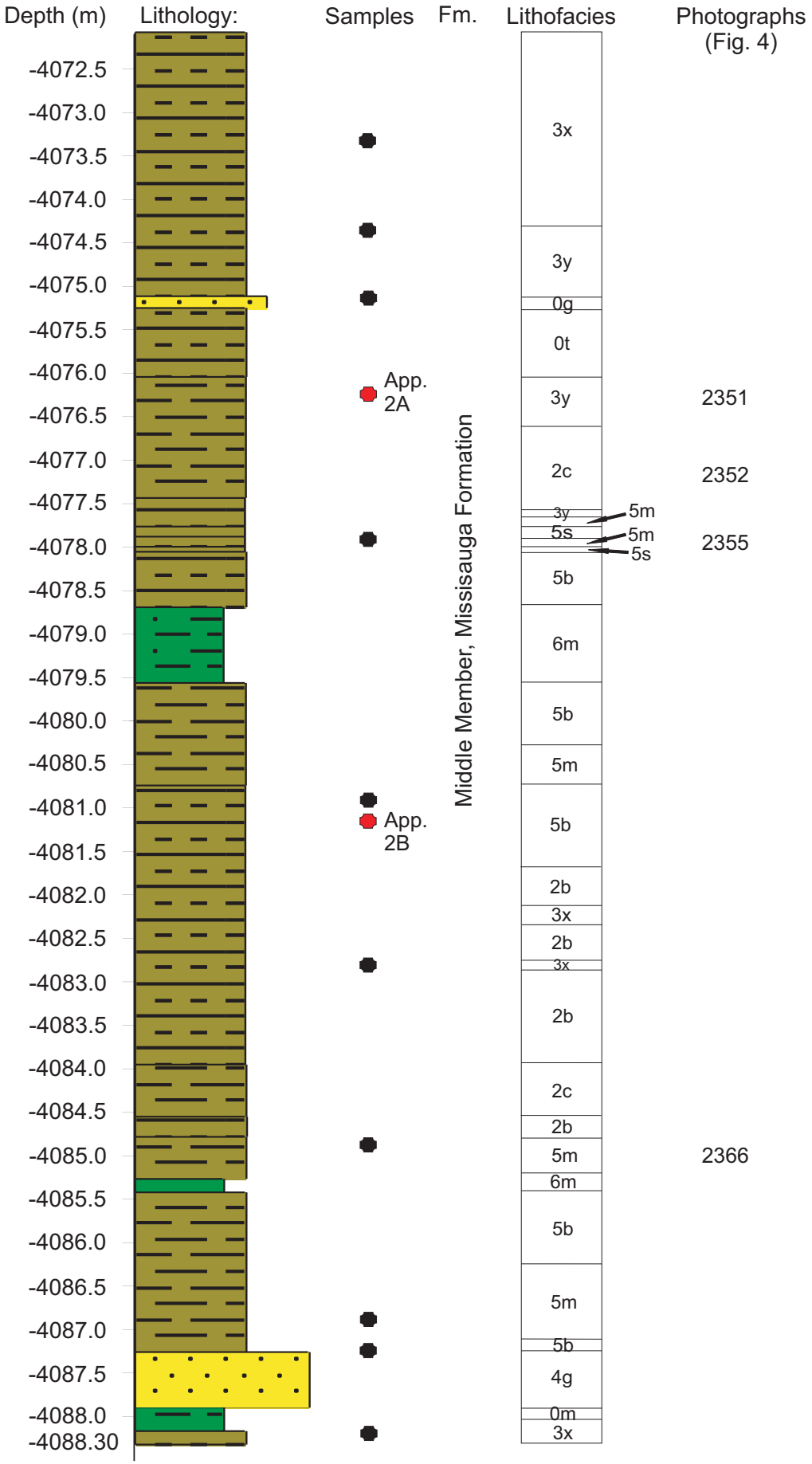
Legend:

Lithology	Description
	Mudstone with <20% sandy and silty laminae
	Mudstone with 20 - 60% sandy and silty laminae and thin beds
	Fine sandstone and siltstone beds, <40% interbedded mudstone
	Fine sandstone
	Medium sandstone

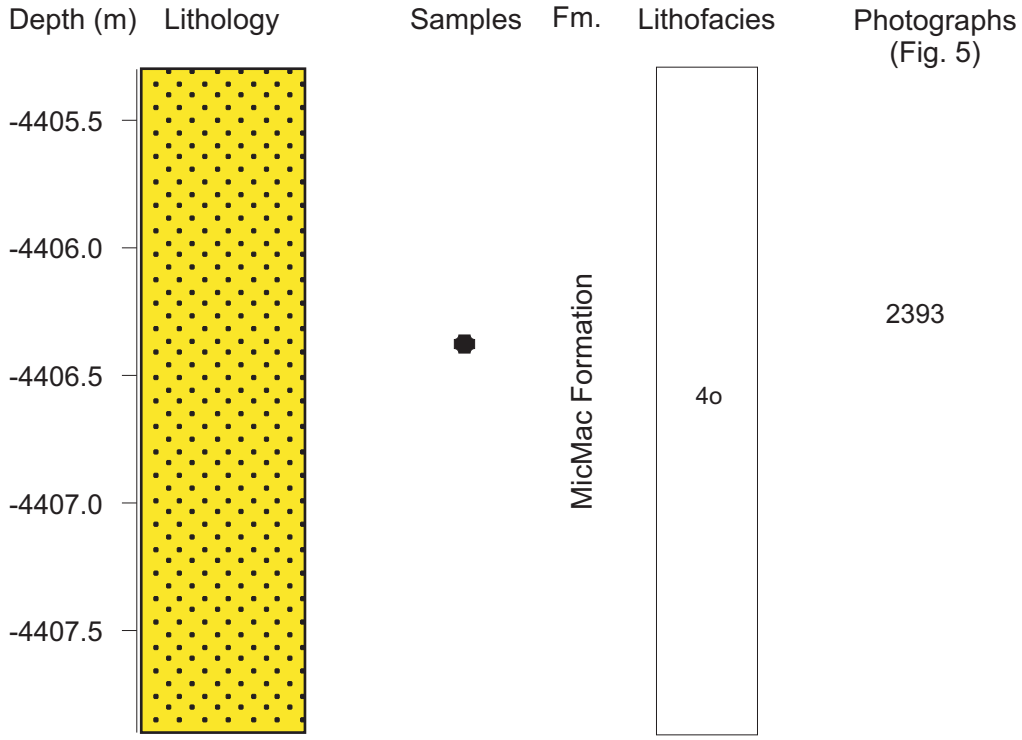
Location of a sample
Indicates a sample focused on for this study (see Appendix 2).

Figure 3: [*6 pages*] Lithological logs of Upper Jurassic and Cretaceous conventional core from the Louisbourg J-47 well, showing location of samples and interpretation of lithofacies (see Table 1b). Photograph numbers refer to Figs. 4 and 5. Core 5 is illustrated in Fig. 6. Note that the vertical scales used are variable.

Core 1:


Depth (m)
Lithology:
Samples
Fm.
Lithofacies
Photographs (Fig. 4)
-4072.5
-4073.0
-4073.5
-4074.0
-4074.5
-4075.0
-4075.5
-4076.0
-4076.5
-4077.0
-4077.5
-4078.0
-4078.5
-4079.0
-4079.5
-4080.0
-4080.5
-4081.0
-4081.5
-4082.0
-4082.5
-4083.0
-4083.5
-4084.0
-4084.5
-4085.0
-4085.5
-4086.0
-4086.5
-4087.0
-4087.5
-4088.0
-4088.30
App. 2A
App. 2B
Middle Member, Missisauga Formation
3x
3y
0g
0t
3y
2c
3y
5s
5b
6m
5b
5m
5b
2b
3x
2b
3x
2b
2c
2b
5m
6m
5b
5m
5b
4g
0m
3x
5m
5m
5s
2351
2352
2355
2366

Core 2:


Depth (m)
Lithology
Samples
Fm.
Lithofacies
Photographs (Fig. 5)
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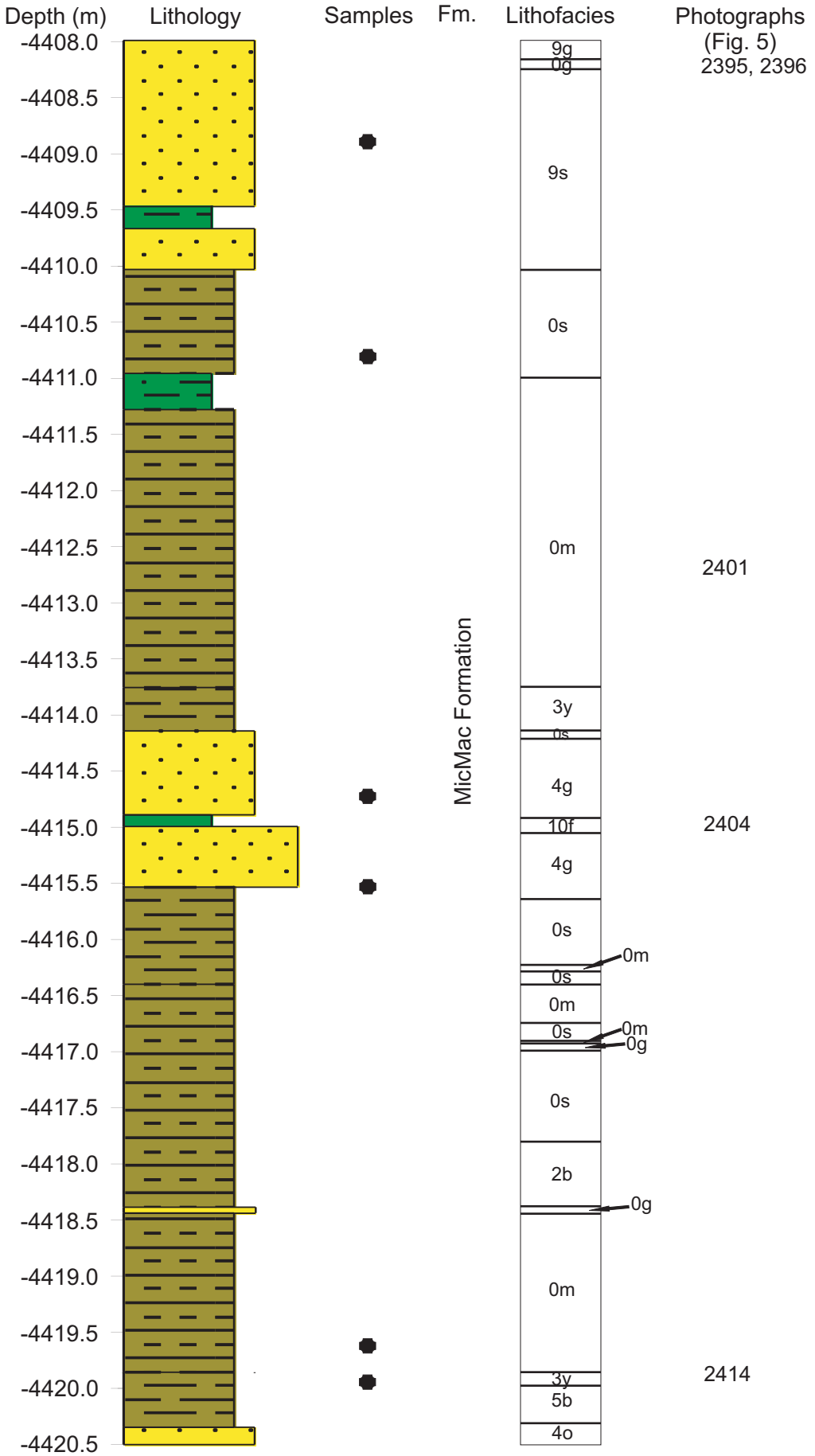
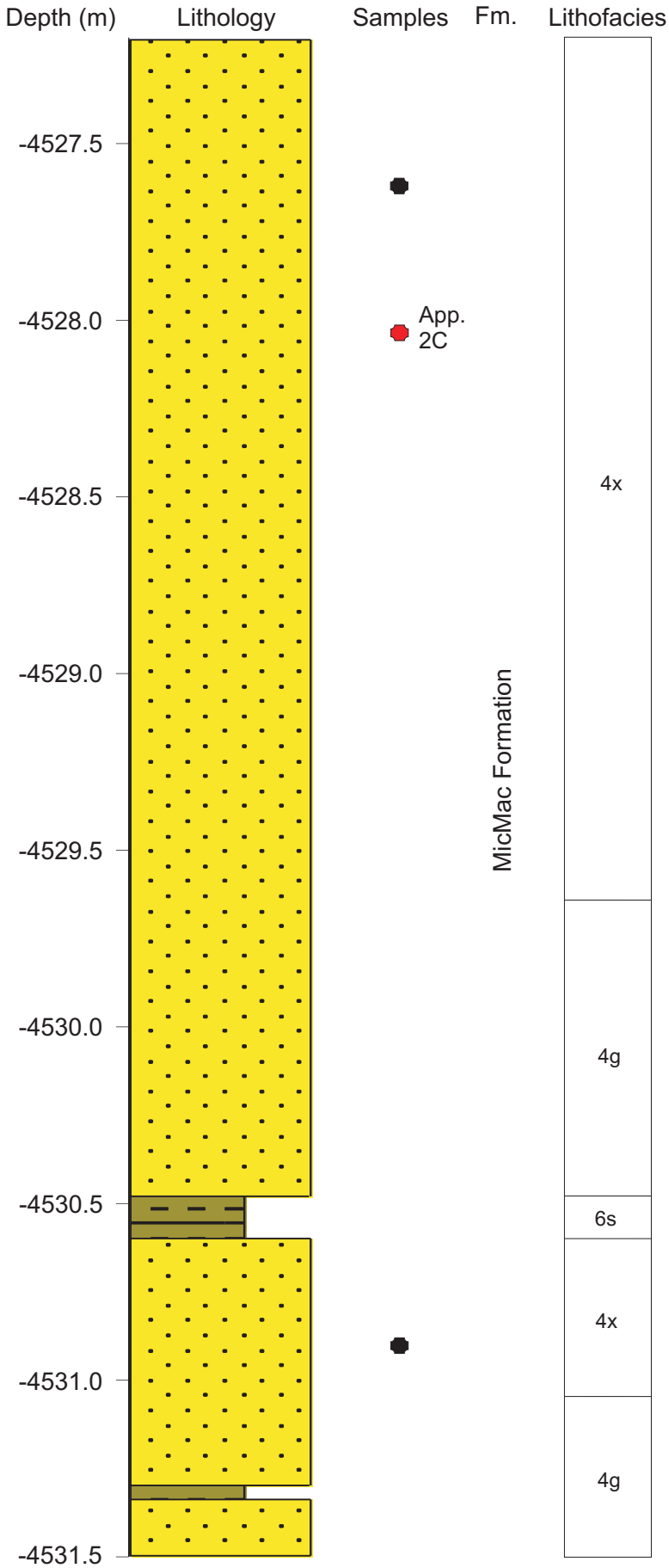
-4406.0
-4406.5
-4407.0
-4407.5
MicMac Formation
4o
2393

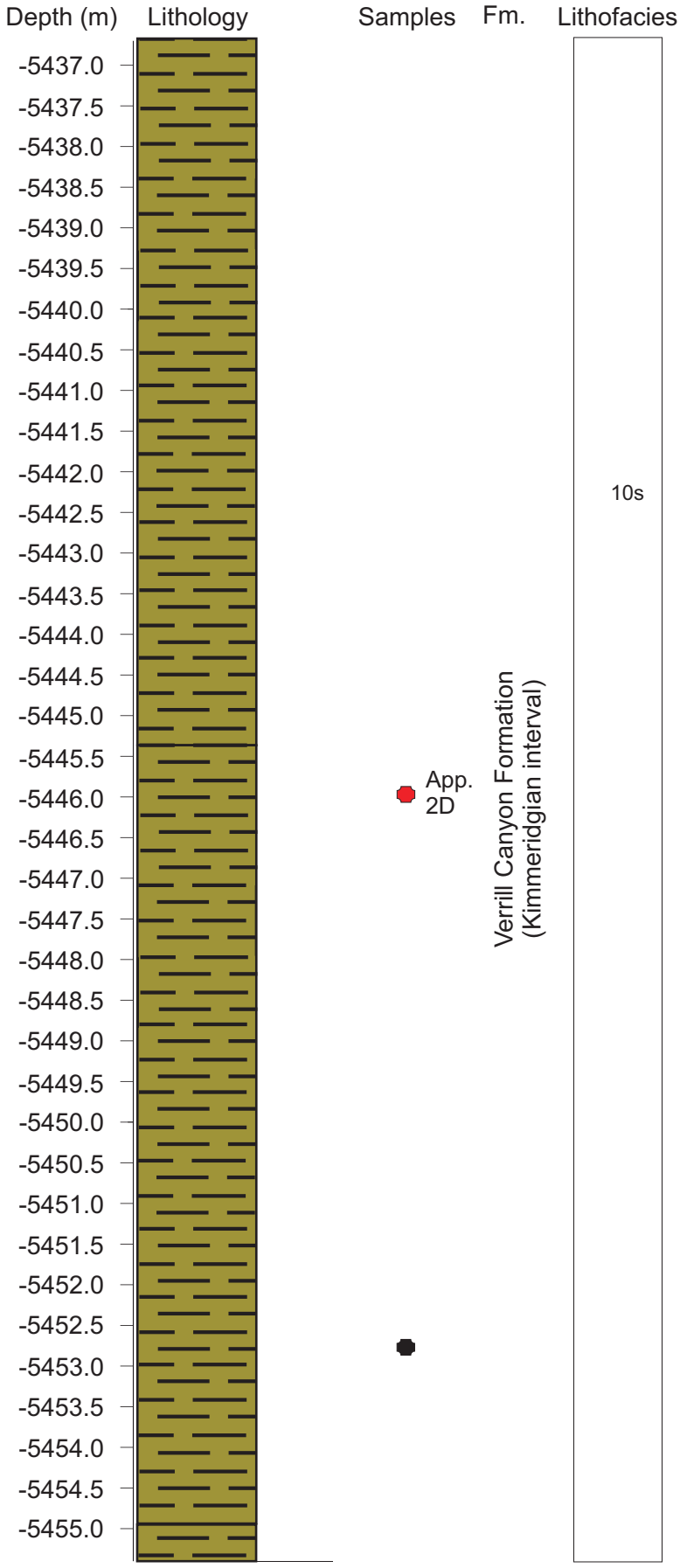
Core 3:


Depth (m)
Lithology
Samples
Fm.
Lithofacies
Photographs (Fig. 5)
-4408.0
-4408.5
-4409.0
-4409.5
-4410.0
-4410.5
-4411.0
-4411.5
-4412.0
-4412.5
-4413.0
-4413.5
-4414.0
-4414.5
-4415.0
-4415.5
-4416.0
-4416.5
-4417.0
-4417.5
-4418.0
-4418.5
-4419.0
-4419.5
-4420.0
-4420.5
MicMac Formation
9g
0g
9s
0s
0m
3y
0s
4g
10f
4g
0s
0m
0s
0m
0s
0m
0g
0s
2b
0g
0m
3y
5b
4o
2395, 2396
2401
2404
2414

Core 4:


Depth (m)
Lithology
Samples
Fm.
Lithofacies
-4527.5
-4528.0
-4528.5
-4529.0
-4529.5
-4530.0
-4530.5
-4531.0
-4531.5
App.
2C
MicMac Formation
4x
4g
6s
4x
4g

Core 5:


Depth (m)
Lithology
Samples
Fm.
Lithofacies
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-5437.5
-5438.0
-5438.5
-5439.0
-5439.5
-5440.0
-5440.5
-5441.0
-5441.5
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-5450.5
-5451.0
-5451.5
-5452.0
-5452.5
-5453.0
-5453.5
-5454.0
-5454.5
-5455.0
App.
2D
Verrill Canyon Formation
(Kimmeridgian interval)
10s

(a) 2351: Facies 3y, bioturbated sandstone with bioclasts and carbonate-cemented intraclasts

(b) 2352: Facies 2c, bioturbated shore-face sandstone

(c) 2355: Facies 5s, tidal flat sandstone overlain by facies 5 m, tidal flat sandstone and mudstone.

(d) 2351: Facies 5m, tidal flat sandstones with mudstone.

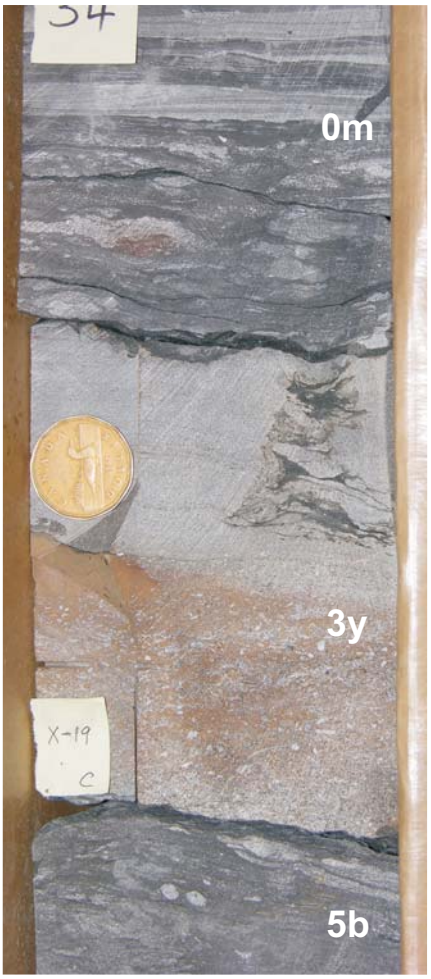
Figure 4: Photographs illustrating sediment facies in the Middle Missisauga Formation. Photos located in Fig. 3.

(b) 2395: Facies 0g, parallel and obliquely laminated sandstone with erosional bases to beds and sparse *Ophiomorpha* burrows. Inset (2396) at same scale shows nearby bed with climbing ripple.

(c) 2401: Facies 0m, mudstone with thin beds of siltstone, some with basal loading. Note thin siltstone bed below laminated sandstone and erosional surface at the top of the sandstone, characteristic of delta-front turbidites.

(a) 2393: Medium sandstone of facies 4o. Note cross bedding picked out by thin mud drapes, and the presence of *Ophiomorpha* burrows.

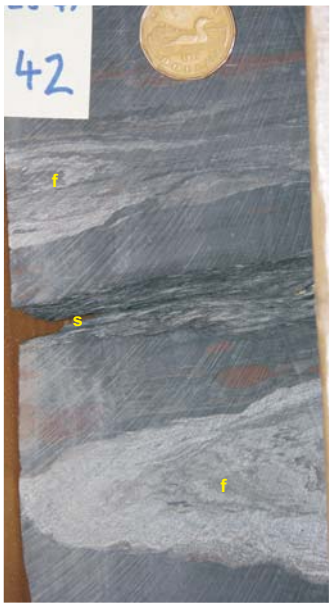
(d) 2404: Deformed facies 10. Foliated mudstone overlying structureless, apparently liquefied, sandstone.



(e) 2414: Facies 5b, tidal flat sandstones with mudstone, overlain by an erosion surface and then transgressive unit of facies 3y, capped by mudstones with thin bedded siltstones and sandstones of facies 0m representing the base of a progradational parasequence.

Figure 5: Photographs illustrating sediment facies in the upper MicMac Formation. Photos located in Fig. 3.

(a) 2429: Discrete sediment blocks 5-20 cm in size.



(b) 2431: Two folded beds of very fine sandstone (f) separated by a 2 cm thick shear zone (s).

(c) 2434: Highly disrupted mudstone, siltstone and sideritic mudstone. Note deformation in sideritic mudstone.

(d) 2438: Dipping blocks of silty mudstone and sideritic mudstone, both with some internal deformation.

(e) 2436: En echelon brittle faults in very fine sandstone, overlain by highly deformed sideritic mudstone.

(f) 2437: Soft-sediment deformation of sideritic mudstone.

(g) 2442: Deformed sandstone bed cross-cutting a block of mudstone.

(h) 2443: Blocks of silty mudstone over deformed sideritic mudstone.

(i) 2445: Silt injected along fault between two blocks.

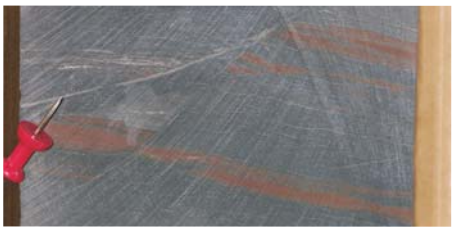


Figure 6: Photographs illustrating deformed sediment facies in the Kimmeridgian interval of the Verrill Canyon Formation (Core 5).

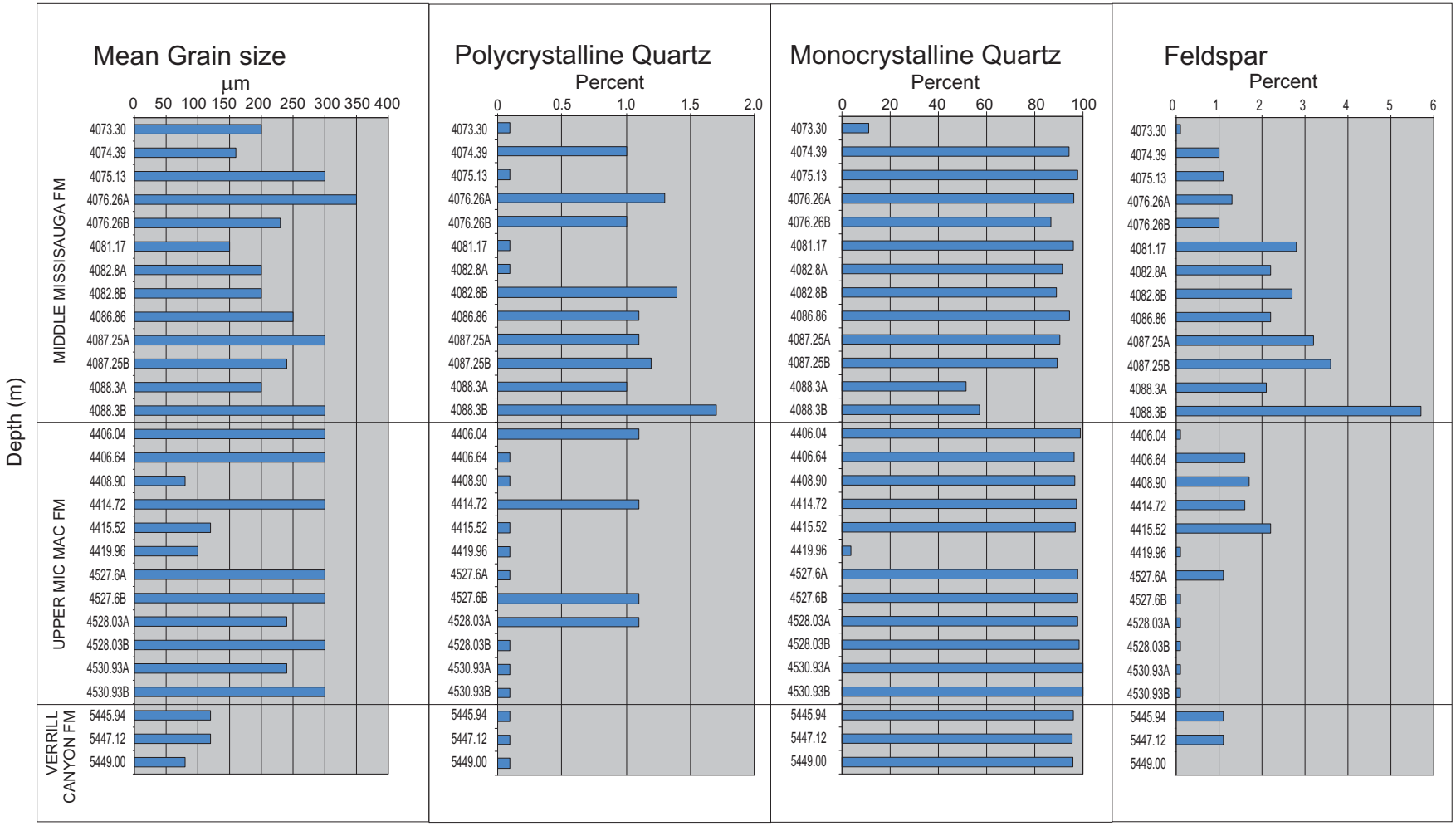


Figure 7: Stratigraphic distribution of mean grain size, and modal abundance of polycrystalline quartz, monocrystalline quartz, and feldspar in sandstone samples from Louisbourg J-47 well. The data used are those of Table 2. Where concentrations were <1% in Table 2, these values were set at 0.1% for plotting.

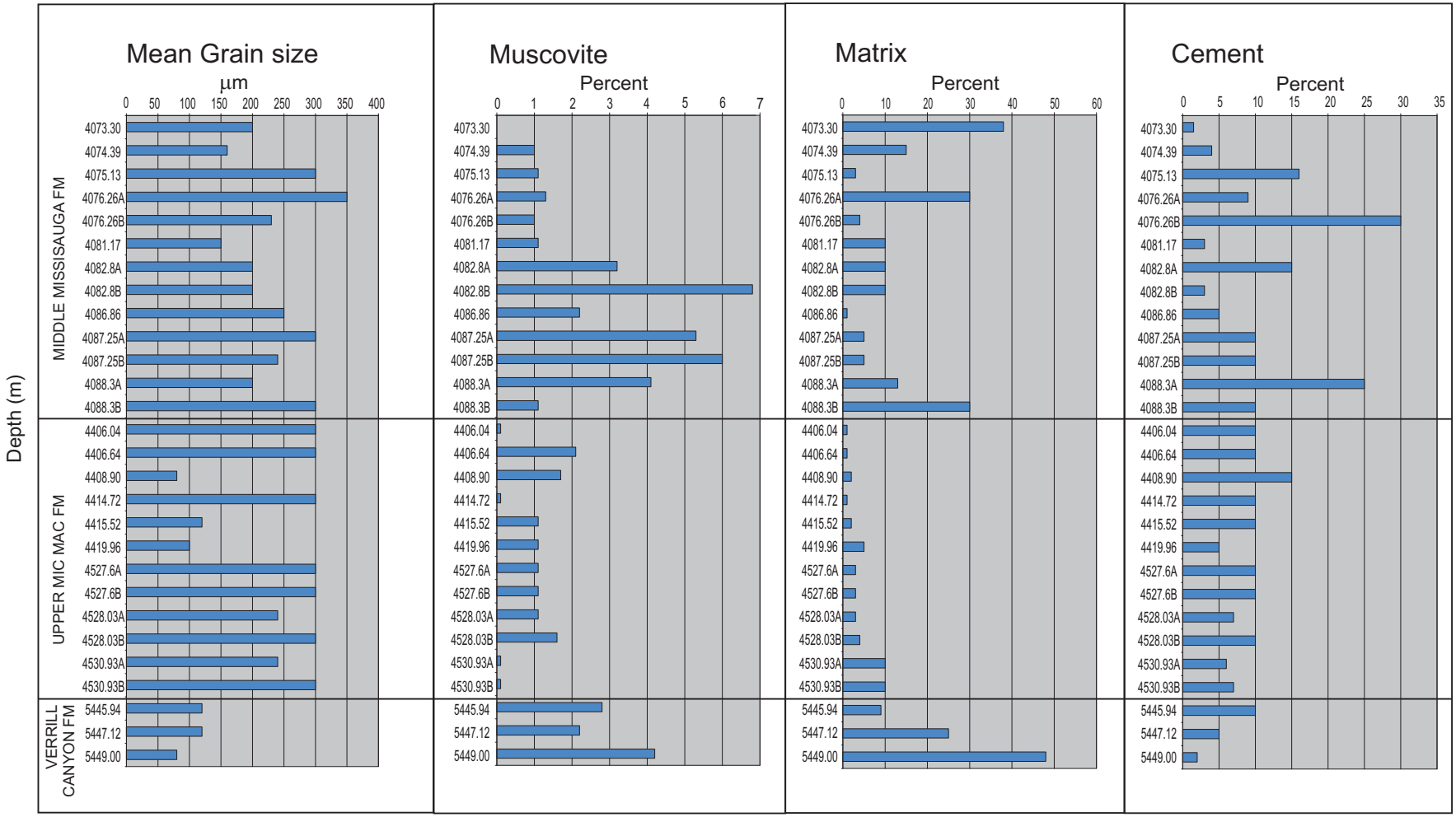
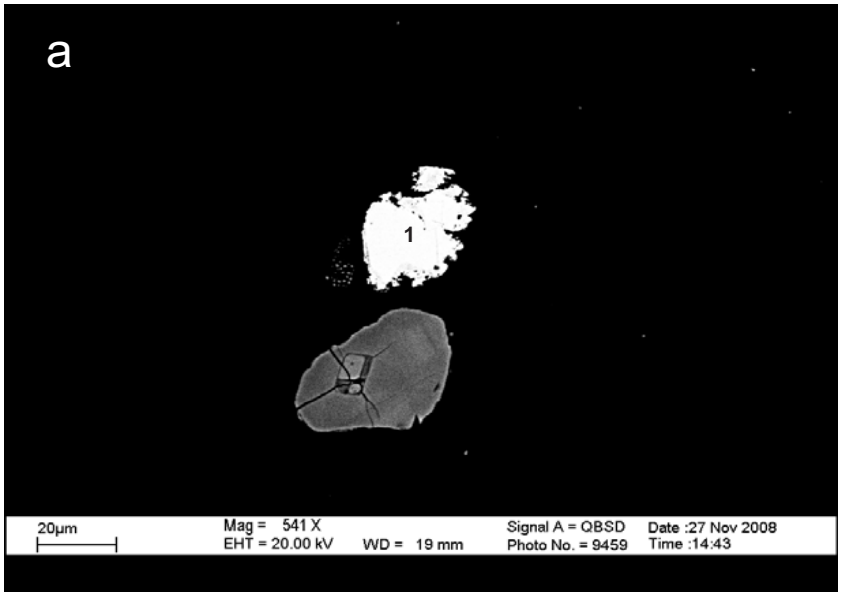
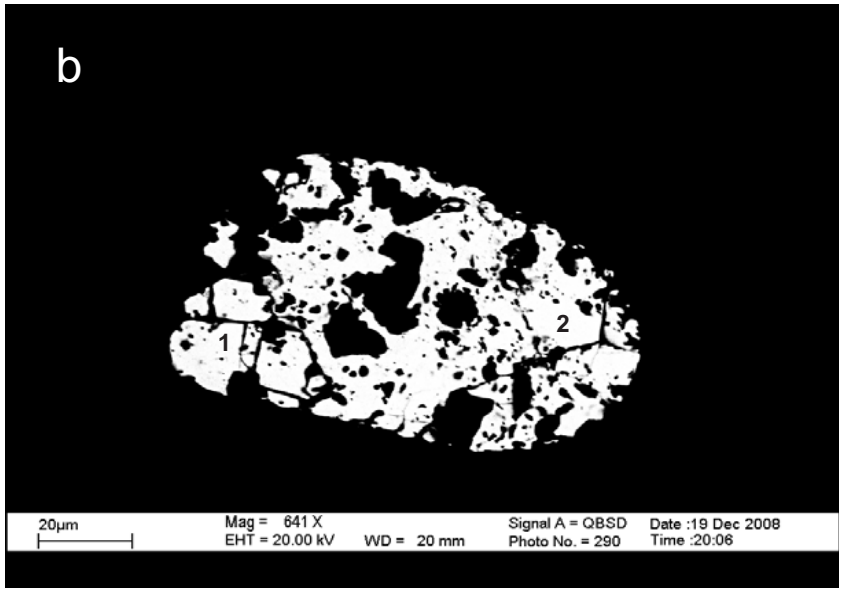


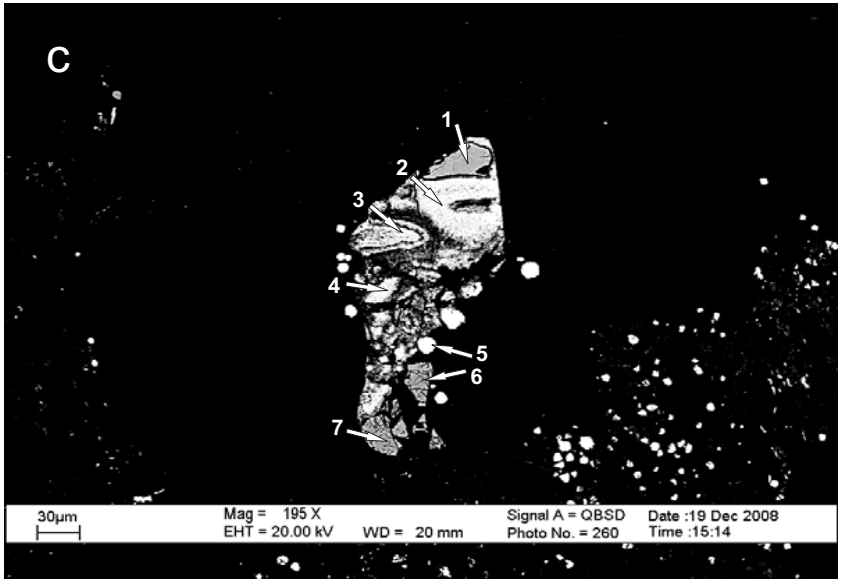
Figure 8: Stratigraphic distribution of mean grain size, and modal abundance of muscovite, matrix and cement in sandstone samples from Louisbourg J-47 well. The data used are those of Table 2. Where concentrations were <1% in Table 2, these values were set at 0.1% for plotting.



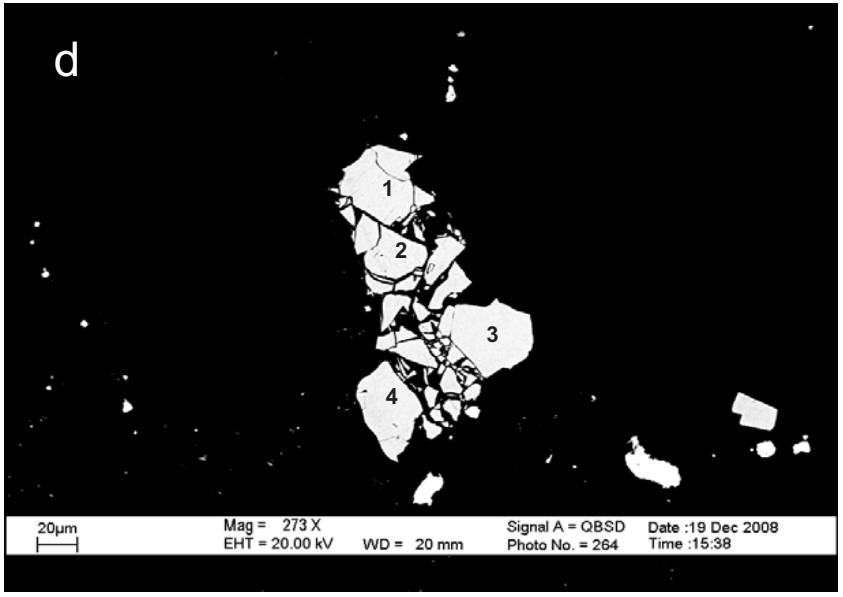
4081.17B m., Detrital(?) xenotime (pos.1) (Figure 65-Appendix 2B)



4528.03B m., Detrital monazite (pos.1,2) (Figure 46-Appendix 2C)

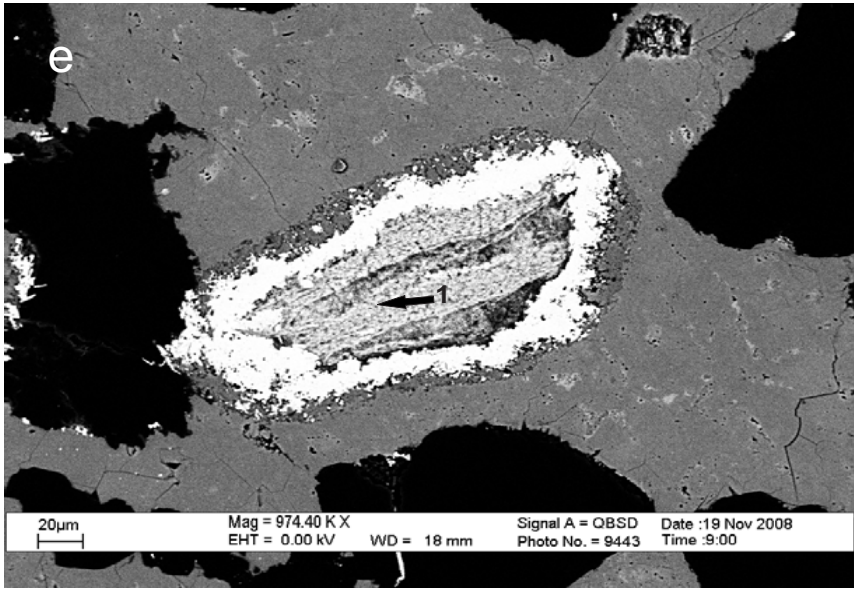


4528.03B m., Detrital chromian spinel (pos.1,6,7) and chromite (pos.2,4) with pyrite (pos.5) and alteration (pos.3) (Figure 17-Appendix 2C)

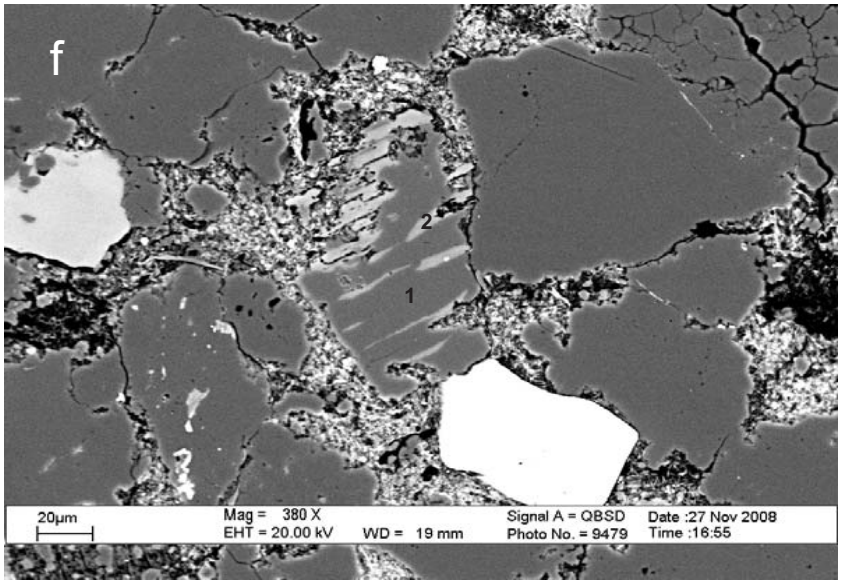


4528.03B m., Detrital chromian spinel (pos.1,2,3,4) (Figure 21-Appendix 2C)

Figure 9: [*four pages*] Back-scattered electron images of representative detrital minerals and lithic clasts.

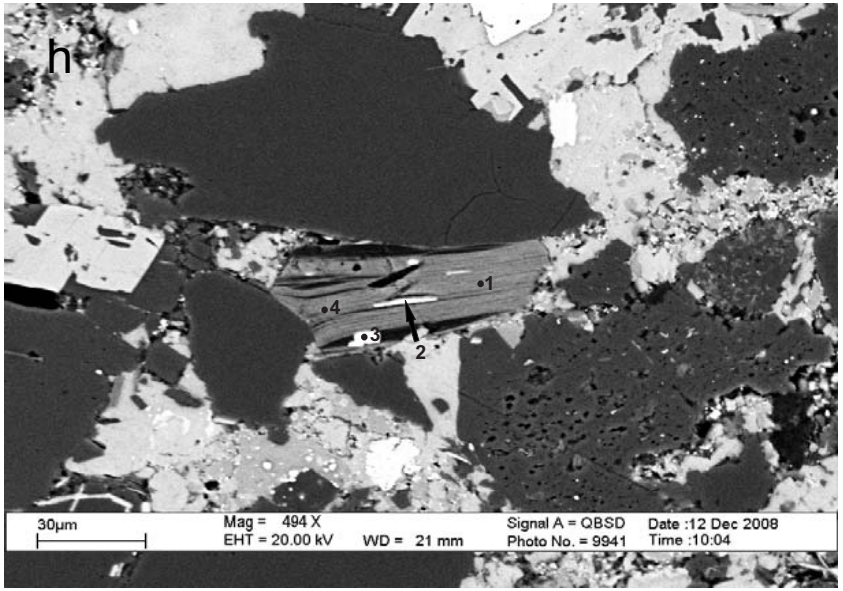


4076.26A m., Mg-chlorite (pos.1) replacing a detrital mineral, probably garnet (Figure 30- Appendix 2A)

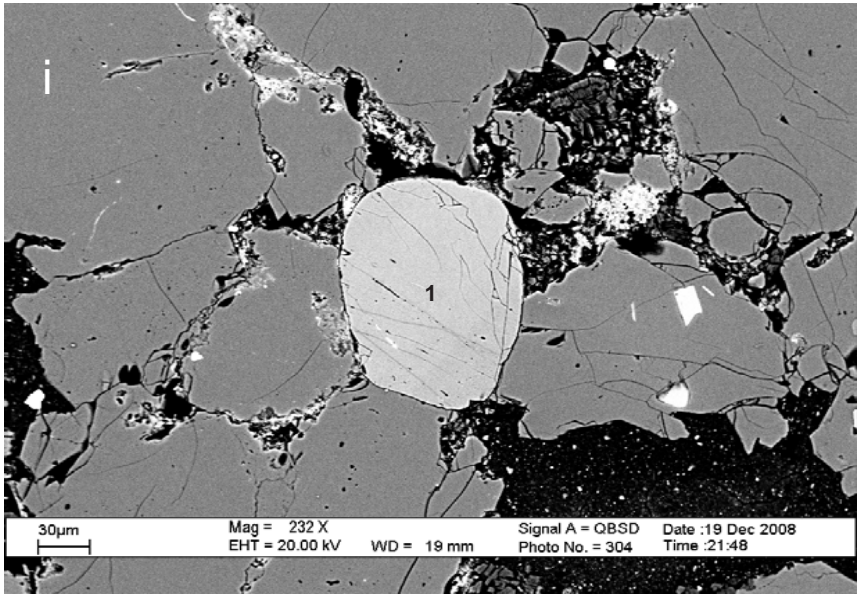


4081.17B m., An example of antiperthite texture:
albite host (pos.1)and K-feldspar (pos.2) exsolution lamellae (Figure 84- Appendix 2B)

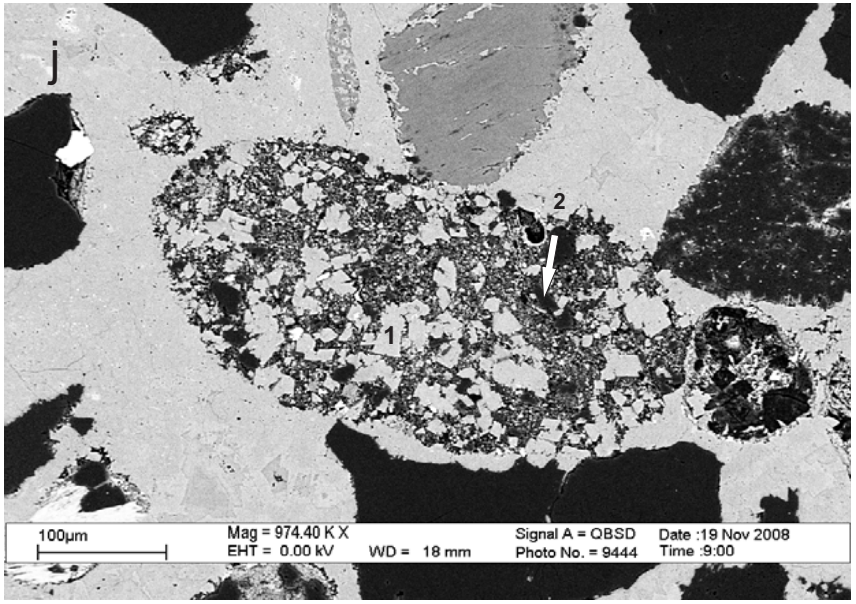
5445.94 m., Diagenetic sphalerite (pos.1) (Figure 18- Appendix 2D)



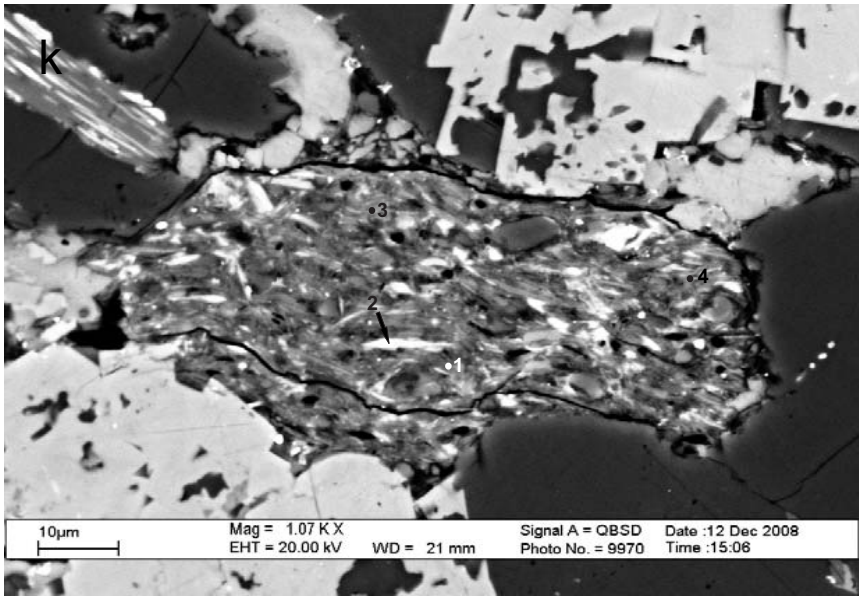
5445.94 m., Detrital muscovite (pos.1,4) with diagenetic sphalerite (pos.2,3) (Figure 6- Appendix 2D)



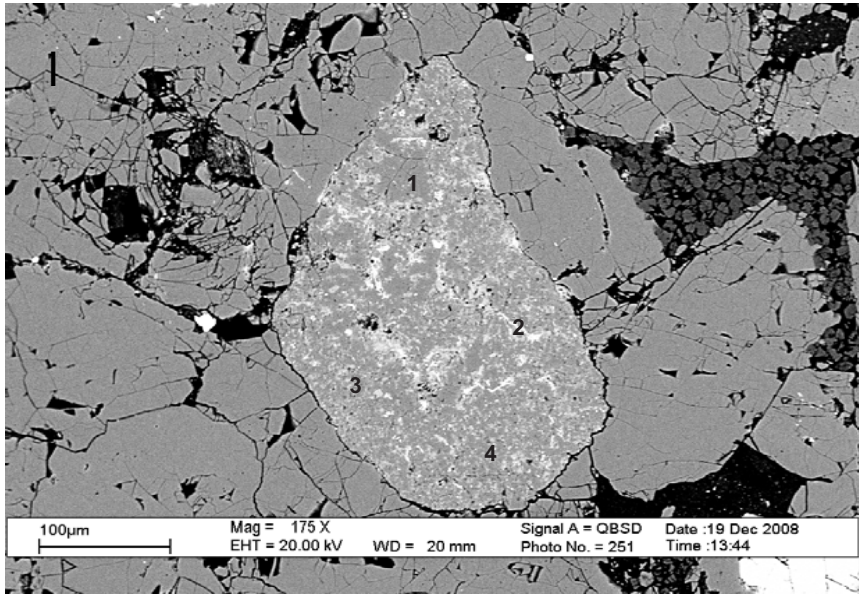
4528.03B m., Detrital tourmaline (pos.1) (Figure 60-Appendix 2C)



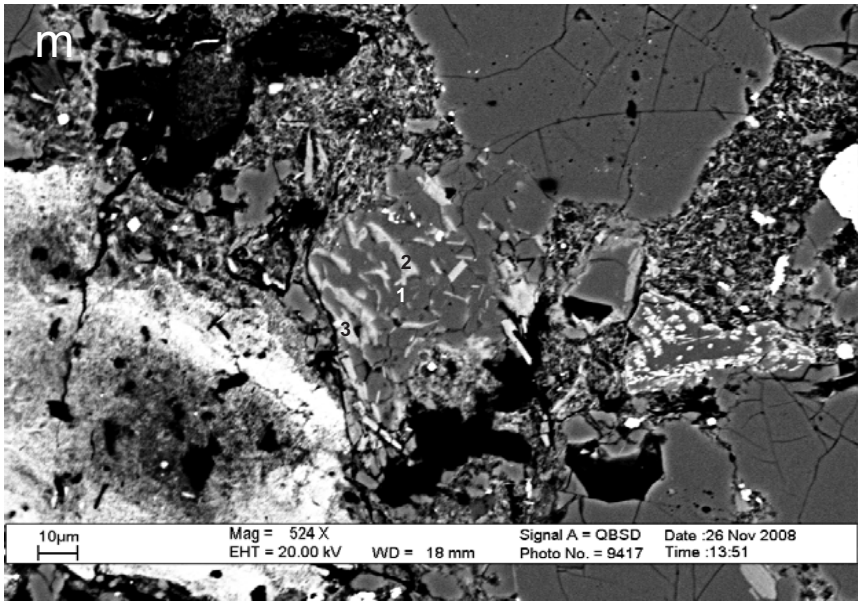
4076.26A m., Lithic clast (sedimentary)with ankerite (pos.1) and detrital quartz (pos.2) (Figure 31- Appendix 2A)



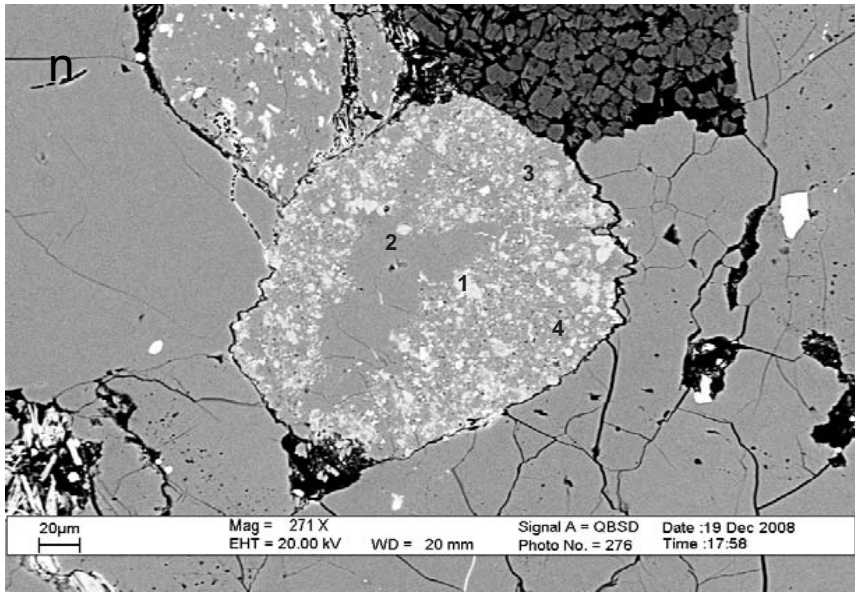
5445.94 m., Lithic clast (volcanic): mixure of minerals (pos.1-4) (Figure 32- Appendix 2D)



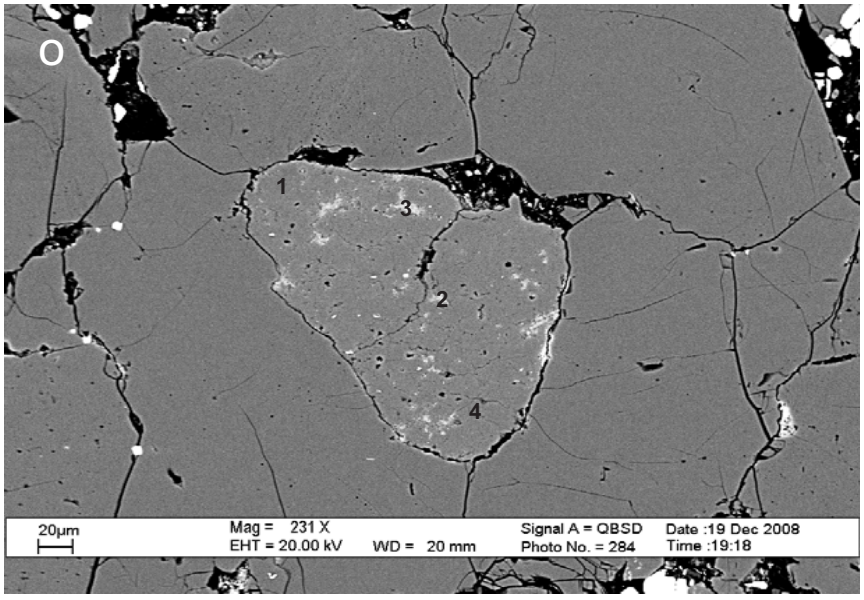
4528.03B m., Lithic clast (microgranite/ rhyolite), mostly quartz (pos.1-4) (Figure 8-Appendix 2C)



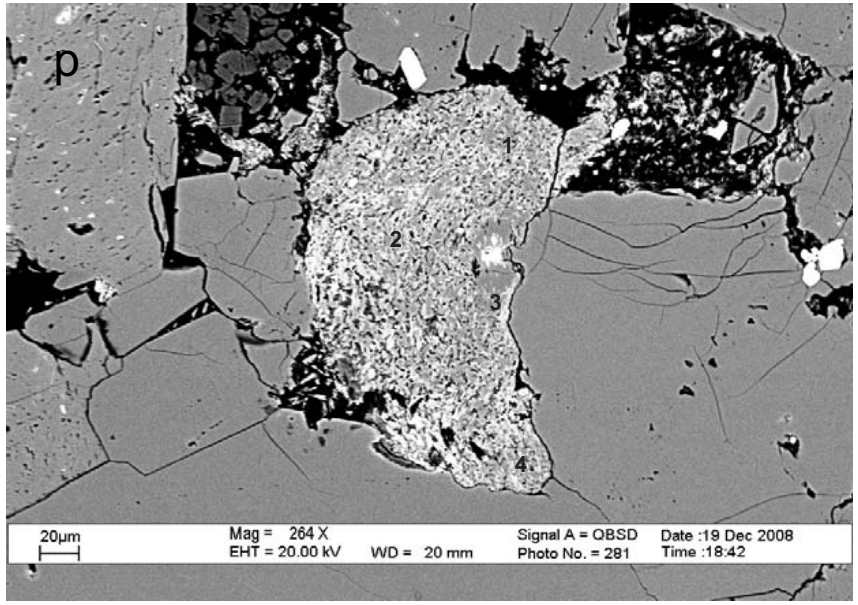
4081.17B m., Lithic clast (igneous) containing quartz (pos.1) and chlorite grains (pos. 2,3) (Figure 38- Appendix 2B)



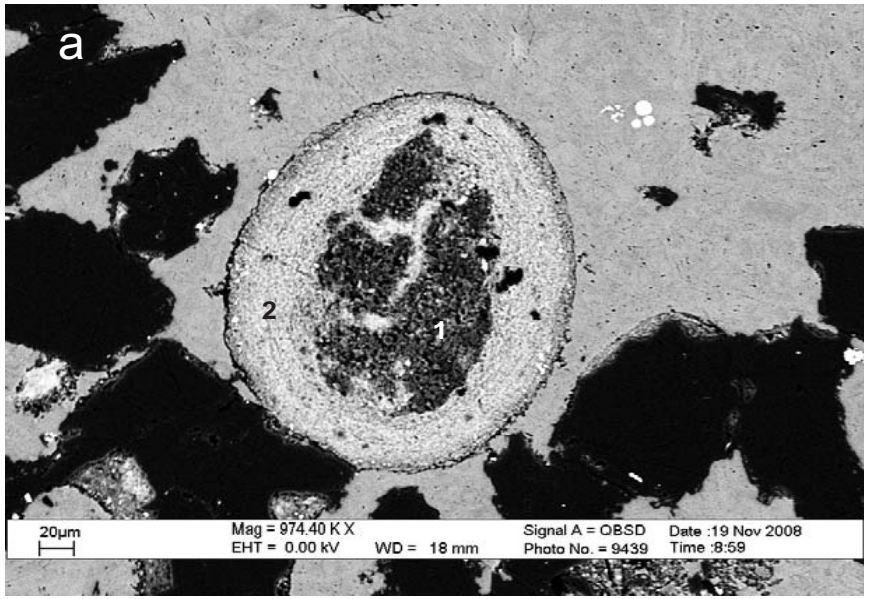
4528.03B m., Lithic clast (microgranite/ rhyolite) (pos.1-4) (Figure 32- Appendix 2C)



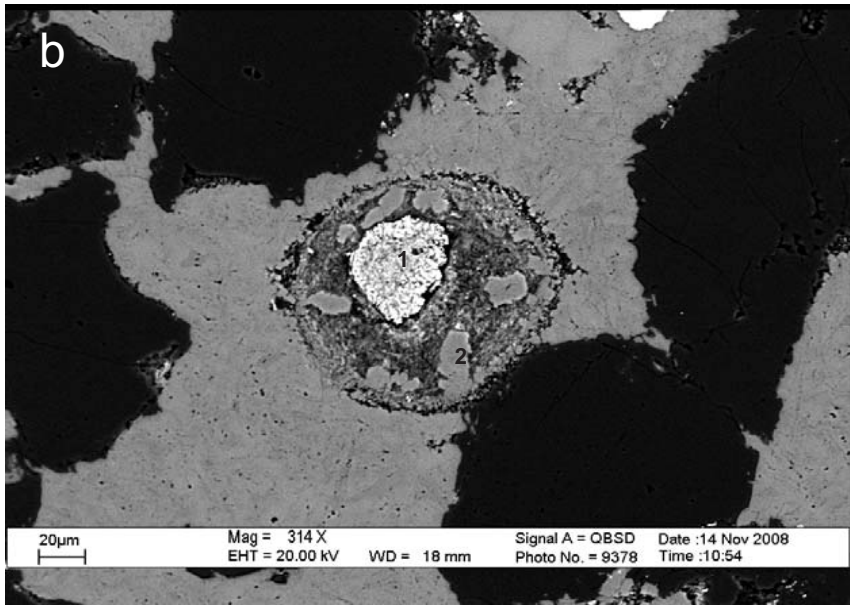
4528.03B m., Lithic clast (microgranite) of quartz (pos.1) and (?) K-feldpsar (pos.2,3,4) (Figure 40- Appendix 2C)



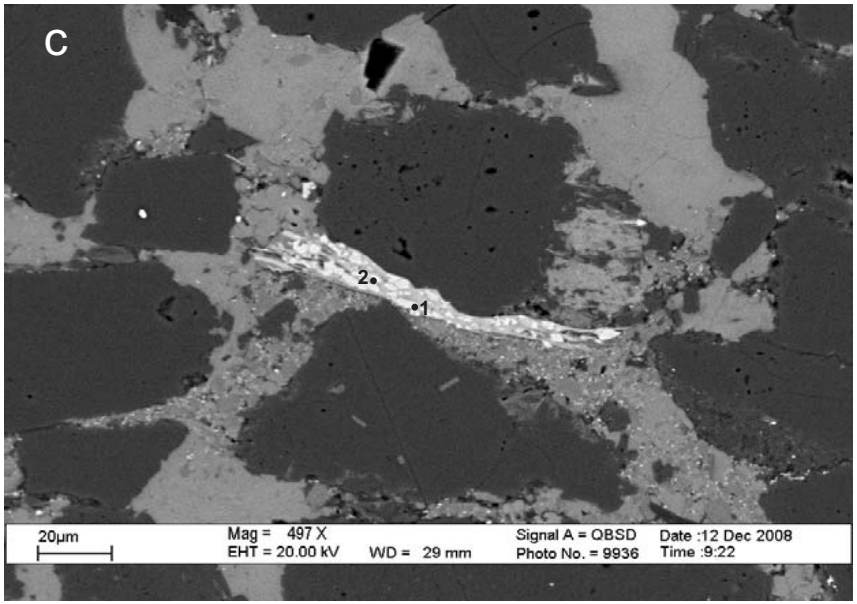
4528.03B m., Lithic clast (rhyolite) altering (pos.1-4) (Figure 37- Appendix 2C)



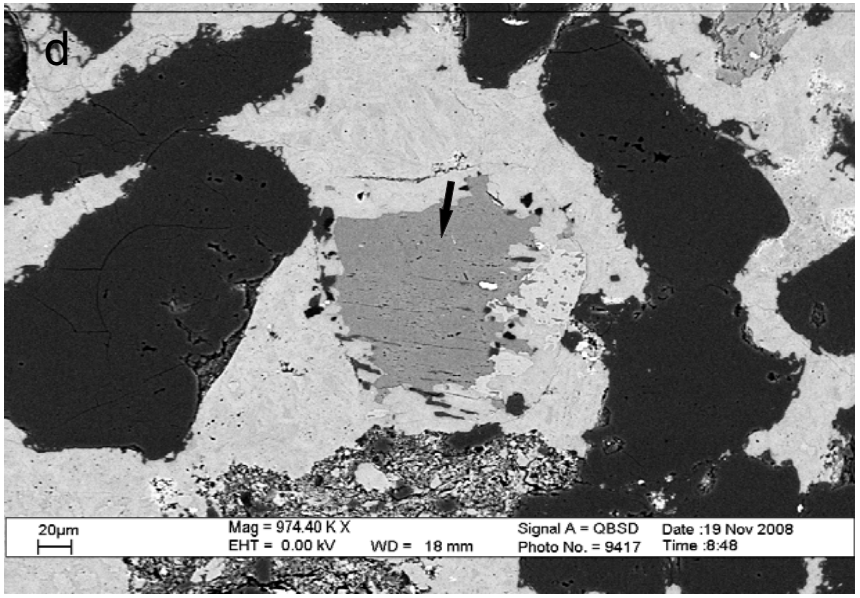
4076.26A m., Coated grain, Glauconite (pos.1) and ?Chlorite (pos. 2) (Figure 26- Appendix 2A)



4076.26A m., Coated grain with chlorite (pos.1) and ferroan calcite (pos.2) (Figure 33- Appendix 2A)

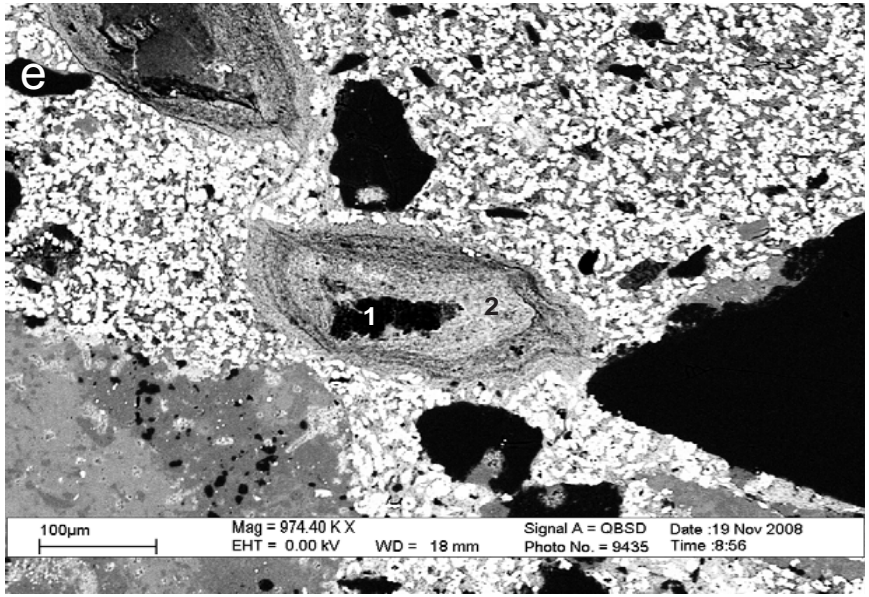


5445.94 m., (?) Chamosite (pos.1,2) (Figure 1- Appendix 2D)

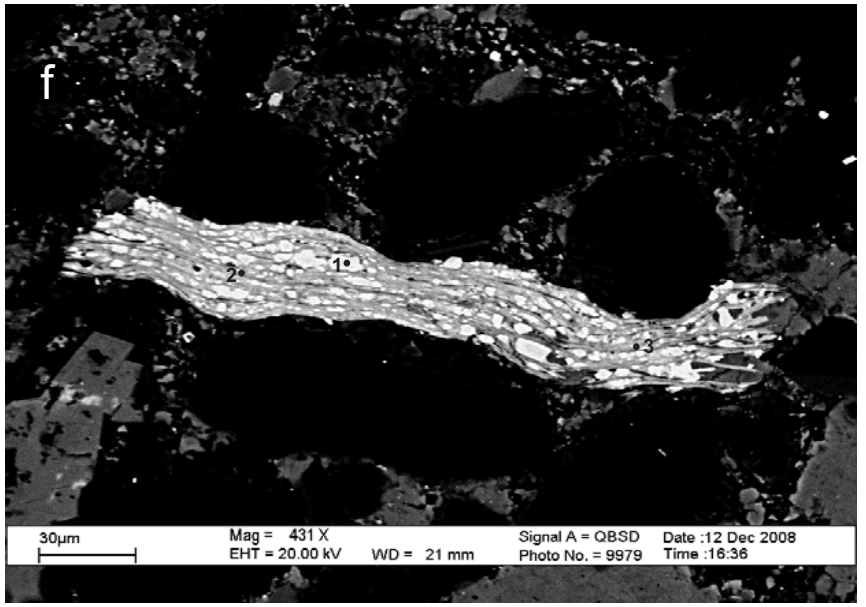


4076.26A m., Detrital K-feldspar grain partly replaced by carbonate (Figure 4- Appendix 2A)

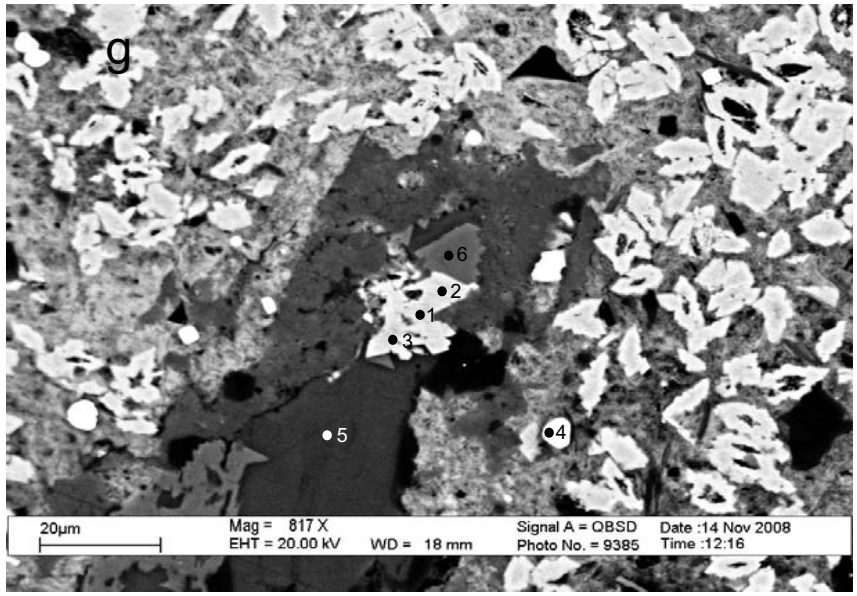
Figure 10: [*four pages*] Back-scattered electron images of representative diagenetic minerals



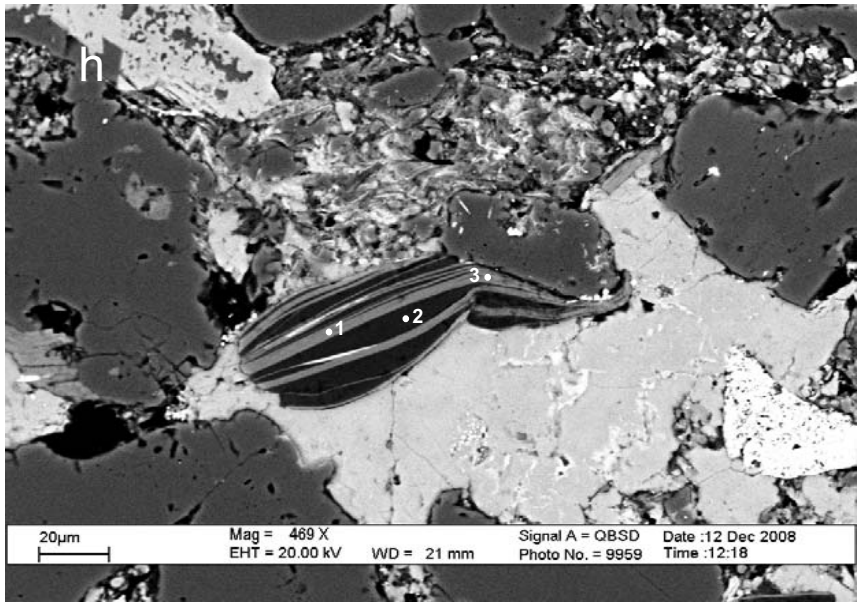
4076.26A m., Kaolinite (pos.1) and ?chlorite (pos.2) (Figure 22- Appendix 2A)



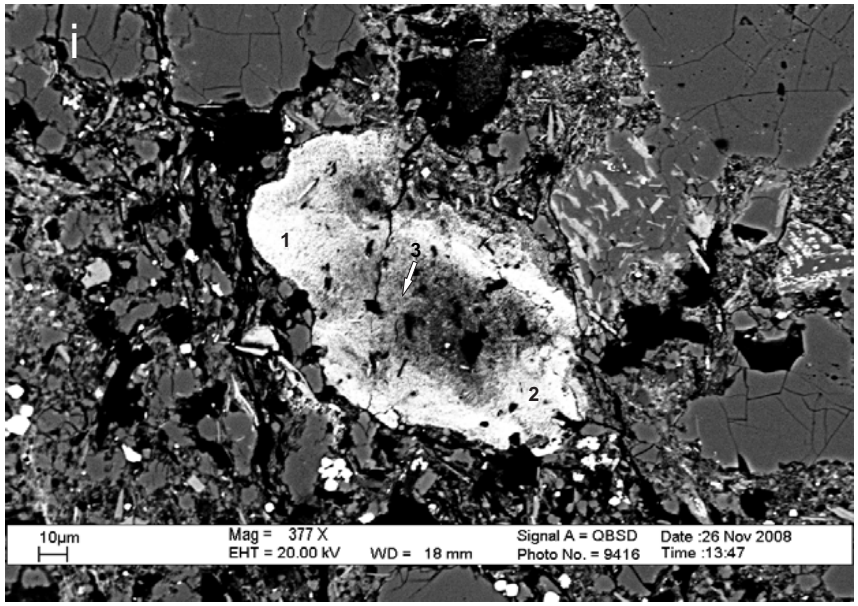
5445.94 m., Chlorite (pos.2,3) and siderite (pos.1) (Figure 41- Appendix 2D)



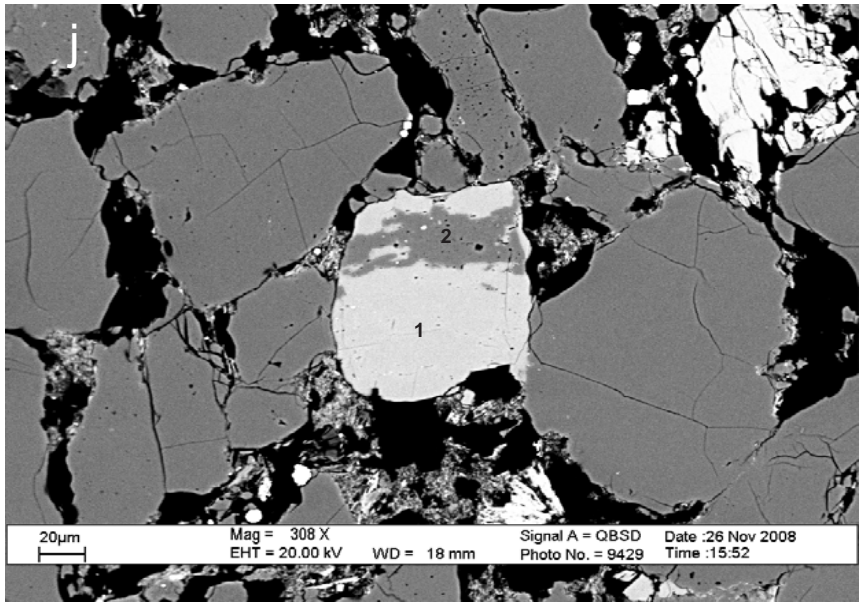
4076.26A m., Siderite (pos.1,2,3), Pyrite (pos. 4),K-feldspar (pos. 5) and ankerite (pos. 6) (Figure 40- Appendix 2A)



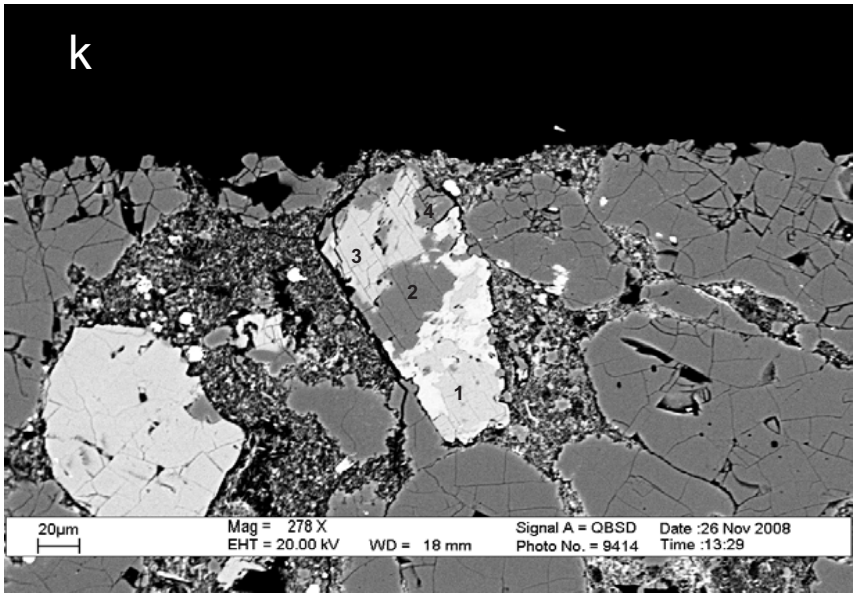
5445.94 m., Muscovite (pos.1,3) and kaolinite (pos.2) (Figure 22- Appendix 2D)



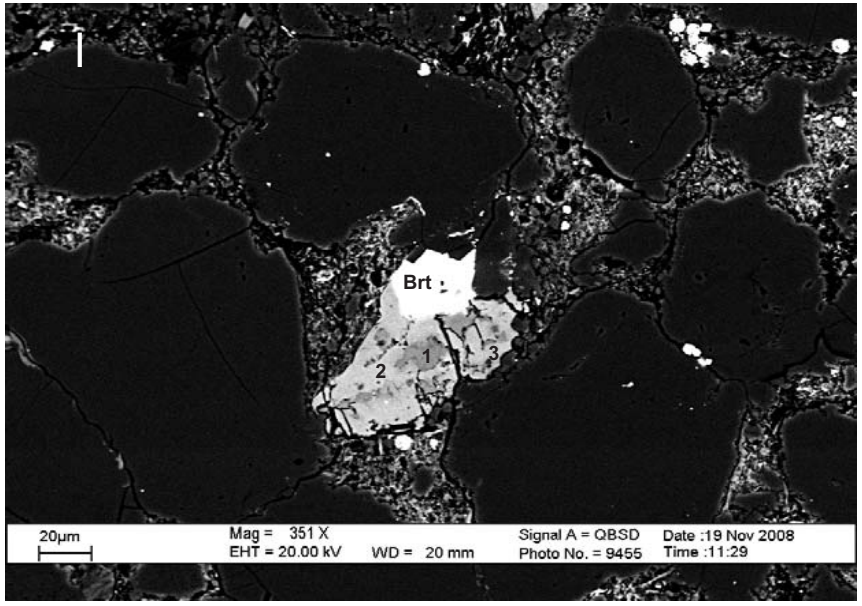
4081.17B m., Detrital ilmenite grain altering to TiO_2 minerals (pos. 1,2,3) (Figure 37- Appendix 2B)



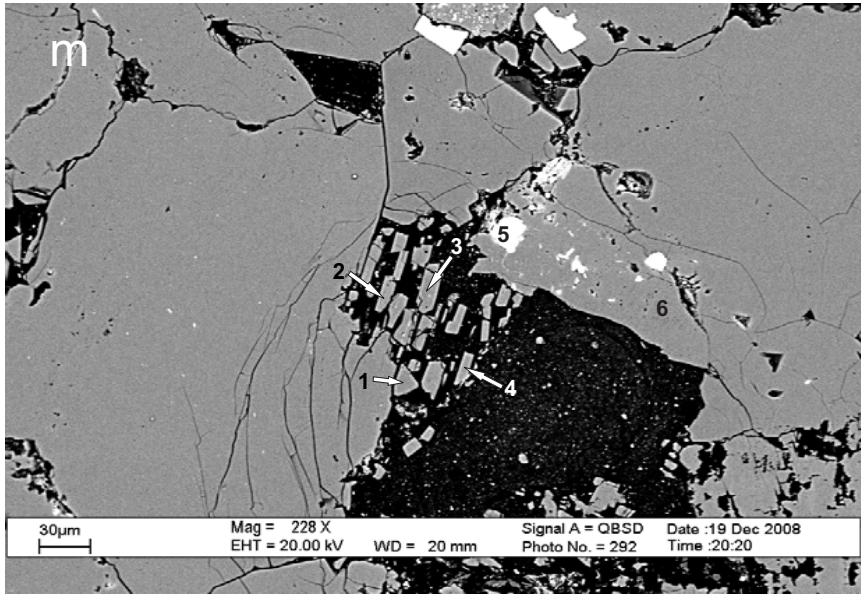
4081.17B m., Albitization (pos.2) of K-feldspar (pos.1) (Figure 50- Appendix 2B)



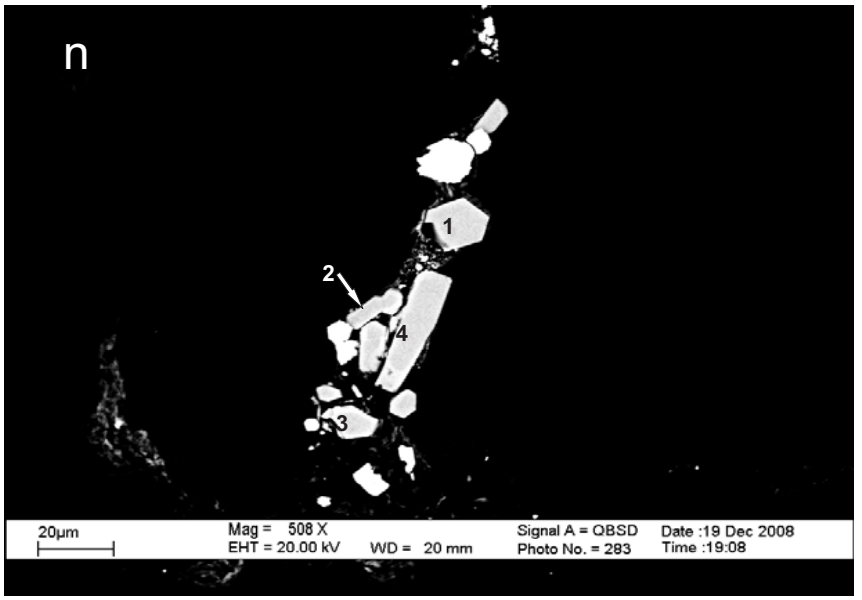
4081.17B m., Albitization (pos.2,4) of K-feldspar (pos.1,3) (Figure 35- Appendix 2B)



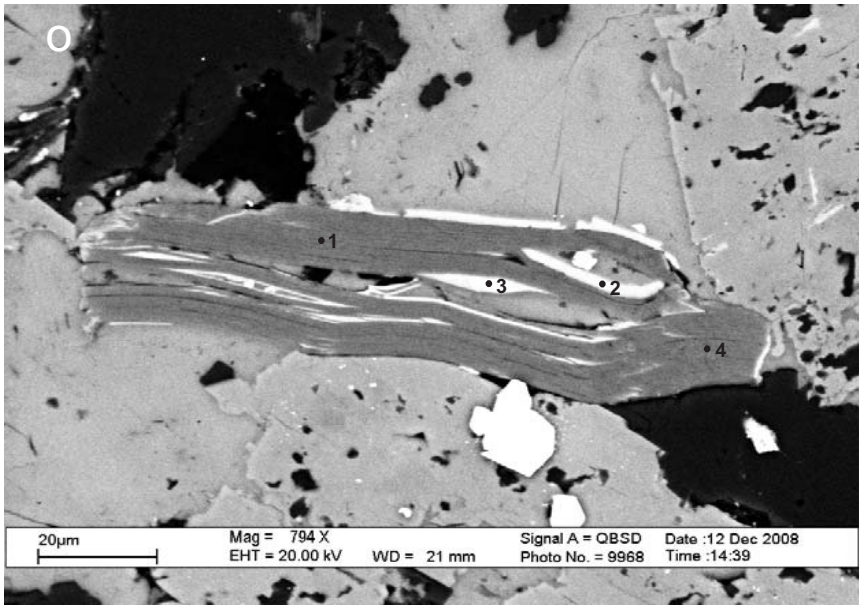
4081.17B m., Diagenetic barite (Fig.9) associated with K-feldspar (pos.1) and ferroan calcite (pos.2,3) (Figure 10- Appendix 2B)



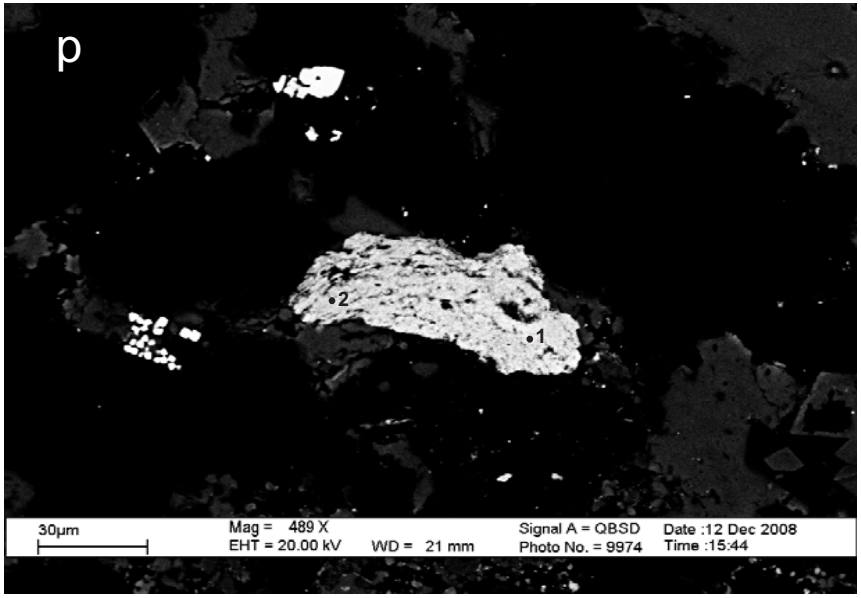
4528.03B m., Diagenetic albite (pos.2,3,4) associated with quartz (pos.1,6) and chlorite (pos.5) (Figure 48- Appendix 2C)



4528.03B m., Diagenetic phosphate minerals (pos.1-4) (Figure 39- Appendix 2C)



5445.94 m., Chlorite (pos.1,4) associated with diagenetic phosphate minerals (pos.2,3) (Figure 30- Appendix 2D)



5445.94 m., Diagenetic aluminum phosphate mineral (pos.1,2) (Figure 36- Appendix 2D)

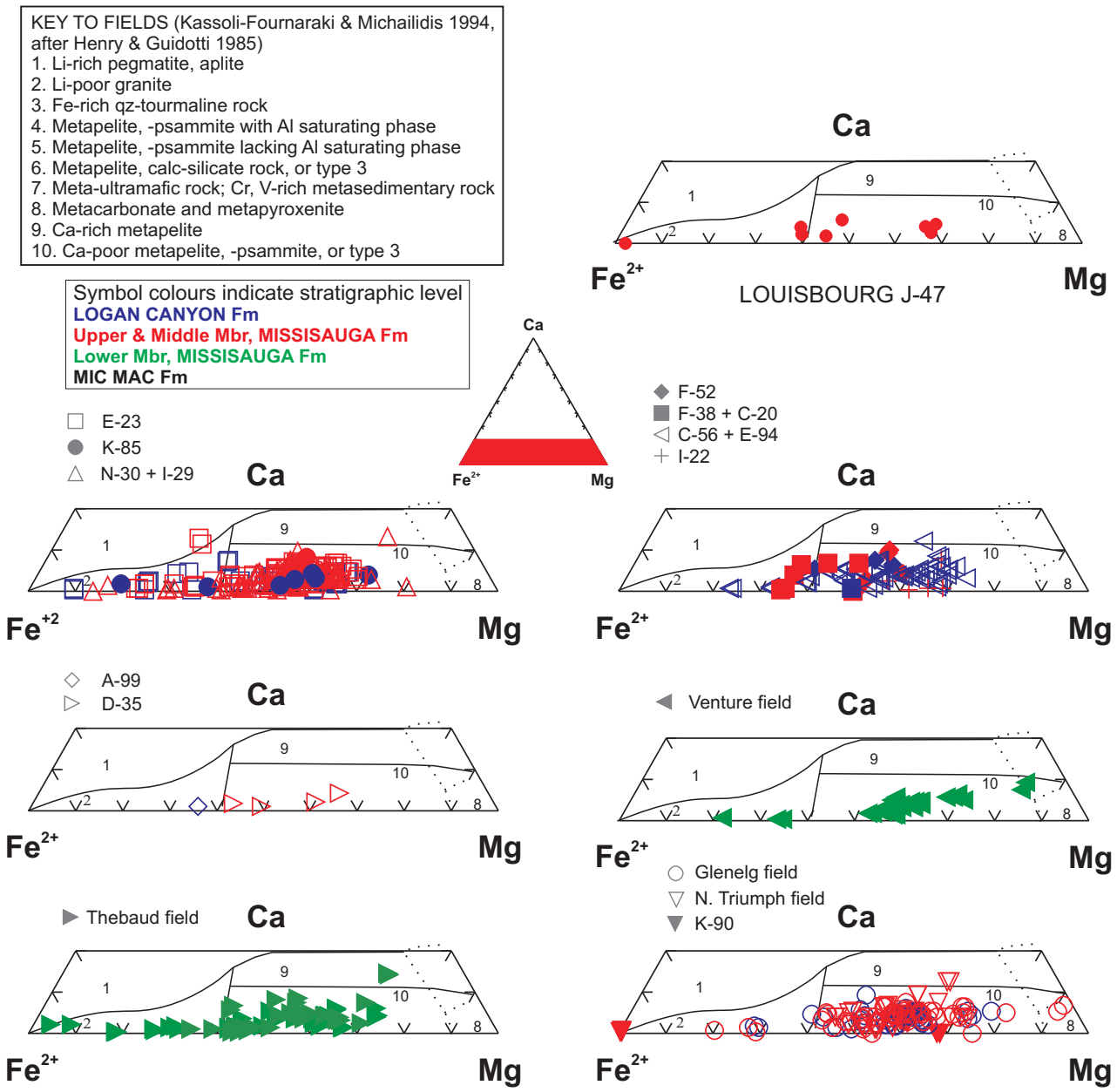


Figure 11: Chemical variation in tourmaline based on Ca - Mg - Fe^{2+}. Data for other wells from Pe-Piper et al. (2009).

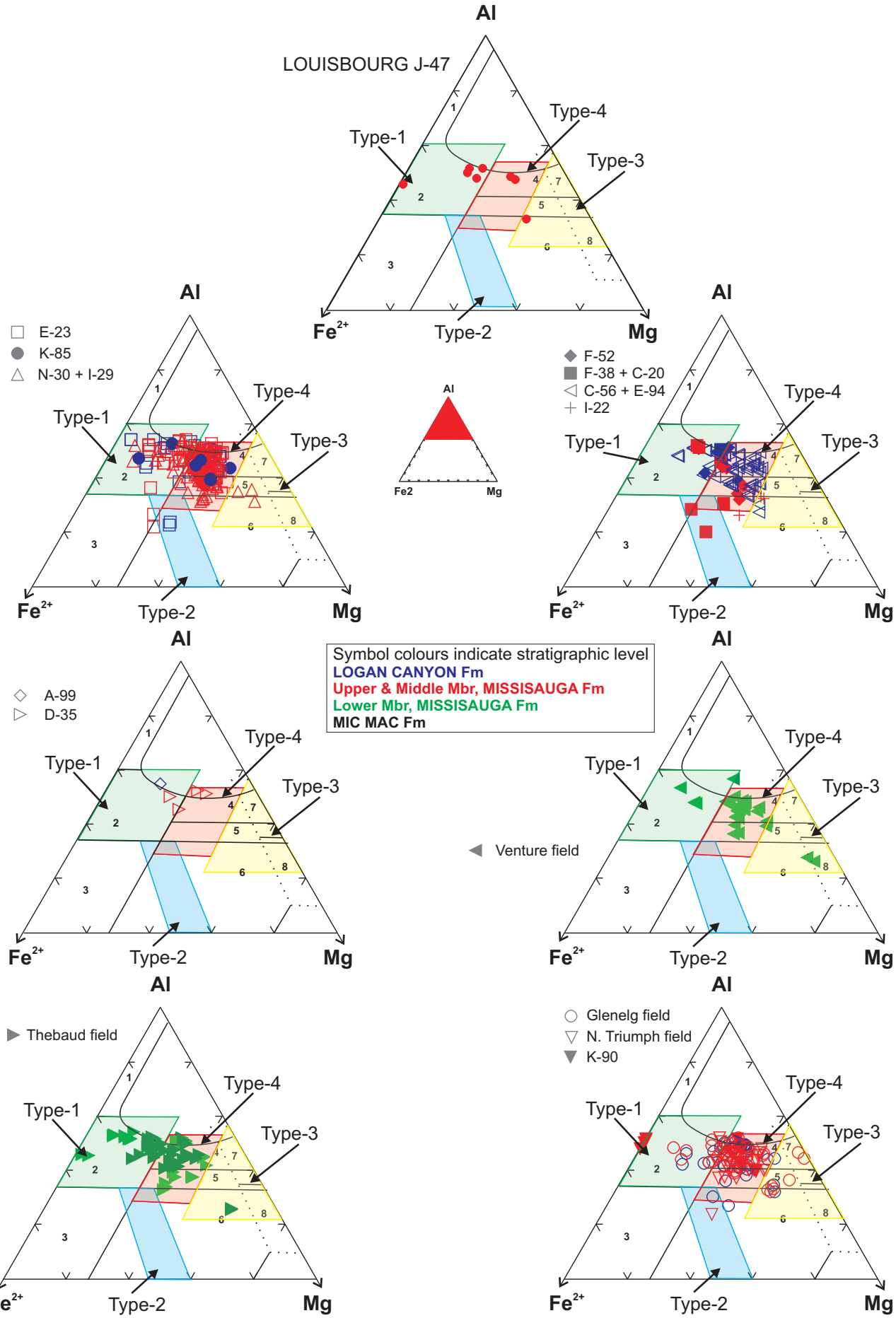


Figure 12: Chemical variation in tourmaline based on Al - Mg - Fe^{2+} showing definition of types defined by Pe-Piper et al. (2009).

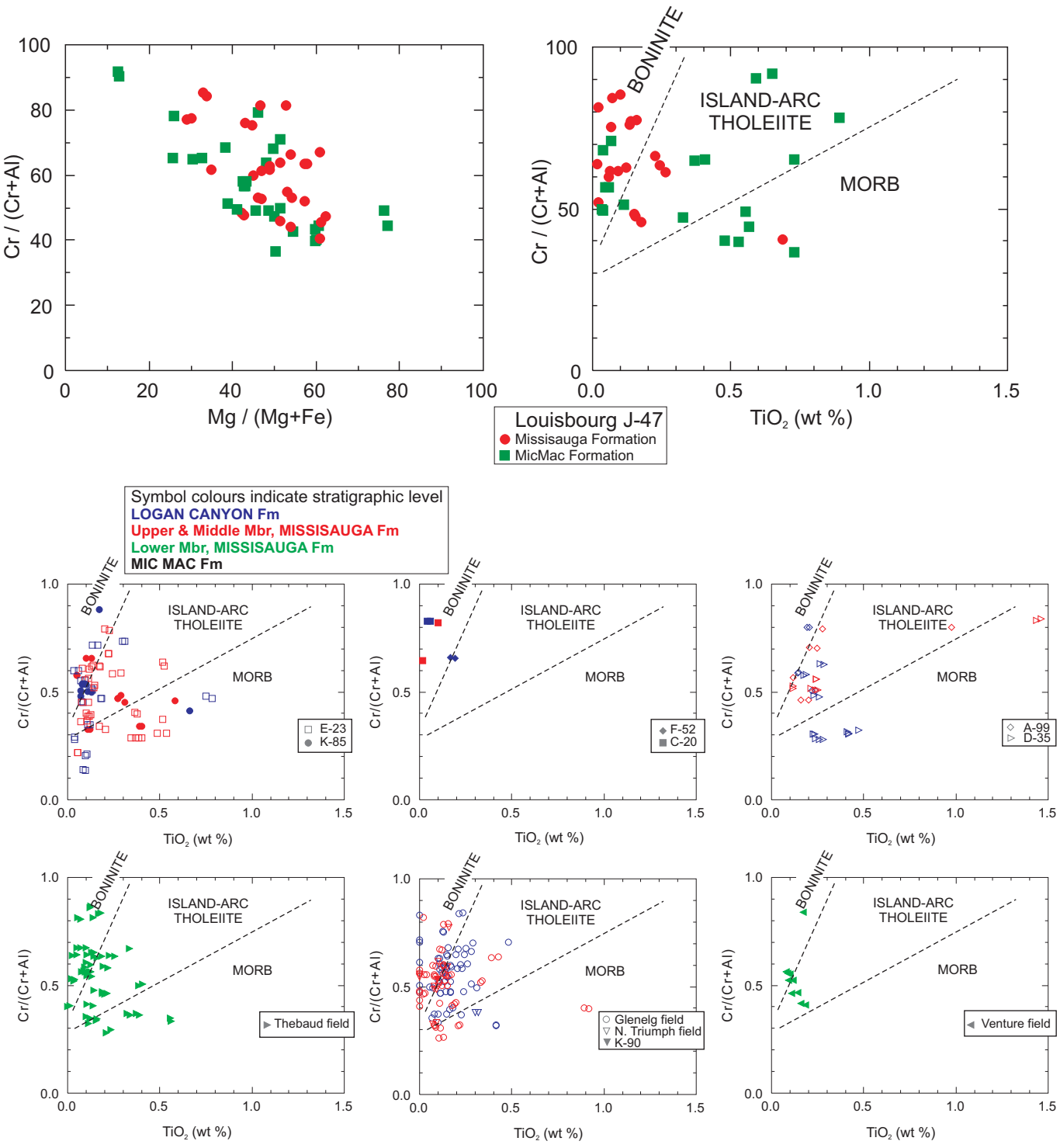


Figure 13: (*above*) Plots of spinel compositions for Louisbourg J-47; (*below*) comparative data from other wells on the Scotian Shelf (from Pe-Piper et al. 2009). Fields for source rocks from Pearce et al. (2000).

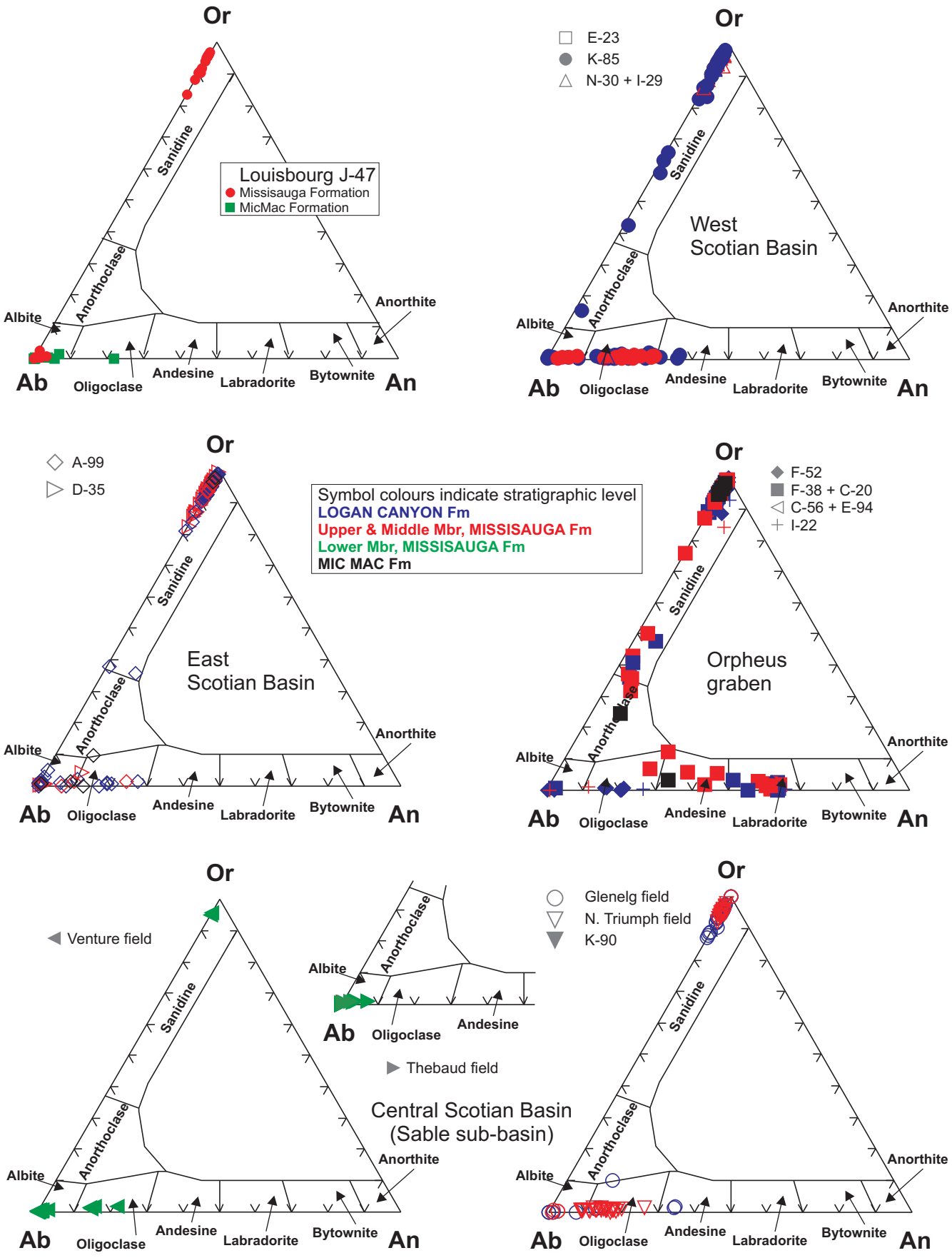


Figure 14: Chemical variation in feldspars from Louisbourg J-47. Also shows analysed feldspars from other Scotian Basin wells (from Pe-Piper et al. 2009).

Table 1a : Louisbourg J-47 lithofacies interpretation.

Ref. #	Louisbourg Core #	Depth (m)	Facies	Condensed notes from logger:
1	Louisbourg 1	4072.13 - 4073.45	3x	highly bioturbated, rich in bioclasts, many siderite clasts
2	Louisbourg 1	4073.45 - 4073.80	3x	highly bioturbated, bioclasts less abundant
3	Louisbourg 1	4073.80 - 4074.09	3x	moderate visible bioclasts, minor siderite clasts
4	Louisbourg 1	4074.09 - 4074.31	3x	very minor visible bioclasts - end of transgressive mega unit
5	Louisbourg 1	4074.31 - 4075.14	3y	highly bioturbated, minor bioclasts, abundant burrows, carbonaceous and sideritic cementation
6	Louisbourg 1	4075.14 - 4075.27	0g	irregular change in lithology, less muds, fine laminae of mud and sst start
7	Louisbourg 1	4075.27 - 4076.06	0t	moderate bioturbation at top, crosscutting ripples, some burrows
8	Louisbourg 1	4076.06 - 4076.51	3y	{TS #1: 4076.26a} high bioturb, siderite cemented fine sst w/ mud, abundant bioclasts; grey nodules
9	Louisbourg 1	4076.51 - 4077.07	2c	highly bioturbated fine sst and mud with minor bioclasts
10	Louisbourg 1	4077.07 - 4077.45	2c	fine sst. w/ mud, mod. bioturb, bedding structure still intact, minor bioclasts
11	Louisbourg 1	4077.45 - 4077.65	3y	fine sst. w/ mud, highly bioturbated, abundant bioclasts; also some sideritic clasts
12	Louisbourg 1	4077.65 - 4077.77	5m	interbedded mud and fine sst; moderate bioturbation; bioclastic
13	Louisbourg 1	4077.77 - 4077.90	5s	mostly fine sst. with mud laminae in ripple troughs
14	Louisbourg 1	4077.92 - 4078.01	5m	fine sst w/ mud, some bioturbation and bioclasts
15	Louisbourg 1	4078.01 - 4078.05	5s	fine sst. w/ very minor mud content
16	Louisbourg 1	4078.05 - 4078.67	5b	some large burrow traces, highly bioturbated mud and fine sst., some bedding still visible
17	Louisbourg 1	4078.67 - 4079.57	5b/6m	more mud than fine sst; still highly bioturbated although less visible b/c of composition
18	Louisbourg 1	4079.57 - 4080.27	5b	fine sst. w/ mud, highly bioturbated, cm-burrows infilled with fine sst.; a few mud laminae towards
19	Louisbourg 1	4080.27 - 4080.37	5m	mostly mud with mild bioturbation
20	Louisbourg 1	4080.37 - 4080.41	5m	fine sst., moderately bioturbated, mud laminae
21	Louisbourg 1	4080.41 - 4080.51	5m	mostly mud, fine sst. laminae, mild bioturbation
22	Louisbourg 1	4080.51 - 4080.59	5m	mostly fine sst. with little mud, mud becomes more dominant gradually
23	Louisbourg 1	4080.59 - 4080.67	5m	interbedded mud and fine sst. laminae; little bioturb
24	Louisbourg 1	4080.67 - 4080.74	5m	interbedded mud and fine sst., highly bioturbated in areas, bedding visible in other areas
25	Louisbourg 1	4080.74 - 4081.26	5b	{TS #2: 4081.17b} intensely bioturbated mud w/ fine sst.; abundant bioclastic material
26	Louisbourg 1	4081.26 - 4081.64	5b	similar to previous unit, less bioturbated , less bioclastic, more sst
27	Louisbourg 1	4081.64 - 4083.10	2b/3x/2b/ 3x/2b	mostly mud, highly bioturbated, little to no bedding; some fine sand/silt and minor bioclasts
28	Louisbourg 1	4083.10 - 4083.47	2b	intensely bioturbated mud and fine sst. w/ little bedding preserved; becomes increasingly muddy with
29	Louisbourg 1	4083.47 - 4083.77	2b	mostly mud, some sand/silt; intense bioturbation; large vertical burrows
30	Louisbourg 1	4083.77 - 4083.94	2b	increasing mud; highly bioturbated; some scattered fine to med. sand
31	Louisbourg 1	4083.94 - 4084.60	2c	mud and fine to med. sst; reworked by high bioturbation ;some remnants of bedding; occ. Wood Frags...
32	Louisbourg 1	4084.60 - 4084.78	2b	very mud-rich, little sand, mild bioturbation, some remnant bedding
33	Louisbourg 1	4084.78 - 4085.26	5m	incr'd amount of fine sand; highly bioturbated; some Woody Fragments, remnants of mud and sand lams
34	Louisbourg 1	4085.26 - 4085.40	6m	high mud content, not much sand, moderate bioturbation
35	Louisbourg 1	4085.40 - 4086.24	5b	highly bioturbated mud and med to fine sst; some remnant bedding; more mud than sand
36	Louisbourg 1	4086.24 - 4086.57	5m	higher sand to mud ratio than previous; moderate bioturbation; more bedding and laminae
37	Louisbourg 1	4086.57 - 4086.77	5m	mostly med. sst. with some mud; some very minor bioturbation

Table 1a : Louisbourg J-47 lithofacies interpretation.

38	Louisbourg 1	4086.77 - 4086.84	5m	irregular packet of mud to sand and mud planar laminae, back to mud...
39	Louisbourg 1	4086.84 - 4087.12	5m	med. sst. with sharp based contacts to mud partings; mod. bioturbation
40	Louisbourg 1	4087.12 - 4087. 23	5b	intensely bioturbated mud (siderite) and med. sst; siderite nodules and possibly occ. Wood frag.s...
41	Louisbourg 1	4087.23 - 4087.39	4g	med sst. with some cross laminae exhibited via mud, some mud is sideritized
42	Louisbourg 1	4087.39 - 4087.67	4g	med. sst. with some cross laminae; some bioturbated mud drapes and laminae
43	Louisbourg 1	4087.67 - 4087.84	4g	fine sst laminae, 2 cm. mud/siderite; bioturbated; cm-scale beds
44	Louisbourg 1	4087.84 - 4087.88	4g	med. sst. with cross laminae and some parallel laminae; some erosional contacts
45	Louisbourg 1	4087.88 - 4088.15	0m	mud wish some silt laminae; moderately bioturbated
46	Louisbourg 1	4088.15 - 4088.30	3x	highly bioturbated mud; highly bioclastic; some siderite layers and clasts
47	Louisbourg 2	4405.30 - 4407.90	4o	[look at TS] mega unit of fine white sst. with irregular mm mud partings; occasional mud-lined burrow; mud partings have white mica on the bedding plane not very visible bedding
48	Louisbourg 3	4408.00 - 4408.17	9g	white med. massive sst. with some mud near the top
49	Louisbourg 3	4408.17 - 4408.23	0g	beginning of mud and fine sst. laminae; 2+ erosional contacts; cross cutting; some bioturb.
50	Louisbourg 3	4408.23 - 4408.30	9s	slightly dipping laminae erosionally overlain; mm thick mud lam at base
51	Louisbourg 3	4408.30 - 4408.46	9s	mud-lined burrow; parallel lam's of fine sst. and mud; laminae indistinct
52	Louisbourg 3	4408.46 - 4408.56	9s	gently dipping cross bedding within med. sst.
53	Louisbourg 3	4408.56 - 4408.97	4x	med. sst., thin mm-mud laminae; occasional burrrows; parallel almost horizontal bedding
54	Louisbourg 3	4408.97 - 4409.01	4s	cut and fill structure infilled with fine sst. and mud lam's picking out climbing ripples
55	Louisbourg 3	4409.01 - 4409.10	4s	fine sst. with gently dipping beds
56	Louisbourg 3	4409.10 - 4409.24	9s	mostly fine sst. with some mud intermixed; probably highly bioturbated
57	Louisbourg 3	4409.24 - 4409.47	9s	fine sst. with little bedding structure, little mud; possible bioturbation; irregular speckled appearance
58	Louisbourg 3	4409.47 - 4409.67	9s	change from fine sst. to mud and fine sst; interbedded mm-cm laminae of mud and silt, possible bioturb.
59	Louisbourg 3	4409.67 - 4410.04	9s	cross bed contact; fine sst. with slightly dipping laminae and lots of cross bedding
60	Louisbourg 3	4410.04 - 4410.24	0s	moderately bioturbated mud with bioclasts and a silty layer
61	Louisbourg 3	4410.24 - 4410.37	0s	well-laminated interval with mild bioturbation
62	Louisbourg 3	4410.37 - 4410.53	0s	moderately bioturbated, abundant v. small burrows, some mesh-like fossil structure on bedding plane
63	Louisbourg 3	4410.53 - 4410.62	0s	mostly fine sst. w/ interbedded mud layers; some grading
64	Louisbourg 3	4410.62 - 4410.66	0s	mostly mud, highly bioturbated
65	Louisbourg 3	4410.66 - 4410.69	0s	fine sst. laminae, not bioturbated
66	Louisbourg 3	4410.69 - 4410.96	0s	interbedded mud and fine sst., intensely bioturbated, mm-burrows; some laminae intact, most destroyed
67	Louisbourg 3	4410.96 - 4411.28	2b	predominantly mud with some fine sst; intensely bioturbated; burrows of various sizes; not much bedding
68	Louisbourg 3	4411.28 - 4411.32	0m	fine sst. with mud laminae picking out cross-bedding;
69	Louisbourg 3	4411.32 - 4411.44	0m	interbedded fine sst. and mud; moderately bioturbated; possibly slumped/deformed; siderite present
70	Louisbourg 3	4411.44 - 4411.47	0m	fine sst. with some large burrows; a shell at the base
71	Louisbourg 3	4411.47 - 4411.55	0m	mostly mud grading into fine sst. near the base; moderately bioturbated
72	Louisbourg 3	4411.55 - 4411.57	0m	thin fine sst. laminae with little bioturbation
73	Louisbourg 3	4411.57 - 4411.63	0m	intensely bioturbated fine sst. and mud with some siderite lined burrows
74	Louisbourg 3	4411.63 - 4411.73	0m	moderately bioturbated fine sst and mud; one thin (0.5 cm) sst. layer still has laminae
75	Louisbourg 3	4411.73 - 4411.78	0m	5 cm of mud, no bioturbation, 2 large siderite concretions

Table 1a : Louisbourg J-47 lithofacies interpretation.

76	Louisbourg 3	4411.78 - 4411.85	0m	fine sst. grading up to mud, moderate bioturbation
77	Louisbourg 3	4411.85 - 4412.01	0m	mostly mud w/ fine sst; intensely bioturbated leaving little to no structure
78	Louisbourg 3	4412.01 - 4412.05	0m	mud and fine sst, mild bioturbation, fine sst base, 2 siderite concretions
79	Louisbourg 3	4412.05 - 4412.18	0m	interbedded 1-2 cm sets of fine sst. and mud, moderately bioturbated leaving speckles and dark material
80	Louisbourg 3	4412.18 - 4412.2	0m	2 cm thick fine sst with an erosional base overlying moderately bioturbated mud
81	Louisbourg 3	4412.2 - 4412.23	0m	mostly mud, some fine sst, moderate bioturbation
82	Louisbourg 3	4412.23 - 4412.34	0m	thicker layers of fine sst. interbedded w/ thinner mud layers, some erosional contacts, mod. bioturb. in
83	Louisbourg 3	4412.34 - 4412.53	0m	mostly mud with fine sst, mildly bioturbated, some structure still intact, little laminae
84	Louisbourg 3	4412.53 - 4412.73	0m	mostly mud w/ fine sst but is moderately bioturbated (more than previous); tiny burrows w/ a few larger
85	Louisbourg 3	4412.73 - 4412.88	0m	mostly mud (70%) with fine sst. layers; some appear graded; mild bioturbation
86	Louisbourg 3	4412.88 - 4412.99	0m	fine sst. w/ interbedded mud and some lam, little bioturbation, some graded beds, one sider. layer, a
87	Louisbourg 3	4412.99 - 4413.14	0m	mostly mud, some fine sst., little to no bioturb, possible erosional contacts, sets up to 2mm
88	Louisbourg 3	4413.14 - 4413.18	0m	mudstone interbedded with fine sst.
89	Louisbourg 3	4413.18 - 4413.25	0m	intensely bioturbated mud with fine sst. in lenses or burrows, graded mud and fine sst; erosionally over
90	Louisbourg 3	4413.25 - 4413.28	0m	mostly mud, graded fine sst at the base, one 0.5 cm sider. layer, large burrow observed, erosionally over
91	Louisbourg 3	4413.28 - 4413.3	0m	fine sst. w/ mud lam picking out some cross-bedding
92	Louisbourg 3	4413.3 - 4413.36	0m	fine sst/silt with v. fine lam of mud mixed in, one large burrow at top, a 5 cm siderite concretion
93	Louisbourg 3	4413.36 - 4413.47	0m	mudstone w/ some graded fine sst. and siderite cement showing cross-bedding laminae
94	Louisbourg 3	4413.47 - 4413.75	0m	mudstone w/ a few graded fine sst. layers, sparse to moderate bioturb., some siderite
95	Louisbourg 3	4413.75 - 4413.79	0m	erosional deposit of medium sst. over muds, fine sst. lam overlying med. sst.
96	Louisbourg 3	4413.79 - 4413.87	3y	intensely bioturbated mud and fine sst; 2 siderite nodules within; erosionally overlies sst
97	Louisbourg 3	4413.87 - 4413.97	3y	mudstone interbedded w/ med. and fine sst; more interbedded at top; fine sst has thin mud lam's, side.
98	Louisbourg 3	4413.97 - 4413.99	3y	mostly mud w/ fine sst; moderately bioturbated
99	Louisbourg 3	4413.99 -4414.15	3y	fine sst. w/ mud, intense bioturb. top, mod. bottom; 2 cm mud layer w/ siderite nodule at v. bottom
100	Louisbourg 3	4414.15 - 4414.2	0s	fine sst. interbedded w thin mud laminae, one 0.5 cm layer, some cross-bedding
101	Louisbourg 3	4414.2 - 4414.88	4g	interbedded fine and med. sst; almost parallel bedding; some thin mud lam; bioclasts and carb cement
102	Louisbourg 3	4414.88 - 4415.06	10f	fine sst. interbedded w/ mud laminae, at base sst/mud mix w/ siderite base
103	Louisbourg 3	4415.06 - 4415.64	4g	med. sst. w/ mud and fine sst. laminae
104	Louisbourg 3	4415.64 - 4416.23	0s	fine sst. w/ grading, mud lam, cross-bedding, some silt; sparse bioturbation, layer of mud micas
105	Louisbourg 3	4416.23 - 4416.29	0m	mudstone w/ some fine sst., probably erosionally deposited with some bioturbation
106	Louisbourg 3	4416.29 - 4416.4	0s	fine sst. with little to no mud; bed sets barely visible
107	Louisbourg 3	4416.4 - 4416.75	0m	mudstone w/ fine sst., mild bioturbation near sand; at base wave ripples/climbing ripples, erosion
108	Louisbourg 3	4416.75 - 4416.91	0s	fine sst. w/ mud laminae; some scour and fill at top
109	Louisbourg 3	4416.91 - 4416.93	0s	mudstone w/ sand lam; erosionally sharp based contact mud; mod bioturb; erosionally overlying (wood
110	Louisbourg 3	4416.93 - 4416.99	0g	fine sst. w/ mud lam., many sed'ary structures/contacts; cross-cutting, wave/climb rips? erosive contacts
111	Louisbourg 3	4416.99 - 4417.05	0s	mudstone w/ some fine sand lenses; mod. bioturb;
112	Louisbourg 3	4417.05 - 4417.47	0s	fine sst. w/ v. fine sparse mud lam's; some scour and fill at v. top
113	Louisbourg 3	4417.47 - 4417.74	0s	mudstone graded w/ fine sst; sparse to mod. bioturb. in mud esp.; ~ 4-6 cm sets;
114	Louisbourg 3	4417.74 - 4417.8	0s	fine sst. w/ mud laminae picking out erosional contact in middle; cross-bedding - scour and fill?

Table 1a : Louisbourg J-47 lithofacies interpretation.

115	Louisbourg 3	4417.8 - 4418.39	0s	mudstone w/ fine sst; mod to intense bioturbation; bioclasts or carb cement
116	Louisbourg 3	4418.39 - 4418.44	0g	fine sst. w mud laminae erosionally underlying mud; sarse bioturb, possible scour and fill
117	Louisbourg 3	4418.44 - 4419.86	0m	mudstone w/ fine sst lenses; sparse to mod. bioturb, siderite concretions
118	Louisbourg 3	4419.86 - 4419.98	3y	fine sst. w mud; carb and siderite cement; sparse to intense bioturbation
119	Louisbourg 3	4419.98 - 4420.34	5b	mudstone w/ fine sst., mostly intense bioturbation, sparse bioclasts
120	Louisbourg 3	4420.34 - 4420.5	4o	fine sst. w/ stylolitic mud partings (mm); sparse bioturb, no bedding structure
121	Louisbourg 4	4527.2 - 4527.49	4x	med. sst. w/ sparse coarse sst; some mud clasts/partings, some oxidized clasts
122	Louisbourg 4	4527.49 - 4527.9	4x	med. sst. w/ sparse coarse sst.; dipping med sst beds 1-2 cm thick; sparse mud partings
123	Louisbourg 4	4527.9 - 4528.81	4x	{TS #3: 4528.03} med. sst w/ sparse coarse sst; some mud lams, cross-bed contacts; bioturbation in mud
124	Louisbourg 4	4528.81 - 4529.33	4x	med. sst. w/ sparse coarse sst., mud clasts, sparse bioturb in mud, orange spots
125	Louisbourg 4	4529.33 - 4529.65	4x	med. + coarse sst; occ. mud lam's showing dipping bed sets; overlying horiz. bed, some silt layers
126	Louisbourg 4	4529.65 - 4530.48	4g	med + coarse sst., w/ mud partings, mud clast/load
127	Louisbourg 4	4530.48 - 4530.55	6s	med. sst. w/ mud clasts and/or partings
128	Louisbourg 4	4530.55 - 4530.6	6s	interbedded mud and fine sst./silt; most likely a tidal deposit
129	Louisbourg 4	4530.6 - 4531.06	4x	med. sst w/ some coarse sst; occasional mud partings; dipping (cm) bed sets
130	Louisbourg 4	4531.06 - 4531.3	4g	med. sst. w/ some coarse; cross-bed contact; med. sst. is either horizontal or massive; sparse mud
131	Louisbourg 4	4531.3 - 4531.34	4g	mudstone interlain with fine sst and silt
132	Louisbourg 4	4531.34 - 4531.39	4g	med. sst. w/ some coarse; med. sand with some mud and possibly wood fragments (coal)
133	Louisbourg 4	4531.39 - 4531.5	4g	med. sst. w/ some coarse; sparse mud clasts; rubble...
134	Louisbourg 5	5436.97 - 5445.4	10s	fine sst. and siltstone beds w/ some mudstone; slightly to highly deformed and folded; siderite, bioclasts
135	Louisbourg 5	5445.4 - 5454.95	10s	{TS #4: 5445.94} dipping blocks of silty mst; sideritic mst; some folding deformation; faulted and
136	Louisbourg 5	5454.95 - 5455.4	10s	fine sst. and siltstone w/ mud; faulted; folded siderite

Table 1b: Classification scheme for lithofacies interpretation. (Gould et al. 2010b)

Facies	Subfacies	Lithology and texture	Primary sedimentary structures	Biogenic structures	General interpretation	Related facies	Notes on diagnostic criteria	Comparison with others	Characteristics
0	0g	sandstone, generally fine but may reach coarse	medium bedded; laminated or cross laminated, common erosional base; possible wave and current ripples	absent to sparse biot	River mouth to shoreface; prodeltaic turbidites	commonly overlies 1 and 2; may interbed with 9	lacks interbedded mudstone	Gould (S4); Cummings and Arnott (6)	0g: common medium bedded graded sandstone beds lacking interbedded mudstone
	0b	fine sandstone, siltstone, mudstone (sandstone > mudstone)	sharp, erosive based beds (<25 cm thick) with sltst laminae, interbedded with mst with sltst laminae; some lenticular bedding; parallel and cross laminae; variable sed structures as in Lamb et al, 2008; possible wave and current ripples	sparse to uncommon biot			sandstone:mudstone ratio	Gould (S2b); Cummings and Arnott (3) and (5); Karim, 2008 (0t), (0s) and (0l)	0t: graded sandstone beds, generally laminated to cross laminated with lesser interbedded mudstone with abundant silt laminae and some lenticular, sparse bioturbation, erosional base
	0m	mudstone, siltstone, very fine sandstone (mudstone >> sandstone)	some sltst or very fine sst laminae; parallel lam, x-lam, lenticular bedding; possible wave and current ripples	uncommon biot			sandstone:mudstone ratio; from 1 by sst; from 1 and 2b by lack of biot	Gould (M1); Cummings et al. (4); Cummings and Arnott (4)	0m: predominant mudstone, uncommon bioturbation, some silt or very fine sandstone laminae
	0a	fine and coarse sandstone, mudstone (sandstone ><mudstone)	alternation of coarse and fine sst beds with interbedded mst; parallel lam, x-lam, lenticular bedding; possible wave and current ripples	absent to sparse biot			mudstone with coarse and fine grained sst		0a: alternation of coarse and fine sandstone beds with interbedded mudstone, bioturbation absent
1		mudstone, <5% fine sandstone or siltstone	thin beds and laminae of parallel fine sst or sltst laminae	abundant to complete biot (*Chondrites* ichnofacies); uncommon thin shelled fossils - echinoderms, ammonites	Shelf	commonly overlies 3 and underlies 2 or 0	from 0 by biot; from 2b by sst; presence of marine shells		may have uncommon thin-shelled fossils
2	2b	mudstone, fine sandstone (10-60%)	destroyed by biot, possible remnants of storm beds with parallel lamination, wave ripples and wave dominated structures	generally moderate to common biot; possible shells *Cruziana* ichnofacies; may have reworked shell frags at base of preserved beds	Shoreface	interbeds with 0; possibly grades into 3	from 0 by biot; from 1 by higher % of sand; less sst than 2c; diverse trace fossil assemblage; sst beds with possible shell hash at base, interbedded with biot sandy mst	Gould (S4)	2b: interbedded with moderate to common bioturbation, sharp base
	2c	fine sandstone (60-95%), mudstone	destroyed by biot, possible remnants of storm beds with parallel lamination, wave ripples and wave dominated structures	common to complete biot, multiple species; possible shells; *Cruziana* ichnofacies; may have reworked shell frags at base of preserved beds			from 0s by biot; from 2b by sst; diverse trace fossil assemblage; primary structures rarely preserved; reworked shells, preserved structures are wave not current dominated	Cummings and Arnott (14)	2c: common to completely bioturbated sandstone and mudstone with sandstone predominant (60 - 90 %)
	2o	fine sandstone	generally thin to thick massive beds	sparse to moderate biot, horizontal *Ophiomorpha* burrows			like 4o but mud drapes absent		
	2x	fine-rare medium sandstone	cross-bedding, mostly low angle, thin bed sets; rare mud drapes	sparse biot			from 4x because of biot, no mud drapes absent. Coal absent. Biot not *Skolithos* ichnofacies		
3	3x	sandy mudstone (10-50% sand); granules; poorly sorted; common brown staining due to early siderite	may have intraclasts	moderate to complete biot; thick shells	Condensed unit on shelf, commonly transgressive	commonly overlies 3y	mudstone	Gould (C1)	3a: sandstone matrix and mud laminae, bioturbation absent to uncommon
	3y	muddy sandstone (50-90% sand), granules; poorly sorted; common brown staining due to early siderite	may have intraclasts	moderate to complete biot; thick shells		commonly overlies 3l or an erosion surface	sandstone	Gould (M2); Cummings and Arnott (13)	3m: mud matrix predominant, moderate to common bioturbation
	3i	intraclast conglomerate; common brown staining due to early siderite	may have intraclasts	may include shells			intraclast cgl		3s: medium sandstone matrix, bioturbation absent, sharp base
	3c	lithic conglomerate; common brown staining due to early siderite	may have intraclasts	may include shells			lithic cgl; generally rare		3b: sandstone matrix, bioturbation absent, erosional base
	3f	firm ground	evidence of strong sed.; commonly associated intraclasts; erosion or incision of underlying sediment	some burrow penetrating firm ground, *Glossifungites*			evidence of firm ground; generally rare		
	3l	bioclastic limestone	parallel lam	abundant shell fragments, possibly in place			bioclastic limestone	Gould (L1); Cummings et al. (7)	3l: bioclastic limestones
	3o	oolitic limestone and sandstone	parallel lam	possible biot			oolitic limestone and sandstone		3o: oolitic limestones and sandstones

Table 1b: Classification scheme for lithofacies interpretation. (Gould et al. 2010b)

Facies	Subfacies	Lithology and texture	Primary sedimentary structures	Biogenic structures	General interpretation	Related facies	Notes on diagnostic criteria	Comparison with others	Characteristics
4	4o	principally fine sandstone	thin to medium bedded, may be cross-bedded; mud drapes	sparse to common biot, *Ophiomorpha* , *Skolithos* ichnofacies	Tidal estuary to fluvial	passes up into 5 or 2	from 5-4 by *Ophiomorpha* burrows; common mud drapes;	Karim, 2008 (4o); Karim, 2008 (4u)	4o: Fine sandstone (< 25 cm), mudstone drapes, *Ophiomorpha* , cross-bedding; 4u: coarse sandstone with bioturbation, mud drapes, calcite cementation
	4g	medium to coarse sandstone; may have coarse grained lag at base of unit	typically thin-bedded, mud drapes; bedding parallel to low angle	absent to sparse biot				Gould (S1); Cummings et al. (2); Cummings and Arnott (10, 12)	4g: medium to coarse sandstone, minor mud drapes, bioturbation absent, base of sandstone may be erosional
	4x	medium to coarse sandstone; mudstone intraclasts; may have coarse grained lag at base of unit	thin to thick beds, many high angle cross-bedded	biot absent; coal intraclasts			coarser grainsize, high-angle cross-bedding	Cummings et al. (1)	4x: thick beds medium to coarse sandstone, not "graded", some cross-bedding
	4n	mudstone, siltstone, very fine sandstone (sandstone>mudstone)	"tidal bundles" of poorly sorted sand and silt; or well-sorted fine sand, rarely with ripples; mud partings 1-2 mm	biot absent or sparse			more silt and sand than 0m; differs from 0a in lack of coarse sst beds	Cumings and Arnott (2); Karim, 2008 (0n)	0n: distinctive graded silt to mud laminae interbedded with well sorted very fine sandstone laminae and lenticular beds, bioturbation absent
5	5m	>75% sandstone, predominantly fine may have medium or coarse grained beds, mudstone	thin bedded; variable mud drapes; mud, slt, and vf sst parallel & x-lam; mud on ripples	variable biot - sparse to moderate, or common to abundant, *Skolithos* ichnofacies; ?plant frags	Mixed flat - intertidal		from 6-1 by sandstone dominance; from 2 by less biot, subvertical burrows dominant, preservation of primary structures diagnostic of tidal environ.	Gould (S3); Cummings et al. (5); Cummings and Arnott (7)	with uncommon to moderate bioturbation, muddy linings to burrows
	5s	>95% sandstone, generally fine may be medium or coarse grained, minor mudstone	possible thin to med bedded; some x-bedding	sparse to mod biot; shells	Sand flat - intertidal to subtidal	may pass up into 4o	mud drapes and *Ophiomorpha* rare compared to 4o; cross- bedding diagnostic; from 2 by less biot, subvertical burrows dominant, preservation of primary structures diagnostic of tidal environ.	Karim, 2008 (4s)	4s: sandstone and siltstone commonly lenticular, mudstone drapes
	5b	20-75% sandstone, predominantly fine may have medium or coarse grained beds	destroyed	abundant to complete biot - common large and long subvertical burrows; may have shells	Mixed flat - intertidal	transitional to 2	large subvertical burrows; from 2 by less biot, subvertical burrows dominant, preservation of primary structures some diagenetic of tidal environ.		
	5c	medium sandstone	sharp based, thin beds	absent	Tidal channel - subtidal	within 5/6	thin beds within 5/6		
6	6s	subequal fine sandstone,mudstone; or 60-75% mudstone, fine sandstone; may have minor medium-coarse sandstone, e.g. in burrows	mud dominant sections with wavy or current ripples and mud on ripple lam, interbedded with prominant parallel lam sst and mst (pinstripe-shaped)	small *Skolithos* ichnofacies burrows absent to common; possible plant frags	Mixed flat-intertidal	commonly interbedded with 4, 5, 7, 8	like 0 but with *Skolithos* burrows, current ripples	Cummings et al. (3); Cummings and Arnott (11); Cummings (P4)	with root traces, tidal flat structures
	6b	>80% mudstone, minor very fine to fine sandstonemay have minor medium-coarse sandstone, e.g. in burrows	destroyed; rare preserved parallel lam, current ripples	common to complete biot; may have whole or fragments of oyster shells	Mudflat- intertidal		from 5b by mud dominance; oyster shells		
	6m	>95% mudstone, may have minor medium-coarse sandstone, e.g. in burrows; may have minor medium-coarse sandstone, e.g. in burrows	rare discontinuous sltst lam, broken by subvertical to vertical burrowing	biot absent to common, may have burrows (horizontal and subvertical) filled with m-c sst; ?oyster shells	Mudflat- intertidal		from other 5/6 by mudstone dominance	Cummings (P4)	
7		lignite or carbon-rich mud		rootlets beneath	Tidal marsh	may overlie 6	lignite or carbon-rich mud		
8		mudstone, rare siltstone	planar parallel to low angle cross siltstone lam	biot generally absent to sparse, with locally intense biot	Lagoon	interbeds with 5 & 6	1 has fossils and overlies 3, is more biot; 8 interbeds with 5 and 6	Cummings (P3)	
9	9g	very coarse to fine sandstone, some graded beds	sharp-based beds, some with erosive structures (sole marks); predominantly massive beds, generally >25cm thick, with minor parallel or cross laminae at top of some beds; possible mud intraclasts	absent to moderate biot at top of beds; plant detritus; possible reworked coastal deposits (shells, sid nodules)	River mouth to prodelta turbidite	commonly interbedded with 0, overliain by 4o	from facies 0 by bed thickness; from 9s by lack of interbedded mudstone	Gould (S2c); Cummings and Arnott (8); Karim, 2008 (4b)	9g: graded sandstone beds lacking interbedded mudstone; 4b: Fine sandstone with coarse bioclasts and ooids and/or coated grains
	9s	fine sandstone, minor mudstone, minor interbedded facies 0	sharp-based beds, some with erosive structures (sole marks); generally >25 thick, parallel lamination at base and cross lamination at top; some beds have mud intraclasts near base	moderate biot at top of beds; plant detritus; possible reworked coastal deposits (shells, sid nodules)			from facies 0 by bed thickness	Gould (S2a), Karim 2008 (9m)	9s: sharp base, parallel lamination at base and cross lamination at top. Some beds have abundant mud intraclasts generally near base; 9m: mud laminae, and intraclasts
10	10f	mudstone to muddy sandstone	destroyed by deformation; secondary structures - massive texture, horizontal foliation	-	Deformed facies	commonly interbedded with 0			10f: dark foliated mudstone to muddy sandstone, massive texture, dark color, horizontal foliation
	10g	sandstone	destroyed by deformation; secondary structures - liquified beds	-					10g: liquefied sandstone beds
	10s	sandstone, siltstone, mudstone,	mostly destroyed by deformation; secondary structures - sheared and folded beds	variable biot					10s: sheared and folded sandstone, siltstone and mudstone, making original structures difficult to recognize

Table 2: Petrography of sandstones from Louisbourg J-47.

(Fields marked with asterisk* add up to 100)

#	Depth (m)	Formations	Rock name	Grains*				*for each mineral or rock type, number of grains as a percentage of total grains*													Matrix*		Cement*	*list in chronological order where apparent*				Porosity*	NOTES
				% of total rock	mean size µm	sorting (poor, fair, good)	roundness of quartz	mono quartz	poly quartz	feldspar	muscovite	biotite	igneous rock fragments	siliceous rock fragments	foliated rock fragments	carbonate rock fragments	fossils	other ferro-mag minerals	opaque minerals	light-coloured heavy minerals	NOTES: List noteworthy minerals and rock fragments, alteration of minerals.	% of total rock	description of material (clay, silt, mud)	% of total rock	cement 1: mineral, % (of total cement), form and any alteration	cement 2: mineral, % (of total cement), form and any alteration	cement 3: mineral, % (of total cement), form and any alteration	other cements	remaining porosity, % of total rock	include information on deformation and veins; cross reference to photomicrographs, BSEI, etc.
16	4073.30	Middle Mississauga	trnsgr. lag	60	200	P	SA	11	<1	<1	?	0	0	0	0	0	88.9	0	0	0	Glt	38	slt/cl	1-2	?				<1	a few coated grains
17	4074.39	Middle Mississauga	fine sst/tr.lag	80	160	G	SR	94	1.05	1.05	1.05	0	0	0	0	0	2.62	0	0	0	Zrn,Glt,Tur	15	slt/cl	4	Cal 1	Sd 3			<1	
18	4075.13	Middle Mississauga	medium sst	80	300	F	SR	98	<1	1.09	1.09	0	0	0	0	0	0	0	0	0		3	clay	16	Cal 10	Sd 6			1	" + mylonitized Qtz
25	4076.26A	Middle Mississauga	trnsgr. lag	60	350	P	SR	96	1.28	1.28	1.28	0	0	0	0	0	0	0	0	0	Py,Rt,St	30	slt/cl	9	Qtz 2	Sd 3	Cal 3	Py 1	1	
19	4076.26B	Middle Mississauga	fine-med sst	65	230	P	SR	87	1.02	1.02	1.02	0	0	0	0	0	10.2	0	0	0		4	clay	30	Qtz 1	Kln 1	Cal 1	Sd 27	<1	mylonitized Qtz
20	4081.17B	Middle Mississauga	fine sst	85	150	F-G	SA	96	<1	2.82	1.13	0	0	0	0	0	0	0	0	0	Zrn,Py,Rt,Chr,St	10	clay	3	Cal 3	Py <1			2	micro-granite
21	4082.80A	Middle Mississauga	mst?	75	200	P	SA	91	<1	2.15	3.23	0	0	0	0	0	3.23	0	0	0	Zrn,Chr,Rt,Hem?	10	clay	15	Qtz 1	Kln 1	Py 1	Sd 12	<1	
26	4082.80B	Middle Mississauga	fine sst	85	200	F-G	SR	89	1.37	2.74	6.85	0	0	0	0	0	0	0	0	0	Zrn,Rt,Glt,St,Hem	10	clay	3	Qtz 0.5	Kln 1	Cal 1	Py 0.5	2	lots of fractures, fluid inclusions
22	4086.86	Middle Mississauga	medium sst	90	250	G	SR	94	1.11	2.22	2.22	0	0	0	0	0	0	0	0	0	Zrn, Glt, Rt	1	slt/cl	5	Kln 1	Cal 3	Sd 0.5	Py 0.5	4	
27	4087.25A	Middle Mississauga	medium sst	80	300	F	SR	90	1.06	3.19	5.32	0	0	0	0	0	0	0	0	0	Zrn,Chr,Rt	5	clay	10	Qtz 1	Kln 1	Cal 8	Sd<1,Py<1	5	
23	4087.25B	Middle Mississauga	medium sst	80	240	F	SA	89	1.19	3.57	5.95	0	0	0	0	0	0	0	0	0	Zrn,Glt,Rt,Chr	5	mud	10	Qtz 1	Kln 1	Cal 7	Sd 1	5	also a bit of Py cement…
28	4088.30A	Middle Mississauga	muddy sst	60	200	P	SR	52	1.03	2.06	4.12	0	0	0	0	0	41.2	0	0	0	Zrn,Chr,Pl,Mnz	13	clay	25	Qtz <1	Sd 20	Cal 1	Py 2, Kln?	2	coated grains
24	4088.30B	Middle Mississauga	muddy sst	60	300	F	SR	57	1.71	5.71	1.14	0	0	0	0	0	34.3	0	0	0	Zrn,Glt,Chr	30	mud	10	Qtz 1	Kln 1	Cal 5	Sd 3	<1	coated grains
1	4406.04	Mic Mac	fine sst	85	300	G	SA - SR	99	1.1	<1	<1	0	0	0	0	0	0	0	0	0	Zrn, Mnz, Grt	<1	clay	10	Kln 3	Qtz 4	Cal 3	Py	4	
2	4406.64	Mic Mac	fine sst	85	300	G	SA	96	<1	1.6	2.14	0	0	0	0	0	0	0	0	0	Zrn, Py	1	clay	10	Qtz 3	Kln 4	Cal 3	Py	4	
3	4408.90A	Mic Mac	v. fine sst	80	80	G	SA	97	<1	1.7	1.7	<1	0	0	0	0	0	0	0	0	Zrn, Grt	<2	clay	15	Py 3	Qtz 2	Cal 10		2	
4	4414.72	Mic Mac	fine sst	85	300	P	SA	97	1.08	1.62	<1	0	0	0	0	0	0	0	0	0	Zrn	1	clay	10	Qtz 2	Kln 2	Cal 6		3	
5	4415.52	Mic Mac	v. fine sst	85	120	G	SR	97	<1	2.15	1.08	0	0	0	0	0	0	0	0	0	Zrn	2	clay	10	Qtz 2	Kln 2	Cal 6		3	
6	4419.96	Mic Mac	muddy sst	85	100	v.P	SA	3.7	<1	<1	1.06	0	0	0	0	0	95.2	0	0	0	Zrn	5	clay	5	Sd(?) 5				<1	Fossils!! *
7	4527.60 A	Mic Mac	medium sst	85	300	G	SA	98	<1	1.09	1.09	0	0	0	0	0	0	0	0	0	Zrn	3	clay	10	Qtz 2	Kln 6	Cal 2		3	
8	4527.60B	Mic Mac	medium sst	85	300	G	SA - SR	98	1.09	<1	1.09	0	0	0	0	0	0	0	0	0		3	clay	10	Qtz 2	Kln 6	Cal 2		2	
9	4528.03A	Mic Mac	medium sst	80	240	G	SA - SR	98	1.09	<1	1.09	0	0	0	0	0	0	0	0	0	Tur, Mnz, Grt, Glt	3	clay	7	Qtz 1	Kln 4	Cal 2		10	
10	4528.03B	Mic Mac	medium sst	80	300	F	SA - SR	98	<1	<1	1.64	0	0	0	0	0	0	0	0	0	Glt,Tur,Zrn,Grt,Py	4	clay	10	Qtz 2	Kln 5	Cal 3		6	
11	4530.93A	Mic Mac	medium sst	80	240	G	SA	100	<1	<1	<1	0	0	0	0	0	0	0	0	0	Zrn,Tur, Glt	10	clay	6	Qtz 2	Kln 2	Cal 2		4	
12	4530.93B	Mic Mac	medium sst	80	300	F	SA	100	<1	<1	<1	0	0	0	0	0	0	0	0	0		10	clay	7	Qtz 2	Cal 4	Kln 1		3	chert/rhyolite ("lots")
13	5445.94	Mic Mac	v. fine sst	80	120	G	SA	96	<1	1.13	2.82	0	0	0	0	0	<1	0	0	0	Zrn,Py,Glt,Ilm,Rt	9	slt/cl	10	Qtz 2	Cal 8			<1	
14	5447.12	Mic Mac	v. fine sst	70	120	P	SR	96	<1	1.12	2.25	0	0	0	0	0	1.12	0	0	0	Py	25	slt/cl	5	Qtz 1	Cal 4			<1	coated grains
15	5449.00	Mic Mac	v. fine sst	50	80	G	SA - SR	96	<1	0	4.19	0	0	0	0	0	0	0	0	0	Py	48	slt/cl	2	Cal 2				<1	

(1) Abbreviations: sst: sandstone, mst: mudstone, sltst: siltstone, med.: medium, v.: very, SA: subangular, SR: subrounded. (2) In the Notes column, all mineral abbreviations are taken after Kretz, 1983. (3) * Fossils for 4419.95 include molluscs, brachiopods, bryozoans, echinoid spines and possibly algae. (4) Number of grains as a percentage of total grains recalculated to 100%, with values <1 rounded to zero.

Table 3a: Microprobe chemical analyses of representative samples from the Louisbourg J-47 well, by depth.

Depth (m)	Reference #	Original[2] grain #	Analysis #[1]	Mineral names	SiO_2	TiO_2	Al_2O_3	Cr_2O3	FeO	MnO	MgO	CaO	Na2O	K_2O	P_2O_5	NiO	SrO	BaO	Total
4076.26A	3	6a	7	albite	71.08	0.00	19.28	0.00	0.00	0.00	0.00	0.00	11.02	0.00	0.00	0.00	0.52	0.00	101.90
4076.26A	5	7a	9	albite	70.76	0.00	19.16	0.00	0.26	0.00	0.00	0.00	11.34	0.07	0.00	0.00	0.51	0.00	102.10
4076.26A	13	27b	13	albite	69.53	0.00	19.72	0.00	0.00	0.00	0.00	0.37	11.44	0.07	0.00	0.00	0.50	0.00	101.63
4076.26A	27	46b	25	albite	68.01	0.00	19.78	0.00	0.27	0.00	0.00	0.20	11.94	0.05	0.00	0.00	0.45	0.00	100.68
4076.26A	6	7b	10	ankerite	0.08	0.00	0.00	0.00	14.85	1.27	8.32	32.78	0.00	0.07	0.03	0.00	0.02	0.00	57.41
4076.26A	17	31a	17	ankerite	0.04	0.00	0.00	0.00	13.27	1.87	8.14	34.74	0.00	0.04	0.00	0.00	0.01	0.00	58.11
4076.26A	21	34a	135	apatite	1.15	0.02	0.02	0.00	0.63	0.00	0.00	54.44	0.00	0.07	40.50	0.00	0.00	0.00	96.83
4076.26A	7	16a	131	chlorite	25.39	0.00	21.09	0.00	32.51	0.00	4.42	0.71	0.00	0.38	0.26	0.00	0.00	0.00	84.76
4076.26A	9	16c	133	chlorite	30.45	0.00	20.91	0.00	29.18	0.00	4.54	1.02	0.00	0.75	0.15	0.00	0.00	0.00	87.00
4076.26A	11	20	11	chlorite	28.23	0.00	22.51	0.00	29.23	0.00	4.33	0.51	0.22	1.00	0.02	0.00	0.14	0.00	86.20
4076.26A	16	30	16	chlorite	26.71	0.46	20.99	0.00	31.93	0.15	6.37	0.34	0.13	0.26	0.13	0.00	0.18	0.00	87.65
4076.26A	19	33a	19	chlorite	21.94	3.81	20.97	0.00	31.66	0.00	4.16	0.41	0.04	0.08	0.01	0.00	0.12	0.00	83.21
4076.26A	1	1	5	chromian spinel	0.01	0.02	25.84	41.93	19.32	0.28	12.27	0.07	0.02	0.02	0.00	0.14	0.14	0.00	100.05
4076.26A	2	5	6	chromian spinel	0.00	0.00	29.45	39.81	17.17	0.30	13.81	0.02	0.02	0.01	0.00	0.07	0.09	0.00	100.77
4076.26A	23	35	21	chromian spinel	0.00	0.18	30.01	38.07	18.59	0.27	10.94	0.03	0.02	0.01	0.00	0.09	0.09	0.00	98.31
4076.26A	25	43	23	chromite	0.13	2.49	13.65	41.74	27.32	0.31	12.25	0.16	0.01	0.08	0.00	0.23	0.15	0.04	98.57
4076.26A	28	47	26	chromite	0.09	0.26	17.69	41.99	25.21	0.38	9.08	0.06	0.06	0.06	0.00	0.08	0.09	0.00	95.05
4076.26A	8	16b	132	Fe-calcite	0.00	0.00	0.00	0.00	1.41	0.00	1.16	50.46	0.00	0.00	0.00	0.00	0.00	0.00	53.03
4076.26A	20	33b	20	Fe-calcite	0.37	0.00	0.22	0.00	1.80	0.62	0.36	58.94	0.00	0.11	0.02	0.00	0.20	0.00	62.63
4076.26A	4	6b	8	K-feldspar	65.73	0.00	18.10	0.00	0.08	0.00	0.00	0.00	0.37	13.65	0.00	0.00	0.00	0.00	97.94
4076.26A	12	27a	12	K-feldspar	64.95	0.00	18.36	0.00	0.00	0.00	0.00	0.00	0.34	15.59	0.00	0.00	0.00	0.00	99.24
4076.26A	14	29a	14	K-feldspar	65.49	0.00	18.38	0.00	0.02	0.00	0.00	0.06	1.76	13.73	0.00	0.00	0.00	0.00	99.45
4076.26A	24	38	22	K-feldspar	63.79	0.00	18.51	0.00	0.37	0.00	0.00	0.00	0.36	13.83	0.00	0.00	0.00	0.55	97.40
4076.26A	26	46a	24	K-feldspar	63.99	0.00	18.36	0.00	0.00	0.00	0.00	0.00	0.49	15.50	0.00	0.00	0.00	0.00	98.35
4076.26A	29	57	27	K-feldspar	62.51	0.00	18.45	0.00	0.28	0.00	0.08	0.00	0.41	14.93	0.00	0.00	0.03	0.01	96.68
4076.26A	15	29b	15	siderite	0.07	0.00	0.00	0.00	44.85	1.60	7.56	2.23	0.00	0.07	0.00	0.00	0.00	0.00	56.38
4076.26A	22	34b	136	unknown	32.68	0.89	17.76	0.00	14.02	0.00	2.79	8.74	0.09	4.01	6.68	0.00	0.00	0.00	87.66
4076.26A	10	16d	134	Mg-calcite	0.00	0.00	0.00	0.00	0.30	0.00	2.30	63.85	0.10	0.02	0.00	0.00	0.00	0.00	66.57
4076.26A	18	31b	18	quartz	96.72	0.00	0.08	0.00	0.11	0.00	0.01	0.11	0.00	0.02	0.00	0.00	0.85	0.00	97.90
4076.26A	31	58b	138	quartz	96.53	0.00	0.06	0.01	0.06	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.54	0.00	97.23
4081.17B	77	69	55	Mg-rich biotite	32.30	5.82	15.97	0.00	14.16	0.00	15.55	0.11	0.51	5.52	0.00	0.00	0.00	0.14	90.08
4081.17B	85	81	148	muscovite	47.72	0.83	36.12	0.03	0.75	0.02	0.41	0.00	1.11	6.66	0.00	0.01	0.00	0.23	93.89
4081.17B	71	60b	141	quartz	97.67	0.00	0.00	0.01	0.06	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.42	0.00	98.18
4081.17B	52	35a	41a	unknown	9.00	0.00	2.79	0.00	0.00	0.00	0.00	0.00	10.52	0.01	0.00	0.00	0.00	0.00	22.31
4081.17B	53	35a	41b	unknown	6.87	0.00	2.10	0.00	0.00	0.00	0.00	0.00	10.47	0.02	0.00	0.00	0.00	0.00	19.46
4081.17B	56	36a	44	unknown - qtz+?	75.52	0.00	11.09	0.00	1.30	0.00	1.55	0.00	0.06	3.65	0.19	0.00	0.55	0.00	93.91
4081.17B	73	64	98	unknown	1.16	0.00	0.00	0.00	0.25	0.00	0.00	1.16	0.00	0.03	24.18	0.02	0.00	0.00	26.80
4081.17B	74	65	143	unknown	0.21	0.36	0.12	0.55	0.45	0.27	0.07	0.16	0.16	0.09	35.38	0.62	0.03	0.59	39.05
4081.17B	64	50b	50	albite	68.57	0.00	19.69	0.00	0.00	0.00	0.00	0.35	11.68	0.08	0.00	0.00	0.44	0.00	100.81
4081.17B	82	73b	145	albite	70.62	0.01	18.95	0.00	0.05	0.01	0.00	0.24	10.92	0.02	0.00	0.01	0.10	0.00	100.92
4081.17B	83	76a	146	albite	59.61	0.04	19.48	0.05	8.08	0.03	1.04	0.08	7.80	0.29	0.00	0.04	0.12	0.00	96.65

Table 3a: Microprobe chemical analyses of representative samples from the Louisbourg J-47 well, by depth.

4081.17B	88	84	59	albite	66.82	0.00	18.75	0.00	0.01	0.00	0.00	0.66	11.43	0.10	0.00	0.00	0.43	0.00	98.20
4081.17B	65	54	51	Al-P-S (?)	1.05	0.26	32.79	0.09	1.53	0.00	0.16	1.06	0.26	0.90	18.59	0.00	8.07	0.58	65.34
4081.17B	34	2	29a	altered K-feldspar	52.70	0.00	14.79	0.00	0.00	0.00	0.00	0.00	1.26	14.43	0.00	0.00	0.00	0.00	83.17
4081.17B	41	16	33	altered muscovite	41.32	0.31	31.09	0.00	1.45	0.00	0.65	0.00	0.76	9.09	0.00	0.00	0.00	0.00	84.67
4081.17B	44	18	36a	chromian spinel	0.11	1.70	19.86	35.82	28.59	0.33	10.76	0.06	0.02	0.03	0.01	0.21	0.16	0.00	97.66
4081.17B	45	18	36b	chromian spinel	0.03	1.65	21.19	35.96	28.06	0.31	11.19	0.04	0.01	0.03	0.00	0.11	0.01	0.00	98.59
4081.17B	48	30	39a	chromian spinel	0.04	0.00	30.15	37.34	15.23	0.22	13.09	0.03	0.00	0.02	0.00	0.11	0.08	0.00	96.32
4081.17B	49	30	39b	chromian spinel	0.00	0.00	31.28	36.96	16.24	0.21	11.41	0.01	0.00	0.00	0.00	0.02	0.01	0.00	96.14
4081.17B	59	43	46a	chromian spinel	0.07	0.00	25.41	42.20	16.74	0.26	9.30	0.11	0.04	0.04	0.00	0.08	0.06	0.00	94.32
4081.17B	60	43	46b	chromian spinel	0.04	0.00	25.25	42.27	17.06	0.24	9.13	0.06	0.02	0.01	0.00	0.00	0.01	0.00	94.10
4081.17B	66	57	52	chromian spinel	0.04	0.69	30.80	31.21	22.03	0.23	13.37	0.00	0.01	0.04	0.00	0.00	0.01	0.00	98.45
4081.17B	79	72	57a	chromian spinel	0.01	0.15	25.68	35.80	25.04	0.34	8.43	0.00	0.00	0.04	0.00	0.09	0.03	0.00	95.60
4081.17B	80	72	57b	chromian spinel	0.00	0.15	26.75	36.53	24.76	0.28	8.78	0.01	0.00	0.01	0.00	0.01	0.01	0.00	97.30
4081.17B	69	59	139	chlorite	36.87	0.19	24.82	0.11	18.87	0.09	3.88	0.21	0.09	2.90	0.00	0.07	0.00	0.08	88.19
4081.17B	70	60a	140	chlorite	26.59	0.13	21.65	0.09	33.23	0.30	7.27	0.04	0.01	0.02	0.00	0.10	0.00	0.16	89.59
4081.17B	32	1	28a	chromite	0.05	0.23	15.58	45.83	20.07	0.31	10.20	0.03	0.07	0.04	0.00	0.16	0.13	0.00	92.68
4081.17B	33	1	28b	chromite	0.00	0.24	18.46	47.66	20.44	0.32	11.96	0.03	0.02	0.05	0.00	0.12	0.14	0.00	99.43
4081.17B	35	2	29b	chromite	0.03	0.23	18.46	47.65	20.71	0.31	12.04	0.04	0.02	0.03	0.00	0.10	0.13	0.00	99.76
4081.17B	37	8	31a	chromite	0.08	0.10	6.31	55.04	27.97	0.55	5.87	0.04	0.01	0.03	0.00	0.11	0.23	0.06	96.40
4081.17B	38	8	31b	chromite	0.02	0.07	7.21	57.06	28.04	0.51	6.30	0.03	0.00	0.03	0.01	0.01	0.18	0.00	99.47
4081.17B	39	15	32a	chromite	0.07	0.06	18.23	43.53	23.83	0.33	6.45	0.06	0.02	0.03	0.00	0.13	0.21	0.00	92.95
4081.17B	40	15	32b	chromite	0.00	0.06	19.59	43.72	24.81	0.33	8.95	0.06	0.01	0.03	0.02	0.05	0.09	0.00	97.71
4081.17B	50	31	40a	chromite	0.05	0.13	12.22	57.85	15.14	1.67	7.63	0.04	0.10	0.03	0.00	0.09	0.22	0.01	95.20
4081.17B	51	31	40b	chromite	0.00	0.07	12.90	58.77	12.35	1.70	7.92	0.05	0.09	0.01	0.02	0.00	0.11	0.00	93.98
4081.17B	57	42	45a	chromite	0.13	0.14	11.19	55.56	17.82	1.47	4.82	0.15	0.15	0.05	0.00	0.04	0.16	0.00	91.66
4081.17B	58	42	45b	chromite	0.04	0.16	10.98	56.47	19.24	0.56	5.28	0.13	0.06	0.04	0.01	0.07	0.18	0.04	93.25
4081.17B	67	58	53a	chromite	0.06	0.02	9.69	62.67	13.82	1.29	8.47	0.01	0.06	0.04	0.00	0.00	0.19	0.00	96.31
4081.17B	68	58	53b	chromite	0.01	0.00	9.69	62.22	14.27	1.38	9.81	0.01	0.04	0.01	0.03	0.00	0.15	0.00	97.63
4081.17B	75	68	54a	chromite	0.00	0.12	19.32	48.36	17.97	0.46	9.59	0.00	0.03	0.04	0.00	0.05	0.11	0.00	96.05
4081.17B	76	68	54b	chromite	0.00	0.09	20.22	48.45	17.88	0.46	9.75	0.00	0.04	0.01	0.02	0.00	0.08	0.00	97.00
4081.17B	86	82	58a	chromite	0.00	0.02	18.89	49.84	17.56	0.35	10.25	0.00	0.00	0.03	0.00	0.02	0.11	0.00	97.07
4081.17B	87	82	58b	chromite	0.00	0.00	19.11	49.55	18.69	0.32	11.90	0.00	0.01	0.01	0.03	0.00	0.09	0.00	99.71
4081.17B	43	17b	35	Fe-calcite	0.00	0.00	0.00	0.00	3.14	1.33	0.54	59.77	0.00	0.01	0.00	0.00	0.06	0.00	64.85
4081.17B	61	44	47	hydromuscovite	45.97	0.00	32.66	0.00	1.43	0.00	0.90	0.00	0.35	7.41	0.00	0.00	0.00	0.00	88.73
4081.17B	62	48	48	hydromuscovite	46.58	0.38	35.05	0.00	1.15	0.00	0.69	0.01	0.90	7.38	0.00	0.00	0.01	0.00	92.15
4081.17B	36	3	30	illite (Lt)	38.60	0.40	27.50	0.00	2.63	0.00	0.36	0.00	0.28	7.83	0.00	0.00	0.06	0.00	77.66
4081.17B	47	27	38	illite	44.34	0.00	33.26	0.00	4.06	0.01	0.77	0.01	0.14	8.30	0.00	0.00	0.00	0.00	90.90
4081.17B	55	36b	43	illite	42.14	0.32	23.72	0.00	5.53	0.00	2.06	0.22	0.26	7.40	0.00	0.00	0.00	0.00	81.64
4081.17B	42	17a	34	K-feldspar	62.34	0.00	17.12	0.00	0.00	0.00	0.00	0.01	1.02	15.07	0.00	0.00	0.00	0.00	95.57
4081.17B	46	22	37	K-feldspar	63.79	0.00	17.74	0.00	0.00	0.00	0.00	0.00	0.89	15.44	0.00	0.00	0.00	0.16	98.01
4081.17B	54	35b	42	K-feldspar	63.57	0.00	17.64	0.00	0.00	0.00	0.00	0.00	1.05	14.88	0.00	0.00	0.00	0.12	97.26
4081.17B	63	50a	49	K-feldspar	64.58	0.00	18.35	0.00	0.00	0.00	0.00	0.00	0.55	15.34	0.12	0.00	0.00	0.00	98.93
4081.17B	72	61	142	K-feldspar	65.29	0.09	18.29	0.01	0.13	0.01	0.00	0.00	0.60	14.17	0.00	0.03	0.00	0.41	99.03

Table 3a: Microprobe chemical analyses of representative samples from the Louisbourg J-47 well, by depth.

4081.17B	78	70	56	K-feldspar	63.12	0.00	17.35	0.00	0.00	0.00	0.00	0.01	0.99	14.93	0.00	0.00	0.00	0.00	96.40
4081.17B	81	73a	144	K-feldspar	65.65	0.05	18.18	0.06	0.13	0.02	0.00	0.09	0.94	14.18	0.00	0.05	0.00	0.08	99.43
4081.17B	84	76b	147	K-feldspar	65.35	0.06	18.14	0.04	0.14	0.04	0.00	0.00	0.44	14.72	0.00	0.04	0.00	0.17	99.15
4408.90			145	Tourmaline	36.73	0.65	34.57	0.02	5.65	0.00	6.62	0.41	2.09	0.04	0.00	0.00	0.00	0.00	86.78
4408.90			146	Tourmaline	36.64	0.77	34.72	0.02	5.70	0.00	6.54	0.43	2.07	0.04	0.00	0.00	0.00	0.00	86.93
4408.90			147	Tourmaline	35.41	0.64	34.87	0.00	9.64	0.05	3.58	0.30	1.92	0.07	0.00	0.00	0.00	0.00	86.50
4408.90			148	Tourmaline	35.62	0.62	34.27	0.00	9.77	0.03	3.63	0.27	1.97	0.09	0.00	0.00	0.00	0.00	86.27
4528.03B	96	12	151	albite	68.32	0.01	20.17	0.01	0.15	0.01	0.00	1.33	10.72	0.22	0.00	0.00	0.08	0.04	101.07
4528.03B	112	28	74	albite	69.05	0.00	19.30	0.00	0.10	0.00	0.03	0.03	11.66	0.03	0.00	0.00	0.39	0.00	100.59
4528.03B	116	36	154	albite	68.98	0.03	19.90	0.00	0.06	0.01	0.00	0.80	11.24	0.03	0.00	0.00	0.08	0.00	101.14
4528.03B	117	41	76	albite	69.34	0.00	19.26	0.00	0.00	0.00	0.00	0.00	11.72	0.00	0.00	0.00	0.42	0.00	100.74
4528.03B	121	48	99	albite	69.38	0.00	19.39	0.00	0.00	0.00	0.00	0.00	10.95	0.00	0.00	0.00	0.00	0.00	99.71
4528.03B	120	47	156	biotite	33.69	3.34	16.98	0.12	24.83	0.59	8.16	0.03	0.06	6.96	0.00	0.10	0.00	0.33	95.17
4528.03B	113	29	75	chlorite	23.84	0.00	20.99	0.00	33.69	0.27	7.68	0.00	0.02	0.03	0.01	0.00	0.04	0.00	86.58
4528.03B	90	3	61	chromian spinel	0.00	0.03	26.69	39.39	22.20	0.36	10.96	0.02	0.03	0.04	0.00	0.09	0.05	0.00	99.84
4528.03B	91	4	62a	chromian spinel	0.00	0.00	23.59	49.04	14.60	0.25	8.46	0.00	0.01	0.04	0.02	0.04	0.08	0.00	96.13
4528.03B	92	4	62b	chromian spinel	0.00	0.00	23.59	48.84	14.51	0.21	8.64	0.00	0.01	0.00	0.00	0.00	0.06	0.00	95.87
4528.03B	97	13	64a	chromian spinel	0.76	0.11	26.11	40.92	12.75	0.28	7.01	0.45	0.30	0.06	0.03	0.06	0.05	0.00	88.90
4528.03B	98	13	64b	chromian spinel	0.06	0.04	26.86	39.34	19.51	0.19	8.12	0.08	0.07	0.01	0.03	0.04	0.05	0.00	94.40
4528.03B	105	19	70a	chromian spinel	0.00	0.00	28.00	40.23	19.46	0.25	9.43	0.00	0.02	0.03	0.03	0.08	0.05	0.00	97.60
4528.03B	106	19	70b	chromian spinel	0.00	0.00	27.97	40.37	19.07	0.22	10.20	0.00	0.02	0.00	0.00	0.00	0.04	0.00	97.88
4528.03B	109	21	72a	chromian spinel	0.00	0.06	22.95	44.93	19.19	0.30	8.49	0.00	0.00	0.05	0.00	0.08	0.08	0.00	96.13
4528.03B	110	21	72b	chromian spinel	0.00	0.04	22.76	44.59	20.02	0.29	8.55	0.01	0.00	0.00	0.03	0.05	0.05	0.00	96.41
4528.03B	118	42	77	chromian spinel	0.05	0.57	30.11	35.75	15.36	0.19	17.61	0.00	0.00	0.03	0.00	0.14	0.00	0.00	99.81
4528.03B	122	52	100	chromian spinel	0.00	0.00	31.44	35.00	14.36	0.00	11.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.95
4528.03B	123	55	101	chromian spinel	0.00	0.00	28.63	34.30	19.89	0.00	12.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.76
4528.03B	129	64a	107	chromian spinel	0.00	0.32	27.50	36.77	18.86	0.00	10.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.63
4528.03B	131	67	109	chromian spinel	0.00	0.55	24.92	35.96	16.60	0.00	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.34
4528.03B	100	17a	66a	~chromian spinel	0.00	0.53	33.48	32.90	16.90	0.25	13.03	0.02	0.01	0.02	0.00	0.12	0.00	0.00	97.25
4528.03B	101	17a	66b	~chromian spinel	0.00	0.48	33.05	33.16	17.15	0.16	13.08	0.02	0.00	0.00	0.03	0.09	0.00	0.00	97.21
4528.03B	102	17b	67	~chromian spinel	2.47	0.65	2.25	36.44	37.17	1.98	1.65	0.49	0.78	0.21	0.02	0.11	0.12	0.00	84.35
4528.03B	103	17c	68	~chromian spinel	2.67	0.59	2.50	35.24	35.09	1.95	1.62	0.52	0.95	0.17	0.01	0.12	0.18	0.00	81.60
4528.03B	99	16	65	chromite	0.00	0.04	16.46	52.52	20.33	0.41	10.04	0.00	0.01	0.05	0.05	0.02	0.09	0.00	100.02
4528.03B	104	18	69	chromite	0.01	0.07	14.74	53.96	20.28	0.44	10.31	0.00	0.03	0.04	0.00	0.03	0.12	0.00	100.02
4528.03B	107	20	71a	chromite	0.02	0.40	16.01	44.71	29.18	0.44	6.21	0.01	0.01	0.05	0.00	0.04	0.13	0.00	97.20
4528.03B	108	20	71b	chromite	0.00	0.37	16.28	44.56	28.52	0.37	5.74	0.03	0.04	0.03	0.02	0.02	0.08	0.00	96.05
4528.03B	111	27	73	chromite	0.01	0.89	8.60	46.08	37.77	0.68	4.77	0.03	0.00	0.06	0.02	0.17	0.17	0.01	99.26
4528.03B	125	57	103	chromite	0.00	0.00	16.69	43.72	25.39	0.00	9.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.19
4528.03B	128	62	106	chromite	0.00	0.00	15.56	50.38	20.90	0.00	7.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.06
4528.03B	130	64b	108	chromite	0.00	0.73	14.06	39.30	31.99	0.00	4.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.67
4528.03B	93	5a	149	clast (mostly qtz)	88.82	0.05	3.97	0.03	1.11	0.01	0.26	0.05	0.03	0.97	0.00	0.01	0.27	0.00	95.59
4528.03B	94	5b	150	clast (mostly qtz)	93.09	0.05	2.74	0.03	1.29	0.05	0.31	0.06	0.00	0.34	0.00	0.00	0.39	0.00	98.35
4528.03B	114	31a	152	clast (mostly qtz)	96.58	0.02	0.75	0.00	0.29	0.01	0.14	0.15	0.00	0.20	0.00	0.00	0.46	0.00	98.62

Table 3a: Microprobe chemical analyses of representative samples from the Louisbourg J-47 well, by depth.

4528.03B	115	31b	153	clast (mostly qtz)	93.80	0.02	1.93	0.02	1.02	0.02	0.52	0.00	0.00	0.75	0.00	0.00	0.35	0.00	98.43
4528.03B	124	56	102	illite	46.91	0.00	30.25	0.00	3.15	0.00	2.35	0.32	0.00	6.76	0.27	0.00	0.00	0.00	90.01
4528.03B	119	45	155	muscovite	49.40	0.07	34.11	0.06	1.69	0.09	0.67	0.02	0.04	6.69	0.00	0.02	0.00	0.19	93.06
4528.03B	126	59	104	tourmaline	35.07	0.39	34.17	0.00	7.91	0.00	4.20	0.71	1.39	0.00	0.00	0.00	0.00	0.00	83.84
4528.03B	127	60	105	tourmaline	35.61	0.62	32.57	0.00	8.85	0.00	4.05	0.21	1.89	0.00	0.00	0.00	0.00	0.00	83.81
5445.94	138	44	116	albite	71.12	0.00	19.50	0.00	0.00	0.00	0.00	0.08	11.11	0.00	0.00	0.00	0.00	0.00	101.81
5445.94	147	68	124	albite	69.92	0.00	19.46	0.00	0.00	0.00	0.00	0.00	11.59	0.00	0.00	0.00	0.00	0.00	100.97
5445.94	132	9	110	chlorite	28.95	0.00	20.97	0.00	28.70	0.00	6.59	0.08	0.00	0.40	0.00	0.00	0.00	0.00	85.69
5445.94	144	57	122	chlorite	30.93	0.00	17.58	0.00	27.31	0.00	13.51	0.14	0.00	0.02	0.00	0.00	0.00	0.00	89.49
5445.94	150	74	127	chlorite	24.18	0.00	23.49	0.00	33.54	0.00	4.87	0.08	0.00	0.00	0.00	0.00	0.00	0.00	86.17
5445.94	139	46	117	chromian spinel	0.00	0.00	30.50	34.89	17.81	0.00	12.86	0.07	0.00	0.00	0.00	0.00	0.00	0.00	96.13
5445.94	141	52	119	chromian spinel	0.00	0.73	32.25	27.60	22.08	0.00	10.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.10
5445.94	151	76	128	chromite	0.00	0.00	10.49	59.67	13.72	0.02	8.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.36
5445.94	135	31	113	monazite	27.33	0.00	0.00	0.00	0.00	0.00	0.00	19.71	0.00	0.00	13.53	0.00	0.00	0.00	60.56
5445.94	143	54	121	siderite	0.32	0.00	0.15	0.00	46.03	1.18	6.56	1.49	0.00	0.00	0.00	0.00	0.00	0.00	55.73
5445.94	152	?	129	tourmaline	34.94	0.00	32.10	0.00	16.34	0.00	0.21	0.00	2.22	0.00	0.00	0.00	0.00	0.00	85.81
5445.94	153	?	130	tourmaline	36.53	0.00	30.25	0.00	6.56	0.00	8.34	0.82	2.16	0.00	0.00	0.00	0.00	0.00	84.64
5445.94	145	59	157	?	0.03	0.36	0.00	0.50	2.15	0.26	0.00	0.27	6.19	0.09	0.06	0.44	0.00	0.54	10.88

Notes: (1) Some of the grains had to be re-analyzed because the first analysis was suspect. This is why some analyses have more than one number, e.g. analyses 28a and 28b in slide 4081.17b. (4) The numbers in this column are the same as the grain numbers in Appendix 1 and the appropriate BSE images are in Appendix 2. Lt = low total

Table 3b: Microprobe chemical analyses of representative samples from the Louisbourg J-47 well, by mineral.

Depth (m)	Reference #	Original[2] grain #	Analysis #[1]	Mineral names	SiO_2	TiO_2	Al_2O_3	Cr_2O3	FeO	MnO	MgO	CaO	Na2O	K_2O	P_2O_5	NiO	SrO	BaO	Total
4076.26A	3	6a	7	albite	71.08	0.00	19.28	0.00	0.00	0.00	0.00	0.00	11.02	0.00	0.00	0.00	0.52	0.00	101.90
4076.26A	5	7a	9	albite	70.76	0.00	19.16	0.00	0.26	0.00	0.00	0.00	11.34	0.07	0.00	0.00	0.51	0.00	102.10
4076.26A	13	27b	13	albite	69.53	0.00	19.72	0.00	0.00	0.00	0.00	0.37	11.44	0.07	0.00	0.00	0.50	0.00	101.63
4076.26A	27	46b	25	albite	68.01	0.00	19.78	0.00	0.27	0.00	0.00	0.20	11.94	0.05	0.00	0.00	0.45	0.00	100.68
4081.17B	64	50b	50	albite	68.57	0.00	19.69	0.00	0.00	0.00	0.00	0.35	11.68	0.08	0.00	0.00	0.44	0.00	100.81
4081.17B	82	73b	145	albite	70.62	0.01	18.95	0.00	0.05	0.01	0.00	0.24	10.92	0.02	0.00	0.01	0.10	0.00	100.92
4081.17B	83	76a	146	albite	59.61	0.04	19.48	0.05	8.08	0.03	1.04	0.08	7.80	0.29	0.00	0.04	0.12	0.00	96.65
4081.17B	88	84	59	albite	66.82	0.00	18.75	0.00	0.01	0.00	0.00	0.66	11.43	0.10	0.00	0.00	0.43	0.00	98.20
4528.03B	96	12	151	albite	68.32	0.01	20.17	0.01	0.15	0.01	0.00	1.33	10.72	0.22	0.00	0.00	0.08	0.04	101.07
4528.03B	112	28	74	albite	69.05	0.00	19.30	0.00	0.10	0.00	0.03	0.03	11.66	0.03	0.00	0.00	0.39	0.00	100.59
4528.03B	116	36	154	albite	68.98	0.03	19.90	0.00	0.06	0.01	0.00	0.80	11.24	0.03	0.00	0.00	0.08	0.00	101.14
4528.03B	117	41	76	albite	69.34	0.00	19.26	0.00	0.00	0.00	0.00	0.00	11.72	0.00	0.00	0.00	0.42	0.00	100.74
4528.03B	121	48	99	albite	69.38	0.00	19.39	0.00	0.00	0.00	0.00	0.00	10.95	0.00	0.00	0.00	0.00	0.00	99.71
5445.94	138	44	116	albite	71.12	0.00	19.50	0.00	0.00	0.00	0.00	0.08	11.11	0.00	0.00	0.00	0.00	0.00	101.81
5445.94	147	68	124	albite	69.92	0.00	19.46	0.00	0.00	0.00	0.00	0.00	11.59	0.00	0.00	0.00	0.00	0.00	100.97
4081.17B	65	54	51	Al-P-S (?)	1.05	0.26	32.79	0.09	1.53	0.00	0.16	1.06	0.26	0.90	18.59	0.00	8.07	0.58	65.34
4081.17B	34	2	29a	altered K-feldspar	52.70	0.00	14.79	0.00	0.00	0.00	0.00	0.00	1.26	14.43	0.00	0.00	0.00	0.00	83.17
4081.17B	41	16	33	altered muscovite	41.32	0.31	31.09	0.00	1.45	0.00	0.65	0.00	0.76	9.09	0.00	0.00	0.00	0.00	84.67
4076.26A	6	7b	10	ankerite	0.08	0.00	0.00	0.00	14.85	1.27	8.32	32.78	0.00	0.07	0.03	0.00	0.02	0.00	57.41
4076.26A	17	31a	17	ankerite	0.04	0.00	0.00	0.00	13.27	1.87	8.14	34.74	0.00	0.04	0.00	0.00	0.01	0.00	58.11
4076.26A	21	34a	135	apatite	1.15	0.02	0.02	0.00	0.63	0.00	0.00	54.44	0.00	0.07	40.50	0.00	0.00	0.00	96.83
4528.03B	120	47	156	biotite	33.69	3.34	16.98	0.12	24.83	0.59	8.16	0.03	0.06	6.96	0.00	0.10	0.00	0.33	95.17
4076.26A	7	16a	131	chlorite	25.39	0.00	21.09	0.00	32.51	0.00	4.42	0.71	0.00	0.38	0.26	0.00	0.00	0.00	84.76
4076.26A	9	16c	133	chlorite	30.45	0.00	20.91	0.00	29.18	0.00	4.54	1.02	0.00	0.75	0.15	0.00	0.00	0.00	87.00
4076.26A	11	20	11	chlorite	28.23	0.00	22.51	0.00	29.23	0.00	4.33	0.51	0.22	1.00	0.02	0.00	0.14	0.00	86.20
4076.26A	16	30	16	chlorite	26.71	0.46	20.99	0.00	31.93	0.15	6.37	0.34	0.13	0.26	0.13	0.00	0.18	0.00	87.65
4076.26A	19	33a	19	chlorite	21.94	3.81	20.97	0.00	31.66	0.00	4.16	0.41	0.04	0.08	0.01	0.00	0.12	0.00	83.21
4081.17B	69	59	139	chlorite	36.87	0.19	24.82	0.11	18.87	0.09	3.88	0.21	0.09	2.90	0.00	0.07	0.00	0.08	88.19
4081.17B	70	60a	140	chlorite	26.59	0.13	21.65	0.09	33.23	0.30	7.27	0.04	0.01	0.02	0.00	0.10	0.00	0.16	89.59
4528.03B	113	29	75	chlorite	23.84	0.00	20.99	0.00	33.69	0.27	7.68	0.00	0.02	0.03	0.01	0.00	0.04	0.00	86.58
5445.94	132	9	110	chlorite	28.95	0.00	20.97	0.00	28.70	0.00	6.59	0.08	0.00	0.40	0.00	0.00	0.00	0.00	85.69
5445.94	144	57	122	chlorite	30.93	0.00	17.58	0.00	27.31	0.00	13.51	0.14	0.00	0.02	0.00	0.00	0.00	0.00	89.49
5445.94	150	74	127	chlorite	24.18	0.00	23.49	0.00	33.54	0.00	4.87	0.08	0.00	0.00	0.00	0.00	0.00	0.00	86.17
4076.26A	1	1	5	chromian spinel	0.01	0.02	25.84	41.93	19.32	0.28	12.27	0.07	0.02	0.02	0.00	0.14	0.14	0.00	100.05
4076.26A	2	5	6	chromian spinel	0.00	0.00	29.45	39.81	17.17	0.30	13.81	0.02	0.02	0.01	0.00	0.07	0.09	0.00	100.77
4076.26A	23	35	21	chromian spinel	0.00	0.18	30.01	38.07	18.59	0.27	10.94	0.03	0.02	0.01	0.00	0.09	0.09	0.00	98.31
4081.17B	44	18	36a	chromian spinel	0.11	1.70	19.86	35.82	28.59	0.33	10.76	0.06	0.02	0.03	0.01	0.21	0.16	0.00	97.66
4081.17B	45	18	36b	chromian spinel	0.03	1.65	21.19	35.96	28.06	0.31	11.19	0.04	0.01	0.03	0.00	0.11	0.01	0.00	98.59
4081.17B	48	30	39a	chromian spinel	0.04	0.00	30.15	37.34	15.23	0.22	13.09	0.03	0.00	0.02	0.00	0.11	0.08	0.00	96.32
4081.17B	49	30	39b	chromian spinel	0.00	0.00	31.28	36.96	16.24	0.21	11.41	0.01	0.00	0.00	0.00	0.02	0.01	0.00	96.14
4081.17B	59	43	46a	chromian spinel	0.07	0.00	25.41	42.20	16.74	0.26	9.30	0.11	0.04	0.04	0.00	0.08	0.06	0.00	94.32

Table 3b: Microprobe chemical analyses of representative samples from the Louisbourg J-47 well, by mineral.

Depth (m)	Reference #	Original[2] grain #	Analysis #[1]	Mineral names	SiO_2	TiO_2	Al_2O_3	Cr_2O3	FeO	MnO	MgO	CaO	Na2O	K_2O	P_2O_5	NiO	SrO	BaO	Total
4081.17B	60	43	46b	chromian spinel	0.04	0.00	25.25	42.27	17.06	0.24	9.13	0.06	0.02	0.01	0.00	0.00	0.01	0.00	94.10
4081.17B	66	57	52	chromian spinel	0.04	0.69	30.80	31.21	22.03	0.23	13.37	0.00	0.01	0.04	0.00	0.00	0.01	0.00	98.45
4081.17B	79	72	57a	chromian spinel	0.01	0.15	25.68	35.80	25.04	0.34	8.43	0.00	0.00	0.04	0.00	0.09	0.03	0.00	95.60
4081.17B	80	72	57b	chromian spinel	0.00	0.15	26.75	36.53	24.76	0.28	8.78	0.01	0.00	0.01	0.00	0.01	0.01	0.00	97.30
4528.03B	90	3	61	chromian spinel	0.00	0.03	26.69	39.39	22.20	0.36	10.96	0.02	0.03	0.04	0.00	0.09	0.05	0.00	99.84
4528.03B	91	4	62a	chromian spinel	0.00	0.00	23.59	49.04	14.60	0.25	8.46	0.00	0.01	0.04	0.02	0.04	0.08	0.00	96.13
4528.03B	92	4	62b	chromian spinel	0.00	0.00	23.59	48.84	14.51	0.21	8.64	0.00	0.01	0.00	0.00	0.00	0.06	0.00	95.87
4528.03B	97	13	64a	chromian spinel	0.76	0.11	26.11	40.92	12.75	0.28	7.01	0.45	0.30	0.06	0.03	0.06	0.05	0.00	88.90
4528.03B	98	13	64b	chromian spinel	0.06	0.04	26.86	39.34	19.51	0.19	8.12	0.08	0.07	0.01	0.03	0.04	0.05	0.00	94.40
4528.03B	105	19	70a	chromian spinel	0.00	0.00	28.00	40.23	19.46	0.25	9.43	0.00	0.02	0.03	0.03	0.08	0.05	0.00	97.60
4528.03B	106	19	70b	chromian spinel	0.00	0.00	27.97	40.37	19.07	0.22	10.20	0.00	0.02	0.00	0.00	0.00	0.04	0.00	97.88
4528.03B	109	21	72a	chromian spinel	0.00	0.06	22.95	44.93	19.19	0.30	8.49	0.00	0.00	0.05	0.00	0.08	0.08	0.00	96.13
4528.03B	110	21	72b	chromian spinel	0.00	0.04	22.76	44.59	20.02	0.29	8.55	0.01	0.00	0.00	0.03	0.05	0.05	0.00	96.41
4528.03B	118	42	77	chromian spinel	0.05	0.57	30.11	35.75	15.36	0.19	17.61	0.00	0.00	0.03	0.00	0.14	0.00	0.00	99.81
4528.03B	122	52	100	chromian spinel	0.00	0.00	31.44	35.00	14.36	0.00	11.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	91.95
4528.03B	123	55	101	chromian spinel	0.00	0.00	28.63	34.30	19.89	0.00	12.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.76
4528.03B	129	64a	107	chromian spinel	0.00	0.32	27.50	36.77	18.86	0.00	10.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.63
4528.03B	131	67	109	chromian spinel	0.00	0.55	24.92	35.96	16.60	0.00	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.34
5445.94	139	46	117	chromian spinel	0.00	0.00	30.50	34.89	17.81	0.00	12.86	0.07	0.00	0.00	0.00	0.00	0.00	0.00	96.13
5445.94	141	52	119	chromian spinel	0.00	0.73	32.25	27.60	22.08	0.00	10.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.10
4528.03B	100	17a	66a	~chromian spinel	0.00	0.53	33.48	32.90	16.90	0.25	13.03	0.02	0.01	0.02	0.00	0.12	0.00	0.00	97.25
4528.03B	101	17a	66b	~chromian spinel	0.00	0.48	33.05	33.16	17.15	0.16	13.08	0.02	0.00	0.00	0.03	0.09	0.00	0.00	97.21
4528.03B	102	17b	67	~chromian spinel	2.47	0.65	2.25	36.44	37.17	1.98	1.65	0.49	0.78	0.21	0.02	0.11	0.12	0.00	84.35
4528.03B	103	17c	68	~chromian spinel	2.67	0.59	2.50	35.24	35.09	1.95	1.62	0.52	0.95	0.17	0.01	0.12	0.18	0.00	81.60
4076.26A	25	43	23	chromite	0.13	2.49	13.65	41.74	27.32	0.31	12.25	0.16	0.01	0.08	0.00	0.23	0.15	0.04	98.57
4076.26A	28	47	26	chromite	0.09	0.26	17.69	41.99	25.21	0.38	9.08	0.06	0.06	0.06	0.00	0.08	0.09	0.00	95.05
4081.17B	32	1	28a	chromite	0.05	0.23	15.58	45.83	20.07	0.31	10.20	0.03	0.07	0.04	0.00	0.16	0.13	0.00	92.68
4081.17B	33	1	28b	chromite	0.00	0.24	18.46	47.66	20.44	0.32	11.96	0.03	0.02	0.05	0.00	0.12	0.14	0.00	99.43
4081.17B	35	2	29b	chromite	0.03	0.23	18.46	47.65	20.71	0.31	12.04	0.04	0.02	0.03	0.00	0.10	0.13	0.00	99.76
4081.17B	37	8	31a	chromite	0.08	0.10	6.31	55.04	27.97	0.55	5.87	0.04	0.01	0.03	0.00	0.11	0.23	0.06	96.40
4081.17B	38	8	31b	chromite	0.02	0.07	7.21	57.06	28.04	0.51	6.30	0.03	0.00	0.03	0.01	0.01	0.18	0.00	99.47
4081.17B	39	15	32a	chromite	0.07	0.06	18.23	43.53	23.83	0.33	6.45	0.06	0.02	0.03	0.00	0.13	0.21	0.00	92.95
4081.17B	40	15	32b	chromite	0.00	0.06	19.59	43.72	24.81	0.33	8.95	0.06	0.01	0.03	0.02	0.05	0.09	0.00	97.71
4081.17B	50	31	40a	chromite	0.05	0.13	12.22	57.85	15.14	1.67	7.63	0.04	0.10	0.03	0.00	0.09	0.22	0.01	95.20
4081.17B	51	31	40b	chromite	0.00	0.07	12.90	58.77	12.35	1.70	7.92	0.05	0.09	0.01	0.02	0.00	0.11	0.00	93.98
4081.17B	57	42	45a	chromite	0.13	0.14	11.19	55.56	17.82	1.47	4.82	0.15	0.15	0.05	0.00	0.04	0.16	0.00	91.66
4081.17B	58	42	45b	chromite	0.04	0.16	10.98	56.47	19.24	0.56	5.28	0.13	0.06	0.04	0.01	0.07	0.18	0.04	93.25
4081.17B	67	58	53a	chromite	0.06	0.02	9.69	62.67	13.82	1.29	8.47	0.01	0.06	0.04	0.00	0.00	0.19	0.00	96.31
4081.17B	68	58	53b	chromite	0.01	0.00	9.69	62.22	14.27	1.38	9.81	0.01	0.04	0.01	0.03	0.00	0.15	0.00	97.63
4081.17B	75	68	54a	chromite	0.00	0.12	19.32	48.36	17.97	0.46	9.59	0.00	0.03	0.04	0.00	0.05	0.11	0.00	96.05
4081.17B	76	68	54b	chromite	0.00	0.09	20.22	48.45	17.88	0.46	9.75	0.00	0.04	0.01	0.02	0.00	0.08	0.00	97.00

Table 3b: Microprobe chemical analyses of representative samples from the Louisbourg J-47 well, by mineral.

Depth (m)	Reference #	Original[2] grain #	Analysis #[1]	Mineral names	SiO_2	TiO_2	Al_2O_3	Cr_2O3	FeO	MnO	MgO	CaO	Na2O	K_2O	P_2O_5	NiO	SrO	BaO	Total
4081.17B	86	82	58a	chromite	0.00	0.02	18.89	49.84	17.56	0.35	10.25	0.00	0.00	0.03	0.00	0.02	0.11	0.00	97.07
4081.17B	87	82	58b	chromite	0.00	0.00	19.11	49.55	18.69	0.32	11.90	0.00	0.01	0.01	0.03	0.00	0.09	0.00	99.71
4528.03B	99	16	65	chromite	0.00	0.04	16.46	52.52	20.33	0.41	10.04	0.00	0.01	0.05	0.05	0.02	0.09	0.00	100.02
4528.03B	104	18	69	chromite	0.01	0.07	14.74	53.96	20.28	0.44	10.31	0.00	0.03	0.04	0.00	0.03	0.12	0.00	100.02
4528.03B	107	20	71a	chromite	0.02	0.40	16.01	44.71	29.18	0.44	6.21	0.01	0.01	0.05	0.00	0.04	0.13	0.00	97.20
4528.03B	108	20	71b	chromite	0.00	0.37	16.28	44.56	28.52	0.37	5.74	0.03	0.04	0.03	0.02	0.02	0.08	0.00	96.05
4528.03B	111	27	73	chromite	0.01	0.89	8.60	46.08	37.77	0.68	4.77	0.03	0.00	0.06	0.02	0.17	0.17	0.01	99.26
4528.03B	125	57	103	chromite	0.00	0.00	16.69	43.72	25.39	0.00	9.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	95.19
4528.03B	128	62	106	chromite	0.00	0.00	15.56	50.38	20.90	0.00	7.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.06
4528.03B	130	64b	108	chromite	0.00	0.73	14.06	39.30	31.99	0.00	4.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.67
5445.94	151	76	128	chromite	0.00	0.00	10.49	59.67	13.72	0.02	8.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.36
4528.03B	93	5a	149	clast (mostly qtz)	88.82	0.05	3.97	0.03	1.11	0.01	0.26	0.05	0.03	0.97	0.00	0.01	0.27	0.00	95.59
4528.03B	94	5b	150	clast (mostly qtz)	93.09	0.05	2.74	0.03	1.29	0.05	0.31	0.06	0.00	0.34	0.00	0.00	0.39	0.00	98.35
4528.03B	114	31a	152	clast (mostly qtz)	96.58	0.02	0.75	0.00	0.29	0.01	0.14	0.15	0.00	0.20	0.00	0.00	0.46	0.00	98.62
4528.03B	115	31b	153	clast (mostly qtz)	93.80	0.02	1.93	0.02	1.02	0.02	0.52	0.00	0.00	0.75	0.00	0.00	0.35	0.00	98.43
4076.26A	8	16b	132	Fe-calcite	0.00	0.00	0.00	0.00	1.41	0.00	1.16	50.46	0.00	0.00	0.00	0.00	0.00	0.00	53.03
4076.26A	20	33b	20	Fe-calcite	0.37	0.00	0.22	0.00	1.80	0.62	0.36	58.94	0.00	0.11	0.02	0.00	0.20	0.00	62.63
4081.17B	43	17b	35	Fe-calcite	0.00	0.00	0.00	0.00	3.14	1.33	0.54	59.77	0.00	0.01	0.00	0.00	0.06	0.00	64.85
4081.17B	61	44	47	hydromuscovite	45.97	0.00	32.66	0.00	1.43	0.00	0.90	0.00	0.35	7.41	0.00	0.00	0.00	0.00	88.73
4081.17B	62	48	48	hydromuscovite	46.58	0.38	35.05	0.00	1.15	0.00	0.69	0.01	0.90	7.38	0.00	0.00	0.01	0.00	92.15
4081.17B	36	3	30	illite (Lt)	38.60	0.40	27.50	0.00	2.63	0.00	0.36	0.00	0.28	7.83	0.00	0.00	0.06	0.00	77.66
4081.17B	47	27	38	illite	44.34	0.00	33.26	0.00	4.06	0.01	0.77	0.01	0.14	8.30	0.00	0.00	0.00	0.00	90.90
4081.17B	55	36b	43	illite	42.14	0.32	23.72	0.00	5.53	0.00	2.06	0.22	0.26	7.40	0.00	0.00	0.00	0.00	81.64
4528.03B	124	56	102	illite	46.91	0.00	30.25	0.00	3.15	0.00	2.35	0.32	0.00	6.76	0.27	0.00	0.00	0.00	90.01
4076.26A	4	6b	8	K-feldspar	65.73	0.00	18.10	0.00	0.08	0.00	0.00	0.00	0.37	13.65	0.00	0.00	0.00	0.00	97.94
4076.26A	12	27a	12	K-feldspar	64.95	0.00	18.36	0.00	0.00	0.00	0.00	0.00	0.34	15.59	0.00	0.00	0.00	0.00	99.24
4076.26A	14	29a	14	K-feldspar	65.49	0.00	18.38	0.00	0.02	0.00	0.00	0.06	1.76	13.73	0.00	0.00	0.00	0.00	99.45
4076.26A	24	38	22	K-feldspar	63.79	0.00	18.51	0.00	0.37	0.00	0.00	0.00	0.36	13.83	0.00	0.00	0.00	0.55	97.40
4076.26A	26	46a	24	K-feldspar	63.99	0.00	18.36	0.00	0.00	0.00	0.00	0.00	0.49	15.50	0.00	0.00	0.00	0.00	98.35
4076.26A	29	57	27	K-feldspar	62.51	0.00	18.45	0.00	0.28	0.00	0.08	0.00	0.41	14.93	0.00	0.00	0.03	0.01	96.68
4081.17B	42	17a	34	K-feldspar	62.34	0.00	17.12	0.00	0.00	0.00	0.00	0.01	1.02	15.07	0.00	0.00	0.00	0.00	95.57
4081.17B	46	22	37	K-feldspar	63.79	0.00	17.74	0.00	0.00	0.00	0.00	0.00	0.89	15.44	0.00	0.00	0.00	0.16	98.01
4081.17B	54	35b	42	K-feldspar	63.57	0.00	17.64	0.00	0.00	0.00	0.00	0.00	1.05	14.88	0.00	0.00	0.00	0.12	97.26
4081.17B	63	50a	49	K-feldspar	64.58	0.00	18.35	0.00	0.00	0.00	0.00	0.00	0.55	15.34	0.12	0.00	0.00	0.00	98.93
4081.17B	72	61	142	K-feldspar	65.29	0.09	18.29	0.01	0.13	0.01	0.00	0.00	0.60	14.17	0.00	0.03	0.00	0.41	99.03
4081.17B	78	70	56	K-feldspar	63.12	0.00	17.35	0.00	0.00	0.00	0.00	0.01	0.99	14.93	0.00	0.00	0.00	0.00	96.40
4081.17B	81	73a	144	K-feldspar	65.65	0.05	18.18	0.06	0.13	0.02	0.00	0.09	0.94	14.18	0.00	0.05	0.00	0.08	99.43
4081.17B	84	76b	147	K-feldspar	65.35	0.06	18.14	0.04	0.14	0.04	0.00	0.00	0.44	14.72	0.00	0.04	0.00	0.17	99.15
4076.26A	10	16d	134	Mg-calcite	0.00	0.00	0.00	0.00	0.30	0.00	2.30	63.85	0.10	0.02	0.00	0.00	0.00	0.00	66.57
4081.17B	77	69	55	Mg-rich biotite	32.30	5.82	15.97	0.00	14.16	0.00	15.55	0.11	0.51	5.52	0.00	0.00	0.00	0.14	90.08
5445.94	135	31	113	monazite	27.33	0.00	0.00	0.00	0.00	0.00	0.00	19.71	0.00	0.00	13.53	0.00	0.00	0.00	60.56

Table 3b: Microprobe chemical analyses of representative samples from the Louisbourg J-47 well, by mineral.

Depth (m)	Reference #	Original[2] grain #	Analysis #[1]	Mineral names	SiO_2	TiO_2	Al_2O_3	Cr_2O3	FeO	MnO	MgO	CaO	Na2O	K_2O	P_2O_5	NiO	SrO	BaO	Total
4081.17B	85	81	148	muscovite	47.72	0.83	36.12	0.03	0.75	0.02	0.41	0.00	1.11	6.66	0.00	0.01	0.00	0.23	93.89
4528.03B	119	45	155	muscovite	49.40	0.07	34.11	0.06	1.69	0.09	0.67	0.02	0.04	6.69	0.00	0.02	0.00	0.19	93.06
4076.26A	18	31b	18	quartz	96.72	0.00	0.08	0.00	0.11	0.00	0.01	0.11	0.00	0.02	0.00	0.00	0.85	0.00	97.90
4076.26A	31	58b	138	quartz	96.53	0.00	0.06	0.01	0.06	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.54	0.00	97.23
4081.17B	71	60b	141	quartz	97.67	0.00	0.00	0.01	0.06	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.42	0.00	98.18
4076.26A	15	29b	15	siderite	0.07	0.00	0.00	0.00	44.85	1.60	7.56	2.23	0.00	0.07	0.00	0.00	0.00	0.00	56.38
5445.94	143	54	121	siderite	0.32	0.00	0.15	0.00	46.03	1.18	6.56	1.49	0.00	0.00	0.00	0.00	0.00	0.00	55.73
4408.90			145	tourmaline	36.73	0.65	34.57	0.02	5.65	0.00	6.62	0.41	2.09	0.04	0.00	0.00	0.00	0.00	86.78
4408.90			146	tourmaline	36.64	0.77	34.72	0.02	5.70	0.00	6.54	0.43	2.07	0.04	0.00	0.00	0.00	0.00	86.93
4408.90			147	tourmaline	35.41	0.64	34.87	0.00	9.64	0.05	3.58	0.30	1.92	0.07	0.00	0.00	0.00	0.00	86.50
4408.90			148	tourmaline	35.62	0.62	34.27	0.00	9.77	0.03	3.63	0.27	1.97	0.09	0.00	0.00	0.00	0.00	86.27
4528.03B	126	59	104	tourmaline	35.07	0.39	34.17	0.00	7.91	0.00	4.20	0.71	1.39	0.00	0.00	0.00	0.00	0.00	83.84
4528.03B	127	60	105	tourmaline	35.61	0.62	32.57	0.00	8.85	0.00	4.05	0.21	1.89	0.00	0.00	0.00	0.00	0.00	83.81
5445.94	152	?	129	tourmaline	34.94	0.00	32.10	0.00	16.34	0.00	0.21	0.00	2.22	0.00	0.00	0.00	0.00	0.00	85.81
5445.94	153	?	130	tourmaline	36.53	0.00	30.25	0.00	6.56	0.00	8.34	0.82	2.16	0.00	0.00	0.00	0.00	0.00	84.64
4076.26A	22	34b	136	unknown	32.68	0.89	17.76	0.00	14.02	0.00	2.79	8.74	0.09	4.01	6.68	0.00	0.00	0.00	87.66
4081.17B	52	35a	41a	unknown	9.00	0.00	2.79	0.00	0.00	0.00	0.00	0.00	10.52	0.01	0.00	0.00	0.00	0.00	22.31
4081.17B	53	35a	41b	unknown	6.87	0.00	2.10	0.00	0.00	0.00	0.00	0.00	10.47	0.02	0.00	0.00	0.00	0.00	19.46
4081.17B	56	36a	44	unknown - qtz+?	75.52	0.00	11.09	0.00	1.30	0.00	1.55	0.00	0.06	3.65	0.19	0.00	0.55	0.00	93.91
4081.17B	73	64	98	unknown	1.16	0.00	0.00	0.00	0.25	0.00	0.00	1.16	0.00	0.03	24.18	0.02	0.00	0.00	26.80
4081.17B	74	65	143	unknown	0.21	0.36	0.12	0.55	0.45	0.27	0.07	0.16	0.16	0.09	35.38	0.62	0.03	0.59	39.05
5445.94	145	59	157	?	0.03	0.36	0.00	0.50	2.15	0.26	0.00	0.27	6.19	0.09	0.06	0.44	0.00	0.54	10.88

Notes: (1) Some of the grains had to be re-analyzed because the first analysis was suspect. This is why some analyses have more than one number, e.g. analyses 28a and 28b in slide 4081.17b. (4) The numbers in this column are the same as the grain numbers in Appendix 1 and the appropriate BSE images are in Appendix 2. Lt = low total

Table 4: Detrital and Neomorphic Mineral Assemblages with depth in Louisbourg J-47 well.

Depth	Formation	Mean size μm	Sorting (poor, fair, good)	Detrital Minerals	Neomorphic Minerals
4073.30	Middle Mississauga	200	P	K-feldspar Zircon Plagioclase	Glauconite Coated grains
4074.39	Middle Mississauga	160	G	Zircon Feldspar Tourmaline Muscovite	Glauconite Calcite Siderite
4075.13	Middle Mississauga	300	F	Mylonitized quartz K-feldspar Plagioclase Microcline Muscovite	Calcite Siderite Glauconite
4076.26A*	Middle Mississauga	350	P	Rutile Chalcopyrite Biotite Staurolite Chromite Chamosite Chromian Spinel Apatite Albite Garnet K-feldspar Quartz Zircon Muscovite	Pyrite Albite Apatite Quartz Overgrowths Glauconite Fe-Calcite Siderite Chlorite Mg- Calcite Calcite Kaolinite Coated grains TiO_2 Ankerite
4076.26B	Middle Mississauga	230	P	Mylonitized quartz K-feldspar Muscovite Tourmaline	Quartz Overgrowths Kaolinite Calcite Siderite
4081.17B*	Middle Mississauga	150	F-G	Zircon K-feldspar Apatite Rutile Muscovite Monazite Staurolite Xenotime Plagioclase Chromian Spinel Ilmenite Biotite Hydromuscovite Chromite	Pyrite Albite Fe- Calcite Calcite Kaolinite Hydromuscovite Siderite Chlorite TiO_2 Illite Barite Aluminium sulphate phosphate
4082.80A	Middle Mississauga	200	P	Zircon Feldspar Chromite Muscovite Rutile Hematite	Quartz Overgrowths Kaolinite Pyrite Siderite
4082.80B	Middle Mississauga	200	F-G	Zircon Feldspar Chromite Muscovite Rutile Hematite	Quartz Overgrowths Kaolinite Pyrite Siderite
4086.86	Middle Mississauga	250	G	Zircon Feldspar Rutile Muscovite	Glauconite Pyrite Kaolinite Siderite Calcite

Table 4: Detrital and Neomorphic Mineral Assemblages with depth in Louisbourg J-47 well.

Depth	Formation	Mean size µm	Sorting (poor, fair, good)	Detrital Minerals	Neomorphic Minerals
4087.25A	Middle Mississauga	300	F	Zircon Rutile Chromite Feldspar Muscovite	Quartz Overgrowths Kaolinite Calcite
4087.25B	Middle Mississauga	240	F	Zircon Rutile Chromite Feldspar Muscovite Tourmaline	Glauconite Quartz Overgrowths Kaolinite Calcite Siderite
4088.30A	Middle Mississauga	200	P	Zircon Chromite Plagioclase Muscovite Monazite	Pyrite Quartz Overgrowths Siderite Calcite Coated grains Kaolinite
4088.30B	Middle Mississauga	300	F	Zircon Chromite Feldspar Muscovite	Glauconite Quartz Overgrowths Kaolinite Coated grains Siderite Calcite
4406.04	Mic Mac	300	G	Zircon Monazite Garnet Feldspar Muscovite	Kaolinite Quartz Overgrowths Calcite Pyrite
4406.64	Mic Mac	300	G	Zircon Feldspar Tourmaline Muscovite Biotite	Pyrite Quartz Overgrowths Kaolinite Calcite
4408.90A	Mic Mac	80	G	Zircon Plagioclase Garnet Muscovite Biotite Tourmaline	Pyrite Quartz Overgrowths Calcite
4414.72	Mic Mac	300	P	Zircon Plagioclase Muscovite	Quartz Overgrowths Kaolinite Calcite
4415.52	Mic Mac	120	G	Zircon Plagioclase Muscovite	Quartz Overgrowths Kaolinite Calcite
4419.96	Mic Mac	100	V.P	Zircon K-feldspar Muscovite	Siderite

Table 4: Detrital and Neomorphic Mineral Assemblages with depth in Louisbourg J-47 well.

Depth	Formation	Mean size µm	Sorting (poor, fair, good)	Detrital Minerals	Neomorphic Minerals
4527.60 A	Mic Mac	300	G	Zircon Feldspar Muscovite	Quartz Overgrowths Kaolinite Calcite
4527.60B	Mic Mac	300	G	Feldspar Muscovite	Quartz Overgrowths Kaolinite Calcite
4528.03A	Mic Mac	240	G	Tourmaline Monazite Garnet Feldspar Muscovite	Quartz Overgrowths Kaolinite Calcite Glauconite
4528.03B*	Mic Mac	300	F	Tourmaline Zircon Garnet Rutile Chromian spinel Monazite Sphalerite Chromite Albite Chamosite Muscovite Plagioclase Barite Apatite Biotite Hydromuscovite	Glauconite Pyrite Quartz Overgrowths Kaolinite Sphalerite Siderite Calcite Chlorite Illite Albite Barite Phosphate Hydromuscovite TiO_2
4530.93A	Mic Mac	240	G	Zircon Tourmaline Feldspar Muscovite	Glauconite Quartz Overgrowths Kaolinite Calcite
4530.93B	Mic Mac	300	F	Feldspar Muscovite Illmenite Altered opaques sometimes within lithic clasts with quartz ± feldspar	Quartz Overgrowths Kaolinite Calcite
5445.94*	Mic Mac	120	G	Zircon Ilmenite Rutile Muscovite Chromian Spinel Apatite Shaplerite Albite Monazite Tourmaline Chamosite Barite Xenotime	Pyrite Sphalerite Quartz Overgrowths Calcite Aluminium phosphate Siderite Kaolinite Ankerite Chlorite sulphate Barite Mg-Calcite Albite? TiO_2
5447.12	Mic Mac	120	P	Feldspar Muscovite	Pyrite Quartz Overgrowths Calcite Coated grains
5449.00	Mic Mac	80	G	Feldspar Muscovite	Pyrite Quartz Overgrowths

Note: * indicates samples studied in detail by SEM and Electron microprobe.

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
1	4076.26a	1	1	chromian spinel	chromian spinel	chromian spinel
2	4076.26a	2	2	?altered feldspar		?altered feldspar
3	4076.26a	3	3	K-feldspar		K-feldspar
4	4076.26a	4	4	K-feldspar		K-feldspar
5	4076.26a	5	5	chromite	chromian spinel	chromian spinel
6	4076.26a	6	6	albite	(a) K-feld; (b) albite	(a) K-feld; (b) albite
7	4076.26a	7	7	K-feldspar	(a) albite; (b) ankerite	(a) albite; (b) ankerite
8	4076.26a	8	8	?chlorite + glauconite		?chlorite + glauconite
9	4076.26a	9	9	chorite + glauconite + carbonate		chorite + glauconite + carbonate
10	4076.26a	10	10	K-feldspar		K-feldspar
11	4076.26a	11	11	chloritized bt		chloritized bt
12	4076.26a	12	12	chlorite		chlorite
13	4076.26a	13	13	?chloritized bt		?chloritized bt
14	4076.26a	14	14	glauconite + chlorite		glauconite + chlorite
15	4076.26a	15	15	chloritized Kfs		chloritized Kfs
16	4076.26a	16	16	garnet	(a,c) chamosite, (b) Fe-cal, (d) Mg-cal	(a,c) chamosite, (b) Fe-cal, (d) Mg-cal
17	4076.26a	17	17	glauconite + chlorite		glauconite + chlorite
18	4076.26a	18	18	chlorite + glauconite		chlorite + glauconite
19	4076.26a	19	19	feldspars mixture		feldspars mixture
20	4076.26a	20	20	garnet	chamosite	altered garnet
21	4076.26a	21 - 1	21	chlorite		chlorite
22	4076.26a	21 - 2	21	chlorite + glauconite		chlorite + glauconite
23	4076.26a	22 - 1	22	kaolinite		kaolinite
24	4076.26a	22 - 2	22	chlorite + glauconite		chlorite + glauconite
25	4076.26a	23 - 1	23	chlorite + glauconite		chlorite + glauconite
26	4076.26a	23 - 2	23	chlorite + glauconite		chlorite + glauconite
27	4076.26a	24	24	chlorite + glauconite		chlorite + glauconite
28	4076.26a	25	25	altered ilmenite		altered ilmenite
29	4076.26a	26 - 1	26	glauconite		glauconite
30	4076.26a	26 - 2	26	chlorite + glauconite		chlorite + glauconite
31	4076.26a	27 - 1	27	K-feldspar	K-feldspar	K-feldspar
32	4076.26a	27 - 2	27	albite	albite	albite
33	4076.26a	28 - 1	28	glauconite + chlorite		glauconite + chlorite
34	4076.26a	28 - 2	28	quartz		quartz
35	4076.26a	28 - 3	28	mixture		mixture
36	4076.26a	29 - 1	29	K-feldspar	K-feldspar	K-feldspar
37	4076.26a	29 - 2	29	siderite	siderite	siderite
38	4076.26a	30	30	garnet	Mg-chlorite	altered garnet
39	4076.26a	31 - 1	31	ankerite	ankerite	ankerite
40	4076.26a	31 - 2	31	quartz (mixture)	quartz	quartz (mixture)
41	4076.26a	32	32	K-feldspar		K-feldspar
42	4076.26a	33	33	ferroan calcite	(a) chlorite, (b) Fe-calcite	(a) chlorite, (b) Fe-calcite
43	4076.26a	34 - 1	34	chlorite + others		chlorite + others
44	4076.26a	34 - 2	34	apatite	apatite	apatite
45	4076.26a	34 - 3	34	calcite		calcite
46	4076.26a	34 - 4	34	mixture	mixture	mixture
47	4076.26a	35	35	chromian spinel	chromian spinel	chromian spinel
48	4076.26a	36	36	chlorite		chlorite
49	4076.26a	37 - 1	37	rutile		rutile
50	4076.26a	37 - 2	37	rutile		rutile
51	4076.26a	37 - 3	37	calcite		calcite
52	4076.26a	37 - 4	37	kaolinite		kaolinite

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
53	4076.26a	37 - 5	37	kaol (+ some calc)		kaol (+ some calc)
54	4076.26a	37 - 6	37	quartz		quartz
55	4076.26a	38	38	K-feldspar	K-feldspar	K-feldspar
56	4076.26a	39 - 1	39	chlorite + glauconite		chlorite + glauconite
57	4076.26a	39 - 2	39	chlorite + glauconite		chlorite + glauconite
58	4076.26a	39 - 3	39	chlorite + glauconite + rutile		chlorite + glauconite + rutile
59	4076.26a	40 - 1	40	siderite		siderite
60	4076.26a	40 - 2	40	siderite		siderite
61	4076.26a	40 - 3	40	siderite		siderite
62	4076.26a	40 - 4	40	K-feldspar		K-feldspar
63	4076.26a	40 - 5	40	ankerite		ankerite
64	4076.26a	41 - 1	41	zircon		zircon
65	4076.26a	41 - 2	41	rutile		rutile
66	4076.26a	42 - 1	42	altered muscovite		altered muscovite
67	4076.26a	42 - 2	42	chlorite		chlorite
68	4076.26a	42 - 3	42	chlorite + mica		chlorite + mica
69	4076.26a	43	43	Fe- rich chromite	chromite	chromite
70	4076.26a	44 - 1	44	chlorite		chlorite
71	4076.26a	44 - 2	44	chlorite		chlorite
72	4076.26a	45 - 1	45	zircon		zircon
73	4076.26a	45 - 2	45	apatite		apatite
74	4076.26a	46 - 1	46	K-feldspar	K-feldspar	K-feldspar
75	4076.26a	46 - 2	46	albite	albite	albite
76	4076.26a	46 - 3	46	K-feldspar		K-feldspar
77	4076.26a	46 - 4	46	albite		albite
78	4076.26a	47	47	Fe-rich chromite	chromite	chromite
79	4076.26a	48	48	barite		barite
80	4076.26a	49 - 1	49	chlorite		chlorite
81	4076.26a	49 - 2	49	chlorite		chlorite
82	4076.26a	49 - 3	49	calcite + chlorite		calcite + chlorite
83	4076.26a	50	50	apatite		apatite
84	4076.26a	51	51	chlorite + glauconite		chlorite + glauconite
85	4076.26a	52 - 1	52	chlorite + glauconite		chlorite + glauconite
86	4076.26a	52 - 2	52	chlorite + calcite		chlorite + calcite
87	4076.26a	53	53	chlorite after musc		chlorite after musc
88	4076.26a	54	54	rutile		rutile
89	4076.26a	55	55	mixture		mixture
90	4076.26a	56	56	glauconite		glauconite
91	4076.26a	57 - 1	57	K-feldspar	K-feldspar	K-feldspar
92	4076.26a	57 - 2	57			bad spot
93	4076.26a	57 - 3	57	albite		albite
94	4076.26a	58	58	chalcopyrite	(a) chalcopyrite, (b) quartz	(a) chalcopyrite, (b) quartz
95	4076.26a	59 - 1	59	chlorite + glauc		chlorite + glauc
96	4076.26a	59 - 2	59	chlorite + glauconite + rutile		chlorite + glauconite + rutile
97	4076.26a	60	60	K-feldspar		K-feldspar
98	4081.17b	1	1	chromite	chromite	chromite
99	4081.17b	2	2	K-feldspar	K-feldspar	K-feldspar
100	4081.17b	3	3	muscovite	muscovite	muscovite
101	4081.17b	4	4	chlorite		chlorite
102	4081.17b	5 - 1	5	ferroan calcite		ferroan calcite
103	4081.17b	5 - 2	5	K-feldspar		K-feldspar
104	4081.17b	6	6	K-feldspar		K-feldspar
105	4081.17b	7 - 1	7	chlorite		chlorite

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
106	4081.17b	7 - 2	7	chlorite		chlorite
107	4081.17b	7 - 3	7	(musc after chlorite) + rutile		(musc after chlorite) + rutile
108	4081.17b	8	8	chromite	chromite	chromite
109	4081.17b	9	9	barite		barite
110	4081.17b	10 - 1	10	K-feldspar		K-feldspar
111	4081.17b	10 - 2	10	ferroan calcite		ferroan calcite
112	4081.17b	10 - 3	10	ferroan calcite		ferroan calcite
113	4081.17b	11	11	apatite		apatite
114	4081.17b	12	12	rutile after ilmenite		rutile after ilmenite
115	4081.17b	13	13	zircon		zircon
116	4081.17b	14 - 1	14	chlorite after musc		chlorite after musc
117	4081.17b	14 - 2	14	chlorite after musc		chlorite after musc
118	4081.17b	15 - 1	15	chromite	chromite	chromite
119	4081.17b	15 - 2	15	chromite	chromite	chromite
120	4081.17b	16 - 1	16	muscovite	muscovite	muscovite
121	4081.17b	16 - 2	16	muscovite		muscovite
122	4081.17b	17	17	K-feldspar	(a) K-feld, (b) Fe-calcite	(a) K-feld, (b) Fe-calcite
123	4081.17b	18 - 1	18	chromite	chromite	chromian spinel
124	4081.17b	18 - 2	18	chromite	chromian spinel	chromian spinel
125	4081.17b	19 - 1	19	chlorite + rutile		chlorite + TiO_2
126	4081.17b	19 - 2	19	chlorite after musc		chlorite after musc
127	4081.17b	19 - 3	19	chlorite + rutile		chlorite + TiO_2
128	4081.17b	20 - 1	20	zircon		zircon
129	4081.17b	20 - 2	20	zircon		zircon
130	4081.17b	20 - 3	20	zircon		zircon
131	4081.17b	21 - 1	21	muscovite		muscovite
132	4081.17b	21 - 2	21	muscovite		muscovite
133	4081.17b	21 - 3	21	muscovite		muscovite
134	4081.17b	21 - 4	21	quartz		quartz
135	4081.17b	21 - 5	21	monazite		monazite
136	4081.17b	22	22	K-feldspar	K-feldspar	K-feldspar
137	4081.17b	23 - 1	23	chlorite		chlorite
138	4081.17b	23 - 2	23	chlorite		chlorite
139	4081.17b	24 - 1	24	chlorite + TiO_2		chlorite + TiO_2
140	4081.17b	24 - 2	24	chlorite after musc.		chlorite after musc.
141	4081.17b	25	25	barite		barite
142	4081.17b	26	26	rutile		rutile
143	4081.17b	27 - 1	27	muscovite	muscovite	muscovite
144	4081.17b	27 - 2	27	muscovite		muscovite
145	4081.17b	28 - 1	28	(chlorite after musc) + TiO_2		(chlorite after musc) + TiO_2
146	4081.17b	28 - 2	28	(chlorite after musc) + TiO_2		(chlorite after musc) + TiO_2
147	4081.17b	29 - 1	29	chlorite after musc		chlorite after musc
148	4081.17b	29 - 2	29	chlorite after musc		chlorite after musc
149	4081.17b	30 - 1	30	chromian spinel	chromian spinel	chromian spinel
150	4081.17b	30 - 2	30	chromian spinel	chromian spinel	chromian spinel
151	4081.17b	31 - 1	31	chromite	chromite	chromite
152	4081.17b	31 - 2	31	chromite	chromite	chromite
153	4081.17b	32	32	apatite		apatite
154	4081.17b	33	33	? Biotite + SiO_2		? Biotite + SiO_2
155	4081.17b	34	34	zircon		zircon
156	4081.17b	35 - 1	35	K-feldspar	bad spot	bad spot

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
157	4081.17b	35 - 2	35	albite		albite
158	4081.17b	35 - 3	35	K-feldspar	(b) K-feldspar	(b) K-feldspar
159	4081.17b	35 - 4	35	albite		albite
160	4081.17b	36 - 1	36	muscovite	illite + SiO_2	illite + SiO_2
161	4081.17b	36 - 2	36	muscovite	illite	?illite
162	4081.17b	37 - 1	37	altered ilmenite		altered ilmenite
163	4081.17b	37 - 2	37	altered ilmenite		altered ilmenite
164	4081.17b	37 - 3	37	altered ilmenite		altered ilmenite
165	4081.17b	38 - 1	38	quartz		quartz
166	4081.17b	38 - 2	38	chlorite		chlorite
167	4081.17b	38 - 3	38	chlorite		chlorite
168	4081.17b	39 - 1	39	K-feldspar		K-feldspar
169	4081.17b	39 - 2	39	K-feldspar		K-feldspar
170	4081.17b	40 - 1	40	chlorite after musc		chlorite after musc
171	4081.17b	40 - 2	40	chlorite after musc		chlorite after musc
172	4081.17b	40 - 3	40	chlorite after musc.		chlorite after musc.
173	4081.17b	41 - 1	41	muscovite		muscovite
174	4081.17b	41 - 2	41	muscovite		muscovite
175	4081.17b	41 - 3	41	muscovite		muscovite
176	4081.17b	42 - 1	42	chromite	chromite	chromite
177	4081.17b	42 - 2	42	chromite	chromite	chromite
178	4081.17b	43	43	chromite	chromian spinel	chromian spinel
179	4081.17b	44 - 1	44	muscovite	hydromuscovite	hydromuscovite
180	4081.17b	44 - 2	44	muscovite		hydromuscovite
181	4081.17b	45	45	chlorite + rutile (after musc)		chlorite + rutile (after musc)
182	4081.17b	46 - 1	46	chlorite + rutile (after musc)		chlorite + rutile (after musc)
183	4081.17b	46 - 2	46	chlorite + rutile (after musc)		chlorite + rutile (after musc)
184	4081.17b	47 - 1	47	chlorite		chlorite
185	4081.17b	47 - 2	47	chlorite		chlorite
186	4081.17b	48 - 1	48	muscovite	hydromuscovite	hydromuscovite
187	4081.17b	48 - 2	48	muscovite		hydromuscovite
188	4081.17b	49 - 1	49	muscovite + TiO_2		muscovite + TiO_2
189	4081.17b	49 - 2	49	muscovite + TiO_2		muscovite + TiO_2
190	4081.17b	50 - 1	50	K-feldspar	K-feldspar	K-feldspar
191	4081.17b	50 - 2	50	albite	albite	albite
192	4081.17b	51 - 1	51	K-feldspar		K-feldspar
193	4081.17b	51 - 2	51	K-feldspar		K-feldspar
194	4081.17b	52 - 1	52	musc + chlorite		musc + chlorite
195	4081.17b	52 - 2	52	chlorite		chlorite
196	4081.17b	52 - 3	52	chlorite + muscovite + TiO_2		chlorite + muscovite + TiO_2
197	4081.17b	53 - 1	53	chlorite + TiO_2		chlorite + TiO_2
198	4081.17b	53 - 2	53	chlorite		chlorite
199	4081.17b	53 - 3	53	chlorite		chlorite
200	4081.17b	54 - 1	54	Al - S - P	Al - S - P	Al - S - P
201	4081.17b	54 - 2	54	Al - S - P		Al - S - P
202	4081.17b	54 - 3	54	Al - S - P		Al - S - P
203	4081.17b	55 - 1	55	monazite		monazite
204	4081.17b	55 - 2	55	monazite		monazite
205	4081.17b	56	56	zircon		zircon
206	4081.17b	57	57	chromian spinel	chromian spinel	chromian spinel
207	4081.17b	58	58	chromite	chromite	chromite

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
208	4081.17b	59 - 1	59	chlorite after musc.	chlorite	chlorite after musc.
209	4081.17b	59 - 2	59	chlorite after musc.		chlorite after musc.
210	4081.17b	60 - 1	60	siderite + SiO_2	siderite	siderite + SiO_2
211	4081.17b	60 - 2	60	chlorite		chlorite
212	4081.17b	60 - 3	60	quartz	quartz	quartz
213	4081.17b	61 - 1	61	K-feldspar	K-feldspar	K-feldspar
214	4081.17b	61 - 2	61	K-feldspar		K-feldspar
215	4081.17b	62 - 1	62	chlorite after musc.		chlorite after musc.
216	4081.17b	62 - 2	62	chlorite after musc.		chlorite after musc.
217	4081.17b	62 - 3	62	apatite		apatite
218	4081.17b	63 - 1	63	muscovite		muscovite
219	4081.17b	63 - 2	63	muscovite		muscovite
220	4081.17b	64 - 1	64	monazite	monazite	monazite
221	4081.17b	64 - 2	64	monazite	monazite	monazite
222	4081.17b	65	65	?	?	?
223	4081.17b	66	66	altered muscovite		altered muscovite
224	4081.17b	67 - 1	67	pyrite		pyrite
225	4081.17b	67 - 2	67	mostly quartz		mostly quartz
226	4081.17b	67 - 3	67	barite		barite
227	4081.17b	68	68	chromite	chromite	chromite
228	4081.17b	69	69	biotite	Mg-rich biotite	Mg-rich biotite
229	4081.17b	70	70	K-feldspar	K-feldspar	K-feldspar
230	4081.17b	71	71	apatite		apatite
231	4081.17b	72 - 1	72	chromian spinel	chromian spinel	chromian spinel
232	4081.17b	72 - 2	72	chromian spinel	chromian spinel	chromian spinel
233	4081.17b	73 - 1	73	K-feldspar	K-feldspar	K-feldspar
234	4081.17b	73 - 2	73	ferroan calcite		ferroan calcite
235	4081.17b	73 - 3	73	albite	albite	albite
236	4081.17b	74	74	(chlorite after musc) + TiO_2		(chlorite after musc) + TiO_2
237	4081.17b	75	75	chlorite		chlorite
238	4081.17b	76 - 1	76	albite	albite	albite
239	4081.17b	76 - 2	76	K-feldspar	K-feldspar	K-feldspar
240	4081.17b	77	77	chlorite		chlorite
241	4081.17b	78	78	chlorite + rutile		chlorite + rutile
242	4081.17b	79	79	chlorite		chlorite
243	4081.17b	80 - 1	80	quartz		quartz
244	4081.17b	80 - 2	80	K-feldspar		K-feldspar
245	4081.17b	81 - 1	81	muscovite	muscovite	muscovite
246	4081.17b	81 - 2	81	muscovite		muscovite
247	4081.17b	82	82	chromite	chromite	chromite
248	4081.17b	83 - 1	83	quartz + ilmenite		quartz + ilmenite
249	4081.17b	83 - 2	83	quartz + ilmenite		quartz + ilmenite
250	4081.17b	84 - 1	84	albite	albite	albite
251	4081.17b	84 - 2	84	K-feldspar		K-feldspar
252	4081.17b	85	85	muscovite		muscovite
253	4528.03a	1 - 1	1	sphalerite		sphalerite
254	4528.03a	1 - 2	2	quartz		quartz
255	4528.03a	1 - 3	3	mostly quartz		mostly quartz
256	4528.03a	1 - 4	4	quartz		quartz
257	4528.03a	1 - 5	5	quartz		quartz
258	4528.03a	2 - 1	2	sphalerite	sphalerite	sphalerite
259	4528.03a	2 - 1	2	sphalerite		sphalerite
260	4528.03a	3 - 1	3	chromian spinel	chromian spinel	chromian spinel
261	4528.03a	3 - 2	3	chromian spinel		chromian spinel

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
262	4528.03a	4 - 1	4	chromian spinel	chromian spinel	chromian spinel
263	4528.03a	4 - 2	4	chromian spinel	chromian spinel	chromian spinel
264	4528.03a	4 - 3	4	chromite		chromite
265	4528.03a	5 - 1	5	mostly quartz	mostly quartz	mostly quartz
266	4528.03a	5 - 2	5	mostly quartz	mostly quartz	mostly quartz
267	4528.03a	5 - 3	5	quartz		quartz
268	4528.03a	5 - 4	5	quartz		quartz
269	4528.03a	5 - 5	5	quartz		quartz
270	4528.03a	6 - 1	6	sphalerite		sphalerite
271	4528.03a	6 - 2	6	quartz		quartz
272	4528.03a	6 - 3	6	quartz		quartz
273	4528.03a	6 - 4	6	albite		albite
274	4528.03a	6 - 5	6	quartz		quartz
275	4528.03a	6 - 6	6	kaolinite		kaolinite
276	4528.03a	7 - 1	7	sphalerite	sphalerite	sphalerite
277	4528.03a	7 - 2	7	sphalerite		sphalerite
278	4528.03a	8 - 1	8	quartz		quartz
279	4528.03a	8 - 2	8	mostly quartz + ?K-feldspar		mostly quartz + ?K-feldspar
280	4528.03a	8 - 3	8	mostly quartz		mostly quartz
281	4528.03a	8 - 4	8	mostly quartz		mostly quartz
282	4528.03a	9 - 1	9	chlorite + musc.		chlorite + musc.
283	4528.03a	9 - 2	9	apatite + chlorite + SiO_2		apatite + chlorite + SiO_2
284	4528.03a	9 - 3	9	chlorite + TiO_2		chlorite + TiO_2
285	4528.03a	9 - 4	9	chlorite + TiO_2 + K_2O		chlorite + TiO_2 + K_2O
286	4528.03a	10	10	chlorite + TiO_2		chlorite + TiO_2
287	4528.03a	11 - 1	11	pyrite + SiO_2		pyrite + SiO_2
288	4528.03a	11 - 2	11	quartz		quartz
289	4528.03a	11 - 3	11	quartz		quartz
290	4528.03a	11 - 4	11	quartz		quartz
291	4528.03a	11 - 5	11	mostly quartz		mostly quartz
292	4528.03a	12 - 1	12	albite	albite	albite
293	4528.03a	12 - 2	12	albite		albite
294	4528.03a	13 - 1	13	chromian spinel	chromian spinel	chromian spinel
295	4528.03a	13 - 2	13	chromian spinel	chromian spinel	chromian spinel
296	4528.03a	14	14	muscovite		muscovite
297	4528.03a	15 - 1	15	muscovite		muscovite
298	4528.03a	15 - 2	15	muscovite		muscovite
299	4528.03a	15 - 3	15	muscovite		muscovite
300	4528.03a	15 - 4	15	siderite		siderite
301	4528.03a	15 - 5	15	phosphate		phosphate
302	4528.03a	15 - 6	15	quartz		quartz
303	4528.03a	16	16	chromite (altering)	chromite	chromite
304	4528.03a	17 - 1	17	chromian spinel	(a) chromian spinel	(a) chromian spinel
305	4528.03a	17 - 2	17	chromite altering	(b) chromian spinel	(b) chromian spinel
306	4528.03a	17 - 3	17	chromite altering	(c) chromite	(c) chromite
307	4528.03a	17 - 4	17	chromite altering	(d) chromite	(d) chromite
308	4528.03a	17 - 5	17	pyrite		pyrite
309	4528.03a	17 - 6	17	chromian spinel		chromian spinel
310	4528.03a	17 - 7	17	chromian spinel		chromian spinel
311	4528.03a	18 - 1	18	chromite	chromite	chromite
312	4528.03a	18 - 2	18	chromite		chromite
313	4528.03a	19 - 1	19	chromian spinel	chromian spinel	chromian spinel
314	4528.03a	19 - 2	19	chromian spinel	chromian spinel	chromian spinel

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
315	4528.03a	19 - 3	19	chromian spinel		chromian spinel
316	4528.03a	20	20	chromite	chromite	chromite
317	4528.03a	21 - 1	21	chromian spinel	chromian spinel	chromian spinel
318	4528.03a	21 - 2	21	chromian spinel	chromian spinel	chromian spinel
319	4528.03a	21 - 3	21	chromian spinel		chromian spinel
320	4528.03a	21 - 4	21	chromian spinel		chromian spinel
321	4528.03a	22 - 1	22	barite		barite
322	4528.03a	22 - 2	22	barite		barite
323	4528.03a	23 - 1	23	barite		barite
324	4528.03a	23 - 2	23	barite		barite
325	4528.03a	24	24	barite		barite
326	4528.03a	25 - 1	25	apatite (incl)		apatite (incl)
327	4528.03a	25 - 2	25	muscovite		muscovite
328	4528.03a	25 - 3	25	muscovite		muscovite
329	4528.03a	25 - 4	25	muscovite		muscovite
330	4528.03a	26 - 1	26	oligoclase (incl)		oligoclase (incl)
331	4528.03a	26 - 2	26	quartz		quartz
332	4528.03a	27	27	chromite	chromite	chromite
333	4528.03a	28 - 1	28	albite	albite	albite
334	4528.03a	28 - 2	28	albite		albite
335	4528.03a	28 - 3	28	albite		albite
336	4528.03a	29 - 1	29	chlorite	chlorite	chlorite
337	4528.03a	29 - 2	29	chlorite		chlorite
338	4528.03a	30 - 1	30	quartz		quartz
339	4528.03a	30 - 2	30	quartz		quartz
340	4528.03a	30 - 3	30	biotite		biotite
341	4528.03a	31 - 1	31	quartz	mostly quartz	mostly quartz
342	4528.03a	31 - 2	31	quartz	mostly quartz	mostly quartz
343	4528.03a	31 - 3	31	chlorite		chlorite
344	4528.03a	31 - 4	31	quartz		quartz
345	4528.03a	31 - 5	31	quartz		quartz
346	4528.03a	32 - 1	32	K-feldspar		K-feldspar
347	4528.03a	32 - 2	32	quartz		quartz
348	4528.03a	32 - 3	32	quartz		quartz
349	4528.03a	32 - 4	32	quartz		quartz
350	4528.03a	33 - 1	33	tourmaline		tourmaline
351	4528.03a	33 - 2	33	tourmaline		tourmaline
352	4528.03a	34 - 1	34	chlorite		chlorite
353	4528.03a	34 - 2	34	chlorite		chlorite
354	4528.03a	34 - 3	34	chlorite		chlorite
355	4528.03a	35 - 1	35	chlorite		chlorite
356	4528.03a	35 - 2	35	mixture		mixture
357	4528.03a	36 - 1	36	albite	albite	albite
358	4528.03a	36 - 2	36	albite (altering)		albite
359	4528.03a	37 - 1	37	mixture		mixture
360	4528.03a	37 - 2	37	mixture		mixture
361	4528.03a	37 - 3	37	quartz		quartz
362	4528.03a	37 - 4	37	quartz		quartz
363	4528.03a	38 - 1	38	rutile		rutile
364	4528.03a	38 - 2	38	rutile		rutile
365	4528.03a	38 - 3	38	rutile		rutile
366	4528.03a	39 - 1	39	phosphate		phosphate
367	4528.03a	39 - 2	39	phosphate (apatite)		phosphate (apatite)
368	4528.03a	39 - 3	39	phosphate (apatite)		phosphate (apatite)
369	4528.03a	39 - 4	39	phosphate (apatite)		phosphate (apatite)
370	4528.03a	40 - 1	40	quartz		quartz

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
371	4528.03a	40 - 2	40	?K-feldspar		?K-feldspar
372	4528.03a	40 - 3	40	?K-feldspar		?K-feldspar
373	4528.03a	40 - 4	40	quartz		quartz
374	4528.03a	41 - 1	41	albite	albite	albite
375	4528.03a	41 - 2	41	albite		albite
376	4528.03a	41 - 3	41	albite		albite
377	4528.03a	42 - 1	42	chromian spinel	chromian spinel	chromian spinel
378	4528.03a	42 - 2	42	chromian spinel		chromian spinel
379	4528.03a	43 - 1	43	quartz		quartz
380	4528.03a	43 - 2	43	hydromuscovite		hydromuscovite
381	4528.03a	43 - 3	43	hydromuscovite		hydromuscovite
382	4528.03a	43 - 4	43	phosphate + SiO_2		phosphate + SiO_2
383	4528.03a	43 - 5	43	muscovite		muscovite
384	4528.03a	44 - 1	44	muscovite		muscovite
385	4528.03a	44 - 2	44	muscovite + TiO_2		muscovite + TiO_2
386	4528.03a	45 - 1	45	muscovite + TiO_2	muscovite	muscovite + TiO_2
387	4528.03a	45 - 2	45	muscovite		muscovite
388	4528.03a	46 - 1	46	monazite		monazite
389	4528.03a	46 - 2	46	monazite		monazite
390	4528.03a	47 - 1	47	biotite	biotite	biotite
391	4528.03a	47 - 2	47	quartz		quartz
392	4528.03a	48 - 1	48	quartz		quartz
393	4528.03a	48 - 2	48	albite	albite	albite
394	4528.03a	48 - 3	48	albite		albite
395	4528.03a	48 - 4	48	albite		albite
396	4528.03a	48 - 5	48	chlorite		chlorite
397	4528.03a	48 - 6	48	quartz		quartz
398	4528.03a	49	49	zircon		zircon
399	4528.03a	50 - 1	50	muscovite + TiO_2		muscovite + TiO_2
400	4528.03a	50 - 2	50	muscovite + TiO_2		muscovite + TiO_2
401	4528.03a	50 - 3	50	muscovite + TiO_2		muscovite + TiO_2
402	4528.03a	50 - 4	50	muscovite		muscovite
403	4528.03a	51 - 1	51	muscovite		muscovite
404	4528.03a	51 - 2	51	muscovite + TiO_2		muscovite
405	4528.03a	52 - 1	52	chromian spinel	chromian spinel	chromian spinel
406	4528.03a	52 - 2	52	chromian spinel		chromian spinel
407	4528.03a	52 - 3	52	pyrite		pyrite
408	4528.03a	52 - 4	52	rutile		rutile
409	4528.03a	53 - 1	53	muscovite		muscovite
410	4528.03a	53 - 2	53	muscovite + TiO_2 + Na_2O		muscovite + TiO_2 + Na_2O
411	4528.03a	54 - 1	54	plagioclase (incl)		plagioclase (incl)
412	4528.03a	54 - 2	54	quartz		quartz
413	4528.03a	55	55	chromian spinel	chromian spinel	chromian spinel
414	4528.03a	56	56	muscovite	muscovite	muscovite
415	4528.03a	57 - 1	57	chromite	chromite	chromite
416	4528.03a	57 - 2	57	chromite		chromite
417	4528.03a	57 - 3	57	chromite		chromite
418	4528.03a	58 - 1	58	muscovite		muscovite
419	4528.03a	58 - 2	58	apatite		apatite
420	4528.03a	59 - 1	59	tourmaline		tourmaline
421	4528.03a	59 - 2	59	tourmaline	tourmaline	tourmaline
422	4528.03a	59 - 3	59	rutile		rutile
423	4528.03a	60	60	tourmaline	tourmaline	tourmaline

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
424	4528.03a	61 - 1	61	chlorite (incl)		chlorite (incl)
425	4528.03a	61 - 2	61	chlorite (incl)		chlorite (incl)
426	4528.03a	61 - 3	61	mixture		mixture
427	4528.03a	61 - 4	61	quartz		quartz
428	4528.03a	62	62	chromite	chromite	chromite
429	4528.03a	63	63	unknown		unknown
430	4528.03a	64 - 1	64	chromian spinel	chromian spinel	chromian spinel
431	4528.03a	64 - 2	64	chromite	chromite	chromite
432	4528.03a	65	65	muscovite		muscovite
433	4528.03a	66 - 1	66	chromian spinel		chromian spinel
434	4528.03a	66 - 2	66	chromian spinel		chromian spinel
435	4528.03a	66 - 3	66	chromian spinel		chromian spinel
436	5445.94	1 - 1	1	Fe - rich chlorite		Fe - rich chlorite
437	5445.94	1 - 2	1	Fe - rich chlorite		Fe - rich chlorite
438	5445.94	2 - 1	2	muscovite		muscovite
439	5445.94	2 - 2	2	muscovite		muscovite
440	5445.94	3 - 1	3	muscovite		muscovite
441	5445.94	3 - 2	3	?chlorite		chlorite
442	5445.94	3 - 3	3	?chlorite		chlorite
443	5445.94	4	4	rutile		rutile
444	5445.94	5 - 1	5	muscovite		muscovite
445	5445.94	5 - 2	5	chlorite + muscovite		chlorite + muscovite
446	5445.94	6 - 1	6	muscovite		muscovite
447	5445.94	6 - 2	6	sphalerite (incl)		sphalerite (incl)
448	5445.94	6 - 3	6	sphalerite		sphalerite
449	5445.94	6 - 4	6	muscovite		muscovite
450	5445.94	7 - 1	7	rutile		rutile
451	5445.94	7 - 2	7	quartz		quartz
452	5445.94	7 - 3	7	rutile		rutile
453	5445.94	8 - 1	8	mixture		mixture
454	5445.94	8 - 2	8	chlorite		chlorite
455	5445.94	9	9	chlor after musc	chlorite	chlorite
456	5445.94	10 - 1	10	chlorite		chlorite
457	5445.94	10 - 2	10	mixture		mixture
458	5445.94	11 - 1	11	sphalerite	sphalerite	sphalerite
459	5445.94	11 - 2	11	sphalerite		sphalerite
460	5445.94	12 - 1	12	chlorite + K_2O + TiO_2		chlorite + K_2O + TiO_2
461	5445.94	12 - 2	12	chlorite + K_2O + TiO_2		chlorite + K_2O + TiO_2
462	5445.94	13	13	muscovite		muscovite
463	5445.94	14	14	muscovite		muscovite
464	5445.94	15 - 1	15	muscovite		muscovite
465	5445.94	15 - 2	15	muscovite		muscovite
466	5445.94	16	16	siderite		siderite
467	5445.94	17 - 1	17	chlorite + TiO_2		chlorite + TiO_2
468	5445.94	17 - 2	17	chlorite + TiO_2		chlorite + TiO_2
469	5445.94	18	18	sphalerite	sphalerite	sphalerite
470	5445.94	19 - 1	19	chlorite + TiO_2		chlorite + TiO_2
471	5445.94	19 - 2	19	chlorite + siderite		chlorite + siderite
472	5445.94	20	20	muscovite		muscovite
473	5445.94	21 - 1	21	rutile		rutile
474	5445.94	21 - 2	21	chlorite after musc.		chlorite after musc.
475	5445.94	21 - 3	21	chlorite after musc.		chlorite after musc.
476	5445.94	22 - 1	22	muscovite		muscovite
477	5445.94	22 - 2	22	kaolinite		kaolinite
478	5445.94	22 - 3	22	muscovite		muscovite

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
479	5445.94	23 - 1	23	chlorite		chlorite
480	5445.94	23 - 2	23	chlorite		chlorite
481	5445.94	24 - 1	24	chlorite		chlorite
482	5445.94	24 - 2	24	siderite		siderite
483	5445.94	25 - 1	25	albite		albite
484	5445.94	25 - 2	25	albite		albite
485	5445.94	26 - 1	26	albite		albite
486	5445.94	26 - 2	26	ankerite		ankerite
487	5445.94	26 - 3	26	albite		albite
488	5445.94	27	27	albite		albite
489	5445.94	28 - 1	28	albite		albite
490	5445.94	28 - 2	28	Mg-chlorite		Mg-chlorite
491	5445.94	28 - 3	28	Mg-chlorite		Mg-chlorite
492	5445.94	28 - 4	28	Mg-chlorite		Mg-chlorite
493	5445.94	28 - 5	28	mixture		mixture
494	5445.94	29 - 1	29	muscovite		muscovite
495	5445.94	29 - 2	29	quartz		quartz
496	5445.94	29 - 3	29	albite		albite
497	5445.94	29 - 4	29	carbonate + quartz		carbonate + quartz
498	5445.94	30 - 1	30	Mg-chlorite		Mg-chlorite
499	5445.94	30 - 2	30	chlorite		chlorite
500	5445.94	30 - 3	30	phosphate + chlorite		phosphate + chlorite
501	5445.94	30 - 4	30	Mg-chlorite		Mg-chlorite
502	5445.94	31 - 1	31	monazite (incl)	monazite	monazite
503	5445.94	31 - 2	31	monazite (incl)		monazite (incl)
504	5445.94	32 - 1	32	clast (? volcanic)		clast (? volcanic)
505	5445.94	32 - 2	32	clast (? volcanic)		clast (? volcanic)
506	5445.94	32 - 3	32	clast (? volcanic)		clast (? volcanic)
507	5445.94	32 - 4	32	clast (? volcanic)		clast (? volcanic)
508	5445.94	33 - 1	33	chlorite		chlorite
509	5445.94	33 - 2	33	siderite		siderite
510	5445.94	33 - 3	33	siderite		siderite
511	5445.94	33 - 4	33	mixture		mixture
512	5445.94	34 - 1	34	muscovite		muscovite
513	5445.94	34 - 2	34	?ankerite + musc.		ankerite + musc.
514	5445.94	34 - 3	34	muscovite		muscovite
515	5445.94	35 - 1	35	muscovite		muscovite
516	5445.94	35 - 2	35	muscovite		muscovite
517	5445.94	36 - 1	36	Al - phosphate		Al - phosphate
518	5445.94	36 - 2	36	Al - phosphate		Al - phosphate
519	5445.94	37	37	sphalerite	sphalerite	sphalerite
520	5445.94	38	38	sphalerite	sphalerite	sphalerite
521	5445.94	39 - 1	39	quartz		quartz
522	5445.94	39 - 2	39	rutile		rutile
523	5445.94	39 - 3	39	rutile		rutile
524	5445.94	39 - 4	39	rutile		rutile
525	5445.94	39 - 5	39	quartz + rutile		quartz + rutile
526	5445.94	40 - 1	40	muscovite		muscovite
527	5445.94	40 - 2	40	muscovite		muscovite
528	5445.94	41 - 1	41	siderite		siderite
529	5445.94	41 - 2	41	chlorite		chlorite
530	5445.94	41 - 3	41	chlorite + TiO_2		chlorite + TiO_2
531	5445.94	42	42	xenotime		xenotime
532	5445.94	43 - 1	43	ferroan calcite		ferroan calcite
533	5445.94	43 - 2	43	siderite + chlorite		siderite + chlorite
534	5445.94	43 - 3	43	quartz		quartz

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
535	5445.94	43 - 4	43	pyrite		pyrite
536	5445.94	44	44	albite	albite	albite
537	5445.94	45 - 1	45	quartz		quartz
538	5445.94	45 - 2	45	rutile + quartz		rutile
539	5445.94	45 - 3	45	quartz + rutile		quartz + rutile
540	5445.94	46	46	chromian spinel	chromian spinel	chromian spinel
541	5445.94	47	47	muscovite		muscovite
542	5445.94	48	48	sphalerite	sphalerite	sphalerite
543	5445.94	49 - 1	49	kaolinite after musc		kaolinite after musc
544	5445.94	49 - 2	49	muscovite		muscovite
545	5445.94	49 - 3	49	chlorite		chlorite
546	5445.94	50 - 1	50	muscovite		muscovite
547	5445.94	50 - 2	50	quartz		quartz
548	5445.94	50 - 3	50	chlorite		chlorite
549	5445.94	51 - 1	51	barite		barite
550	5445.94	51 - 2	51	barite		barite
551	5445.94	52	52	chromian spinel	chromian spinel	chromian spinel
552	5445.94	53	53	sphalerite	sphalerite	sphalerite
553	5445.94	54 - 1	54	albite		albite
554	5445.94	54 - 2	54	albite		albite
555	5445.94	54 - 3	54	siderite	siderite	siderite
556	5445.94	55	55	apatite		apatite
557	5445.94	56 - 1	56	muscovite		muscovite
558	5445.94	56 - 2	56	muscovite		muscovite
559	5445.94	57	57	chlorite	Mg-chlorite	Mg-chlorite
560	5445.94	58 - 1	58	sphalerite		sphalerite
561	5445.94	58 - 2	58	sphalerite		sphalerite
562	5445.94	58 - 3	58	unknown		unknown
563	5445.94	59 - 1	59	rutile + chlorite		rutile + chlorite
564	5445.94	59 - 2	59	rutile + chlorite		rutile + chlorite
565	5445.94	60 - 1	60	albite		albite
566	5445.94	60 - 2	60	rutile		rutile
567	5445.94	61 - 1	61	chlorite after musc		chlorite after musc
568	5445.94	61 - 2	61	chlorite after musc		chlorite after musc
569	5445.94	62	62	barite		barite
570	5445.94	63 - 1	63	barite (v. fractured)		barite (v. fractured)
571	5445.94	63 - 2	63	barite (v. fractured)		barite (v. fractured)
572	5445.94	64 - 1	64	chlorite after musc		chlorite after musc
573	5445.94	64 - 2	64	chlorite after musc		chlorite after musc
574	5445.94	64 - 3	64	chlorite after musc		chlorite after musc
575	5445.94	65 - 1	65	muscovite		muscovite
576	5445.94	65 - 2	65	muscovite		muscovite
577	5445.94	65 - 3	65	chlorite + muscovite		chlorite + muscovite
578	5445.94	66 - 1	66	Mg-rich calcite		Mg-rich calcite
579	5445.94	66 - 2	66	calcite		calcite
580	5445.94	66 - 3	66	chlorite		chlorite
581	5445.94	67 - 1	67	sphalerite	sphalerite	sphalerite
582	5445.94	67 - 2	67	sphalerite		sphalerite
583	5445.94	68 - 1	68	ankerite		ankerite
584	5445.94	68 - 2	68	albite	albite	albite
585	5445.94	68 - 3	68	kaolinite + muscovite		kaolinite + muscovite
586	5445.94	69	69	sphalerite	sphalerite	sphalerite
587	5445.94	70	70	barite		barite
588	5445.94	71 - 1	71	chlorite after musc + TiO_2		chlorite after musc + TiO_2
589	5445.94	71 - 2	71	chlorite		chlorite

Appendix 1: Summary of minerals identified in samples 4076.26A, 4081.17B, 4528.03B and 5445.94 that are shown in Appendix 2.

Ref. #	Depth (m)	Grain # - Analysis #	Fig # *	SEM related Mineral Name	Probe related Mineral Name	Final Mineral Name
590	5445.94	72 - 1	72	chlorite + barite		chlorite + barite
591	5445.94	72 - 2	72	barite		barite
592	5445.94	72 - 3	72	chlorite + barite		chlorite + barite
593	5445.94	72 - 4	72	quartz		quartz
594	5445.94	73 - 1	73	sphalerite	sphalerite	sphalerite
595	5445.94	73 - 2	73	sphalerite		sphalerite
596	5445.94	74	74	chlorite	chlorite	chlorite
597	5445.94	75 - 1	75	muscovite		muscovite
598	5445.94	75 - 2	75	muscovite + kaolinite		muscovite + kaolinite
599	5445.94	76	76	chromite	chromite	chromite

* These figures are presented in Appendix 2:
Sample 4076.26 (Appendix 2A)
Sample 4081.17 (Appendix 2B)
Sample 4528.03 (Appendix 2C)
Sample 5445.014 (Appendix 2D)

Appendix 2A: Scanning Electron Microscope Backscattered Electron Images for TS 4076.26A

*** Note: The symbol (+) between two mineral names indicates a mixed composition between these two minerals.**

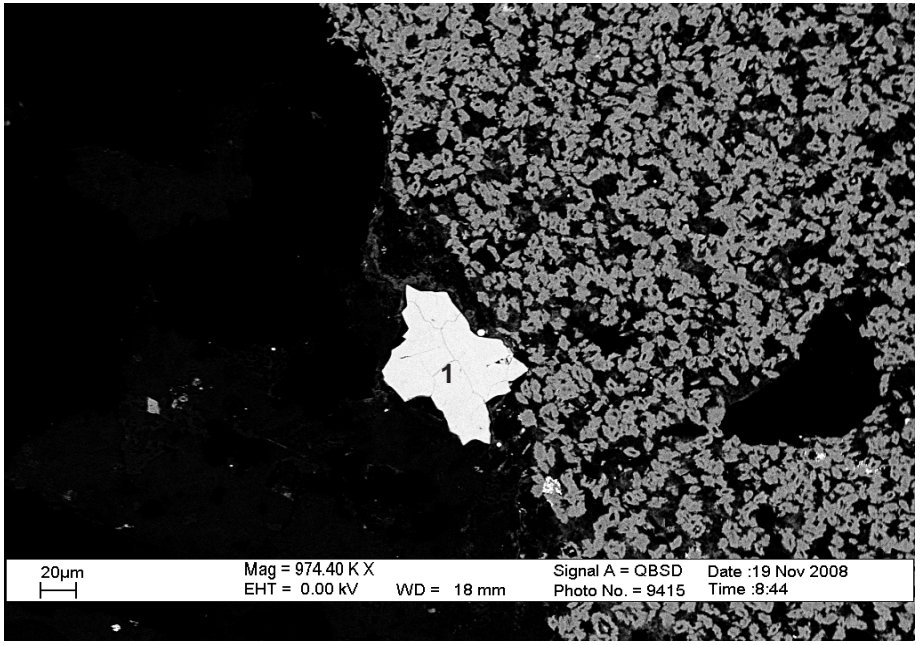


Figure 1: 4076.26A m., Chromian spinel (pos.1)

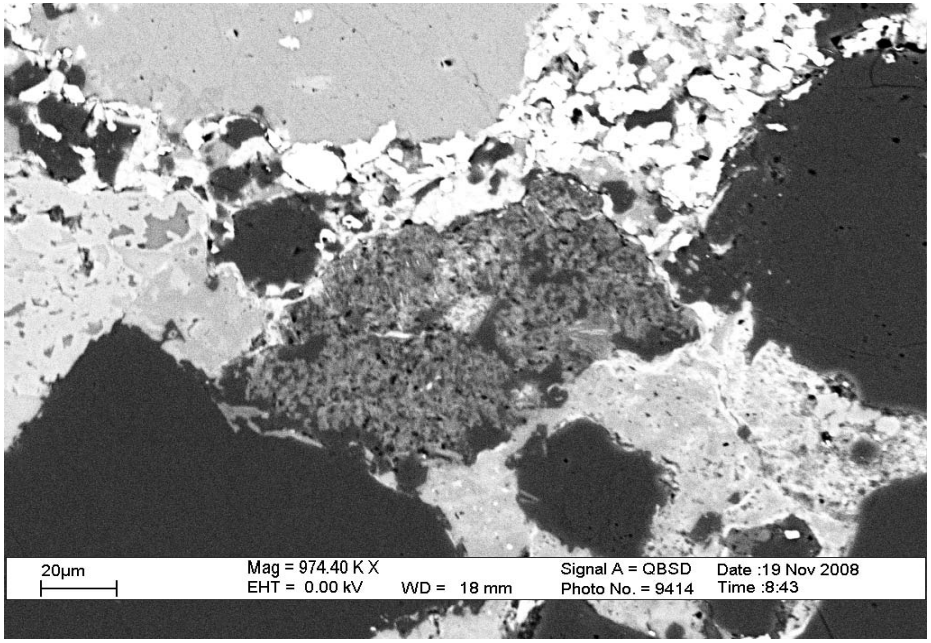


Figure 2: 4076.26A m., ? Altered feldspar

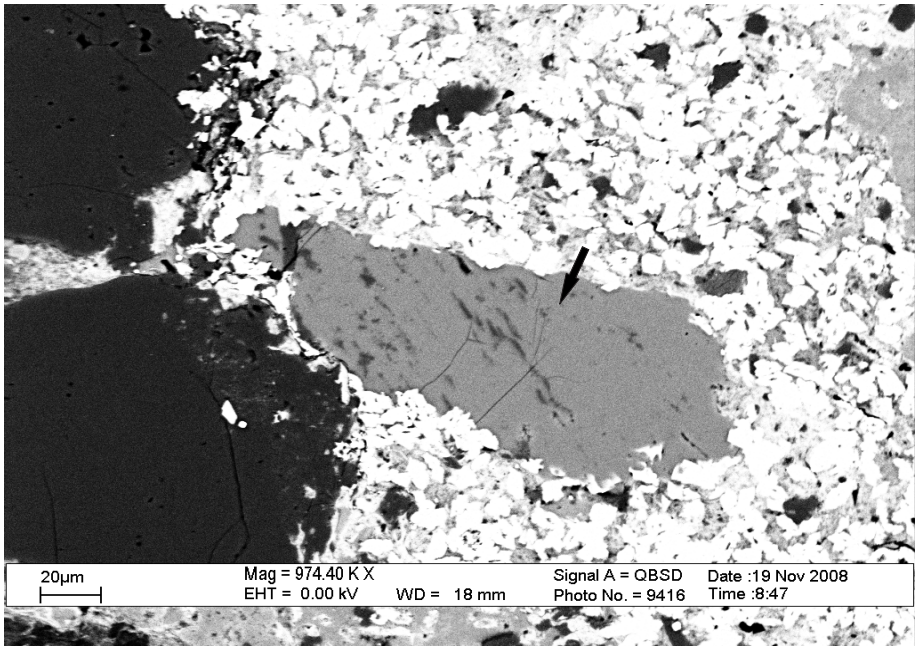


Figure 3: 4076.26A m., K-feldspar

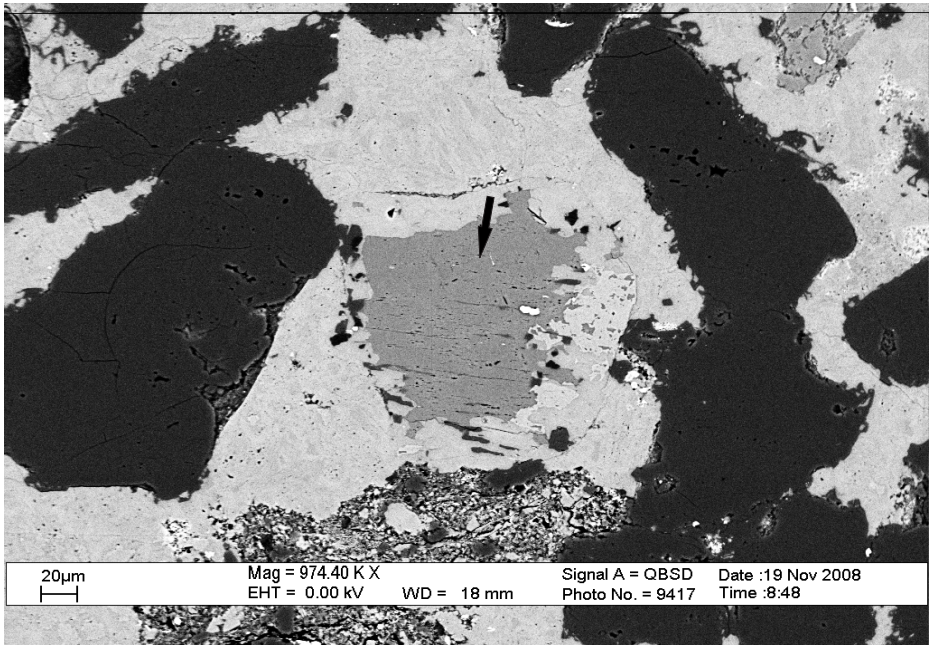


Figure 4: 4076.26A m., K-feldspar

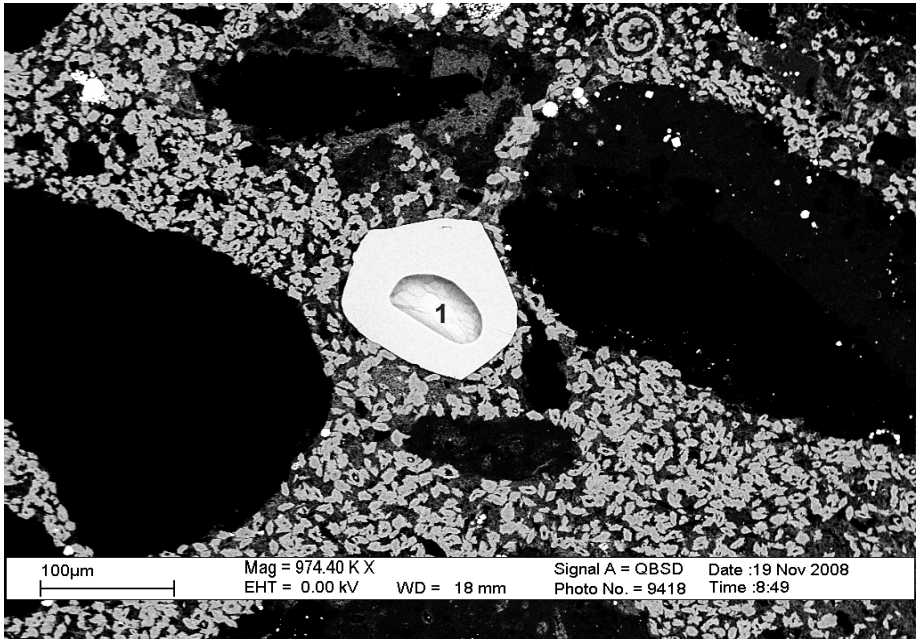


Figure 5: 4076.26A m., Chromian spinel with a pit (pos.1)

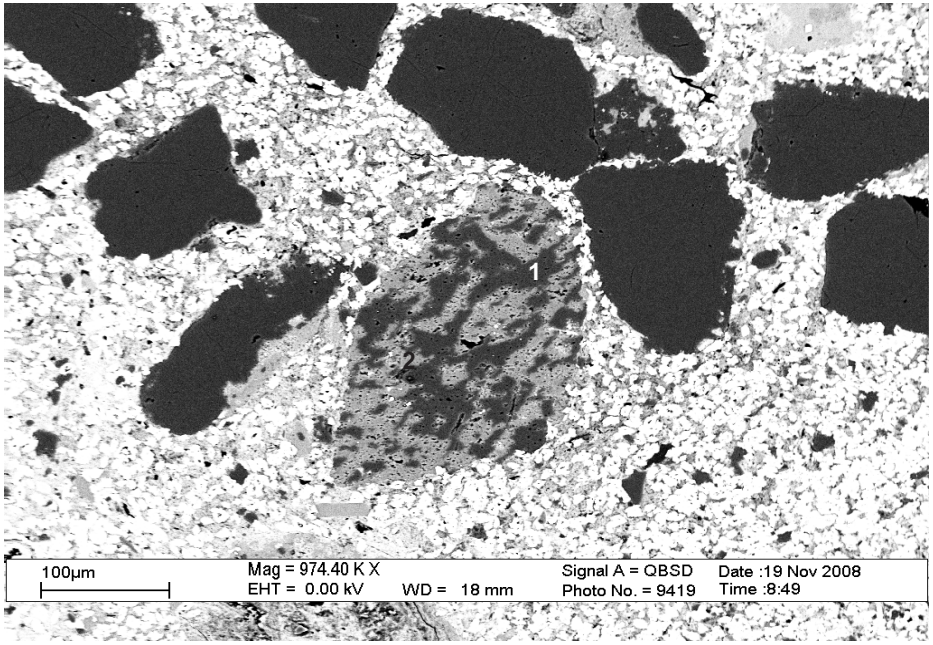


Figure 6: 4076.26A m., Albite (pos.1) and K-feldspar (pos.2)

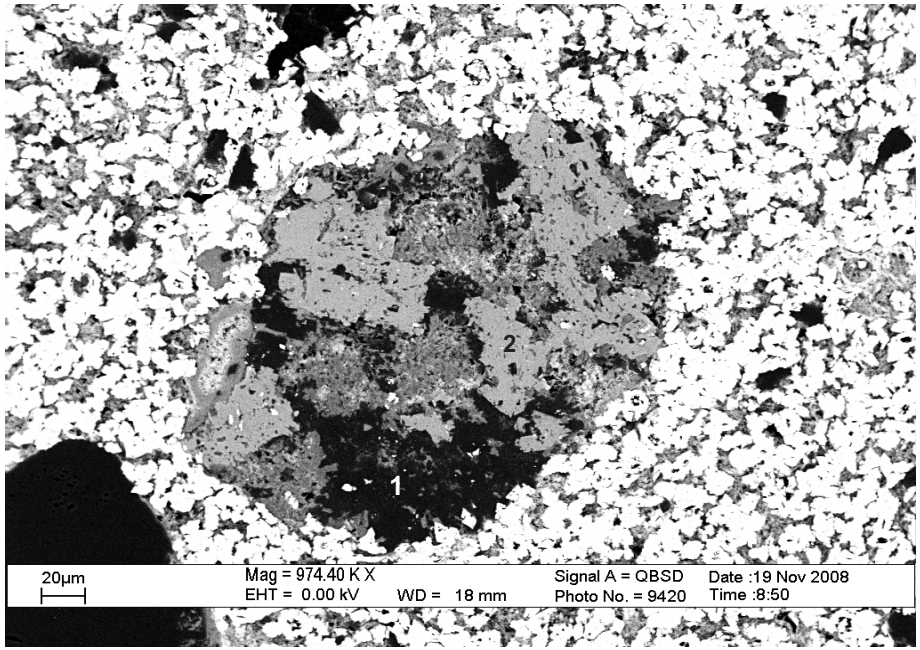


Figure 7: 4076.26A m., K-feldspar (pos.2) altering and mixing with albite (pos.1) and ankerite

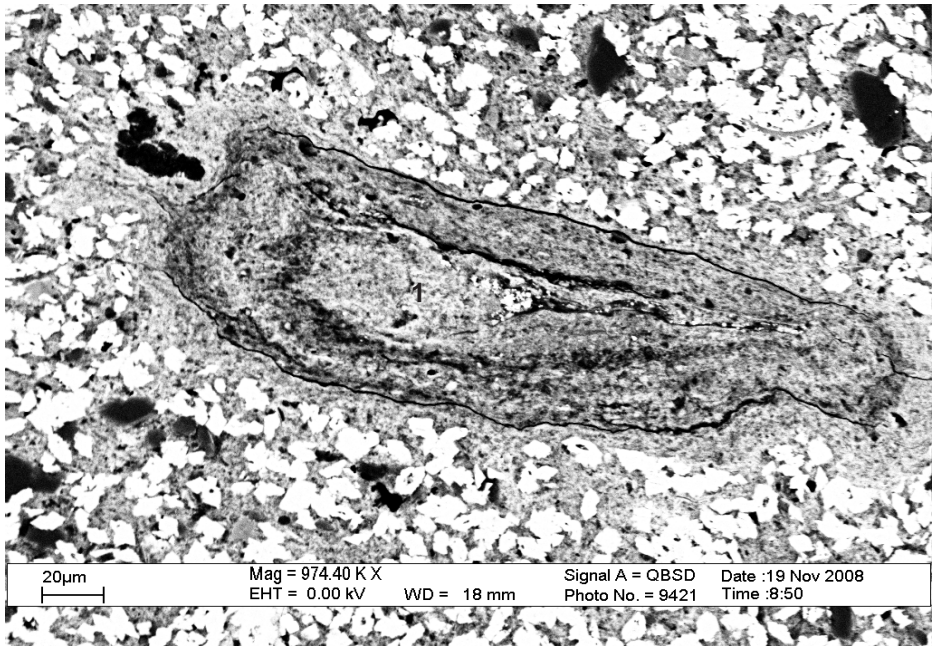


Figure 8: 4076.26A m., ? Chloritized glauconite (pos.1)

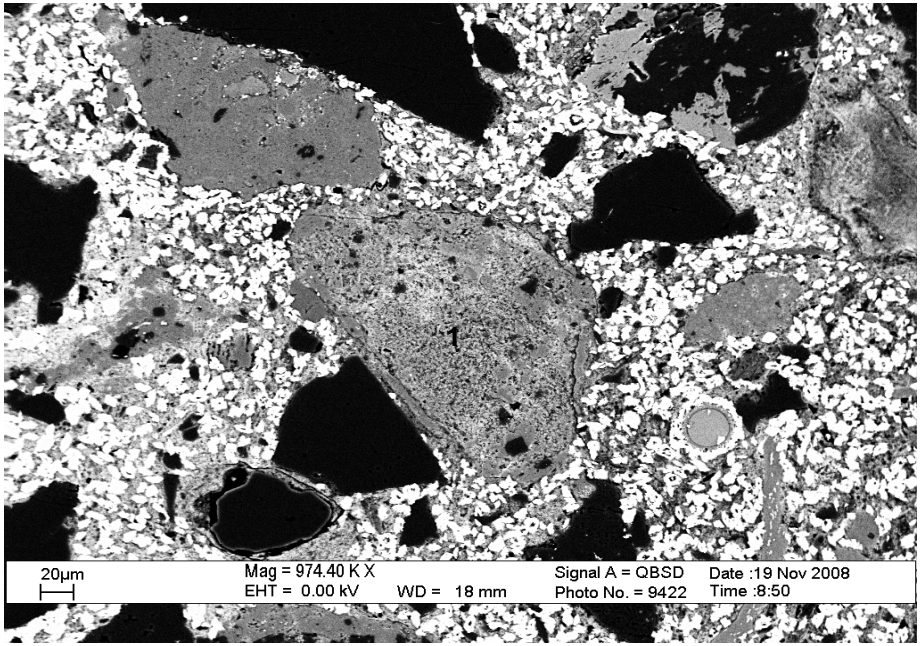


Figure 9: 4076.26A m., Chlorite+ glauconite+ carbonate? (pos.1)

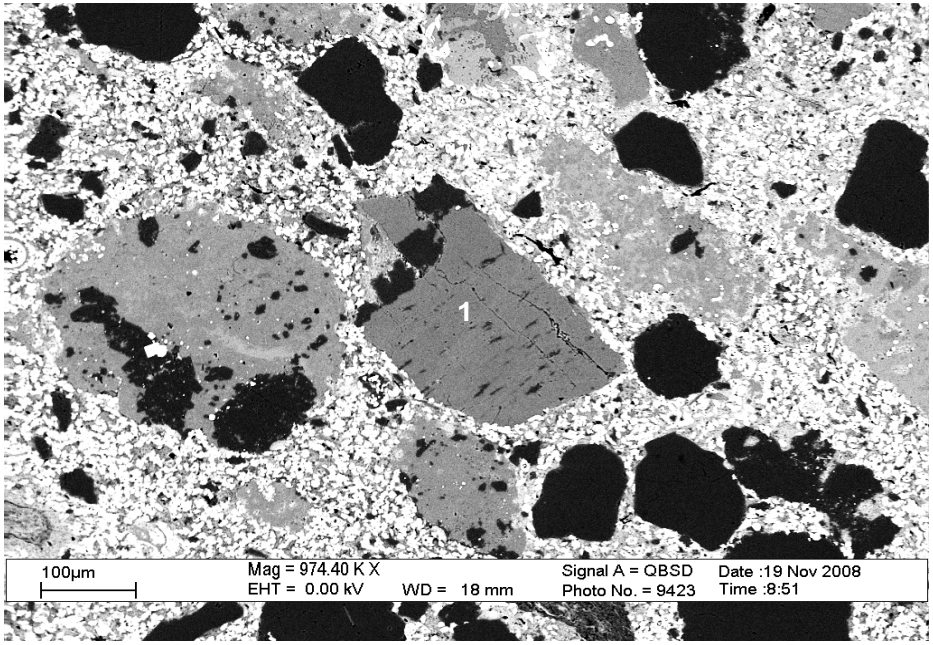


Figure 10: 4076.26A m., K-feldspar (pos.1)

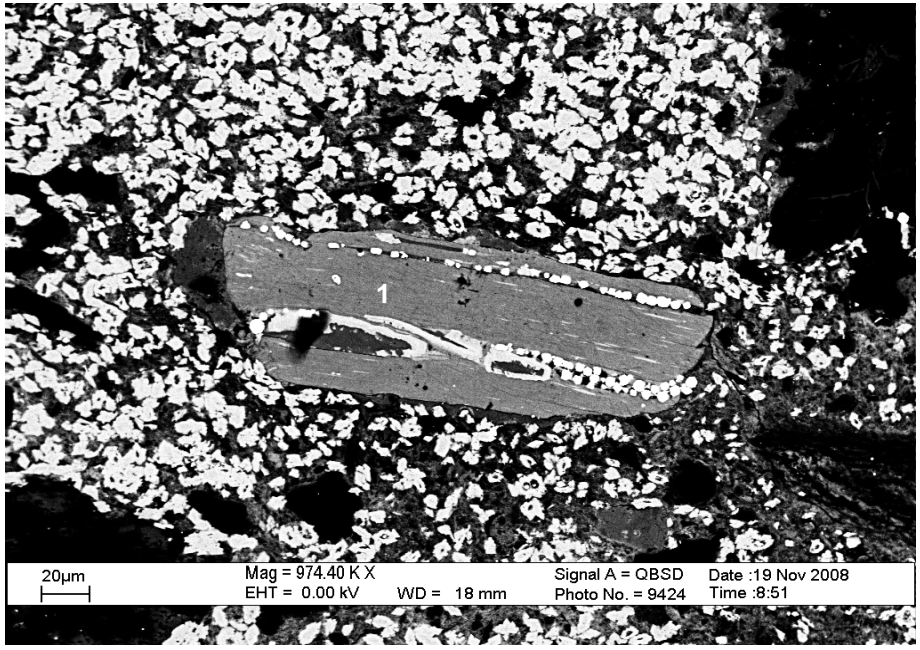


Figure 11: 4076.26A m., Chloritized biotite (pos.1)

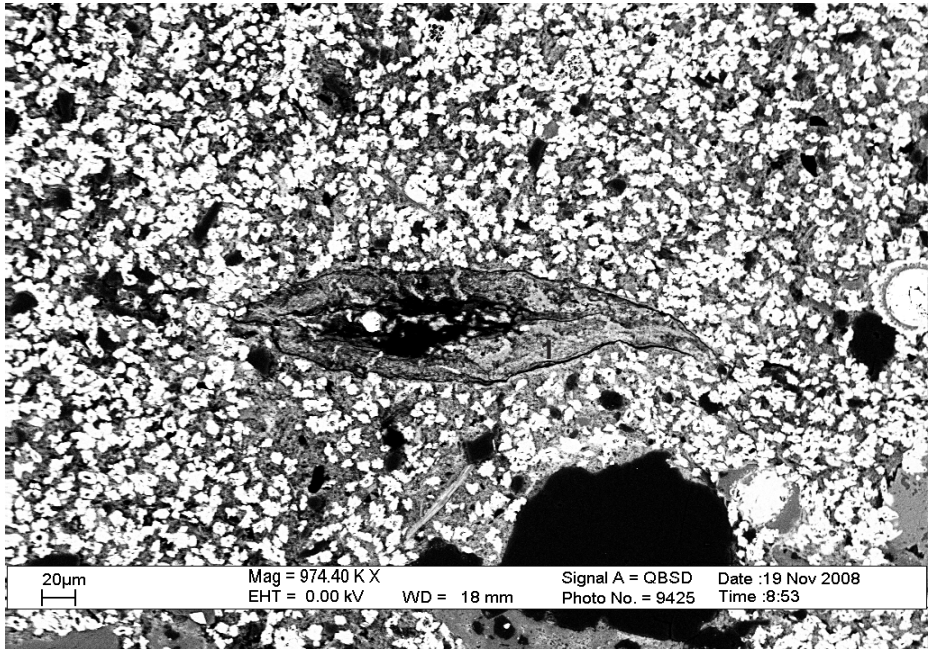


Figure 12: 4076.26A m., Chlorite (pos.1)

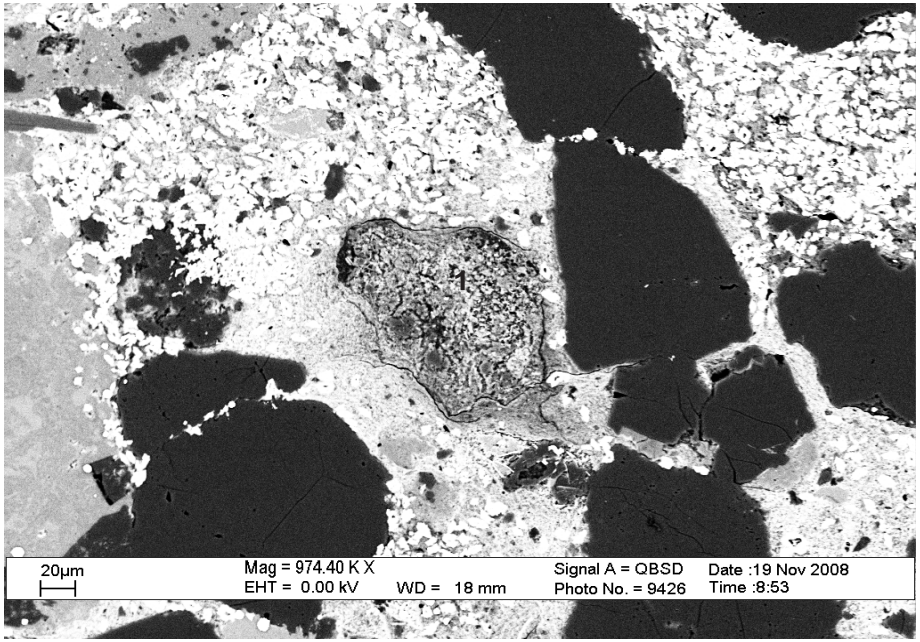


Figure 13: 4076.26A m., ? Chloritized biotite (pos.1)

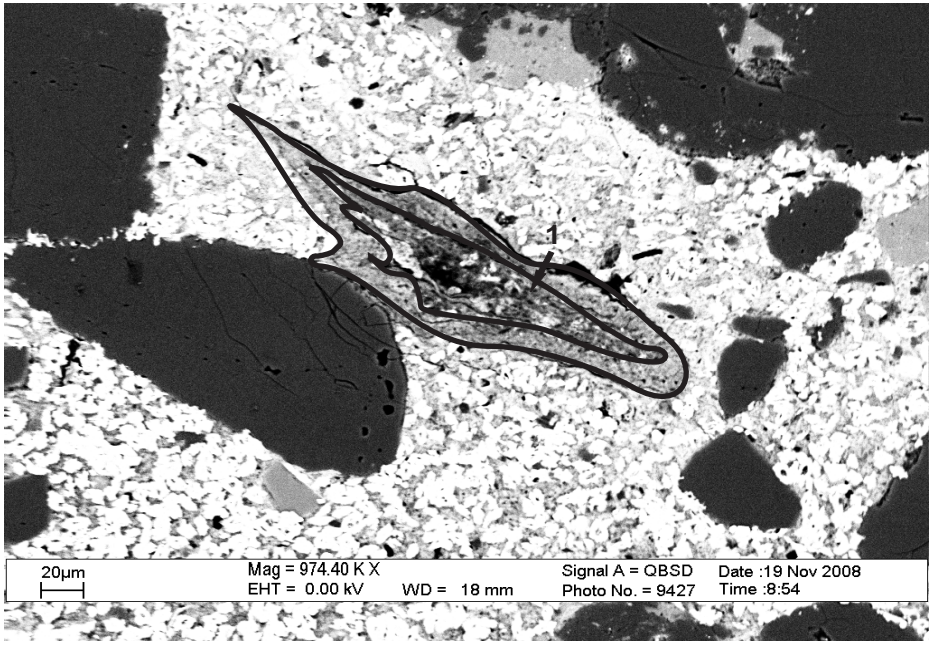


Figure 14: 4076.26A m., Coated grain: ? Unknown (pos.1)

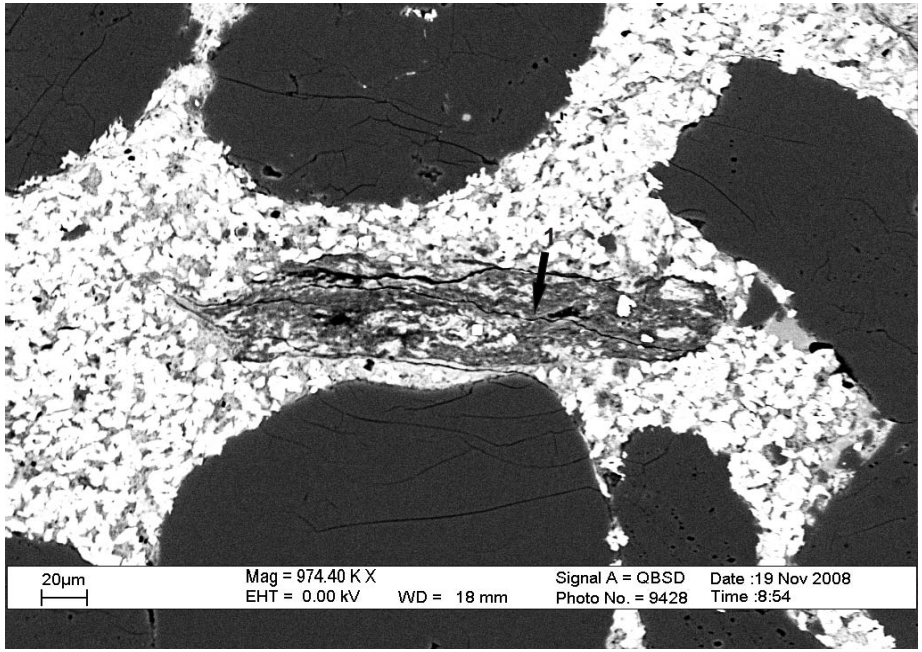


Figure 15: 4076.26A m., ? Chloritized Muscovite (pos.1)

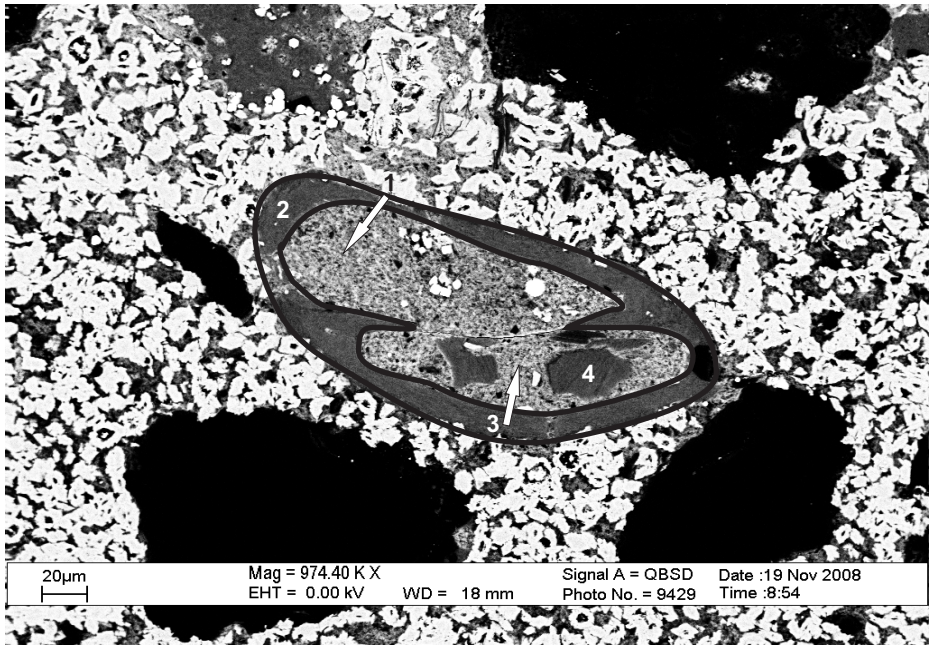


Figure 16: 4076.26A m., Coated grain: Chamosite (pos.1,3), Fe-calcite (pos.2), and (?) Mg-calcite (pos.4)

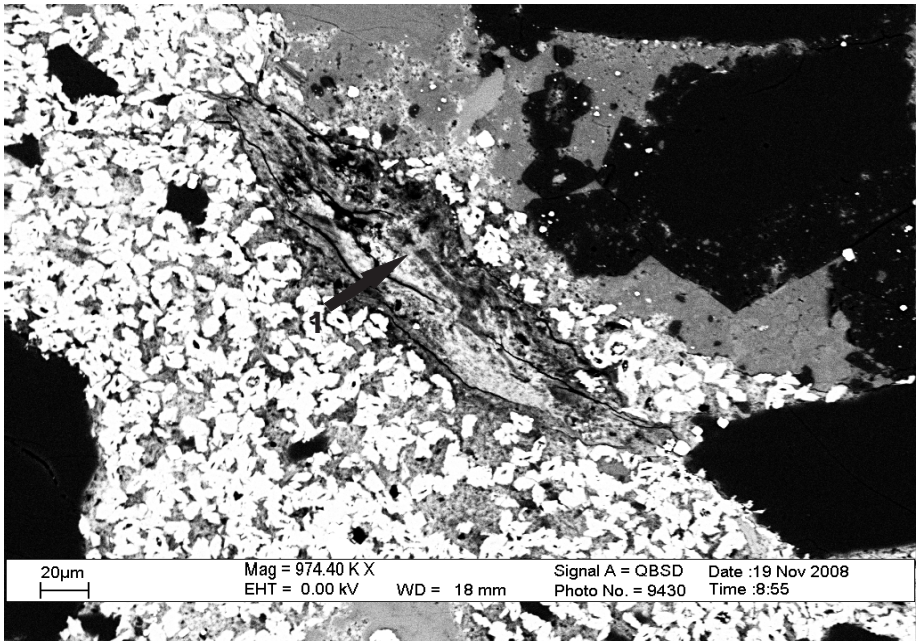


Figure 17: 4076.26A m., ? Glauconite (pos.1)

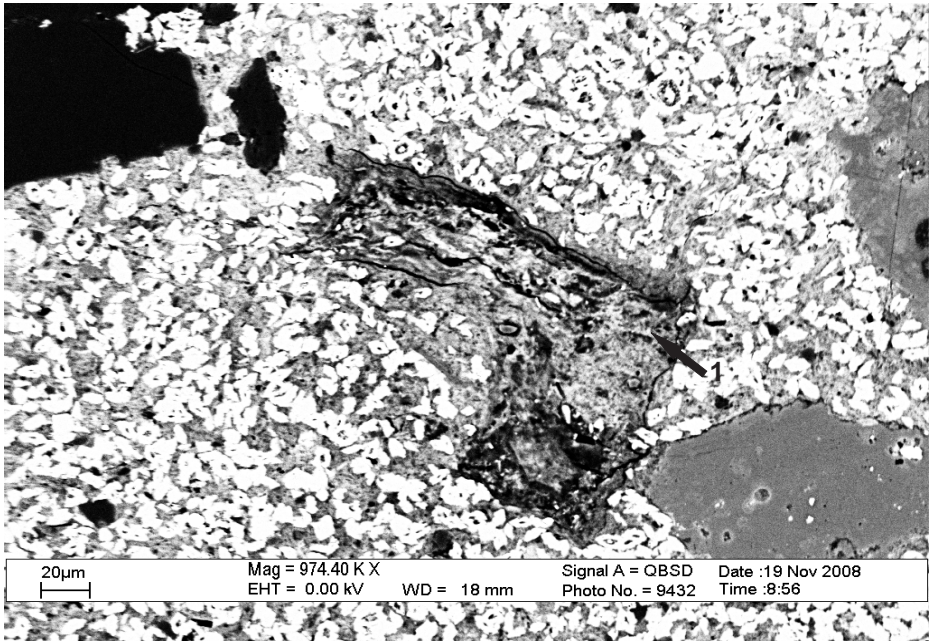


Figure 18: 4076.26A m., Unknown (pos.1)

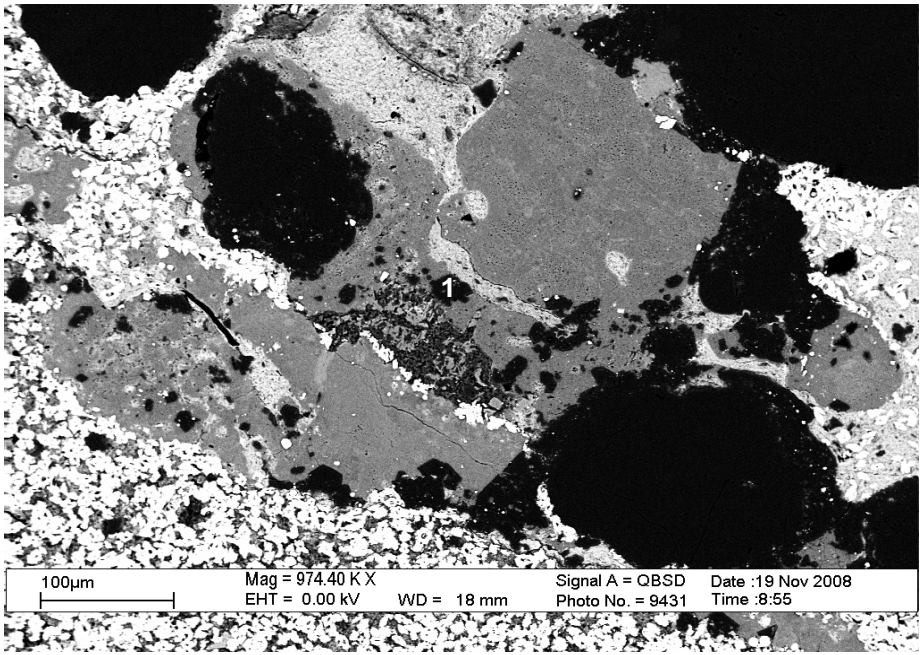


Figure 19: 4076.26A m.,Mixed feldspars (pos.1)

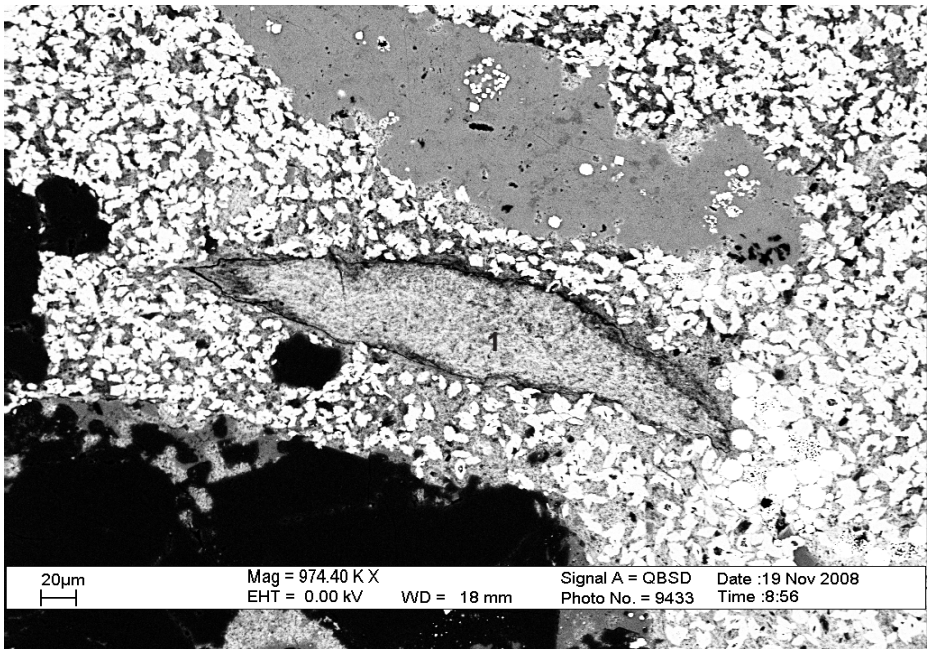


Figure 20: 4076.26A m., Altered garnet (pos.1)

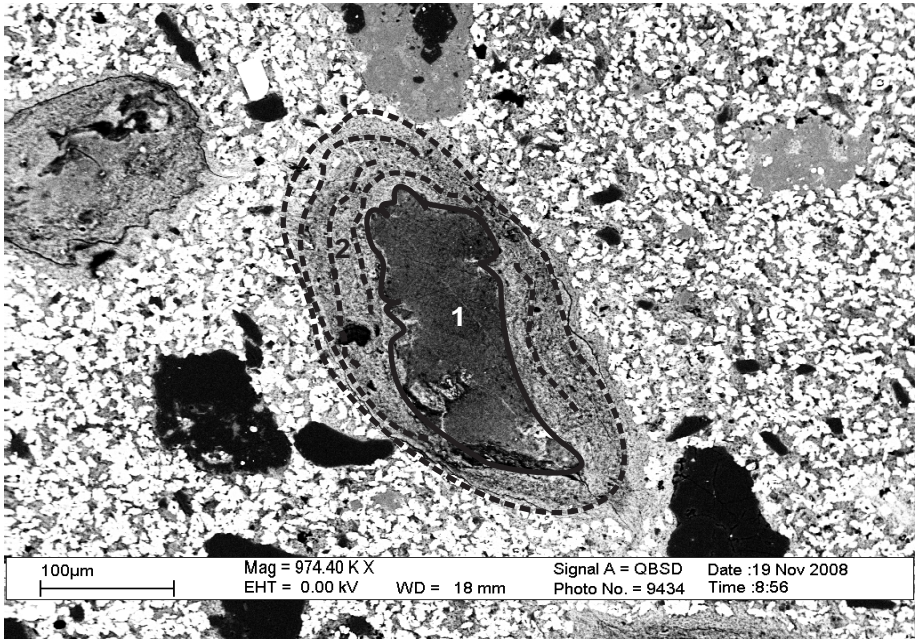


Figure 21: 4076.26A m., Coated grains: Chlorite (pos.1) and glauconite (pos.2)

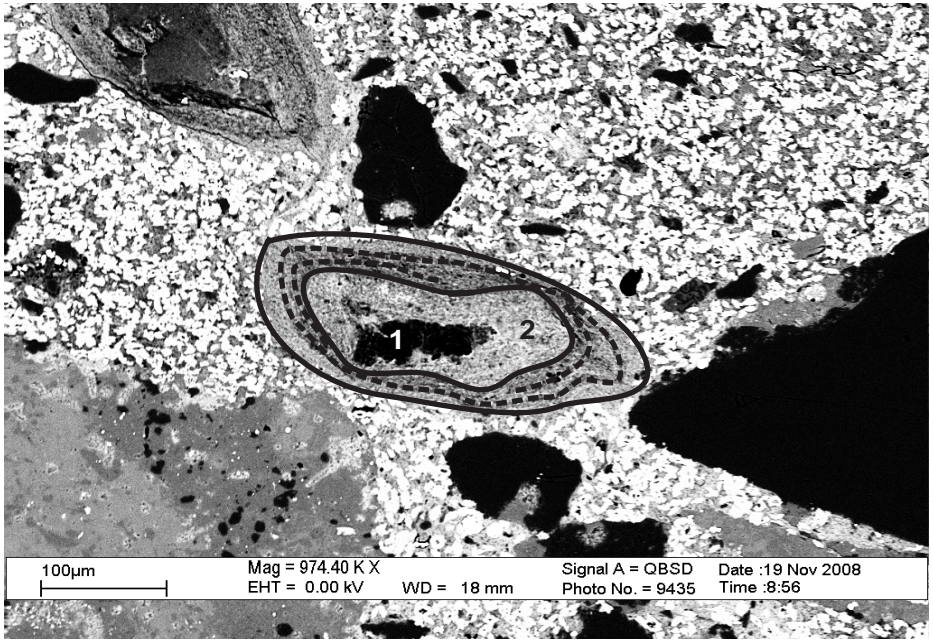


Figure 22: 4076.26A m., Coated grains: Kaolinite (pos.1) and chlorite+ glauconite (pos.2)

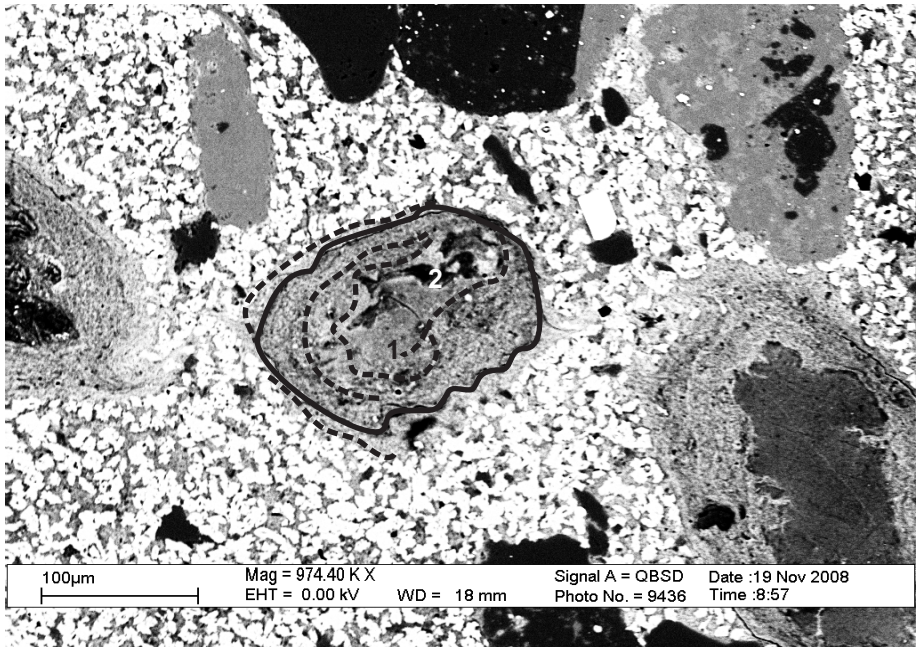


Figure 23: 4076.26A m., Coated grains: Chlorite + glauconite (pos.1,2)

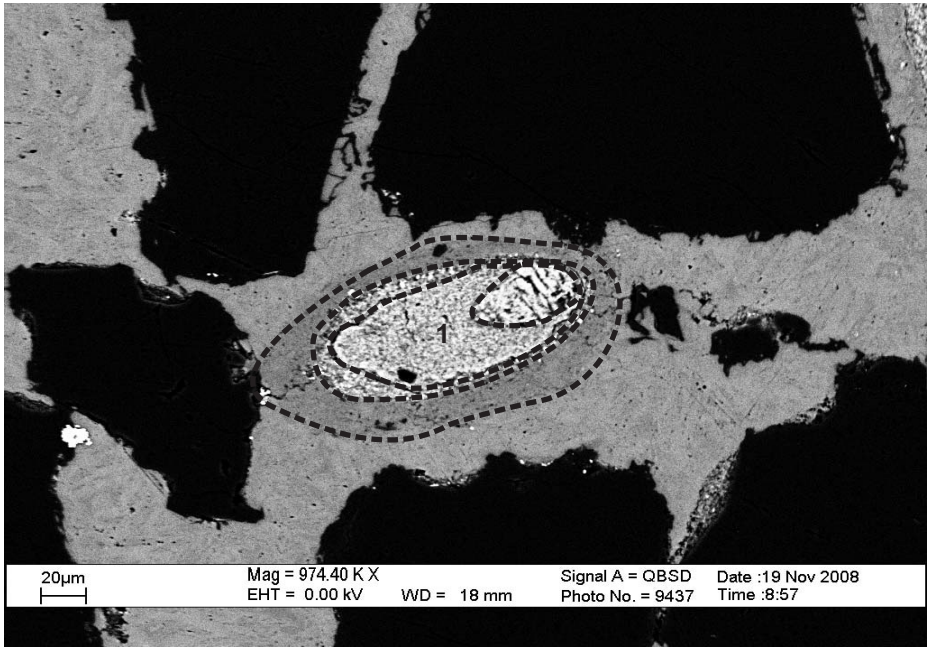


Figure 24: 4076.26A m., Coated grain: Chlorite+ glauconite (pos.1)

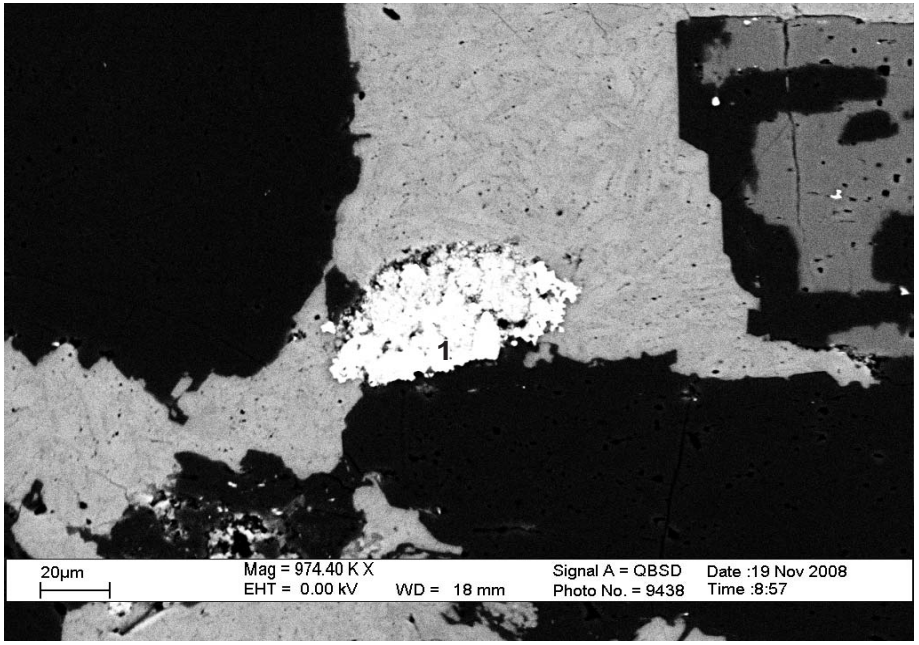


Figure 25: 4076.26A m., Altered ilmenite (pos.1)

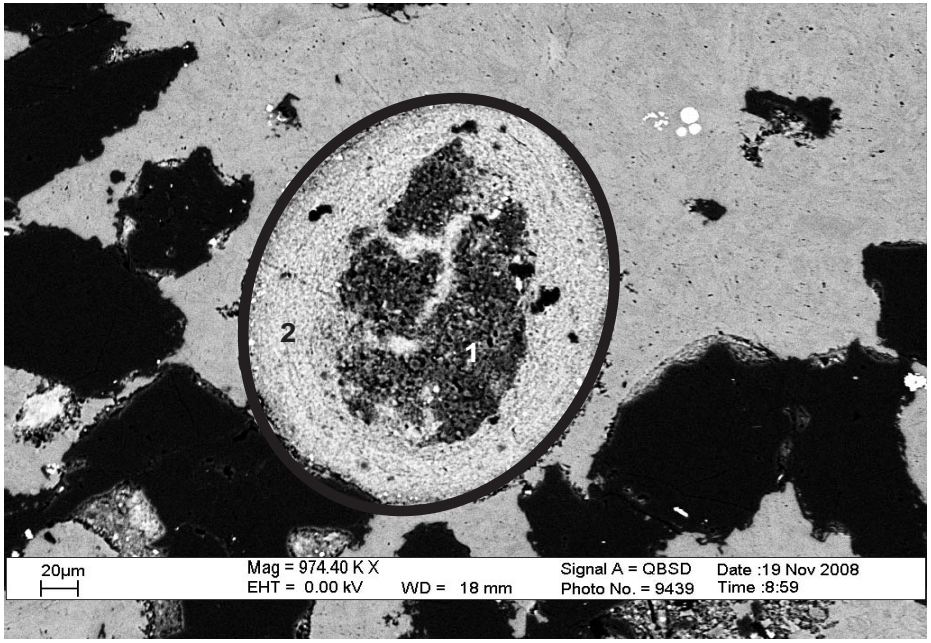


Figure 26: 4076.26A m., coated grain, glauconite (pos.1) and chlorite (pos. 2)

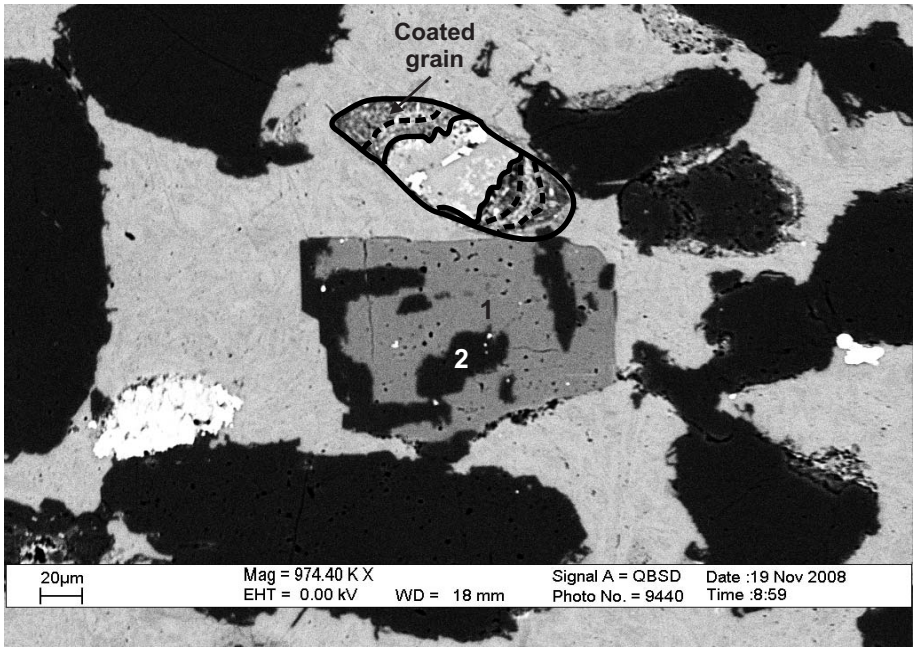


Figure 27: 4076.26A m., K-feldspar (pos.1) and albite (pos.2)

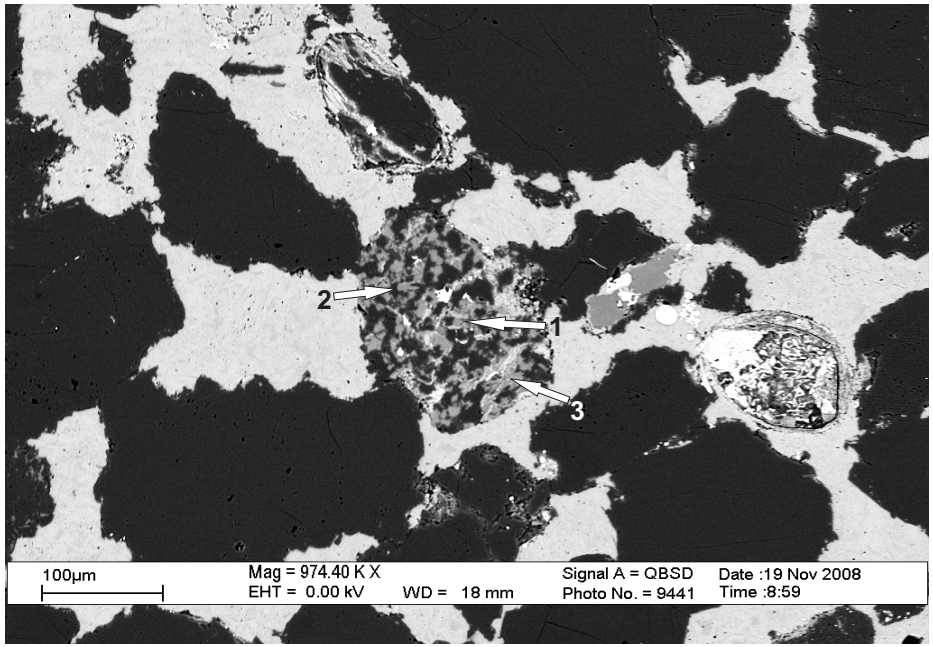


Figure 28: 4076.26A m., glauconite+ chlorite (pos.1), quartz (pos.2) and mixing between both (pos.3)

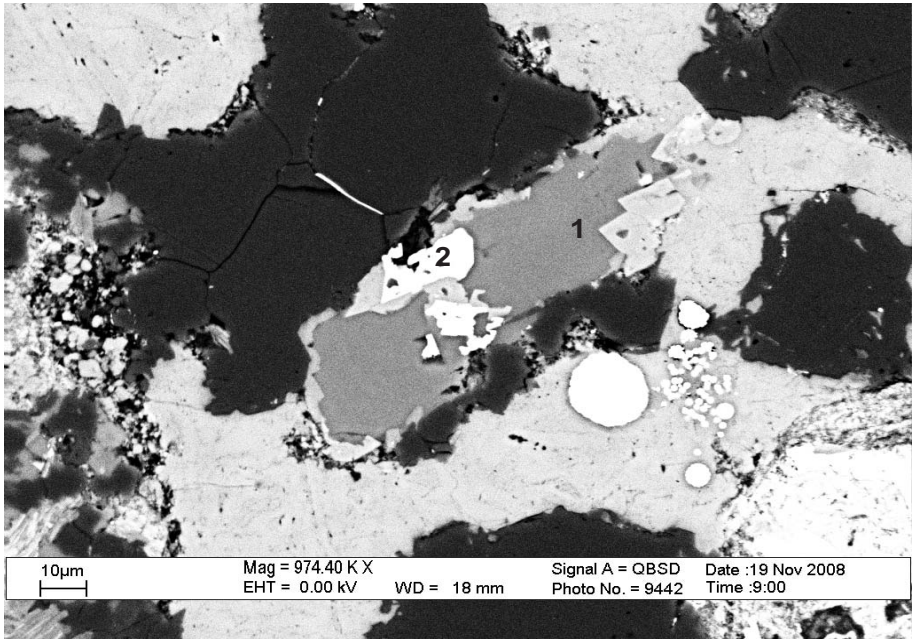


Figure 29: 4076.26A m., K-feldspar (pos.1) and siderite (pos.2)

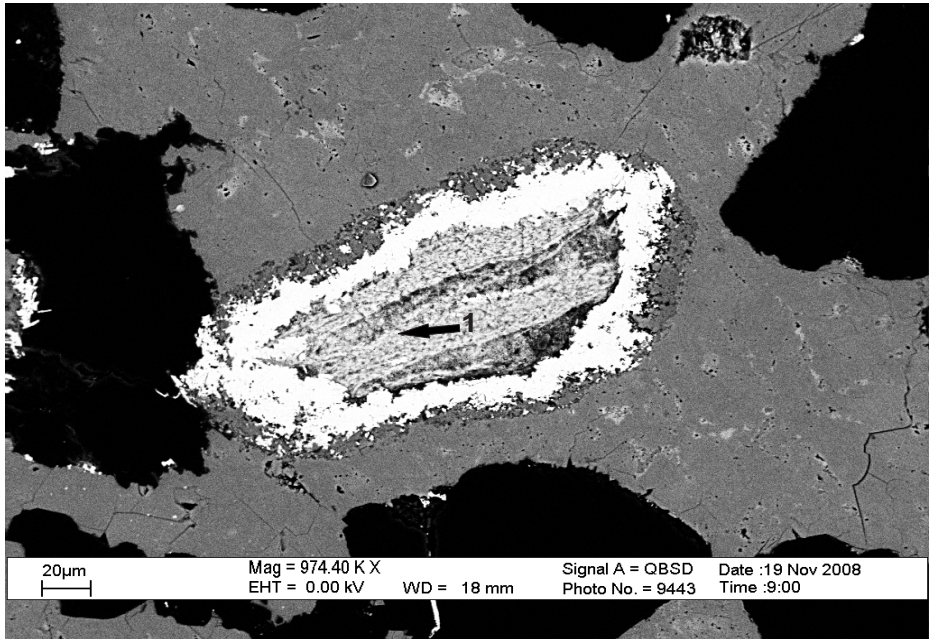


Figure 30: 4076.26A m., Mg-chlorite (altered garnet) (pos.1)

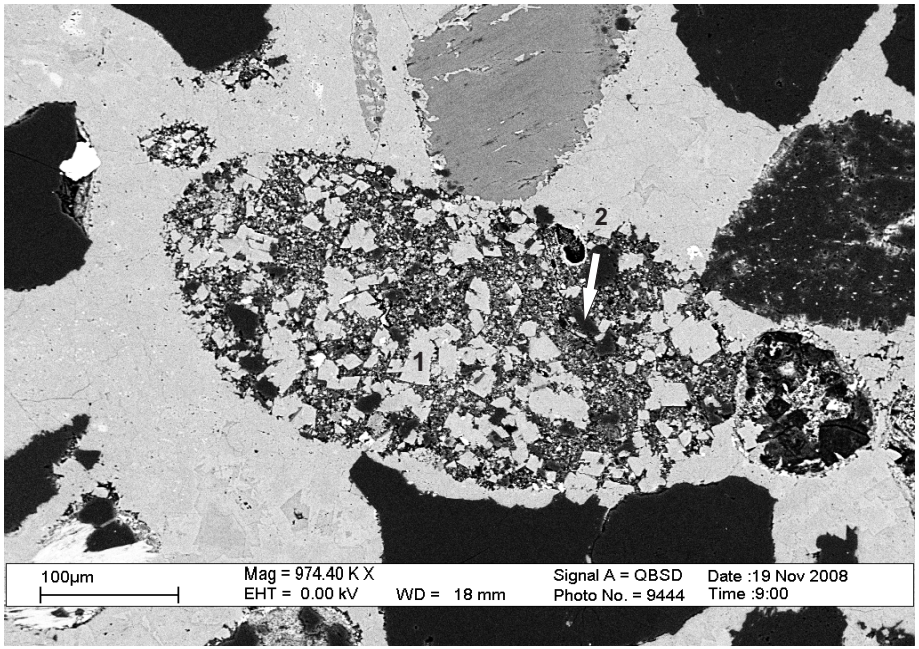


Figure 31: 4076.26A m., Clast with ankerite (pos.1) and mineral mixture (pos.2)

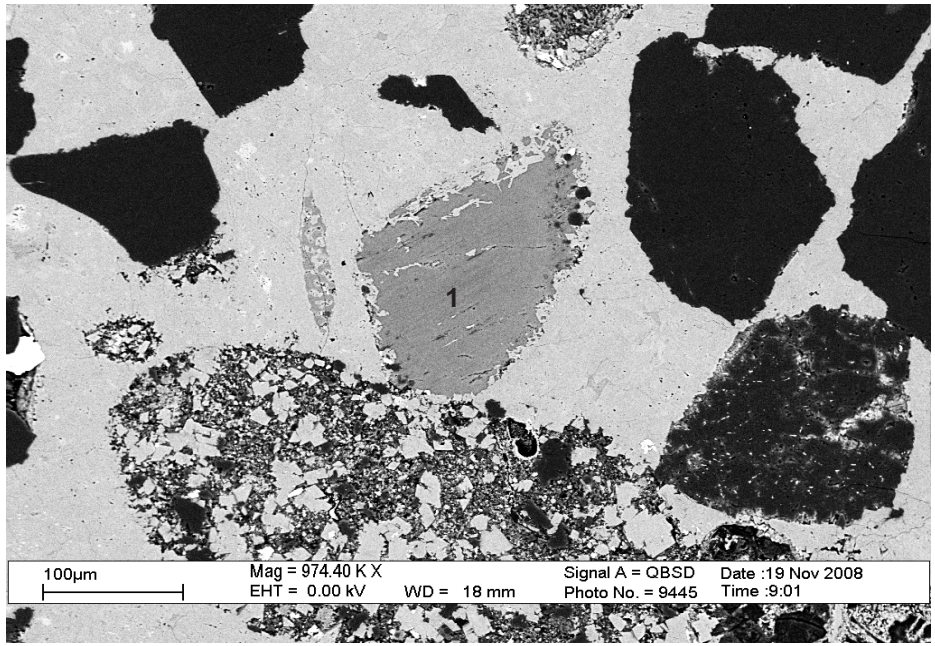


Figure 32: 4076.26A m., K-feldspar (pos.1)

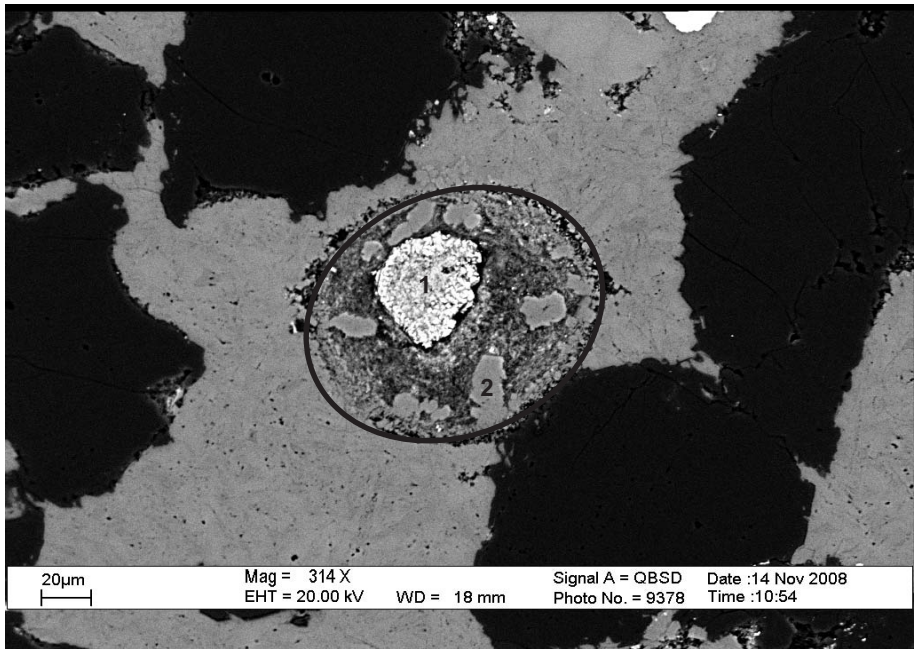


Figure 33: 4076.26A m., Coated grain with chlorite (pos.1) and ferroan calcite (pos.2)

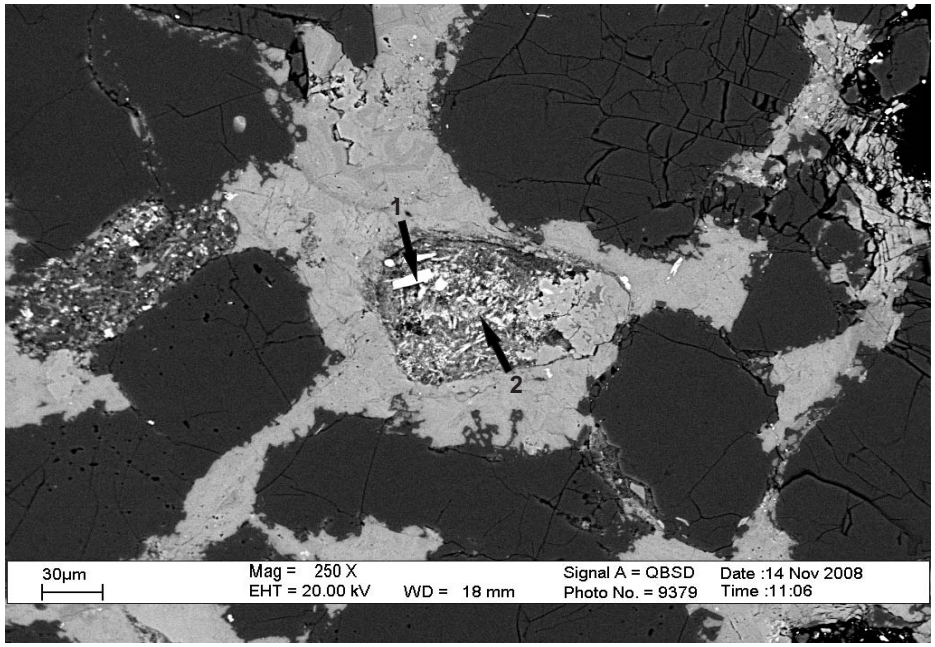


Figure 34: 4076.26A m., Apatite (pos.1) and chlorite+ others (pos.2)

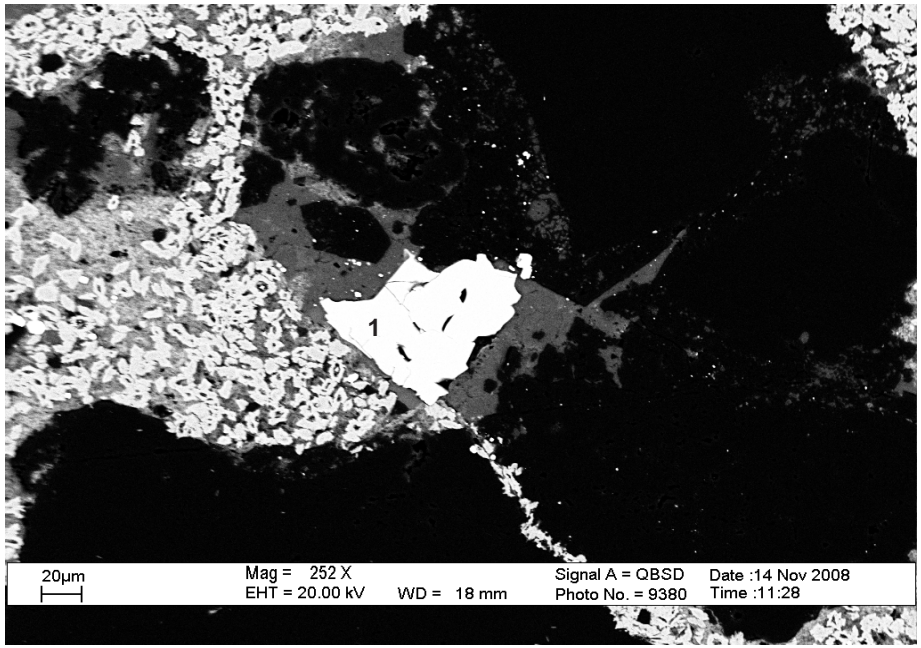


Figure 35: 4076.26A m., Chromian spinel (pos. 1)

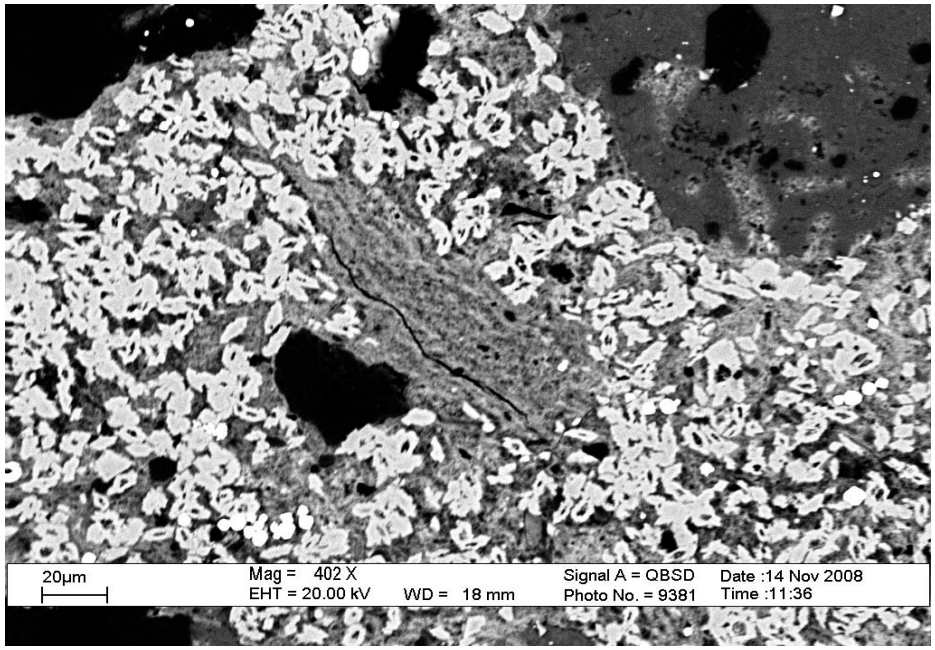


Figure 36: 4076.26A m., Chlorite

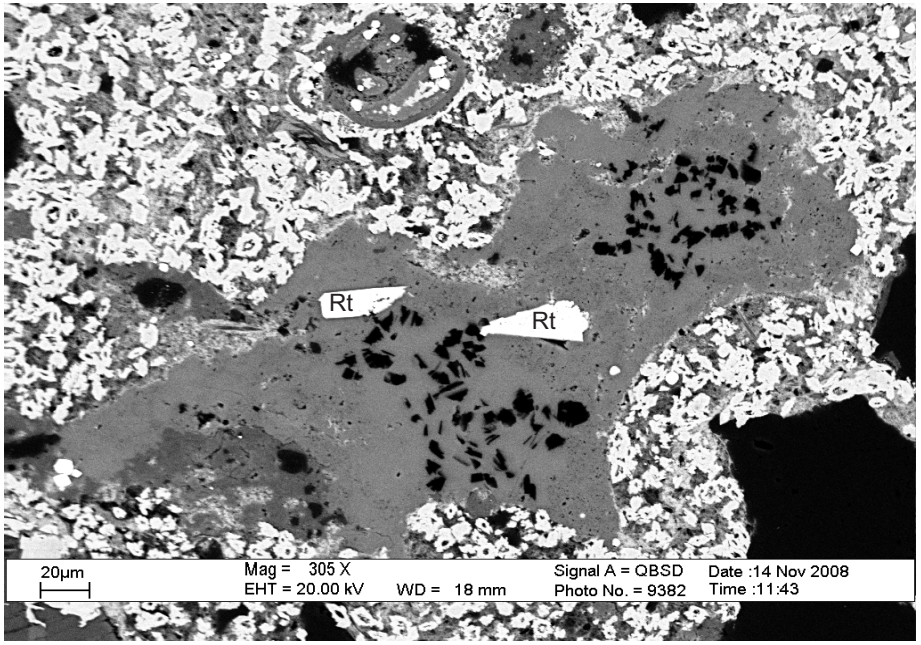


Figure 37: 4076.26A m., Rutile and plagioclase with calcite, kaolinite, and quartz

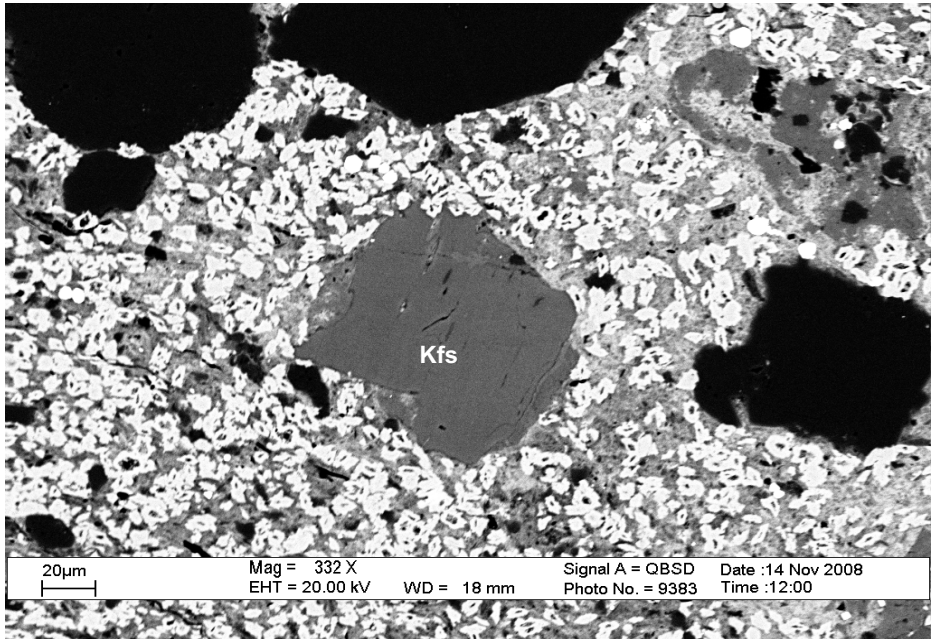


Figure 38: 4076.26A m., K-feldspar

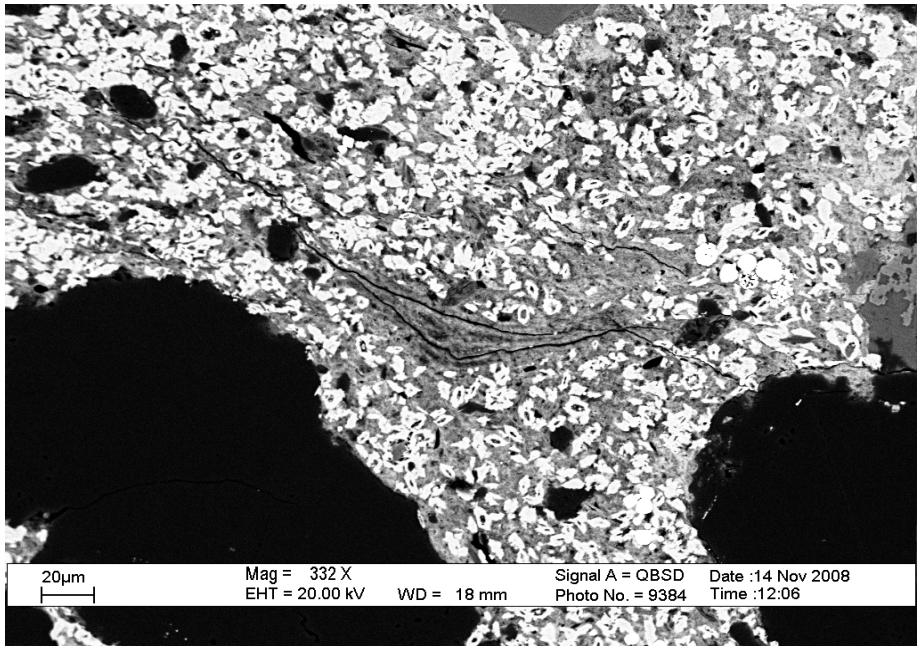


Figure 39: 4076.26A m., Chlorite, glauconite, and rutile

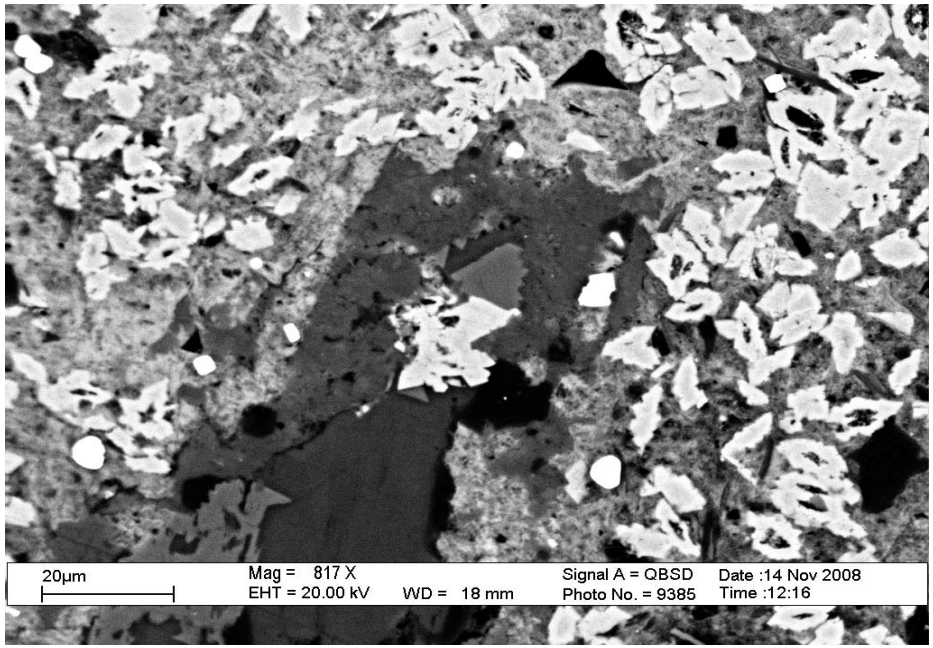


Figure 40: 4076.26A m., Siderite (pos.1,2,3), K-feldspar (pos.4) and ? ankerite (pos.5)

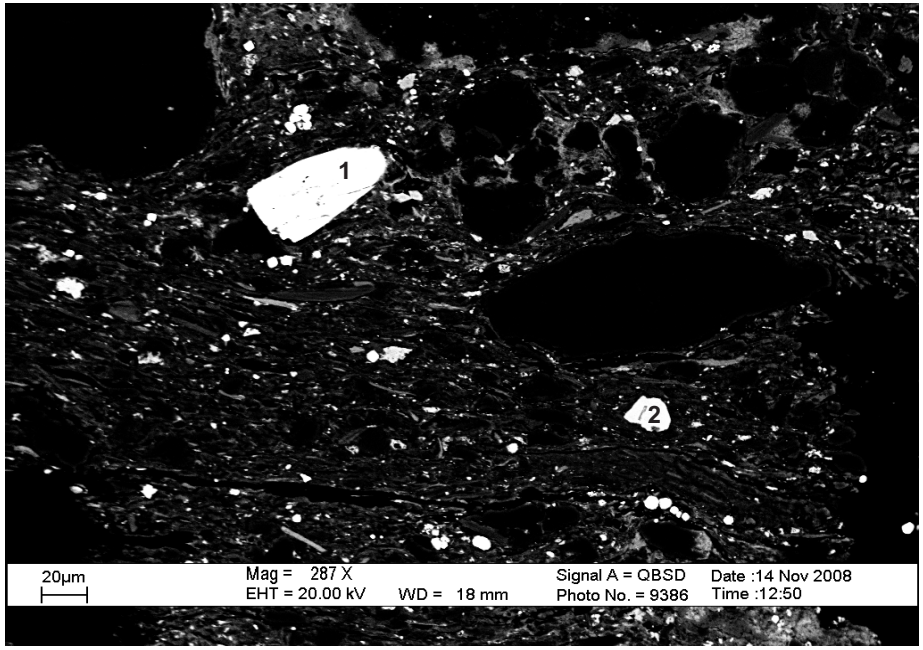


Figure 41: 4076.26A m., Zircon (pos.1) and rutile (pos.2)

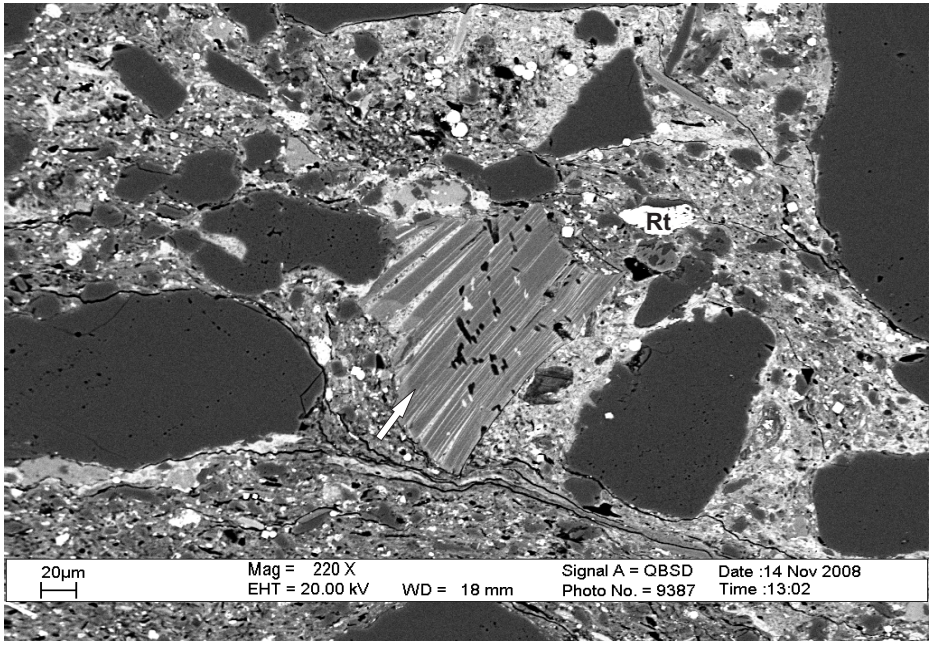


Figure 42: 4076.26A m., Muscovite altering to chlorite

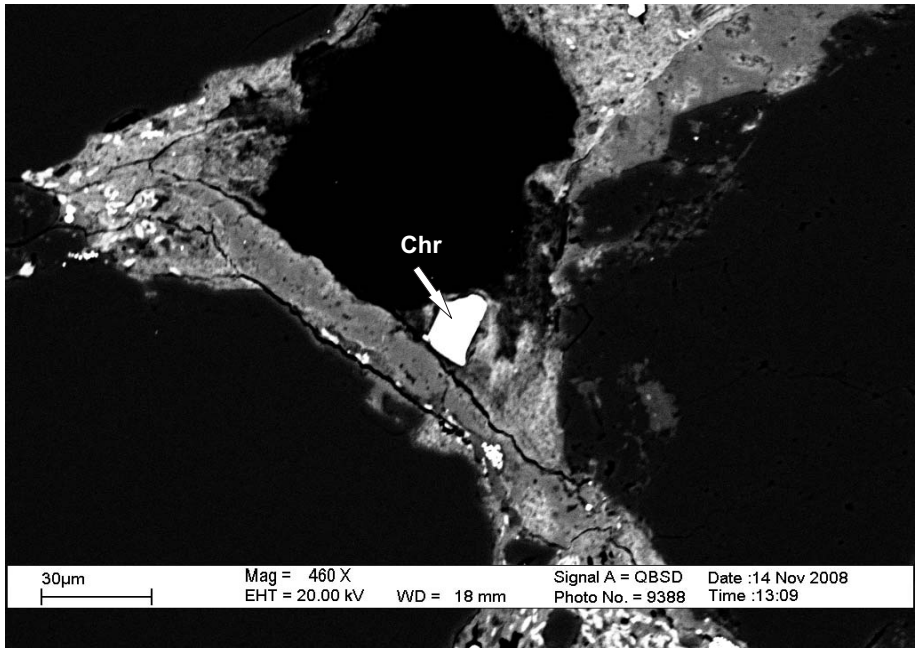


Figure 43: 4076.26A m., Chromite

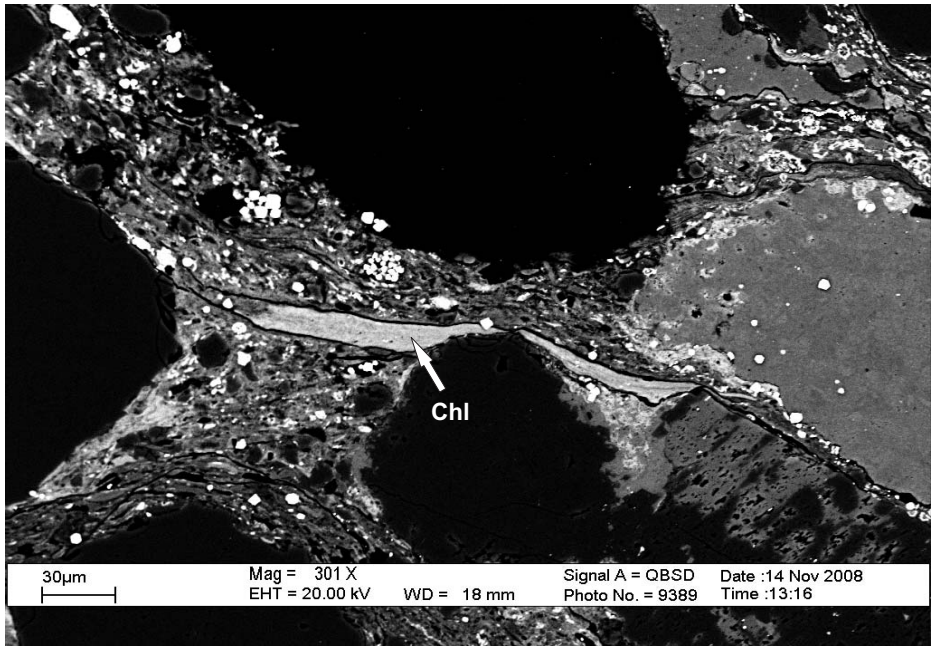


Figure 44: 4076.26A m., Chlorite

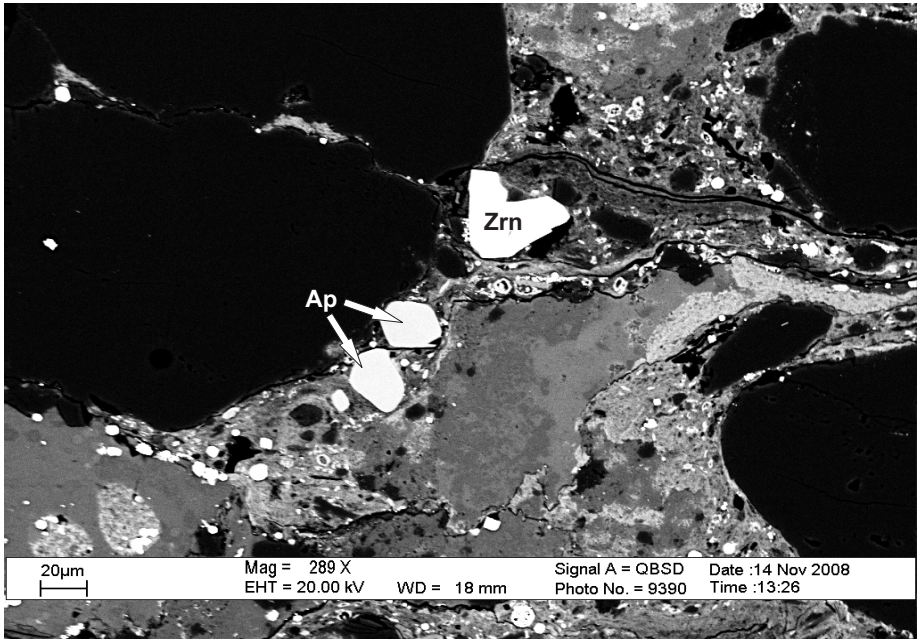


Figure 45: 4076.26A m., Zircon and 2 apatite grains

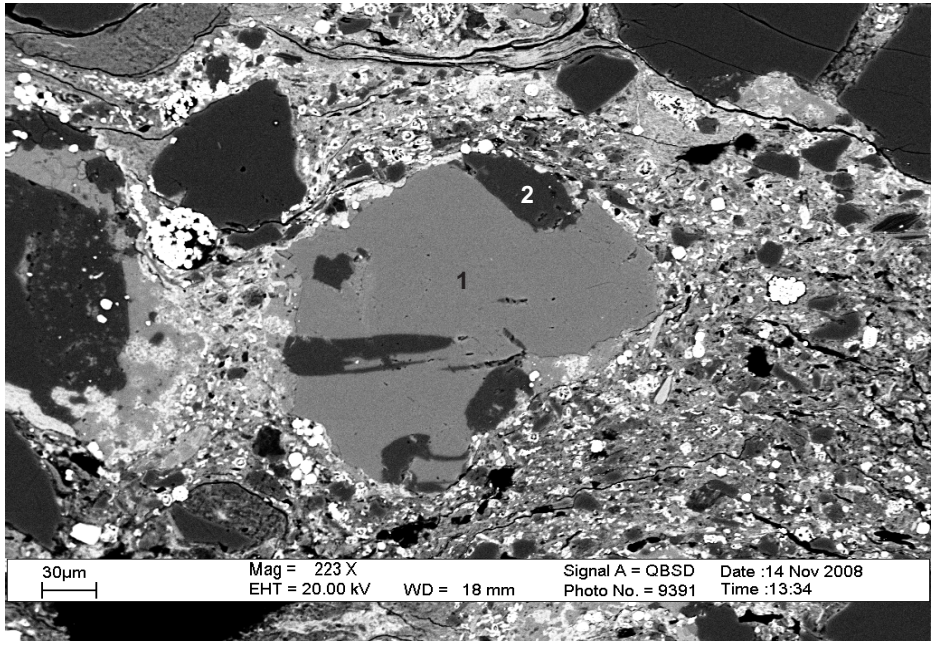


Figure 46: 4076.26A m., K-feldspar (pos.1) and albite (pos.2)

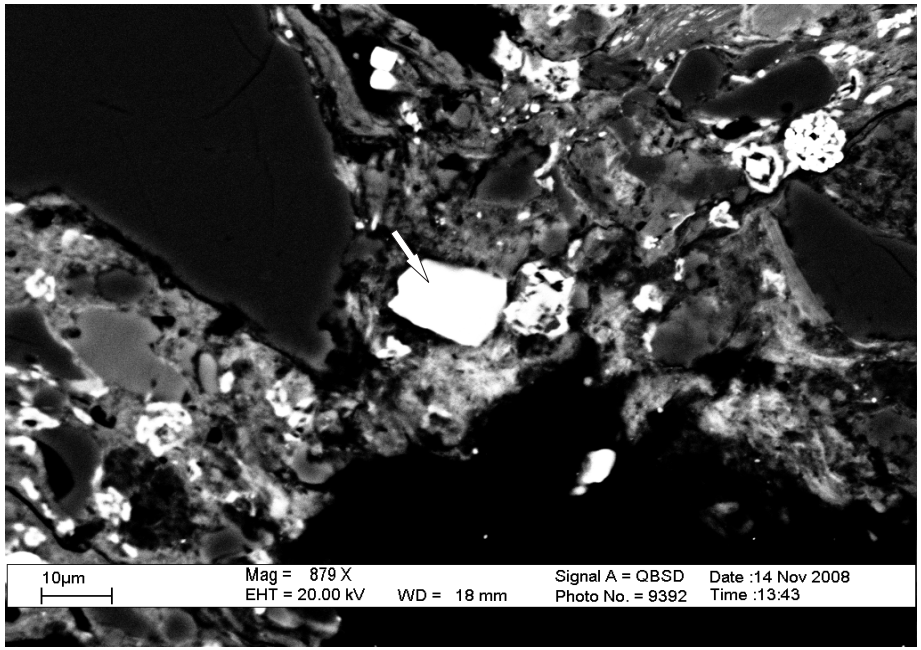


Figure 47: 4076.26A m., Chromite

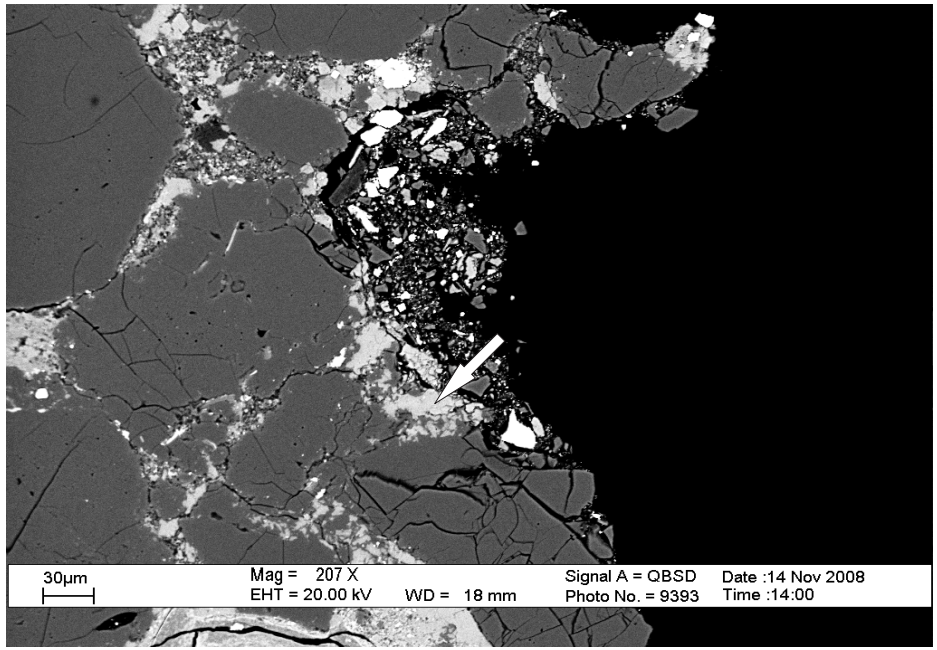


Figure 48: 4076.26A m., Barite

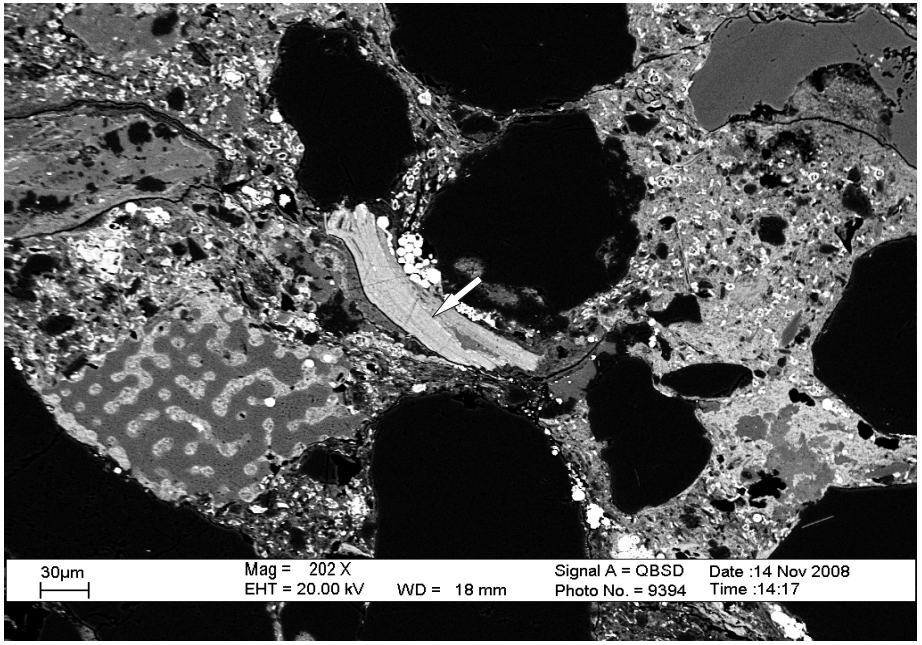


Figure 49: 4076.26A m., Mostly chlorite with some chlorite+ calcite

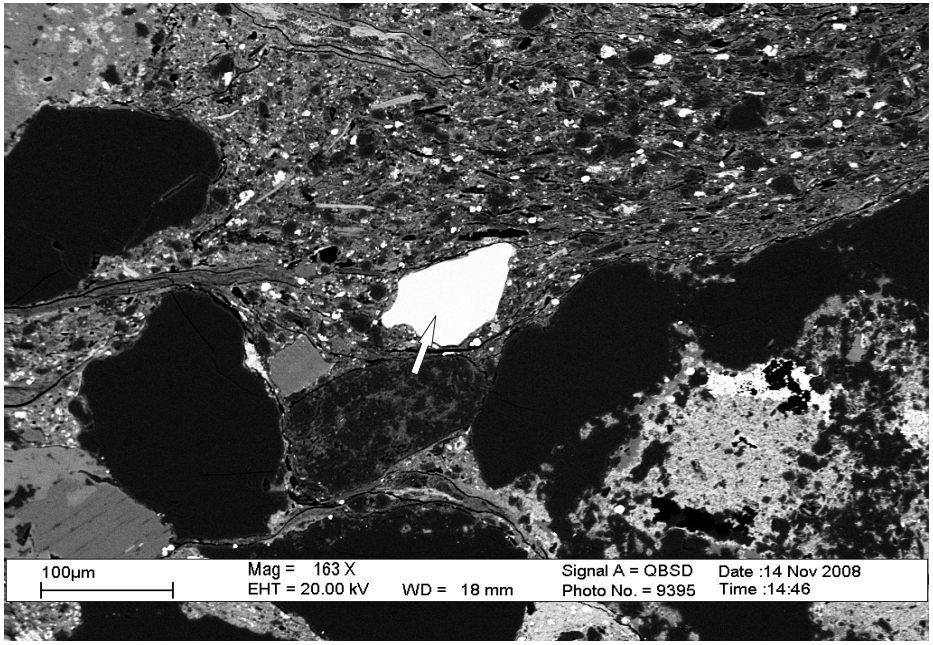


Figure 50: 4076.26A m., Apatite

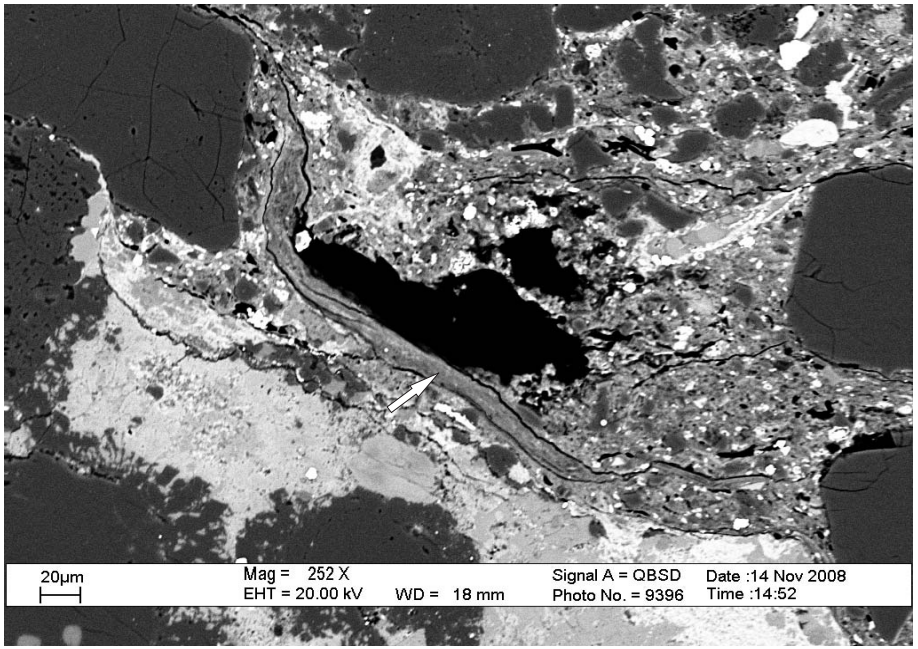


Figure 51: 4076.26A m., Chlorite and glauconite

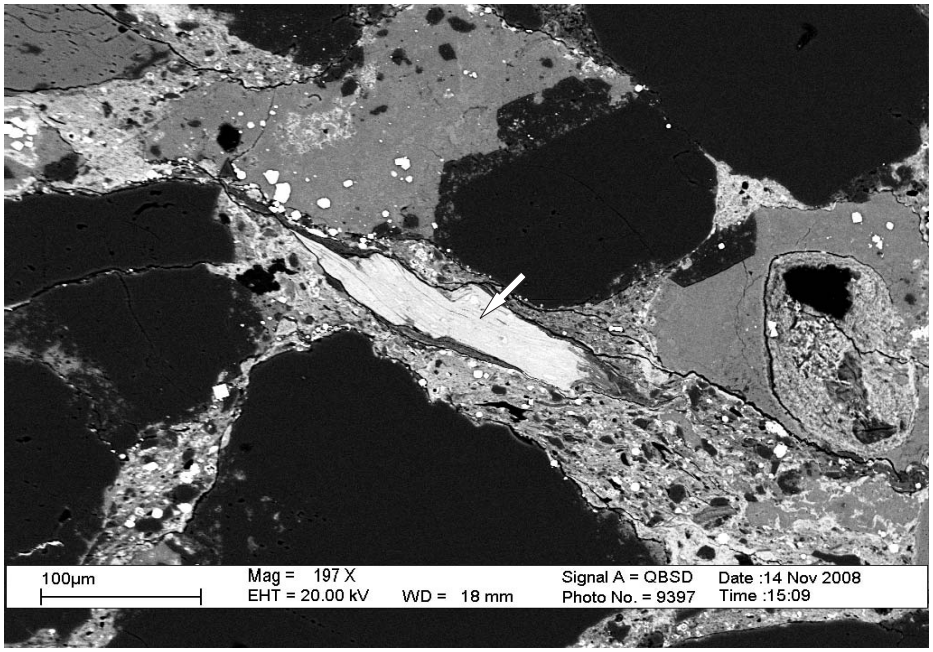


Figure 52: 4076.26A m., Chlorite + glauconite and chlorite + calcite

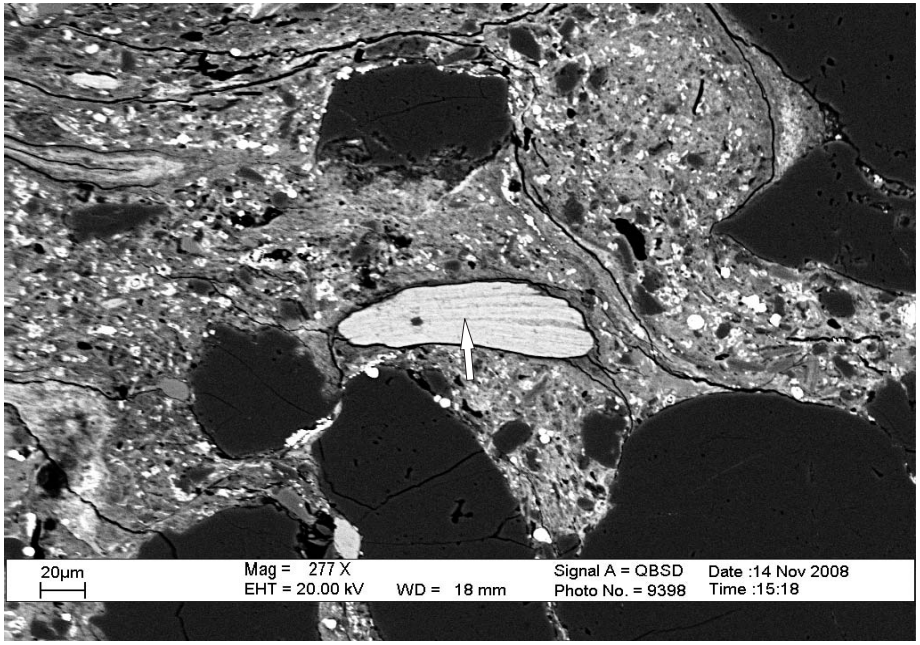


Figure 53: 4076.26A m., Chloritized muscovite

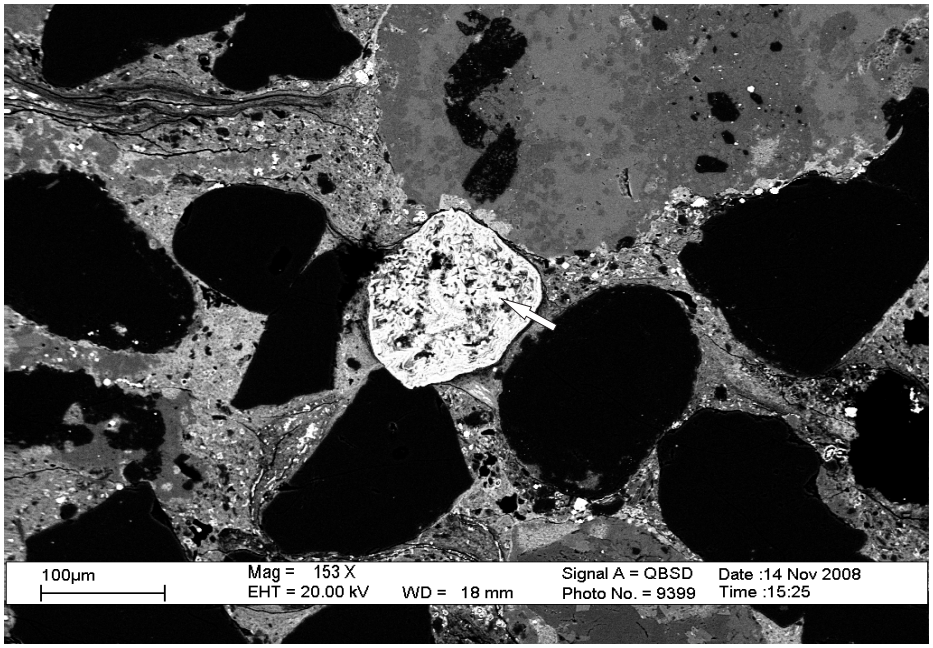


Figure 54: 4076.26A m., Rutile

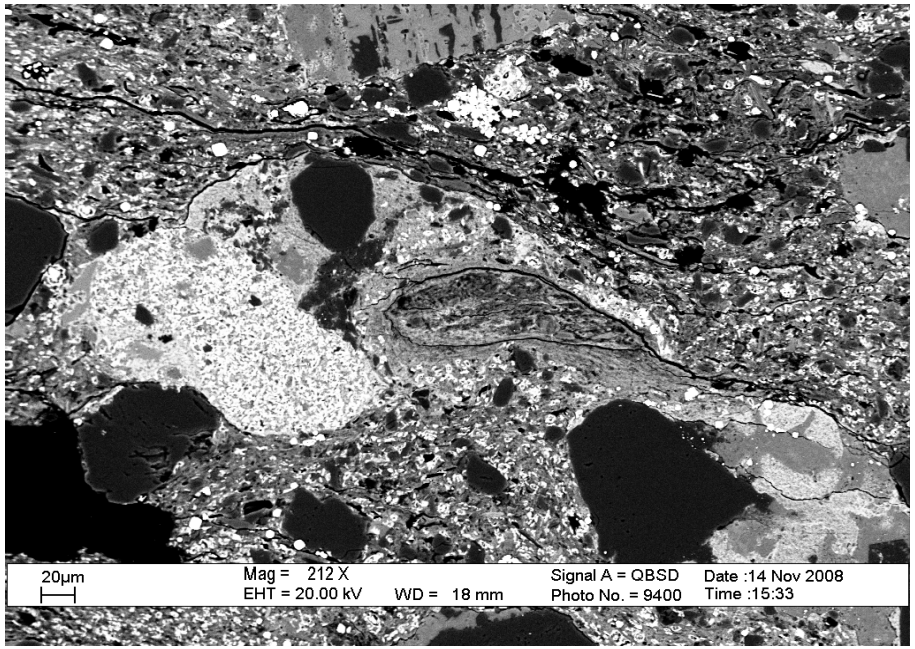


Figure 55: 4076.26A m., Grains 55 (mixture) & 56 (glauconite)

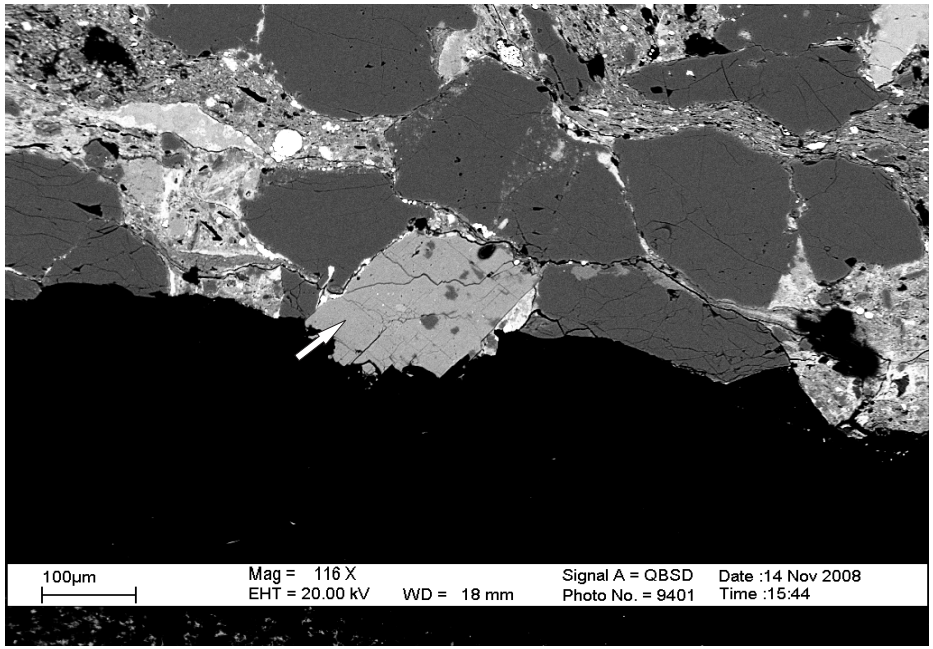


Figure 57: 4076.26A m., K-feldspar with albite patches

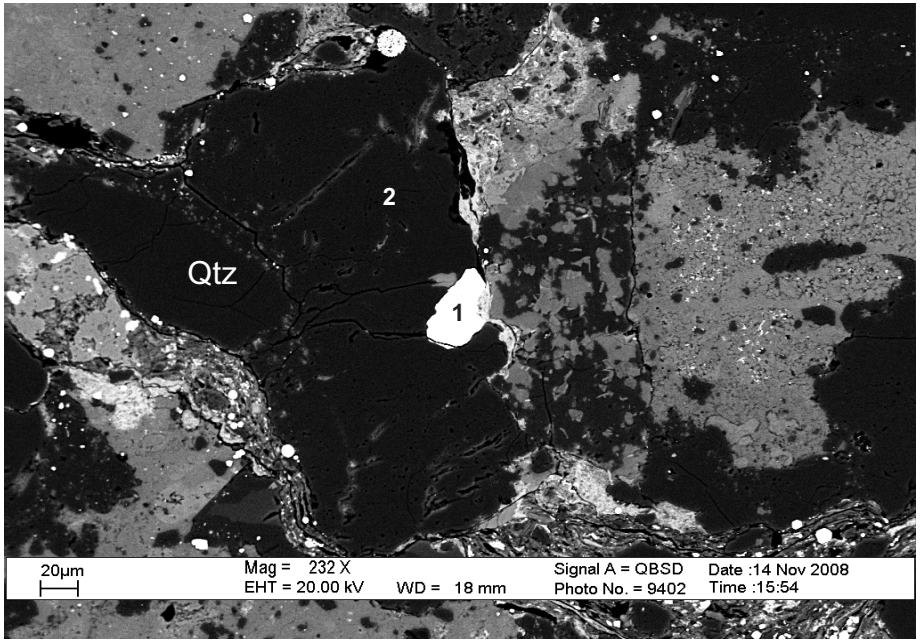


Figure 58: 4076.26A m., Chalcopyrite inclusion (pos.1) and quartz (pos.2) vein clast

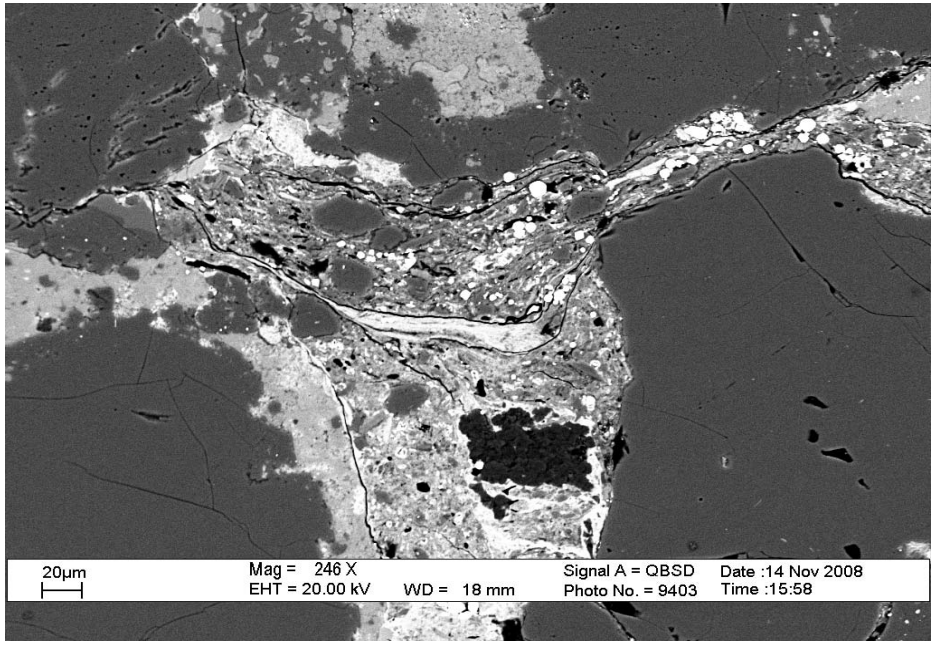


Figure 59: 4076.26A m., Chlorite, glauconite, and rutile

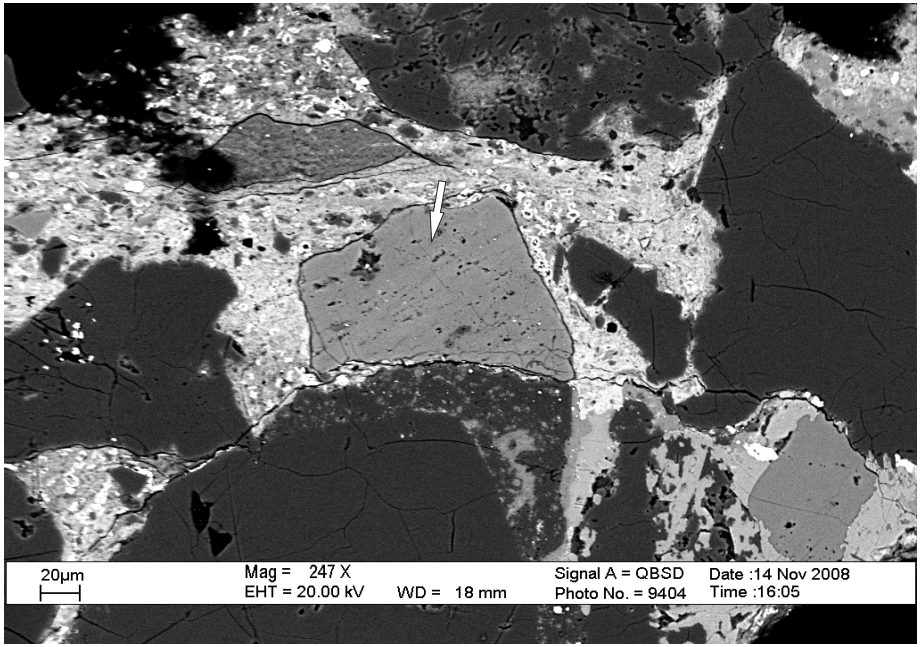


Figure 60: 4076.26A m., K-feldspar

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

Mineral Name															
chromian spinel	grain 1														
	Element	Line	App. Conc	k ratio	Intensity corrn.	Weight%	Weight% sigma	Atomic%	Compound%	Formula	Number of ions	Standard			
	Mg	K_SERIES	3.7	0.02538	0.5468	6.77	0.15	6.95	11.23	MgO	0.97	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.21	0.06045	0.6228	13.18	0.14	12.18	24.9	Al2O3	1.71	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.21	0.00166	0.6527	0.31	0.07	0.28	0.67	SiO2	0.04	SiO2 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	30.01	0.3001	0.9246	32.46	0.23	15.57	47.44	Cr2O3	2.18	Cr 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.37	0.00371	0.8831	0.42	0.14	0.19	0.54	MnO	0.03	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.73	0.14733	0.8492	17.35	0.21	7.75	22.32	FeO	1.09	Fe 1-Jun-1999 12:00 AM			
	O					36.61	0.28	57.08			8				
	Totals					107.1									
										Cation sum	6.02				
altered feldspar	grain 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.57	0.00388	0.7945	0.71	0.09	0.58	1.18	MgO	0.07	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	13.31	0.09807	0.8922	14.92	0.14	10.91	28.2	Al2O3	1.39	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	24.54	0.19795	0.8001	30.68	0.18	21.54	65.63	SiO2	2.75	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.98	0.04905	0.9752	6.13	0.1	3.09	7.38	K2O	0.39	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.71	0.0271	0.8278	3.27	0.11	1.16	4.21	FeO	0.15	Fe 1-Jun-1999 12:00 AM			
	O					50.88	0.26	62.72			8				
	Totals					106.6									
										Cation sum	4.75				
K-feldspar	grain 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	9.14	0.06733	0.9195	9.94	0.27	7.2	18.78	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	30.08	0.24257	0.8698	34.58	0.4	24.05	73.97	SiO2	3.09	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	12.91	0.10595	0.9814	13.16	0.28	6.57	15.85	K2O	0.85	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					50.93	0.51	62.18			8				
	Totals					108.61									
										Cation sum	4.87				
K-feldspar	grain 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	9.63	0.07094	0.9205	10.46	0.29	7.3	19.77	Al2O3	0.94	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	31.38	0.25308	0.868	36.15	0.45	24.23	77.34	SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	12.28	0.10076	0.9789	12.55	0.31	6.04	15.11	K2O	0.77	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					53.06	0.57	62.43			8				
	Totals					112.22									
										Cation sum	4.81				
chromite	grain 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	5.49	0.03766	0.5119	10.73	0.94	14.72	17.79	MgO	2.13	MgO 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	31.01	0.31008	0.9373	33.08	1.11	21.22	48.35	Cr2O3	3.07	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	12.41	0.12409	0.8473	14.65	1.01	8.75	18.84	FeO	1.27	Fe 1-Jun-1999 12:00 AM			
	O					26.53	1.2	55.31			8				
	Totals					84.98									

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

										Cation sum	6.46				
albite	grain 6														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Na	K_SERIES	6.32	0.02834	0.92	6.87	0.28	5.61	9.26	Na2O	0.72	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.78	0.06468	0.8686	10.11	0.26	7.04	19.1	Al2O3	0.9	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	30.49	0.24591	0.8289	36.78	0.39	24.59	78.69	SiO2	3.14	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.29	0.00237	0.9559	0.3	0.1	0.14	0.36	K2O	0.02	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					53.35	0.51	62.62			8				
	Totals					107.42									
										Cation sum	4.78				
K-feldspar	grain 7	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	10.27	0.07563	0.9051	11.35	0.57	10.07	21.44	Al2O3	1.28	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.6	0.17422	0.818	26.4	0.77	22.51	56.48	SiO2	2.86	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.78	0.04741	0.9753	5.92	0.44	3.63	7.14	K2O	0.46	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.77	0.01771	0.8266	2.14	0.59	0.92	2.76	FeO	0.12	Fe 1-Jun-1999 12:00 AM			
	O					42	1.05	62.87			8				
	Totals					87.81									
										Cation sum	4.73				
	grain 7	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	N	K_SERIES	7.09	0.07093	0.2731	25.97	10.26	15.29	100.11	N2O5	1.82	Not defined 1-Jun-1999 12:00 AM			
	Na	K_SERIES	5	0.02243	0.7525	6.65	0.69	2.38	8.96	Na2O	0.28	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.33	0.07611	0.8026	12.87	0.61	3.93	24.32	Al2O3	0.47	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	30.36	0.24484	0.8197	37.04	0.82	10.87	79.23	SiO2	1.29	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.46	0.01202	0.9961	1.47	0.26	0.31	1.77	K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					130.41	17.38	67.21			8				
	Totals					214.4									
										Cation sum	3.9				
chlorite +	grain 8														
glauconite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.11	0.00761	0.639	1.74	0.2	1.9	2.88	MgO	0.25	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.74	0.05705	0.7417	10.44	0.26	10.3	19.73	Al2O3	1.35	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.82	0.1034	0.7316	17.53	0.3	16.6	37.49	SiO2	2.18	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.5	0.01227	1.0134	1.48	0.12	1	1.78	K2O	0.13	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.58	0.00583	0.8579	0.68	0.12	0.38	1.13	TiO2	0.05	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.18	0.16183	0.8569	18.88	0.41	9	24.29	FeO	1.18	Fe 1-Jun-1999 12:00 AM			
	O					36.56	0.5	60.81			8				
	Totals					87.31									
										Cation sum	5.15				
unknown	grain 9														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.1	0.00751	0.6642	1.65	0.28	1.92	2.74	MgO	0.26	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.28	0.05363	0.7645	9.52	0.36	10	17.99	Al2O3	1.35	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.49	0.0846	0.7526	13.94	0.4	14.06	29.82	SiO2	1.9	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.74	0.0143	1.0444	1.67	0.2	1.21	2.01	K2O	0.16	MAD-10 Feldspar 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Ca	K_SERIES	10.31	0.09258	0.986	10.45	0.33	7.39	14.63	CaO	1	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.29	0.10291	0.8427	12.21	0.52	6.19	15.71	FeO	0.84	Fe 1-Jun-1999 12:00 AM			
	O					33.45	0.7	59.23			8				
	Totals					82.9									
										Cation sum	5.51				
K-feldspar	grain 10														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	9.16	0.06751	0.9201	9.96	0.45	7.28	18.82	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	29.87	0.24086	0.8684	34.39	0.67	24.15	73.57	SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	12.12	0.09944	0.9798	12.37	0.48	6.24	14.9	K2O	0.8	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					50.57	0.86	62.33			8				
	Totals					107.29									
										Cation sum	4.83				
?chloritized	grain 11														
biotite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	2.35	0.01611	0.6325	3.72	0.18	3.69	6.16	MgO	0.49	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.68	0.05654	0.7171	10.7	0.21	9.57	20.22	Al2O3	1.28	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.84	0.10359	0.7237	17.75	0.23	15.24	37.97	SiO2	2.04	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.83	0.02325	1.0202	2.78	0.11	1.71	3.35	K2O	0.23	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.75	0.00749	0.8592	0.87	0.1	0.44	1.45	TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.99	0.18994	0.8587	22.12	0.33	9.55	28.45	FeO	1.28	Fe 1-Jun-1999 12:00 AM			
	O					39.67	0.4	59.8			8				
	Totals					97.61									
										Cation sum	5.38				
?chlorite	grain 12														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.78	0.01218	0.6247	2.84	0.3	2.83	4.72	MgO	0.38	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.86	0.06526	0.7192	12.32	0.38	11.03	23.28	Al2O3	1.47	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.25	0.09876	0.7116	17.21	0.41	14.8	36.82	SiO2	1.97	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.37	0.01124	1.0193	1.34	0.16	0.83	1.62	K2O	0.11	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.49	0.00438	0.9877	0.49	0.14	0.3	0.69	CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.46	0.20465	0.8613	23.76	0.62	10.27	30.56	FeO	1.37	Fe 1-Jun-1999 12:00 AM			
	O					39.72	0.71	59.95			8				
	Totals					97.69									
										Cation sum	5.34				
? chloritized	grain 13														
biotite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.98	0.01355	0.6941	2.85	0.23	3.01	4.72	MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.76	0.06452	0.774	11.32	0.28	10.79	21.39	Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	14.05	0.11332	0.7409	18.97	0.32	17.38	40.58	SiO2	2.28	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.6	0.02134	0.9993	2.6	0.15	1.71	3.14	K2O	0.22	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.3	0.00304	0.8373	0.36	0.11	0.2	0.61	TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.74	0.10735	0.8461	12.69	0.38	5.85	16.32	FeO	0.77	Fe 1-Jun-1999 12:00 AM			
	O					37.96	0.53	61.06			8				
	Totals					86.75									
										Cation sum	5.1				

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

unknown	grain 14														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.34	0.00918	0.6964	1.92	0.31	1.86	3.19	MgO	0.24	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.41	0.07669	0.7908	13.16	0.41	11.44	24.87	Al2O3	1.49	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	15.85	0.12785	0.7445	21.29	0.47	17.78	45.55	SiO2	2.32	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	3.18	0.02606	0.9977	3.18	0.22	1.91	3.83	K2O	0.25	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.55	0.11549	0.8457	13.65	0.52	5.73	17.57	FeO	0.75	Fe 1-Jun-1999 12:00 AM			
	O					41.8	0.75	61.27			8				
	Totals					95.02									
										Cation sum	5.06				
? chloritized	grain 15														
K-feldspar	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.16	0.00798	0.7548	1.54	0.22	1.45	2.56	MgO	0.19	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	11.14	0.08207	0.8451	13.18	0.32	11.13	24.91	Al2O3	1.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.85	0.15205	0.7746	24.34	0.4	19.75	52.07	SiO2	2.55	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.91	0.04029	0.9852	4.98	0.21	2.9	6	K2O	0.38	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.81	0.05813	0.8347	6.96	0.33	2.84	8.96	FeO	0.37	Fe 1-Jun-1999 12:00 AM			
	O					43.49	0.59	61.93			8				
	Totals					94.5									
										Cation sum	4.92				
calcite +	grain 16														
chlorite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.77	0.0121	0.598	2.95	0.28	2.91	4.9	MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.82	0.06493	0.6955	12.68	0.34	11.27	23.95	Al2O3	1.52	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.88	0.08774	0.697	15.61	0.35	13.33	33.39	SiO2	1.8	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.62	0.00508	1.0283	0.6	0.12	0.37	0.72	K2O	0.05	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.55	0.00492	1.0012	0.55	0.12	0.33	0.77	CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	25.07	0.25074	0.8683	28.87	0.57	12.4	37.15	FeO	1.67	Fe 1-Jun-1999 12:00 AM			
	O					39.61	0.63	59.39			8				
	Totals					100.87									
										Cation sum	5.47				
? glauconite	grain 17														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.04	0.00712	0.7265	1.43	0.24	1.23	2.37	MgO	0.16	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	12.56	0.09254	0.8245	15.24	0.34	11.83	28.79	Al2O3	1.53	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.94	0.15278	0.7575	25.01	0.4	18.66	53.51	SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.47	0.03666	0.991	4.51	0.2	2.42	5.43	K2O	0.31	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	9.33	0.09334	0.84	11.11	0.39	4.17	14.29	FeO	0.54	Fe 1-Jun-1999 12:00 AM			
	O					47.09	0.61	61.69			8				
	Totals					104.39									
										Cation sum	4.97				
feldspar	grain 18														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.92	0.00627	0.6771	1.35	0.32	1.35	2.24	MgO	0.17	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.1	0.06701	0.781	11.65	0.44	10.47	22.01	Al2O3	1.36	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.31	0.13155	0.7498	21.76	0.53	18.78	46.54	SiO2	2.43	SiO2 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	K	K_SERIES	1.45	0.01193	0.9976	1.46	0.2	0.9	1.76	K2O	0.12	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.15	0.13147	0.8489	15.49	0.62	6.72	19.92	FeO	0.87	Fe 1-Jun-1999 12:00 AM			
	O					40.77	0.83	61.78			8				
	Totals					92.47									
										Cation sum	4.95				
feldspars	grain 19														
(mixed)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Na	K_SERIES	2.58	0.01157	0.8323	3.1	0.24	3.08	4.18	Na2O	0.4	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.08	0.05948	0.8573	9.42	0.24	7.98	17.8	Al2O3	1.04	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.77	0.16754	0.8211	25.3	0.34	20.6	54.13	SiO2	2.7	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.79	0.02287	1.0007	2.79	0.16	1.63	3.36	K2O	0.21	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	7.99	0.07178	0.9457	8.45	0.22	4.82	11.82	CaO	0.63	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.54	0.01536	0.824	1.86	0.2	0.76	2.4	FeO	0.1	Fe 1-Jun-1999 12:00 AM			
	O					42.76	0.49	61.12			8				
	Totals					93.68									
										Cation sum	5.09				
almandine	grain 20														
garnet	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	1.49	0.0102	0.6032	2.47	0.14	2.54	4.09	MgO	0.34	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.84	0.05776	0.704	11.14	0.18	10.34	21.05	Al2O3	1.39	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.41	0.09203	0.7107	16.06	0.19	14.32	34.35	SiO2	1.92	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.8	0.00657	1.0283	0.78	0.07	0.5	0.94	K2O	0.07	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.45	0.01301	0.9982	1.45	0.08	0.91	2.03	CaO	0.12	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.71	0.22711	0.8655	26.24	0.3	11.77	33.76	FeO	1.58	Fe 1-Jun-1999 12:00 AM			
	O					38.08	0.33	59.62			8				
	Totals					96.21									
										Cation sum	5.42				
chlorite	grain 21	spectrum 1 (middle)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	1.49	0.01023	0.6445	2.32	0.36	2.7	3.84	MgO	0.36	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.22	0.06055	0.7369	11.15	0.48	11.71	21.08	Al2O3	1.55	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.86	0.08761	0.7139	15.22	0.52	15.35	32.56	SiO2	2.03	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.26	0.01034	1.0115	1.25	0.22	0.9	1.5	K2O	0.12	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.16	0.15165	0.8574	17.69	0.73	8.97	22.75	FeO	1.19	Fe 1-Jun-1999 12:00 AM			
	O					34.11	0.88	60.38			8				
	Totals					81.73									
										Cation sum	5.25				
glauconite	grain 21	spectrum 2 (outer)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	1.23	0.00841	0.6667	1.84	0.39	1.81	3.05	MgO	0.24	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.98	0.07352	0.7663	13.02	0.53	11.51	24.61	Al2O3	1.51	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	14.53	0.11721	0.732	19.86	0.6	16.86	42.48	SiO2	2.21	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.35	0.0193	1.0049	2.34	0.27	1.43	2.82	K2O	0.19	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.84	0.14842	0.8519	17.42	0.76	7.44	22.41	FeO	0.98	Fe 1-Jun-1999 12:00 AM			
	O					40.89	0.97	60.95			8				
	Totals					95.37									

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

										Cation sum	5.13				
kaolinite	grain 22	spectrum 1 (middle)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	18.27	0.1346	0.9385	19.47	0.14	16.62	36.79	Al2O3	2.08	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.57	0.14167	0.742	23.68	0.17	19.42	50.65	SiO2	2.43	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.18	0.00177	0.8251	0.21	0.07	0.09	0.28	FeO	0.01	Fe 1-Jun-1999 12:00 AM			
	O					44.35	0.23	63.87			8				
	Totals					87.71									
										Cation sum	4.53				
chlorite	grain 22	spectrum 2 (outer)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.52	0.01043	0.614	2.48	0.24	2.53	4.11	MgO	0.34	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.9	0.06555	0.713	12.48	0.3	11.49	23.58	Al2O3	1.54	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.31	0.09125	0.7047	16.06	0.32	14.2	34.35	SiO2	1.9	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.03	0.00843	1.0223	1	0.12	0.64	1.21	K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.36	0.00325	0.9928	0.36	0.1	0.23	0.51	CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	21.57	0.21571	0.8642	24.96	0.49	11.1	32.11	FeO	1.48	Fe 1-Jun-1999 12:00 AM			
	O					38.53	0.56	59.81			8				
	Totals					95.87									
										Cation sum	5.37				
chlorite	grain 23	spectrum 1 (middle)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.24	0.00849	0.6259	1.98	0.36	2.17	3.28	MgO	0.29	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.06	0.05938	0.7271	11.09	0.45	10.94	20.95	Al2O3	1.45	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.85	0.09556	0.7171	16.53	0.49	15.66	35.35	SiO2	2.07	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1	0.00822	1.0157	0.99	0.18	0.67	1.19	K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.35	0.18354	0.861	21.31	0.72	10.16	27.42	FeO	1.35	Fe 1-Jun-1999 12:00 AM			
	O					36.3	0.83	60.4			8				
	Totals					88.19									
										Cation sum	5.25				
	grain 23	spectrum 2 (dark spot)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.93	0.00639	0.6843	1.36	0.25	1.47	2.26	MgO	0.19	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.17	0.06756	0.7858	11.67	0.34	11.35	22.05	Al2O3	1.49	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.86	0.11179	0.7445	18.62	0.39	17.39	39.83	SiO2	2.28	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.56	0.02103	1.004	2.55	0.18	1.71	3.07	K2O	0.22	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.09	0.00977	0.9624	1.13	0.15	0.74	1.58	CaO	0.1	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.23	0.1123	0.847	13.26	0.45	6.23	17.06	FeO	0.82	Fe 1-Jun-1999 12:00 AM			
	O					37.26	0.63	61.11			8				
	Totals					85.86									
										Cation sum	5.09				
unknown	grain 24														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.51	0.01033	0.6144	2.45	0.29	2.45	4.07	MgO	0.33	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.16	0.06744	0.7142	12.82	0.37	11.52	24.22	Al2O3	1.54	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.79	0.09509	0.7049	16.73	0.38	14.44	35.79	SiO2	1.93	SiO2 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	K	K_SERIES	0.89	0.00728	1.0205	0.87	0.14	0.54	1.05	K2O	0.07	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.1	0.22095	0.8644	25.56	0.59	11.09	32.88	FeO	1.48	Fe 1-Jun-1999 12:00 AM			
	O					39.58	0.67	59.96			8				
	Totals					98.01									
										Cation sum	5.34				
? altered	grain 25														
ilmenite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	1.74	0.01285	0.7059	2.47	0.31	2.33	4.67	Al2O3	0.29	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.34	0.01884	0.806	2.9	0.3	2.62	6.2	SiO2	0.32	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.88	0.00791	1.1811	0.75	0.21	0.47	1.04	CaO	0.06	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	45.37	0.45371	0.9079	49.97	0.9	26.51	83.36	TiO2	3.26	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.38	0.05384	0.8395	6.41	0.55	2.92	8.25	FeO	0.36	Fe 1-Jun-1999 12:00 AM			
	O					41.02	0.91	65.15			8				
	Totals					103.52									
										Cation sum	4.28				
glauconite	grain 26	spectrum 1 (middle)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.95	0.0065	0.743	1.28	0.31	1.23	2.12	MgO	0.16	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.5	0.07737	0.8386	12.53	0.45	10.91	23.67	Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.43	0.14865	0.7743	23.81	0.56	19.92	50.93	SiO2	2.57	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.18	0.03428	0.9861	4.24	0.29	2.55	5.1	K2O	0.33	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.64	0.06643	0.8365	7.94	0.51	3.34	10.22	FeO	0.43	Fe 1-Jun-1999 12:00 AM			
	O					42.24	0.84	62.05			8				
	Totals					92.03									
										Cation sum	4.89				
chlorite	grain 26	spectrum 2 (outer)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.6	0.01095	0.6202	2.57	0.3	2.6	4.27	MgO	0.35	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.93	0.0658	0.7177	12.45	0.38	11.33	23.52	Al2O3	1.51	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.87	0.09576	0.7083	16.77	0.4	14.66	35.87	SiO2	1.96	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.31	0.01073	1.0193	1.28	0.15	0.81	1.55	K2O	0.11	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.92	0.20918	0.8629	24.24	0.61	10.66	31.19	FeO	1.42	Fe 1-Jun-1999 12:00 AM			
	O					39.07	0.69	59.96			8				
	Totals					96.39									
										Cation sum	5.34				
K-feldspar	grain 27	spectrum 1 (lighter middle)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	9.56	0.07041	0.9192	10.4	0.37	7.21	19.65	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	31.25	0.25205	0.8698	35.93	0.56	23.94	76.87	SiO2	3.08	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.91	0.11417	0.9823	14.16	0.41	6.78	17.06	K2O	0.87	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					53.09	0.72	62.08			8				
	Totals					113.58									
										Cation sum	4.89				
albite	grain 27	spectrum 2 (darker middle)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Na	K_SERIES	5.6	0.02511	0.9169	6.11	0.46	4.94	8.23	Na2O	0.63	Albite 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Al	K_SERIES	9.09	0.06696	0.876	10.38	0.43	7.15	19.61	Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	31.29	0.25231	0.8316	37.62	0.65	24.9	80.48	SiO2	3.16	SiO2 1-Jun-1999 12:00 AM			
	O					54.21	0.85	63.01			8				
	Totals					108.32									
										Cation sum	4.7				
glauconite	grain 28	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.1	0.00751	0.745	1.47	0.21	1.24	2.44	MgO	0.16	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	13.27	0.09775	0.8402	15.8	0.32	12.03	29.84	Al2O3	1.57	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	19.27	0.15538	0.7641	25.22	0.38	18.45	53.95	SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.98	0.05725	0.9918	7.03	0.22	3.7	8.47	K2O	0.48	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	7.43	0.07425	0.8368	8.87	0.34	3.27	11.42	FeO	0.43	Fe 1-Jun-1999 12:00 AM			
	O					47.73	0.57	61.31			8				
	Totals					106.12									
										Cation sum	5.05				
silica	grain 28	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	1.57	0.01154	0.9255	1.69	0.14	1.05	3.2	Al2O3	0.13	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	52.01	0.41946	0.962	54.06	0.32	32.29	115.65	SiO2	3.89	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.74	0.00607	0.9458	0.78	0.09	0.34	0.94	K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					63.26	0.37	66.32			8				
	Totals					119.79									
										Cation sum	4.06				
? both mixing	grain 28	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.53	0.00367	0.7813	0.68	0.1	0.55	1.14	MgO	0.07	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.53	0.04809	0.8839	7.39	0.14	5.34	13.95	Al2O3	0.67	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.39	0.26926	0.8696	38.39	0.23	26.64	82.13	SiO2	3.32	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	3.7	0.03035	0.9664	3.83	0.1	1.91	4.61	K2O	0.24	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.28	0.0328	0.8263	3.97	0.15	1.39	5.11	FeO	0.17	Fe 1-Jun-1999 12:00 AM			
	O					52.68	0.31	64.18			8				
	Totals					106.94									
										Cation sum	4.47				
K-feldspar	grain 29	spectrum 1 (right side)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	9.62	0.07086	0.9213	10.44	0.35	7.27	19.73	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	31.79	0.25641	0.868	36.63	0.53	24.51	78.36	SiO2	3.13	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	11.22	0.09203	0.9764	11.49	0.36	5.52	13.84	K2O	0.7	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					53.37	0.68	62.69			8				
	Totals					111.92									
										Cation sum	4.76				
? siderite	grain 29	spectrum 2 (middle metallic)													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.9	0.01302	0.4573	4.16	0.48	7.78	6.89	MgO	1.22	MgO 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.89	0.00721	0.6748	1.32	0.29	2.15	2.83	SiO2	0.34	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	7.37	0.06618	1.0913	6.75	0.36	7.67	9.45	CaO	1.2	Wollastonite 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Mn	K_SERIES	1.45	0.0145	0.8882	1.63	0.34	1.35	2.11	MnO	0.21	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	33.43	0.33434	0.9094	36.77	1.07	29.98	47.3	FeO	4.7	Fe 1-Jun-1999 12:00 AM			
	O					17.95	0.81	51.07			8				
	Totals					68.58									
										Cation sum	7.66				
? almandine	grain 30														
garnet	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.83	0.01254	0.5879	3.11	0.26	3.19	5.16	MgO	0.43	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.77	0.0572	0.6842	11.35	0.31	10.48	21.45	Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.55	0.08508	0.697	15.14	0.31	13.43	32.38	SiO2	1.81	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.53	0.00476	1.0069	0.53	0.1	0.33	0.74	CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	25.84	0.25839	0.8708	29.67	0.53	13.24	38.17	FeO	1.78	Fe 1-Jun-1999 12:00 AM			
	O					38.1	0.57	59.33			8				
	Totals					97.89									
										Cation sum	5.48				
ankerite	grain 31	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	2.65	0.01815	0.5644	4.69	0.31	9.37	7.78	MgO	1.5	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	25.45	0.22862	1.0728	23.73	0.42	28.74	33.2	CaO	4.6	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.58	0.01578	0.8213	1.92	0.25	1.7	2.48	MnO	0.27	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	9.94	0.09938	0.8479	11.72	0.48	10.19	15.08	FeO	1.63	Fe 1-Jun-1999 12:00 AM			
	O					16.48	0.47	50			8				
	Totals					58.54									
										Cation sum	8				
quartz + alt	grain 31	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	7.75	0.05706	0.8589	9.02	0.32	7.48	17.04	Al2O3	0.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	24.34	0.19633	0.8288	29.37	0.46	23.41	62.84	SiO2	2.96	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.61	0.0214	0.9855	2.65	0.2	1.52	3.19	K2O	0.19	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.78	0.02498	0.9431	2.95	0.2	1.65	4.13	CaO	0.21	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.69	0.05686	0.8317	6.84	0.37	2.74	8.79	FeO	0.35	Fe 1-Jun-1999 12:00 AM			
	O					45.16	0.63	63.2			8				
	Totals					95.99									
										Cation sum	4.66				
K-feldspar	grain 32														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	9.6	0.07075	0.9207	10.43	0.41	7.24	19.71	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	31.77	0.25619	0.8687	36.57	0.62	24.38	78.23	SiO2	3.12	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	11.95	0.09802	0.978	12.22	0.42	5.85	14.71	K2O	0.75	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					53.44	0.79	62.54			8				
	Totals					112.65									
										Cation sum	4.79				
chlorite	grain 33	spectrum1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.03	0.00704	0.5779	1.78	0.17	2.67	2.95	MgO	0.36	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.59	0.04116	0.6806	8.21	0.21	11.1	15.52	Al2O3	1.5	Al2O3 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Si	K_SERIES	6.41	0.05173	0.6914	9.28	0.21	12.05	19.85	SiO2	1.63	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.22	0.00193	1.016	0.21	0.07	0.19	0.3	CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.08	0.0108	0.889	1.22	0.11	0.93	2.03	TiO2	0.12	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.43	0.18427	0.8727	21.11	0.37	13.79	27.16	FeO	1.86	Fe 1-Jun-1999 12:00 AM			
	O					25.99	0.39	59.27			8				
	Totals					67.79									
										Cation sum	5.5				
ferroan calcite	grain 33	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.14	0.00099	0.632	0.23	0.05	0.61	0.38	MgO	0.1	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	0.45	0.00331	0.756	0.59	0.04	1.44	1.12	Al2O3	0.22	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.8	0.00643	0.8561	0.93	0.04	2.17	1.99	SiO2	0.34	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	27.75	0.24924	1.0668	26.01	0.12	42.45	36.4	CaO	6.6	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.31	0.00312	0.7825	0.4	0.05	0.47	0.51	MnO	0.07	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.98	0.00976	0.8126	1.2	0.07	1.41	1.55	FeO	0.22	Fe 1-Jun-1999 12:00 AM			
	O					12.58	0.11	51.44			8				
	Totals					41.95									
										Cation sum	7.55				
unknown	grain 33	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.59	0.00403	0.5778	1.02	0.07	1.45	1.69	MgO	0.18	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.05	0.02247	0.6964	4.38	0.08	5.61	8.28	Al2O3	0.71	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	3.66	0.02954	0.7611	4.81	0.08	5.93	10.3	SiO2	0.75	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.3	0.00271	1.1106	0.27	0.04	0.23	0.38	CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	21.47	0.21471	0.8975	23.92	0.15	17.27	39.9	TiO2	2.19	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	8.94	0.08945	0.8499	10.52	0.14	6.52	13.54	FeO	0.83	Fe 1-Jun-1999 12:00 AM			
	O					29.15	0.19	63			8				
	Totals					74.08									
										Cation sum	4.7				
ferroan calcite	grain 33	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Si	K_SERIES	0.28	0.00224	0.873	0.32	0.06	0.8	0.68	SiO2	0.13	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	28.97	0.26025	1.0757	26.94	0.21	47.36	37.69	CaO	7.52	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.23	0.00226	0.7785	0.29	0.09	0.37	0.37	MnO	0.06	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.69	0.00687	0.8096	0.85	0.1	1.07	1.09	FeO	0.17	Fe 1-Jun-1999 12:00 AM			
	O					11.44	0.17	50.4			8				
	Totals					39.83									
										Cation sum	7.87				
chlorite +	grain 34	spectrum 1													
glauconite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.11	0.00762	0.6576	1.69	0.11	2.44	2.8	MgO	0.32	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.2	0.04569	0.7518	8.25	0.14	10.75	15.59	Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.95	0.07219	0.7337	12.2	0.16	15.27	26.1	SiO2	2.03	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.82	0.01489	1.021	1.78	0.08	1.6	2.14	K2O	0.21	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.89	0.01702	0.9773	1.94	0.08	1.7	2.71	CaO	0.23	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.66	0.00656	0.8416	0.78	0.07	0.57	1.3	TiO2	0.08	Ti 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Fe	K_SERIES	10.1	0.10098	0.8508	11.87	0.21	7.47	15.27	FeO	0.99	Fe 1-Jun-1999 12:00 AM			
	O					27.41	0.27	60.21			8				
	Totals					65.92									
										Cation sum	5.29				
apatite	grain 34	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	0.82	0.00605	0.8198	1	0.08	1.44	1.89	Al2O3	0.2	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.6	0.02099	0.9071	2.87	0.12	3.97	6.14	SiO2	0.54	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	8.49	0.0503	1.2379	6.86	0.15	8.62	15.72	P2O5	1.17	GaP 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.76	0.00625	1.095	0.7	0.08	0.69	0.84	K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	24.23	0.21765	1.0009	24.21	0.19	23.5	33.88	CaO	3.19	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.1	0.01103	0.8279	1.33	0.1	0.93	1.71	FeO	0.13	Fe 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	1.4	0.01304	0.8271	1.7	0.28	0.75	2.01	SrO	0.1	SrF2 1-Jun-1999 12:00 AM			
	Y	L_SERIES	2.03	0.02026	0.7625	2.66	0.38	1.16	3.37	Y2O3	0.16	Y 1-Jun-1999 12:00 AM			
	O					24.23	0.35	58.93			8				
	Totals					65.56									
										Cation sum	5.58				
calcite	grain 34	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	0.76	0.00563	0.7968	0.96	0.2	2.12	1.81	Al2O3	0.32	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.95	0.02381	0.8779	3.36	0.24	7.13	7.19	SiO2	1.06	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.05	0.00863	1.2153	0.87	0.21	1.32	1.04	K2O	0.2	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	24.83	0.22299	1.0354	23.98	0.54	35.66	33.55	CaO	5.31	Wollastonite 1-Jun-1999 12:00 AM			
	O					14.43	0.48	53.77			8				
	Totals					43.6									
										Cation sum	6.88				
unknown	grain 34	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.68	0.00463	0.6747	1	0.12	1.38	1.66	MgO	0.18	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.47	0.04033	0.7801	7.02	0.17	8.68	13.26	Al2O3	1.14	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.14	0.08984	0.7732	14.41	0.21	17.13	30.83	SiO2	2.25	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	0.69	0.00407	0.953	0.72	0.11	0.78	1.65	P2O5	0.1	GaP 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.96	0.02425	1.0169	2.91	0.11	2.48	3.5	K2O	0.33	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.73	0.02454	0.9634	2.84	0.11	2.36	3.97	CaO	0.31	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.3	0.00297	0.8269	0.36	0.08	0.25	0.6	TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	8.65	0.08654	0.8449	10.24	0.24	6.12	13.18	FeO	0.81	Fe 1-Jun-1999 12:00 AM			
	O					29.15	0.36	60.82			8				
	Totals					68.64									
										Cation sum	5.15				
chromian spinel	grain 35	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	2.64	0.01809	0.5602	4.71	0.42	6.76	7.81	MgO	0.95	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.13	0.05251	0.634	11.24	0.43	14.54	21.24	Al2O3	2.04	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	19.21	0.19206	0.9209	20.85	0.6	13.99	30.48	Cr2O3	1.96	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.31	0.10305	0.8492	12.14	0.57	7.58	15.61	FeO	1.06	Fe 1-Jun-1999 12:00 AM			
	O					26.2	0.74	57.13			8				

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Totals					75.15									
										Cation sum	6				
chlorite	grain 35	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.37	0.00255	0.7008	0.53	0.06	0.63	0.88	MgO	0.08	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.22	0.00896	0.8145	1.49	0.07	1.6	2.82	Al2O3	0.2	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	22.68	0.18292	0.8791	25.8	0.13	26.49	55.19	SiO2	3.32	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	0.1	0.00091	0.7389	0.14	0.04	0.13	0.35	SO3	0.02	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.15	0.0012	0.9931	0.15	0.04	0.11	0.18	K2O	0.01	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	3.92	0.03519	0.9605	4.08	0.07	2.93	5.71	CaO	0.37	Wollastonite 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	0.42	0.0042	0.8477	0.5	0.05	0.27	0.72	Cr2O3	0.03	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.5	0.06496	0.8336	7.79	0.12	4.02	10.03	FeO	0.5	Fe 1-Jun-1999 12:00 AM			
	O					35.4	0.19	63.81			8				
	Totals					75.88									
										Cation sum	4.54				
chromian spinel	grain 35	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	2.64	0.01809	0.5602	4.71	0.42	6.76	7.81	MgO	0.95	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.13	0.05251	0.634	11.24	0.43	14.54	21.24	Al2O3	2.04	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	19.21	0.19206	0.9209	20.85	0.6	13.99	30.48	Cr2O3	1.96	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.31	0.10305	0.8492	12.14	0.57	7.58	15.61	FeO	1.06	Fe 1-Jun-1999 12:00 AM			
	O					26.2	0.74	57.13			8				
	Totals					75.15									
										Cation sum	6				
chlorite	grain 36	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.02	0.00696	0.5951	1.71	0.16	2.62	2.83	MgO	0.35	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.49	0.04041	0.6959	7.88	0.2	10.91	14.9	Al2O3	1.47	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.25	0.0585	0.7008	10.35	0.21	13.76	22.14	SiO2	1.85	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.65	0.0053	1.028	0.63	0.08	0.6	0.76	K2O	0.08	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.44	0.1644	0.8691	18.91	0.34	12.65	24.33	FeO	1.7	Fe 1-Jun-1999 12:00 AM			
	O					25.48	0.37	59.46			8				
	Totals					64.96									
										Cation sum	5.45				
	grain 36	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.36	0.00931	0.6046	2.25	0.23	3.11	3.72	MgO	0.42	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.35	0.04678	0.6989	9.09	0.28	11.34	17.17	Al2O3	1.52	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.06	0.06501	0.697	11.57	0.29	13.86	24.74	SiO2	1.86	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	17.16	0.17158	0.8672	19.78	0.47	11.92	25.45	FeO	1.6	Fe 1-Jun-1999 12:00 AM			
	O					28.41	0.52	59.77			8				
	Totals					71.09									
										Cation sum	5.39				
rutile	grain 37	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Ca	K_SERIES	1.13	0.01018	1.2331	0.92	0.15	0.79	1.29	CaO	0.1	Wollastonite 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Ti	K_SERIES	41.17	0.41168	0.9148	45	0.69	32.3	75.07	TiO2	3.91	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.03	0.01028	0.8336	1.23	0.25	0.76	1.59	FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	O					30.78	0.59	66.15			8				
	Totals					77.94									
										Cation sum	4.09				
rutile	grain 37	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Al	K_SERIES	0.38	0.00282	0.7064	0.54	0.15	0.7	1.02	Al2O3	0.08	Al2O3 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.68	0.00609	1.2316	0.55	0.13	0.48	0.77	CaO	0.06	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	40.39	0.40394	0.9149	44.15	0.6	32.02	73.65	TiO2	3.87	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.84	0.00836	0.8334	1	0.23	0.62	1.29	FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	O					30.48	0.53	66.18			8				
	Totals					76.73									
										Cation sum	4.09				
calcite	grain 37	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	0.5	0.00344	0.6433	0.78	0.14	2.25	1.3	MgO	0.35	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	0.31	0.00228	0.7505	0.41	0.11	1.07	0.78	Al2O3	0.17	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.64	0.00517	0.8547	0.75	0.11	1.87	1.6	SiO2	0.29	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	26.02	0.23373	1.0642	24.45	0.33	42.69	34.21	CaO	6.67	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.6	0.00595	0.8095	0.74	0.16	0.92	0.95	FeO	0.14	Fe 1-Jun-1999 12:00 AM			
	O					11.71	0.3	51.2			8				
	Totals					38.84									
										Cation sum	7.62				
kaolinite	grain 37	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Al	K_SERIES	13.57	0.09998	0.9397	14.44	0.19	16.45	27.29	Al2O3	2.06	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.28	0.10713	0.7447	17.84	0.23	19.52	38.16	SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.2	0.00181	0.9339	0.22	0.06	0.17	0.3	CaO	0.02	Wollastonite 1-Jun-1999 12:00 AM			
	O					33.26	0.3	63.87			8				
	Totals					65.76									
										Cation sum	4.53				
kaolinite +	grain 37	spectrum 5													
some calcite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Al	K_SERIES	12.51	0.09214	0.931	13.44	0.38	16.08	25.39	Al2O3	2.03	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.26	0.09889	0.7488	16.38	0.46	18.83	35.03	SiO2	2.37	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.94	0.0174	0.9397	2.06	0.19	1.66	2.88	CaO	0.21	Wollastonite 1-Jun-1999 12:00 AM			
	O					31.43	0.62	63.43			8				
	Totals					63.3									
										Cation sum	4.61				
silica	grain 37	spectrum 6													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Si	K_SERIES	38.5	0.3105	0.9796	39.3	0.39	33.16	84.08	SiO2	3.98	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.41	0.00369	0.9226	0.45	0.1	0.26	0.62	CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	O					44.95	0.42	66.58			8				
	Totals					84.7									

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

										Cation sum	4.02				
K-feldspar	grain 38	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	6.91	0.05088	0.9109	7.58	0.14	7.4	14.33	Al2O3	0.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.96	0.17709	0.8622	25.47	0.22	23.88	54.48	SiO2	3.07	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.33	0.07657	0.983	9.49	0.15	6.39	11.44	K2O	0.82	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	0.51	0.0048	0.758	0.68	0.16	0.13	0.76	BaO	0.02	BaF2 1-Jun-1999 12:00 AM			
	O					37.78	0.28	62.19			8				
	Totals					81									
										Cation sum	4.86				
	grain 38	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	6.49	0.0478	0.9197	7.06	0.29	7.15	13.33	Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.61	0.1743	0.8704	24.83	0.43	24.15	53.12	SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.06	0.07431	0.9808	9.23	0.31	6.45	11.12	K2O	0.83	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					36.45	0.55	62.25			8				
	Totals					77.57									
										Cation sum	4.85				
	grain 38	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	7	0.05154	0.9204	7.6	0.25	7.63	14.36	Al2O3	0.98	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.36	0.17228	0.8636	24.73	0.37	23.85	52.92	SiO2	3.06	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.84	0.07251	0.9802	9.02	0.26	6.24	10.86	K2O	0.8	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					36.79	0.47	62.27			8				
	Totals					78.14									
										Cation sum	4.85				
chlorite +	grain 39	spectrum 1													
glauconite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.17	0.00799	0.6709	1.74	0.17	2.17	2.88	MgO	0.29	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.44	0.05478	0.7654	9.72	0.23	10.96	18.36	Al2O3	1.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.72	0.09455	0.7364	15.92	0.26	17.25	34.06	SiO2	2.26	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.85	0.01518	1.0034	1.84	0.11	1.43	2.22	K2O	0.19	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.22	0.11218	0.8508	13.18	0.32	7.18	16.96	FeO	0.94	Fe 1-Jun-1999 12:00 AM			
	O					32.08	0.42	61			8				
	Totals					74.48									
										Cation sum	5.11				
chlorite +	grain 39	spectrum 2													
glauconite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.04	0.00713	0.6674	1.56	0.13	2.07	2.58	MgO	0.27	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.32	0.05393	0.7637	9.59	0.18	11.49	18.12	Al2O3	1.51	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.54	0.08497	0.7307	14.42	0.2	16.61	30.85	SiO2	2.19	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.99	0.01635	1.0059	1.98	0.09	1.64	2.39	K2O	0.22	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.92	0.10918	0.8518	12.82	0.25	7.42	16.49	FeO	0.98	Fe 1-Jun-1999 12:00 AM			
	O					30.06	0.32	60.77			8				
	Totals					70.42									
										Cation sum	5.17				

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

chlorite +	grain 39	spectrum 3													
glauconite +	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
rutile	Mg	K_SERIES	0.92	0.00629	0.7171	1.28	0.21	1.63	2.12	MgO	0.21	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.97	0.05867	0.8116	9.81	0.31	11.29	18.54	Al2O3	1.46	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.03	0.09703	0.758	15.87	0.36	17.54	33.96	SiO2	2.27	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.83	0.02322	1.0018	2.82	0.18	2.24	3.4	K2O	0.29	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.97	0.0197	0.8291	2.38	0.19	1.54	3.96	TiO2	0.2	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.99	0.05986	0.8395	7.13	0.34	3.96	9.17	FeO	0.51	Fe 1-Jun-1999 12:00 AM			
	O					31.86	0.57	61.8			8				
	Totals					71.16									
										Cation sum	4.94				
siderite	grain 40	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	F	K_SERIES	5.35	0.04121	0.4187	12.77	1.49	31.72	0		3.85	MgF2 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.54	0.01054	0.4422	3.48	0.26	6.75	5.76	MgO	0.82	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.17	0.01054	1.0926	1.07	0.11	1.27	1.5	CaO	0.15	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.51	0.01505	0.8961	1.68	0.21	1.44	2.17	MnO	0.18	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	26.7	0.26699	0.9143	29.2	0.55	24.68	37.57	FeO	3	Fe 1-Jun-1999 12:00 AM			
	O					11.57	0.39	34.14			4.15				
	Totals					59.77									
										Cation sum	4.15				
	grain 40	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	F	K_SERIES	5.8	0.04471	0.4431	13.09	1.4	32.27	0		3.9	MgF2 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.25	0.00857	0.4341	2.88	0.25	5.55	4.77	MgO	0.67	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.65	0.00584	1.0966	0.59	0.1	0.69	0.83	CaO	0.08	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.21	0.01209	0.9002	1.34	0.2	1.15	1.73	MnO	0.14	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	29	0.29004	0.9183	31.58	0.59	26.48	40.63	FeO	3.2	Fe 1-Jun-1999 12:00 AM			
	O					11.57	0.39	33.87			4.1				
	Totals					61.06									
										Cation sum	4.1				
	grain 40	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.09	0.0075	0.435	2.52	0.24	7.03	4.18	MgO	1.1	MgO 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.63	0.00511	0.6584	0.96	0.15	2.33	2.06	SiO2	0.36	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.37	0.00306	1.1254	0.33	0.1	0.58	0.4	K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.99	0.00889	1.0968	0.9	0.11	1.53	1.26	CaO	0.24	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.37	0.01365	0.9073	1.5	0.2	1.86	1.94	MnO	0.29	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	27.19	0.27185	0.927	29.32	0.58	35.66	37.72	FeO	5.59	Fe 1-Jun-1999 12:00 AM			
	O					12.02	0.42	51.02			8				
	Totals					47.56									
										Cation sum	7.68				
K-feldspar	grain 40	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Na	K_SERIES	0.62	0.00279	0.8726	0.71	0.14	0.83	0.96	Na2O	0.11	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.78	0.04992	0.9121	7.43	0.19	7.31	14.04	Al2O3	0.94	Al2O3 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Si	K_SERIES	21.81	0.17593	0.8621	25.3	0.29	23.93	54.13	SiO2	3.08	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.34	0.06844	0.9786	8.52	0.2	5.79	10.27	K2O	0.75	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					37.43	0.38	62.14			8				
	Totals					79.4									
										Cation sum	4.87				
ankerite	grain 40	spectrum 5													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	2.06	0.01413	0.5552	3.71	0.35	10.28	6.15	MgO	1.65	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	17.05	0.15315	1.0708	15.92	0.47	26.76	22.28	CaO	4.28	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	9.15	0.09148	0.8516	10.74	0.6	12.96	13.82	FeO	2.07	Fe 1-Jun-1999 12:00 AM			
	O					11.88	0.52	50			8				
	Totals					42.25									
										Cation sum	8				
zircon	grain 41	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Si	K_SERIES	9.41	0.0759	1.014	9.28	0.31	19.37	19.86	SiO2	2.36	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.46	0.00409	0.9132	0.5	0.13	0.73	0.7	CaO	0.09	Wollastonite 1-Jun-1999 12:00 AM			
	Sc	K_SERIES	0.57	0.00569	0.8051	0.71	0.16	0.92	1.08	Sc2O3	0.11	Sc 1-Jun-1999 12:00 AM			
	Y	L_SERIES	3.62	0.0362	0.7029	5.15	0.97	3.4	6.54	Y2O3	0.41	Y 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	11.34	0.11336	0.7373	15.38	0.76	9.88	20.77	ZrO2	1.2	Zr 1-Jun-1999 12:00 AM			
	O					17.93	0.77	65.7			8				
	Totals					48.95									
										Cation sum	4.18				
rutile	grain 41	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Ti	K_SERIES	41.46	0.41465	0.9179	45.17	0.83	33.33	75.35	TiO2	4	Ti 1-Jun-1999 12:00 AM			
	O					30.18	0.68	66.67			8				
	Totals					75.35									
										Cation sum	4				
altered	grain 42	spectrum 1													
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	12.09	0.08906	0.8921	13.55	0.24	14.75	25.61	Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.95	0.1044	0.7572	17.1	0.28	17.88	36.58	SiO2	2.31	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.93	0.04048	0.9855	5.01	0.16	3.76	6.03	K2O	0.49	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.28	0.00283	0.8071	0.35	0.09	0.22	0.59	TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.53	0.0253	0.8312	3.04	0.19	1.6	3.92	FeO	0.21	Fe 1-Jun-1999 12:00 AM			
	O					33.66	0.4	61.79			8				
	Totals					72.72									
										Cation sum	4.95				
chlorite	grain 42	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.02	0.00696	0.6362	1.6	0.23	2.24	2.65	MgO	0.3	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.76	0.0498	0.7353	9.19	0.31	11.62	17.37	Al2O3	1.54	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.99	0.07247	0.7153	12.56	0.33	15.25	26.88	SiO2	2.03	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.37	0.01125	1.0149	1.35	0.14	1.18	1.63	K2O	0.16	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.34	0.13338	0.859	15.53	0.47	9.48	19.97	FeO	1.26	Fe 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	O					28.27	0.56	60.24			8				
	Totals					68.5									
										Cation sum	5.28				
mixture of	grain 42	spectrum 3													
chlorite +	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
muscovite	Na	K_SERIES	0.45	0.00203	0.7974	0.57	0.15	0.72	0.76	Na2O	0.09	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	11.14	0.08205	0.8619	12.92	0.22	13.96	24.42	Al2O3	1.81	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.47	0.10059	0.7528	16.57	0.25	17.2	35.44	SiO2	2.23	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	0.31	0.00276	0.7468	0.42	0.08	0.38	1.05	SO3	0.05	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.43	0.03634	0.9892	4.48	0.14	3.34	5.39	K2O	0.43	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.26	0.00261	0.8144	0.32	0.08	0.2	0.53	TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.25	0.04246	0.8352	5.08	0.2	2.65	6.54	FeO	0.34	Fe 1-Jun-1999 12:00 AM			
	O					33.78	0.39	61.55			8				
	Totals					74.15									
										Cation sum	5				
Fe-rich chromite	grain 43														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	2.4	0.01648	0.5062	4.75	0.37	7.21	7.88	MgO	1.02	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.94	0.02167	0.5893	4.99	0.3	6.83	9.43	Al2O3	0.97	Al2O3 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.13	0.01135	0.9839	1.15	0.17	0.89	1.92	TiO2	0.13	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	22.56	0.22562	0.9449	23.88	0.55	16.94	34.9	Cr2O3	2.4	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.26	0.15256	0.8583	17.78	0.59	11.74	22.87	FeO	1.67	Fe 1-Jun-1999 12:00 AM			
	O					24.45	0.66	56.39			8				
	Totals					77									
										Cation sum	6.19				
chlorite	grain 44	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	1.25	0.00858	0.5886	2.13	0.12	2.95	3.53	MgO	0.4	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.85	0.04311	0.6869	8.52	0.15	10.67	16.1	Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.53	0.06077	0.6971	10.81	0.15	13	23.12	SiO2	1.74	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	0.35	0.00306	0.7708	0.45	0.06	0.48	1.13	SO3	0.06	FeS2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.17	0.00156	1.0053	0.17	0.05	0.15	0.24	CaO	0.02	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.87	0.18873	0.8705	21.68	0.26	13.11	27.89	FeO	1.76	Fe 1-Jun-1999 12:00 AM			
	O					28.25	0.28	59.64			8				
	Totals					72.01									
										Cation sum	5.41				
	grain 44	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	1.33	0.00914	0.5925	2.25	0.18	3.29	3.73	MgO	0.44	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.73	0.04219	0.687	8.34	0.22	11	15.75	Al2O3	1.48	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.3	0.05887	0.6936	10.53	0.22	13.34	22.52	SiO2	1.8	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	17.66	0.1766	0.8703	20.29	0.37	12.94	26.1	FeO	1.74	Fe 1-Jun-1999 12:00 AM			
	O					26.7	0.4	59.42			8				
	Totals					68.11									
										Cation sum	5.46				
zircon	grain 45	spectrum 1													

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Si	K_SERIES	12.75	0.10285	1.0113	12.61	0.35	21.03	26.98	SiO2	2.52	SiO2 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	17.21	0.1721	0.7181	23.97	0.92	12.31	32.38	ZrO2	1.48	Zr 1-Jun-1999 12:00 AM			
	O					22.78	0.66	66.67			8				
	Totals					59.35									
										Cation sum	4				
apatite	grain 45	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Si	K_SERIES	0.85	0.00687	0.9339	0.91	0.14	1.26	1.95	SiO2	0.17	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	10.34	0.06125	1.2809	8.07	0.2	10.13	18.5	P2O5	1.38	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	28.31	0.25427	1.0075	28.1	0.26	27.25	39.32	CaO	3.72	Wollastonite 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	2.43	0.02257	0.8495	2.86	0.34	1.27	3.38	SrO	0.17	SrF2 1-Jun-1999 12:00 AM			
	Y	L_SERIES	2.76	0.02759	0.8106	3.4	0.48	1.49	4.32	Y2O3	0.2	Y 1-Jun-1999 12:00 AM			
	O					24.13	0.43	58.6			8				
	Totals					67.48									
										Cation sum	5.65				
K-feldspar	grain 46	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	6.79	0.05004	0.9199	7.38	0.31	7.26	13.95	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	22.14	0.17852	0.8687	25.48	0.46	24.08	54.51	SiO2	3.09	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.25	0.07588	0.9806	9.43	0.33	6.4	11.36	K2O	0.82	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					37.53	0.59	62.26			8				
	Totals					79.82									
										Cation sum	4.85				
albite	grain 46	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Na	K_SERIES	4.47	0.02006	0.9207	4.86	0.44	5.53	6.55	Na2O	0.71	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.53	0.04809	0.8699	7.51	0.41	7.28	14.18	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.73	0.17526	0.826	26.31	0.62	24.5	56.28	SiO2	3.13	SiO2 1-Jun-1999 12:00 AM			
	O					38.34	0.81	62.69			8				
	Totals					77.01									
										Cation sum	4.76				
K-feldspar	grain 46	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	4.67	0.03443	0.8724	5.36	0.23	5.61	10.12	Al2O3	0.71	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.94	0.16887	0.8636	24.25	0.36	24.4	51.87	SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	0.28	0.00248	0.7421	0.38	0.12	0.34	0.95	SO3	0.04	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5	0.04101	0.9845	5.08	0.2	3.67	6.12	K2O	0.47	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.3	0.01167	0.9242	1.41	0.15	0.99	1.97	CaO	0.13	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.24	0.03236	0.8285	3.91	0.26	1.98	5.02	FeO	0.25	Fe 1-Jun-1999 12:00 AM			
	O					35.68	0.5	63.02			8				
	Totals					76.05									
										Cation sum	4.69				
albite	grain 46	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Na	K_SERIES	5.13	0.02302	0.9252	5.55	0.48	6.31	7.48	Na2O	0.81	Albite 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Al	K_SERIES	6.38	0.047	0.8616	7.41	0.45	7.18	13.99	Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.36	0.17225	0.8222	25.98	0.68	24.19	55.57	SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	O					38.11	0.88	62.31			8				
	Totals					77.04									
										Cation sum	4.84				
Fe-rich chromite	grain 47														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	2.05	0.01404	0.5158	3.97	0.25	5.84	6.58	MgO	0.82	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.48	0.03298	0.6056	7.39	0.23	9.81	13.97	Al2O3	1.38	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	23.16	0.23161	0.9428	24.57	0.38	16.9	35.9	Cr2O3	2.39	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.39	0.14391	0.8561	16.81	0.39	10.77	21.62	FeO	1.52	Fe 1-Jun-1999 12:00 AM			
	O					25.34	0.44	56.68			8				
	Totals					78.08									
										Cation sum	6.11				
barite	grain 48	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	S	K_SERIES	6.73	0.0591	0.8331	8.07	0.45	14.54	20.16	SO3	1.77	FeS2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	41.33	0.38583	0.9238	44.75	1.34	18.83	49.97	BaO	2.3	BaF2 1-Jun-1999 12:00 AM			
	W	M_SERIES	1.92	0.01925	0.5804	3.32	0.88	1.04	4.18	WO3	0.13	W 1-Jun-1999 12:00 AM			
	O					18.16	0.85	65.59			8				
	Totals					74.3									
										Cation sum	4.2				
	grain 48	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	S	K_SERIES	6.09	0.0535	0.8535	7.13	0.43	14.58	17.81	SO3	1.81	FeS2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	40.79	0.38076	0.934	43.66	1.34	20.84	48.75	BaO	2.58	BaF2 1-Jun-1999 12:00 AM			
	O					15.77	0.7	64.58			8				
	Totals					66.56									
										Cation sum	4.39				
chlorite	grain 49	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	1.42	0.00973	0.5876	2.42	0.22	3.44	4.01	MgO	0.46	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.45	0.04018	0.6816	8	0.26	10.26	15.12	Al2O3	1.38	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.7	0.06206	0.6968	11.05	0.27	13.61	23.63	SiO2	1.83	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.73	0.18727	0.8712	21.49	0.46	13.32	27.65	FeO	1.79	Fe 1-Jun-1999 12:00 AM			
	O					27.45	0.49	59.37			8				
	Totals					70.41									
										Cation sum	5.47				
chlorite	grain 49	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compoun	Formula	Number of	Standard			
	Mg	K_SERIES	1.31	0.00901	0.5827	2.26	0.25	3.26	3.74	MgO	0.44	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.27	0.03882	0.6791	7.76	0.29	10.1	14.66	Al2O3	1.36	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.58	0.06113	0.6972	10.87	0.3	13.59	23.26	SiO2	1.83	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	19.06	0.19061	0.8724	21.85	0.52	13.73	28.11	FeO	1.85	Fe 1-Jun-1999 12:00 AM			
	O					27.03	0.55	59.32			8				
	Totals					69.77									

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

										Cation sum	5.49				
calcite +	grain 49	spectrum 3													
chlorite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.57	0.00393	0.6282	0.91	0.13	2.39	1.51	MgO	0.37	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	0.68	0.00504	0.7348	0.93	0.11	2.2	1.76	Al2O3	0.34	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	1.12	0.00907	0.8289	1.36	0.11	3.08	2.9	SiO2	0.47	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	24.55	0.22047	1.0599	23.16	0.28	36.83	32.4	CaO	5.66	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.47	0.00469	0.7905	0.59	0.14	0.69	0.77	MnO	0.11	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.95	0.01954	0.8194	2.39	0.18	2.72	3.07	FeO	0.42	Fe 1-Jun-1999 12:00 AM			
	O					13.07	0.29	52.09			8				
	Totals					42.41									
										Cation sum	7.36				
apatite	grain 50														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	P	K_SERIES	10.17	0.06025	1.353	7.52	0.38	11.03	17.23	P2O5	1.51	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	27.82	0.24984	1.0266	27.09	0.57	30.7	37.91	CaO	4.22	Wollastonite 1-Jun-1999 12:00 AM			
	O					20.53	0.57	58.27			8				
	Totals					55.14									
										Cation sum	5.73				
chlorite +	grain 51														
glauconite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.72	0.00495	0.7561	0.96	0.2	1.29	1.58	MgO	0.17	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.36	0.0616	0.8481	9.86	0.3	12	18.63	Al2O3	1.54	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.72	0.10261	0.7652	16.63	0.37	19.43	35.57	SiO2	2.5	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.67	0.02187	0.983	2.71	0.18	2.28	3.27	K2O	0.29	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.07	0.04067	0.8351	4.87	0.32	2.86	6.27	FeO	0.37	Fe 1-Jun-1999 12:00 AM			
	O					30.29	0.55	62.15			8				
	Totals					65.32									
										Cation sum	4.87				
chlorite +	grain 52	spectrum 1													
glauconite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.14	0.0078	0.5966	1.91	0.22	2.8	3.16	MgO	0.38	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.09	0.03752	0.696	7.32	0.26	9.7	13.83	Al2O3	1.31	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.77	0.06269	0.7125	10.91	0.29	13.89	23.34	SiO2	1.88	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.26	0.01038	1.0336	1.22	0.12	1.12	1.47	K2O	0.15	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.73	0.00657	0.9985	0.73	0.11	0.65	1.02	CaO	0.09	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.42	0.00417	0.8723	0.48	0.12	0.36	0.8	TiO2	0.05	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.52	0.16524	0.8668	19.06	0.47	12.21	24.52	FeO	1.65	Fe 1-Jun-1999 12:00 AM			
	O					26.52	0.52	59.27			8				
	Totals					68.15									
										Cation sum	5.5				
chlorite +	grain 52	spectrum 2													
glauconite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.66	0.00455	0.6205	1.07	0.22	1.74	1.77	MgO	0.24	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.15	0.02317	0.7301	4.31	0.26	6.3	8.14	Al2O3	0.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	4.34	0.03502	0.7747	5.6	0.28	7.88	11.99	SiO2	1.07	SiO2 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	P	K_SERIES	3.79	0.02242	1.0867	3.49	0.25	4.44	7.99	P2O5	0.6	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	13.36	0.12002	1.0144	13.17	0.31	12.97	18.43	CaO	1.76	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	9.36	0.09363	0.845	11.08	0.42	7.83	14.26	FeO	1.06	Fe 1-Jun-1999 12:00 AM			
	O					23.85	0.59	58.84			8				
	Totals					62.57									
										Cation sum	5.6				
chloritized	grain 53														
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.16	0.00794	0.5843	1.98	0.21	2.94	3.29	MgO	0.4	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.41	0.03989	0.6835	7.92	0.26	10.61	14.97	Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.17	0.05785	0.6963	10.3	0.27	13.25	22.04	SiO2	1.79	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.47	0.00387	1.0318	0.46	0.1	0.42	0.55	K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.34	0.18343	0.8721	21.03	0.47	13.6	27.06	FeO	1.84	Fe 1-Jun-1999 12:00 AM			
	O					26.21	0.48	59.17			8				
	Totals					67.91									
										Cation sum	5.52				
rutile	grain 54														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Ti	K_SERIES	37.11	0.37111	0.9194	40.36	0.73	32.78	67.33	TiO2	3.94	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	0.71	0.0071	0.7933	0.9	0.24	0.67	1.31	Cr2O3	0.08	Cr 1-Jun-1999 12:00 AM			
	O					27.38	0.62	66.56			8				
	Totals					68.64									
										Cation sum	4.02				
unknown	grain 55														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.85	0.00583	0.5095	1.67	0.27	3.47	2.77	MgO	0.5	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.03	0.01494	0.6135	3.31	0.26	6.18	6.25	Al2O3	0.89	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.91	0.02346	0.6906	4.21	0.25	7.56	9.01	SiO2	1.09	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	4.86	0.04362	1.0554	4.6	0.22	5.79	6.44	CaO	0.84	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.15	0.01148	0.8693	1.32	0.24	1.21	1.71	MnO	0.18	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.16	0.20161	0.8895	22.67	0.62	20.47	29.16	FeO	2.96	Fe 1-Jun-1999 12:00 AM			
	O					17.55	0.57	55.32			8				
	Totals					55.33									
										Cation sum	6.46				
glauconite	grain 56														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	0.91	0.00625	0.7573	1.2	0.2	1.38	2	MgO	0.18	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.11	0.05971	0.8484	9.55	0.3	9.86	18.05	Al2O3	1.26	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.95	0.1367	0.7904	21.44	0.4	21.26	45.88	SiO2	2.72	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	3.18	0.02609	0.9804	3.24	0.18	2.31	3.91	K2O	0.3	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.48	0.04477	0.8335	5.37	0.31	2.68	6.91	FeO	0.34	Fe 1-Jun-1999 12:00 AM			
	O					35.92	0.57	62.52			8				
	Totals					76.74									
										Cation sum	4.8				
K-feldspar	grain 57	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Al	K_SERIES	6.59	0.04854	0.9193	7.17	0.28	7.14	13.54	Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.87	0.17642	0.8706	25.13	0.42	24.05	53.75	SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.52	0.07809	0.9818	9.69	0.3	6.66	11.68	K2O	0.86	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					36.98	0.54	62.14			8				
	Totals					78.97									
										Cation sum	4.87				
unknown	grain 57	spectrum 2													
(bad analysis)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	2.56	0.01883	0.8718	2.93	0.23	6.45	5.54	Al2O3	0.83	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.92	0.07194	0.8538	10.44	0.35	22.05	22.34	SiO2	2.84	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	0.44	0.00385	0.761	0.58	0.17	1.06	1.44	SO3	0.14	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.13	0.03391	0.9901	4.17	0.26	6.33	5.03	K2O	0.82	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.56	0.01561	0.8297	1.88	0.29	2	2.42	FeO	0.26	Fe 1-Jun-1999 12:00 AM			
	O					16.76	0.52	62.12			8				
	Totals					36.77									
										Cation sum	4.88				
albite	grain 57	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Na	K_SERIES	4.94	0.02215	0.9227	5.35	0.34	5.92	7.22	Na2O	0.76	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.55	0.04824	0.8656	7.57	0.31	7.13	14.3	Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	22.26	0.17951	0.8253	26.97	0.48	24.43	57.69	SiO2	3.13	SiO2 1-Jun-1999 12:00 AM			
	O					39.32	0.63	62.52			8				
	Totals					79.2									
										Cation sum	4.8				
chalcopyrite	grain 58														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	F	K_SERIES	1.03	0.00792	0.2822	3.64	3.03	4.4	0		0.54	MgF2 1-Jun-1999 12:00 AM			
	S	K_SERIES	15.73	0.13825	0.8703	18.08	0.44	12.94	45.14	SO3	1.59	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	25.32	0.25316	0.9396	26.94	0.62	11.07	34.66	FeO	1.36	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	25.45	0.25446	0.8467	30.05	0.9	10.85	37.62	CuO	1.33	Cu 1-Jun-1999 12:00 AM			
	O					42.35	0.78	60.74			7.46				
	Totals					121.06									
										Cation sum	4.28				
chlorite +	grain 59	spectrum 1													
glauconite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Mg	K_SERIES	1.23	0.0084	0.6205	1.97	0.28	2.65	3.27	MgO	0.35	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.67	0.04916	0.7174	9.3	0.36	11.25	17.58	Al2O3	1.5	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.98	0.07245	0.7086	12.68	0.39	14.73	27.12	SiO2	1.96	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.9	0.00739	1.0189	0.88	0.14	0.74	1.07	K2O	0.1	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.7	0.157	0.8628	18.2	0.59	10.63	23.41	FeO	1.42	Fe 1-Jun-1999 12:00 AM			
	O					29.41	0.67	59.99			8				
	Totals					72.45									
										Cation sum	5.33				
chlorite +	grain 59	spectrum 2													
glauconite +	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
rutile	Mg	K_SERIES	1.39	0.00954	0.6136	2.27	0.29	3.27	3.76	MgO	0.44	MgO 1-Jun-1999 12:00 AM			

Table A: Scanning Electron Microscope semiquantitative chemical analyses of TS 4076.26A from the Louisbourg J-47 well.

	Al	K_SERIES	5.76	0.04242	0.7054	8.16	0.35	10.62	15.43	Al2O3	1.42	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.99	0.06448	0.7075	11.3	0.38	14.12	24.18	SiO2	1.89	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.73	0.00602	1.0244	0.72	0.14	0.64	0.86	K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.68	0.00684	0.8713	0.79	0.16	0.58	1.31	TiO2	0.08	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.04	0.15036	0.8637	17.41	0.58	10.94	22.39	FeO	1.46	Fe 1-Jun-1999 12:00 AM			
	O					27.29	0.67	59.84			8				
	Totals					67.93									
										Cation sum	5.37				
K-feldspar	grain 60														
	Element	Line	App. Conc	k ratio	Intensity c	Weight%	Weight% s	Atomic%	Compour	Formula	Number of	Standard			
	Al	K_SERIES	5.98	0.04405	0.9096	6.57	0.16	6.59	12.42	Al2O3	0.84	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	22.36	0.18035	0.8718	25.65	0.26	24.7	54.88	SiO2	3.15	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.64	0.06271	0.9794	7.8	0.17	5.4	9.4	K2O	0.69	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.31	0.00278	0.9049	0.34	0.09	0.23	0.48	CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.72	0.00723	0.8234	0.88	0.12	0.43	1.13	FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					37.06	0.34	62.65			8				
	Totals					78.3									
										Cation sum	4.77				

Notes: If there is only one mineral name for a mineral grain, this name pertains to the whole set of analyses for said grain.

Appendix 2B: Scanning Electron Microscope Backscattered Electron Images for TS # 4081.17B

*** Note: The symbol (+) between two mineral names indicates a mixed composition between these two minerals.**

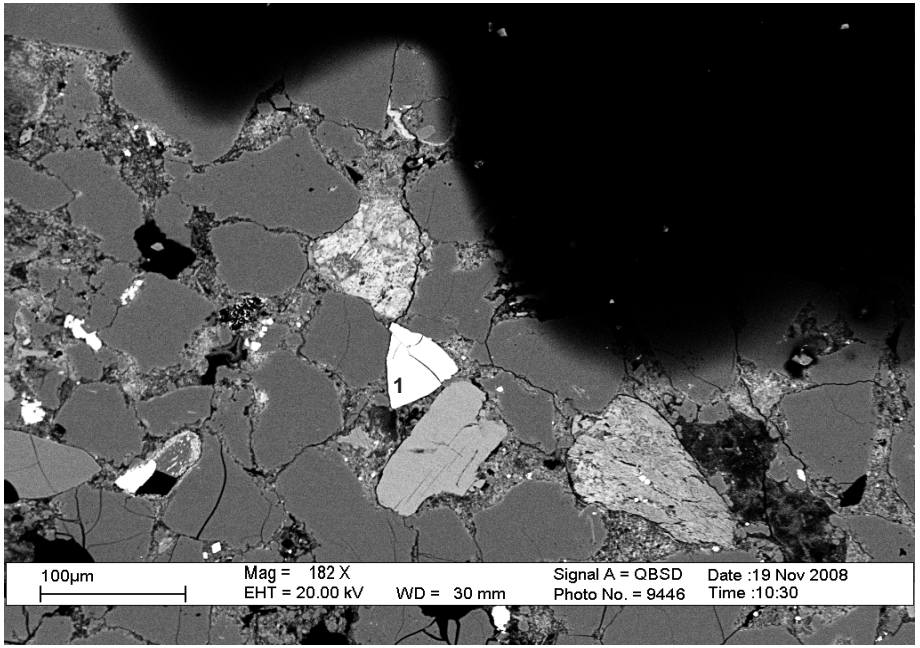


Figure 1: 4081.17B m., Chromite (pos.1)

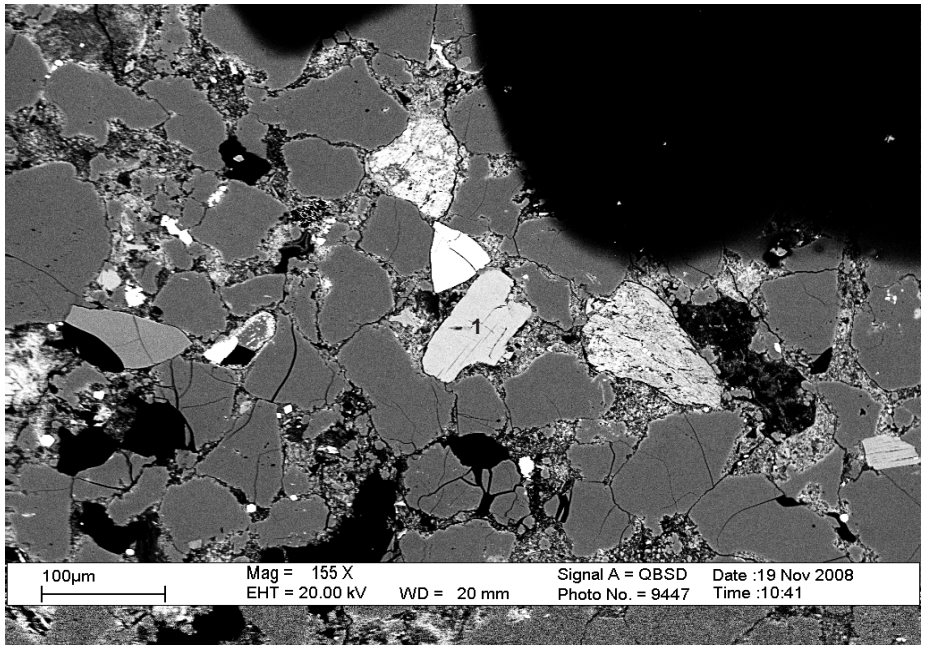


Figure 2: 4081.17B m., K-feldspar (pos.1)

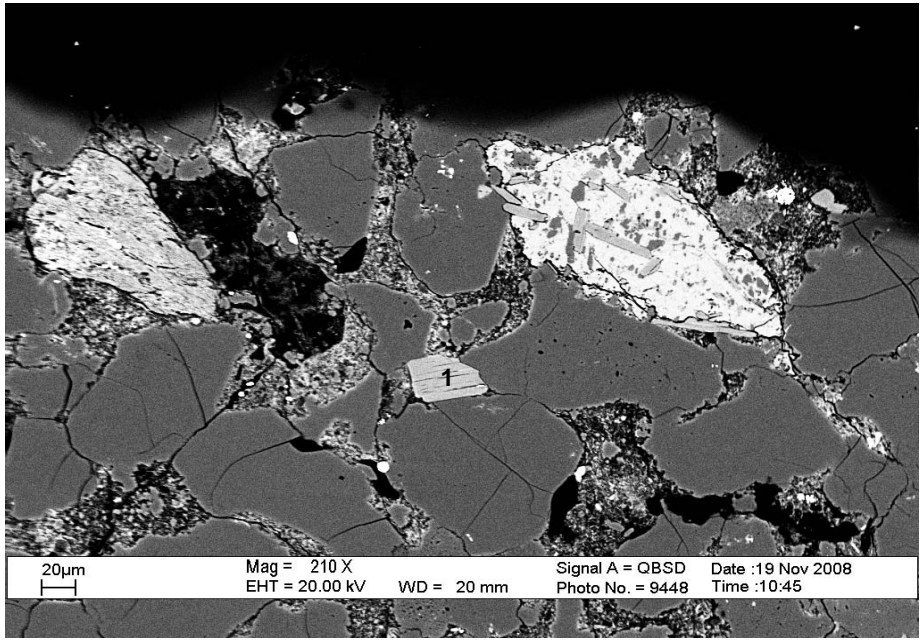


Figure 3: 4081.17B m., Muscovite (pos.1)

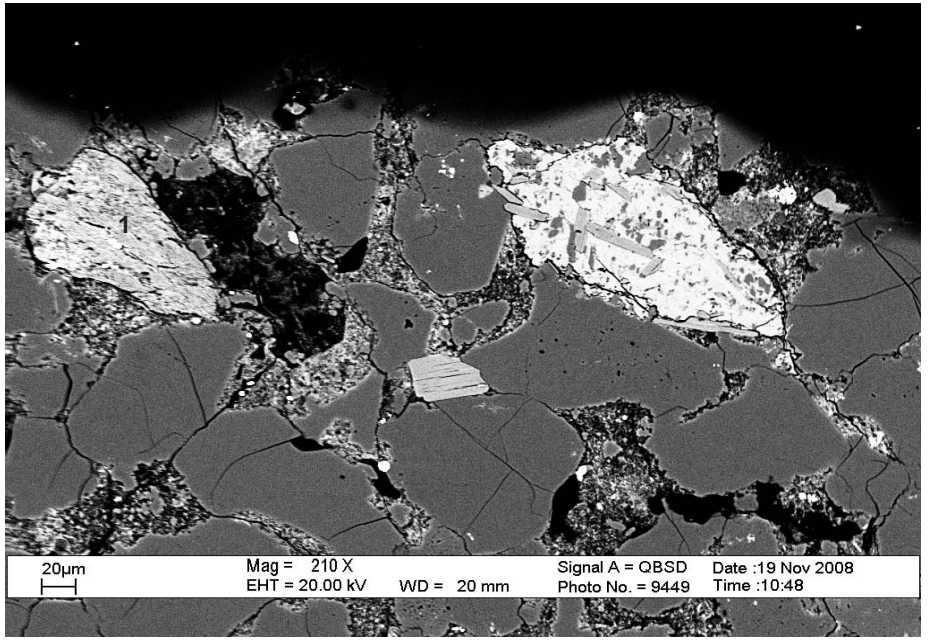


Figure 4: 4081.17B m., Chlorite (pos.1)

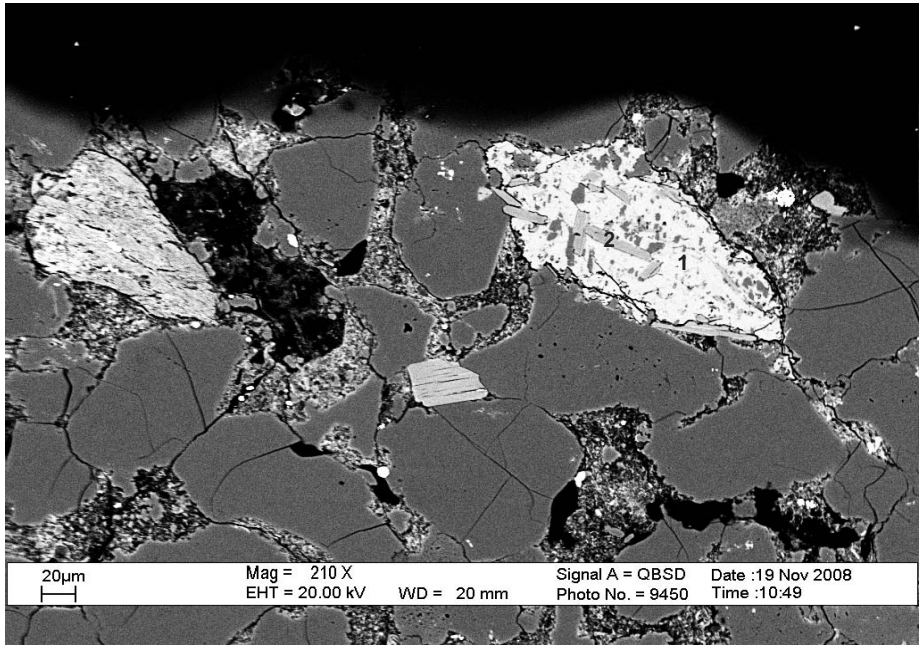


Figure 5: 4081.17B m., Ferroan calcite (pos.1) and K-feldspar (microcline) (pos.2)

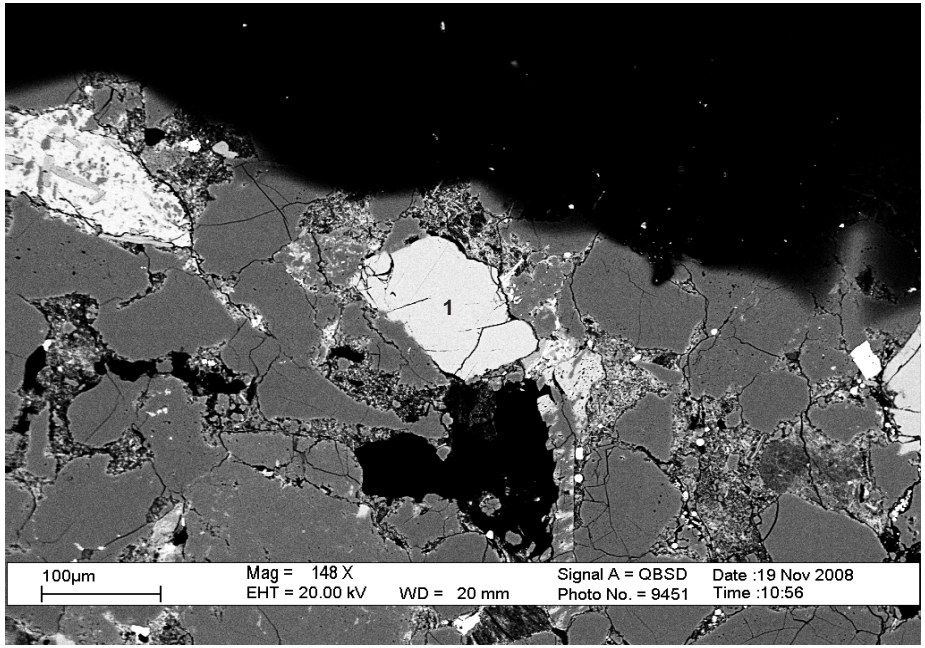


Figure 6: 4081.17B m., K-feldspar (pos.1)

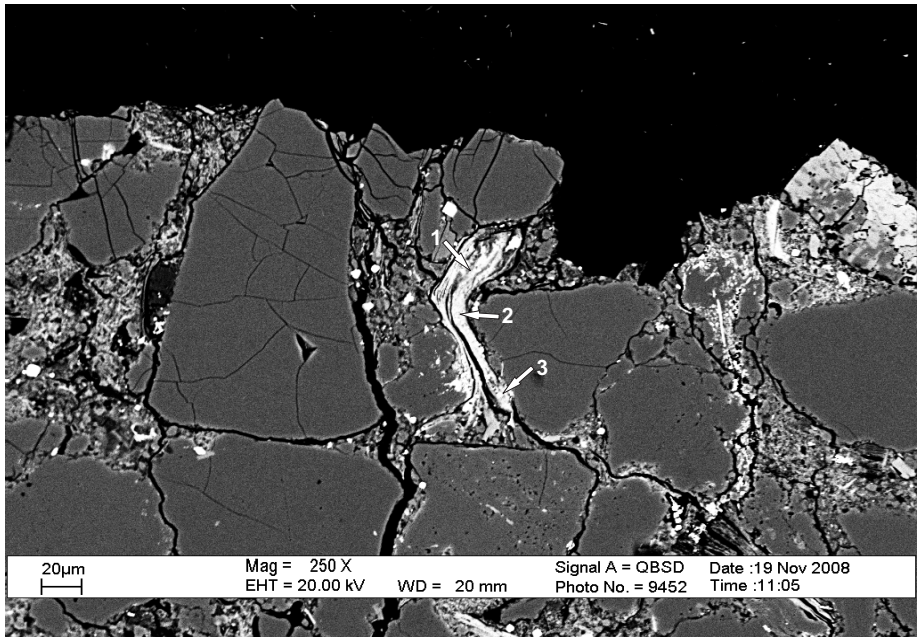


Figure 7: 4081.17B m., Chlorite (muscovite altering to chlorite) (pos.1,2); chlorite (pos.3); chlorite with K_2O and TiO_2)

Figure 8: 4081.17B m.,Chromite (pos.1)

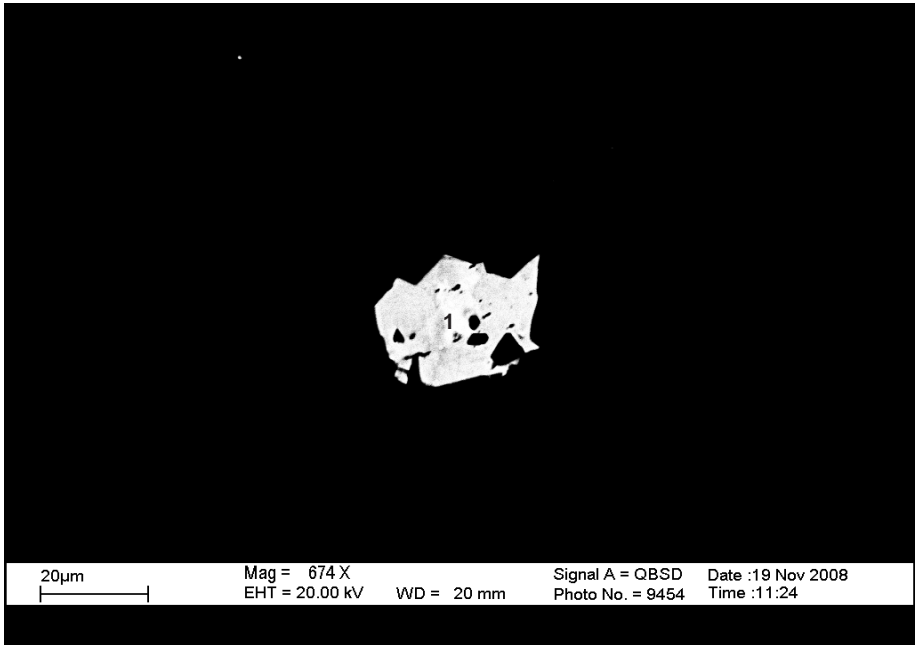


Figure 9: 4081.17B m., Barite (pos.1)

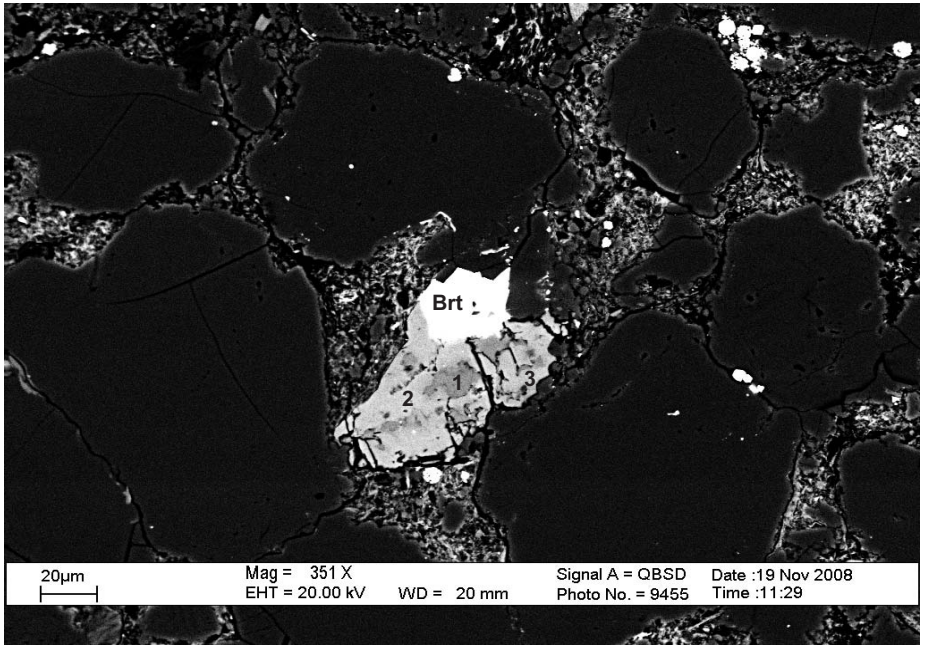


Figure 10: 4081.17B m., Barite (fig.9) associated with K-feldspar (pos.1) and ferroan calcite (pos.2,3)

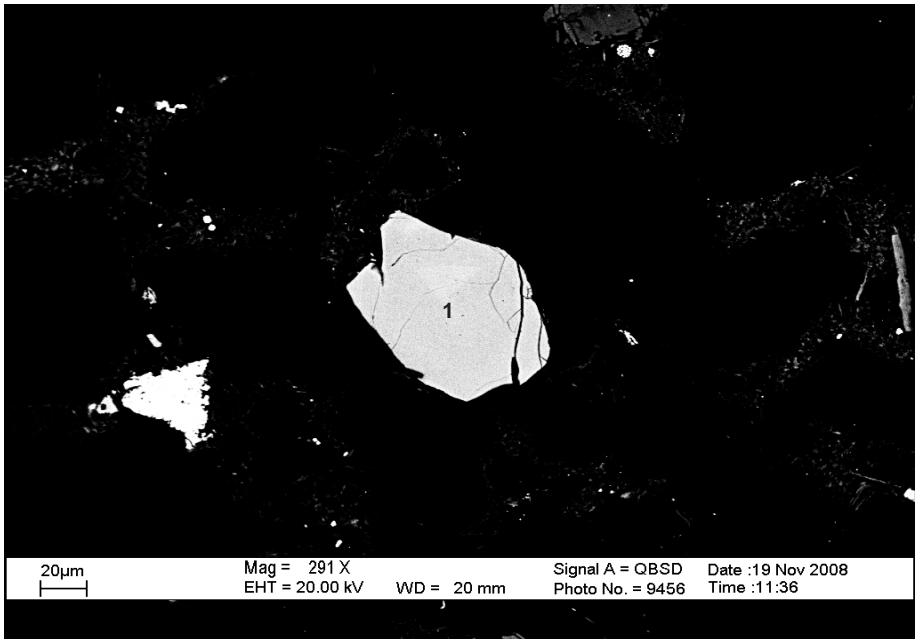


Figure 11: 4081.17B m., Apatite (pos.1)

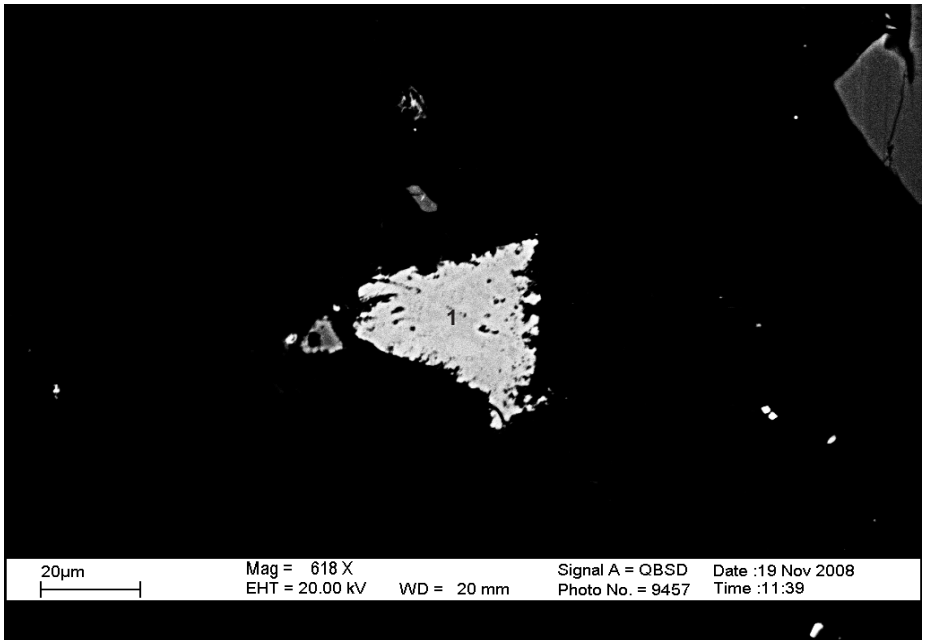


Figure 12: 4081.17B m., Rutile after ilmenite (pos.1)

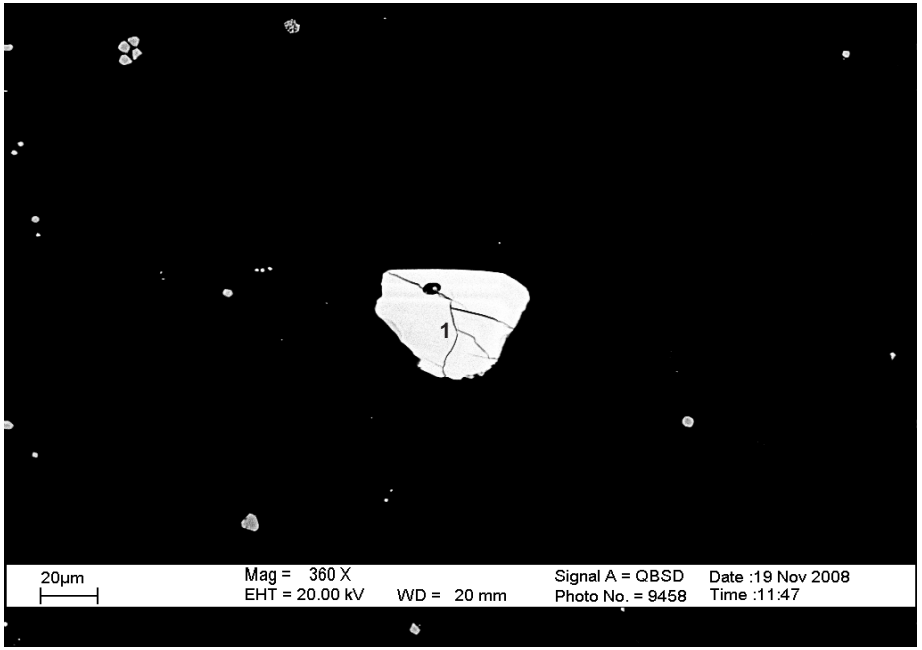


Figure 13: 4081.17B m., Zircon (pos.1)

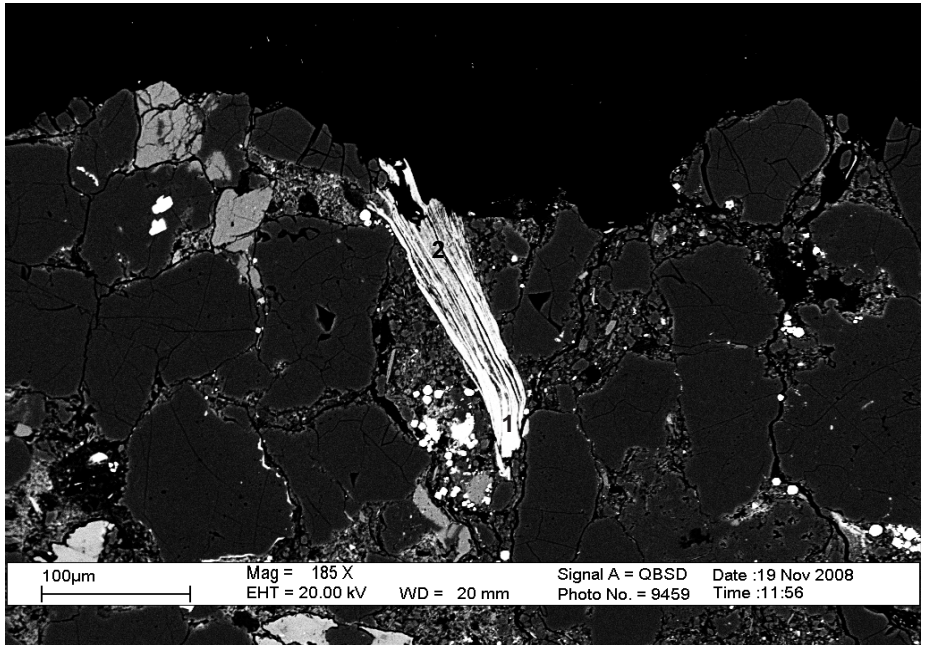


Figure 14: 4081.17B m., Chlorite after muscovite (pos.1,2)

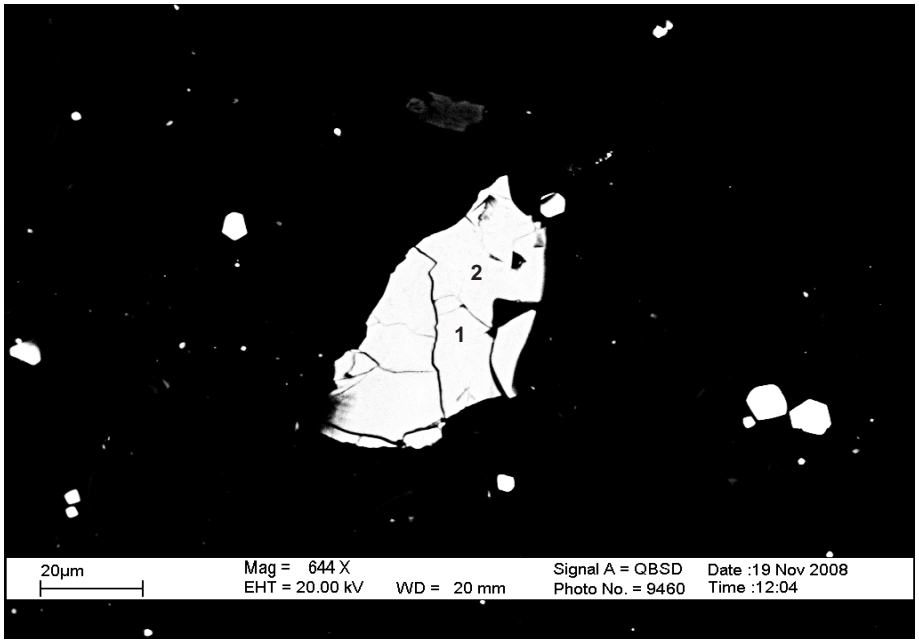


Figure 15: 4081.17B m., Chromite (pos.1,2)

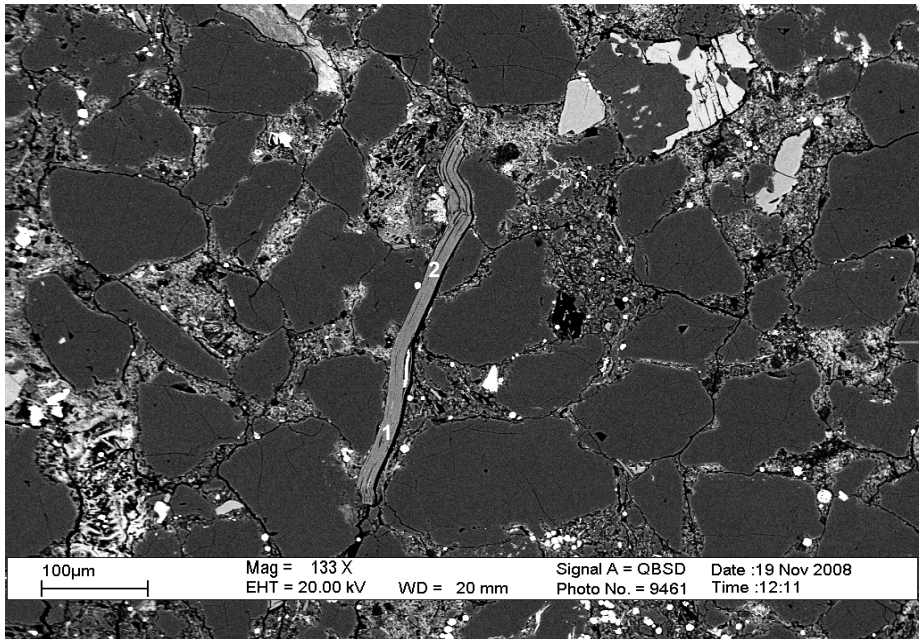


Figure 16: 4081.17B m., Muscovite (pos.1,2)

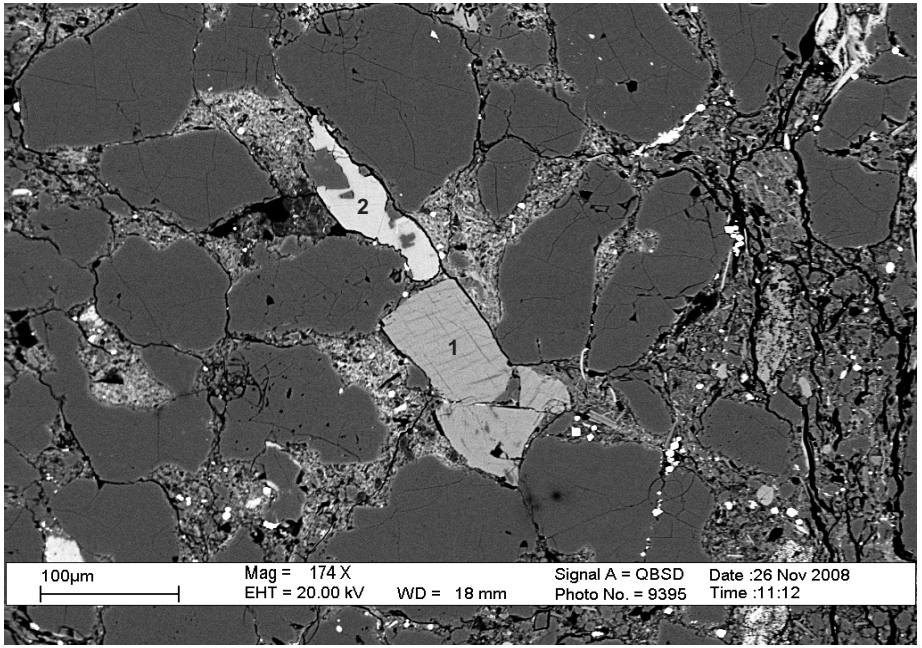


Figure 17: 4081.17B m., K-feldspar (pos.1) and ferroan calcite (pos.2)

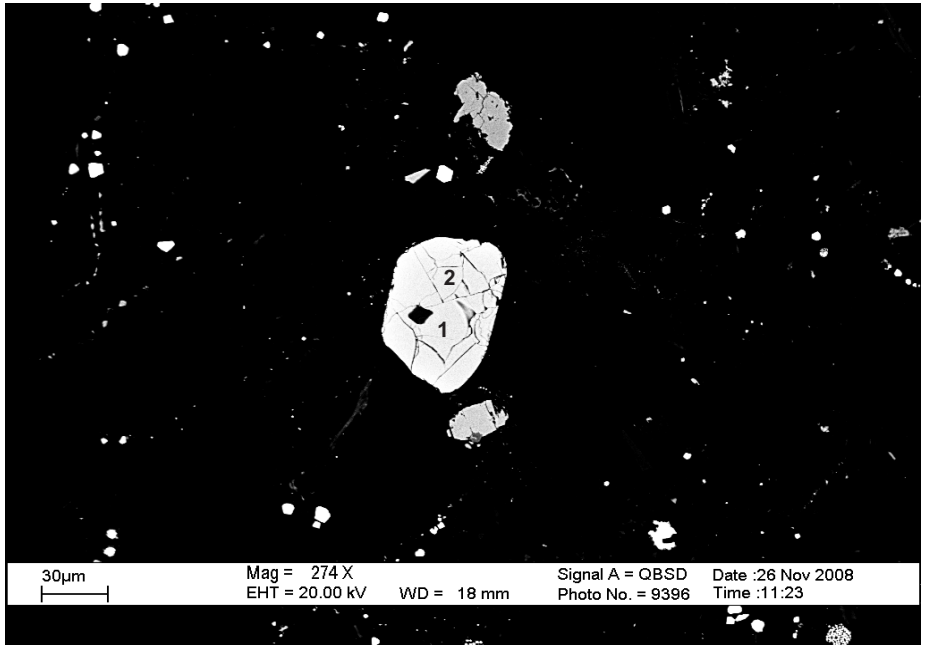


Figure 18: 4081.17B m., Chromian spinel (pos.1,2)

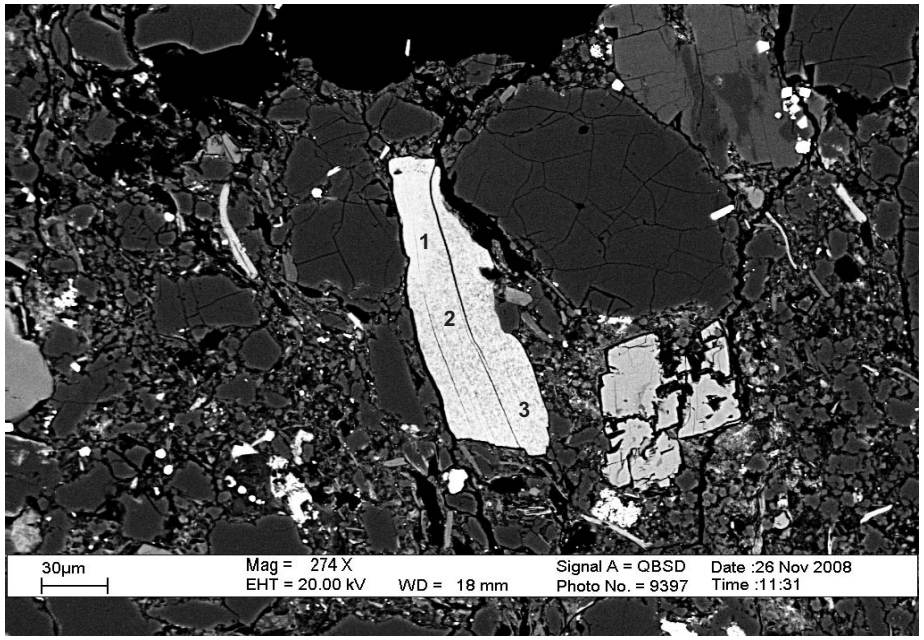


Figure 19: 4081.17B m., Chlorite after muscovite with TiO2 (pos.1,2,3)

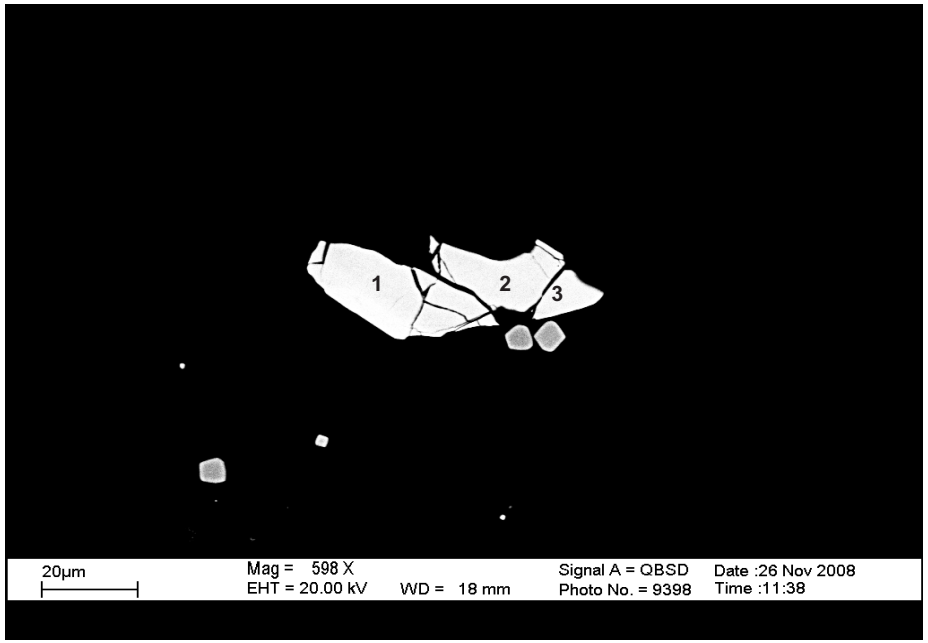


Figure 20: 4081.17B m., Zircon (pos.1,2,3)

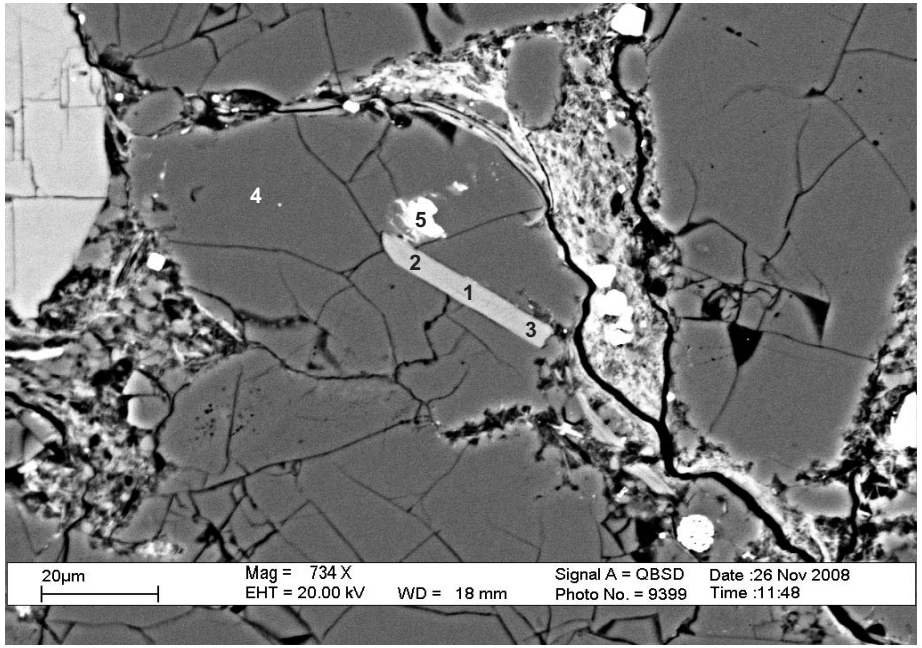


Figure 21: 4081.17B m., Muscovite (pos.1,2,3) and monazite (pos.5) within quartz (pos.4)

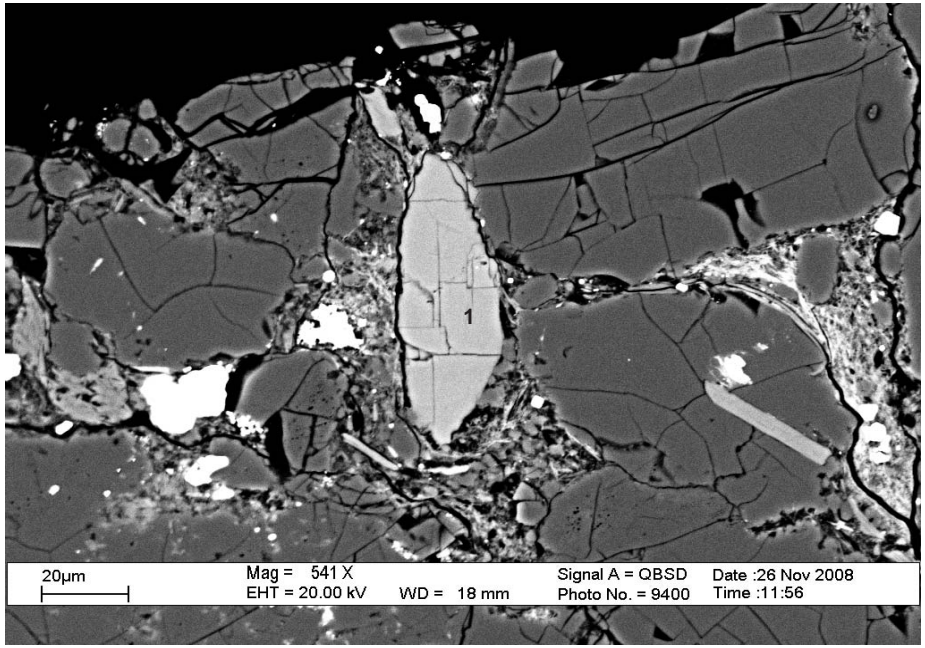


Figure 22: 4081.17B m., K-feldspar (pos.1)

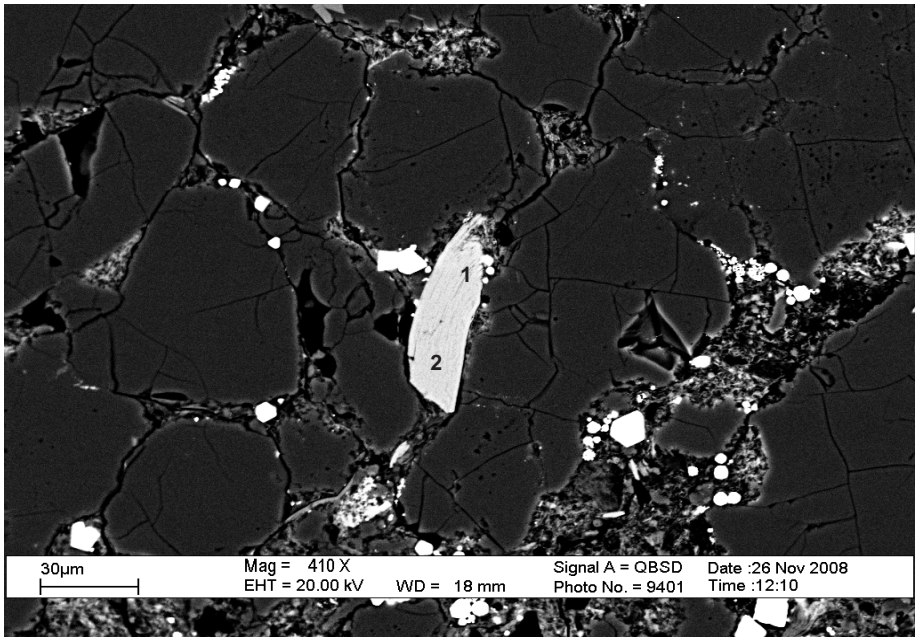


Figure 23: 4081.17B m., Chlorite (pos.1,2)

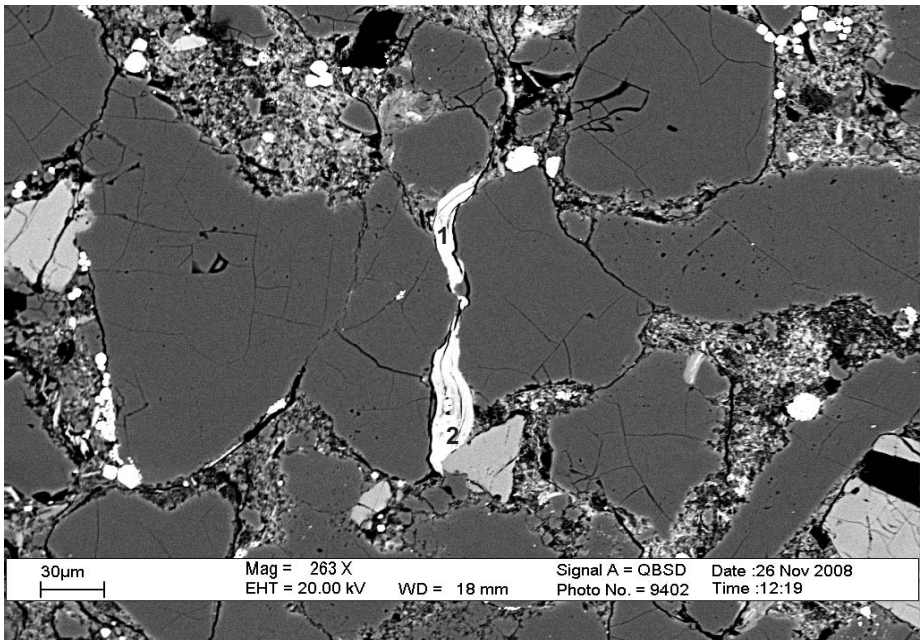


Figure 24: 4081.17B m., Chlorite after muscovite with TiO_2 (pos.1,2)

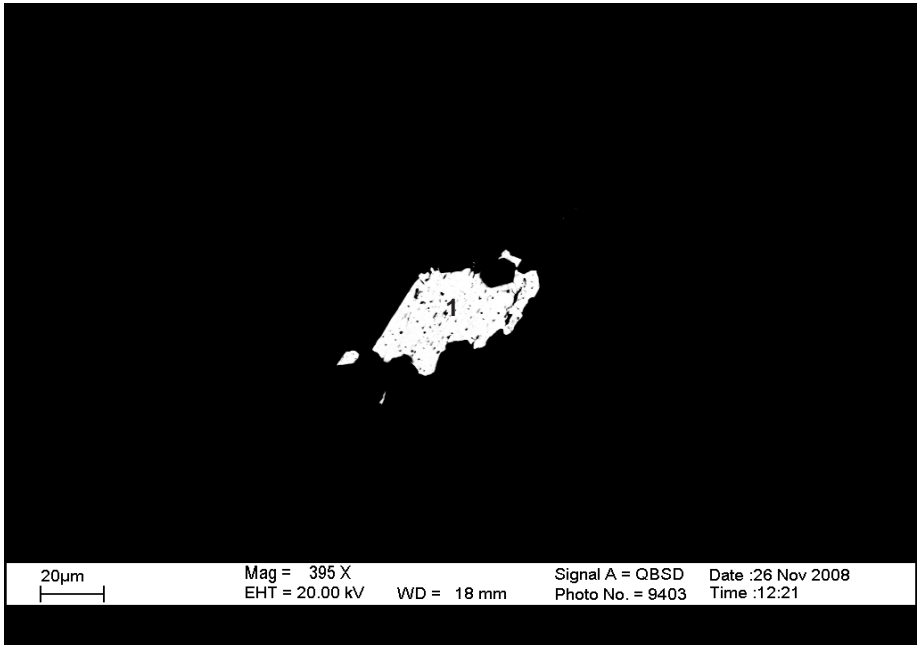


Figure 25: 4081.17B m., Barite (pos.1)

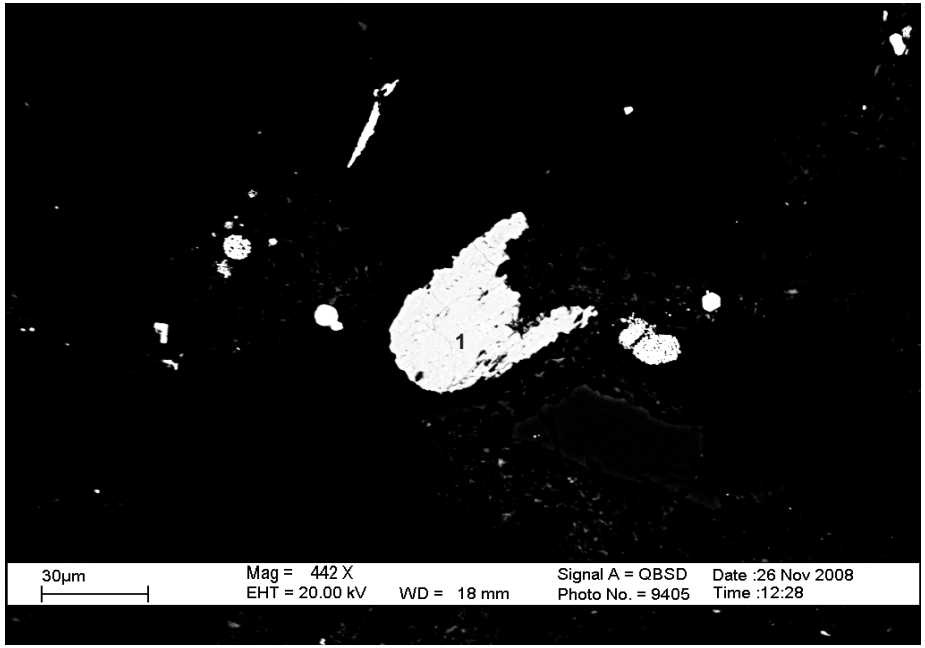


Figure 26: 4081.17B m., Rutile (pos.1)

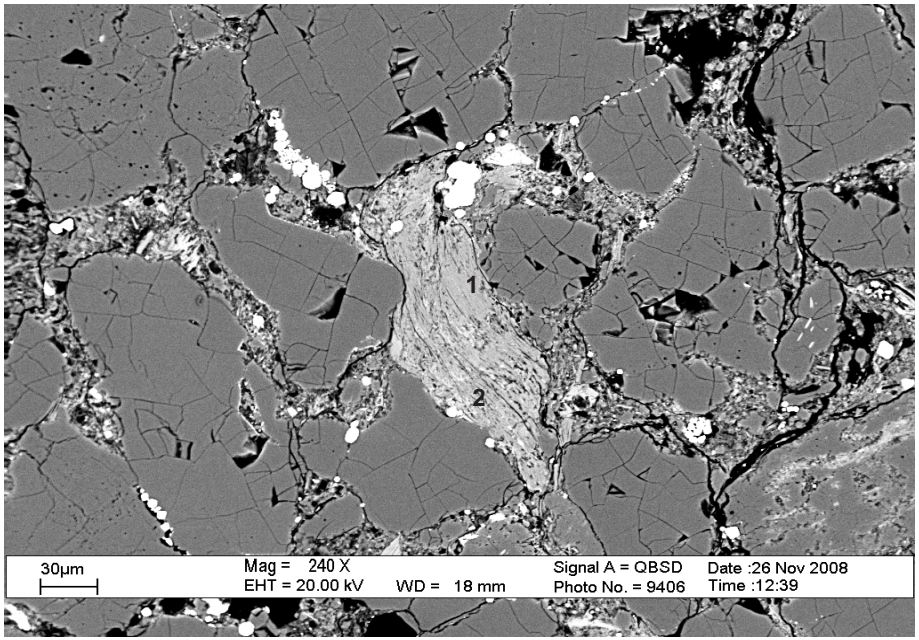


Figure 27: 4081.17B m., ?Illite/kaolinite (pos.1,2)

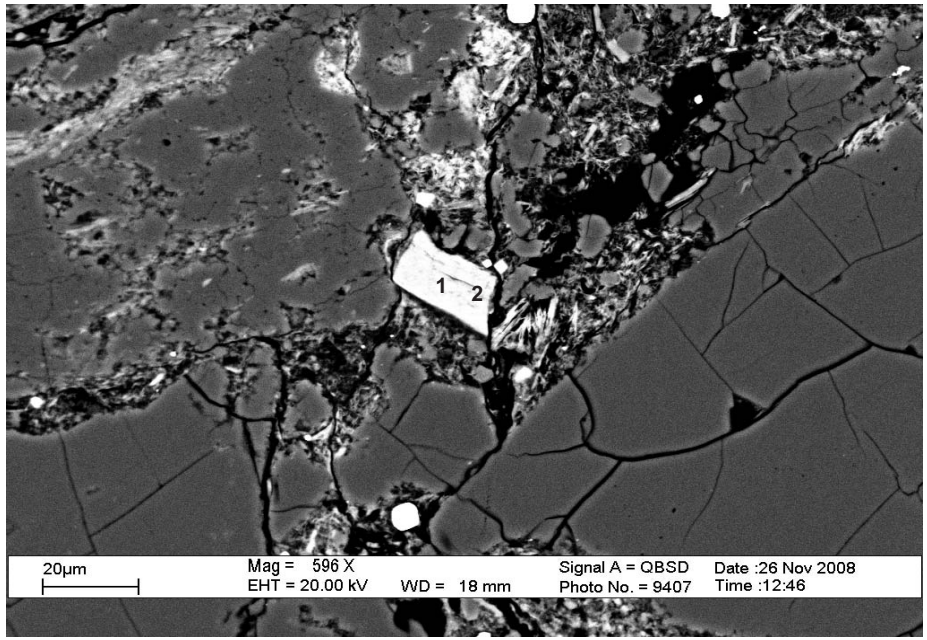


Figure 28: 4081.17B m., Chlorite after muscovite with TiO2 (pos.1,2)

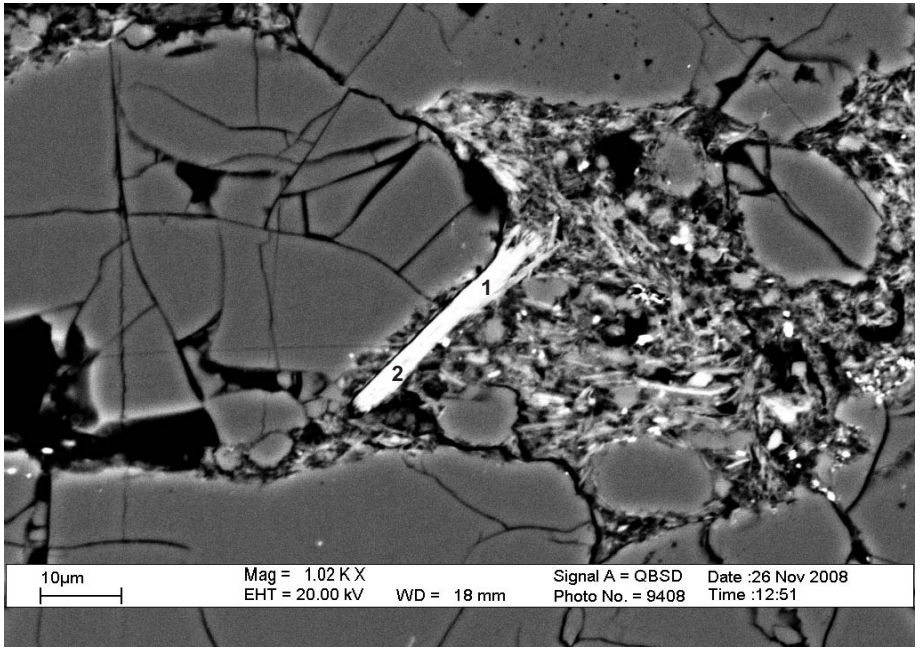


Figure 29: 4081.17B m., Chlorite after muscovite (pos.1,2)

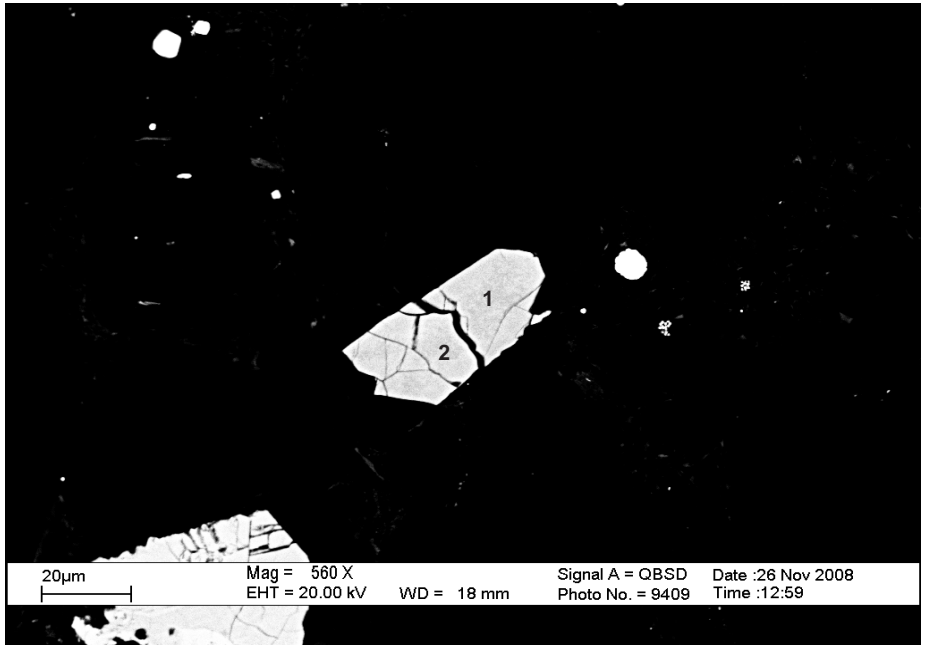


Figure 30: 4081.17B m., Chromian spinel (pos.1,2)

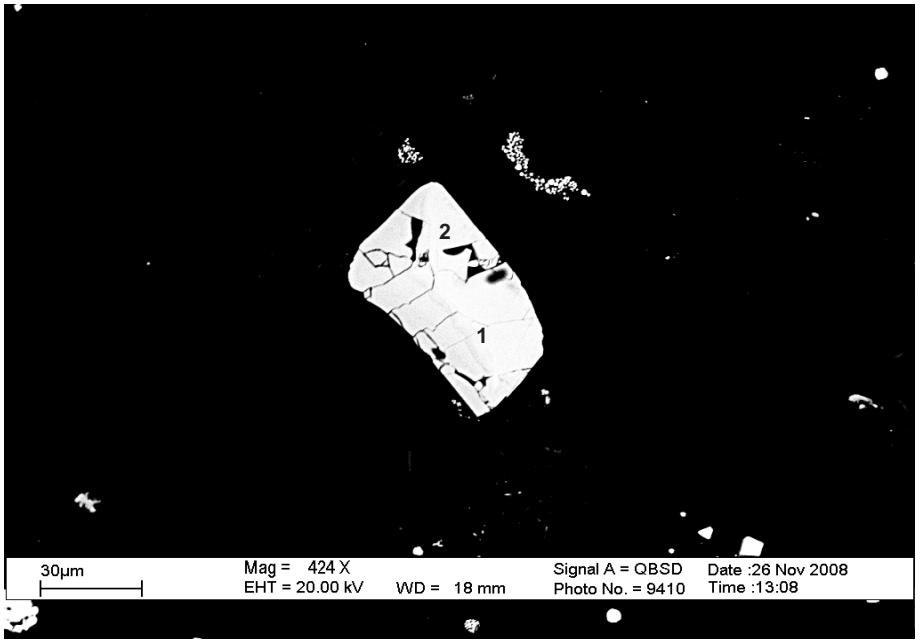


Figure 31: 4081.17B m., Chromite (pos.1,2)

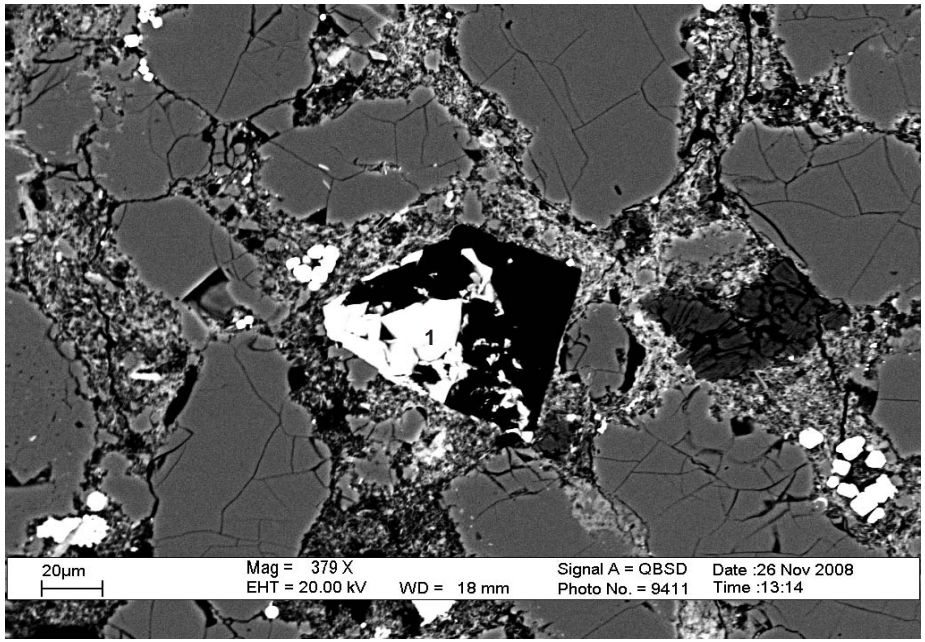


Figure 32: 4081.17B m., Apatite (pos.1)

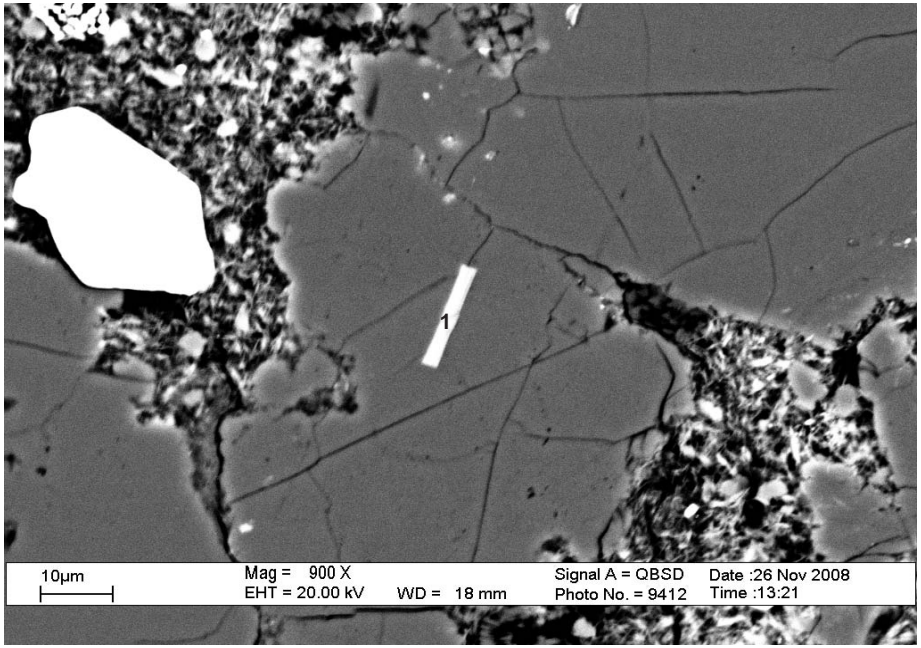


Figure 33: 4081.17B m., ?Biotite inclusion (pos.1) within quartz

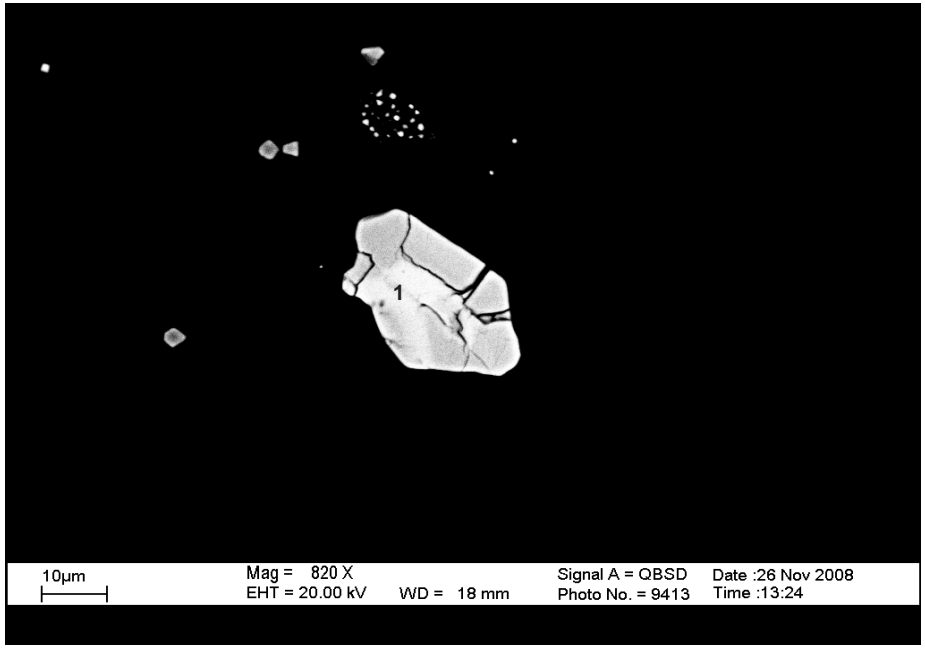


Figure 34: 4081.17B m., Zircon (pos.1)

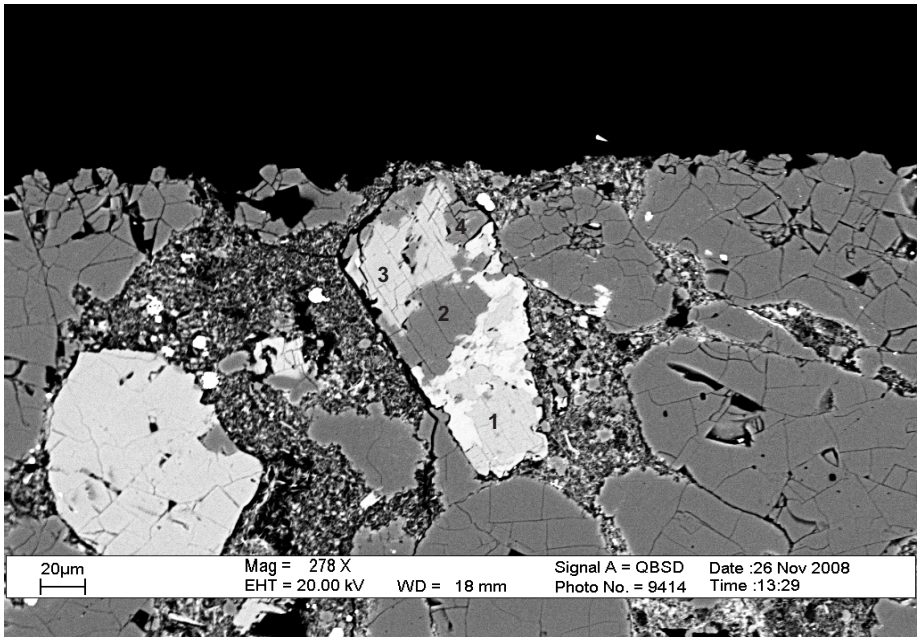


Figure 35: 4081.17B m., Albitization (pos.2,4) of K-feldspar (pos.1,3)

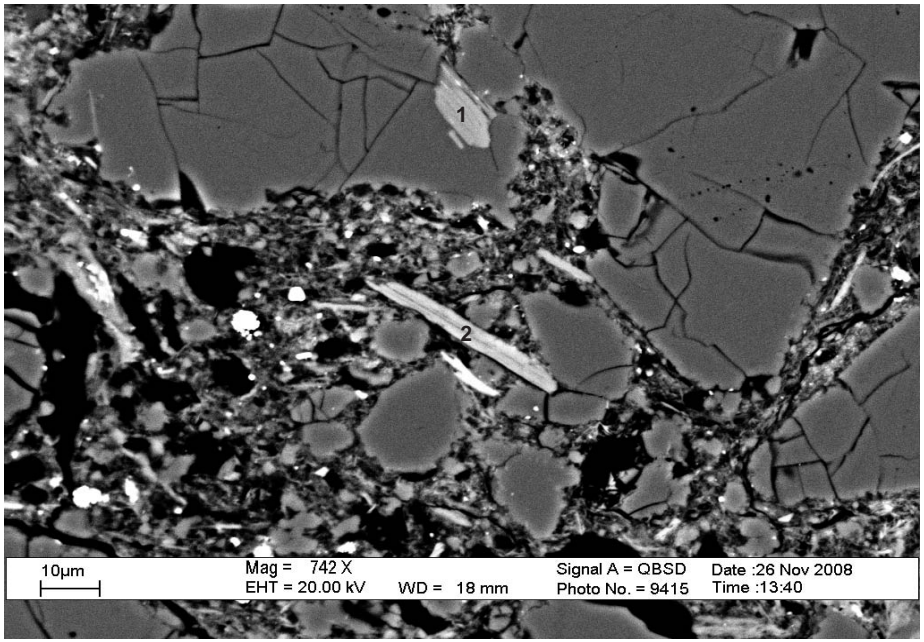


Figure 36: 4081.17B m., Mostly quartz (pos.1) and (?altered) muscovite (pos.2)

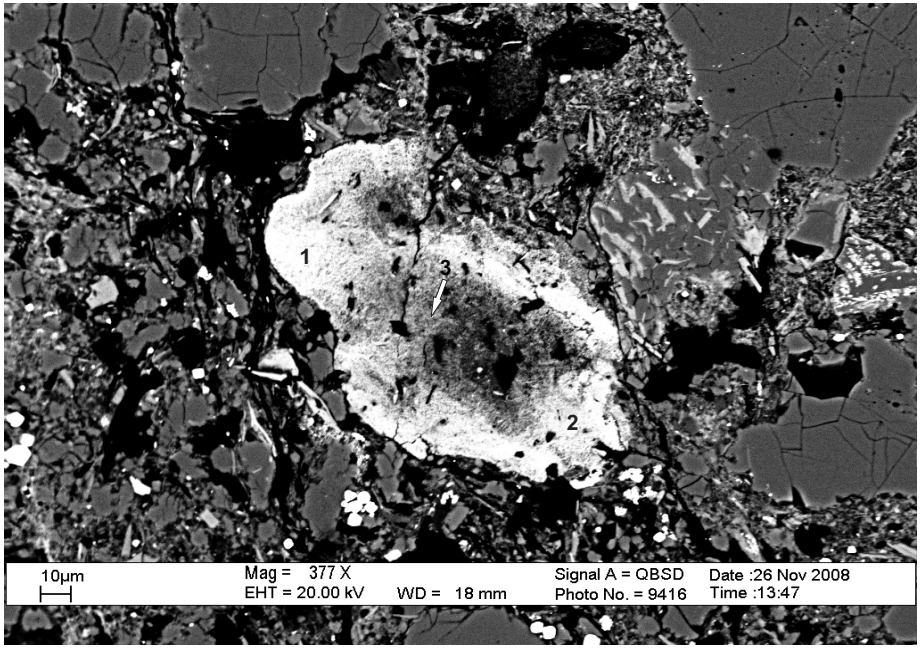


Figure 37: 4081.17B m., Ilmenite grain altering to TiO_2 minerals (pos. 1,2,3)

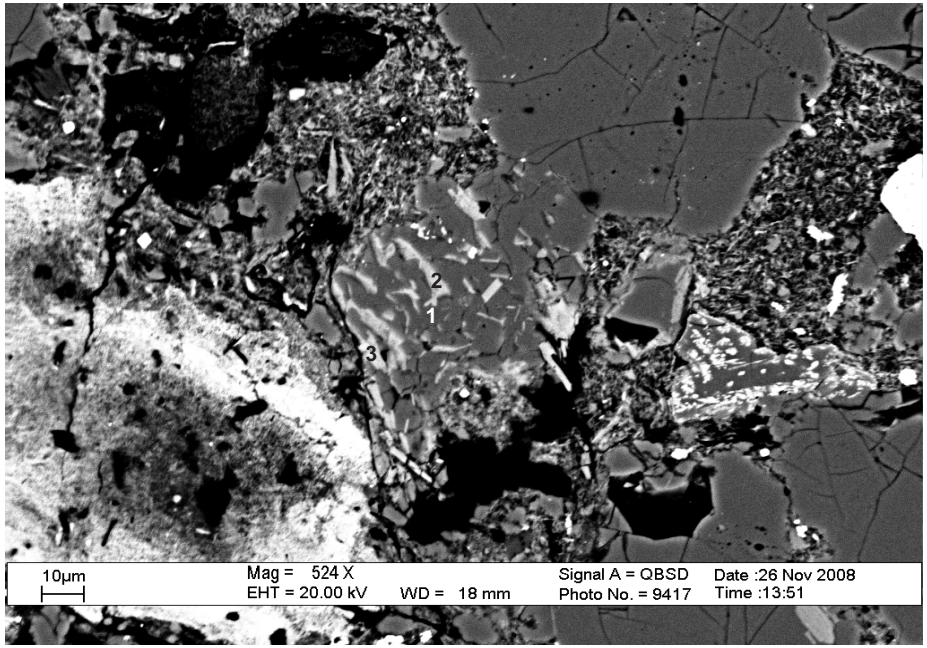


Figure 38: 4081.17B m., Clast containing quartz (pos.1) and chlorite grains (pos.2,3)

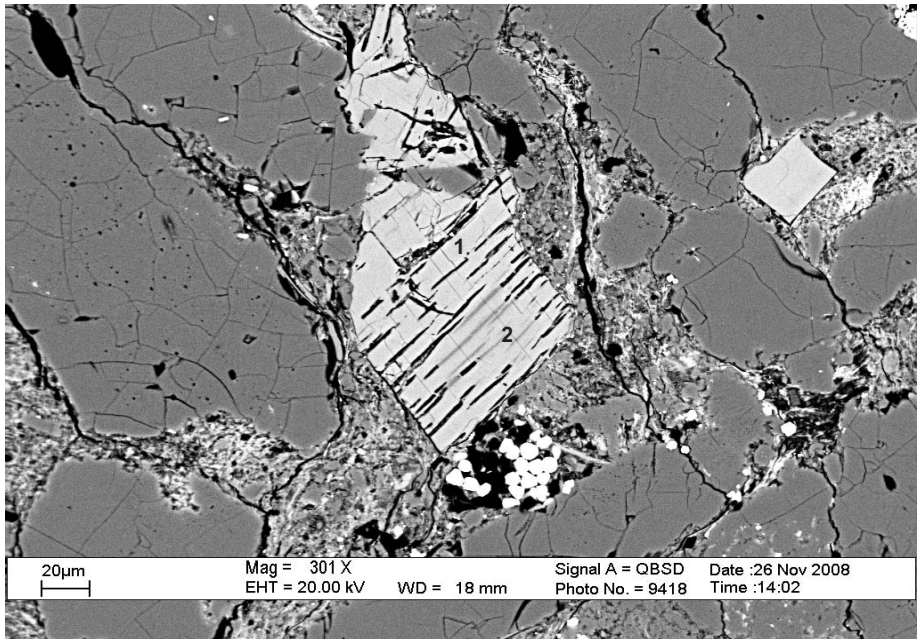


Figure 39: 4081.17B m., K-feldspar (pos. 1,2)

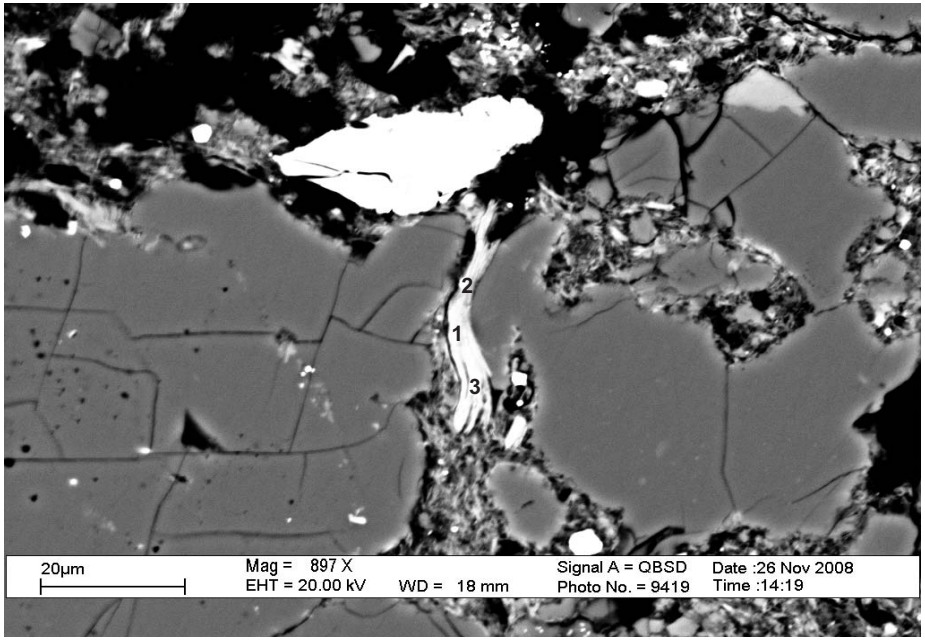


Figure 40: 4081.17B m., Muscovite altering to chlorite (pos.1,2,3)

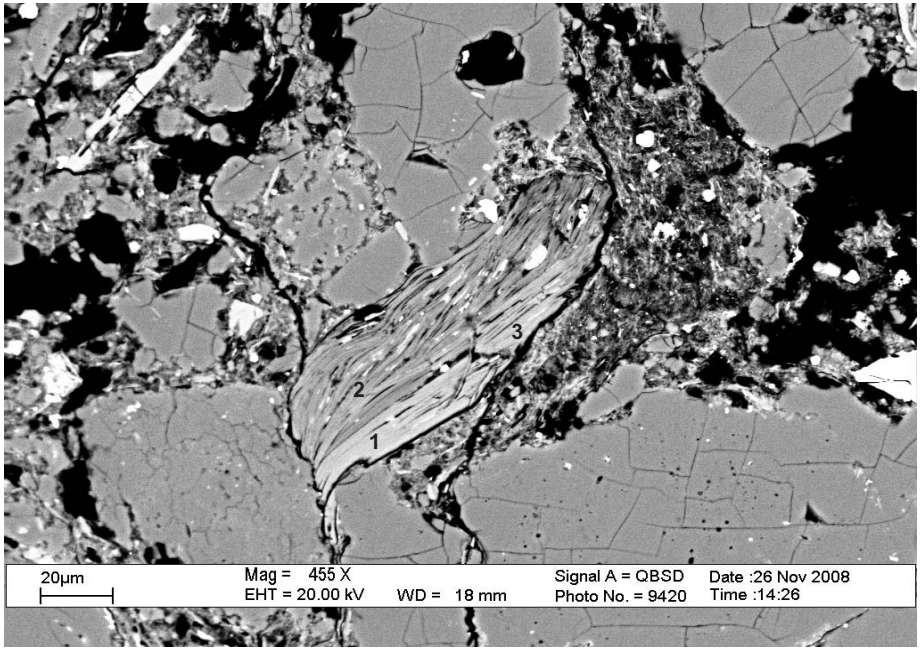


Figure 41: 4081.17B m., Muscovite (pos.1,2,3)

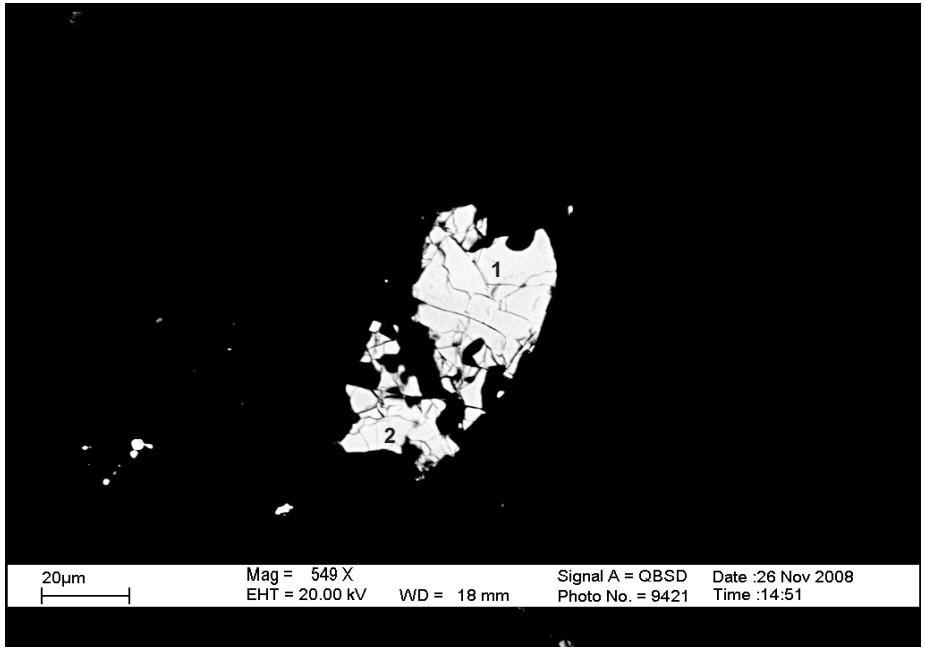


Figure 42: 4081.17B m., Chromite (pos.1,2)

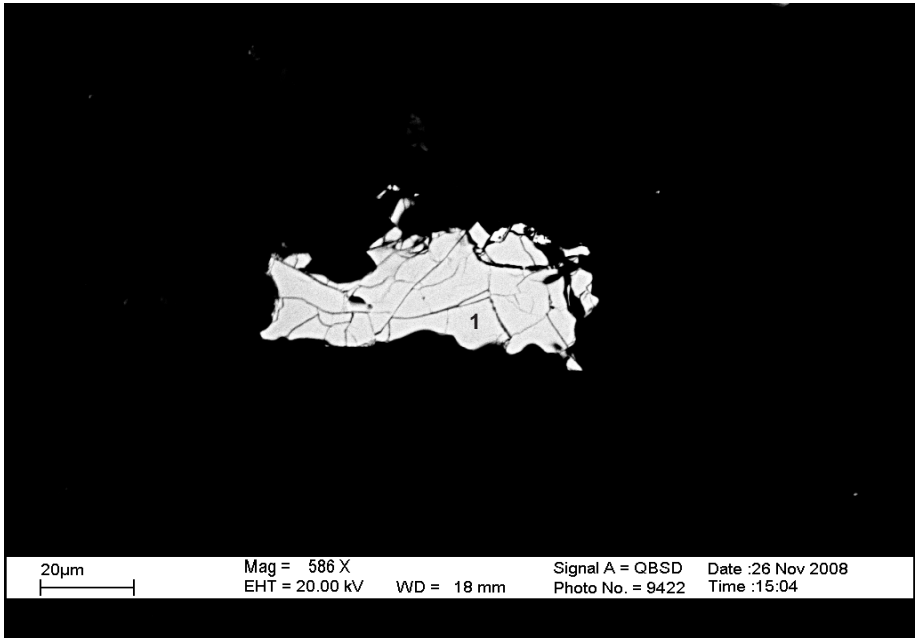


Figure 43: 4081.17B m., Chromian spinel (pos.1)

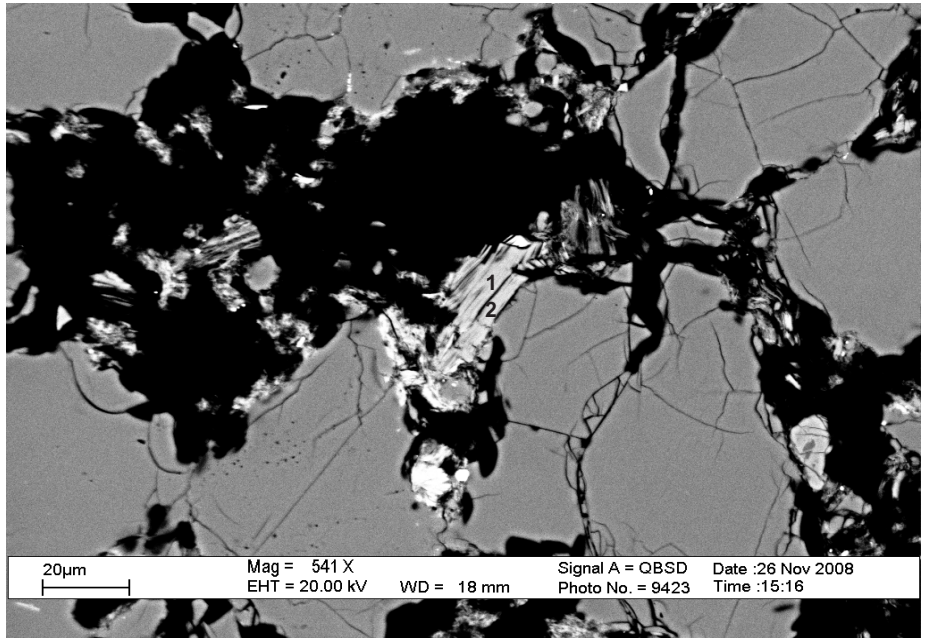


Figure 44: 4081.17B m., Hydromuscovite (pos.1,2)

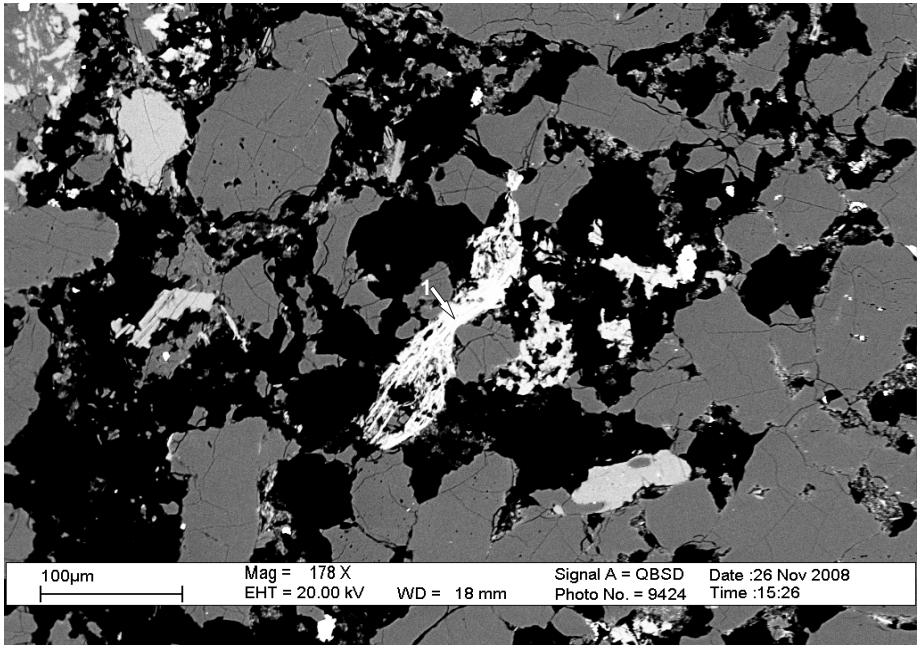


Figure 45: 4081.17B m., Chlorite (pos.1) associated with TiO_2

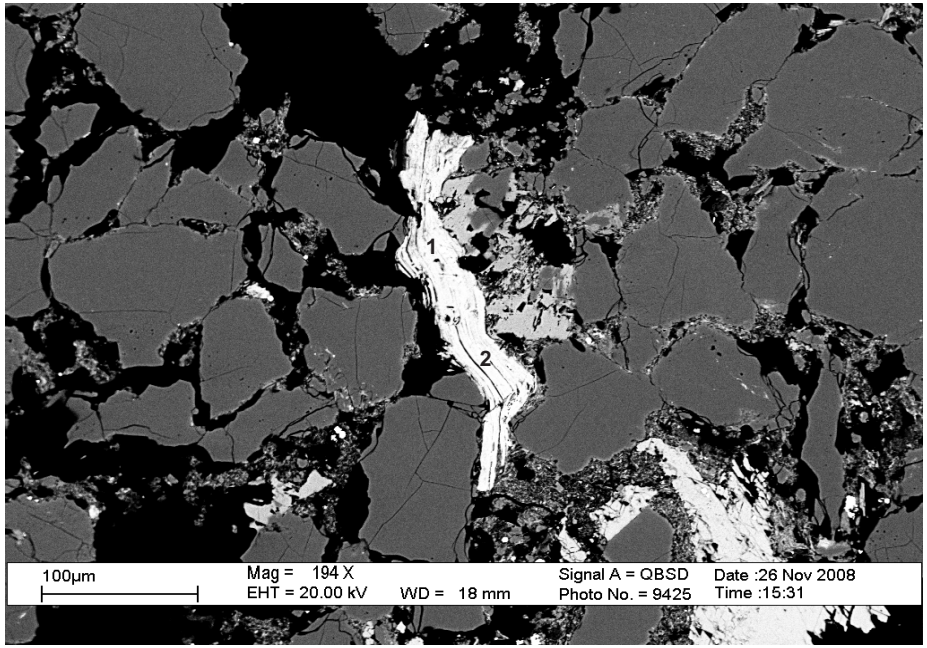


Figure 46: 4081.17B m., Chlorite after muscovite (pos.1,2), associated with TiO_2

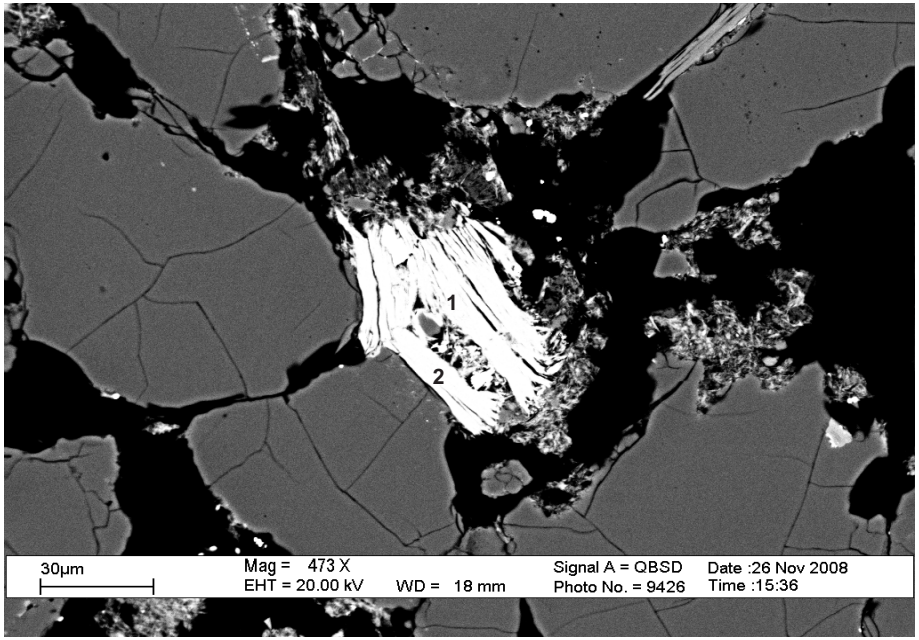


Figure 47: 4081.17B m., Chlorite (pos.1,2)

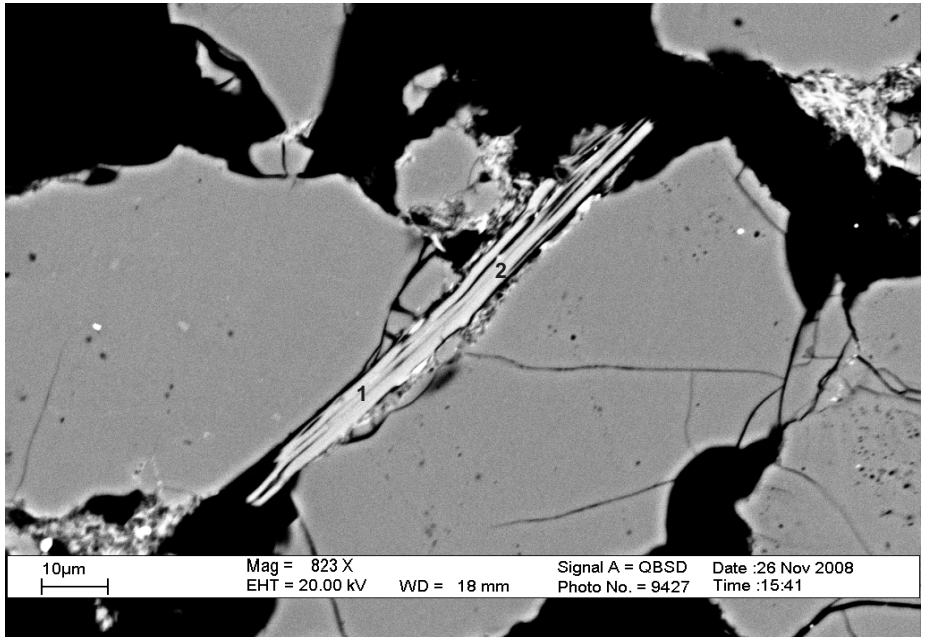


Figure 48: 4081.17B m., Hydromuscovite (pos.1,2)

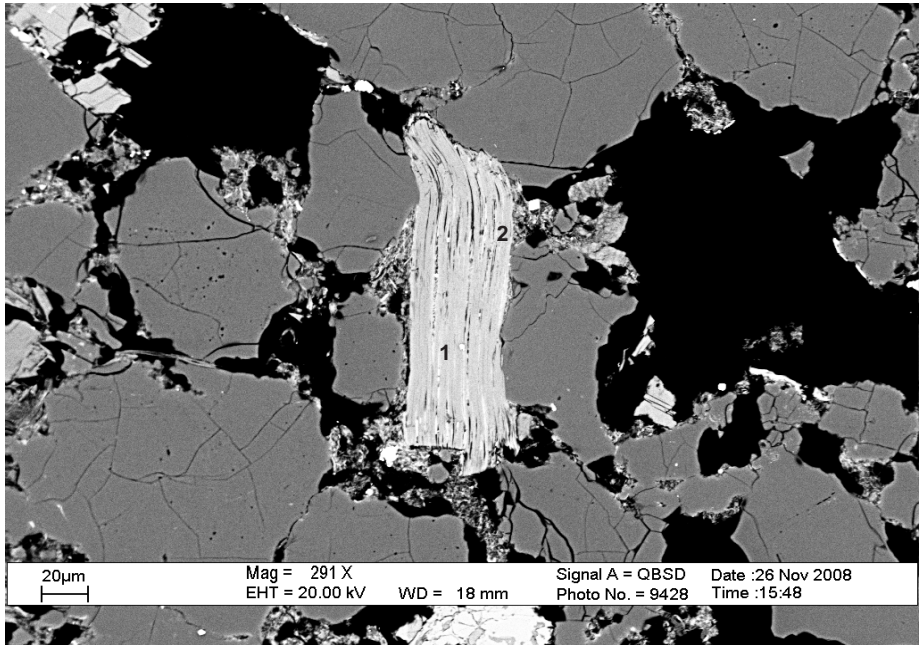


Figure 49: 4081.17B m., Muscovite + TiO_2 (pos.1,2)

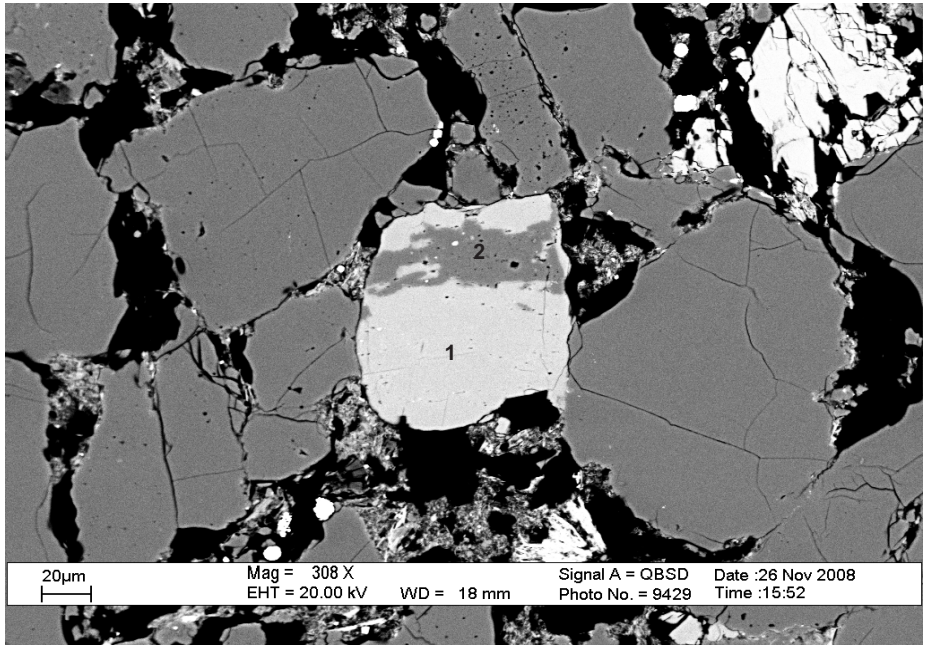


Figure 50: 4081.17B m., Albitization (pos.2) of K-feldspar (pos.1)

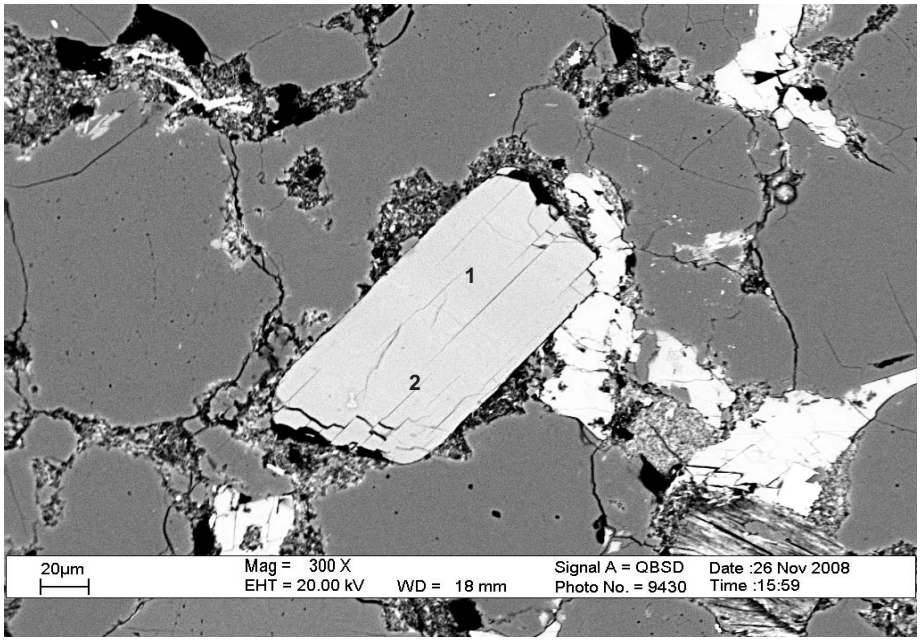


Figure 51: 4081.17B m., K-feldspar (pos.1,2)

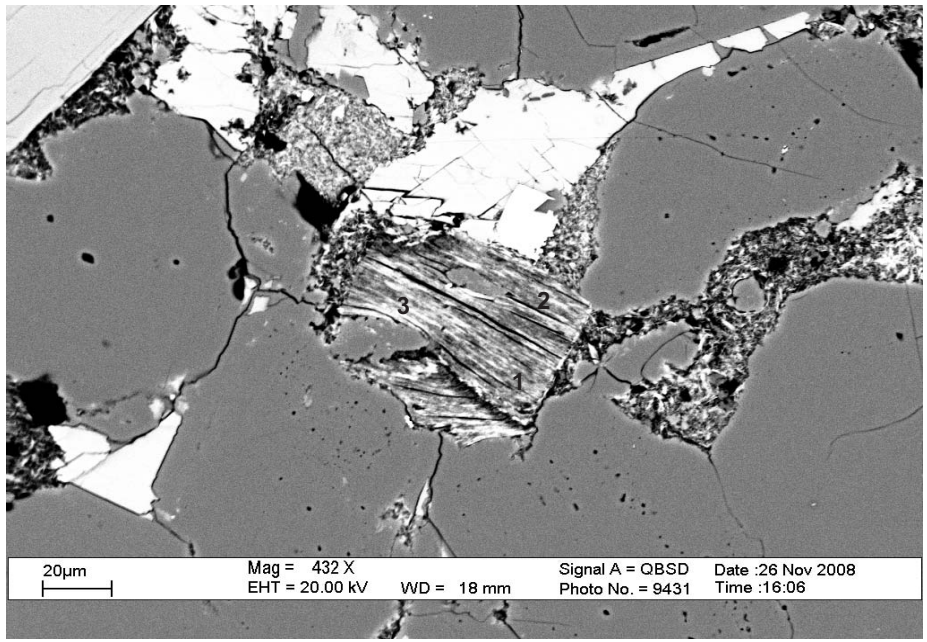


Figure 52: 4081.17B m., Chlorite after muscovite (pos.1,2: chlorite, pos.3: chlorite + TiO_2)

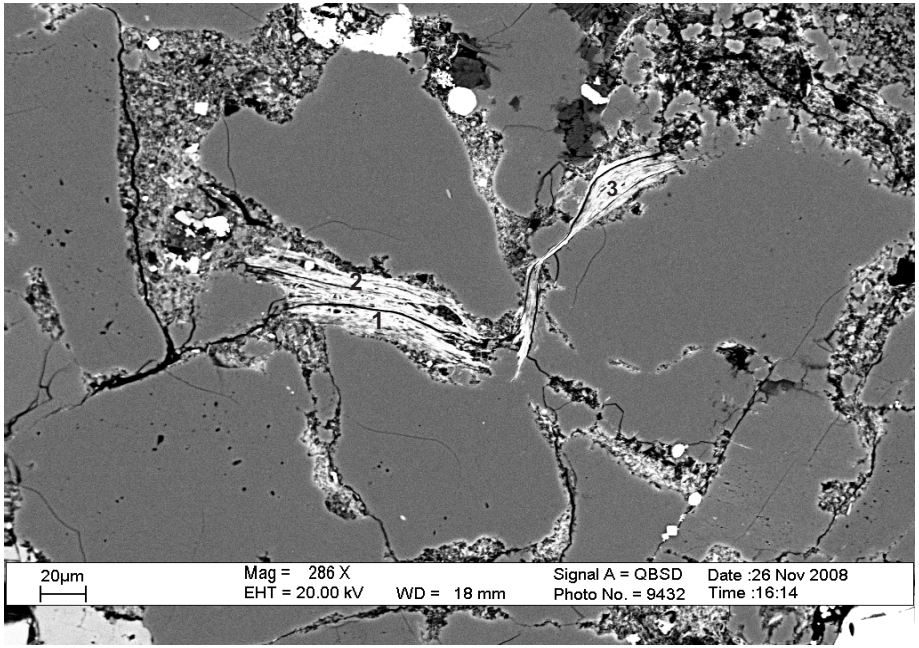


Figure 53: 4081.17B m., Chlorite after muscovite+ TiO_2 (pos.1,2, 3)

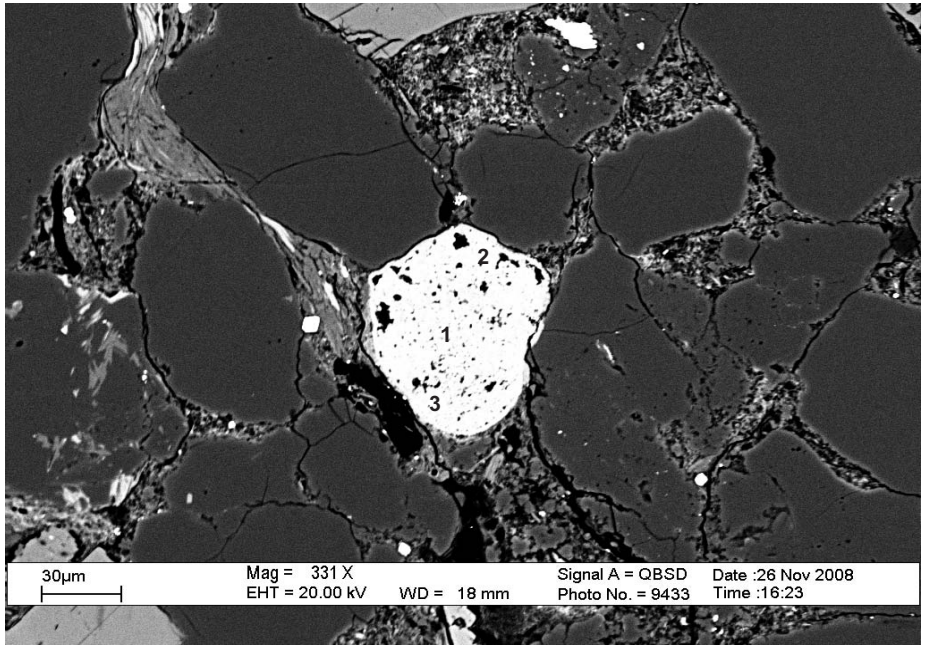


Figure 54: 4081.17B m., Aluminium sulphate phosphate (pos.1,2,3)

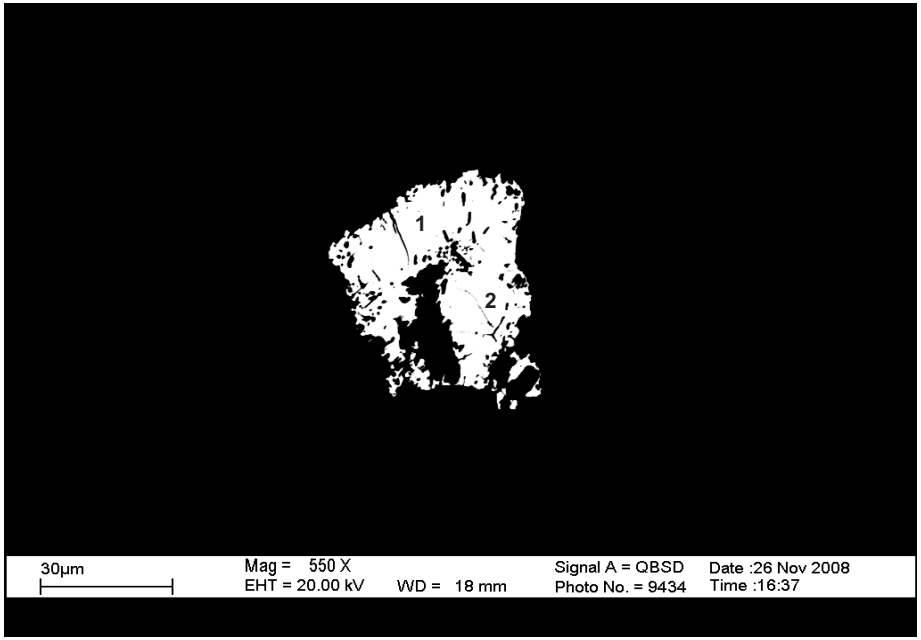


Figure 55: 4081.17B m., Monazite (pos.1,2)

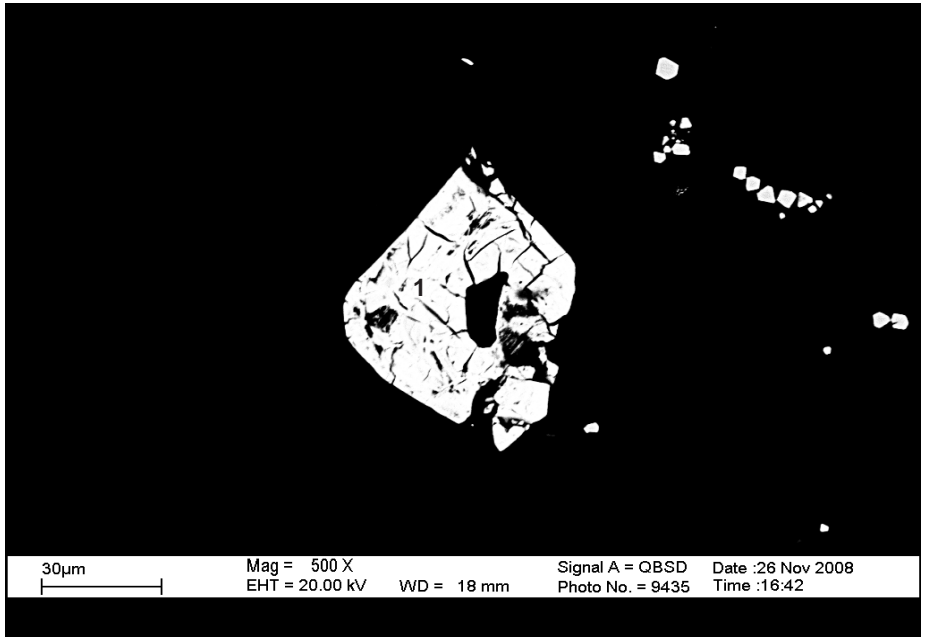


Figure 56: 4081.17B m., Zircon (pos. 1)

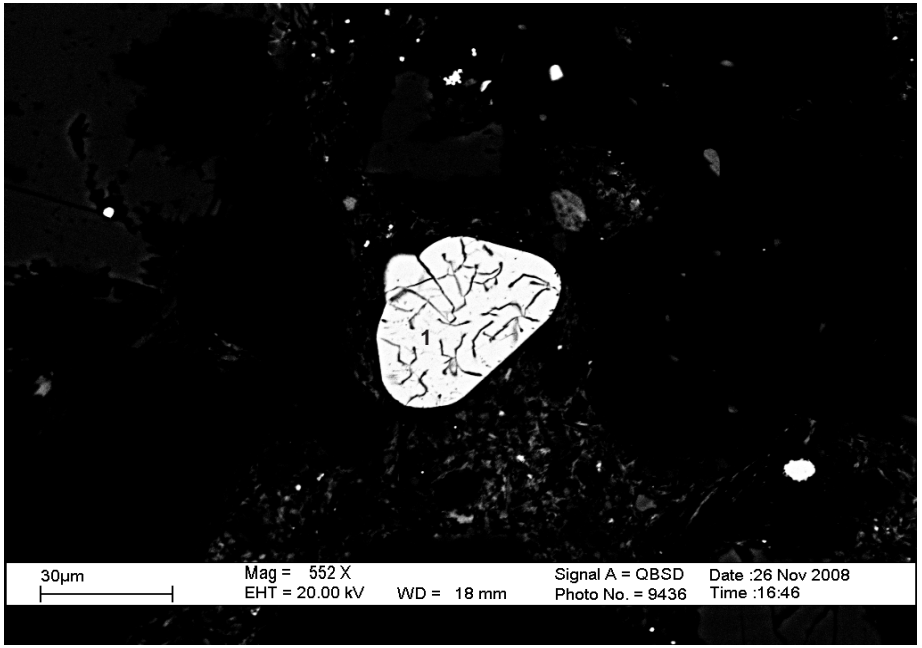


Figure 57: 4081.17B m., Chromian spinel (pos.1)

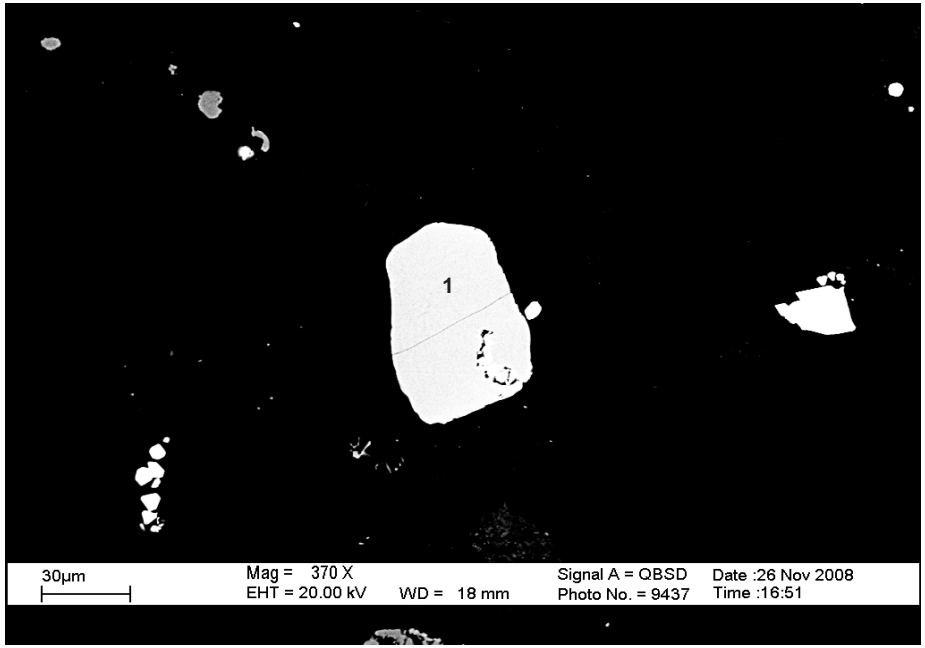


Figure 58: 4081.17B m., Chromite (pos.1)

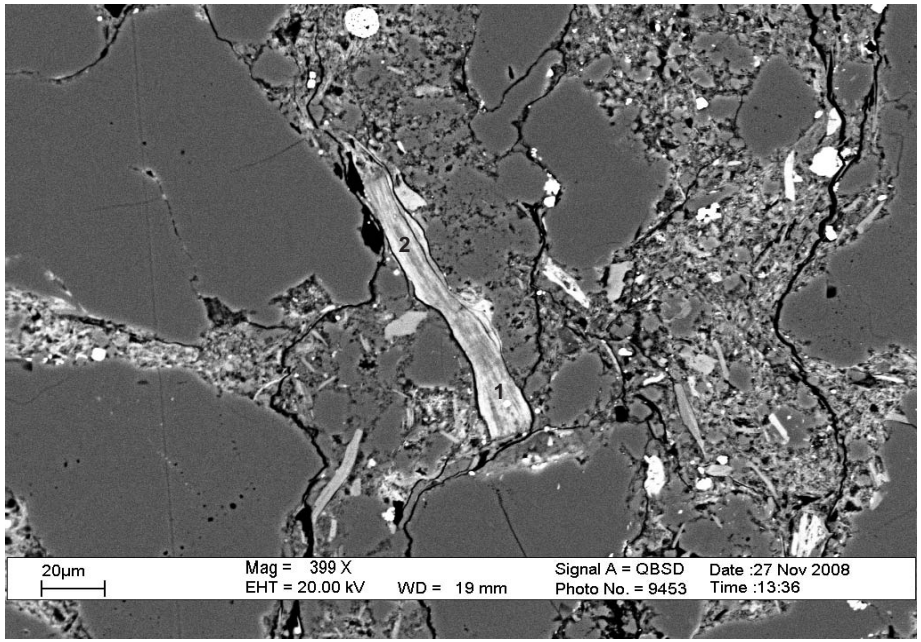


Figure 59: 4081.17B m., Chlorite after muscovite (pos.1,2)

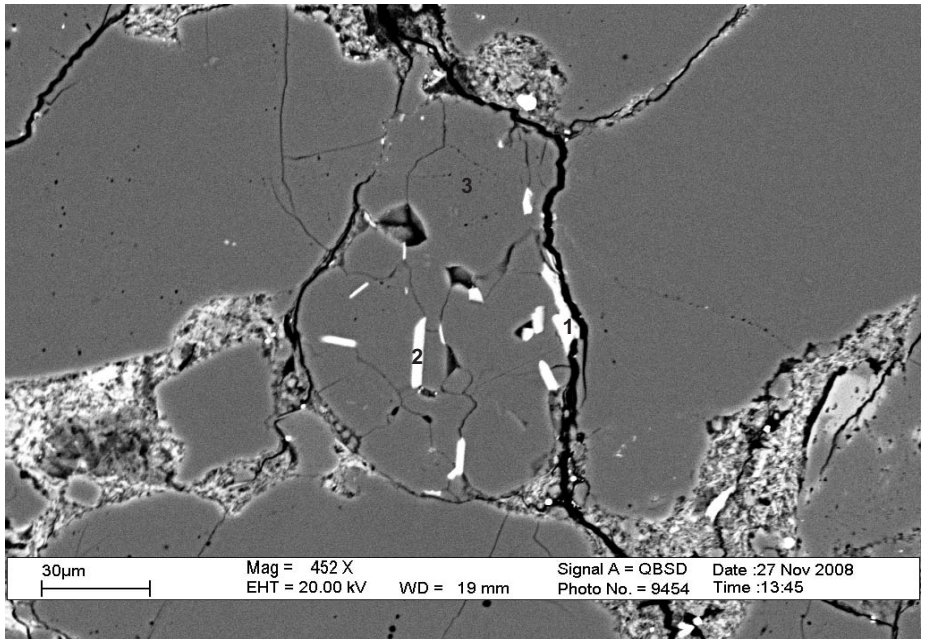


Figure 60: 4081.17B m., Siderite (pos.1) and chlorite (pos.2) within quartz (pos.3)

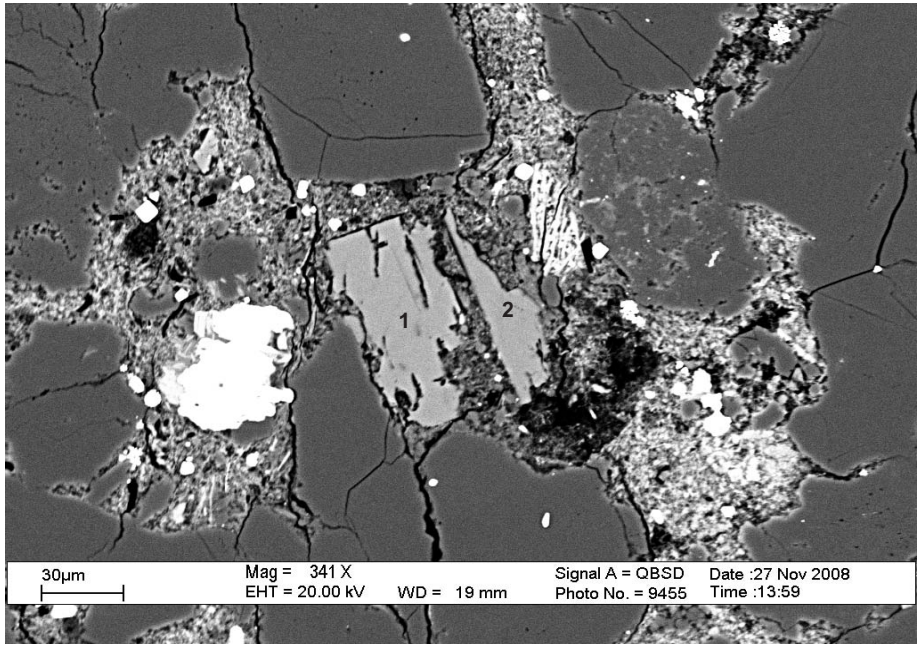


Figure 61: 4081.17B m., K-feldspar (pos.1,2)

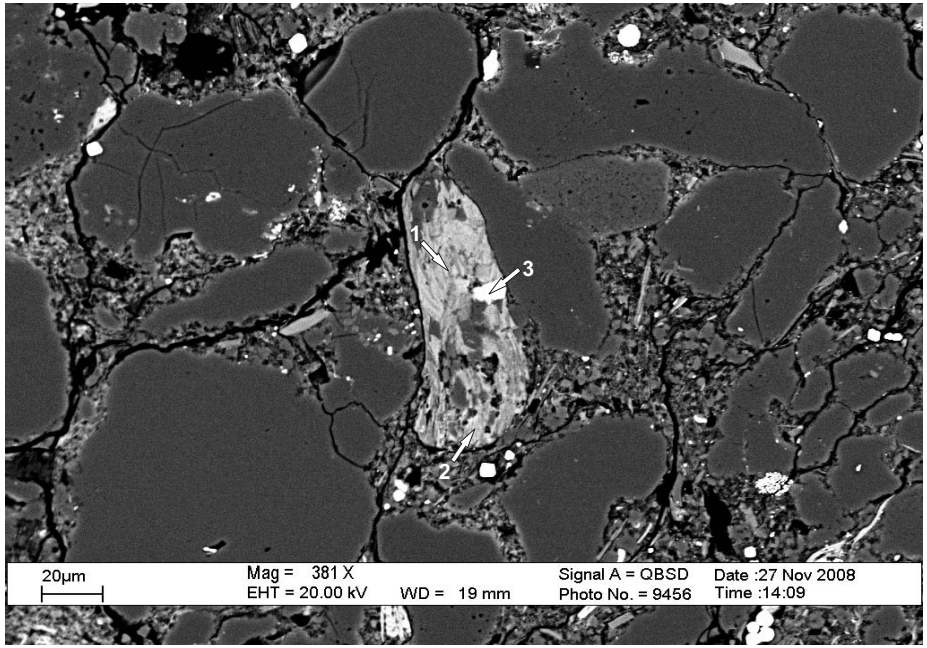


Figure 62: 4081.17B m., (?) Biotite (pos. 1,2) with an apatite inclusion (pos. 3)

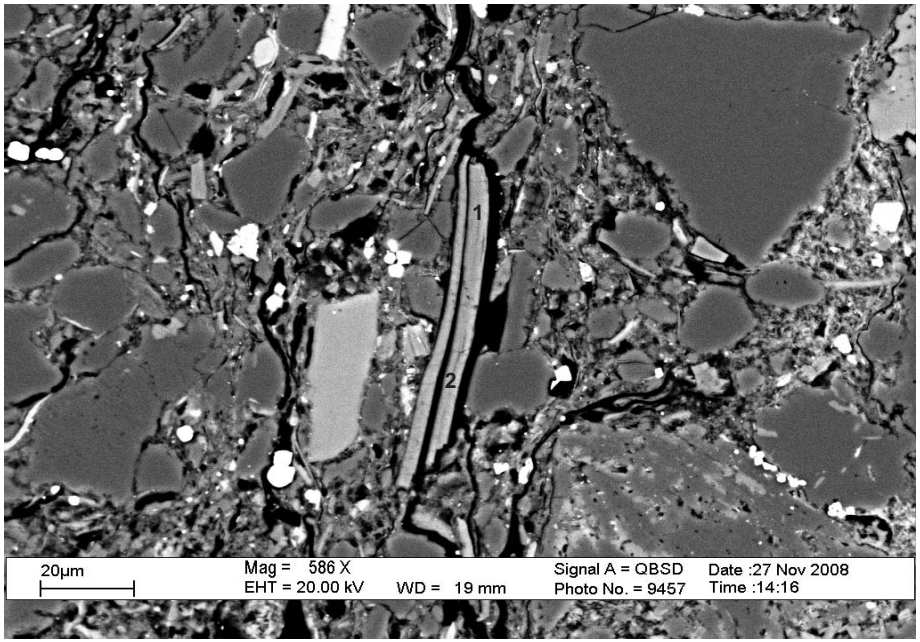


Figure 63: 4081.17B m., Muscovite (pos.1,2)

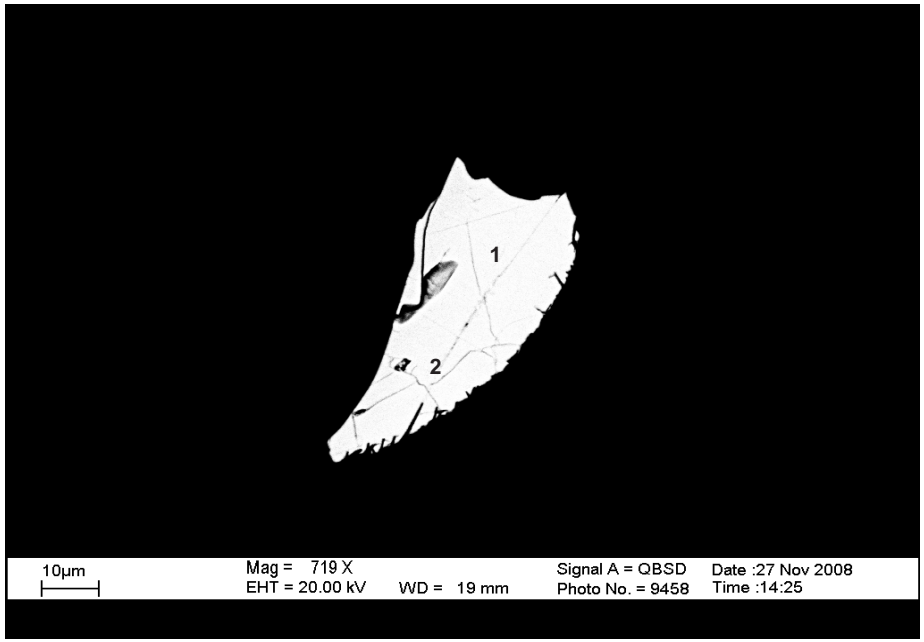


Figure 64: 4081.17B m., Monazite (pos.1,2)

Figure 65: 4081.17B m., (?) Xenotime (pos.1)

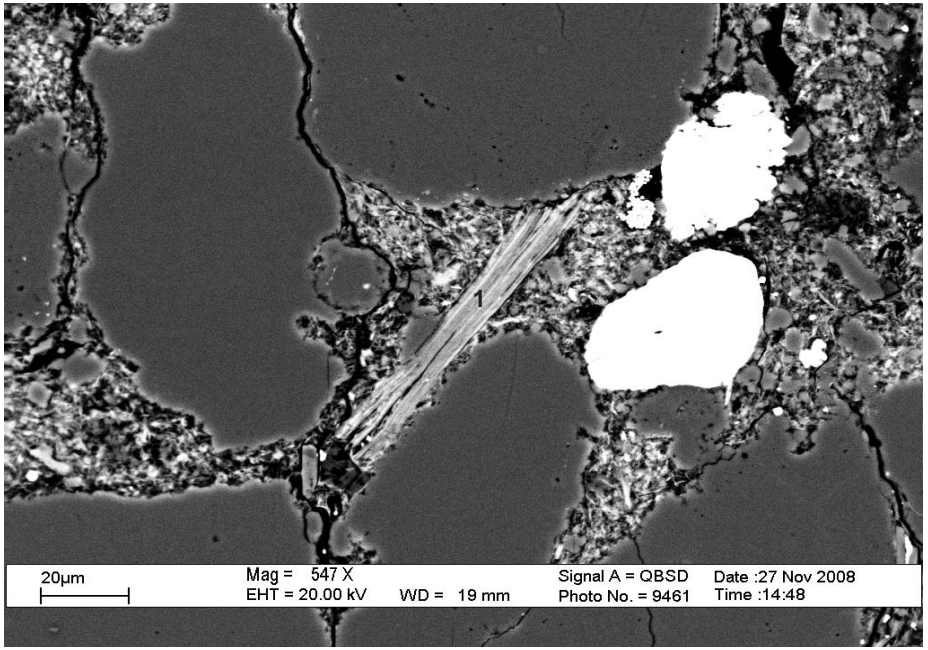


Figure 66: 4081.17B m., Altered muscovite (pos.1)

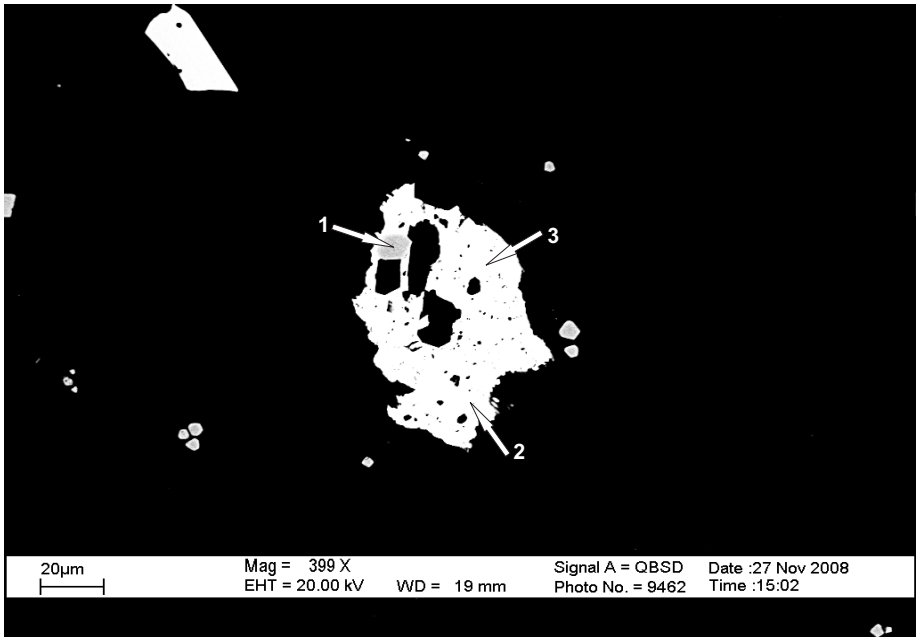


Figure 67: 4081.17B m., Barite (pos.3) with unknown (mostly quartz, pos.2) and pyrite (pos.1)

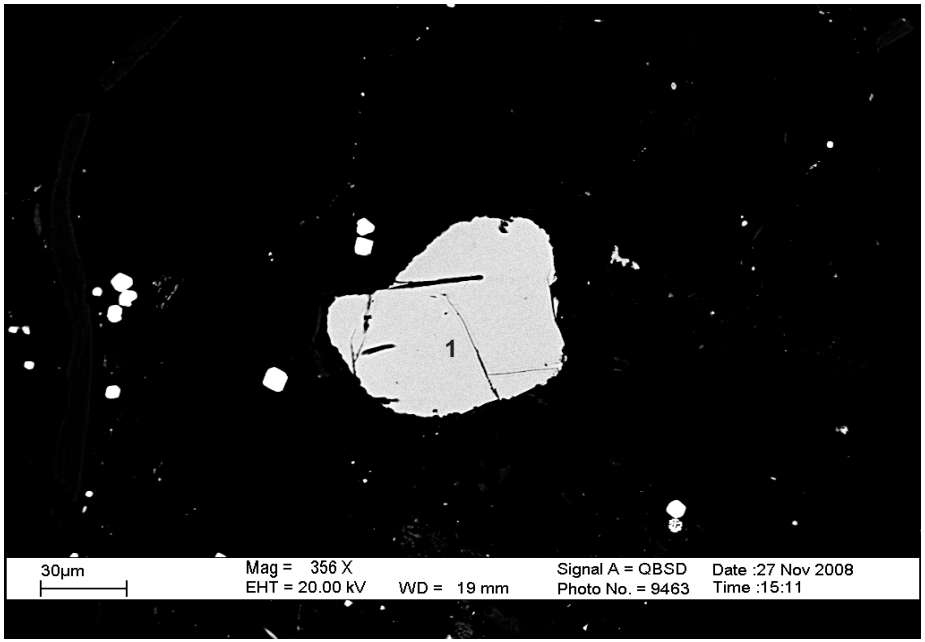


Figure 68: 4081.17B m., Chromite (pos.1)

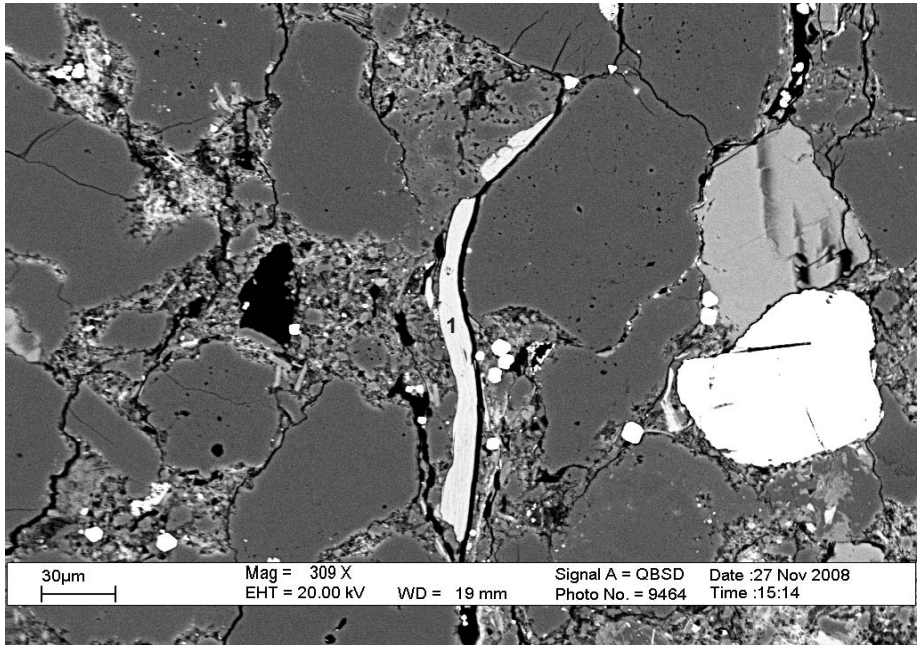


Figure 69: 4081.17B m., Mg-rich biotite (pos.1)

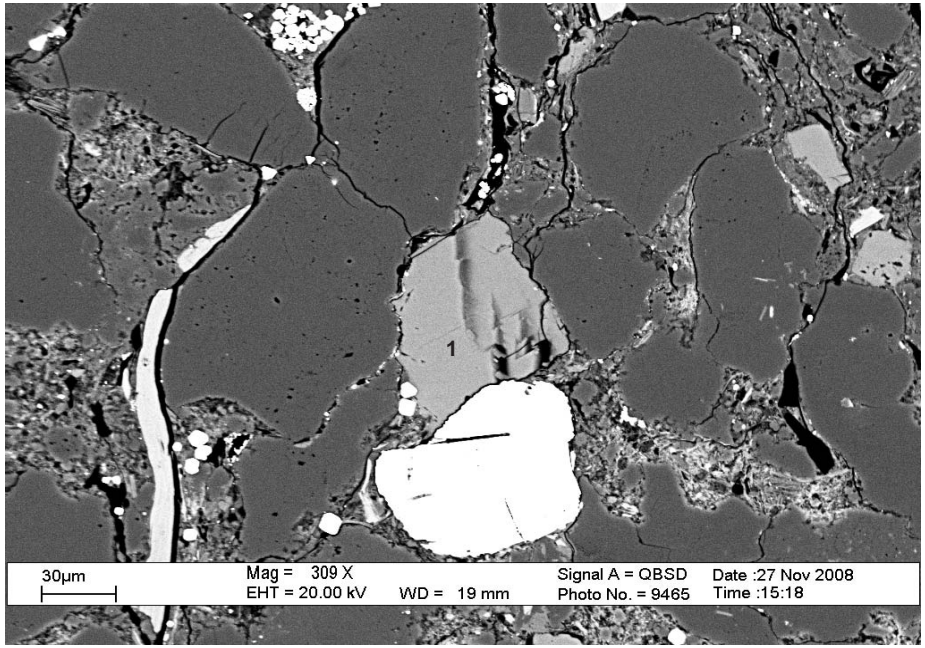


Figure 70: 4081.17B m., K-feldspar (pos.1)

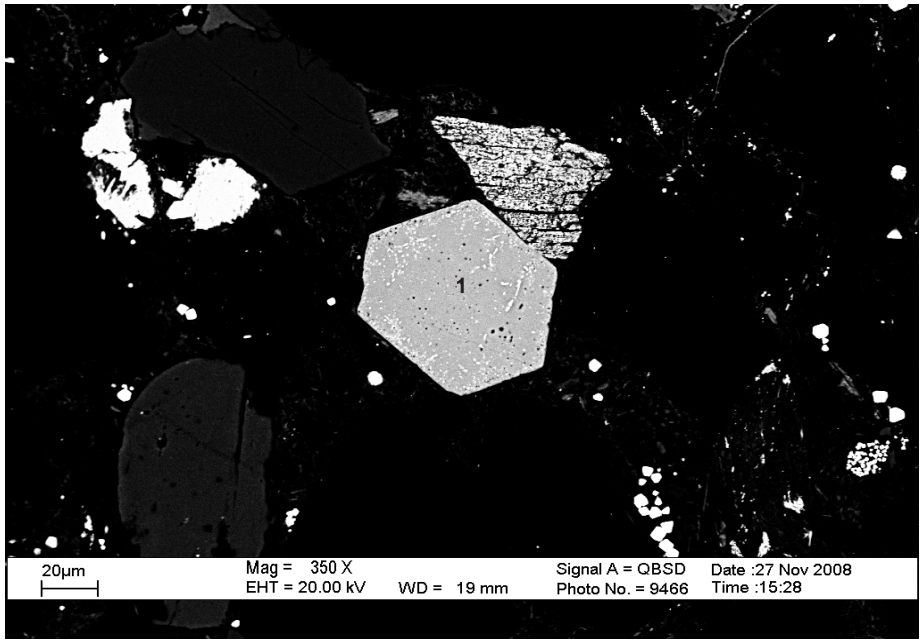


Figure 71: 4081.17B m., Apatite (pos.1)

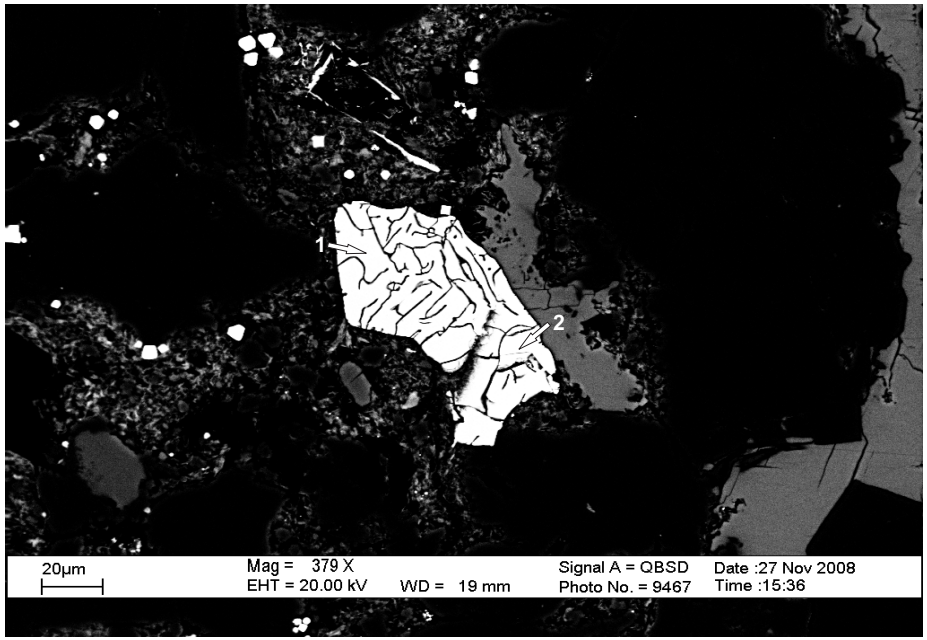


Figure 72: 4081.17B m., Chromian spinel (pos.1,2)

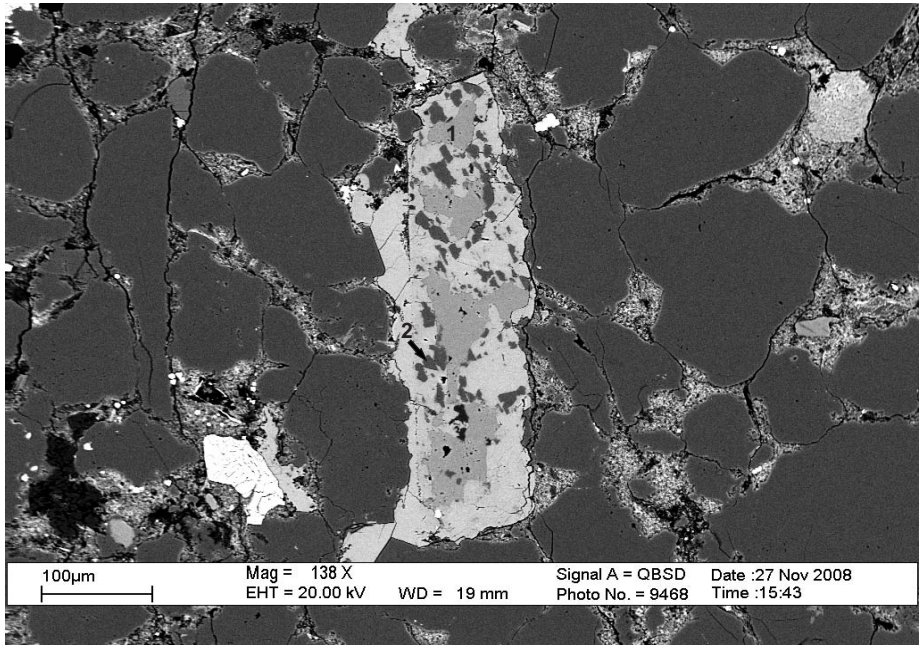


Figure 73: 4081.17B m., K-feldspar (pos.1), albite (pos.2) with ferroan calcite alteration

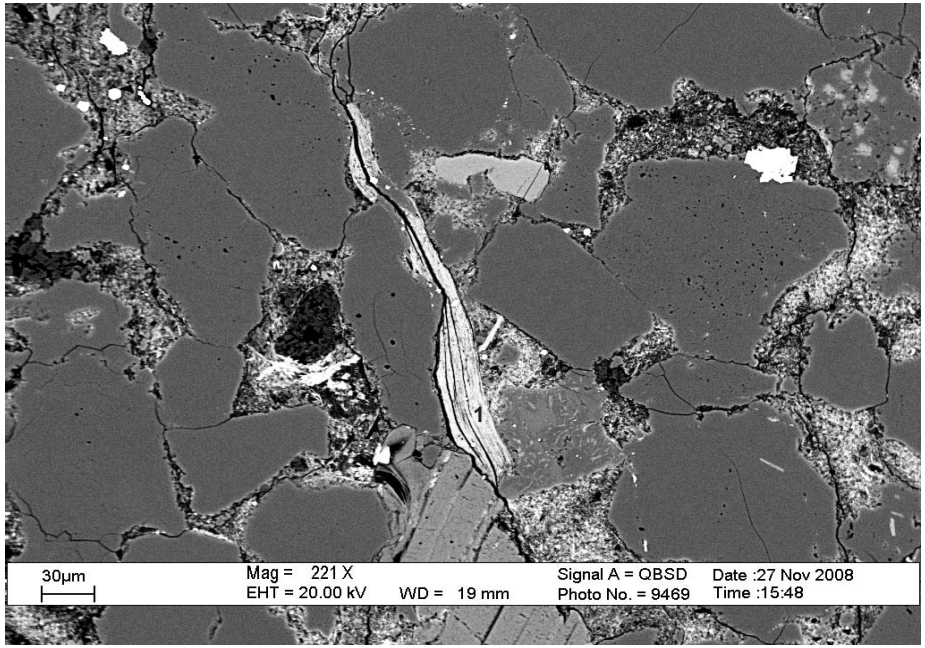


Figure 74: 4081.17B m., Chlorite after muscovite (pos.1)

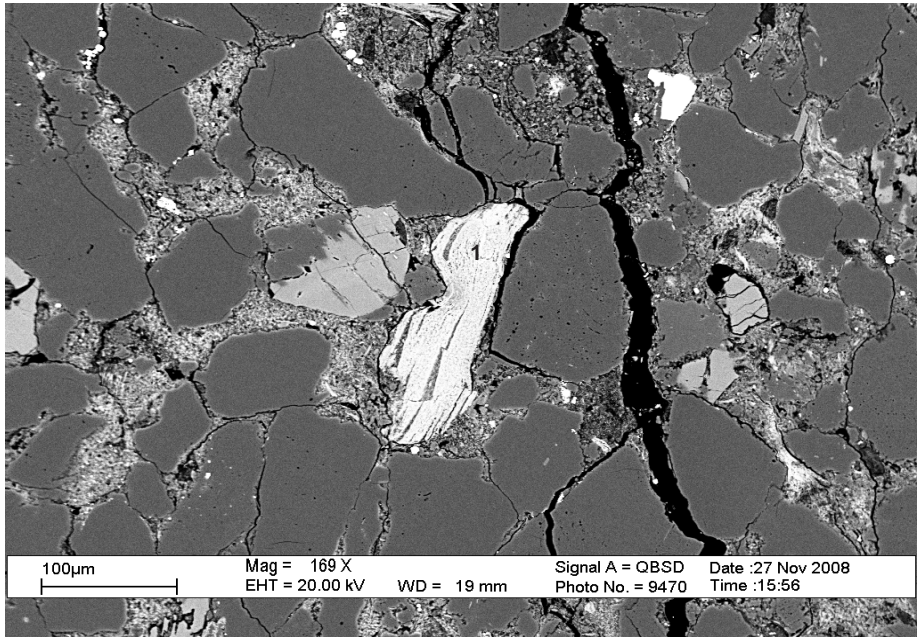


Figure 75: 4081.17B m., Chlorite (pos.1)

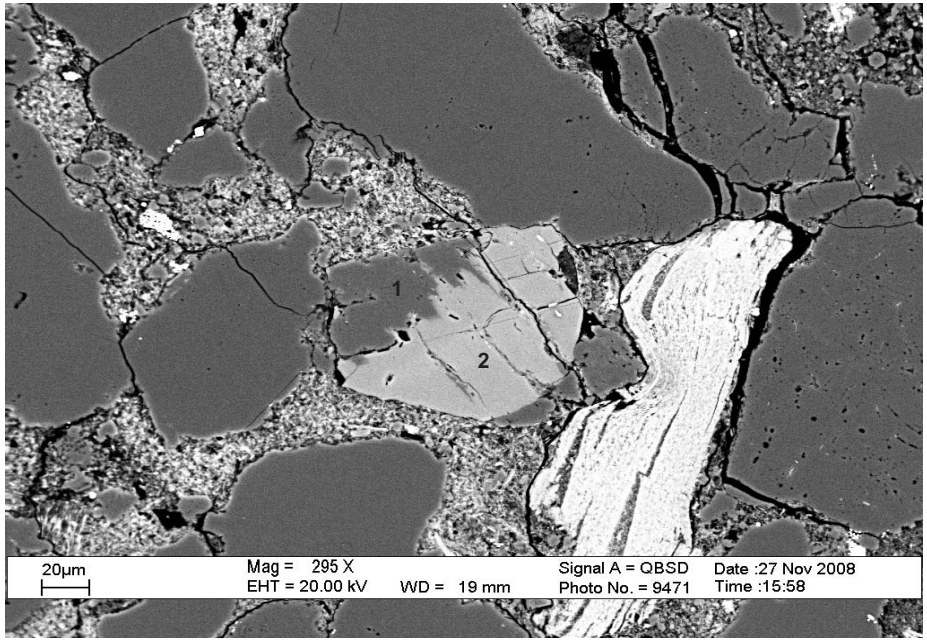


Figure 76: 4081.17B m., Albitization (pos.1) of K-feldspar (pos.2)

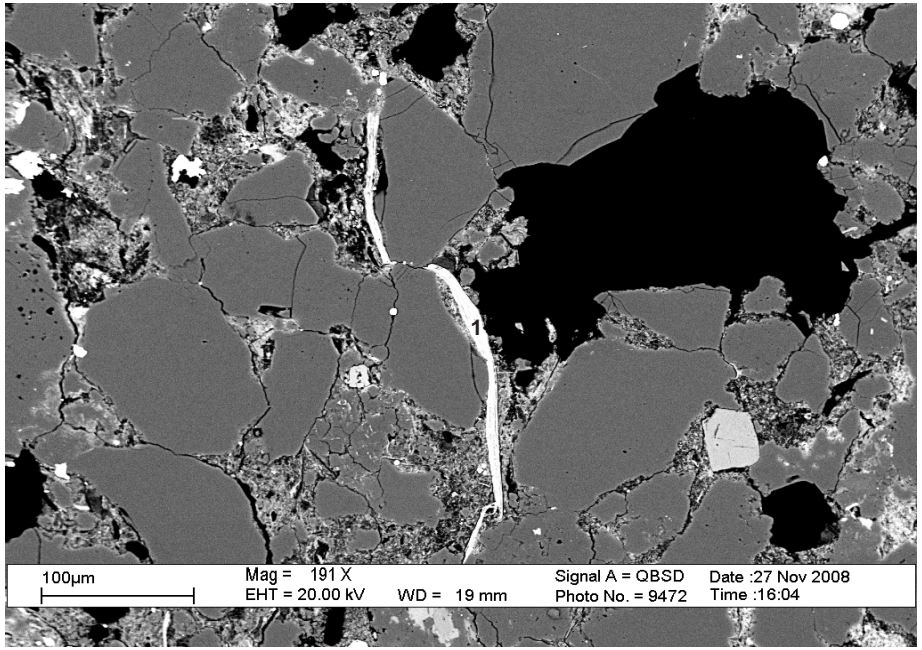


Figure 77: 4081.17B m., Chlorite (pos.1)

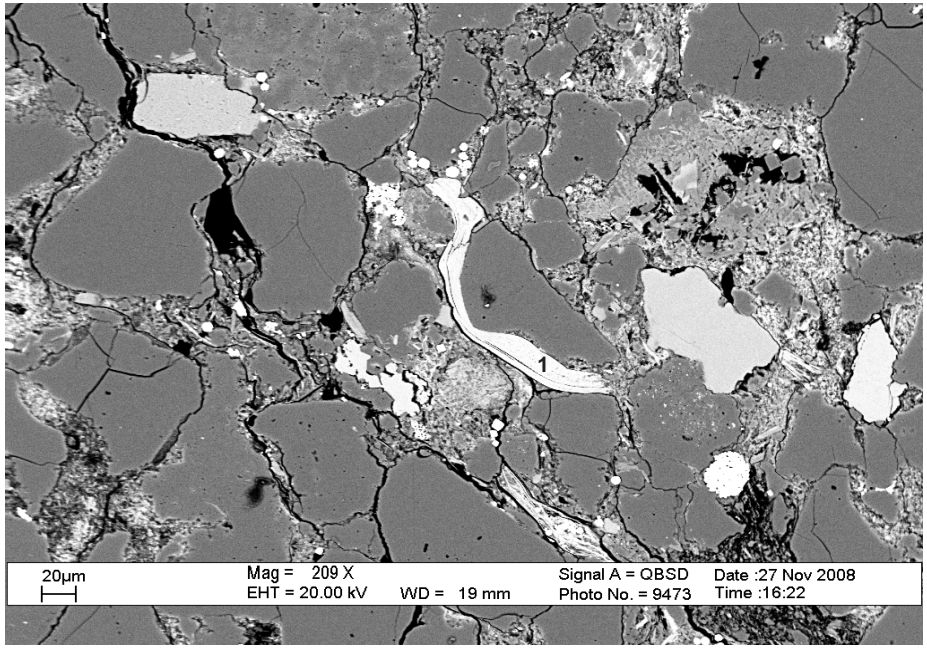


Figure 78: 4081.17B m., Chlorite associated with TiO_2 (pos.1)

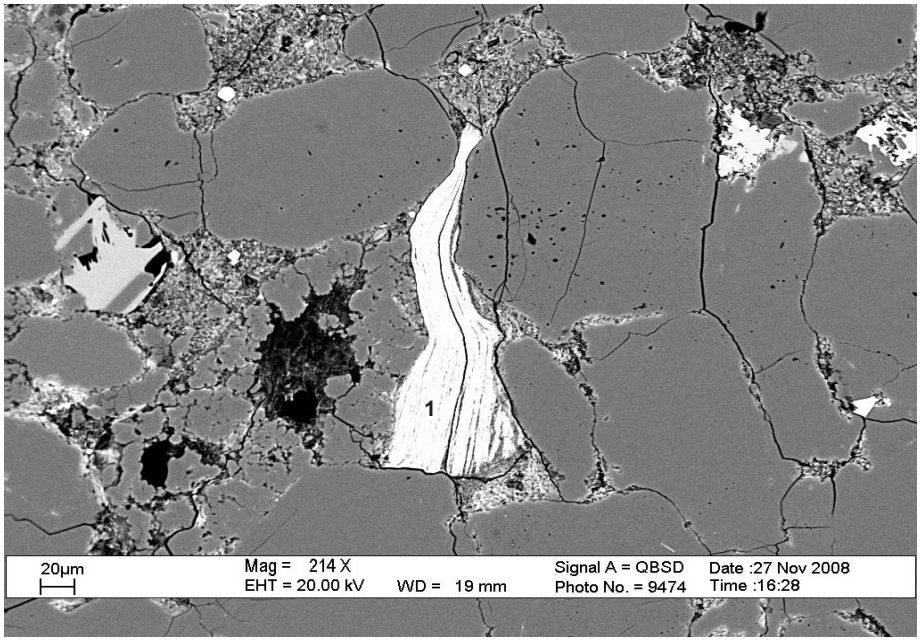


Figure 79: 4081.17B m., Chlorite (pos.1)

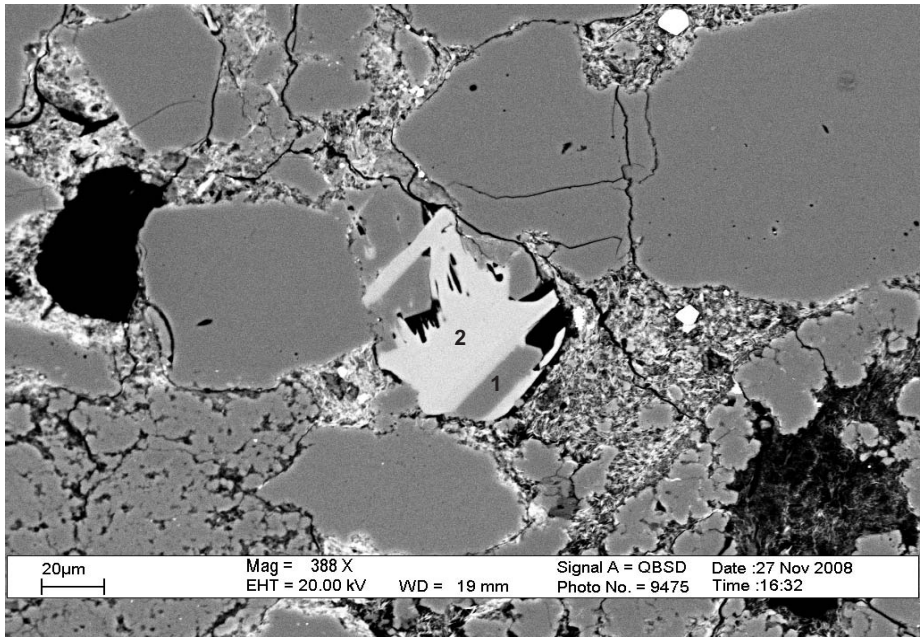


Figure 80: 4081.17B m., K-feldspar (pos.2) with quartz (pos.1)

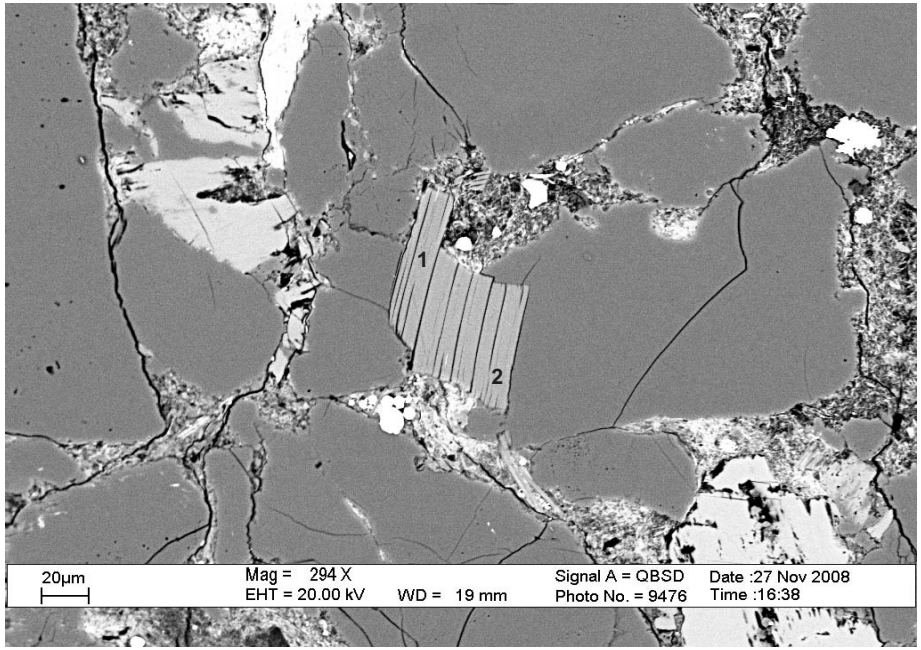


Figure 81: 4081.17B m., Muscovite (pos.1,2)

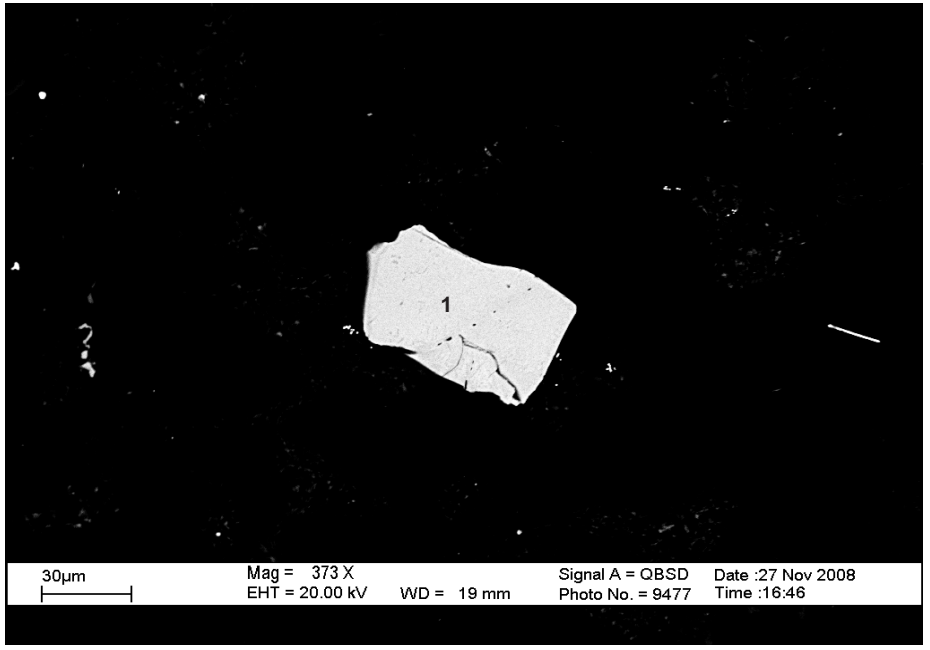


Figure 82: 4081.17B m., Chromite (pos.1)

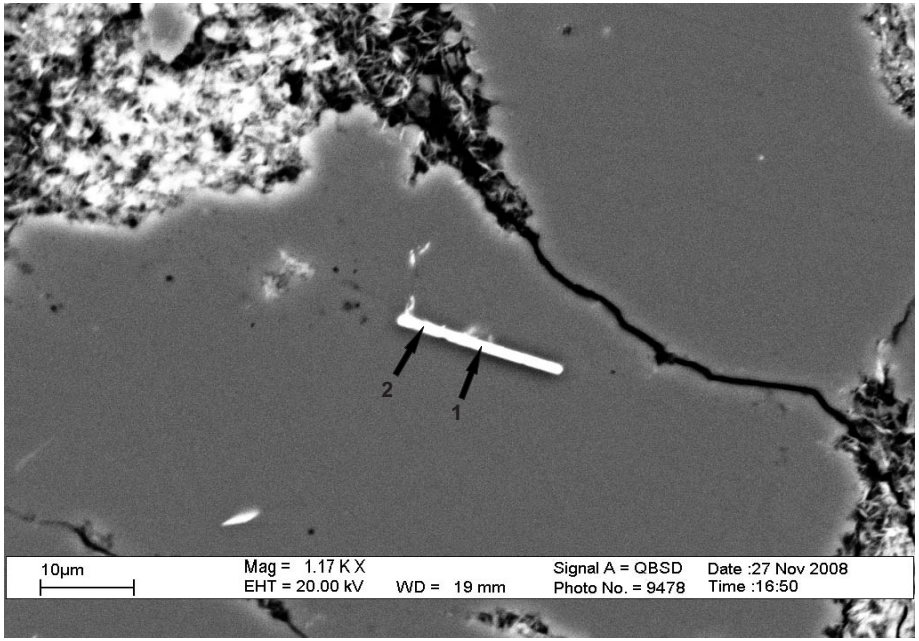


Figure 83: 4081.17B m.,Ilmenite inclusion (pos.1 & 2) within quartz

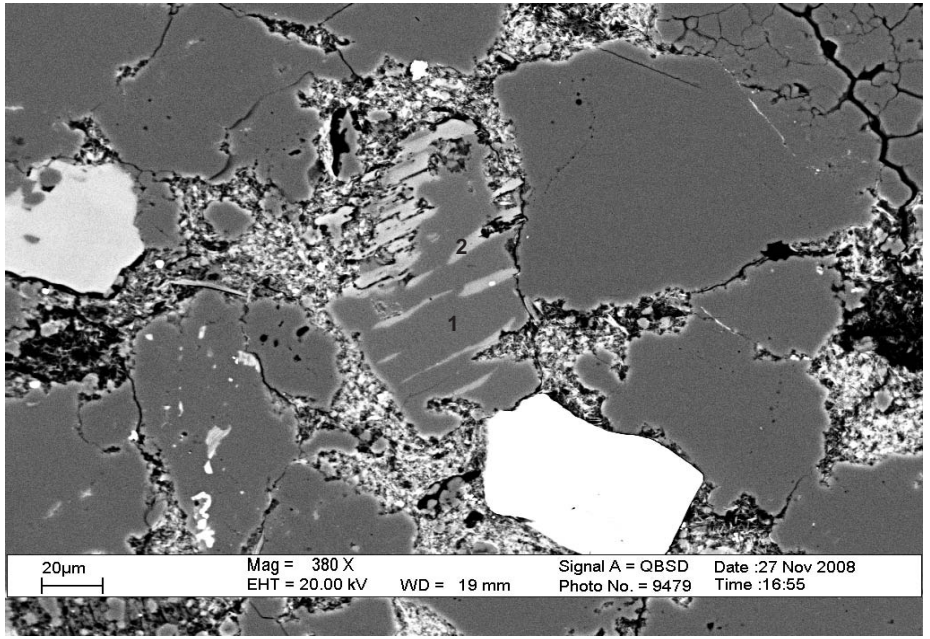


Figure 84: 4081.17B m., Antiperthite texture: albite (pos.1) and K-feldspar (pos.2)

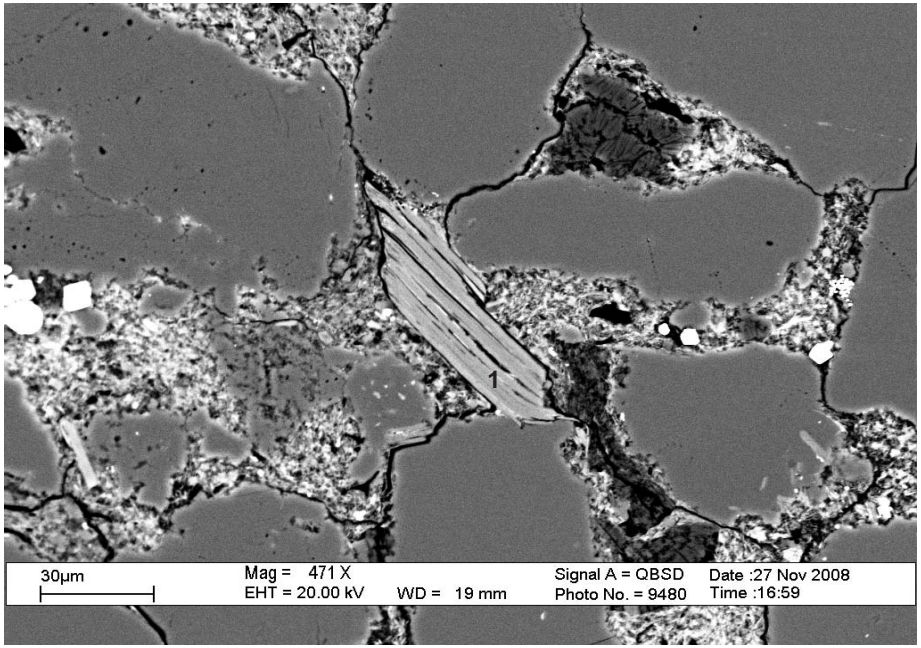


Figure 85: 4081.17B m., Muscovite (pos.1)

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

Mineral Name																
chromite	grain 1															
	Element	Line	App. Conc	k ratio	Intensity corrn.	Weight%	Weight% sigma	Atomic%	Compound%	Recalculations	Formula	Number of ions	Standard			
	Mg	K_SERIES	0.75	0.00517	0.5281	1.43	0.23	6.75	2.37		MgO	0.95	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.38	0.01015	0.6077	2.27	0.21	9.63	4.28		Al2O3	1.35	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	7.72	0.07719	0.9316	8.28	0.37	18.27	12.11		Cr2O3	2.57	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.46	0.03459	0.8489	4.08	0.35	8.37	5.24		FeO	1.18	Fe 1-Jun-1999 12:00 AM			
	O					7.95	0.41	56.98				8				
	Totals					24										
											Cation sum	6.04				
K-feldspar	grain 2															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	5.96	0.04388	0.9204	6.47	0.26	7.09	12.23		Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.19	0.16287	0.8708	23.19	0.4	24.42	49.61		SiO2	3.13	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.76	0.06364	0.9785	7.93	0.28	6	9.55		K2O	0.77	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					33.8	0.5	62.49				8				
	Totals					71.39										
											Cation sum	4.8				
muscovite	grain 3															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	10.97	0.08078	0.903	12.15	0.21	13.6	22.96		Al2O3	1.76	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.53	0.10911	0.775	17.45	0.25	18.75	37.33		SiO2	2.43	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.9	0.04837	0.9856	5.98	0.16	4.62	7.2		K2O	0.6	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.36	0.00362	0.8012	0.45	0.09	0.28	0.75		TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.51	0.01508	0.8285	1.82	0.15	0.98	2.34		FeO	0.13	Fe 1-Jun-1999 12:00 AM			
	O					32.73	0.36	61.76				8				
	Totals					70.58										
											Cation sum	4.95				
chlorite	grain 4															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.75	0.02572	0.6563	5.72	0.29	8.91	9.48		MgO	1.21	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.88	0.03593	0.6792	7.18	0.29	10.09	13.57		Al2O3	1.37	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	6.71	0.05409	0.687	9.76	0.3	13.18	20.89		SiO2	1.78	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11	0.11	0.8569	12.84	0.43	8.71	16.51		FeO	1.18	Fe 1-Jun-1999 12:00 AM			
	O					24.95	0.53	59.11				8				
	Totals					60.45										
											Cation sum	5.53				
ferroan calcite	grain 5	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	0.37	0.00299	0.8723	0.43	0.11	1.17	0.91		SiO2	0.18	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	26.08	0.23425	1.0741	24.28	0.36	46.76	33.97		CaO	7.39	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.87	0.00874	0.8098	1.08	0.2	1.49	1.39		FeO	0.24	Fe 1-Jun-1999 12:00 AM			
	O					10.49	0.28	50.58				8				
	Totals					36.27										
											Cation sum	7.82				
K-feldspar	grain 5	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Al	K_SERIES	10.31	0.07591	0.9031	11.42	0.36	13.4	21.57		Al2O3	1.74	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.84	0.10353	0.7781	16.49	0.43	18.59	35.28		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.13	0.0421	0.9897	5.18	0.27	4.2	6.24		K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.62	0.01457	0.9219	1.76	0.19	1.39	2.46		CaO	0.18	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.21	0.01206	0.827	1.46	0.25	0.83	1.88		FeO	0.11	Fe 1-Jun-1999 12:00 AM			
	O					31.12	0.61	61.6				8				
	Totals					67.43										
											Cation sum	4.99				
K-feldspar	grain 6															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	6.62	0.04877	0.9204	7.19	0.3	7.29	13.59		Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.6	0.17424	0.8682	24.88	0.46	24.21	53.23		SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.54	0.07004	0.9792	8.72	0.32	6.09	10.5		K2O	0.78	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					36.53	0.59	62.41				8				
	Totals					77.33										
											Cation sum	4.82				
chlorite	grain 7	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.11	0.00764	0.6857	1.62	0.17	2.59	2.69		MgO	0.34	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.45	0.04753	0.7718	8.36	0.22	12.03	15.8		Al2O3	1.57	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.76	0.07069	0.7267	12.06	0.25	16.68	25.81		SiO2	2.18	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.56	0.00463	0.9996	0.56	0.09	0.56	0.68		K2O	0.07	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.24	0.00213	0.9702	0.24	0.08	0.24	0.34		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.26	0.00255	0.8432	0.3	0.09	0.25	0.5		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	7.72	0.07716	0.8481	9.1	0.29	6.33	11.7		FeO	0.83	Fe 1-Jun-1999 12:00 AM			
	O					25.27	0.41	61.33				8				
	Totals					57.52										
											Cation sum	5.04				
chlorite	grain 7	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.95	0.00649	0.7137	1.33	0.17	2	2.2		MgO	0.25	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.01	0.02218	0.8037	3.75	0.2	5.08	7.08		Al2O3	0.64	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	15.22	0.12277	0.8223	18.5	0.31	24.1	39.58		SiO2	3.04	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.71	0.00587	0.9832	0.73	0.1	0.68	0.88		K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.52	0.00524	0.8282	0.63	0.11	0.48	1.05		TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.46	0.05461	0.8379	6.52	0.28	4.27	8.38		FeO	0.54	Fe 1-Jun-1999 12:00 AM			
	O					27.73	0.44	63.39				8				
	Totals					59.18										
											Cation sum	4.62				
chlorite + TiO2	grain 7	spectrum 3														
after	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
muscovite	Mg	K_SERIES	1.21	0.00829	0.6457	1.87	0.25	2.97	3.11		MgO	0.38	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.01	0.0295	0.7381	5.43	0.28	7.75	10.25		Al2O3	1	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.21	0.05817	0.7589	9.5	0.32	13.04	20.33		SiO2	1.68	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.21	0.00989	1.0538	1.14	0.15	1.13	1.38		K2O	0.15	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	8.27	0.08269	0.8604	9.61	0.34	7.73	16.03		TiO2	1	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.54	0.06538	0.8449	7.74	0.41	5.34	9.95		FeO	0.69	Fe 1-Jun-1999 12:00 AM			
	O					25.76	0.6	62.04				8				
	Totals					61.05										

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

											Cation sum	4.89				
chromite	grain 8															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.05	0.00723	0.4802	2.2	0.29	3.65	3.64		MgO	0.51	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.52	0.01121	0.5885	2.58	0.24	3.87	4.88		Al2O3	0.54	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	29.66	0.2966	0.9543	31.08	0.6	24.16	45.42		Cr2O3	3.39	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.33	0.1333	0.8535	15.62	0.55	11.3	20.09		FeO	1.59	Fe 1-Jun-1999 12:00 AM			
	O					22.56	0.6	57.01				8				
	Totals					74.04										
											Cation sum	6.03				
barite	grain 9															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	5.98	0.05252	0.8141	7.34	0.25	14.22	18.32		SO3	1.77	FeS2 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	3.41	0.03169	0.6358	5.37	0.44	3.81	6.35		SrO	0.47	SrF2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	36.06	0.33657	0.9189	39.25	0.68	17.76	43.83		BaO	2.21	BaF2 1-Jun-1999 12:00 AM			
	O					16.54	0.42	64.22				8				
	Totals					68.5										
											Cation sum	4.46				
K-feldspar	grain 10	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	6.33	0.04663	0.916	6.91	0.29	7.28	13.06		Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.37	0.16427	0.8665	23.51	0.44	23.78	50.29		SiO2	3.05	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.66	0.06283	0.9839	7.78	0.3	5.65	9.37		K2O	0.73	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.28	0.01148	0.9046	1.41	0.18	1	1.98		CaO	0.13	Wollastonite 1-Jun-1999 12:00 AM			
	O					35.08	0.57	62.29				8				
	Totals					74.7										
											Cation sum	4.84				
ferroan calcite	grain 10	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Ca	K_SERIES	25.21	0.2264	1.0781	23.38	0.42	48.59	32.71		CaO	7.77	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.77	0.00766	0.8092	0.95	0.21	1.41	1.22		FeO	0.23	Fe 1-Jun-1999 12:00 AM			
	O					9.6	0.28	50				8				
	Totals					33.93										
											Cation sum	8				
ferroan calcite	grain 10	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Ca	K_SERIES	26.77	0.24045	1.0696	25.03	0.44	47.81	35.02		CaO	7.58	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.77	0.00771	0.8158	0.95	0.22	1.3	1.22		FeO	0.21	Fe 1-Jun-1999 12:00 AM			
	W	M_SERIES	0.8	0.00802	0.7474	1.07	0.35	0.45	1.35		WO3	0.07	W 1-Jun-1999 12:00 AM			
	O					10.54	0.35	50.45				8				
	Totals					37.59										
											Cation sum	7.86				
apatite	grain 11															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	9.98	0.05911	1.3529	7.38	0.32	11.01	16.91		P2O5	1.51	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	27.36	0.24572	1.0267	26.64	0.47	30.73	37.28		CaO	4.22	Wollastonite 1-Jun-1999 12:00 AM			
	O					20.16	0.47	58.26				8				
	Totals					54.19										
											Cation sum	5.73				

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

rutile after	grain 12															
ilmenite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	0.42	0.00336	0.8361	0.5	0.15	0.65	1.07		SiO2	0.08	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	38.99	0.38989	0.9159	42.57	0.69	32.68	71.01		TiO2	3.92	Ti 1-Jun-1999 12:00 AM			
	O					29	0.59	66.67				8				
	Totals					72.07										
											Cation sum	4				
zircon	grain 13															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	12.17	0.09815	1.0108	12.04	0.24	21.31	25.76		SiO2	2.56	SiO2 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	15.77	0.15767	0.7145	22.07	0.64	12.02	29.81		ZrO2	1.44	Zr 1-Jun-1999 12:00 AM			
	O					21.46	0.46	66.67				8				
	Totals					55.57										
											Cation sum	4				
chlorite after	grain 14	spectrum 1														
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.82	0.00559	0.5638	1.45	0.22	2.28	2.4		MgO	0.31	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.03	0.03708	0.6714	7.5	0.28	10.64	14.17		Al2O3	1.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	6.39	0.05156	0.6903	9.26	0.28	12.62	19.81		SiO2	1.71	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	19.85	0.19852	0.8778	22.61	0.51	15.5	29.09		FeO	2.1	Fe 1-Jun-1999 12:00 AM			
	O					24.65	0.51	58.97				8				
	Totals					65.47										
											Cation sum	5.57				
	grain 14	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.61	0.00421	0.5731	1.07	0.25	2.12	1.78		MgO	0.29	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.99	0.02939	0.6811	5.86	0.3	10.46	11.07		Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	5.49	0.04427	0.6971	7.88	0.31	13.51	16.85		SiO2	1.82	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.75	0.1475	0.8748	16.86	0.54	14.54	21.69		FeO	1.96	Fe 1-Jun-1999 12:00 AM			
	O					19.72	0.55	59.37				8				
	Totals					51.38										
											Cation sum	5.48				
chromite	grain 15	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-1.05	-0.01054	0.3191	-3.3	3.77	-13.26	-12.74		N2O5	-2.12	Not defined 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.85	0.01271	0.5166	3.59	0.26	8.3	5.95		MgO	1.33	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.27	0.03146	0.6074	7.03	0.24	14.66	13.29		Al2O3	2.35	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	21.64	0.21644	0.9421	22.97	0.41	24.85	33.58		Cr2O3	3.98	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.2	0.13197	0.8557	15.42	0.42	15.53	19.84		FeO	2.49	Fe 1-Jun-1999 12:00 AM			
	O					14.21	6.39	49.93				8				
	Totals					59.92										
											Cation sum	8.02				
	grain 15	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-0.96	-0.0096	0.321	-2.99	5.04	-11.73	-11.53		N2O5	-1.85	Not defined 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.62	0.01112	0.5117	3.17	0.35	7.17	5.26		MgO	1.13	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.15	0.03055	0.6071	6.83	0.33	13.92	12.91		Al2O3	2.2	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	21.65	0.21654	0.945	22.91	0.54	24.23	33.49		Cr2O3	3.82	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.65	0.13649	0.857	15.93	0.57	15.68	20.49		FeO	2.47	Fe 1-Jun-1999 12:00 AM			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	O					14.77	8.54	50.74				8				
	Totals					60.62										
											Cation sum	7.77				
muscovite	grain 16	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	11.29	0.08313	0.9161	12.32	0.24	14.42	23.29		Al2O3	1.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.72	0.10256	0.7699	16.51	0.28	18.56	35.32		SiO2	2.4	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.36	0.04397	0.9817	5.46	0.17	4.41	6.58		K2O	0.57	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.26	0.00263	0.7986	0.33	0.09	0.22	0.55		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.73	0.00726	0.8268	0.88	0.14	0.5	1.13		FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					31.36	0.39	61.89				8				
	Totals					66.86										
											Cation sum	4.93				
	grain 16	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	11.39	0.08389	0.919	12.4	0.28	14.61	23.42		Al2O3	1.89	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.66	0.1021	0.7685	16.47	0.33	18.64	35.23		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.29	0.04344	0.9798	5.4	0.2	4.39	6.51		K2O	0.57	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.69	0.00692	0.8267	0.84	0.14	0.48	1.08		FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					31.13	0.45	61.88				8				
	Totals					66.24										
											Cation sum	4.93				
K-feldspar	grain 17															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	8.94	0.06586	0.9202	9.72	0.28	7.02	18.36		Al2O3	0.9	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	30.73	0.24782	0.8719	35.24	0.43	24.47	75.4		SiO2	3.13	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	11.84	0.09714	0.9787	12.1	0.29	6.03	14.57		K2O	0.77	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					51.27	0.55	62.48				8				
	Totals					108.33										
											Cation sum	4.8				
chromite	grain 18	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.7	0.02539	0.5247	7.06	0.33	7.03	11.7		MgO	1	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.16	0.05274	0.6045	11.85	0.31	10.63	22.38		Al2O3	1.51	Al2O3 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.19	0.01187	0.9648	1.23	0.15	0.62	2.05		TiO2	0.09	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	27.9	0.27903	0.9411	29.65	0.48	13.81	43.34		Cr2O3	1.96	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.75	0.22749	0.8597	26.46	0.54	11.48	34.04		FeO	1.63	Fe 1-Jun-1999 12:00 AM			
	O					37.27	0.6	56.42				8				
	Totals					113.51										
											Cation sum	6.18				
	grain 18	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.68	0.02521	0.5255	7	0.43	6.85	11.61		MgO	0.97	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.35	0.05417	0.6064	12.13	0.41	10.7	22.92		Al2O3	1.51	Al2O3 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.38	0.01377	0.9651	1.43	0.21	0.71	2.38		TiO2	0.1	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	28.76	0.28757	0.9394	30.61	0.62	14.01	44.74		Cr2O3	1.98	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.55	0.22554	0.8589	26.26	0.7	11.19	33.78		FeO	1.58	Fe 1-Jun-1999 12:00 AM			
	O					38	0.78	56.53				8				
	Totals					115.42										

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

											Cation sum	6.15				
chlorite + TiO2	grain 19	spectrum 1														
after	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
muscovite	Mg	K_SERIES	2.4	0.01648	0.591	4.07	0.28	4.25	6.75		MgO	0.57	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.64	0.0489	0.6771	9.81	0.31	9.24	18.53		Al2O3	1.24	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.7	0.08628	0.7021	15.24	0.33	13.79	32.6		SiO2	1.86	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.75	0.00753	0.8834	0.85	0.15	0.45	1.42		TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	24.54	0.24543	0.8695	28.22	0.55	12.84	36.31		FeO	1.73	Fe 1-Jun-1999 12:00 AM			
	O					37.42	0.6	59.43				8				
	Totals					95.61										
											Cation sum	5.46				
chlorite	grain 19	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.18	0.01492	0.5942	3.66	0.47	3.95	6.07		MgO	0.53	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.89	0.05074	0.6823	10.1	0.54	9.8	19.07		Al2O3	1.32	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.53	0.08491	0.7003	15.04	0.58	14.02	32.17		SiO2	1.89	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.66	0.23661	0.8694	27.21	0.96	12.76	35.01		FeO	1.72	Fe 1-Jun-1999 12:00 AM			
	O					36.32	1.02	59.46				8				
	Totals					92.33										
											Cation sum	5.45				
chlorite + TiO2	grain 19	spectrum 3														
after	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
muscovite	Mg	K_SERIES	2.08	0.01425	0.5833	3.56	0.37	3.67	5.91		MgO	0.49	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.87	0.05061	0.6761	10.16	0.44	9.42	19.2		Al2O3	1.27	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.69	0.08625	0.7009	15.26	0.46	13.59	32.64		SiO2	1.83	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.79	0.00792	0.8867	0.89	0.19	0.47	1.49		TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	26.21	0.26209	0.8714	30.07	0.78	13.47	38.69		FeO	1.81	Fe 1-Jun-1999 12:00 AM			
	O					37.98	0.84	59.38				8				
	Totals					97.93										
											Cation sum	5.47				
zircon	grain 20	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	18.6	0.15005	1.0117	18.39	0.52	20.8	39.34		SiO2	2.5	SiO2 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	25.94	0.25944	0.7209	35.99	1.4	12.53	48.61		ZrO2	1.5	Zr 1-Jun-1999 12:00 AM			
	O					33.57	1	66.67				8				
	Totals					87.95										
											Cation sum	4				
	grain 20	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	18.08	0.14584	1.0112	17.88	0.63	21.08	38.26		SiO2	2.53	SiO2 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	24.23	0.24226	0.7174	33.77	1.66	12.25	45.61		ZrO2	1.47	Zr 1-Jun-1999 12:00 AM			
	O					32.22	1.19	66.67				8				
	Totals					83.87										
											Cation sum	4				
	grain 20	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	18.26	0.14725	1.0115	18.05	0.64	20.93	38.62		SiO2	2.51	SiO2 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	25	0.25004	0.7193	34.76	1.7	12.41	46.95		ZrO2	1.49	Zr 1-Jun-1999 12:00 AM			
	O					32.76	1.22	66.67				8				

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Totals					85.57										
											Cation sum	4				
muscovite	grain 21	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.09	0.1185	0.8942	17.99	0.19	13.1	33.99		Al2O3	1.7	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.11	0.17029	0.7788	27.11	0.23	18.96	58		SiO2	2.46	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.19	0.07537	0.987	9.31	0.14	4.68	11.21		K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.37	0.00372	0.8029	0.46	0.08	0.19	0.77		TiO2	0.02	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.27	0.03271	0.8299	3.94	0.15	1.39	5.07		FeO	0.18	Fe 1-Jun-1999 12:00 AM			
	O					50.23	0.32	61.68				8				
	Totals					109.05										
											Cation sum	4.97				
muscovite	grain 21	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.28	0.11258	0.8945	17.09	0.34	12.34	32.28		Al2O3	1.6	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	22.25	0.17946	0.7886	28.22	0.42	19.58	60.37		SiO2	2.54	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	10.06	0.08256	0.9867	10.2	0.26	5.08	12.28		K2O	0.66	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.33	0.03326	0.8296	4.01	0.28	1.4	5.16		FeO	0.18	Fe 1-Jun-1999 12:00 AM			
	O					50.58	0.58	61.6				8				
	Totals					110.09										
											Cation sum	4.99				
muscovite	grain 21	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.81	0.00555	0.7894	1.03	0.21	0.82	1.7		MgO	0.11	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	15.51	0.11424	0.8837	17.55	0.35	12.62	33.16		Al2O3	1.64	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.42	0.17278	0.7781	27.54	0.44	19.02	58.91		SiO2	2.47	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.32	0.07646	0.9855	9.45	0.27	4.69	11.39		K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.26	0.03261	0.8297	3.93	0.28	1.37	5.06		FeO	0.18	Fe 1-Jun-1999 12:00 AM			
	O					50.72	0.63	61.49				8				
	Totals					110.21										
											Cation sum	5.01				
quartz	grain 21	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	57.25	0.46169	0.9805	58.39	1.02	33.33	124.91		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					66.52	1.09	66.67				8				
	Totals					124.91										
											Cation sum	4				
monazite	grain 21	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.47	0.00323	0.6173	0.76	0.22	0.77	1.27		MgO	0.1	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.8	0.01326	0.7385	2.44	0.22	2.21	4.6		Al2O3	0.29	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.57	0.06911	0.8266	10.37	0.33	9.04	22.18		SiO2	1.19	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	5.97	0.03532	1.1254	5.3	0.3	4.19	12.15		P2O5	0.55	GaP 1-Jun-1999 12:00 AM			
	S	K_SERIES	2.03	0.0178	0.8255	2.45	0.2	1.87	6.13		SO3	0.25	FeS2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	20.32	0.18256	1.01	20.12	0.35	12.29	28.16		CaO	1.62	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.58	0.0158	0.8083	1.95	0.19	1	3.26		TiO2	0.13	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.22	0.14221	0.8451	16.83	0.48	7.38	21.65		FeO	0.97	Fe 1-Jun-1999 12:00 AM			
	Y	L_SERIES	1.28	0.01285	0.6635	1.94	0.81	0.53	2.46		Y2O3	0.07	Y 1-Jun-1999 12:00 AM			
	O					39.68	0.83	60.72				8				

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Totals					101.85										
											Cation sum	5.18				
K-feldspar	grain 22															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	9.44	0.06955	0.9194	10.27	0.33	6.94	19.4		Al2O3	0.89	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	32.69	0.2636	0.8732	37.43	0.51	24.31	80.07		SiO2	3.12	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.61	0.11171	0.9807	13.88	0.36	6.48	16.72		K2O	0.83	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					54.62	0.65	62.27				8				
	Totals					116.2										
											Cation sum	4.85				
chlorite	grain 23	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.31	0.02956	0.6195	6.96	0.26	6.92	11.54		MgO	0.94	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.61	0.06345	0.6736	12.79	0.28	11.45	24.17		Al2O3	1.56	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.23	0.07441	0.6764	13.64	0.27	11.73	29.18		SiO2	1.6	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.34	0.22338	0.8653	25.81	0.45	11.17	33.21		FeO	1.52	Fe 1-Jun-1999 12:00 AM			
	O					38.89	0.51	58.73				8				
	Totals					98.09										
											Cation sum	5.62				
	grain 23	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.81	0.03296	0.6259	7.68	0.42	7.18	12.74		MgO	0.98	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.44	0.06954	0.6755	13.98	0.45	11.78	26.41		Al2O3	1.6	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.63	0.07765	0.674	14.29	0.43	11.57	30.56		SiO2	1.58	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.8	0.22802	0.8641	26.38	0.7	10.74	33.94		FeO	1.46	Fe 1-Jun-1999 12:00 AM			
	O					41.32	0.8	58.73				8				
	Totals					103.65										
											Cation sum	5.62				
chlorite + TiO2	grain 24	spectrum 1														
after	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
muscovite	Mg	K_SERIES	2.14	0.01465	0.5962	3.58	0.2	3.45	5.94		MgO	0.46	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.62	0.05612	0.6892	11.05	0.24	9.59	20.89		Al2O3	1.28	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.78	0.09501	0.7077	16.65	0.26	13.87	35.61		SiO2	1.86	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.64	0.00524	1.031	0.62	0.09	0.37	0.75		K2O	0.05	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.6	0.01595	0.8793	1.81	0.13	0.89	3.03		TiO2	0.12	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	25.18	0.25182	0.8673	29.03	0.42	12.16	37.35		FeO	1.63	Fe 1-Jun-1999 12:00 AM			
	O					40.81	0.47	59.68				8				
	Totals					103.56										
											Cation sum	5.4				
	grain 24	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.6	0.01097	0.6259	2.56	0.38	2.47	4.24		MgO	0.33	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.99	0.06622	0.7239	12.42	0.49	10.82	23.46		Al2O3	1.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.19	0.10635	0.7164	18.41	0.53	15.41	39.38		SiO2	2.05	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.59	0.01304	1.017	1.56	0.21	0.94	1.88		K2O	0.12	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.83	0.20833	0.8611	24.19	0.77	10.18	31.12		FeO	1.35	Fe 1-Jun-1999 12:00 AM			
	O					40.95	0.9	60.17				8				
	Totals					100.09										
											Cation sum	5.29				

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

barite	grain 25															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	0.99	0.00799	0.713	1.39	0.14	1.84	2.97		SiO2	0.23	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	9.2	0.08086	0.7959	11.56	0.17	13.41	28.87		SO3	1.67	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.42	0.00425	0.9001	0.47	0.11	0.31	0.61		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	8.34	0.07747	0.6655	12.53	0.3	5.32	14.82		SrO	0.66	SrF2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	48.23	0.45022	0.9002	53.57	0.44	14.5	59.81		BaO	1.8	BaF2 1-Jun-1999 12:00 AM			
	Hg	M_SERIES	1.17	0.01066	0.7396	1.58	0.48	0.29	1.71		HgO	0.04	HgTe 1-Jun-1999 12:00 AM			
	O					27.68	0.35	64.33				8				
	Totals					108.79										
											Cation sum	4.44				
rutile	grain 26															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-2.72	-0.02721	0.5261	-5.17	3.71	-11.63	-19.94		N2O5	-1.44	Not defined 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	65.47	0.65466	0.9179	71.32	1.05	46.9	118.97		TiO2	5.8	Ti 1-Jun-1999 12:00 AM			
	O					32.88	6.32	64.73				8				
	Totals					99.03										
											Cation sum	4.36				
muscovite	grain 27	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	19.4	0.1429	0.9135	21.24	0.25	15.13	40.12		Al2O3	1.97	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	19.91	0.16056	0.7622	26.12	0.29	17.88	55.88		SiO2	2.32	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.54	0.07827	0.9834	9.7	0.19	4.77	11.68		K2O	0.62	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.69	0.01686	0.8279	2.04	0.16	0.7	2.62		FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	O					51.22	0.41	61.53				8				
	Totals					110.31										
											Cation sum	5				
	grain 27	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.26	0.11242	0.9058	16.85	0.43	13.16	31.83		Al2O3	1.7	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.43	0.16478	0.7815	26.15	0.53	19.61	55.93		SiO2	2.53	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.65	0.06276	0.9808	7.8	0.31	4.2	9.39		K2O	0.54	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.16	0.0216	0.8281	2.61	0.31	0.98	3.36		FeO	0.13	Fe 1-Jun-1999 12:00 AM			
	O					47.12	0.73	62.04				8				
	Totals					100.52										
											Cation sum	4.89				
chlorite + TiO2	grain 28	spectrum 1														
after	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
muscovite	Mg	K_SERIES	3.9	0.02675	0.6194	6.3	0.24	5.98	10.44		MgO	0.81	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.63	0.05622	0.6832	11.17	0.25	9.55	21.11		Al2O3	1.29	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.47	0.0925	0.7005	16.37	0.27	13.45	35.03		SiO2	1.82	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.97	0.00794	1.0236	0.95	0.1	0.56	1.14		K2O	0.08	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.95	0.00955	0.8706	1.1	0.12	0.53	1.83		TiO2	0.07	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.38	0.22376	0.863	25.93	0.41	10.71	33.35		FeO	1.45	Fe 1-Jun-1999 12:00 AM			
	O					41.09	0.49	59.24				8				
	Totals					102.91										
											Cation sum	5.51				
	grain 28	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Mg	K_SERIES	3.1	0.02124	0.625	4.96	0.39	5.03	8.22		MgO	0.68	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.63	0.05618	0.697	10.94	0.44	10.01	20.68		Al2O3	1.35	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.04	0.08903	0.7058	15.64	0.46	13.74	33.46		SiO2	1.85	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.17	0.00961	1.0236	1.14	0.18	0.72	1.38		K2O	0.1	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.87	0.00781	0.9919	0.88	0.16	0.54	1.23		CaO	0.07	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.62	0.00616	0.8642	0.71	0.19	0.37	1.19		TiO2	0.05	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	19.88	0.19885	0.8609	23.09	0.71	10.21	29.71		FeO	1.38	Fe 1-Jun-1999 12:00 AM			
	O					38.49	0.83	59.38				8				
	Totals					95.86										
											Cation sum	5.47				
chlorite after	grain 29	spectrum 1														
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.95	0.02024	0.6258	4.72	0.32	4.5	7.82		MgO	0.6	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.72	0.06422	0.7024	12.41	0.37	10.66	23.45		Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.19	0.09832	0.7026	17.35	0.39	14.32	37.12		SiO2	1.92	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.71	0.00584	1.0172	0.7	0.14	0.41	0.84		K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	21.57	0.21569	0.8621	25.02	0.59	10.38	32.19		FeO	1.39	Fe 1-Jun-1999 12:00 AM			
	O					41.23	0.69	59.72				8				
	Totals					101.43										
											Cation sum	5.4				
	grain 29	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.41	0.01653	0.6161	3.91	0.35	3.82	6.49		MgO	0.51	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.8	0.06484	0.7016	12.55	0.41	11.05	23.71		Al2O3	1.48	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.46	0.09239	0.7002	16.36	0.43	13.84	35		SiO2	1.86	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.47	0.0039	1.0221	0.46	0.13	0.28	0.56		K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.67	0.00601	0.9953	0.67	0.15	0.4	0.94		CaO	0.05	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.36	0.22361	0.8639	25.88	0.67	11.01	33.3		FeO	1.48	Fe 1-Jun-1999 12:00 AM			
	O					40.16	0.76	59.61				8				
	Totals					100										
											Cation sum	5.42				
chromian spinel	grain 30	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.67	0.03202	0.5763	8.11	0.45	7.53	13.44		MgO	1.05	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	11.47	0.08447	0.6403	17.91	0.46	14.99	33.84		Al2O3	2.09	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	30.1	0.30096	0.9107	33.05	0.64	14.35	48.3		Cr2O3	2	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	12.09	0.12088	0.8437	14.33	0.55	5.79	18.43		FeO	0.81	Fe 1-Jun-1999 12:00 AM			
	O					40.62	0.77	57.34				8				
	Totals					114.01										
											Cation sum	5.95				
	grain 30	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.16	0.02851	0.5726	7.26	0.55	6.85	12.04		MgO	0.95	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	11.52	0.08486	0.6429	17.92	0.57	15.23	33.86		Al2O3	2.12	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	29.89	0.29893	0.9124	32.76	0.81	14.45	47.88		Cr2O3	2.01	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	12.43	0.12428	0.8445	14.72	0.71	6.04	18.93		FeO	0.84	Fe 1-Jun-1999 12:00 AM			
	O					40.06	0.97	57.42				8				
	Totals					112.72										
											Cation sum	5.93				

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

chromite	grain 31	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.81	0.0261	0.512	7.44	0.29	7.06	12.33		MgO	0.99	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.27	0.03144	0.5957	7.16	0.24	6.13	13.54		Al2O3	0.86	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	46.26	0.46265	0.9304	49.73	0.54	22.06	72.68		Cr2O3	3.09	Cr 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	2.43	0.02433	0.8975	2.71	0.33	1.14	3.5		MnO	0.16	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	12.68	0.12683	0.8462	14.99	0.39	6.19	19.28		FeO	0.87	Fe 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	0.9	0.00905	0.8379	1.08	0.31	0.38	1.34		ZnO	0.05	Zn 1-Jun-1999 12:00 AM			
	O					39.57	0.58	57.05				8				
	Totals					122.67										
											Cation sum	6.02				
	grain 31	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.57	0.02449	0.5148	6.94	0.46	6.8	11.51		MgO	0.95	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.19	0.03085	0.5999	6.98	0.37	6.17	13.19		Al2O3	0.86	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	45.42	0.45422	0.9304	48.82	0.85	22.38	71.35		Cr2O3	3.13	Cr 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	2.55	0.02546	0.897	2.84	0.51	1.23	3.66		MnO	0.17	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	12.44	0.12443	0.8447	14.73	0.61	6.29	18.95		FeO	0.88	Fe 1-Jun-1999 12:00 AM			
	O					38.36	0.88	57.14				8				
	Totals					118.67										
											Cation sum	6				
apatite	grain 32															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	14.37	0.08509	1.3371	10.75	0.36	10.58	24.62		P2O5	1.45	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	41.1	0.36914	1.0369	39.64	0.57	30.17	55.46		CaO	4.15	Wollastonite 1-Jun-1999 12:00 AM			
	Sb	L_SERIES	3.4	0.03398	0.8102	4.19	1.3	1.05	5.02		Sb2O3	0.14	Sb 1-Jun-1999 12:00 AM			
	O					30.53	0.79	58.2				8				
	Totals					85.1										
											Cation sum	5.75				
?illite	grain 33															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.39	0.02323	0.6876	4.93	0.26	3.85	8.17		MgO	0.5	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.51	0.06266	0.7592	11.21	0.31	7.88	21.17		Al2O3	1.03	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.3	0.17182	0.763	27.92	0.39	18.87	59.74		SiO2	2.47	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	3.66	0.02999	1.0008	3.65	0.17	1.77	4.4		K2O	0.23	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1	0.01005	0.8375	1.2	0.15	0.48	2		TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.81	0.1481	0.8456	17.51	0.44	5.95	22.53		FeO	0.78	Fe 1-Jun-1999 12:00 AM			
	O					51.59	0.62	61.2				8				
	Totals					118.01										
											Cation sum	5.07				
zircon	grain 34															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	18.82	0.15175	1.0109	18.61	0.43	21.22	39.82		SiO2	2.55	SiO2 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	24.7	0.24697	0.7156	34.51	1.16	12.11	46.62		ZrO2	1.45	Zr 1-Jun-1999 12:00 AM			
	O					33.31	0.83	66.67				8				
	Totals					86.43										
											Cation sum	4				
K-feldspar	grain 35	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Na	K_SERIES	0.93	0.00416	0.8699	1.07	0.33	0.82	1.44		Na2O	0.11	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.71	0.07154	0.911	10.66	0.43	6.96	20.14		Al2O3	0.9	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.12	0.26709	0.8674	38.18	0.66	23.96	81.68		SiO2	3.09	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.76	0.11291	0.9809	14.03	0.46	6.32	16.9		K2O	0.82	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					56.22	0.86	61.94				8				
	Totals					120.16										
											Cation sum	4.92				
albite	grain 35	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	7.34	0.03292	0.9221	7.96	0.43	5.81	10.73		Na2O	0.74	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10	0.07367	0.8668	11.54	0.4	7.17	21.8		Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.81	0.27265	0.8256	40.95	0.62	24.45	87.6		SiO2	3.13	SiO2 1-Jun-1999 12:00 AM			
	O					59.69	0.8	62.57				8				
	Totals					120.14										
											Cation sum	4.79				
K-feldspar	grain 35	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	9.9	0.0729	0.9202	10.76	0.48	7.17	20.32		Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	32.98	0.266	0.8698	37.92	0.73	24.29	81.12		SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.07	0.10725	0.9793	13.35	0.51	6.14	16.08		K2O	0.79	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					55.5	0.93	62.4				8				
	Totals					117.52										
											Cation sum	4.82				
albite	grain 35	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	5.98	0.02683	0.9163	6.53	0.65	4.83	8.8		Na2O	0.61	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.99	0.07356	0.8771	11.39	0.61	7.18	21.51		Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	34.26	0.27632	0.832	41.18	0.95	24.94	88.1		SiO2	3.16	SiO2 1-Jun-1999 12:00 AM			
	O					59.32	1.23	63.05				8				
	Totals					118.41										
											Cation sum	4.69				
quartz + ?	grain 36	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.73	0.01183	0.794	2.17	0.24	1.68	3.6		MgO	0.22	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	13.81	0.1017	0.8739	15.8	0.36	10.99	29.85		Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	23.46	0.18919	0.7914	29.64	0.46	19.81	63.41		SiO2	2.57	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.41	0.07723	0.9847	9.56	0.28	4.59	11.51		K2O	0.6	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.51	0.00508	0.8007	0.63	0.16	0.25	1.06		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.6	0.02598	0.828	3.14	0.27	1.05	4.04		FeO	0.14	Fe 1-Jun-1999 12:00 AM			
	O					52.53	0.67	61.63				8				
	Totals					113.48										
											Cation sum	4.98				
illite	grain 36	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.87	0.00597	0.7733	1.13	0.27	0.89	1.87		MgO	0.12	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	13.99	0.10302	0.8696	16.08	0.41	11.51	30.39		Al2O3	1.49	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	22.45	0.18103	0.7847	28.61	0.51	19.66	61.2		SiO2	2.55	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.76	0.07186	0.9867	8.88	0.31	4.38	10.69		K2O	0.57	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.7	0.04696	0.8315	5.65	0.37	1.95	7.27		FeO	0.25	Fe 1-Jun-1999 12:00 AM			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	O					51.07	0.75	61.61				8				
	Totals					111.41										
											Cation sum	4.98				
ilmenite altering	grain 37	spectrum 1														
to TiO2	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
minerals	Si	K_SERIES	0.56	0.00452	0.8364	0.67	0.21	0.74	1.43		SiO2	0.09	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	45.86	0.4586	0.9156	50.09	0.88	32.59	83.54		TiO2	3.91	Ti 1-Jun-1999 12:00 AM			
	O					34.22	0.75	66.67				8				
	Totals					84.98										
											Cation sum	4				
	grain 37	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	0.55	0.00406	0.7102	0.78	0.25	1.04	1.47		Al2O3	0.13	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	1.08	0.00875	0.8241	1.32	0.26	1.7	2.81		SiO2	0.21	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	36.23	0.36234	0.9126	39.71	0.91	30.04	66.23		TiO2	3.63	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.4	0.01399	0.8345	1.68	0.47	1.09	2.16		FeO	0.13	Fe 1-Jun-1999 12:00 AM			
	O					29.19	0.87	66.13				8				
	Totals					72.67										
											Cation sum	4.1				
	grain 37	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	0.62	0.00454	0.7092	0.87	0.24	1.76	1.64		Al2O3	0.22	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	1.29	0.01042	0.8144	1.59	0.24	3.09	3.39		SiO2	0.38	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	21.65	0.21653	0.9092	23.82	0.65	27.21	39.73		TiO2	3.32	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2	0.02002	0.8378	2.39	0.38	2.34	3.07		FeO	0.29	Fe 1-Jun-1999 12:00 AM			
	O					19.18	0.66	65.59				8				
	Totals					47.84										
											Cation sum	4.2				
quartz	grain 38	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	58.38	0.47081	0.9805	59.54	0.99	33.33	127.37		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					67.83	1.05	66.67				8				
	Totals					127.37										
											Cation sum	4				
chlorite	grain 38	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	6.1	0.04181	0.6753	9.03	0.33	7.43	14.97		MgO	0.99	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.86	0.06528	0.7071	12.54	0.34	9.29	23.69		Al2O3	1.24	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	15.71	0.12672	0.7115	22.09	0.38	15.73	47.25		SiO2	2.09	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	17.48	0.17484	0.8516	20.53	0.49	7.35	26.41		FeO	0.98	Fe 1-Jun-1999 12:00 AM			
	O					48.14	0.64	60.19				8				
	Totals					112.32										
											Cation sum	5.29				
chlorite	grain 38	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	5.2	0.03566	0.6763	7.69	0.5	6.54	12.75		MgO	0.87	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.58	0.07795	0.7174	14.75	0.56	11.3	27.87		Al2O3	1.5	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.93	0.11232	0.6992	19.92	0.6	14.66	42.61		SiO2	1.95	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.93	0.16932	0.8523	19.87	0.75	7.35	25.56		FeO	0.98	Fe 1-Jun-1999 12:00 AM			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	O					46.57	1.01	60.15				8				
	Totals					108.8										
											Cation sum	5.3				
K-feldspar	grain 39	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	10.35	0.07624	0.9201	11.25	0.37	7.26	21.25		Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.82	0.27279	0.8687	38.94	0.57	24.16	83.3		SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.75	0.11279	0.9799	14.03	0.39	6.25	16.9		K2O	0.8	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					57.24	0.73	62.33				8				
	Totals					121.46										
											Cation sum	4.83				
	grain 39	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	0.94	0.00421	0.8721	1.08	0.29	0.82	1.45		Na2O	0.11	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.23	0.07539	0.912	11.22	0.38	7.26	21.21		Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.26	0.26823	0.863	38.54	0.6	23.94	82.44		SiO2	3.08	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	12.9	0.10588	0.979	13.18	0.39	5.88	15.88		K2O	0.76	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					56.96	0.77	62.11				8				
	Totals					120.98										
											Cation sum	4.88				
chlorite after	grain 40	spectrum 1														
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.44	0.00986	0.6679	2.15	0.22	1.94	3.57		MgO	0.26	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	11.16	0.08224	0.7658	14.58	0.31	11.84	27.55		Al2O3	1.56	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	15.1	0.12178	0.7293	20.71	0.35	16.15	44.3		SiO2	2.13	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	3.53	0.02895	1.0083	3.5	0.16	1.96	4.21		K2O	0.26	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.35	0.00312	0.9661	0.36	0.11	0.2	0.5		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.98	0.15979	0.8516	18.76	0.44	7.36	24.14		FeO	0.97	Fe 1-Jun-1999 12:00 AM			
	O					44.21	0.56	60.55				8				
	Totals					104.27										
											Cation sum	5.21				
chlorite after	grain 40	spectrum 2														
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	9.93	0.07317	0.858	11.58	0.49	9.09	21.87		Al2O3	1.16	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	24.06	0.19403	0.8076	29.79	0.68	22.47	63.73		SiO2	2.86	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.34	0.03559	0.9819	4.42	0.32	2.39	5.32		K2O	0.3	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.91	0.06909	0.8348	8.28	0.57	3.14	10.65		FeO	0.4	Fe 1-Jun-1999 12:00 AM			
	O					47.51	0.92	62.91				8				
	Totals					101.58										
											Cation sum	4.72				
chlorite	grain 40	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.46	0.01002	0.641	2.28	0.31	2.04	3.78		MgO	0.27	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	11.07	0.08154	0.7415	14.93	0.43	12.05	28.21		Al2O3	1.6	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	14.04	0.11326	0.7146	19.66	0.46	15.24	42.05		SiO2	2.02	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.13	0.01749	1.0134	2.1	0.19	1.17	2.53		K2O	0.16	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.16	0.20158	0.858	23.49	0.66	9.16	30.22		FeO	1.21	Fe 1-Jun-1999 12:00 AM			
	O					44.33	0.78	60.34				8				
	Totals					106.79										

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

											Cation sum	5.26				
muscovite	grain 41	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	17.14	0.12624	0.9185	18.67	0.35	13.67	35.27		Al2O3	1.76	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.55	0.17383	0.7795	27.64	0.43	19.45	59.14		SiO2	2.51	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.45	0.06932	0.9788	8.63	0.26	4.36	10.4		K2O	0.56	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.07	0.01071	0.8263	1.3	0.21	0.46	1.67		FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					50.23	0.59	62.05				8				
	Totals					106.47										
											Cation sum	4.89				
	grain 41	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	1.52	0.00681	0.9065	1.68	0.27	1.43	2.26		Na2O	0.18	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	19.08	0.14052	0.9183	20.77	0.41	15.11	39.24		Al2O3	1.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.29	0.16366	0.7569	26.81	0.49	18.74	57.36		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.95	0.0406	0.9699	5.1	0.25	2.56	6.15		K2O	0.33	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					50.65	0.68	62.15				8				
	Totals					105.01										
											Cation sum	4.87				
	grain 41	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	0.58	0.00261	0.8811	0.66	0.1	0.59	0.89		Na2O	0.08	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	17.98	0.13241	0.9159	19.63	0.16	14.88	37.09		Al2O3	1.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	19.4	0.15643	0.7621	25.45	0.19	18.53	54.44		SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.89	0.05653	0.9768	7.05	0.11	3.69	8.5		K2O	0.48	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.9	0.00898	0.8266	1.09	0.1	0.4	1.4		FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					48.44	0.27	61.92				8				
	Totals					102.31										
											Cation sum	4.92				
chromite	grain 42	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.65	0.01132	0.4952	3.33	0.33	3.52	5.53		MgO	0.49	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.98	0.02933	0.6035	6.6	0.31	6.27	12.46		Al2O3	0.87	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	45.15	0.45148	0.9435	47.85	0.7	23.61	69.94		Cr2O3	3.29	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.87	0.16867	0.8484	19.88	0.58	9.13	25.58		FeO	1.27	Fe 1-Jun-1999 12:00 AM			
	O					35.84	0.69	57.47				8				
	Totals					113.51										
											Cation sum	5.92				
	grain 42	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.33	0.0091	0.4927	2.7	0.41	2.94	4.47		MgO	0.41	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.87	0.02849	0.6049	6.4	0.39	6.28	12.08		Al2O3	0.87	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	44.39	0.44391	0.9447	46.99	0.87	23.95	68.68		Cr2O3	3.33	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.58	0.16575	0.8486	19.53	0.74	9.27	25.13		FeO	1.29	Fe 1-Jun-1999 12:00 AM			
	O					34.75	0.87	57.56				8				
	Totals					110.36										
											Cation sum	5.9				
chromite	grain 43															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Mg	K_SERIES	3.27	0.02242	0.5474	5.97	0.46	5.73	9.91		MgO	0.8	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.6	0.07072	0.6323	15.19	0.48	13.12	28.69		Al2O3	1.83	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	34.24	0.34236	0.9222	37.12	0.75	16.64	54.26		Cr2O3	2.32	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.33	0.14332	0.8463	16.93	0.64	7.07	21.79		FeO	0.98	Fe 1-Jun-1999 12:00 AM			
	O					39.42	0.85	57.44				8				
	Totals					114.64										
											Cation sum	5.93				
muscovite	grain 44	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	17.38	0.12806	0.9179	18.95	0.39	13.95	35.8		Al2O3	1.8	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.92	0.16873	0.7766	26.93	0.47	19.05	57.61		SiO2	2.46	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.08	0.07449	0.9807	9.26	0.29	4.7	11.15		K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.09	0.01094	0.8265	1.32	0.24	0.47	1.7		FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					49.81	0.64	61.83				8				
	Totals					106.26										
											Cation sum	4.94				
	grain 44	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	17.7	0.13037	0.9184	19.28	0.3	13.99	36.42		Al2O3	1.81	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	21.17	0.17076	0.7762	27.27	0.36	19.02	58.34		SiO2	2.46	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.2	0.0755	0.9807	9.38	0.23	4.7	11.3		K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.07	0.01071	0.8265	1.3	0.18	0.45	1.67		FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					50.5	0.5	61.83				8				
	Totals					107.73										
											Cation sum	4.94				
chlorite + TiO2	grain 45															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.99	0.01364	0.6062	3.28	0.33	3.41	5.44		MgO	0.46	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.11	0.05971	0.6975	11.62	0.4	10.88	21.96		Al2O3	1.45	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.73	0.08653	0.7001	15.33	0.42	13.78	32.79		SiO2	1.84	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.81	0.00808	0.8771	0.92	0.18	0.49	1.54		TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.2	0.22196	0.866	25.63	0.67	11.59	32.97		FeO	1.55	Fe 1-Jun-1999 12:00 AM			
	O					37.92	0.75	59.85				8				
	Totals					94.7										
											Cation sum	5.37				
chlorite + TiO2	grain 46	spectrum 1														
after	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
muscovite	Mg	K_SERIES	1.84	0.01264	0.6057	3.04	0.33	2.96	5.05		MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.29	0.06104	0.7018	11.81	0.41	10.34	22.31		Al2O3	1.38	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12	0.0968	0.7085	16.94	0.44	14.25	36.25		SiO2	1.9	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.74	0.00603	1.0262	0.72	0.15	0.43	0.86		K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.09	0.01088	0.8749	1.24	0.19	0.61	2.07		TiO2	0.08	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.52	0.23519	0.8654	27.18	0.69	11.5	34.96		FeO	1.54	Fe 1-Jun-1999 12:00 AM			
	O					40.57	0.78	59.91				8				
	Totals					101.5										
											Cation sum	5.35				
	grain 46	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.02	0.01383	0.6158	3.28	0.23	3.25	5.43		MgO	0.43	MgO 1-Jun-1999 12:00 AM			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Al	K_SERIES	8.46	0.06234	0.7073	11.97	0.29	10.69	22.61		Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.84	0.0955	0.7075	16.74	0.31	14.37	35.81		SiO2	1.92	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.68	0.00556	1.0222	0.66	0.11	0.41	0.8		K2O	0.05	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.83	0.00832	0.8711	0.96	0.13	0.48	1.59		TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	21.61	0.21612	0.8633	25.03	0.49	10.81	32.2		FeO	1.44	Fe 1-Jun-1999 12:00 AM			
	O					39.81	0.55	60				8				
	Totals					98.45										
											Cation sum	5.33				
chlorite	grain 47	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.85	0.01269	0.5843	3.17	0.35	3.16	5.25		MgO	0.43	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.31	0.06124	0.6813	12.2	0.44	10.96	23.06		Al2O3	1.48	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.42	0.08402	0.6913	15.07	0.44	13	32.24		SiO2	1.76	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	27.45	0.27449	0.8724	31.46	0.76	13.65	40.47		FeO	1.84	Fe 1-Jun-1999 12:00 AM			
	O					39.12	0.8	59.24				8				
	Totals					101.03										
											Cation sum	5.5				
	grain 47	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.19	0.01504	0.5879	3.73	0.35	3.71	6.19		MgO	0.5	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.83	0.05767	0.6793	11.53	0.42	10.31	21.78		Al2O3	1.39	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.81	0.0872	0.6947	15.57	0.43	13.38	33.3		SiO2	1.81	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	26.86	0.2686	0.8713	30.82	0.74	13.33	39.66		FeO	1.8	Fe 1-Jun-1999 12:00 AM			
	O					39.27	0.78	59.27				8				
	Totals					100.92										
											Cation sum	5.5				
muscovite	grain 48	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	18.94	0.13951	0.9217	20.55	0.32	14.82	38.82		Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.63	0.16636	0.7673	26.89	0.38	18.63	57.52		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.34	0.06846	0.9783	8.53	0.23	4.25	10.27		K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.68	0.00681	0.8265	0.82	0.19	0.29	1.06		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	0.13	0.00127	0.7975	0.16	0.28	0.05	0.2		ZnO	0.01	Zn 1-Jun-1999 12:00 AM			
	O					50.93	0.55	61.96				8				
	Totals					107.87										
											Cation sum	4.91				
	grain 48	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	0.8	0.00357	0.8784	0.91	0.23	0.79	1.22		Na2O	0.1	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	17.61	0.12969	0.912	19.31	0.36	14.37	36.48		Al2O3	1.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	19.86	0.16016	0.7675	25.87	0.43	18.49	55.35		SiO2	2.4	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.85	0.06441	0.98	8.01	0.25	4.11	9.65		K2O	0.53	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.37	0.00374	0.7985	0.47	0.15	0.2	0.78		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.77	0.00765	0.8264	0.93	0.2	0.33	1.19		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					49.18	0.62	61.71				8				
	Totals					104.67										
											Cation sum	4.96				
muscovite	grain 49	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Mg	K_SERIES	1.01	0.0069	0.789	1.28	0.27	1	2.11		MgO	0.13	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	16.21	0.11941	0.8802	18.42	0.44	13.06	34.8		Al2O3	1.7	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.8	0.16775	0.771	26.98	0.53	18.38	57.71		SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.2	0.0755	0.9872	9.32	0.33	4.56	11.23		K2O	0.59	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.49	0.00489	0.8033	0.61	0.18	0.24	1.02		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.21	0.03207	0.8298	3.87	0.34	1.32	4.97		FeO	0.17	Fe 1-Jun-1999 12:00 AM			
	O					51.38	0.78	61.43				8				
	Totals					111.85										
											Cation sum	5.02				
	grain 49	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.51	0.11424	0.8931	17.37	0.49	13.11	32.81		Al2O3	1.7	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.38	0.16435	0.7783	26.18	0.59	18.99	56.01		SiO2	2.47	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	9.13	0.07487	0.9868	9.25	0.38	4.82	11.14		K2O	0.63	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.44	0.03445	0.8303	4.15	0.39	1.51	5.34		FeO	0.2	Fe 1-Jun-1999 12:00 AM			
	O					48.36	0.82	61.57				8				
	Totals					105.3										
											Cation sum	4.99				
K-feldspar	grain 50	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	10.47	0.07709	0.9201	11.37	0.34	7.42	21.49		Al2O3	0.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.19	0.26771	0.8666	38.31	0.52	24	81.95		SiO2	3.08	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.75	0.11283	0.9803	14.03	0.36	6.31	16.9		K2O	0.81	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					56.63	0.66	62.27				8				
	Totals					120.33										
											Cation sum	4.85				
albite	grain 50	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	7	0.0314	0.9212	7.6	0.53	5.79	10.25		Na2O	0.74	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.17	0.06756	0.8668	10.58	0.5	6.87	19.99		Al2O3	0.88	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	32.91	0.26539	0.8299	39.65	0.77	24.72	84.83		SiO2	3.16	SiO2 1-Jun-1999 12:00 AM			
	O					57.23	1	62.63				8				
	Totals					115.07										
											Cation sum	4.77				
K-feldspar	grain 51	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	9.83	0.07239	0.9197	10.69	0.19	7.08	20.19		Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.14	0.26723	0.8712	38.03	0.3	24.22	81.36		SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.77	0.11295	0.9806	14.04	0.21	6.42	16.91		K2O	0.82	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					55.71	0.38	62.28				8				
	Totals					118.46										
											Cation sum	4.85				
	grain 51	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	10.08	0.07427	0.9198	10.96	0.32	7.23	20.71		Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.02	0.26633	0.8692	37.99	0.49	24.09	81.28		SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.86	0.11374	0.9807	14.13	0.34	6.44	17.03		K2O	0.83	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					55.93	0.62	62.24				8				
	Totals					119.02										

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

											Cation sum	4.85				
chlorite after	grain 52	spectrum 1														
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.86	0.00592	0.7081	1.22	0.3	1.12	2.02		MgO	0.14	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	13.45	0.09909	0.8095	16.62	0.47	13.69	31.4		Al2O3	1.77	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	15.96	0.12873	0.7284	21.91	0.53	17.35	46.88		SiO2	2.24	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.61	0.00501	0.9909	0.62	0.16	0.35	0.74		K2O	0.05	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.44	0.00393	0.9635	0.45	0.15	0.25	0.63		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.09	0.11087	0.8445	13.13	0.57	5.23	16.89		FeO	0.67	Fe 1-Jun-1999 12:00 AM			
	O					44.62	0.82	62.01				8				
	Totals					98.57										
											Cation sum	4.9				
chlorite after	grain 52	spectrum 2														
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.5	0.01027	0.68	2.2	0.32	2	3.65		MgO	0.26	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	12.86	0.09472	0.774	16.61	0.48	13.57	31.39		Al2O3	1.77	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	14.64	0.11806	0.7124	20.55	0.52	16.12	43.96		SiO2	2.1	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.8	0.14798	0.8507	17.39	0.63	6.86	22.38		FeO	0.89	Fe 1-Jun-1999 12:00 AM			
	O					44.62	0.83	61.45				8				
	Totals					101.38										
											Cation sum	5.02				
chlorite + TiO2	grain 52	spectrum 3														
after	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
muscovite	Mg	K_SERIES	1.55	0.01065	0.6566	2.37	0.28	2.18	3.92		MgO	0.29	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	11.21	0.08256	0.7528	14.89	0.39	12.34	28.13		Al2O3	1.62	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	14.16	0.11416	0.7158	19.78	0.43	15.74	42.31		SiO2	2.07	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.73	0.00597	1.007	0.72	0.15	0.41	0.87		K2O	0.05	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.51	0.00507	0.8552	0.59	0.16	0.28	0.99		TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	17.21	0.1721	0.8545	20.14	0.56	8.06	25.91		FeO	1.06	Fe 1-Jun-1999 12:00 AM			
	O					43.64	0.72	60.99				8				
	Totals					102.13										
											Cation sum	5.12				
chlorite + TiO2	grain 53	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.52	0.01045	0.618	2.47	0.38	2.29	4.09		MgO	0.3	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.51	0.07741	0.7188	14.62	0.5	12.21	27.63		Al2O3	1.62	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.18	0.09826	0.701	17.38	0.52	13.95	37.19		SiO2	1.85	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.17	0.01168	0.8722	1.34	0.22	0.63	2.23		TiO2	0.08	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.66	0.22658	0.8631	26.25	0.78	10.59	33.77		FeO	1.4	Fe 1-Jun-1999 12:00 AM			
	O					42.85	0.91	60.34				8				
	Totals					104.91										
											Cation sum	5.26				
chlorite	grain 53	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.78	0.01219	0.6247	2.85	0.29	2.6	4.72		MgO	0.34	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.95	0.08069	0.7209	15.2	0.39	12.5	28.71		Al2O3	1.66	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.59	0.10151	0.6982	18.03	0.41	14.25	38.57		SiO2	1.89	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.6	0.22596	0.8626	26.19	0.61	10.41	33.7		FeO	1.38	Fe 1-Jun-1999 12:00 AM			
	O					43.43	0.7	60.25				8				

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Totals					105.69										
											Cation sum	5.28				
chlorite	grain 53	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.74	0.01195	0.602	2.89	0.25	2.71	4.8		MgO	0.36	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.11	0.07449	0.7006	14.44	0.32	12.17	27.28		Al2O3	1.63	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.33	0.0914	0.6914	16.39	0.33	13.28	35.07		SiO2	1.78	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	25.93	0.25926	0.8682	29.86	0.54	12.16	38.42		FeO	1.63	Fe 1-Jun-1999 12:00 AM			
	O					41.98	0.58	59.68				8				
	Totals					105.56										
											Cation sum	5.4				
aluminum	grain 54	spectrum 1														
sulphate	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
phosphate	Al	K_SERIES	13.76	0.10132	0.8776	15.67	0.19	19.07	29.61		Al2O3	2.38	Al2O3 1-Jun-1999 12:00 AM			
	P	K_SERIES	4.99	0.02957	0.9506	5.25	0.26	5.57	12.04		P2O5	0.7	GaP 1-Jun-1999 12:00 AM			
	S	K_SERIES	2.64	0.02323	0.7072	3.74	0.15	3.83	9.33		SO3	0.48	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.75	0.01439	0.9616	1.82	0.1	1.53	2.2		K2O	0.19	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.53	0.00478	0.9433	0.56	0.08	0.46	0.79		CaO	0.06	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.1	0.011	0.8758	1.26	0.14	0.74	1.62		FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	3.6	0.03348	0.6543	5.51	1.37	2.06	6.51		SrO	0.26	SrF2 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	2.66	0.02472	0.8245	3.23	0.32	0.76	3.78		Ce2O3	0.09	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	1.08	0.00993	0.8424	1.29	0.29	0.29	1.5		Nd2O3	0.04	NdF3 1-Jun-1999 12:00 AM			
	Ta	M_SERIES	2.16	0.02156	0.6244	3.45	1.03	0.63	4.22		Ta2O5	0.08	Ta 1-Jun-1999 12:00 AM			
	W	M_SERIES	3.48	0.03476	0.6417	5.42	1.45	0.97	6.83		WO3	0.12	W 1-Jun-1999 12:00 AM			
	O					31.23	1.15	64.09				8				
	Totals					78.43										
											Cation sum	4.48				
	grain 54	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	14.74	0.10856	0.8863	16.63	0.35	18.14	31.42		Al2O3	2.27	Al2O3 1-Jun-1999 12:00 AM			
	P	K_SERIES	4.9	0.02902	0.9819	4.99	0.39	4.74	11.44		P2O5	0.59	GaP 1-Jun-1999 12:00 AM			
	S	K_SERIES	4.55	0.03997	0.7304	6.23	0.31	5.72	15.55		SO3	0.72	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.72	0.02235	0.9634	2.83	0.2	2.13	3.41		K2O	0.27	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.82	0.00734	0.9353	0.87	0.15	0.64	1.22		CaO	0.08	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.95	0.00947	0.861	1.1	0.24	0.58	1.41		FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	6.14	0.05708	0.6624	9.28	0.8	3.12	10.97		SrO	0.39	SrF2 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	2.4	0.02224	0.8115	2.95	0.51	0.62	3.46		Ce2O3	0.08	CeO2 1-Jun-1999 12:00 AM			
	Ta	M_SERIES	1.94	0.01937	0.6271	3.09	0.93	0.5	3.77		Ta2O5	0.06	Ta 1-Jun-1999 12:00 AM			
	O					34.68	0.91	63.81				8				
	Totals					82.65										
											Cation sum	4.54				
	grain 54	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	13.73	0.10116	0.8435	16.28	0.35	19.87	30.76		Al2O3	2.51	Al2O3 1-Jun-1999 12:00 AM			
	P	K_SERIES	5.7	0.03376	0.965	5.91	0.38	6.28	13.54		P2O5	0.79	GaP 1-Jun-1999 12:00 AM			
	S	K_SERIES	2.46	0.02165	0.7137	3.45	0.26	3.54	8.62		SO3	0.45	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.47	0.01203	0.972	1.51	0.17	1.27	1.82		K2O	0.16	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.62	0.00554	0.9498	0.65	0.15	0.53	0.91		CaO	0.07	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.84	0.00843	0.8605	0.98	0.23	0.58	1.26		FeO	0.07	Fe 1-Jun-1999 12:00 AM			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Sr	L_SERIES	6.16	0.05721	0.6634	9.28	0.74	3.49	10.98		SrO	0.44	SrF2 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	2.77	0.02569	0.8187	3.38	0.57	0.79	3.96		Ce2O3	0.1	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	1.59	0.01451	0.8342	1.9	0.54	0.43	2.22		Nd2O3	0.05	NdF3 1-Jun-1999 12:00 AM			
	O					30.72	0.79	63.21				8				
	Totals					74.06										
											Cation sum	4.66				
monazite	grain 55	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	8.4	0.04976	1.0192	8.24	0.31	12.82	18.89		P2O5	1.57	GaP 1-Jun-1999 12:00 AM			
	S	K_SERIES	0.43	0.0038	0.751	0.58	0.15	0.87	1.44		SO3	0.11	FeS2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.57	0.01408	1.068	1.47	0.14	1.76	2.05		CaO	0.22	Wollastonite 1-Jun-1999 12:00 AM			
	Y	L_SERIES	2.05	0.02048	0.5962	3.44	0.73	1.86	4.36		Y2O3	0.23	Y 1-Jun-1999 12:00 AM			
	La	L_SERIES	11.08	0.09884	0.9477	11.69	0.87	4.05	13.71		La2O3	0.5	LaB6 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	23.66	0.21955	0.9233	25.63	1.05	8.81	30.02		Ce2O3	1.08	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	10.48	0.09588	0.9473	11.06	0.72	3.69	12.9		Nd2O3	0.45	NdF3 1-Jun-1999 12:00 AM			
	Th	M_SERIES	2.73	0.02648	0.8003	3.41	0.64	0.71	3.88		ThO2	0.09	ThO2 1-Jun-1999 12:00 AM			
	O					21.74	0.88	65.44				8				
	Totals					87.26										
											Cation sum	4.23				
	grain 55	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	8.84	0.05237	1.0014	8.83	0.5	13.9	20.24		P2O5	1.7	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.89	0.01701	1.0766	1.76	0.22	2.14	2.46		CaO	0.26	Wollastonite 1-Jun-1999 12:00 AM			
	La	L_SERIES	12.04	0.10742	0.9517	12.65	1.42	4.44	14.84		La2O3	0.54	LaB6 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	25.03	0.23229	0.9269	27.01	1.71	9.39	31.64		Ce2O3	1.15	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	10.86	0.0994	0.9511	11.42	1.18	3.86	13.32		Nd2O3	0.47	NdF3 1-Jun-1999 12:00 AM			
	Th	M_SERIES	3.69	0.03576	0.8148	4.53	1.02	0.95	5.15		ThO2	0.12	ThO2 1-Jun-1999 12:00 AM			
	O					21.44	1.25	65.32				8				
	Totals					87.64										
											Cation sum	4.25				
zircon	grain 56															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	13.98	0.11278	1.0068	13.89	0.53	20.95	29.72		SiO2	2.53	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.1	0.00991	0.9092	1.21	0.24	1.28	1.7		CaO	0.15	Wollastonite 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	17.73	0.17734	0.7144	24.82	1.39	11.53	33.53		ZrO2	1.39	Zr 1-Jun-1999 12:00 AM			
	O					25.02	1.01	66.24				8				
	Totals					64.94										
											Cation sum	4.08				
chromian spinel	grain 57															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	5.1	0.03496	0.567	8.99	0.43	8.11	14.91		MgO	1.14	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	11.48	0.08454	0.6284	18.27	0.43	14.84	34.52		Al2O3	2.09	Al2O3 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.66	0.00655	0.9406	0.7	0.17	0.32	1.16		TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	25.02	0.25019	0.9222	27.13	0.55	11.43	39.65		Cr2O3	1.61	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.64	0.18641	0.8534	21.84	0.61	8.57	28.1		FeO	1.21	Fe 1-Jun-1999 12:00 AM			
	O					41.41	0.75	56.73				8				
	Totals					118.34										
											Cation sum	6.1				
chromite	grain 58															

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.31	0.02272	0.5059	6.55	0.41	6.3	10.86		MgO	0.88	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.23	0.02378	0.5961	5.41	0.32	4.69	10.23		Al2O3	0.65	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	51.1	0.51095	0.9336	54.73	0.8	24.59	79.98		Cr2O3	3.43	Cr 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.27	0.01272	0.9004	1.41	0.47	0.6	1.82		MnO	0.08	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.08	0.13082	0.8424	15.53	0.56	6.5	19.98		FeO	0.91	Fe 1-Jun-1999 12:00 AM			
	O					39.25	0.81	57.32				8				
	Totals					122.88										
											Cation sum	5.96				
?biotite	grain 59	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	5.73	0.03927	0.6744	8.49	1.11	2.08	14.08	3.699	MgO	0.27	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	41.28	0.30408	0.7693	53.66	1.52	11.84	101.38	26.633	Al2O3	1.56	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	56.93	0.45914	0.73	77.98	1.74	16.53	166.83	43.827	SiO2	2.18	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	11.45	0.09393	1.0044	11.4	0.8	1.74	13.73	3.607	K2O	0.23	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	55.96	0.55958	0.8506	65.79	2.13	7.01	84.64	22.235	FeO	0.92	Fe 1-Jun-1999 12:00 AM			
	O					163.34	2.79	60.79				8				
	Totals					380.66				100						
											Cation sum	5.16				
	grain 59	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	5.2	0.03564	0.717	7.25	0.93	1.67	12.02	3.054	MgO	0.22	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	46.05	0.33921	0.8105	56.82	1.36	11.8	107.35	27.271	Al2O3	1.54	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	67.85	0.54722	0.7509	90.35	1.6	18.02	193.3	49.106	SiO2	2.35	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	17.6	0.14439	0.9946	17.69	0.8	2.53	21.31	5.414	K2O	0.33	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	39.04	0.39037	0.8419	46.37	1.63	4.65	59.65	15.151	FeO	0.61	Fe 1-Jun-1999 12:00 AM			
	O					175.15	2.45	61.33				8				
	Totals					393.64				99.996						
											Cation sum	5.05				
chlorite	grain 60	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	9.07	0.06218	0.5976	15.18	1.36	3.89	25.17	6.507	MgO	0.52	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	30.22	0.22259	0.6856	44.08	1.59	10.18	83.28	21.53	Al2O3	1.37	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	43.96	0.35454	0.699	62.89	1.67	13.95	134.55	34.785	SiO2	1.87	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	97.11	0.97106	0.8687	111.79	2.77	12.47	143.82	37.181	FeO	1.68	Fe 1-Jun-1999 12:00 AM			
	O					152.87	2.97	59.52				8				
	Totals					386.81				100						
											Cation sum	5.44				
chlorite	grain 60	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	8.55	0.05862	0.6238	13.71	2.32	3.13	22.73	5.401	MgO	0.41	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	30.42	0.2241	0.715	42.55	2.72	8.75	80.39	19.101	Al2O3	1.15	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	63.18	0.50953	0.7289	86.68	3.23	17.13	185.43	44.059	SiO2	2.26	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	88.52	0.8852	0.8607	102.85	4.76	10.22	132.31	31.437	FeO	1.35	Fe 1-Jun-1999 12:00 AM			
	O					175.08	5.33	60.76				8				
	Totals					420.87				99.998						
											Cation sum	5.17				
quartz	grain 60	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Si	K_SERIES	231.8	1.86947	0.9805	236.42	4.22	33.33	505.77	100	SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					269.35	4.5	66.67				8				
	Totals					505.77										
											Cation sum	4				
K-feldspar	grain 61	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	38.13	0.28089	0.9197	41.46	1.89	7.03	78.34	16.93	Al2O3	0.9	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	129.89	1.04757	0.8719	148.98	2.94	24.28	318.7	68.874	SiO2	3.12	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	53.46	0.43862	0.9803	54.53	2.03	6.38	65.68	14.194	K2O	0.82	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					217.76	3.72	62.3				8				
	Totals					462.73				99.998						
											Cation sum	4.84				
	grain 61	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	39.19	0.2887	0.9201	42.6	1.72	7.21	80.48	17.367	Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	129.58	1.04503	0.8694	149.04	2.62	24.22	318.85	68.807	SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	52.11	0.42753	0.9796	53.19	1.84	6.21	64.07	13.826	K2O	0.8	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					218.57	3.34	62.36				8				
	Totals					463.4				100						
											Cation sum	4.83				
biotite	grain 62	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	14.07	0.09644	0.732	19.22	1.37	4.35	31.87	8.013	MgO	0.57	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	39.7	0.29241	0.7859	50.51	1.67	10.31	95.44	23.996	Al2O3	1.36	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	67.92	0.5478	0.7503	90.53	1.95	17.75	193.66	48.69	SiO2	2.34	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	19.61	0.16086	0.9931	19.74	1.07	2.78	23.78	5.979	K2O	0.37	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	34.59	0.34587	0.8396	41.2	1.91	4.06	53	13.325	FeO	0.53	Fe 1-Jun-1999 12:00 AM			
	O					176.55	3.06	60.75				8				
	Totals					397.74				100						
											Cation sum	5.17				
biotite	grain 62	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	21.34	0.1463	0.6542	32.62	1.6	8.08	54.09	14.198	MgO	1.09	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	31.24	0.2301	0.6861	45.53	1.63	10.16	86.03	22.582	Al2O3	1.37	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	43.95	0.35448	0.6919	63.53	1.66	13.62	135.9	35.673	SiO2	1.84	SiO2 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.83	0.0183	0.8399	2.18	0.71	0.24	2.81	0.738	MnO	0.03	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	68.05	0.68055	0.8573	79.39	2.34	8.56	102.13	26.809	FeO	1.15	Fe 1-Jun-1999 12:00 AM			
	O					157.72	2.99	59.35				8				
	Totals					380.96				100						
											Cation sum	5.48				
apatite	grain 62	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	9.31	0.07511	0.9294	10.02	1.27	2.28	21.44	5.376	SiO2	0.31	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	64.19	0.38011	1.2808	50.12	1.73	10.34	114.84	28.798	P2O5	1.4	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	167.52	1.50467	1.0083	166.13	2.33	26.49	232.45	58.29	CaO	3.58	Wollastonite 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	9.83	0.09131	0.8459	11.62	3.12	0.85	13.74	3.446	SrO	0.11	SrF2 1-Jun-1999 12:00 AM			
	Y	L_SERIES	10.22	0.10215	0.7951	12.85	4.37	0.92	16.32	4.092	Y2O3	0.12	Y 1-Jun-1999 12:00 AM			
	O					148.04	3.85	59.13				8				
	Totals					398.78				100						

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

											Cation sum	5.53				
muscovite	grain 63	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	69.18	0.50958	0.9138	75.7	1.27	13.94	143.03	33.542	Al2O3	1.8	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	82.44	0.66488	0.7764	106.18	1.51	18.78	227.15	53.269	SiO2	2.43	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	36.93	0.30301	0.9831	37.56	0.96	4.77	45.25	10.612	K2O	0.62	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.39	0.01394	0.7979	1.75	0.53	0.18	2.92	0.685	TiO2	0.02	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.19	0.05189	0.8269	6.28	0.78	0.56	8.07	1.893	FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	O					198.95	2.14	61.77				8				
	Totals					426.42				100						
											Cation sum	4.95				
	grain 63	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	73.39	0.5406	0.914	80.29	2.27	14.57	151.7	35.172	Al2O3	1.89	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	81.68	0.65875	0.768	106.36	2.71	18.55	227.54	52.756	SiO2	2.4	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	34.29	0.28136	0.9809	34.96	1.68	4.38	42.11	9.763	K2O	0.57	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.41	0.06411	0.8275	7.75	1.52	0.68	9.97	2.312	FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	O					201.96	3.76	61.82				8				
	Totals					431.31				100						
											Cation sum	4.94				
xenotime	grain 64	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	4.1	0.03308	0.6191	6.63	1.34	2.8	14.17	4.061	SiO2	0.35	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	32.75	0.19394	0.991	33.05	1.54	12.67	75.72	21.702	P2O5	1.56	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.98	0.0268	1.077	2.77	0.73	0.82	3.88	1.112	CaO	0.1	Wollastonite 1-Jun-1999 12:00 AM			
	Ag	L_SERIES	12.5	0.12497	0.8058	15.51	2.54	1.71	16.66	4.775	Ag2O	0.21	Ag 1-Jun-1999 12:00 AM			
	La	L_SERIES	59.34	0.52949	0.9527	62.29	4.92	5.32	73.05	20.937	La2O3	0.66	LaB6 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	102.41	0.95027	0.9286	110.29	5.86	9.34	129.18	37.024	Ce2O3	1.15	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	29.58	0.27069	0.9519	31.07	3.85	2.56	36.24	10.387	Nd2O3	0.32	NdF3 1-Jun-1999 12:00 AM			
	O					87.3	4.28	64.78				8				
	Totals					348.91				99.998						
											Cation sum	4.35				
	grain 64	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-20.42	-0.20415	0.2426	-84.15	36.26	45.89	-324.44	?	N2O5	4.86	Not defined 1-Jun-1999 12:00 AM			
	Si	K_SERIES	3.99	0.03218	0.6138	6.5	1.38	-1.77	13.9		SiO2	-0.19	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	29.28	0.17339	0.9851	29.73	1.58	-7.33	68.11		P2O5	-0.78	GaP 1-Jun-1999 12:00 AM			
	Ag	L_SERIES	14.91	0.14914	0.8088	18.44	2.78	-1.31	19.81		Ag2O	-0.14	Ag 1-Jun-1999 12:00 AM			
	La	L_SERIES	58.16	0.51897	0.9581	60.71	5.27	-3.34	71.2		La2O3	-0.35	LaB6 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	104.96	0.97395	0.9341	112.37	6.27	-6.13	131.61		Ce2O3	-0.65	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	29.14	0.26668	0.9581	30.42	4.01	-1.61	35.48		Nd2O3	-0.17	NdF3 1-Jun-1999 12:00 AM			
	O					-158.34	61.44	75.59				8				
	Totals					15.67										
											Cation sum	2.58				
xenotime	grain 65															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	48.13	0.28502	1.1383	42.28	1.5	15.6	96.89	32.001	P2O5	1.86	GaP 1-Jun-1999 12:00 AM			
	Co	K_SERIES	5.52	0.05522	0.9346	5.91	1.02	1.15	7.51	2.48	CoO	0.14	Co 1-Jun-1999 12:00 AM			
	Y	L_SERIES	65.21	0.65209	0.7392	88.21	3.08	11.34	112.03	37.002	Y2O3	1.35	Y 1-Jun-1999 12:00 AM			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Gd	L_SERIES	7.49	0.06782	0.8832	8.49	1.78	0.62	9.78	3.23	Gd2O3	0.07	GdF3 1-Jun-1999 12:00 AM			
	Dy	L_SERIES	17.37	0.15684	0.8782	19.78	2.21	1.39	22.7	7.497	Dy2O3	0.17	DyF3 1-Jun-1999 12:00 AM			
	Yb	L_SERIES	19.31	0.17358	0.868	22.25	2.88	1.47	25.33	8.366	Yb2O3	0.18	YbF3 1-Jun-1999 12:00 AM			
	Re	M_SERIES	16.04	0.16044	0.7316	21.93	4.46	1.35	28.53	9.423	Re2O7	0.16	Re 1-Jun-1999 12:00 AM			
	O					93.92	3.75	67.09				8				
	Totals					302.77				99.999						
											Cation sum	3.92				
?biotite	grain 66															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.49	0.02391	0.7464	4.67	0.64	0.98	7.75	1.816	MgO	0.13	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	55.76	0.41075	0.8453	65.97	0.98	12.5	124.64	29.199	Al2O3	1.63	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	75.6	0.60968	0.7621	99.2	1.15	18.06	212.21	49.713	SiO2	2.36	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	29.5	0.24206	0.9935	29.69	0.69	3.88	35.77	8.38	K2O	0.51	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.34	0.01338	0.8153	1.64	0.4	0.18	2.74	0.642	TiO2	0.02	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	28.46	0.28455	0.8364	34.02	1.02	3.12	43.77	10.254	FeO	0.41	Fe 1-Jun-1999 12:00 AM			
	O					191.68	1.77	61.27				8				
	Totals					426.87				100						
											Cation sum	5.06				
pyrite	grain 67	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	159.38	1.4005	0.9339	23.66	0.5	18.04	59.08		SO3	2.12	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	198.58	1.98582	0.8656	31.81	0.63	13.92	40.92		FeO	1.64	Fe 1-Jun-1999 12:00 AM			
	O					44.53	0.62	68.04				8				
	Totals					100										
											Cation sum	3.76				
mostly quartz	grain 67	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.32	0.12019	0.8128	4.41	0.16	3.6	8.33		Al2O3	0.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	131.54	1.06084	0.8487	34.03	0.28	26.73	72.81		SiO2	3.28	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	4.67	0.04103	0.7283	1.41	0.11	0.97	3.51		SO3	0.12	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.93	0.02403	0.9803	0.66	0.09	0.37	0.79		K2O	0.05	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	19.81	0.1981	0.8341	5.22	0.2	2.06	6.71		FeO	0.25	Fe 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	25.4	0.23715	0.7939	7.03	0.28	1.13	7.85		BaO	0.14	BaF2 1-Jun-1999 12:00 AM			
	O					47.25	0.33	65.14				8				
	Totals					100										
											Cation sum	4.28				
barite	grain 67	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	35.79	0.31446	0.8141	10.76	0.53	14.24	26.86		SO3	1.77	FeS2 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	20.91	0.19424	0.6372	8.03	0.9	3.89	9.5		SrO	0.48	SrF2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	213.76	1.99536	0.9175	57	1.04	17.62	63.65		BaO	2.19	BaF2 1-Jun-1999 12:00 AM			
	O					24.21	0.84	64.24				8				
	Totals					100										
											Cation sum	4.45				
chromite	grain 68															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-15.84	-0.15838	0.3229	-19.02	16.27	-86.16	-73.35		N2O5	-46.08	Not defined 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	12.87	0.08821	0.5319	9.38	2.56	24.48	15.56		MgO	13.1	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	27.69	0.20394	0.6176	17.39	4.57	40.88	32.85		Al2O3	21.86	Al2O3 1-Jun-1999 12:00 AM			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Cr	K_SERIES	151.58	1.5158	0.9265	63.46	16.51	77.42	92.75		Cr2O3	41.41	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	54.5	0.54499	0.8449	25.02	6.56	28.42	32.19		FeO	15.2	Fe 1-Jun-1999 12:00 AM			
	O					3.77	21.51	14.96				8				
	Totals					100										
											Cation sum	45.49				
Mg-rich biotite	grain 69															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	24.94	0.17094	0.669	8.59	0.44	8.11	14.24		MgO	1.09	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	28.36	0.2089	0.698	9.36	0.43	7.97	17.69		Al2O3	1.07	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	53.49	0.43139	0.7222	17.07	0.47	13.95	36.51		SiO2	1.88	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	13.03	0.10692	1.0201	2.94	0.23	1.73	3.55		K2O	0.23	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	14.79	0.14793	0.8492	4.01	0.29	1.92	6.7		TiO2	0.26	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	61.07	0.61075	0.8497	16.56	0.57	6.81	21.31		FeO	0.92	Fe 1-Jun-1999 12:00 AM			
	O					41.46	0.69	59.5				8				
	Totals					100										
											Cation sum	5.45				
K-feldspar	grain 70															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	38.44	0.28317	0.9196	9.02	0.27	7.09	17.04		Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	129.41	1.04371	0.8713	32.05	0.38	24.19	68.56		SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	54.32	0.44572	0.9808	11.95	0.29	6.48	14.39		K2O	0.83	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					46.98	0.42	62.25				8				
	Totals					100										
											Cation sum	4.85				
apatite	grain 71															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	3.98	0.03213	0.919	1.24	0.14	1.13	2.66		SiO2	0.15	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	56.24	0.33301	1.342	12.03	0.19	9.91	27.58		P2O5	1.36	GaP 1-Jun-1999 12:00 AM			
	Cl	K_SERIES	0.83	0.00837	0.7991	0.3	0.08	0.21	0			0.03	KCl 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	165.53	1.48677	1.0189	46.65	0.35	29.68	65.27		CaO	4.07	Wollastonite 1-Jun-1999 12:00 AM			
	Y	L_SERIES	9.2	0.09196	0.8008	3.3	0.46	0.95	4.19		Y2O3	0.13	Y 1-Jun-1999 12:00 AM			
	O					36.47	0.34	58.12				7.97				
	Totals					100										
											Cation sum	5.71				
chromian spinel	grain 72	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-31.59	-0.31593	0.3036	-210.86	243.4	79.42	-812.98		N2O5	6.54	Not defined 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	11.21	0.07686	0.5351	42.46	42.98	-9.21	70.39		MgO	-0.76	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	38.06	0.28032	0.6257	123.25	124.66	-24.1	232.87		Al2O3	-1.98	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	115.47	1.15467	0.9361	249.94	252.74	-25.36	365.29		Cr2O3	-2.09	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	80.27	0.80275	0.8561	189.99	192.07	-17.95	244.42		FeO	-1.48	Fe 1-Jun-1999 12:00 AM			
	O					-294.77	375.47	97.2				8				
	Totals					100										
											Cation sum	0.23				
	grain 72	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-23.03	-0.23029	0.3055	-49.7	29.82	202.47	-191.61		N2O5	10.05	Not defined 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	11.39	0.07805	0.5277	14.23	4.95	-33.39	23.59		MgO	-1.66	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	34.06	0.25086	0.6173	36.38	12.47	-76.94	68.73		Al2O3	-3.82	Al2O3 1-Jun-1999 12:00 AM			

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Cr	K_SERIES	111.47	1.11466	0.9418	78.04	26.69	-85.65	114.05		Cr2O3	-4.25	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	86.31	0.8631	0.859	66.25	22.66	-67.7	85.23		FeO	-3.36	Fe 1-Jun-1999 12:00 AM			
	O					-45.2	43.38	161.2				8				
	Totals					100										
											Cation sum	-3.04				
K-feldspar	grain 73	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	4.28	0.0192	0.871	1	0.26	0.92	1.34		Na2O	0.12	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	39.94	0.29422	0.9102	8.88	0.34	6.96	16.79		Al2O3	0.9	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	136.38	1.0999	0.8666	31.87	0.48	24	68.17		SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	55.06	0.45179	0.9802	11.37	0.36	6.15	13.7		K2O	0.79	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					46.88	0.53	61.97				8				
	Totals					100										
											Cation sum	4.91				
ferroan calcite	grain 73	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Ca	K_SERIES	166.05	1.49143	1.0784	68.35	0.98	48.28	95.64		CaO	7.73	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.19	0.06186	0.8102	3.39	0.79	1.72	4.36		FeO	0.27	Fe 1-Jun-1999 12:00 AM			
	O					28.26	0.84	50				8				
	Totals					100										
											Cation sum	8				
andesine	grain 73	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	22.4	0.10042	0.8894	5.67	0.35	5.08	7.65		Na2O	0.65	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	33.5	0.24675	0.8619	8.76	0.32	6.68	16.55		Al2O3	0.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	117.84	0.95036	0.8338	31.85	0.45	23.34	68.13		SiO2	3.01	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	22.94	0.20607	0.9424	5.49	0.25	2.82	7.68		CaO	0.36	Wollastonite 1-Jun-1999 12:00 AM			
	O					48.24	0.51	62.07				8				
	Totals					100										
											Cation sum	4.89				
chlorite + TiO2	grain 74															
after muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	11.27	0.07728	0.6275	4.37	0.27	4.24	7.25		MgO	0.57	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	32.81	0.2417	0.7069	11.29	0.3	9.87	21.34		Al2O3	1.32	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	51.18	0.41276	0.7139	17.44	0.33	14.64	37.32		SiO2	1.96	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.6	0.06236	1.0206	1.81	0.14	1.09	2.18		K2O	0.15	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	3.28	0.03285	0.864	0.93	0.14	0.46	1.54		TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	83.46	0.83465	0.8604	23.61	0.44	9.96	30.37		FeO	1.33	Fe 1-Jun-1999 12:00 AM			
	O					40.55	0.48	59.74				8				
	Totals					100										
											Cation sum	5.39				
chlorite	grain 75															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	7.08	0.04856	0.5849	3.19	0.32	3.21	5.3		MgO	0.43	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	30.55	0.22505	0.6813	11.83	0.37	10.71	22.34		Al2O3	1.45	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	39.98	0.32242	0.6933	15.21	0.38	13.23	32.53		SiO2	1.79	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	102.39	1.02392	0.8721	30.96	0.56	13.55	39.83		FeO	1.83	Fe 1-Jun-1999 12:00 AM			
	O					38.81	0.58	59.29				8				
	Totals					100										

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

											Cation sum	5.49				
albite	grain 76	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-14.23	-0.14233	0.1784	-51.35	41.48	-187.07	-197.99		N2O5	-261.92	Not defined 1-Jun-1999 12:00 AM			
	Na	K_SERIES	26.48	0.11874	0.9203	18.52	8.69	41.12	24.97		Na2O	57.57	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	39.55	0.29132	0.8708	29.24	13.68	55.3	55.25		Al2O3	77.42	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	130.6	1.05325	0.8259	101.8	47.56	184.95	217.77		SiO2	258.94	SiO2 1-Jun-1999 12:00 AM			
	O					1.79	39.48	5.71				8				
	Totals					100										
											Cation sum	132.01				
K-feldspar	grain 76	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	38.94	0.28686	0.9193	9	0.26	7.08	17.01		Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	130.75	1.05451	0.8714	31.89	0.36	24.1	68.22		SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	56.62	0.46461	0.9817	12.26	0.28	6.66	14.77		K2O	0.86	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					46.85	0.39	62.16				8				
	Totals					100										
											Cation sum	4.87				
chlorite	grain 77															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	5.51	0.0378	0.6427	1.86	0.24	1.75	3.09		MgO	0.22	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	24.12	0.17764	0.7472	7.01	0.3	5.93	13.25		Al2O3	0.76	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	95	0.76617	0.7784	26.51	0.42	21.53	56.71		SiO2	2.77	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	82.36	0.82358	0.8537	20.95	0.49	8.56	26.96		FeO	1.1	Fe 1-Jun-1999 12:00 AM			
	O					43.66	0.52	62.24				8				
	Totals					100										
											Cation sum	4.85				
chlorite + TiO2	grain 78															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.45	0.00997	0.5979	2.43	0.23	2.96	4.03		MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.86	0.04313	0.6967	8.41	0.27	9.21	15.88		Al2O3	1.21	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.67	0.06189	0.719	10.67	0.27	11.24	22.84		SiO2	1.48	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.37	0.00333	1.0326	0.36	0.1	0.26	0.5		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	8.06	0.08065	0.8805	9.16	0.25	5.65	15.28		TiO2	0.74	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.11	0.16109	0.8602	18.73	0.44	9.92	24.09		FeO	1.31	Fe 1-Jun-1999 12:00 AM			
	O					32.86	0.53	60.75				8				
	Totals					82.62										
											Cation sum	5.17				
chlorite	grain 79															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-3.6	-0.03595	0.232	-15.49	5.01	193.84	-59.74		N2O5	10.8	Not defined 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.52	0.0104	0.5764	2.63	0.21	-18.97	4.36		MgO	-1.06	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.56	0.04832	0.6734	9.74	0.25	-63.27	18.41		Al2O3	-3.52	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.92	0.0639	0.6872	11.53	0.25	-71.94	24.67		SiO2	-4.01	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.21	0.2321	0.8747	26.53	0.46	-83.25	34.13		FeO	-4.64	Fe 1-Jun-1999 12:00 AM			
	O					-13.11	8.49	143.59				8				
	Totals					21.83										
											Cation sum	-2.43				
quartz	grain 80	spectrum 1														

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	47.1	0.37984	0.9805	48.04	0.77	33.33	102.76		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					54.73	0.83	66.67				8				
	Totals					102.76										
											Cation sum	4				
K-feldspar	grain 80	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	8.06	0.05934	0.9196	8.76	0.35	7.15	16.55		Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	26.81	0.21619	0.8704	30.8	0.52	24.13	65.88		SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	11.31	0.09282	0.9809	11.53	0.37	6.49	13.89		K2O	0.83	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					45.24	0.67	62.23				8				
	Totals					96.33										
											Cation sum	4.86				
muscovite	grain 81	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.75	0.116	0.9217	17.09	0.3	14.92	32.29		Al2O3	1.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.87	0.13607	0.7654	22.04	0.35	18.48	47.15		SiO2	2.38	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.56	0.05382	0.9791	6.7	0.21	4.03	8.07		K2O	0.52	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.32	0.00318	0.7983	0.4	0.12	0.2	0.66		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.62	0.00618	0.8262	0.75	0.16	0.32	0.96		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					42.16	0.5	62.06				8				
	Totals					89.14										
											Cation sum	4.89				
	grain 81	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.75	0.11599	0.9313	16.91	0.26	14.87	31.95		Al2O3	1.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.18	0.13858	0.7695	22.33	0.31	18.86	47.77		SiO2	2.43	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.67	0.05476	0.9759	6.84	0.18	4.15	8.24		K2O	0.53	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					41.88	0.41	62.11				8				
	Totals					87.96										
											Cation sum	4.88				
chromite	grain 82															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-5.63	-0.05631	0.3223	-17.47	4.18	157.64	-67.37		N2O5	9.27	Not defined 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	3.27	0.02243	0.5324	6.15	0.29	-31.95	10.19		MgO	-1.88	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.65	0.04162	0.6113	9.24	0.27	-43.28	17.46		Al2O3	-2.55	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	32.6	0.326	0.927	35.17	0.49	-85.46	51.4		Cr2O3	-5.03	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	12.33	0.12325	0.8455	14.58	0.41	-32.98	18.75		FeO	-1.94	Fe 1-Jun-1999 12:00 AM			
	O					-17.22	7.08	136.04				8				
	Totals					30.43										
											Cation sum	-2.12				
?ilmenite	grain 83	spectrum 1														
inclusion	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
within quartz	Si	K_SERIES	16.96	0.13678	0.8106	20.92	0.29	16.32	44.76		SiO2	2.07	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	19.21	0.19212	0.8929	21.52	0.32	9.84	35.89		TiO2	1.25	Ti 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.94	0.00939	0.8371	1.12	0.17	0.45	1.45		MnO	0.06	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.59	0.22587	0.86	26.26	0.46	10.3	33.79		FeO	1.31	Fe 1-Jun-1999 12:00 AM			
	O					46.06	0.48	63.08				8				
	Totals					115.89										

Table B: Scanning Electron Microscope semiquantitative chemical analyses of TS 4081.17B from the Louisbourg J-47 well.

											Cation sum	4.68				
	grain 83	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	16.64	0.13422	0.8305	20.04	0.31	15.67	42.87		SiO2	1.95	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	1.13	0.00993	0.8344	1.35	0.14	0.93	3.38		SO3	0.12	FeS2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	21.64	0.21644	0.8823	24.53	0.38	11.25	40.92		TiO2	1.4	Ti 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.6	0.00603	0.827	0.73	0.18	0.29	0.94		MnO	0.04	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.18	0.16176	0.8505	19.02	0.46	7.48	24.47		FeO	0.93	Fe 1-Jun-1999 12:00 AM			
	O					46.91	0.56	64.39				8				
	Totals					112.58										
											Cation sum	4.43				
albite	grain 84	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	5.57	0.02499	0.9182	6.07	0.46	5.46	8.18		Na2O	0.7	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.47	0.06239	0.8696	9.74	0.44	7.46	18.4		Al2O3	0.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.1	0.21857	0.8237	32.9	0.67	24.21	70.38		SiO2	3.09	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.47	0.00419	0.933	0.5	0.14	0.26	0.7		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	O					48.46	0.87	62.61				8				
	Totals					97.67										
											Cation sum	4.78				
K-feldspar	grain 84	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	1.36	0.00609	0.876	1.55	0.29	1.42	2.09		Na2O	0.18	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.26	0.06081	0.906	9.11	0.35	7.09	17.22		Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.59	0.22253	0.8611	32.04	0.54	23.95	68.55		SiO2	3.09	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	10.08	0.0827	0.9779	10.31	0.35	5.53	12.42		K2O	0.71	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					47.26	0.7	62.01				8				
	Totals					100.27										
											Cation sum	4.9				
muscovite	grain 85															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	14.84	0.10933	0.9086	16.33	0.24	14.34	30.86		Al2O3	1.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.73	0.13489	0.7694	21.74	0.28	18.33	46.51		SiO2	2.37	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.33	0.06018	0.9844	7.45	0.17	4.51	8.97		K2O	0.58	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.45	0.0045	0.8003	0.56	0.1	0.28	0.94		TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.51	0.01512	0.8279	1.83	0.16	0.77	2.35		FeO	0.1	Fe 1-Jun-1999 12:00 AM			
	O					41.72	0.4	61.76				8				
	Totals					89.63										
											Cation sum	4.95				

Notes: (1) This particular thin section was analyzed during three separate sessions on the SEM. The SEM was not properly calibrated right away during one of these sessions and so for grains 59 - 66 (with the exception of grain #64) the compound % value has been recalculated, i.e. normalized to 100. (2) If there is only one mineral name for a particular grain, this name pertains to the whole set of analyses for said grain.

Appendix 2C: Scanning Electron Microscope Backscattered Electron Images for TS # 4528.03B

*** Note: The symbol (+) between two mineral names indicates a mixed composition between these two minerals.**

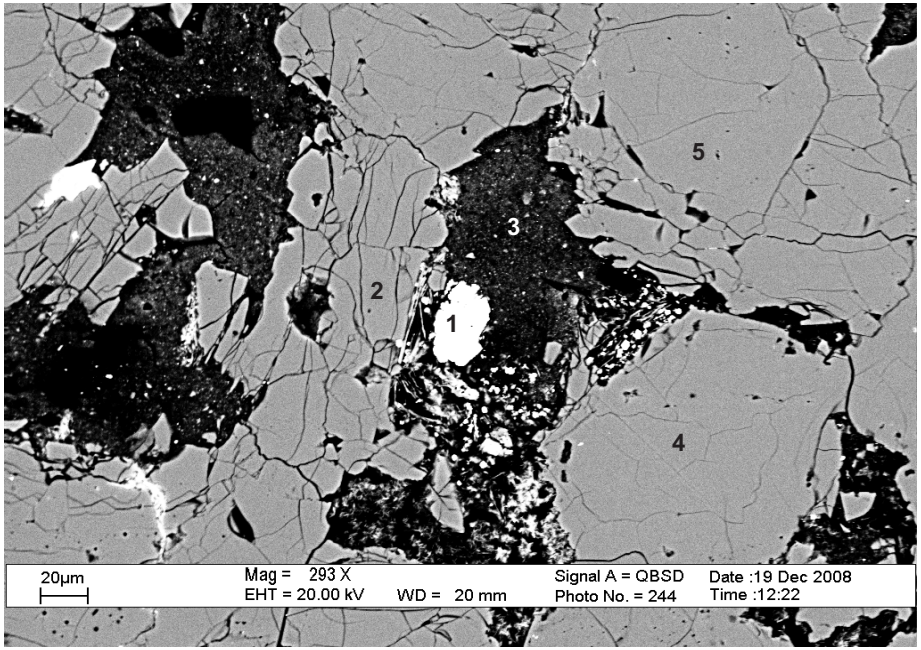


Figure 1: 4528.03B m., fig.2 Sphalerite (pos.1) in context, associated with quartz (pos.2,4,5) and unknown (pos.3)

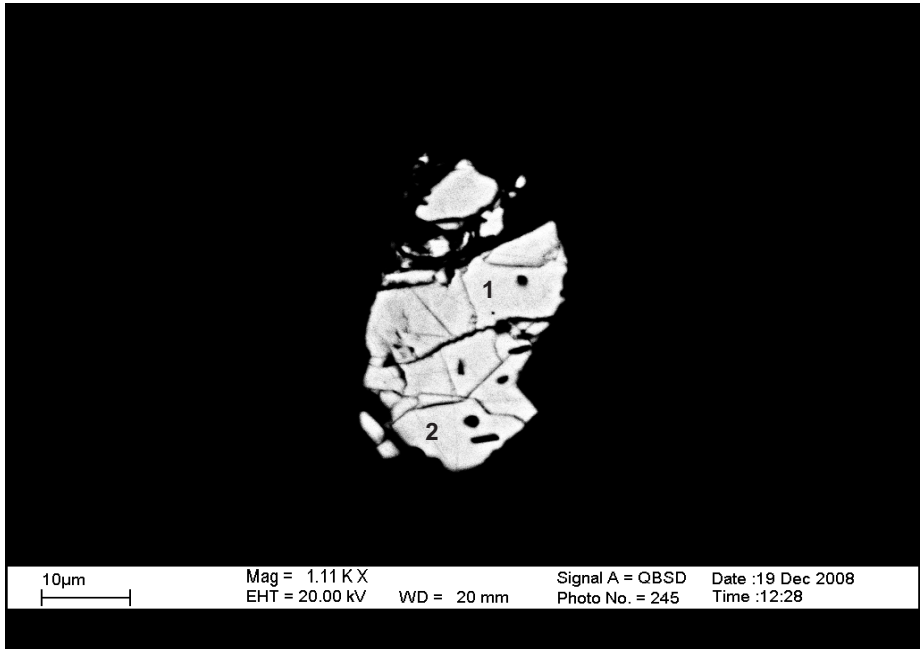


Figure 2: 4528.03B m., Sphalerite (pos.1 and 2)

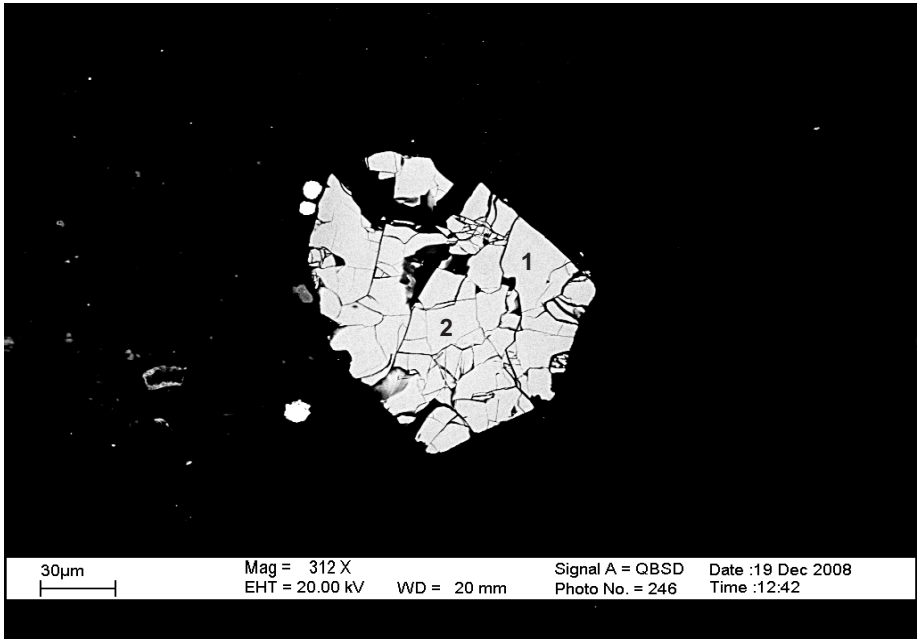


Figure 3: 4528.03B m., Chromian spinel (pos.1 & 2)

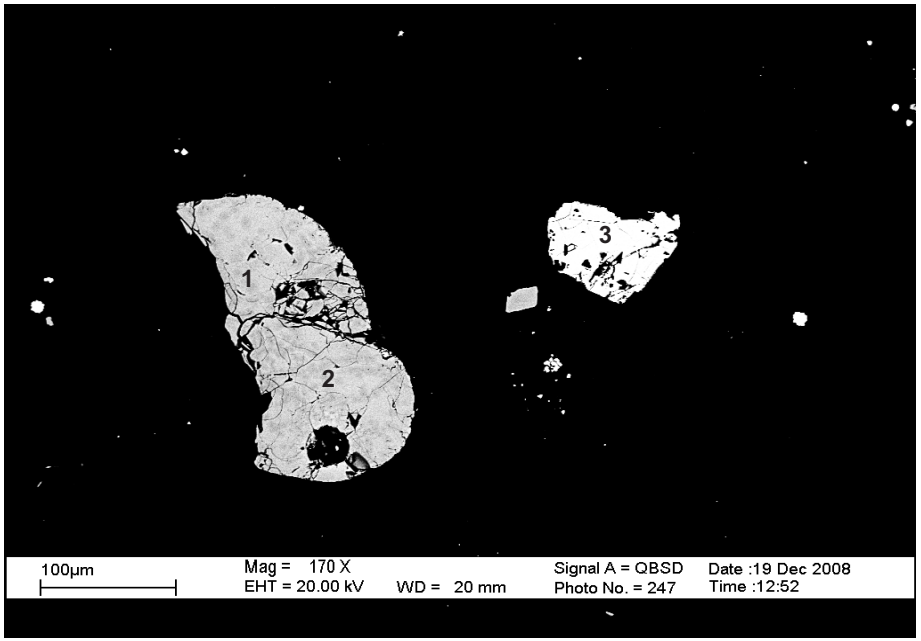


Figure 4: 4528.03B m., Chromian spinel (pos.1 & 2) and chromite (pos.3)

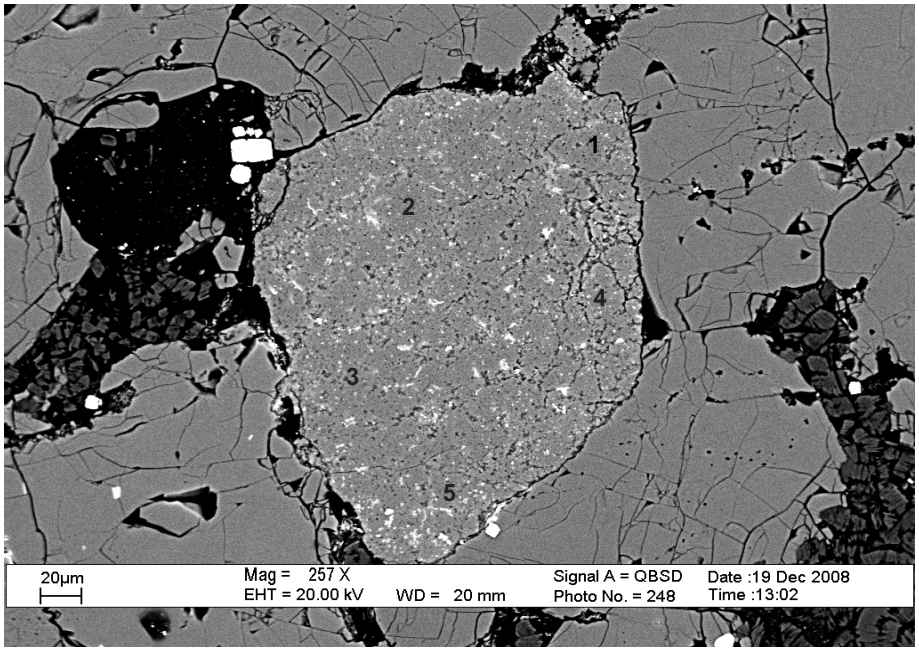


Figure 5: 4528.03B m., Clast, mostly quartz (pos.1,2,3,4 & 5)

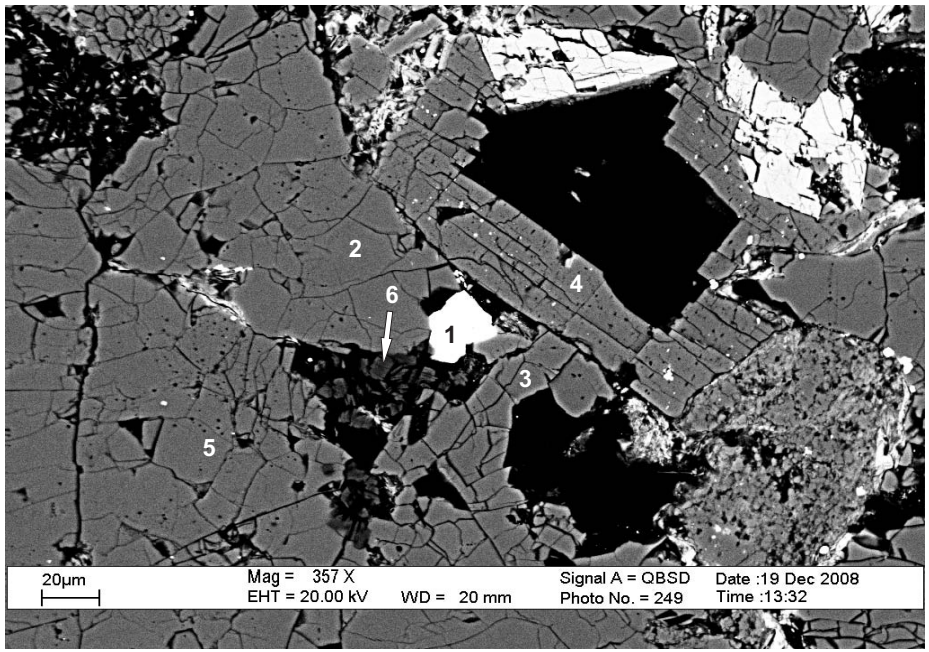


Figure 6: 4528.03B m., fig.7 Sphalerite (pos.1) in context, assoc. with quartz (pos.2,3,5), albite (pos.4) and kaolinite (pos.6)

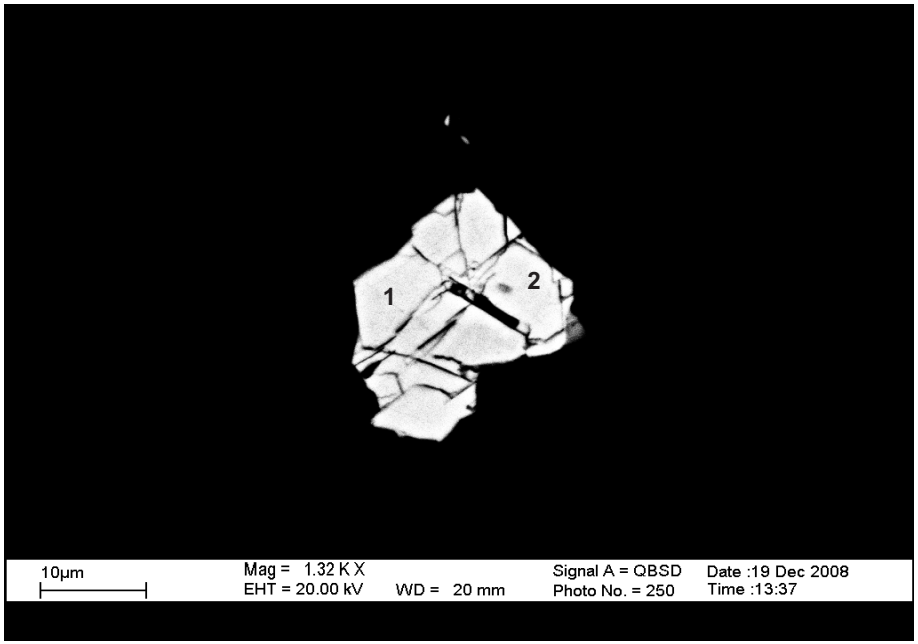


Figure 7: 4528.03B m., Sphalerite (pos.1 & 2)

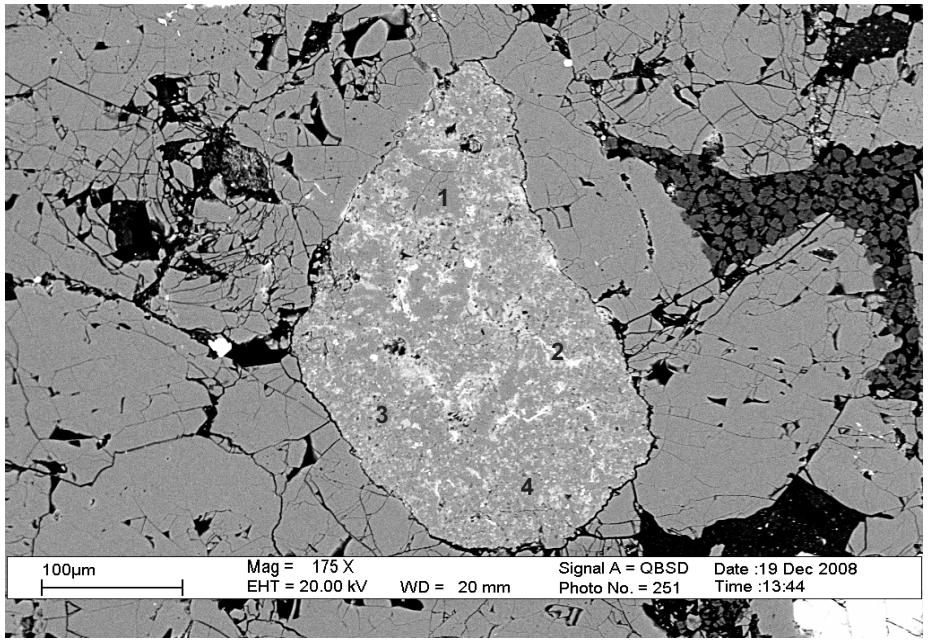


Figure 8: 4528.03B m., Clast, mostly quartz (pos.1,2,3,4)

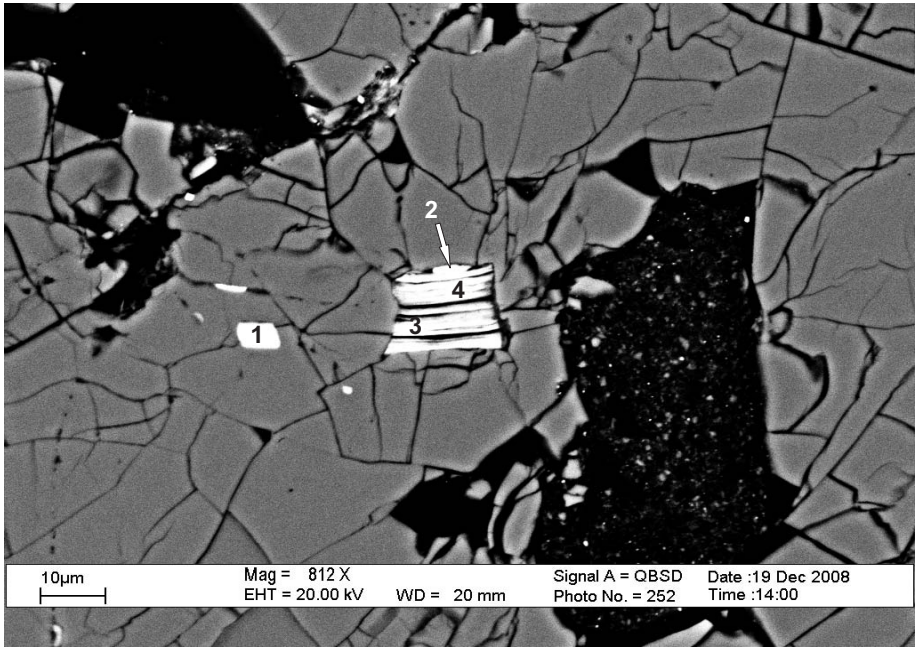


Figure 9: 4528.03B m., (?) Chamosite (pos.1,3,4) and altered apatite (pos.2)

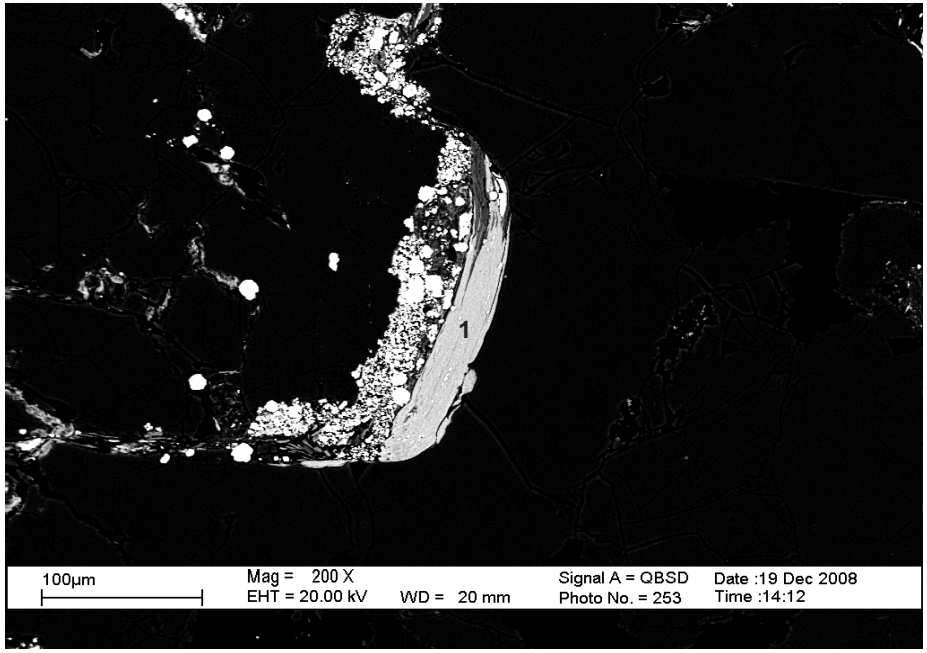


Figure 10: 4528.03B m., Chlorite (pos.1)

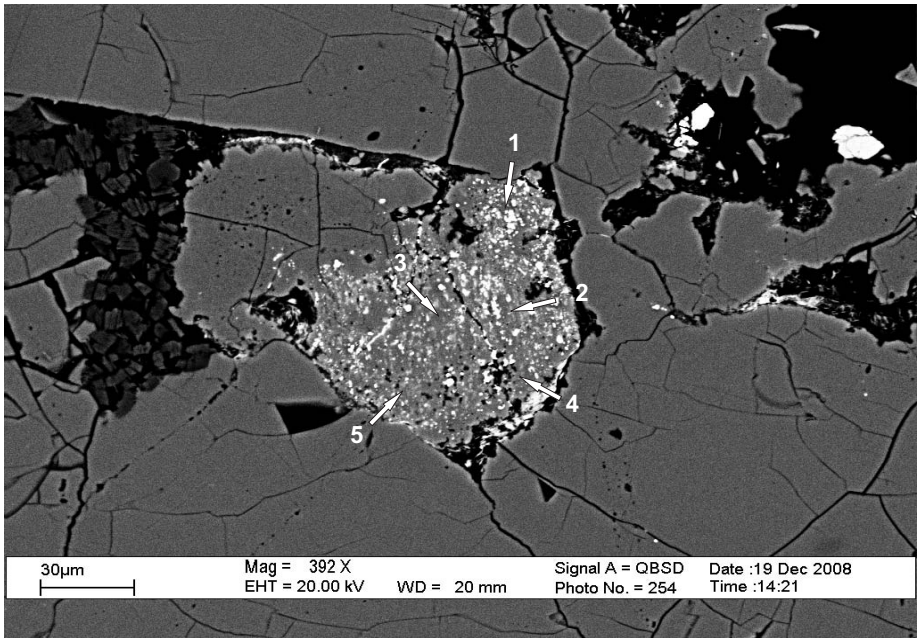


Figure 11: 4528.03B m., (?) Clast (pos.1,2,3,4,5)

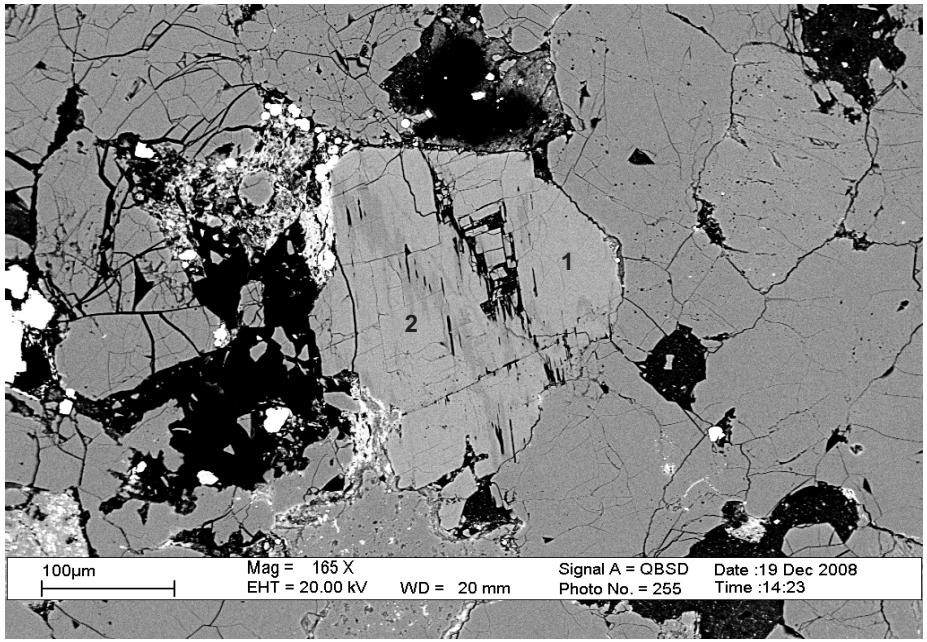


Figure 12: 4528.03B m., Albite (pos.1,2)

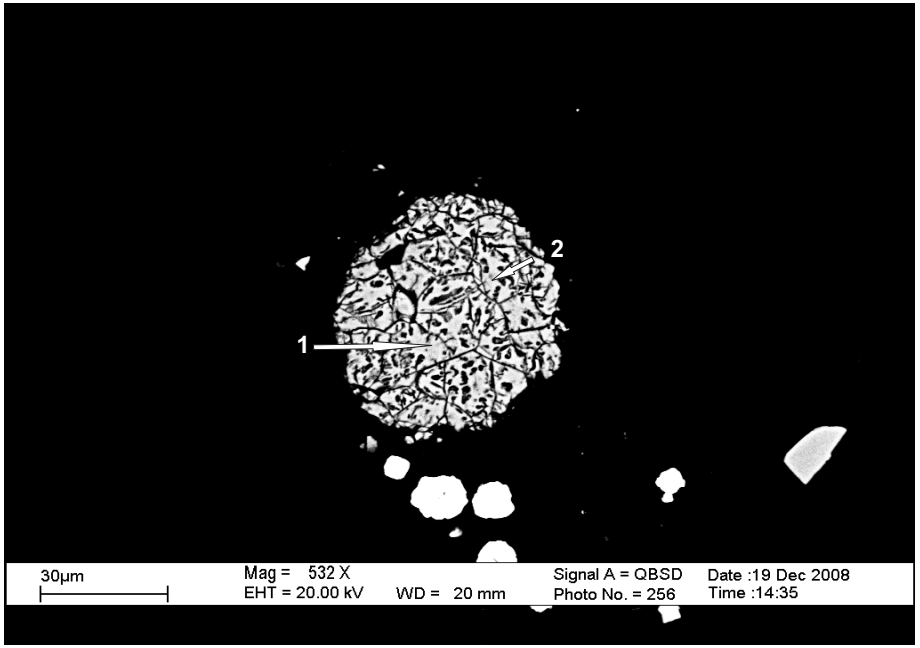


Figure 13: 4528.03B m., Chromian spinel (pos.1,2)

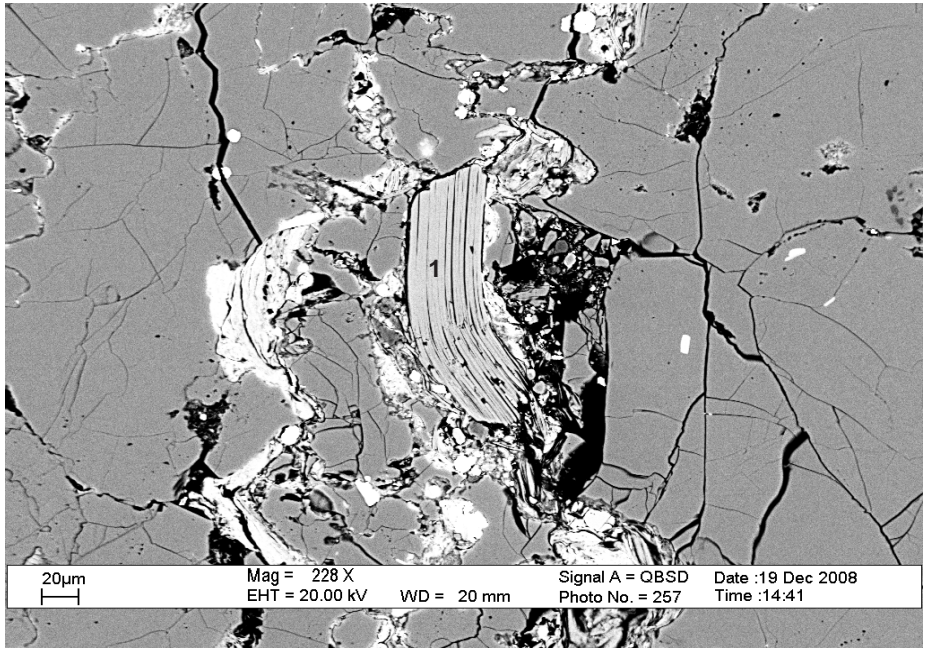


Figure 14: 4528.03B m., Muscovite (pos.1)

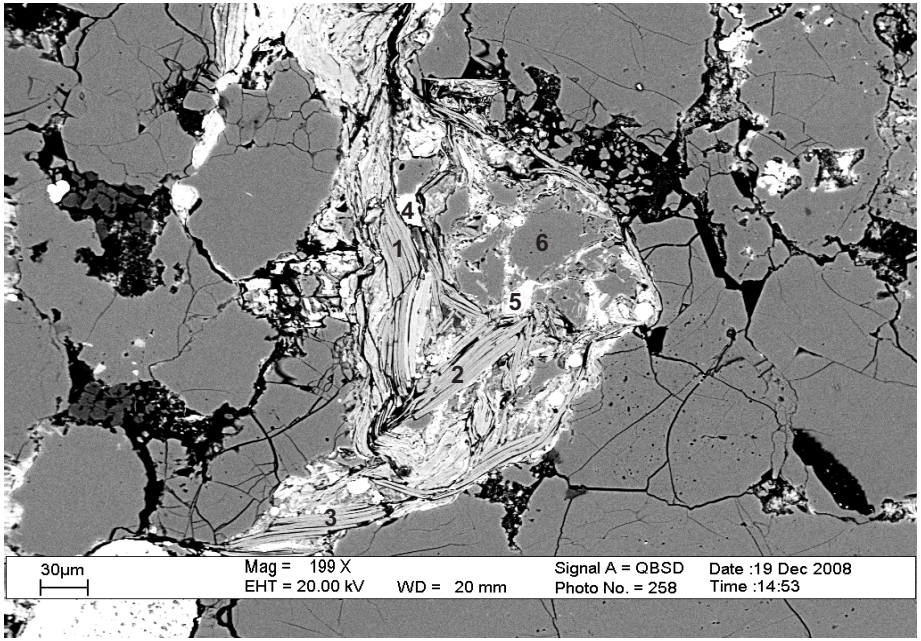


Figure 15: 4528.03B m., Muscovite (pos.1,2,3); Siderite (pos.4) and phosphate (pos. 5), all associated with quartz (pos.6)

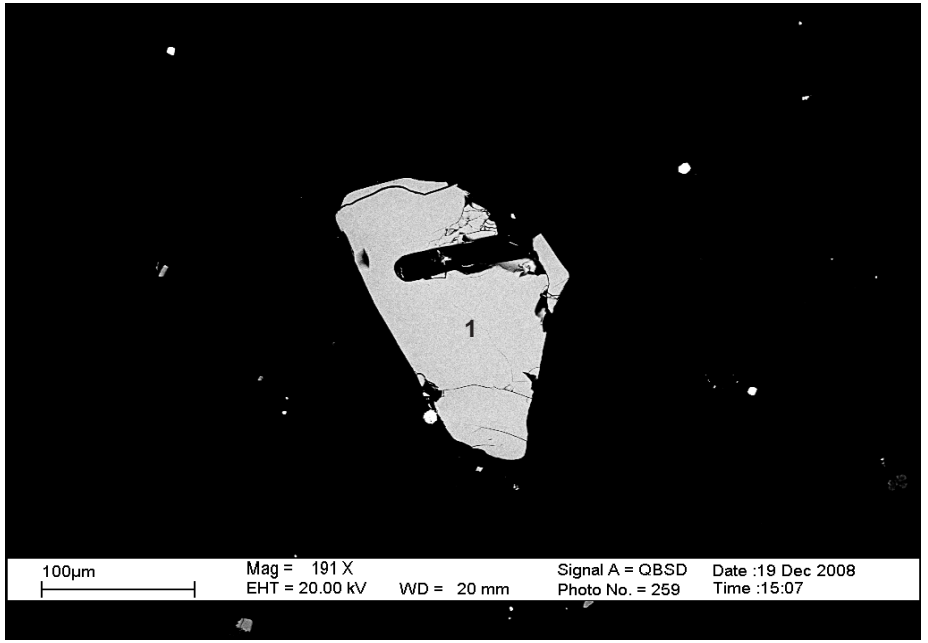


Figure 16: 4528.03B m., Chromite (pos.1)

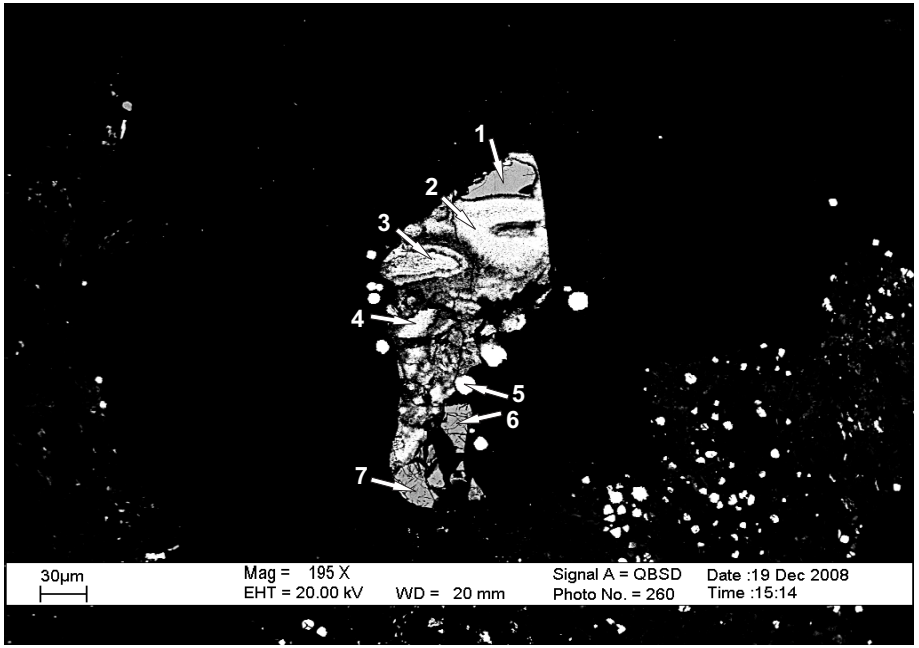


Figure 17: 4528.03B m., Chromian spinel (pos.1,6,7) and chromite (pos.2,4) with pyrite (pos.5) and alteration (pos.3)

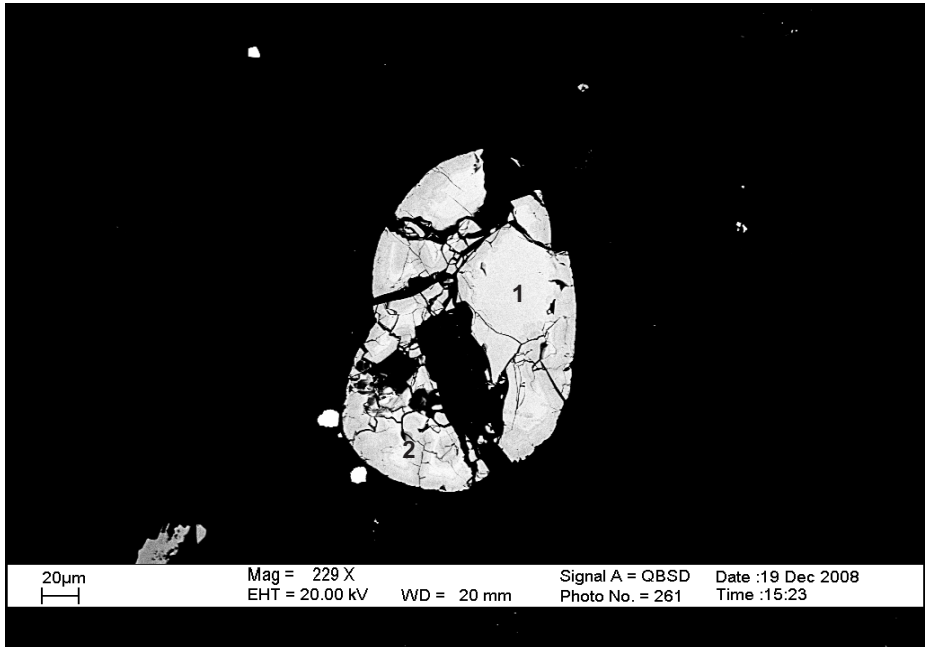


Figure 18: 4528.03B m., Chromite (pos.1,2)

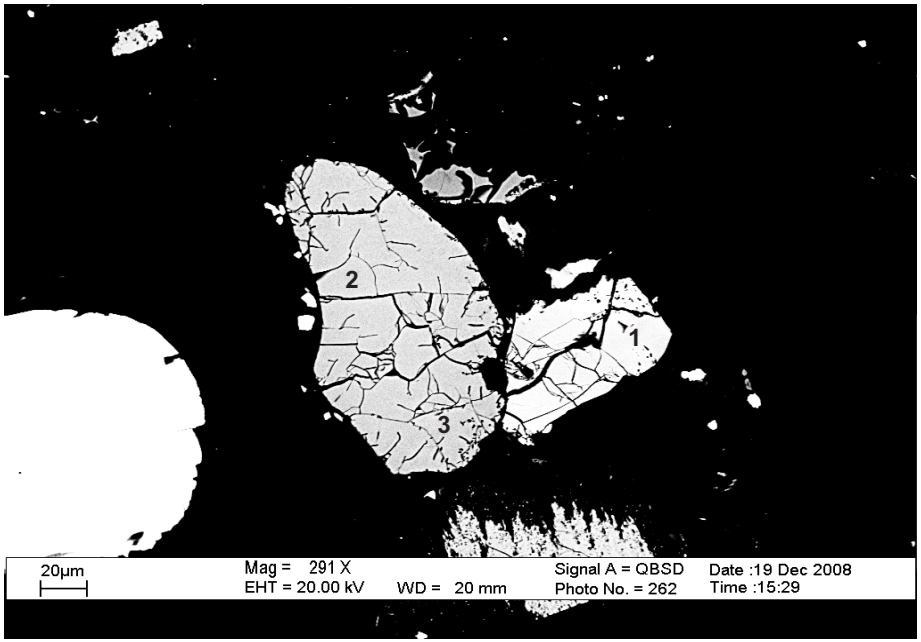


Figure 19: 4528.03B m., Chromian spinel (pos.1,2,3)

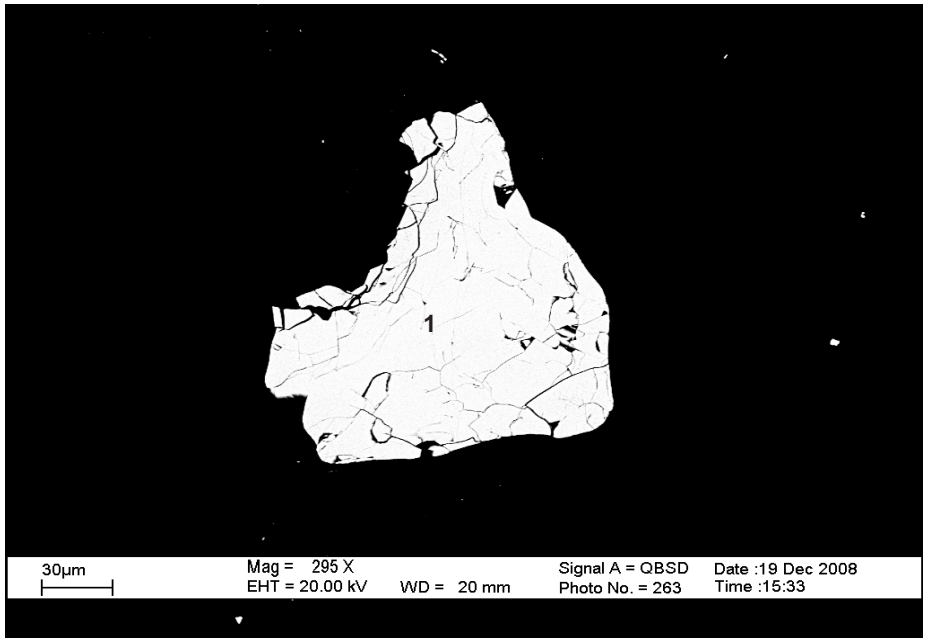


Figure 20: 4528.03B m., Chromite (pos.1)

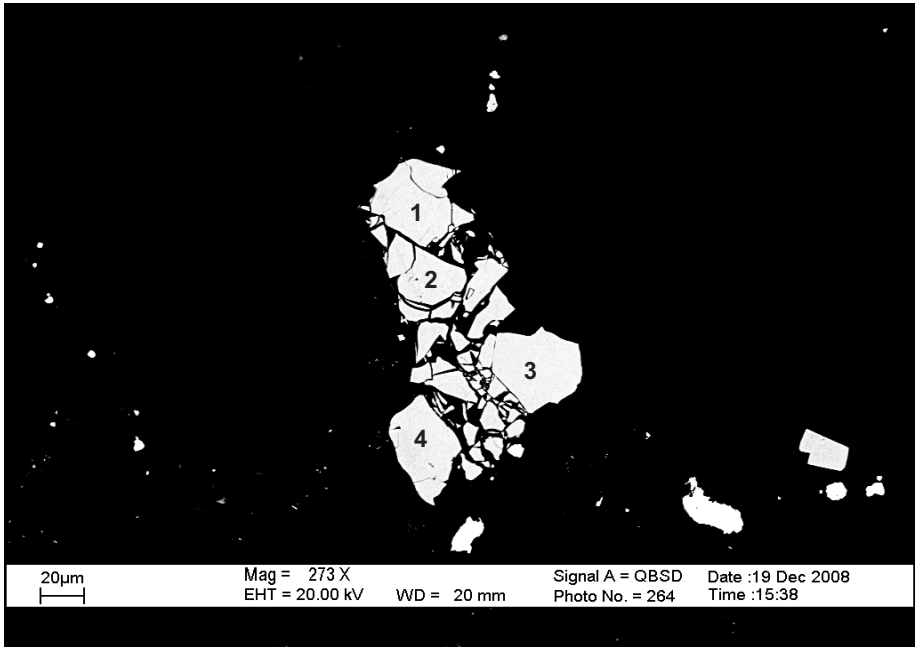


Figure 21: 4528.03B m., Chromian spinel (pos.1,2,3,4)

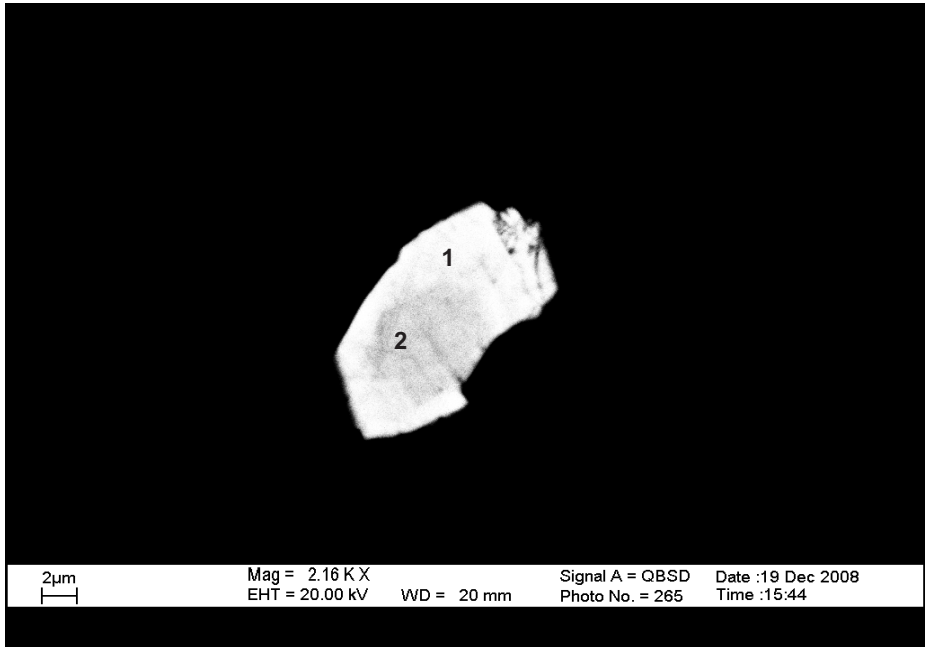


Figure 22: 4528.03B m., Barite (pos.1,2)

Figure 23: 4528.03B m., Barite (pos.1,2)

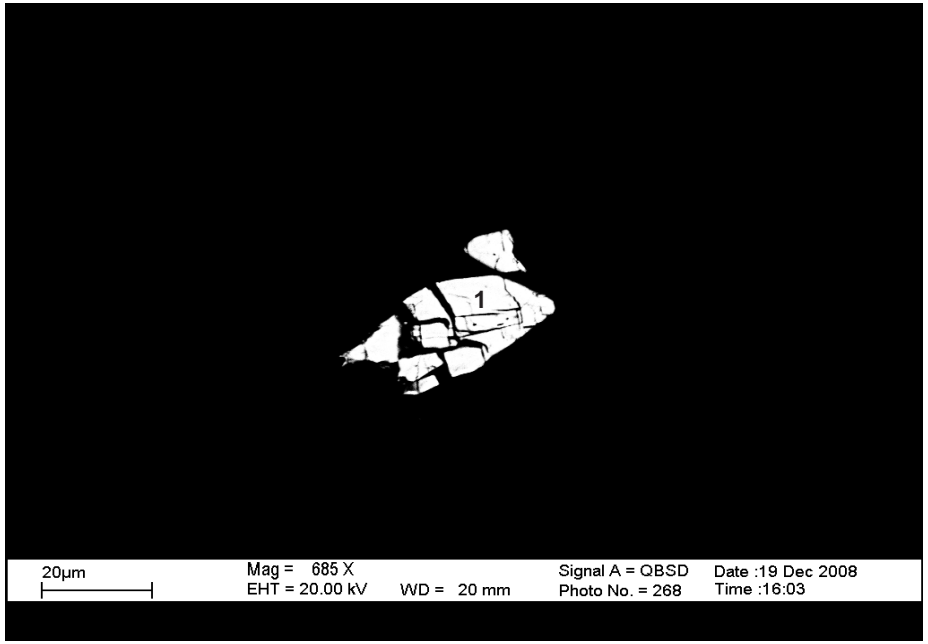


Figure 24: 4528.03B m., Barite (pos.1)

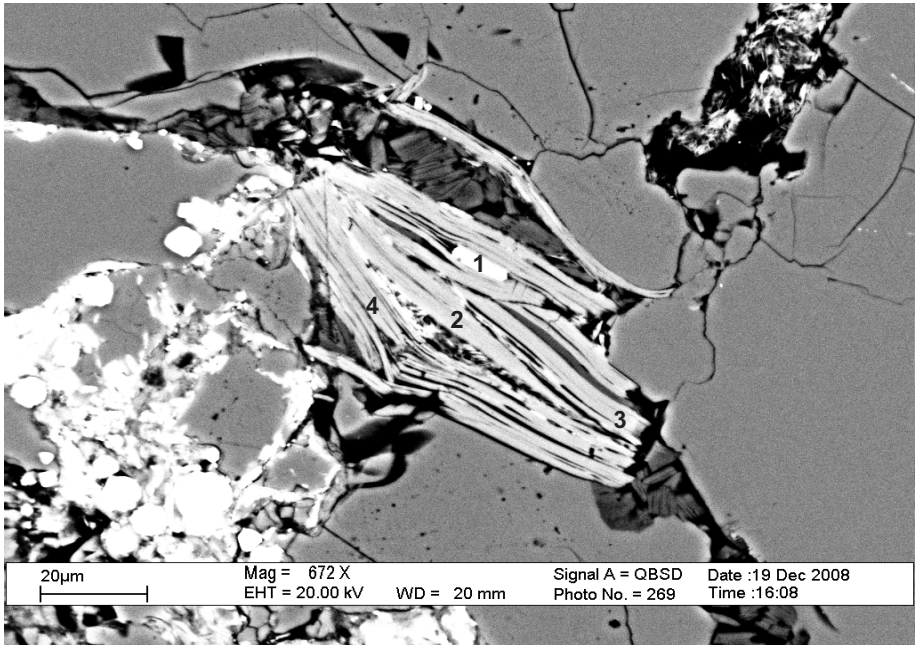


Figure 25: 4528.03B m., Apatite (pos.1) inclusion in muscovite (pos.2-4)

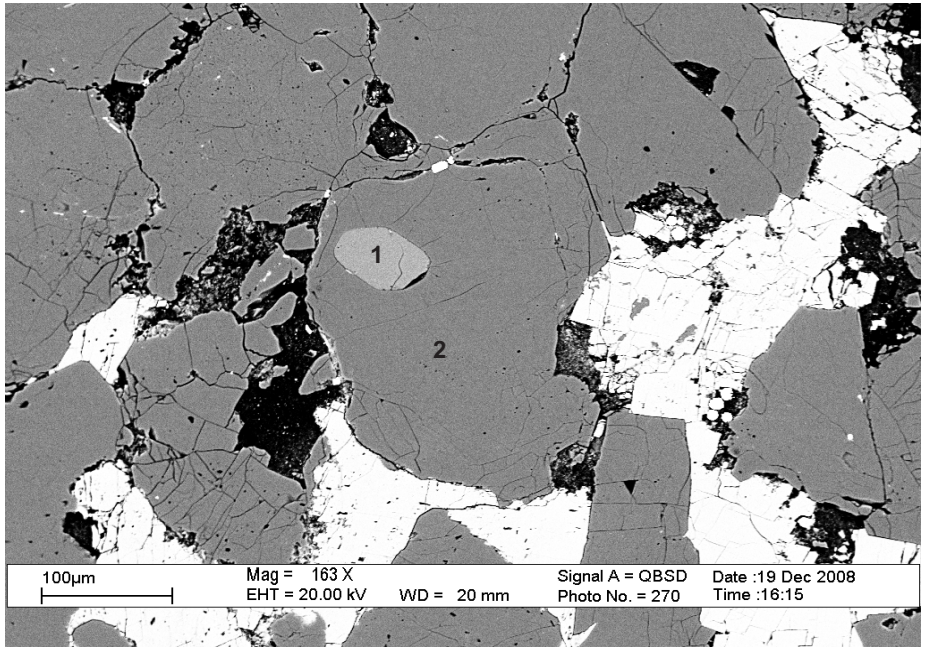


Figure 26: 4528.03B m., Albite (pos.1) inclusion in quartz (pos.2)

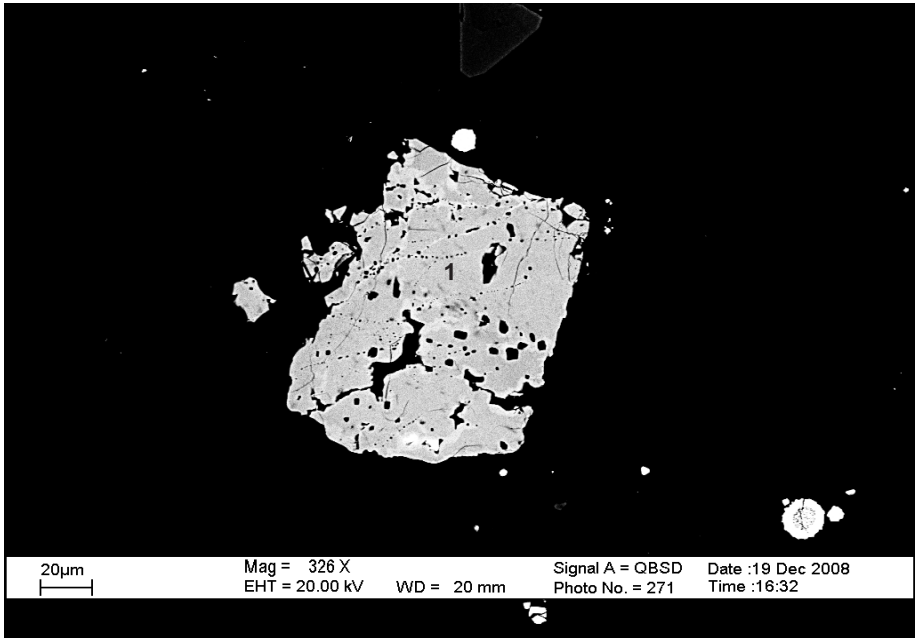


Figure 27: 4528.03B m., Chromite (pos.1)

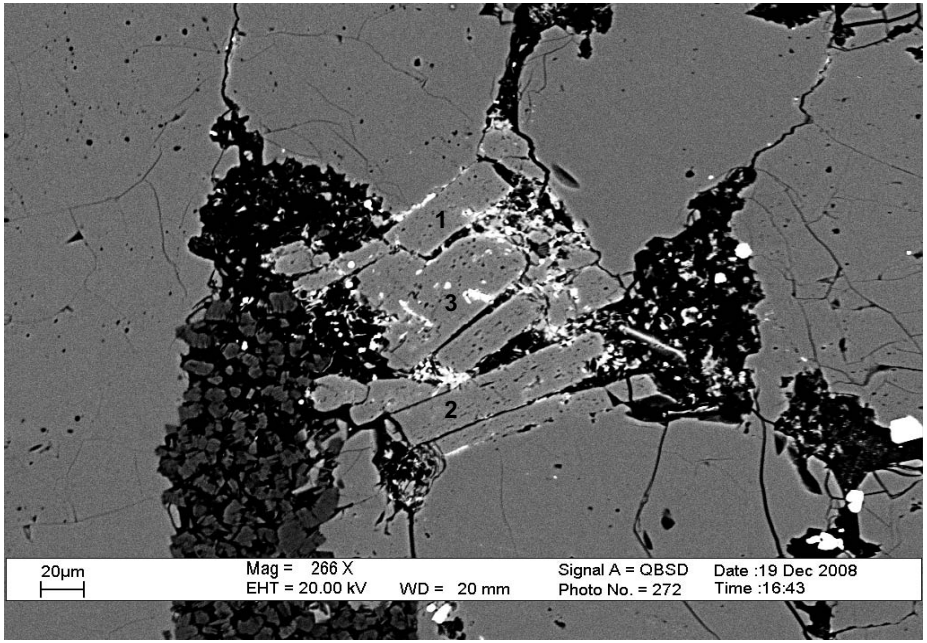


Figure 28: 4528.03B m., Albite (pos.1,2,3)

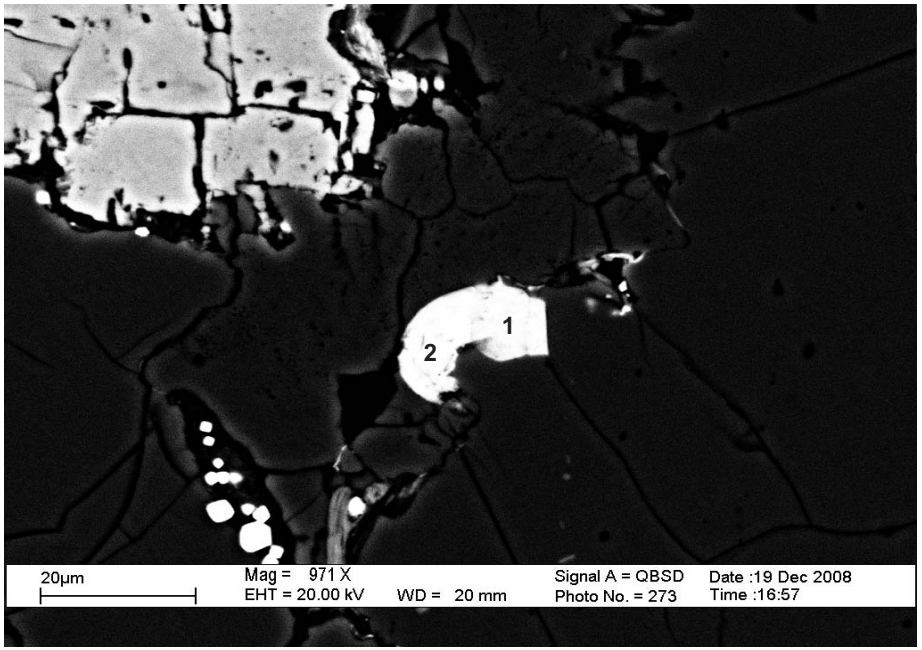


Figure 29: 4528.03B m., Mg-chlorite (pos.1,2)

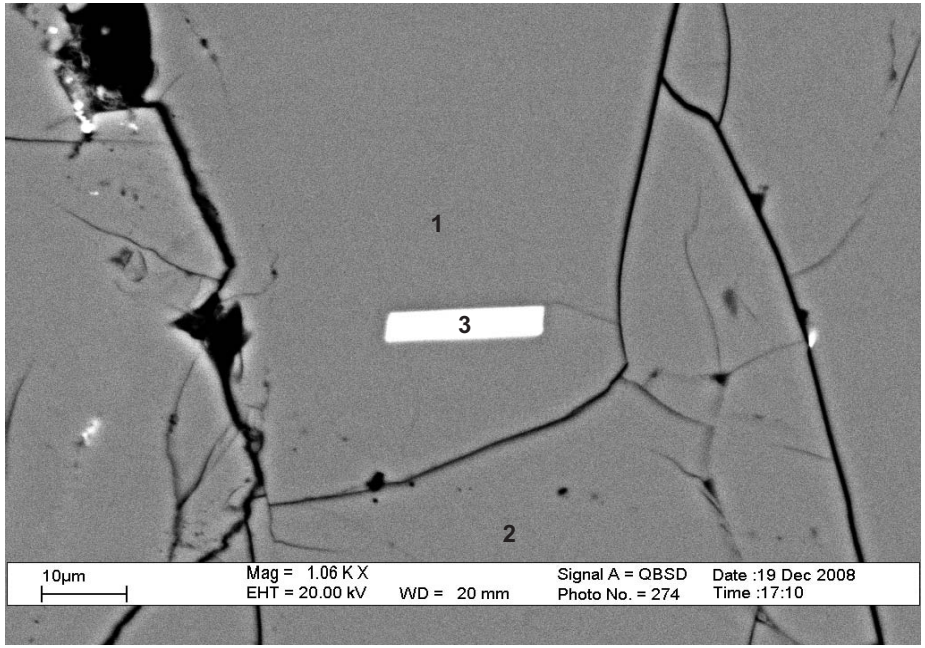


Figure 30: 4528.03B m., Quartz (pos.1,2) with biotite inclusion (pos.3)

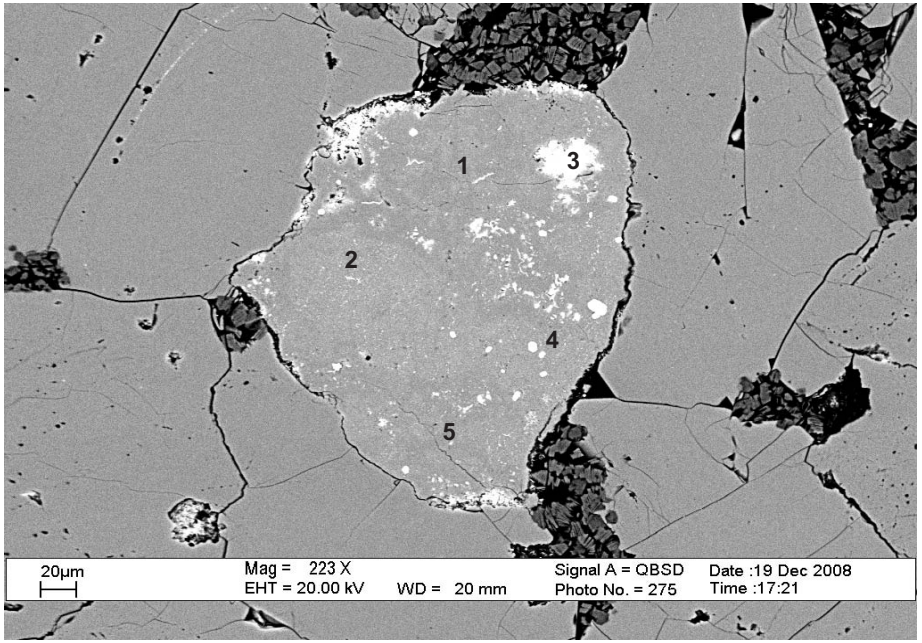


Figure 31: 4528.03B m., Clast, mostly quartz (pos.1,2,4,5) with chlorite (pos.3)

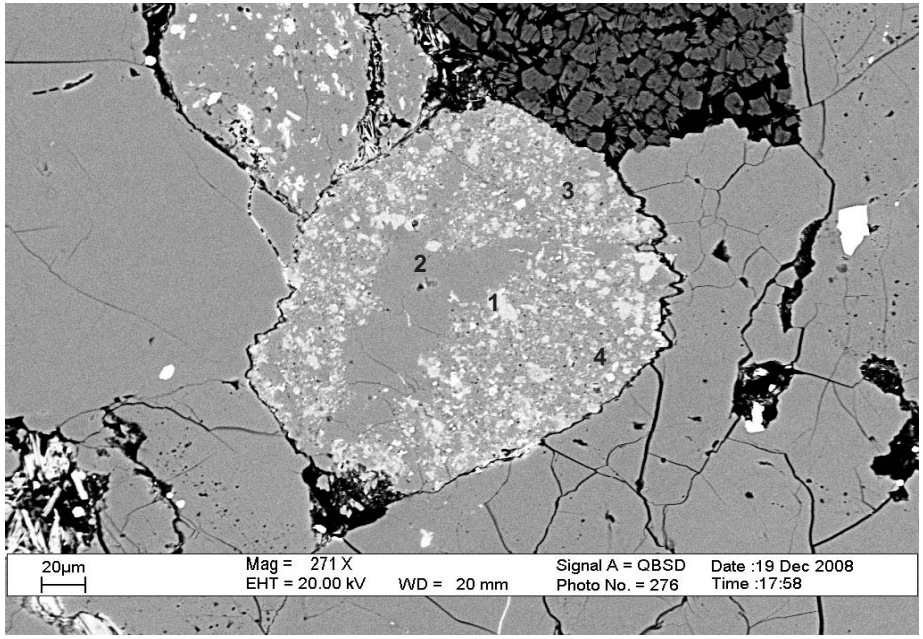


Figure 32: 4528.03B m., Clast (pos.1-4): 2,3,4 (mostly quartz), 1 (K-feldspar?)

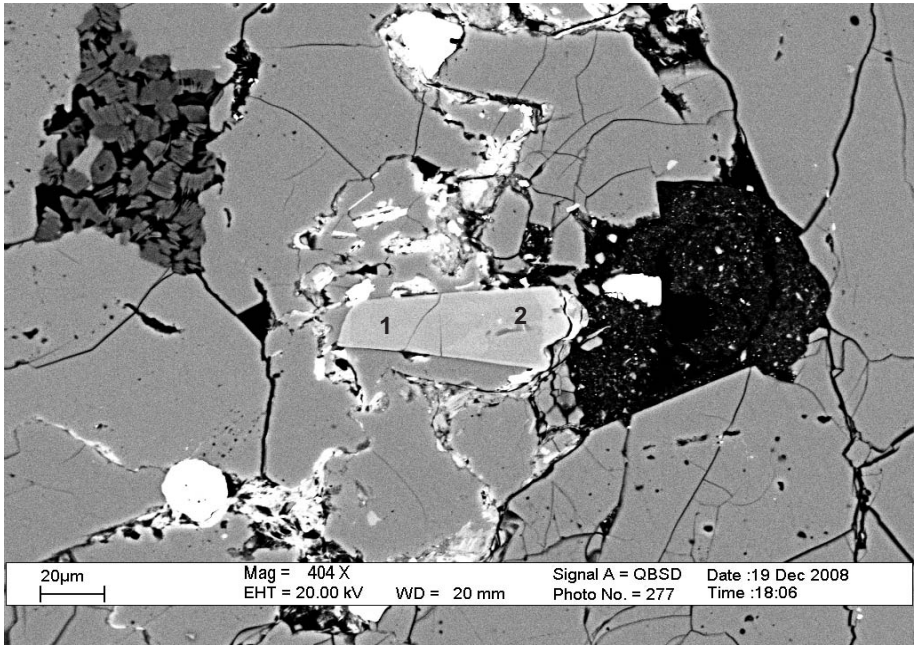


Figure 33: 4528.03B m., Tourmaline (pos.1,2)

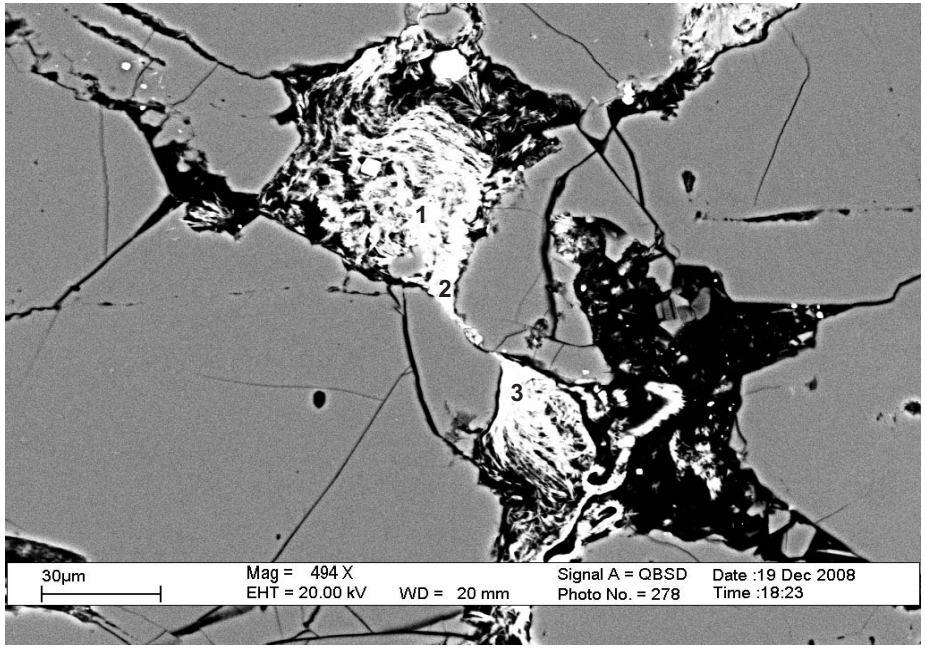


Figure 34: 4528.03B m., Chlorite (pos.1,2,3)

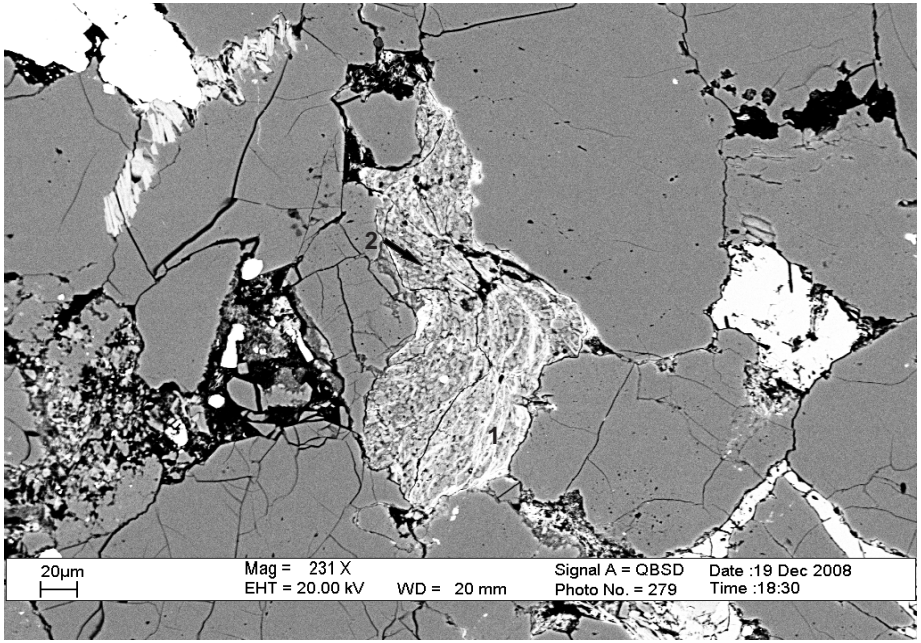


Figure 35: 4528.03B m., Chlorite (pos.1); Chlorite+ K-feldspar + Quartz (pos. 2)

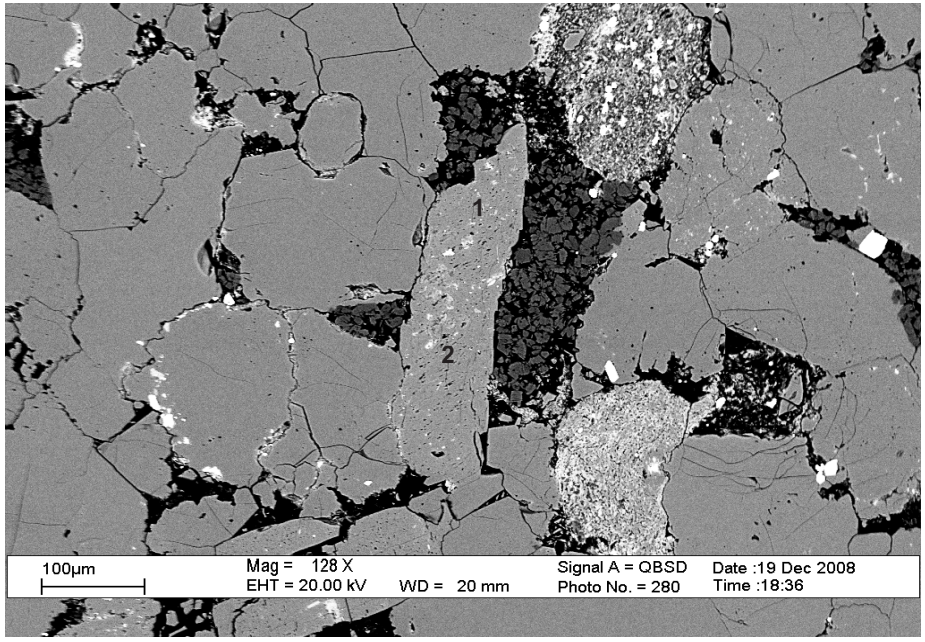


Figure 36: 4528.03B m., Albite (pos.1) with alteration? (pos.2)

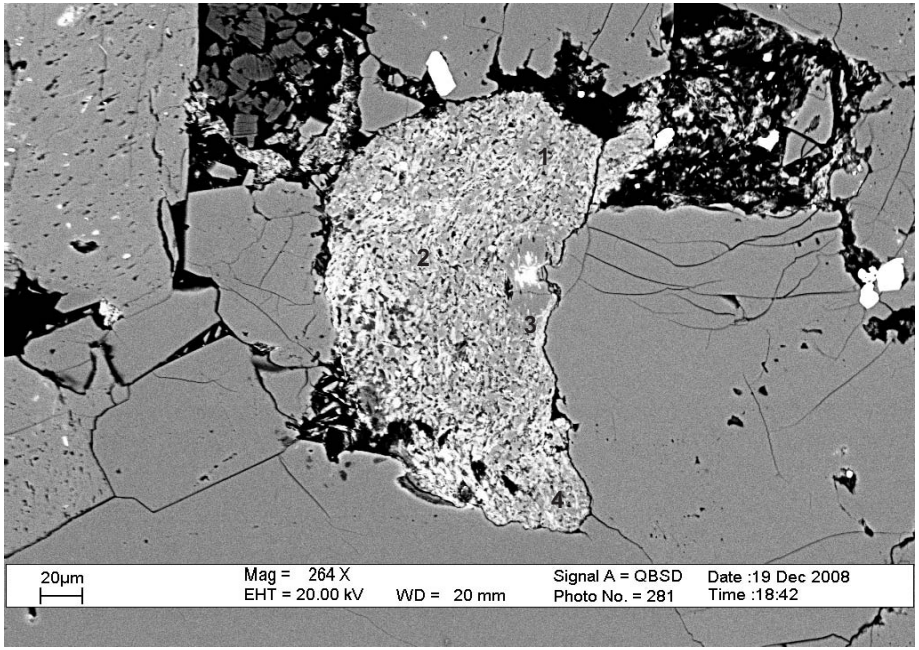


Figure 37: 4528.03B m., Clast altering (pos.1-4)

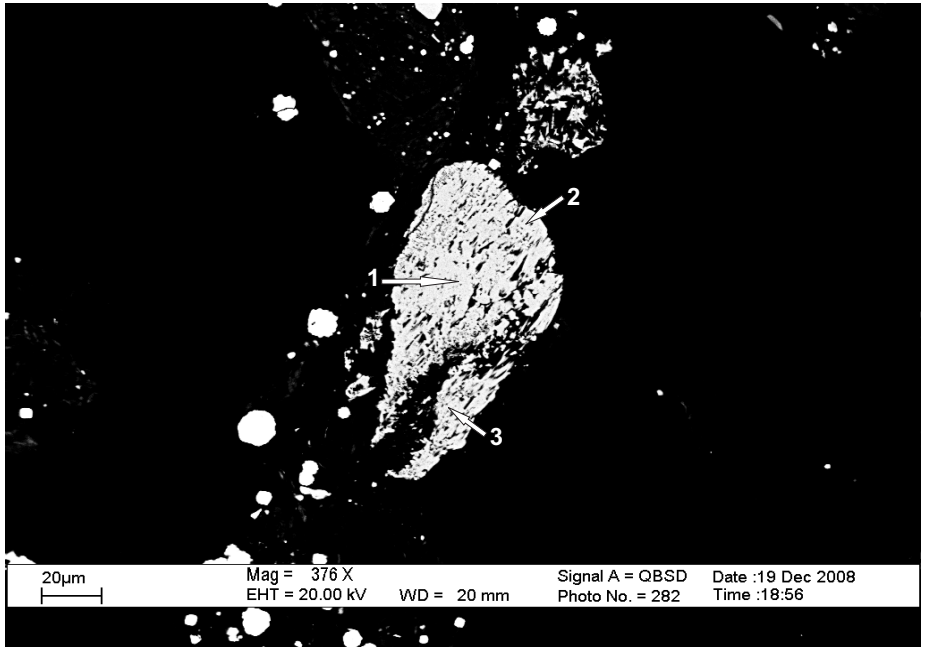


Figure 38: 4528.03B m., Rutile (pos.1,2,3)

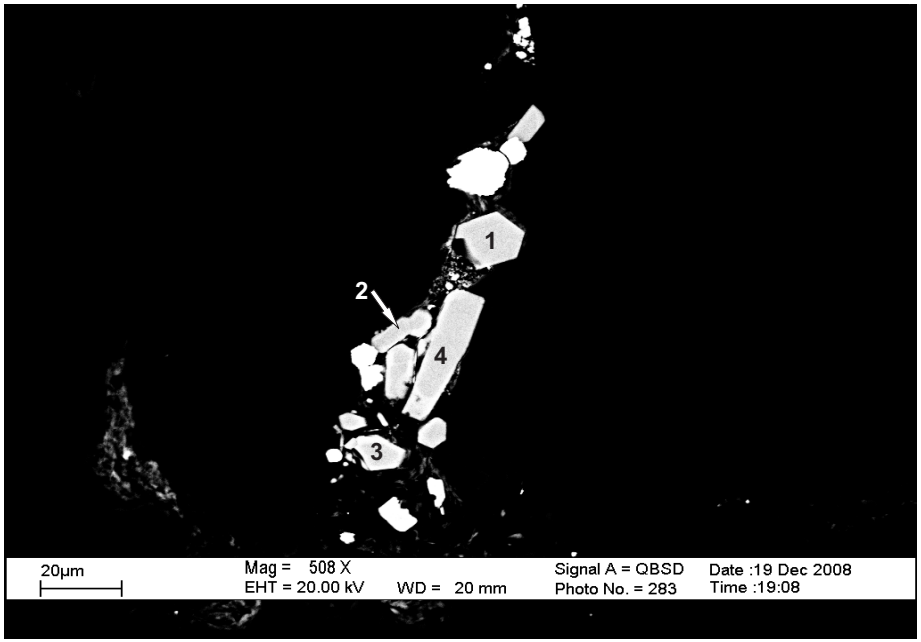


Figure 39: 4528.03B m., Clot of diagenetic phosphate mineral (?) (pos.1-4)

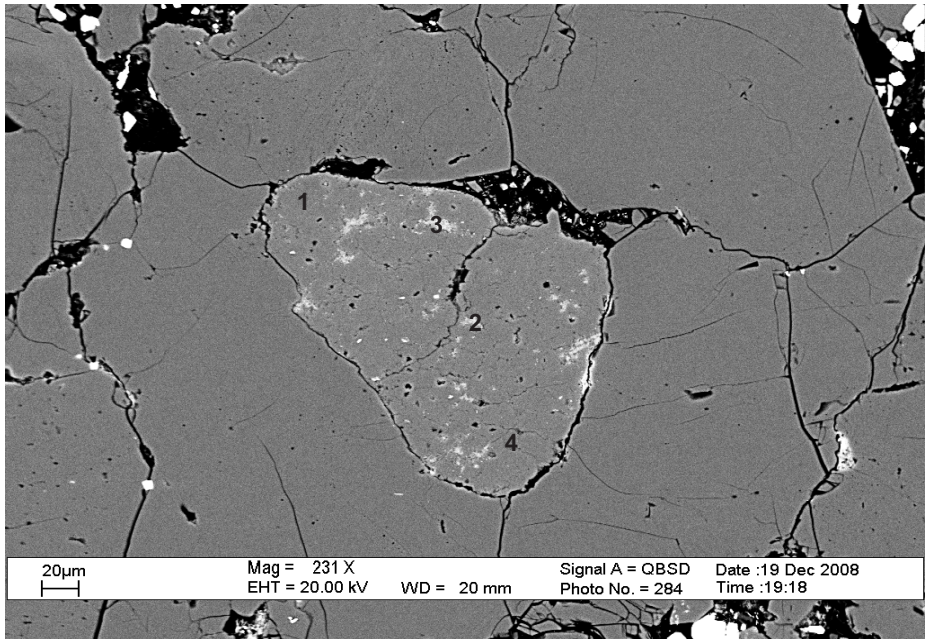


Figure 40: 4528.03B m., Clast of quartz (pos.1) and (?) K-feldpsar (pos.2,3,4)

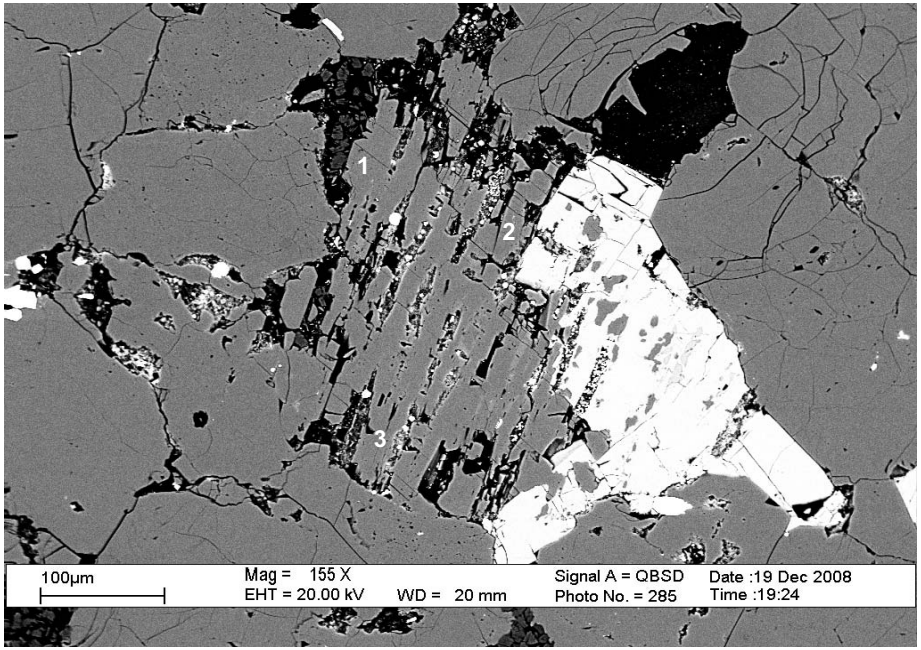


Figure 41: 4528.03B m., Albite (pos.1,2,3)

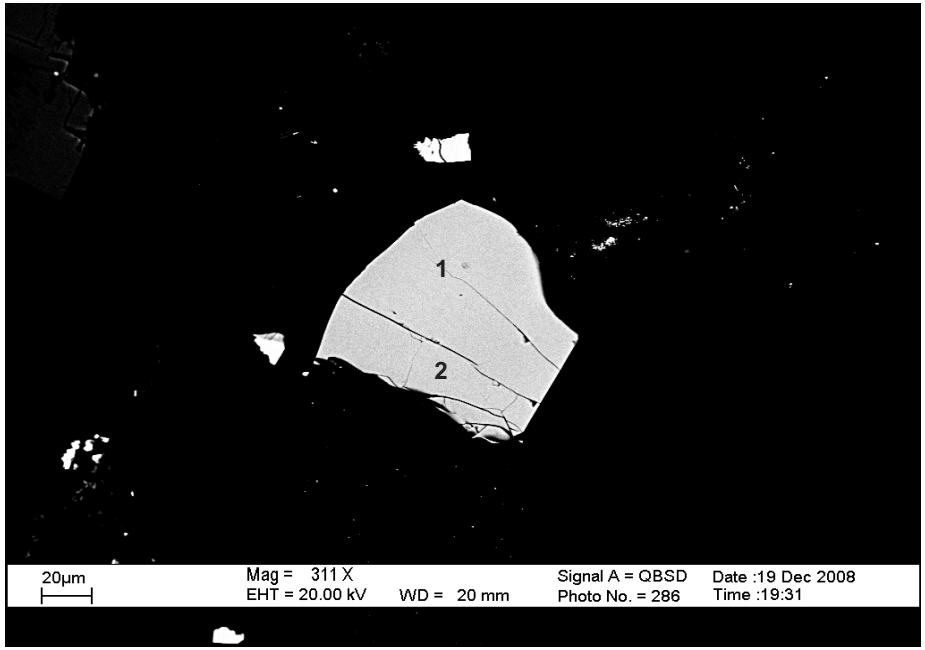


Figure 42: 4528.03B m., Chromian spinel (pos.1,2)

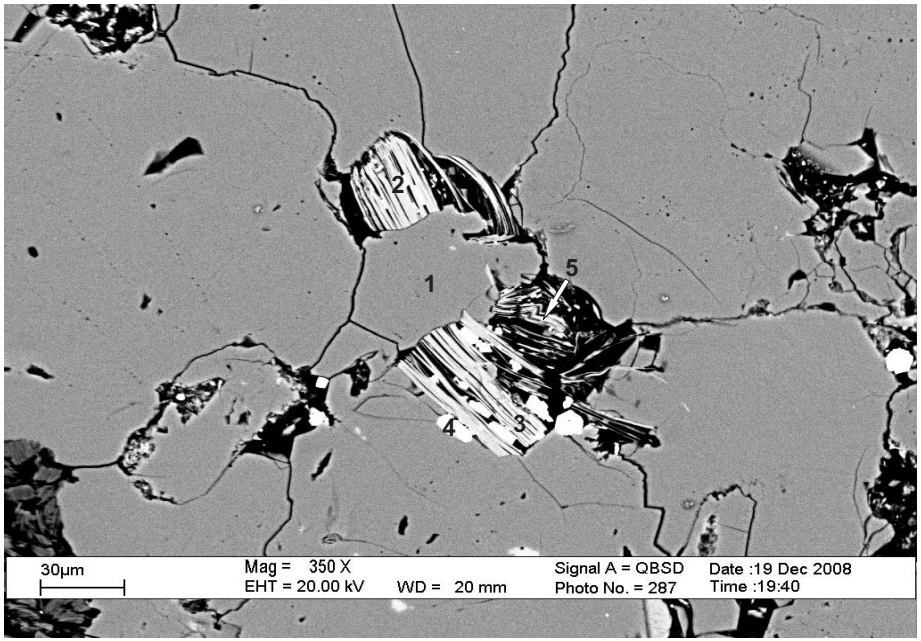


Figure 43: 4528.03B m., Quartz (pos.1), apatite (pos.4) and hydromuscovite (pos.2,3,5)

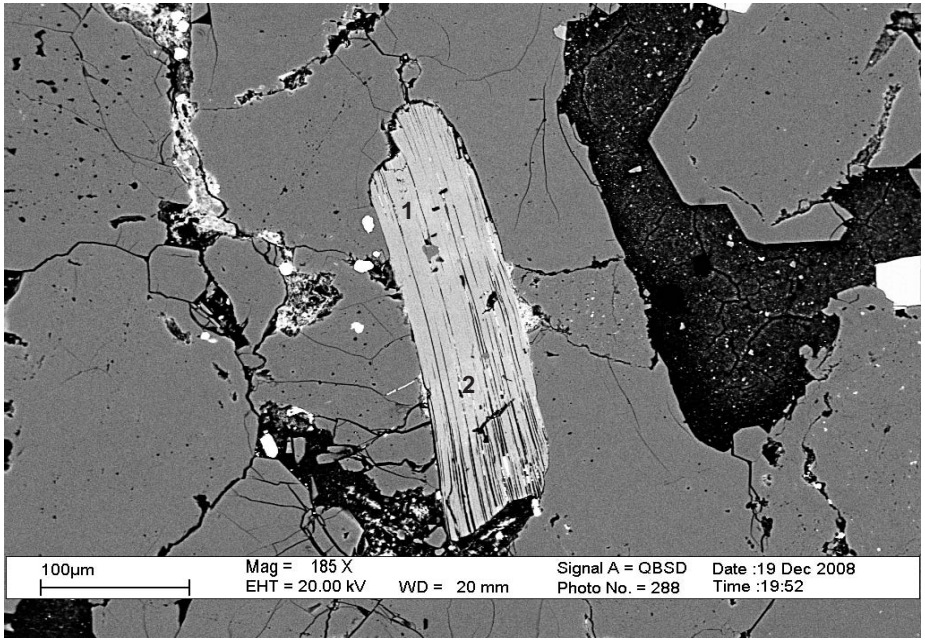


Figure 44: 4528.03B m., Muscovite (pos.1,2)

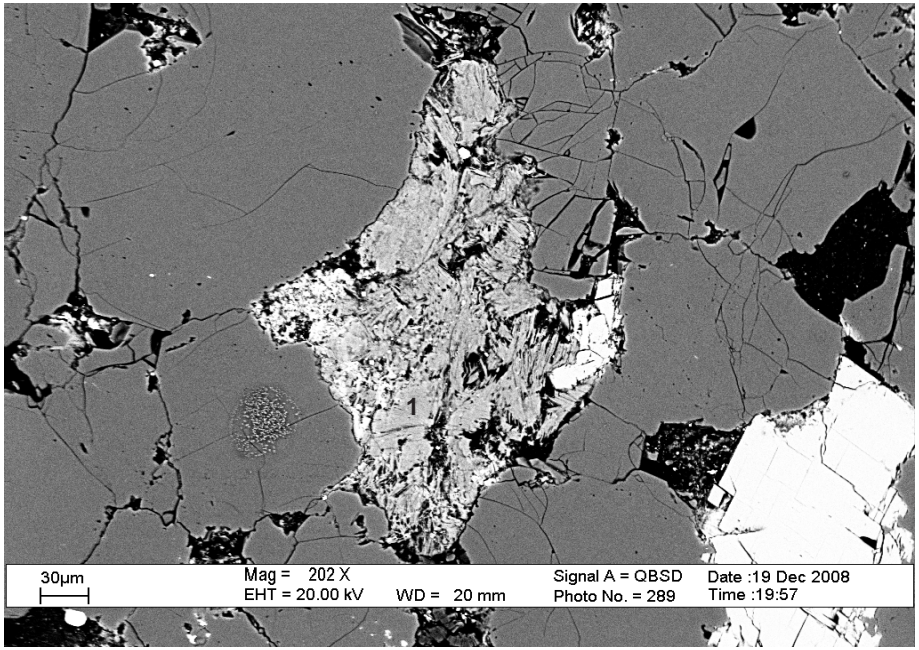


Figure 45: 4528.03B m., Muscovite (pos.1)

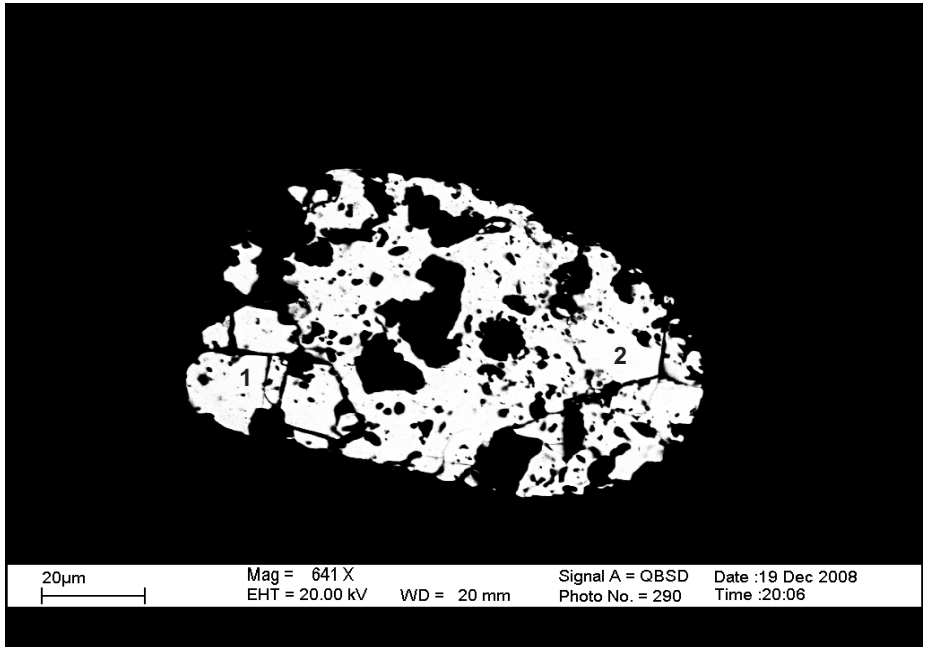


Figure 46: 4528.03B m., Monazite (pos.1,2)

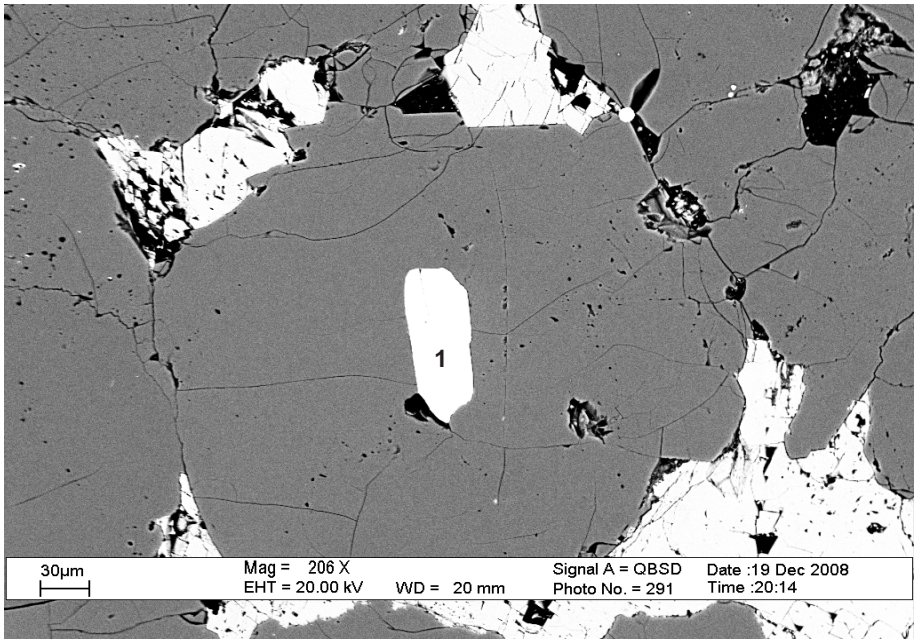


Figure 47: 4528.03B m., Biotite (pos.1) within quartz

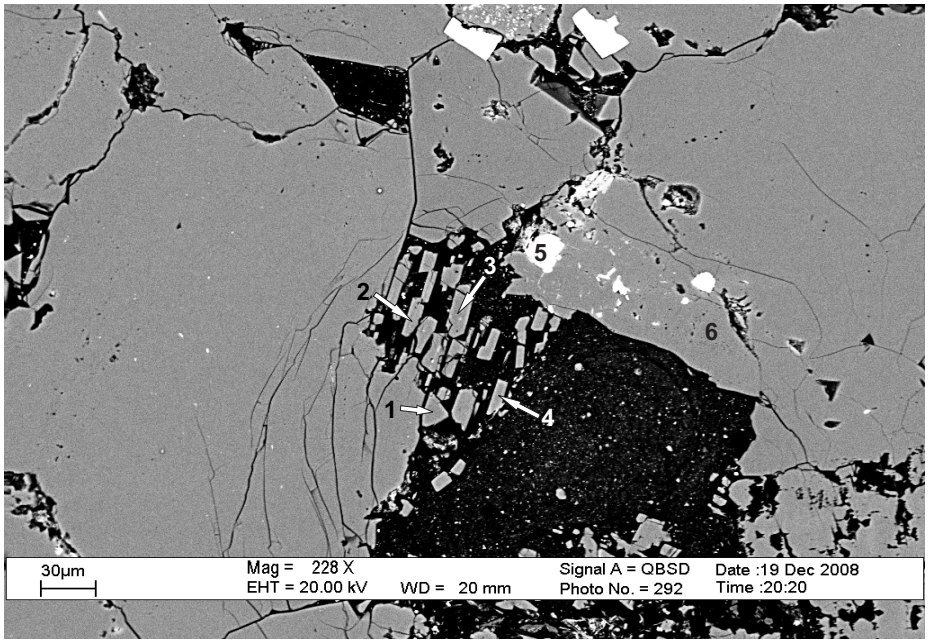


Figure 48: 4528.03B m., Albite (pos.2,3,4) with quartz (pos.1,6) and chlorite inclusion in quartz (pos.5)

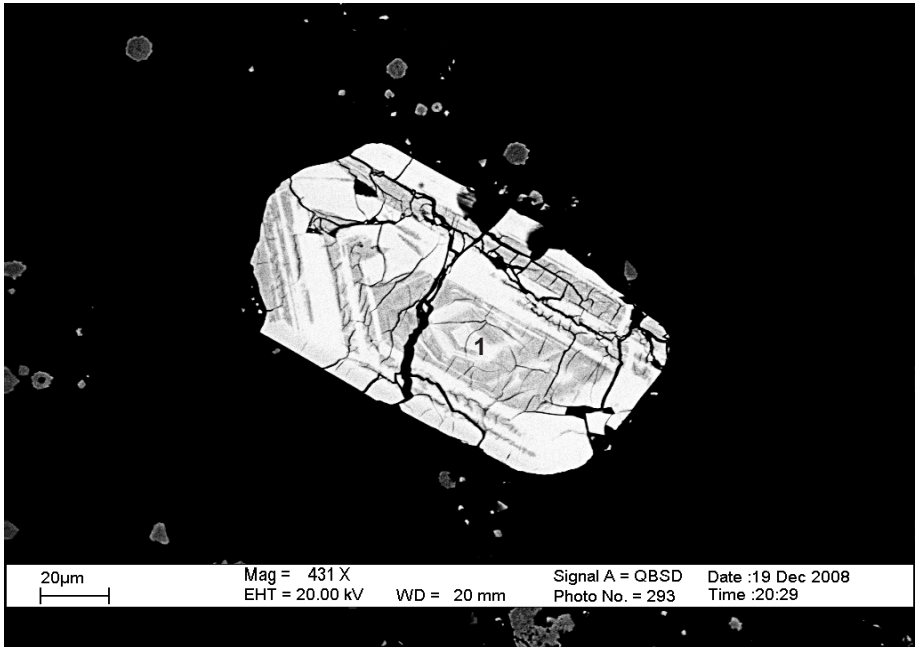


Figure 49: 4528.03B m., Zircon (pos.1)

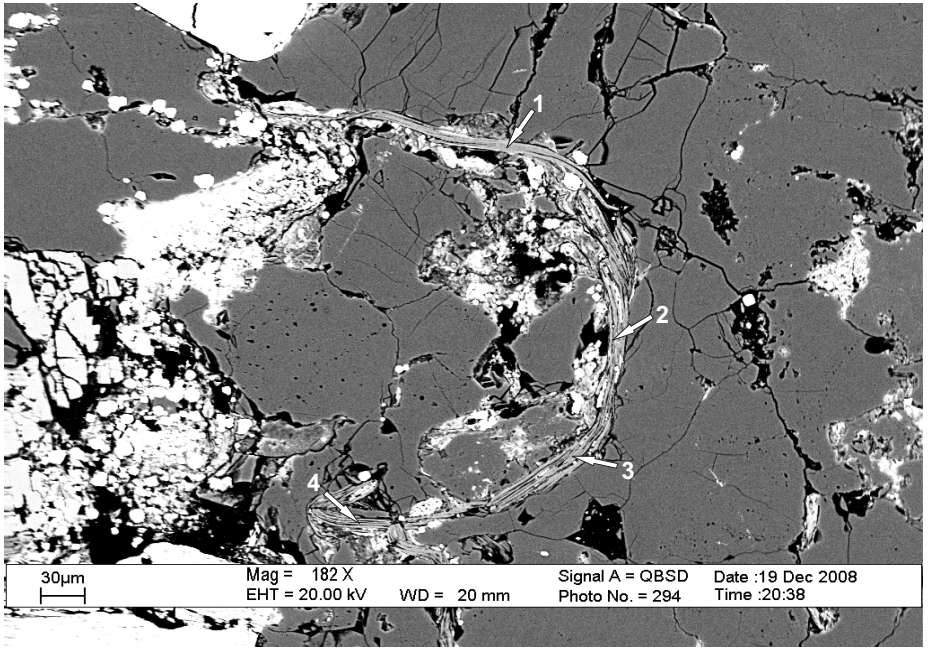


Figure 50: 4528.03B m., Muscovite (pos.1-4)

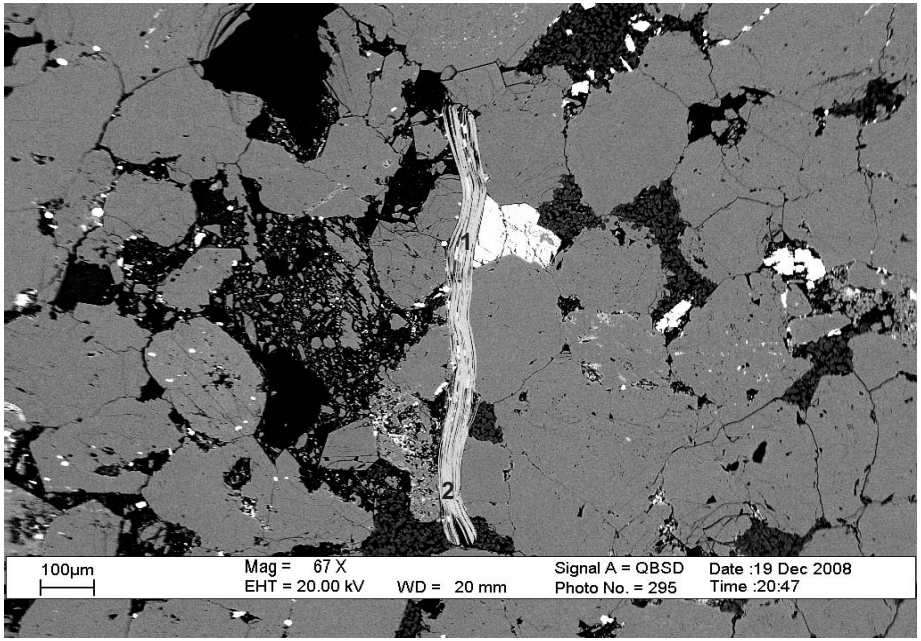


Figure 51: 4528.03B m., Muscovite (pos.1,2)

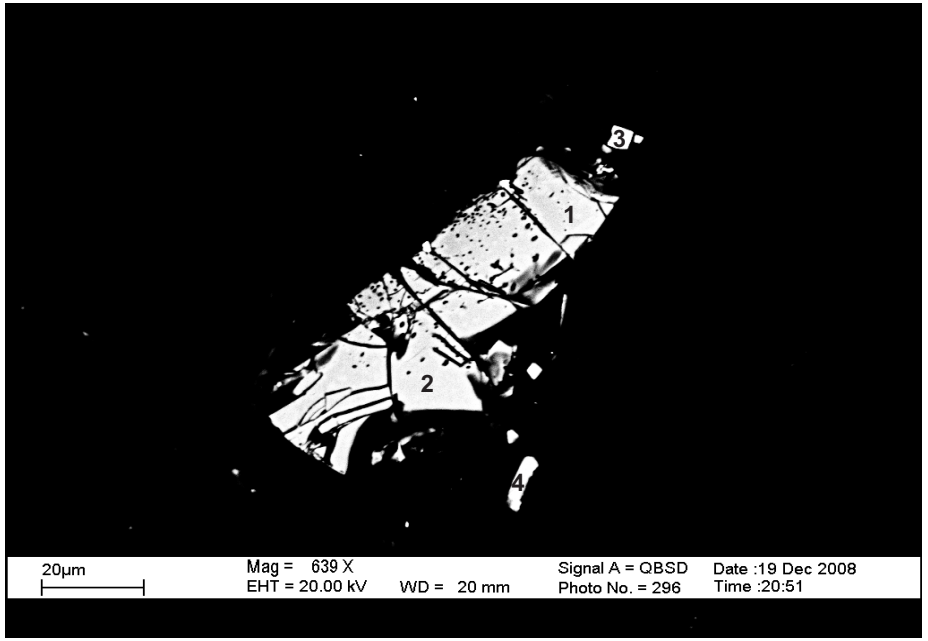


Figure 52: 4528.03B m., Chromian spinel (pos.1,2), pyrite (pos.3), and rutile (pos.4)

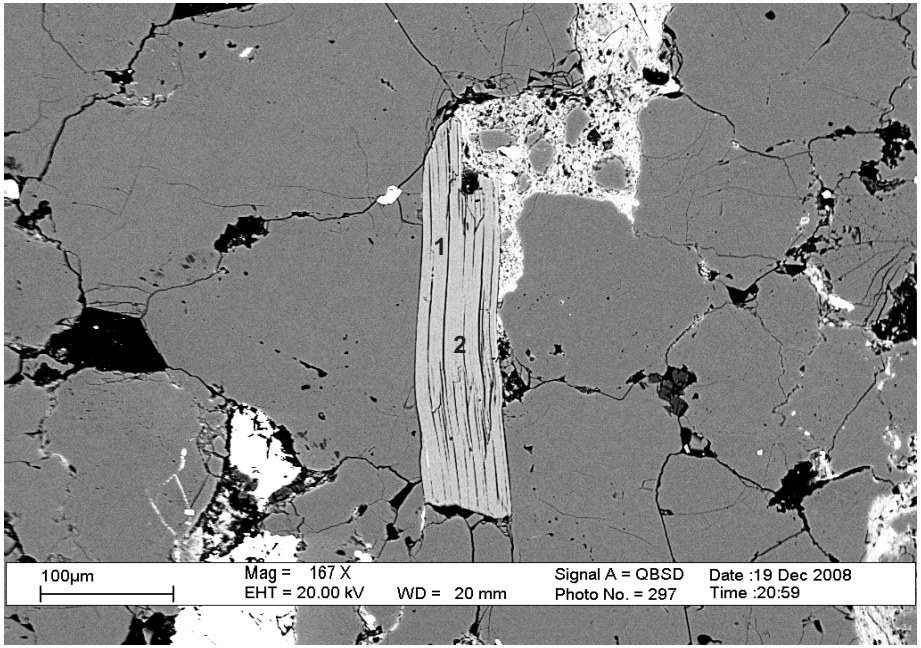


Figure 53: 4528.03B m., Muscovite (pos.1,2)

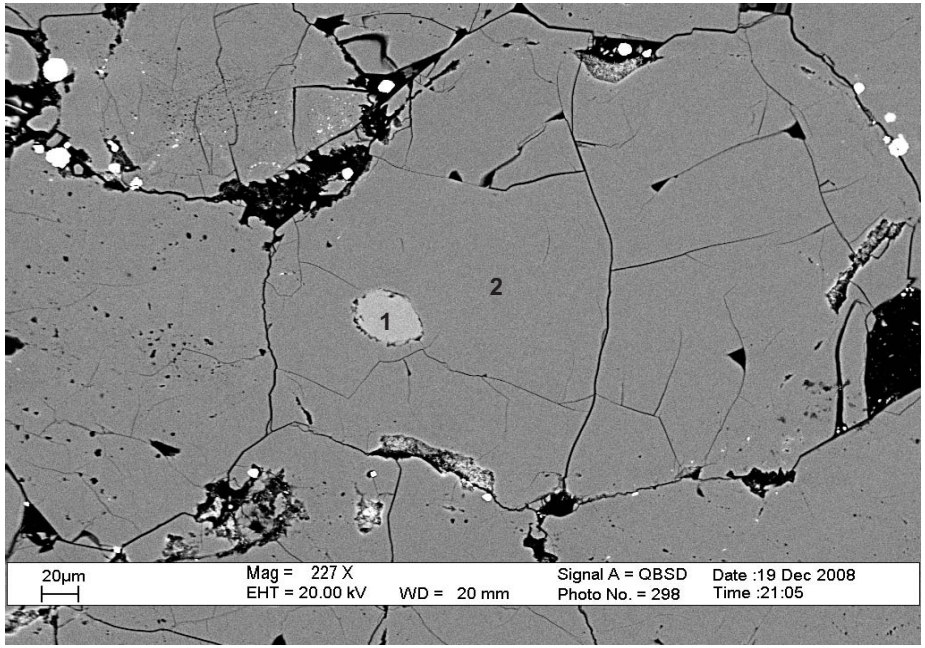


Figure 54: 4528.03B m., Plagioclase (pos.1) inclusion in quartz (pos.2)

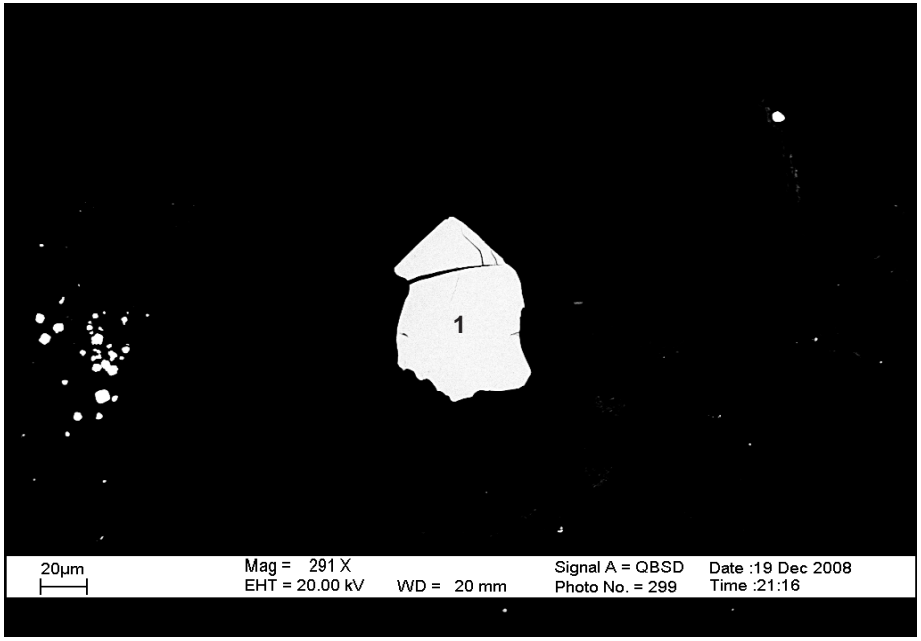


Figure 55: 4528.03B m., Chromian spinel (pos.1)

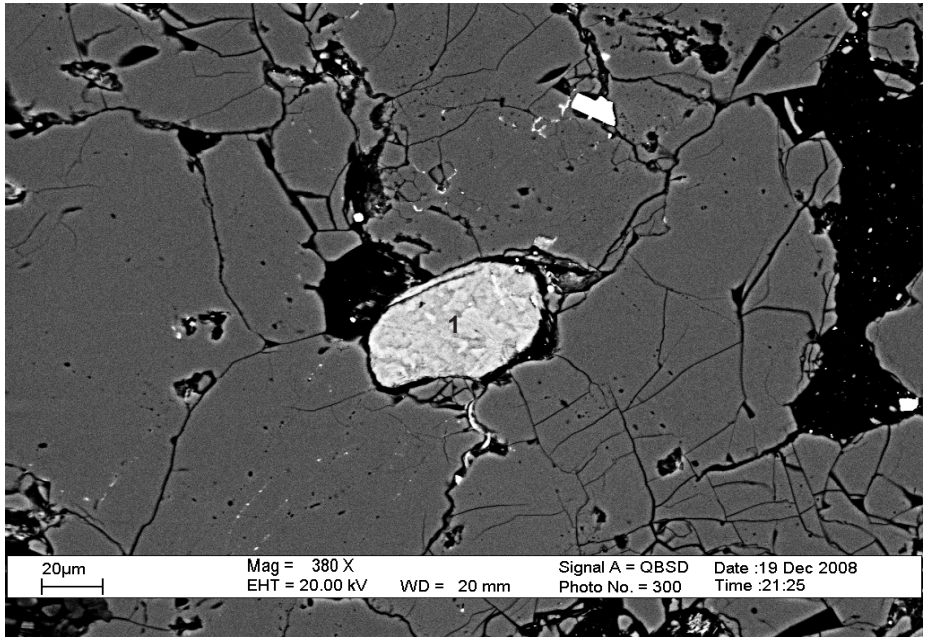


Figure 56: 4528.03B m., Illite (pos.1)

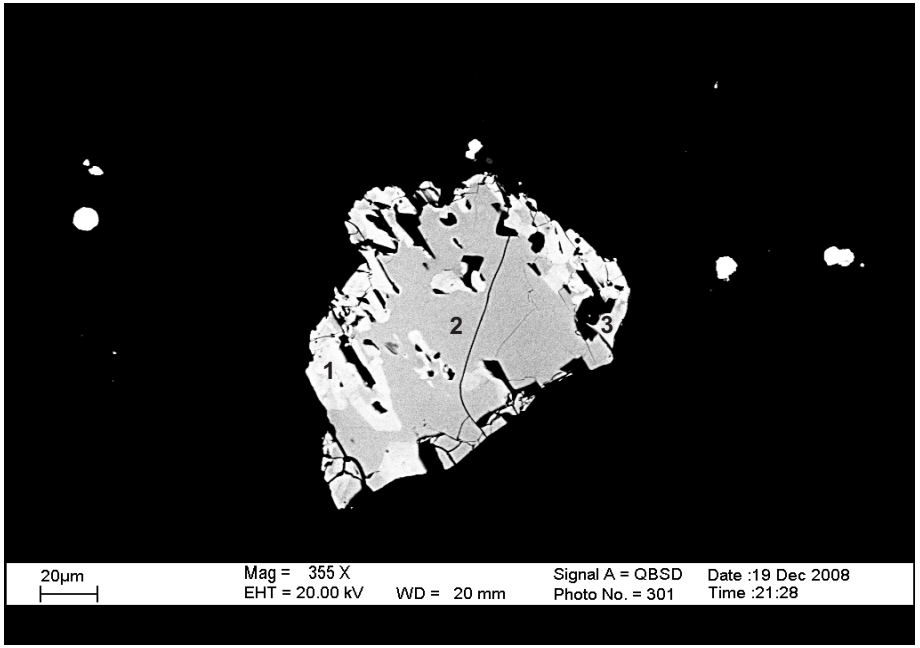


Figure 57: 4528.03B m., Chromite (pos.1-3)

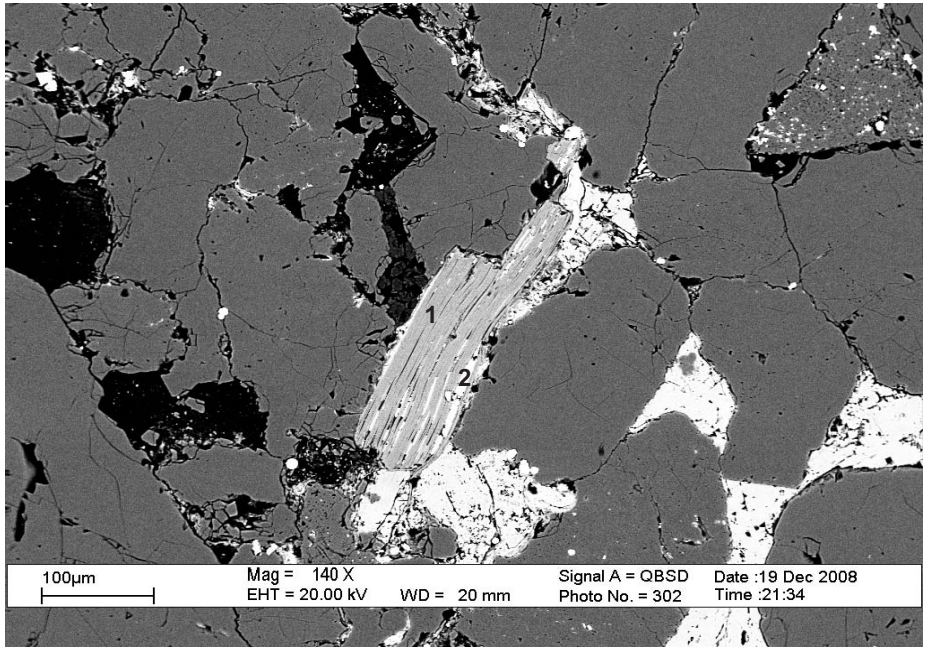


Figure 58: 4528.03B m., Illite (pos.1) and phosphate minerals (pos.2)

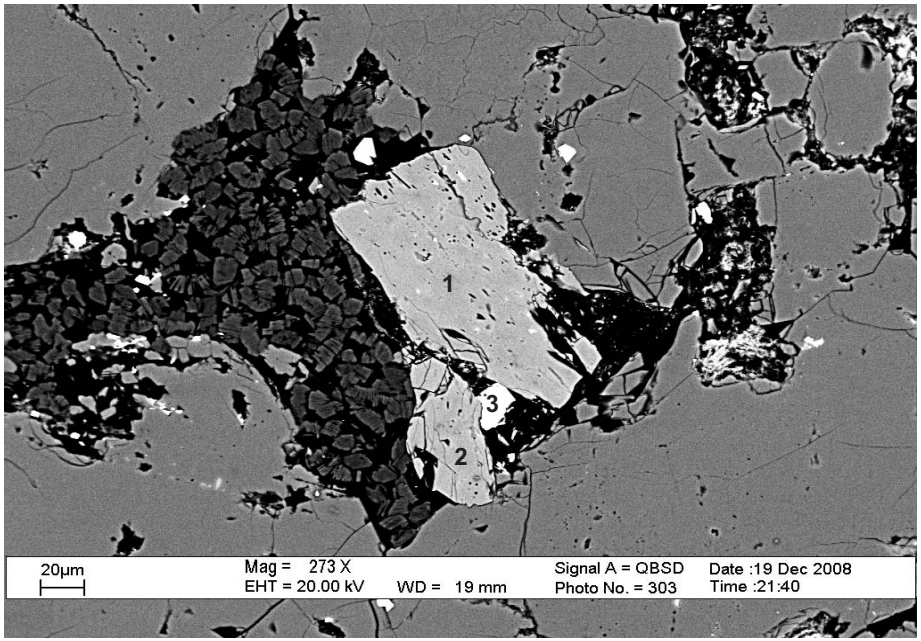


Figure 59: 4528.03B m., Tourmaline (pos.1,2) with rutile (pos.3)

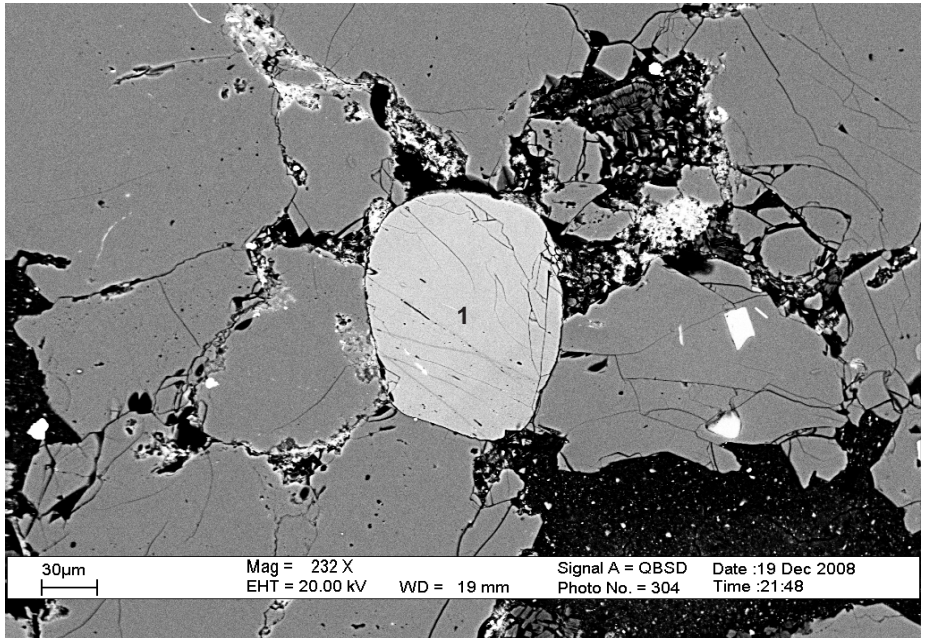


Figure 60: 4528.03B m., Tourmaline (pos.1)

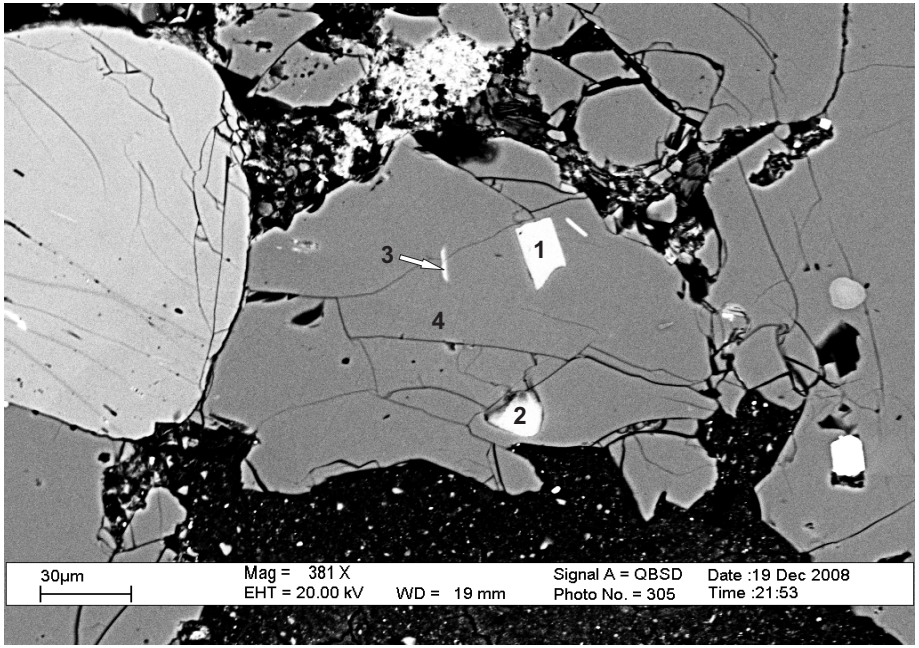


Figure 61: 4528.03B m., Chlorite inclusions (pos.1-3) within quartz (pos.4)

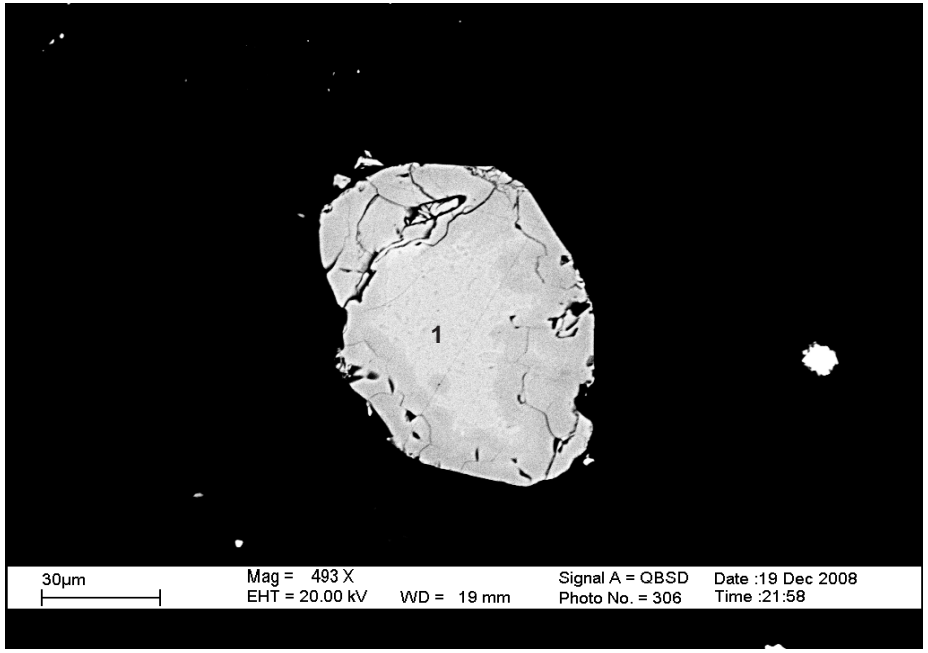


Figure 62: 4528.03B m., Chromite (pos.1)

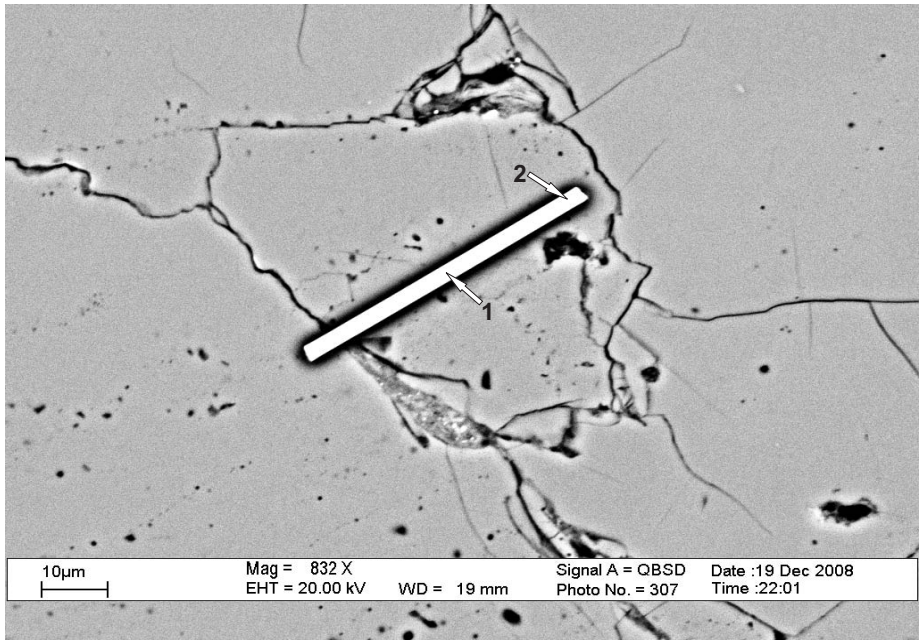


Figure 63: 4528.03B m., Mixture (pos.1,2)

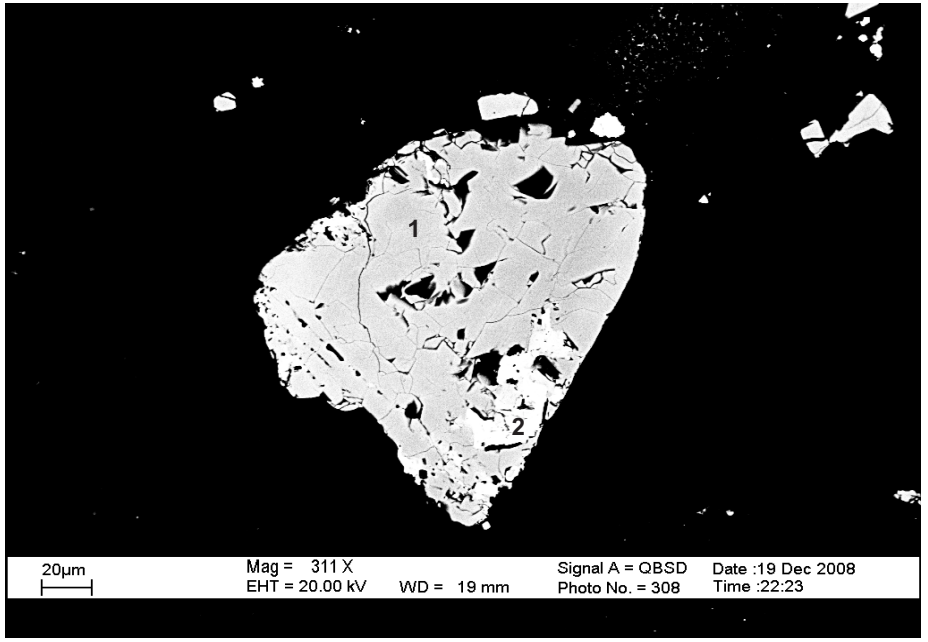


Figure 64: 4528.03B m., (?) Chromian spinel (pos.1) and chromite (pos.2)

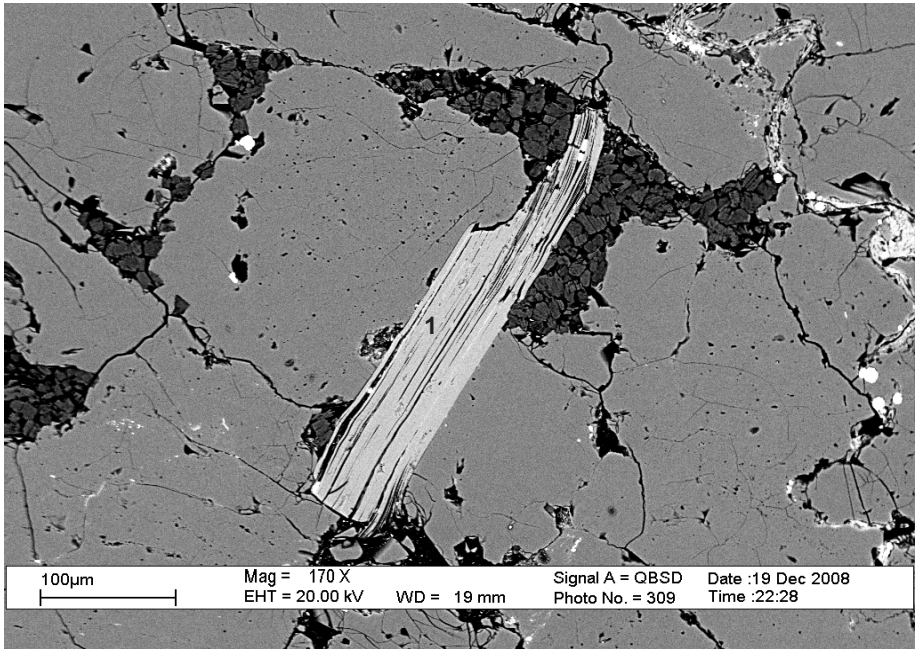


Figure 65: 4528.03B m., Muscovite (pos.1)

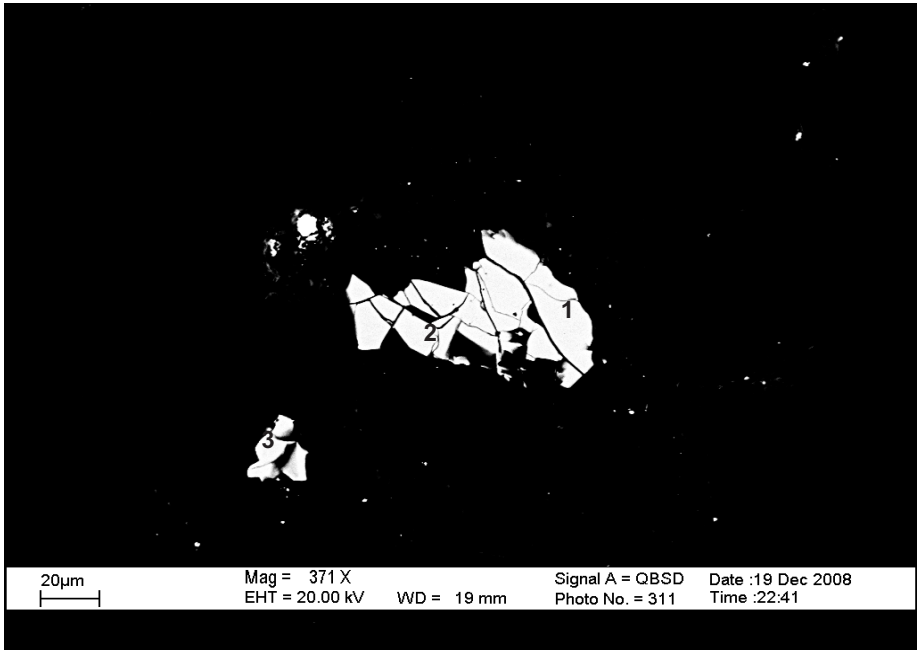


Figure 66: 4528.03B m., Chromian spinel (pos.1,2,3)

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

Mineral Name																
sphalerite	grain 1	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity corrn.	Weight%	Weight% sigma	Atomic%	Compound%	Recalculations	Formula	Number of ions	Standard			
	S	K_SERIES	81.19	0.7134	0.8092	100.33	2.1	13.72	250.53	37.485	SO3	1.72	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.33	0.05331	0.9925	5.37	1.08	0.42	6.91	1.034	FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.92	0.00919	0.8779	1.05	1.71	0.07	1.31	0.196	CuO	0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	288.99	2.88995	0.8783	329.05	6.2	22.07	409.59	61.196	ZnO	2.77	Zn 1-Jun-1999 12:00 AM			
	O					232.53	4.13	63.72				8				
	Totals					668.34				99.911						
											Cation sum	4.56				
quartz	grain 1	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	225.43	1.81805	0.9805	229.92	3.47	33.33	491.86	100	SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					261.94	3.7	66.67				8				
	Totals					491.86										
											Cation sum	4				
mostly quartz	grain 1	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	7.49	0.05135	0.787	9.52	0.85	3.17	15.78	6.227	MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.23	0.03112	0.8455	5	0.77	1.5	9.44	3.725	Al2O3	0.19	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	88.95	0.71734	0.8978	99.07	1.58	28.6	211.93	83.631	SiO2	3.54	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	4.4	0.03948	0.9354	4.7	0.57	0.95	6.58	2.597	CaO	0.12	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.19	0.06192	0.8232	7.52	0.95	1.09	9.68	3.82	FeO	0.14	Fe 1-Jun-1999 12:00 AM			
	O					127.6	2.06	64.68				8				
	Totals					253.41				100						
											Cation sum	4.37				
quartz	grain 1	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	226.04	1.82302	0.9805	230.55	2.72	33.33	493.2	100	SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					262.66	2.9	66.67				8				
	Totals					493.2										
											Cation sum	4				
quartz	grain 1	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	233.09	1.87983	0.9805	237.73	4.16	33.33	508.57	100	SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					270.84	4.44	66.67				8				
	Totals					508.57										
											Cation sum	4				
sphalerite	grain 2	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	77.63	0.68212	0.8061	96.29	2.04	13.55	240.44	36.817	SO3	1.71	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	1.13	0.01128	0.8801	1.28	1.61	0.09	1.61	0.247	CuO	0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	290.67	2.90674	0.8803	330.2	6.09	22.8	411.02	62.938	ZnO	2.87	Zn 1-Jun-1999 12:00 AM			
	O					225.28	3.99	63.55				8				
	Totals					653.06				100.002						
											Cation sum	4.59				
	grain 2	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	S	K_SERIES	80.04	0.70334	0.8077	99.1	2.23	13.77	247.45	37.609	SO3	1.73	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	-1.32	-0.01324	0.879	-1.51	1.43	-0.11	-1.89	0.287	CuO	-0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	291.28	2.9128	0.8792	331.31	6.62	22.57	412.4	62.679	ZnO	2.83	Zn 1-Jun-1999 12:00 AM			
	O					229.05	4.32	63.77				8				
	Totals					657.96				100.575						
											Cation sum	4.55				
chromian spinel	grain 3	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	14.62	0.10023	0.5469	26.74	1.66	6.58	44.33	9.952	MgO	0.92	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	37.6	0.27695	0.6251	60.15	1.7	13.34	113.65	25.514	Al2O3	1.87	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	116.71	1.16706	0.9279	125.77	2.45	14.48	183.82	41.267	Cr2O3	2.03	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	68.63	0.68627	0.8519	80.56	2.47	8.64	103.64	23.267	FeO	1.21	Fe 1-Jun-1999 12:00 AM			
	O					152.22	2.98	56.96				8				
	Totals					445.44				100						
											Cation sum	6.05				
	grain 3	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	13.77	0.09442	0.5445	25.3	2.04	6.2	41.94	9.347	MgO	0.87	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	37.77	0.27822	0.626	60.34	2.08	13.33	114	25.407	Al2O3	1.87	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	119.32	1.19319	0.9287	128.47	3.07	14.73	187.77	41.848	Cr2O3	2.07	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	69.53	0.69527	0.852	81.61	3.07	8.71	104.99	23.399	FeO	1.22	Fe 1-Jun-1999 12:00 AM			
	O					152.99	3.69	57.02				8				
	Totals					448.7				100.001						
											Cation sum	6.03				
chromian spinel	grain 4	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.94	0.02014	0.5406	5.43	0.43	6.1	9.01		MgO	0.85	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.13	0.05255	0.6244	11.43	0.43	11.56	21.59		Al2O3	1.61	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	31.78	0.31776	0.9234	34.41	0.72	18.06	50.29		Cr2O3	2.52	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.89	0.11895	0.845	14.08	0.59	6.88	18.11		FeO	0.96	Fe 1-Jun-1999 12:00 AM			
	O					33.65	0.79	57.4				8				
	Totals					99										
											Cation sum	5.94				
chromian spinel	grain 4	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.56	0.01757	0.5399	4.75	0.35	5.48	7.87		MgO	0.76	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.03	0.05175	0.6285	11.18	0.34	11.62	21.12		Al2O3	1.61	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	32.33	0.32332	0.922	35.07	0.59	18.92	51.25		Cr2O3	2.63	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.64	0.10637	0.8431	12.62	0.47	6.34	16.23		FeO	0.88	Fe 1-Jun-1999 12:00 AM			
	O					32.87	0.64	57.64				8				
	Totals					96.48										
											Cation sum	5.88				
chromite	grain 4	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.8	0.01231	0.493	3.64	0.36	4.26	6.04		MgO	0.6	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.49	0.03308	0.596	7.54	0.35	7.95	14.24		Al2O3	1.13	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	31.41	0.31414	0.9574	32.81	0.66	17.96	47.95		Cr2O3	2.54	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.59	0.22587	0.8622	26.2	0.72	13.35	33.7		FeO	1.89	Fe 1-Jun-1999 12:00 AM			
	O					31.75	0.74	56.48				8				

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Totals					101.94										
											Cation sum	6.17				
mostly quartz	grain 5	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	1.03	0.00757	0.9255	1.11	0.23	0.77	2.1		Al2O3	0.09	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	47.22	0.38083	0.9669	48.84	0.61	32.56	104.47		SiO2	3.92	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.5	0.00411	0.9452	0.53	0.14	0.25	0.64		K2O	0.03	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					56.73	0.69	66.41				8				
	Totals					107.21										
											Cation sum	4.05				
mostly quartz	grain 5	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	1.05	0.00775	0.9194	1.14	0.2	0.78	2.16		Al2O3	0.09	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	47.71	0.38477	0.9624	49.58	0.51	32.51	106.06		SiO2	3.91	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.63	0.00632	0.8192	0.77	0.18	0.25	0.99		FeO	0.03	Fe 1-Jun-1999 12:00 AM			
	O					57.72	0.58	66.45				8				
	Totals					109.21										
											Cation sum	4.04				
quartz	grain 5	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	0.81	0.00596	0.9259	0.87	0.2	0.61	1.65		Al2O3	0.07	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	47.68	0.3845	0.9698	49.16	0.53	32.83	105.17		SiO2	3.95	SiO2 1-Jun-1999 12:00 AM			
	O					56.79	0.6	66.57				8				
	Totals					106.82										
											Cation sum	4.02				
quartz	grain 5	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	0.98	0.00725	0.9167	1.07	0.22	0.76	2.03		Al2O3	0.09	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	45.64	0.3681	0.9609	47.5	0.56	32.46	101.61		SiO2	3.91	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.85	0.00848	0.8197	1.03	0.22	0.36	1.33		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					55.37	0.64	66.42				8				
	Totals					104.97										
											Cation sum	4.04				
quartz	grain 5	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	1.69	0.01246	0.9231	1.83	0.2	1.3	3.46		Al2O3	0.16	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	44.41	0.35818	0.9565	46.43	0.49	31.55	99.32		SiO2	3.81	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	0.3	0.00267	0.6992	0.43	0.13	0.26	1.09		SO3	0.03	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.59	0.00487	0.9478	0.63	0.12	0.31	0.75		K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.58	0.00525	0.922	0.63	0.13	0.3	0.89		CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	O					55.56	0.58	66.28				8				
	Totals					105.51										
											Cation sum	4.07				
sphalerite	grain 6	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	17.83	0.1567	0.8154	21.87	0.51	13.83	54.6		SO3	1.73	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.98	0.04979	0.9804	5.08	0.36	1.84	6.53		FeO	0.23	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.02	0.00022	0.8733	0.03	0.33	0.01	0.03		CuO	0	Cu 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Zn	K_SERIES	57.76	0.57758	0.8741	66.08	1.46	20.49	82.25		ZnO	2.57	Zn 1-Jun-1999 12:00 AM			
	O					50.37	0.99	63.83				8				
	Totals					143.42										
											Cation sum	4.53				
quartz	grain 6	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	50.72	0.40906	0.9805	51.73	0.56	33.33	110.67		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					58.94	0.59	66.67				8				
	Totals					110.67										
											Cation sum	4				
quartz	grain 6	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	50.08	0.40389	0.9805	51.08	0.57	33.33	109.27		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					58.19	0.61	66.67				8				
	Totals					109.27										
											Cation sum	4				
albite	grain 6	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	6.16	0.02763	0.9232	6.67	0.35	5.96	9		Na2O	0.76	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.2	0.06039	0.8653	9.48	0.32	7.21	17.9		Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.44	0.22127	0.824	33.29	0.5	24.34	71.22		SiO2	3.12	SiO2 1-Jun-1999 12:00 AM			
	O					48.68	0.65	62.48				8				
	Totals					98.12										
											Cation sum	4.8				
quartz	grain 6	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	49.29	0.39751	0.9805	50.27	0.75	33.33	107.54		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					57.27	0.8	66.67				8				
	Totals					107.54										
											Cation sum	4				
kaolinite	grain 6	spectrum 6														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	17.93	0.13206	0.941	19.05	0.39	16.83	36		Al2O3	2.11	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.84	0.13585	0.7403	22.75	0.47	19.31	48.67		SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	O					42.87	0.62	63.86				8				
	Totals					84.67										
											Cation sum	4.53				
sphalerite	grain 7	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	17.85	0.15684	0.8089	22.07	0.61	13.87	55.1		SO3	1.74	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.07	0.00068	0.8782	0.08	0.47	0.02	0.1		CuO	0	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	63.37	0.6337	0.8784	72.15	1.82	22.24	89.8		ZnO	2.79	Zn 1-Jun-1999 12:00 AM			
	O					50.71	1.19	63.87				8				
	Totals					145										
											Cation sum	4.53				
	grain 7	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	18.01	0.15827	0.8089	22.27	0.52	13.9	55.6		SO3	1.74	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	-0.32	-0.00319	0.8782	-0.36	0.33	-0.11	-0.45		CuO	-0.01	Cu 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Zn	K_SERIES	63.98	0.63983	0.8784	72.84	1.52	22.31	90.67		ZnO	2.79	Zn 1-Jun-1999 12:00 AM			
	O					51.07	1	63.9				8				
	Totals					145.82										
											Cation sum	4.52				
quartz	grain 8	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	48.84	0.39391	0.9798	49.85	0.5	33.18	106.65		SiO2	3.99	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.44	0.00395	0.9225	0.48	0.12	0.22	0.67		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	O					56.99	0.53	66.59				8				
	Totals					107.31										
											Cation sum	4.01				
mostly quartz	grain 8	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	3.87	0.0285	0.926	4.18	0.23	3	7.9		Al2O3	0.36	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	41.09	0.33138	0.9297	44.2	0.49	30.43	94.55		SiO2	3.7	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.55	0.01272	0.9498	1.63	0.16	0.81	1.97		K2O	0.1	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					54.4	0.58	65.76				8				
	Totals					104.41										
											Cation sum	4.16				
mostly quartz	grain 8	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	2.12	0.01561	0.9256	2.29	0.24	1.61	4.33		Al2O3	0.19	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	44.72	0.36065	0.9525	46.95	0.54	31.73	100.43		SiO2	3.84	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1	0.00821	0.9472	1.06	0.15	0.51	1.27		K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					55.74	0.63	66.14				8				
	Totals					106.03										
											Cation sum	4.1				
mostly quartz	grain 8	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	4.23	0.03116	0.9173	4.61	0.24	3.45	8.71		Al2O3	0.42	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	38.07	0.30701	0.9172	41.51	0.48	29.8	88.79		SiO2	3.64	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.57	0.01292	0.9527	1.65	0.16	0.85	1.99		K2O	0.1	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.8	0.00801	0.8209	0.98	0.21	0.35	1.26		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					52.01	0.58	65.55				8				
	Totals					100.75										
											Cation sum	4.2				
Mg-rich chlorite	grain 9	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.17	0.02172	0.666	4.76	0.27	4.53	7.89		MgO	0.61	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.64	0.04891	0.7359	9.02	0.3	7.75	17.05		Al2O3	1.04	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	15.01	0.12108	0.7533	19.93	0.36	16.44	42.64		SiO2	2.21	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.86	0.05625	1.0182	6.73	0.22	3.99	8.11		K2O	0.54	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.16	0.0116	0.8392	1.38	0.16	0.67	2.31		TiO2	0.09	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.63	0.14627	0.8499	17.21	0.47	7.14	22.14		FeO	0.96	Fe 1-Jun-1999 12:00 AM			
	O					41.1	0.6	59.49				8				
	Totals					100.13										
											Cation sum	5.45				
apatite	grain 9	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Al	K_SERIES	1.55	0.01138	0.8193	1.89	0.26	1.98	3.56		Al2O3	0.26	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	11.51	0.09283	0.889	12.95	0.41	13.04	27.7		SiO2	1.69	SiO2 1-Jun-1999 12:00 AM		
	P	K_SERIES	7.83	0.04635	1.1043	7.09	0.39	6.47	16.24		P2O5	0.84	GaP 1-Jun-1999 12:00 AM		
	Ca	K_SERIES	20.58	0.18485	0.988	20.83	0.47	14.7	29.14		CaO	1.9	Wollastonite 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	3.16	0.03162	0.8224	3.84	0.38	1.95	4.95		FeO	0.25	Fe 1-Jun-1999 12:00 AM		
	O					35	0.76	61.87				8			
	Totals					81.6									
											Cation sum	4.93			
Mg-rich chlorite	grain 9	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	F	K_SERIES	2.72	0.02094	0.2804	9.69	1.7	12.9	0			1.6	MgF2 1-Jun-1999 12:00 AM		
	Mg	K_SERIES	2.34	0.01605	0.592	3.95	0.28	4.11	6.56		MgO	0.51	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	6.48	0.0477	0.6772	9.56	0.31	8.97	18.07		Al2O3	1.11	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	9	0.07256	0.7003	12.85	0.32	11.57	27.49		SiO2	1.43	SiO2 1-Jun-1999 12:00 AM		
	Ti	K_SERIES	0.79	0.00795	0.8777	0.91	0.14	0.48	1.51		TiO2	0.06	Ti 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	19.4	0.19401	0.8656	22.41	0.52	10.15	28.83		FeO	1.25	Fe 1-Jun-1999 12:00 AM		
	O					32.77	0.59	51.81				6.4			
	Totals					92.15									
											Cation sum	4.36			
Mg-rich chlorite	grain 9	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	2.34	0.01606	0.6223	3.77	0.18	4.33	6.24		MgO	0.58	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	7.12	0.05245	0.7017	10.15	0.21	10.5	19.17		Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	9.86	0.07948	0.7047	13.99	0.23	13.91	29.92		SiO2	1.87	SiO2 1-Jun-1999 12:00 AM		
	K	K_SERIES	0.83	0.00679	1.0223	0.81	0.08	0.58	0.98		K2O	0.08	MAD-10 Feldspar 1-Jun-1999 12:00 AM		
	Ca	K_SERIES	0.32	0.00288	0.993	0.32	0.07	0.22	0.45		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM		
	Ti	K_SERIES	0.61	0.00607	0.8674	0.7	0.1	0.41	1.17		TiO2	0.05	Ti 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	17.94	0.17938	0.8619	20.81	0.35	10.41	26.77		FeO	1.4	Fe 1-Jun-1999 12:00 AM		
	O					34.16	0.41	59.64				8			
	Totals					84.7									
											Cation sum	5.41			
chlorite	grain 10														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	3.59	0.02462	0.6206	5.79	0.31	6.39	9.59		MgO	0.86	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	7.55	0.05562	0.6796	11.11	0.33	11.05	21		Al2O3	1.5	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	8.84	0.07127	0.6839	12.92	0.34	12.35	27.65		SiO2	1.67	SiO2 1-Jun-1999 12:00 AM		
	Ti	K_SERIES	0.41	0.00408	0.8738	0.47	0.13	0.26	0.78		TiO2	0.04	Ti 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	19.58	0.19576	0.8642	22.65	0.54	10.88	29.14		FeO	1.47	Fe 1-Jun-1999 12:00 AM		
	O					35.22	0.62	59.07				8			
	Totals					88.15									
											Cation sum	5.54			
unknown	grain 11	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	F	K_SERIES	2.28	0.01759	0.2328	9.8	3.34	8.66	0			1.01	MgF2 1-Jun-1999 12:00 AM		
	Si	K_SERIES	17.75	0.14316	0.8248	21.52	0.55	12.86	46.04		SiO2	1.49	SiO2 1-Jun-1999 12:00 AM		
	S	K_SERIES	12.91	0.11344	0.8349	15.46	0.53	8.09	38.61		SO3	0.94	FeS2 1-Jun-1999 12:00 AM		
	Ca	K_SERIES	1.76	0.01579	0.9806	1.79	0.22	0.75	2.51		CaO	0.09	Wollastonite 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	26.87	0.26872	0.8554	31.41	0.89	9.44	40.41		FeO	1.1	Fe 1-Jun-1999 12:00 AM		
	O					57.38	1.01	60.19				6.99			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Totals					137.38										
											Cation sum	3.62				
quartz	grain 11	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	3.2	0.02359	0.8972	3.57	0.27	2.59	6.74		Al2O3	0.32	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	39.32	0.31709	0.9188	42.79	0.58	29.86	91.54		SiO2	3.65	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.52	0.01245	0.9586	1.58	0.18	0.79	1.91		K2O	0.1	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.54	0.00481	0.9278	0.58	0.16	0.28	0.81		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.57	0.02571	0.8236	3.12	0.31	1.1	4.02		FeO	0.13	Fe 1-Jun-1999 12:00 AM			
	O					53.37	0.7	65.38				8				
	Totals					105.01										
											Cation sum	4.24				
quartz	grain 11	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	0.86	0.00635	0.9259	0.93	0.2	0.66	1.76		Al2O3	0.08	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	46.71	0.37673	0.9689	48.21	0.53	32.78	103.14		SiO2	3.94	SiO2 1-Jun-1999 12:00 AM			
	O					55.76	0.6	66.56				8				
	Totals					104.9										
											Cation sum	4.02				
quartz	grain 11	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	46.16	0.37224	0.9674	47.71	0.62	32.84	102.07		SiO2	3.96	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.76	0.01756	0.821	2.14	0.28	0.74	2.75		FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	O					54.97	0.68	66.42				8				
	Totals					104.82										
											Cation sum	4.04				
mostly quartz	grain 11	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.34	0.00232	0.8015	0.42	0.12	0.35	0.7		MgO	0.04	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.55	0.03355	0.9056	5.03	0.17	3.71	9.5		Al2O3	0.46	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	36.69	0.29592	0.9066	40.47	0.32	28.7	86.58		SiO2	3.54	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.84	0.02328	0.9598	2.96	0.13	1.51	3.56		K2O	0.19	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.64	0.00579	0.9216	0.7	0.09	0.35	0.98		CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.11	0.01111	0.8217	1.35	0.15	0.48	1.74		FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					52.13	0.41	64.9				8				
	Totals					103.06										
											Cation sum	4.33				
albite	grain 12	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	5.74	0.02575	0.9158	6.27	0.39	5.39	8.45		Na2O	0.69	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.19	0.06769	0.8694	10.57	0.37	7.75	19.97		Al2O3	0.99	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.74	0.22372	0.82	33.83	0.56	23.83	72.37		SiO2	3.05	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1	0.009	0.9343	1.07	0.16	0.53	1.5		CaO	0.07	Wollastonite 1-Jun-1999 12:00 AM			
	O					50.55	0.74	62.5				8				
	Totals					102.29										
											Cation sum	4.8				
	grain 12	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	5.51	0.0247	0.9153	6.02	0.3	5.34	8.11		Na2O	0.68	Albite 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Al	K_SERIES	8.76	0.06456	0.8699	10.08	0.28	7.61	19.04		Al2O3	0.97	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.16	0.21903	0.8222	33.03	0.43	23.98	70.66		SiO2	3.07	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.93	0.00838	0.934	1	0.12	0.51	1.4		CaO	0.06	Wollastonite 1-Jun-1999 12:00 AM			
	O					49.09	0.56	62.56				8				
	Totals					99.21										
											Cation sum	4.79				
chromian spinel	grain 13	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.67	0.01828	0.5456	4.89	0.42	5.61	8.11		MgO	0.78	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.37	0.06166	0.6314	13.26	0.44	13.72	25.05		Al2O3	1.92	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	26.21	0.2621	0.9268	28.28	0.66	15.18	41.33		Cr2O3	2.12	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.06	0.14062	0.8505	16.53	0.64	8.26	21.27		FeO	1.16	Fe 1-Jun-1999 12:00 AM			
	O					32.8	0.78	57.22				8				
	Totals					95.76										
											Cation sum	5.98				
	grain 13	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.99	0.02048	0.5526	5.41	0.38	6.18	8.96		MgO	0.86	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.59	0.06326	0.6328	13.57	0.4	13.98	25.65		Al2O3	1.95	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	25.79	0.25786	0.9231	27.93	0.58	14.92	40.83		Cr2O3	2.09	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.14	0.13144	0.849	15.48	0.54	7.7	19.92		FeO	1.08	Fe 1-Jun-1999 12:00 AM			
	O					32.96	0.69	57.22				8				
	Totals					95.35										
											Cation sum	5.98				
?illite	grain 14															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	0.71	0.00321	0.8849	0.81	0.12	0.79	1.09		Na2O	0.1	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	16.62	0.12244	0.9155	18.16	0.19	15.07	34.31		Al2O3	1.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.32	0.13966	0.7597	22.79	0.23	18.17	48.75		SiO2	2.35	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.46	0.053	0.9781	6.6	0.13	3.78	7.96		K2O	0.49	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.25	0.00247	0.7988	0.31	0.07	0.14	0.52		TiO2	0.02	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.54	0.00544	0.8263	0.66	0.11	0.26	0.85		FeO	0.03	Fe 1-Jun-1999 12:00 AM			
	O					44.14	0.33	61.78				8				
	Totals					93.47										
											Cation sum	4.95				
muscovite	grain 15	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.36	0.11314	0.9205	16.69	0.36	14.62	31.54		Al2O3	1.89	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.02	0.13724	0.7692	22.12	0.43	18.61	47.31		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.35	0.06033	0.9801	7.5	0.26	4.53	9.04		K2O	0.59	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.79	0.00789	0.8265	0.95	0.18	0.4	1.23		FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					41.85	0.59	61.83				8				
	Totals					89.12										
											Cation sum	4.94				
muscovite	grain 15	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.28	0.11257	0.9226	16.57	0.38	14.36	31.31		Al2O3	1.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.54	0.14144	0.7731	22.68	0.46	18.88	48.52		SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.45	0.06116	0.9793	7.61	0.28	4.55	9.17		K2O	0.59	MAD-10 Feldspar 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Fe	K_SERIES	0.6	0.00602	0.826	0.73	0.21	0.31	0.94		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					42.34	0.63	61.89				8				
	Totals					89.93										
											Cation sum	4.93				
muscovite	grain 15	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.1	0.11859	0.9187	17.52	0.41	14.78	33.11		Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.48	0.14098	0.7673	22.78	0.49	18.46	48.74		SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.51	0.06159	0.9803	7.66	0.3	4.46	9.22		K2O	0.58	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.99	0.00985	0.8268	1.19	0.23	0.49	1.53		FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					43.45	0.67	61.81				8				
	Totals					92.6										
											Cation sum	4.94				
siderite	grain 15	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	F	K_SERIES	4.88	0.03761	0.3637	13.42	1.94	22.41	0			2.69	MgF2 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.13	0.00829	0.5941	1.89	0.24	2.23	3.58		Al2O3	0.27	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	3.1	0.02499	0.7054	4.39	0.27	4.96	9.4		SiO2	0.6	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	1.5	0.01317	0.855	1.75	0.19	1.73	4.38		SO3	0.21	FeS2 1-Jun-1999 12:00 AM			
	Cl	K_SERIES	1.23	0.01233	0.7789	1.57	0.18	1.41	0			0.17	KCl 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.76	0.00624	1.087	0.7	0.14	0.57	0.84		K2O	0.07	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.12	0.01002	1.0568	1.06	0.14	0.84	1.48		CaO	0.1	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.67	0.00667	0.8842	0.75	0.23	0.44	0.97		MnO	0.05	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	36.08	0.36078	0.903	39.96	0.73	22.7	51.4		FeO	2.73	Fe 1-Jun-1999 12:00 AM			
	O					21.54	0.6	42.72				5.14				
	Totals					87.04										
											Cation sum	4.02				
phosphate	grain 15	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.78	0.00532	0.6324	1.23	0.27	1.64	2.03		MgO	0.22	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.96	0.02181	0.7425	3.99	0.29	4.81	7.53		Al2O3	0.65	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	4.08	0.03291	0.8012	5.09	0.34	5.9	10.9		SiO2	0.8	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	6.74	0.03989	1.1404	5.91	0.34	6.21	13.54		P2O5	0.84	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	20.68	0.18578	1.016	20.36	0.44	16.53	28.48		CaO	2.25	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	8.78	0.08783	0.8374	10.49	0.5	6.11	13.49		FeO	0.83	Fe 1-Jun-1999 12:00 AM			
	O					28.92	0.74	58.81				8				
	Totals					75.98										
											Cation sum	5.6				
quartz	grain 15	spectrum 6														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	50.49	0.40718	0.9805	51.49	0.71	33.33	110.16		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					58.67	0.76	66.67				8				
	Totals					110.16										
											Cation sum	4				
chromite	grain 16															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.45	0.01681	0.5109	4.8	0.51	5.67	7.96		MgO	0.79	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.26	0.03137	0.6034	7.06	0.45	7.51	13.34		Al2O3	1.05	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	35.78	0.35783	0.9371	38.19	0.91	21.08	55.81		Cr2O3	2.95	Cr 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Fe	K_SERIES	14.17	0.14166	0.848	16.71	0.77	8.59	21.49		FeO	1.2	Fe 1-Jun-1999 12:00 AM			
	O					31.85	0.95	57.15				8				
	Totals					98.6										
											Cation sum	6				
chromian spinel	grain 17	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.98	0.02729	0.5832	6.83	0.32	7.38	11.32		MgO	1.03	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.84	0.07986	0.6461	16.78	0.34	16.35	31.71		Al2O3	2.28	Al2O3 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.46	0.0046	0.9383	0.49	0.12	0.27	0.82		TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	22	0.21997	0.9107	24.15	0.43	12.21	35.3		Cr2O3	1.71	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.72	0.11725	0.8471	13.84	0.41	6.51	17.81		FeO	0.91	Fe 1-Jun-1999 12:00 AM			
	O					34.86	0.56	57.27				8				
	Totals					96.95										
											Cation sum	5.97				
Fe-altering	grain 17	spectrum 2														
chromite (?)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	1	0.00807	0.6723	1.49	0.18	1.97	3.19		SiO2	0.28	SiO2 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	26.43	0.26431	0.9921	26.64	0.48	19.07	38.94		Cr2O3	2.7	Cr 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.44	0.01443	0.9253	1.56	0.32	1.06	2.01		MnO	0.15	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	25.32	0.2532	0.8919	28.39	0.58	18.92	36.52		FeO	2.68	Fe 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	3.88	0.03882	0.8577	4.53	0.42	2.58	5.63		ZnO	0.37	Zn 1-Jun-1999 12:00 AM			
	Br	L_SERIES	1.44	0.01293	0.5127	2.8	0.37	1.31	0			0.19	KBr 1-Jun-1999 12:00 AM			
	O					23.69	0.56	55.1				7.81				
	Totals					89.1										
											Cation sum	6.18				
chromite altering	grain 17	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	F	K_SERIES	3.98	0.03067	0.2208	18.03	6.82	26.03	0			3.11	MgF2 1-Jun-1999 12:00 AM			
	Na	K_SERIES	0.32	0.00142	0.4429	0.71	0.61	0.85	0.96		Na2O	0.1	Albite 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	0.37	0.00251	0.4492	0.82	0.26	0.92	1.35		MgO	0.11	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	0.7	0.00513	0.5719	1.22	0.22	1.24	2.3		Al2O3	0.15	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	1.08	0.00872	0.6937	1.56	0.19	1.52	3.33		SiO2	0.18	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.54	0.00489	1.1048	0.49	0.12	0.34	0.69		CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	23.37	0.23368	0.9678	24.14	0.5	12.74	35.29		Cr2O3	1.52	Cr 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.49	0.01487	0.9024	1.65	0.34	0.82	2.13		MnO	0.1	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.77	0.23767	0.8789	27.04	0.63	13.28	34.79		FeO	1.58	Fe 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	2.46	0.02464	0.8417	2.93	0.48	1.23	3.64		ZnO	0.15	Zn 1-Jun-1999 12:00 AM			
	O					23.93	0.76	41.03				4.89				
	Totals					102.51										
											Cation sum	3.93				
chromite altering	grain 17	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	0.27	0.00121	0.4365	0.62	0.61	1.07	0.84		Na2O	0.15	Albite 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.94	0.00756	0.672	1.4	0.2	1.97	2.99		SiO2	0.28	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.49	0.00438	1.1173	0.44	0.13	0.43	0.61		CaO	0.06	Wollastonite 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	23.12	0.23124	0.9911	23.33	0.54	17.77	34.1		Cr2O3	2.55	Cr 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.7	0.01703	0.9235	1.84	0.36	1.33	2.38		MnO	0.19	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.8	0.23801	0.8936	26.63	0.67	18.88	34.27		FeO	2.71	Fe 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	4.06	0.04064	0.8568	4.74	0.56	2.87	5.9		ZnO	0.41	Zn 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Br	L_SERIES	1.08	0.0097	0.5079	2.12	0.42	1.05	0			0.15	KBr 1-Jun-1999 12:00 AM			
	O					22.08	0.75	54.63				7.85				
	Totals					83.2										
											Cation sum	6.37				
pyrite	grain 17	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	36	0.3163	0.9356	38.47	1.04	18.28	96.07		SO3	2.14	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	42.58	0.42582	0.8641	49.28	1.49	13.44	63.4		FeO	1.57	Fe 1-Jun-1999 12:00 AM			
	O					71.71	1.51	68.28				8				
	Totals					159.46										
											Cation sum	3.72				
chromian spinel	grain 17	spectrum 6														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.49	0.03078	0.5898	7.61	0.44	8.25	12.62		MgO	1.16	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.9	0.0803	0.6436	16.94	0.46	16.55	32.01		Al2O3	2.32	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	20.96	0.20961	0.9103	23.03	0.57	11.67	33.65		Cr2O3	1.64	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.62	0.11615	0.8472	13.71	0.55	6.47	17.64		FeO	0.91	Fe 1-Jun-1999 12:00 AM			
	O					34.63	0.74	57.06				8				
	Totals					95.92										
											Cation sum	6.02				
chromian spinel	grain 17	spectrum 7														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.31	0.02957	0.5904	7.31	0.5	8.08	12.11		MgO	1.13	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.82	0.07973	0.6455	16.77	0.53	16.71	31.69		Al2O3	2.34	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	20.66	0.20657	0.9097	22.71	0.68	11.74	33.19		Cr2O3	1.64	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.19	0.11193	0.8469	13.22	0.64	6.36	17		FeO	0.89	Fe 1-Jun-1999 12:00 AM			
	O					33.99	0.87	57.11				8				
	Totals					93.99										
											Cation sum	6.01				
chromite	grain 18	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.76	0.01889	0.5138	5.36	0.45	6.22	8.89		MgO	0.87	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.24	0.03127	0.6023	7.05	0.39	7.36	13.32		Al2O3	1.03	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	36.43	0.36433	0.9351	38.96	0.8	21.11	56.95		Cr2O3	2.96	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.75	0.13754	0.8469	16.24	0.67	8.19	20.89		FeO	1.15	Fe 1-Jun-1999 12:00 AM			
	O					32.43	0.83	57.12				8				
	Totals					100.05										
											Cation sum	6.01				
	grain 18	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.38	0.00943	0.5062	2.72	0.39	3.46	4.5		MgO	0.48	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.16	0.03064	0.614	6.78	0.39	7.77	12.8		Al2O3	1.08	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	36.82	0.36818	0.9358	39.34	0.84	23.4	57.5		Cr2O3	3.24	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.56	0.11565	0.8445	13.69	0.65	7.58	17.62		FeO	1.05	Fe 1-Jun-1999 12:00 AM			
	O					29.9	0.83	57.79				8				
	Totals					92.42										
											Cation sum	5.84				
chromian spinel	grain 19	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Mg	K_SERIES	2.87	0.01966	0.5336	5.37	0.38	6.04	8.91		MgO	0.85	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	7.01	0.05164	0.6189	11.33	0.38	11.47	21.4		Al2O3	1.61	Al2O3 1-Jun-1999 12:00 AM		
	Cr	K_SERIES	29.94	0.29938	0.9305	32.17	0.63	16.9	47.02		Cr2O3	2.37	Cr 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	14.78	0.14784	0.8501	17.39	0.58	8.51	22.37		FeO	1.19	Fe 1-Jun-1999 12:00 AM		
	O					33.44	0.71	57.09				8			
	Totals					99.71									
											Cation sum	6.01			
	grain 19	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	3.35	0.02295	0.5525	6.06	0.47	6.71	10.05		MgO	0.94	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	8.46	0.0623	0.6288	13.45	0.48	13.42	25.42		Al2O3	1.88	Al2O3 1-Jun-1999 12:00 AM		
	Cr	K_SERIES	26.98	0.26978	0.9227	29.24	0.72	15.14	42.73		Cr2O3	2.12	Cr 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	13.35	0.13355	0.8485	15.74	0.68	7.59	20.25		FeO	1.06	Fe 1-Jun-1999 12:00 AM		
	O					33.96	0.85	57.14				8			
	Totals					98.44									
											Cation sum	6			
	grain 19	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	2.98	0.02039	0.5517	5.39	0.44	5.88	8.94		MgO	0.82	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	9.26	0.06819	0.6341	14.6	0.47	14.36	27.59		Al2O3	2.01	Al2O3 1-Jun-1999 12:00 AM		
	Cr	K_SERIES	26.17	0.26166	0.9249	28.29	0.69	14.43	41.35		Cr2O3	2.02	Cr 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	14.56	0.14559	0.8506	17.12	0.66	8.13	22.02		FeO	1.14	Fe 1-Jun-1999 12:00 AM		
	O					34.5	0.82	57.2				8			
	Totals					99.9									
											Cation sum	5.99			
chromite	grain 20														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	1.54	0.01054	0.5002	3.07	0.2	3.69	5.1		MgO	0.52	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	4.73	0.03485	0.6068	7.8	0.2	8.43	14.73		Al2O3	1.19	Al2O3 1-Jun-1999 12:00 AM		
	Ti	K_SERIES	0.31	0.00308	0.9904	0.31	0.09	0.19	0.52		TiO2	0.03	Ti 1-Jun-1999 12:00 AM		
	Cr	K_SERIES	31.03	0.31032	0.9522	32.59	0.37	18.28	47.63		Cr2O3	2.57	Cr 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	20.39	0.20392	0.8613	23.67	0.39	12.37	30.46		FeO	1.74	Fe 1-Jun-1999 12:00 AM		
	W	M_SERIES	0.49	0.00493	0.5873	0.84	0.28	0.13	1.06		WO3	0.02	W 1-Jun-1999 12:00 AM		
	O					31.21	0.44	56.91				8			
	Totals					99.49									
											Cation sum	6.06			
chromian spinel	grain 21	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	2.21	0.01514	0.5376	4.11	0.41	4.78	6.81		MgO	0.66	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	7.55	0.05564	0.6313	11.97	0.44	12.54	22.61		Al2O3	1.74	Al2O3 1-Jun-1999 12:00 AM		
	Cr	K_SERIES	30.15	0.30147	0.9259	32.56	0.71	17.7	47.58		Cr2O3	2.46	Cr 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	12.42	0.12416	0.8468	14.66	0.63	7.42	18.86		FeO	1.03	Fe 1-Jun-1999 12:00 AM		
	O					32.57	0.79	57.56				8			
	Totals					95.87									
											Cation sum	5.9			
	grain 21	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	2.53	0.01734	0.5373	4.71	0.44	5.42	7.8		MgO	0.76	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	7.34	0.05408	0.6263	11.72	0.45	12.17	22.15		Al2O3	1.7	Al2O3 1-Jun-1999 12:00 AM		

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Cr	K_SERIES	29.69	0.29693	0.9272	32.02	0.75	17.25	46.8		Cr2O3	2.41	Cr 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	13.17	0.13172	0.848	15.53	0.65	7.79	19.98		FeO	1.09	Fe 1-Jun-1999 12:00 AM		
	O					32.75	0.83	57.36				8			
	Totals					96.74									
											Cation sum	5.95			
	grain 21	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	2.72	0.01865	0.5356	5.08	0.46	5.54	8.42		MgO	0.77	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	7.7	0.05675	0.624	12.35	0.48	12.14	23.33		Al2O3	1.7	Al2O3 1-Jun-1999 12:00 AM		
	Cr	K_SERIES	30.55	0.30546	0.9295	32.86	0.78	16.76	48.03		Cr2O3	2.34	Cr 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	14.91	0.1491	0.8498	17.55	0.69	8.33	22.57		FeO	1.16	Fe 1-Jun-1999 12:00 AM		
	O					34.52	0.87	57.23				8			
	Totals					102.36									
											Cation sum	5.98			
	grain 21	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	2.83	0.01937	0.5379	5.25	0.5	5.97	8.71		MgO	0.83	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	7.24	0.05332	0.6229	11.62	0.51	11.9	21.96		Al2O3	1.66	Al2O3 1-Jun-1999 12:00 AM		
	Cr	K_SERIES	29.66	0.29665	0.9275	31.98	0.84	16.99	46.74		Cr2O3	2.38	Cr 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	13.6	0.13599	0.8485	16.03	0.77	7.93	20.62		FeO	1.11	Fe 1-Jun-1999 12:00 AM		
	O					33.15	0.95	57.22				8			
	Totals					98.03									
											Cation sum	5.98			
barite	grain 22	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	S	K_SERIES	7.93	0.06969	0.8115	9.77	0.36	14.34	24.4		SO3	1.78	FeS2 1-Jun-1999 12:00 AM		
	Sr	L_SERIES	4.98	0.04623	0.6409	7.76	0.64	4.17	9.18		SrO	0.52	SrF2 1-Jun-1999 12:00 AM		
	Ba	L_SERIES	45.79	0.42745	0.915	50.04	0.98	17.14	55.87		BaO	2.13	BaF2 1-Jun-1999 12:00 AM		
	O					21.88	0.61	64.34				8			
	Totals					89.46									
											Cation sum	4.43			
	grain 22	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	S	K_SERIES	8.09	0.07111	0.7833	10.33	0.4	14.45	25.8		SO3	1.79	FeS2 1-Jun-1999 12:00 AM		
	Sr	L_SERIES	9.15	0.08504	0.6724	13.61	0.73	6.97	16.1		SrO	0.86	SrF2 1-Jun-1999 12:00 AM		
	Ba	L_SERIES	38.91	0.36318	0.8986	43.29	1	14.14	48.34		BaO	1.75	BaF2 1-Jun-1999 12:00 AM		
	O					22.99	0.67	64.45				8			
	Totals					90.23									
											Cation sum	4.41			
barite	grain 23	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	S	K_SERIES	8.24	0.07243	0.8054	10.23	0.4	14.55	25.55		SO3	1.8	FeS2 1-Jun-1999 12:00 AM		
	Sr	L_SERIES	6	0.05578	0.6497	9.24	0.71	4.81	10.93		SrO	0.6	SrF2 1-Jun-1999 12:00 AM		
	Ba	L_SERIES	44.09	0.41159	0.9093	48.49	1.05	16.09	54.14		BaO	1.99	BaF2 1-Jun-1999 12:00 AM		
	O					22.66	0.68	64.55				8			
	Totals					90.62									
											Cation sum	4.39			
	grain 23	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Si	K_SERIES	0.71	0.00576	0.7177	0.99	0.29	1.47	2.13		SiO2	0.18	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	8.46	0.07438	0.7878	10.75	0.35	13.88	26.83		SO3	1.72	FeS2 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	8.58	0.07976	0.6694	12.82	0.64	6.06	15.17		SrO	0.75	SrF2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	41.59	0.38824	0.8976	46.33	0.88	13.97	51.73		BaO	1.73	BaF2 1-Jun-1999 12:00 AM			
	O					24.96	0.67	64.62				8				
	Totals					95.85										
											Cation sum	4.38				
barite	grain 24															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	S	K_SERIES	7.71	0.06776	0.8181	9.43	0.43	14.04	23.54		SO3	1.75	FeS2 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	3.98	0.03702	0.631	6.31	0.74	3.44	7.47		SrO	0.43	SrF2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	48.97	0.45716	0.922	53.11	1.18	18.47	59.3		BaO	2.31	BaF2 1-Jun-1999 12:00 AM			
	O					21.45	0.73	64.04				8				
	Totals					90.31										
											Cation sum	4.49				
apatite	grain 25	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	1.56	0.01146	0.8313	1.87	0.15	2.08	3.54		Al2O3	0.28	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.36	0.01903	0.9092	2.6	0.2	2.77	5.55		SiO2	0.38	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	11.58	0.06858	1.2508	9.26	0.26	8.95	21.22		P2O5	1.22	GaP 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.99	0.00812	1.0982	0.9	0.15	0.69	1.09		K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	33.17	0.29791	1.0005	33.15	0.36	24.76	46.38		CaO	3.37	Wollastonite 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	2.17	0.02013	0.8289	2.61	0.52	0.89	3.09		SrO	0.12	SrF2 1-Jun-1999 12:00 AM			
	Y	L_SERIES	2.63	0.02626	0.7765	3.38	0.71	1.14	4.29		Y2O3	0.16	Y 1-Jun-1999 12:00 AM			
	O					31.39	0.63	58.73				8				
	Totals					85.16										
											Cation sum	5.62				
muscovite	grain 25	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.85	0.12412	0.9155	18.4	0.41	14.77	34.77		Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.36	0.14806	0.7659	23.97	0.49	18.48	51.28		SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.5	0.06151	0.9801	7.65	0.29	4.24	9.21		K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.35	0.01353	0.8274	1.64	0.27	0.63	2.1		FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	O					45.71	0.68	61.88				8				
	Totals					97.37										
											Cation sum	4.93				
muscovite	grain 25	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.44	0.1211	0.9211	17.85	0.35	14.98	33.74		Al2O3	1.94	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.32	0.13969	0.7655	22.62	0.41	18.24	48.39		SiO2	2.36	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.99	0.06555	0.9811	8.14	0.26	4.72	9.81		K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.78	0.0078	0.8266	0.94	0.21	0.38	1.21		FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					43.59	0.57	61.68				8				
	Totals					93.15										
											Cation sum	4.97				
muscovite	grain 25	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.45	0.12117	0.9129	18.02	0.41	14.85	34.04		Al2O3	1.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.57	0.14172	0.7646	22.98	0.49	18.2	49.17		SiO2	2.36	SiO2 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	K	K_SERIES	7.82	0.0642	0.9822	7.97	0.3	4.53	9.6		K2O	0.59	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.52	0.01516	0.8278	1.83	0.27	0.73	2.36		FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	O					44.36	0.68	61.68				8				
	Totals					95.16										
											Cation sum	4.97				
albite	grain 26	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	4.58	0.02056	0.9044	5.07	0.32	4.48	6.83		Na2O	0.57	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.48	0.07719	0.8759	11.96	0.34	9.01	22.6		Al2O3	1.15	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	25.26	0.2037	0.8084	31.24	0.48	22.6	66.84		SiO2	2.9	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.72	0.02447	0.9381	2.9	0.19	1.47	4.06		CaO	0.19	Wollastonite 1-Jun-1999 12:00 AM			
	O					49.16	0.65	62.43				8				
	Totals					100.34										
											Cation sum	4.81				
quartz	grain 26	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	49.94	0.4028	0.9805	50.94	0.54	33.33	108.97		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					58.03	0.58	66.67				8				
	Totals					108.97										
											Cation sum	4				
chromite	grain 27															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.27	0.00873	0.4687	2.72	0.37	3.38	4.51		MgO	0.48	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.33	0.01713	0.5789	4.02	0.32	4.51	7.59		Al2O3	0.64	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	32.77	0.32774	0.9741	33.65	0.71	19.58	49.18		Cr2O3	2.8	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	26.47	0.26467	0.8687	30.47	0.83	16.51	39.2		FeO	2.36	Fe 1-Jun-1999 12:00 AM			
	O					29.62	0.78	56.02				8				
	Totals					100.47										
											Cation sum	6.28				
albite	grain 28	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	6.37	0.02856	0.9234	6.9	0.35	5.95	9.3		Na2O	0.76	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.61	0.06345	0.8655	9.95	0.33	7.32	18.8		Al2O3	0.94	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	28.25	0.2278	0.8226	34.33	0.51	24.26	73.45		SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	O					50.37	0.66	62.47				8				
	Totals					101.55										
											Cation sum	4.81				
	grain 28	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	6.26	0.02808	0.9086	6.89	0.33	6	9.29		Na2O	0.77	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.22	0.06057	0.8577	9.59	0.3	7.11	18.11		Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.9	0.22505	0.8216	33.96	0.46	24.19	72.66		SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.75	0.00754	0.8249	0.91	0.21	0.33	1.18		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					49.88	0.61	62.37				8				
	Totals					101.24										
											Cation sum	4.83				
	grain 28	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	6.01	0.02696	0.9231	6.51	0.51	5.7	8.78		Na2O	0.73	Albite 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Al	K_SERIES	9.08	0.06687	0.8685	10.45	0.47	7.79	19.75		Al2O3	1	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.41	0.22103	0.818	33.5	0.74	23.99	71.68		SiO2	3.07	SiO2 1-Jun-1999 12:00 AM			
	O					49.73	0.95	62.52				8				
	Totals					100.21										
											Cation sum	4.8				
*chlorite/siderite	grain 29	spectrum 1														
????	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.38	0.01634	0.5857	4.07	0.3	4.46	6.75		MgO	0.61	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.12	0.05242	0.6706	10.61	0.34	10.47	20.05		Al2O3	1.42	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.1	0.07341	0.6875	13.24	0.34	12.55	28.32		SiO2	1.7	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	24.93	0.2493	0.8724	28.57	0.61	13.62	36.76		FeO	1.85	Fe 1-Jun-1999 12:00 AM			
	O					35.39	0.64	58.89				8				
	Totals					91.89										
											Cation sum	5.58				
	grain 29	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.57	0.01759	0.5885	4.36	0.39	4.9	7.23		MgO	0.67	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.18	0.05292	0.6688	10.74	0.44	10.89	20.3		Al2O3	1.48	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.43	0.06799	0.6824	12.35	0.44	12.02	26.43		SiO2	1.64	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.97	0.23973	0.8721	27.49	0.78	13.45	35.36		FeO	1.83	Fe 1-Jun-1999 12:00 AM			
	O					34.37	0.82	58.73				8				
	Totals					89.32										
											Cation sum	5.62				
quartz	grain 30	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	50.17	0.40458	0.9805	51.17	0.68	33.33	109.46		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					58.29	0.73	66.67				8				
	Totals					109.46										
											Cation sum	4				
quartz	grain 30	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	51.12	0.41224	0.9805	52.13	1.08	33.33	111.53		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					59.4	1.16	66.67				8				
	Totals					111.53										
											Cation sum	4				
biotite	grain 30	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	F	K_SERIES	2.55	0.01965	0.2436	10.46	1.88	11.62	0			1.44	MgF2 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.63	0.01117	0.6272	2.6	0.24	2.25	4.31		MgO	0.28	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.62	0.0488	0.7282	9.1	0.29	7.11	17.19		Al2O3	0.88	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	14.69	0.1185	0.7551	19.46	0.36	14.62	41.63		SiO2	1.82	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.93	0.05684	1.0299	6.73	0.22	3.63	8.1		K2O	0.45	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.39	0.01388	0.8475	1.64	0.17	0.72	2.73		TiO2	0.09	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.53	0.16531	0.8542	19.35	0.48	7.31	24.9		FeO	0.91	Fe 1-Jun-1999 12:00 AM			
	O					39.99	0.6	52.73				6.56				
	Totals					109.32										
											Cation sum	4.43				
quartz	grain 31	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Si	K_SERIES	48.02	0.38731	0.9718	49.42	0.53	33.01	105.72		SiO2	3.97	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.18	0.01185	0.8199	1.45	0.24	0.49	1.86		FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					56.71	0.58	66.5				8				
	Totals					107.58										
											Cation sum	4.03				
quartz	grain 31	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	0.98	0.00722	0.9037	1.08	0.2	0.74	2.05		Al2O3	0.09	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	46.47	0.37478	0.9525	48.79	0.5	32.13	104.37		SiO2	3.88	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.18	0.02176	0.8219	2.65	0.26	0.88	3.41		FeO	0.11	Fe 1-Jun-1999 12:00 AM			
	O					57.31	0.58	66.25				8				
	Totals					109.83										
											Cation sum	4.08				
chlorite	grain 31	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.46	0.01684	0.5797	4.24	0.36	4.79	7.03		MgO	0.65	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.37	0.03957	0.663	8.1	0.39	8.25	15.31		Al2O3	1.12	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.97	0.08042	0.7014	14.22	0.43	13.91	30.42		SiO2	1.89	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	24.88	0.2488	0.8729	28.5	0.75	14.02	36.67		FeO	1.9	Fe 1-Jun-1999 12:00 AM			
	O					34.36	0.77	59.02				8				
	Totals					89.42										
											Cation sum	5.55				
quartz	grain 31	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	47.48	0.38292	0.9804	48.43	0.4	33.22	103.61		SiO2	3.99	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.45	0.00372	0.9445	0.48	0.1	0.24	0.58		K2O	0.03	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					55.27	0.43	66.55				8				
	Totals					104.19										
											Cation sum	4.02				
quartz	grain 31	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	45.48	0.36676	0.9721	46.78	0.43	32.8	100.08		SiO2	3.95	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.75	0.00677	0.9259	0.81	0.11	0.4	1.14		CaO	0.05	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.92	0.00925	0.8194	1.13	0.18	0.4	1.45		FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					53.94	0.47	66.4				8				
	Totals					102.67										
											Cation sum	4.05				
mostly quartz	grain 32	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.16	0.00793	0.8072	1.43	0.31	1.26	2.38		MgO	0.16	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.98	0.08091	0.8915	12.32	0.48	9.77	23.28		Al2O3	1.25	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	23.5	0.18952	0.8142	28.86	0.65	21.98	61.75		SiO2	2.82	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.98	0.05724	0.9754	7.15	0.36	3.91	8.62		K2O	0.5	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.34	0.01337	0.8255	1.62	0.37	0.62	2.08		FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	O					46.71	0.91	62.46				8				
	Totals					98.1										
											Cation sum	4.81				
quartz	grain 32	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Si	K_SERIES	48.14	0.38823	0.9805	49.1	0.83	33.33	105.03		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					55.94	0.88	66.67				8				
	Totals					105.03										
											Cation sum	4				
quartz	grain 32	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	2.65	0.0195	0.9254	2.86	0.43	2.06	5.41		Al2O3	0.25	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	42.7	0.34437	0.945	45.18	1.01	31.24	96.66		SiO2	3.79	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.43	0.01174	0.9487	1.51	0.29	0.75	1.82		K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					54.33	1.16	65.95				8				
	Totals					103.88										
											Cation sum	4.13				
quartz	grain 32	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	2.42	0.01782	0.9256	2.61	0.26	1.91	4.94		Al2O3	0.23	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	42.31	0.34126	0.9474	44.66	0.63	31.44	95.54		SiO2	3.81	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.1	0.00904	0.9478	1.16	0.18	0.59	1.4		K2O	0.07	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					53.44	0.72	66.05				8				
	Totals					101.88										
											Cation sum	4.11				
tourmaline	grain 33	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	1.08	0.00486	0.828	1.31	0.24	1.42	1.77		Na2O	0.19	Albite 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	2.96	0.02031	0.7593	3.9	0.24	4.01	6.47		MgO	0.52	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	12.17	0.08965	0.8066	15.09	0.32	13.98	28.51		Al2O3	1.82	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.16	0.10611	0.7136	18.44	0.36	16.41	39.44		SiO2	2.14	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.46	0.00417	0.9526	0.49	0.1	0.3	0.68		CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.72	0.04722	0.8352	5.65	0.29	2.53	7.27		FeO	0.33	Fe 1-Jun-1999 12:00 AM			
	O					39.27	0.57	61.34				8				
	Totals					84.15										
											Cation sum	5.04				
	grain 33	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	1.24	0.00555	0.8283	1.49	0.26	1.62	2.01		Na2O	0.21	Albite 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	3.07	0.02102	0.7566	4.05	0.26	4.15	6.72		MgO	0.54	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	12.28	0.09048	0.8023	15.31	0.35	14.11	28.93		Al2O3	1.84	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.02	0.105	0.7095	18.35	0.39	16.25	39.25		SiO2	2.12	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.95	0.04952	0.836	5.92	0.32	2.64	7.62		FeO	0.34	Fe 1-Jun-1999 12:00 AM			
	O					39.41	0.62	61.25				8				
	Totals					84.54										
											Cation sum	5.06				
Fe-rich chlorite	grain 34	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.33	0.00909	0.5851	2.27	0.31	2.91	3.76		MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.05	0.0519	0.6842	10.3	0.4	11.9	19.46		Al2O3	1.61	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.65	0.0617	0.6854	11.16	0.4	12.4	23.88		SiO2	1.68	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	21.29	0.21287	0.8727	24.39	0.68	13.62	31.38		FeO	1.84	Fe 1-Jun-1999 12:00 AM			
	O					30.36	0.72	59.17				8				
	Totals					78.48										

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

											Cation sum	5.52				
	grain 34	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	F	K_SERIES	2	0.01541	0.2885	6.93	1.12	9.61	0			1.22	MgF2 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.46	0.01001	0.5713	2.55	0.16	2.77	4.24		MgO	0.35	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.01	0.05161	0.6728	10.41	0.2	10.17	19.68		Al2O3	1.29	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.21	0.06619	0.6909	11.88	0.2	11.14	25.41		SiO2	1.42	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.39	0.00348	1.0135	0.38	0.07	0.25	0.53		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.61	0.23612	0.8728	27.05	0.36	12.76	34.8		FeO	1.62	Fe 1-Jun-1999 12:00 AM			
	O					32.38	0.38	53.31				6.78				
	Totals					91.6										
											Cation sum	4.72				
	grain 34	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.51	0.01036	0.584	2.59	0.42	3.02	4.29		MgO	0.41	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.44	0.05478	0.6823	10.9	0.52	11.44	20.6		Al2O3	1.55	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.63	0.06961	0.688	12.55	0.51	12.65	26.84		SiO2	1.71	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.57	0.23571	0.8728	27.01	0.91	13.7	34.74		FeO	1.85	Fe 1-Jun-1999 12:00 AM			
	O					33.43	0.94	59.19				8				
	Totals					86.47										
											Cation sum	5.52				
chlorite	grain 35	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.54	0.01058	0.6311	2.45	0.28	2.95	4.06		MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.5	0.05522	0.7232	10.37	0.37	11.26	19.59		Al2O3	1.5	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.13	0.08171	0.7112	14.25	0.4	14.87	30.48		SiO2	1.98	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.42	0.01164	1.0166	1.4	0.16	1.05	1.68		K2O	0.14	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.21	0.16208	0.8603	18.84	0.57	9.89	24.23		FeO	1.32	Fe 1-Jun-1999 12:00 AM			
	O					32.74	0.67	59.99				8				
	Totals					80.03										
											Cation sum	5.34				
unknown	grain 35	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.3	0.00889	0.7991	1.62	0.27	1.4	2.69		MgO	0.17	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.64	0.04153	0.8836	6.38	0.36	4.98	12.05		Al2O3	0.62	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	31.52	0.25421	0.8722	36.14	0.62	27.08	77.31		SiO2	3.36	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.22	0.01818	0.96	2.31	0.22	1.24	2.78		K2O	0.15	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.81	0.01807	0.8239	2.19	0.38	0.83	2.82		FeO	0.1	Fe 1-Jun-1999 12:00 AM			
	O					49.01	0.81	64.47				8				
	Totals					97.66										
											Cation sum	4.41				
albite	grain 36	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	5.75	0.02577	0.9178	6.26	0.37	5.32	8.44		Na2O	0.68	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.82	0.06499	0.8713	10.13	0.35	7.33	19.13		Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	29.07	0.23447	0.8265	35.17	0.54	24.45	75.25		SiO2	3.12	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.34	0.00309	0.9325	0.37	0.12	0.18	0.52		CaO	0.02	Wollastonite 1-Jun-1999 12:00 AM			
	O					51.41	0.7	62.73				8				
	Totals					103.34										

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

											Cation sum	4.75				
albite altering	grain 36	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	2.21	0.0099	0.8914	2.48	0.32	2.17	3.34		Na2O	0.27	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.33	0.03187	0.9031	4.79	0.31	3.58	9.05		Al2O3	0.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	36.89	0.29749	0.9036	40.82	0.61	29.27	87.33		SiO2	3.6	SiO2 1-Jun-1999 12:00 AM			
	O					51.63	0.73	64.99				8				
	Totals					99.72										
											Cation sum	4.31				
mixture	grain 37	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.63	0.00434	0.7945	0.8	0.23	0.66	1.32		MgO	0.08	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.81	0.02803	0.8941	4.26	0.31	3.18	8.04		Al2O3	0.39	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	36.88	0.29742	0.9066	40.68	0.61	29.2	87.02		SiO2	3.59	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.79	0.01473	0.9567	1.88	0.2	0.97	2.26		K2O	0.12	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.92	0.01916	0.823	2.33	0.35	0.84	3		FeO	0.1	Fe 1-Jun-1999 12:00 AM			
	O					51.7	0.77	65.15				8				
	Totals					101.64										
											Cation sum	4.28				
mixture	grain 37	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	4.77	0.03517	0.9047	5.28	0.33	4.1	9.97		Al2O3	0.5	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	34.6	0.27905	0.9	38.44	0.61	28.71	82.24		SiO2	3.53	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.27	0.01866	0.9586	2.37	0.22	1.27	2.86		K2O	0.16	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.88	0.01877	0.8234	2.28	0.31	0.86	2.93		FeO	0.11	Fe 1-Jun-1999 12:00 AM			
	O					49.63	0.75	65.06				8				
	Totals					98.01										
											Cation sum	4.3				
quartz	grain 37	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	1.73	0.01275	0.9255	1.87	0.28	1.33	3.53		Al2O3	0.16	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	44.67	0.36027	0.9572	46.67	0.68	31.99	99.84		SiO2	3.87	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.88	0.00725	0.9467	0.93	0.18	0.46	1.12		K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					55.02	0.78	66.21				8				
	Totals					104.5										
											Cation sum	4.08				
quartz	grain 37	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	2.2	0.0162	0.9171	2.4	0.22	1.76	4.53		Al2O3	0.21	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	42.09	0.33945	0.9447	44.55	0.49	31.36	95.31		SiO2	3.8	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.08	0.00882	0.9498	1.13	0.15	0.57	1.36		K2O	0.07	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.76	0.00761	0.8201	0.93	0.18	0.33	1.19		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					53.39	0.58	65.98				8				
	Totals					102.4										
											Cation sum	4.13				
rutile	grain 38	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-1.98	-0.01979	0.5053	-3.92	1.56	-9.79	-15.1		N2O5	-1.21	Not defined 1-Jun-1999 12:00 AM			
	Al	K_SERIES	0.24	0.0018	0.7097	0.34	0.1	0.45	0.65		Al2O3	0.06	Al2O3 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Si	K_SERIES	0.7	0.00568	0.832	0.85	0.1	1.06	1.81		SiO2	0.13	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	53.91	0.53907	0.9154	58.89	0.44	43.06	98.23		TiO2	5.31	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.54	0.00539	0.8324	0.65	0.15	0.41	0.83		FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					29.62	2.66	64.83				8				
	Totals					86.43										
											Cation sum	4.34				
	grain 38	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	N	K_SERIES	-3.89	-0.03895	0.5111	-7.62	2.47	-29.1	-29.38		N2O5	-3.77	Not defined 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.73	0.00591	0.8366	0.88	0.16	1.67	1.87		SiO2	0.22	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	53.78	0.53784	0.9154	58.76	0.71	65.62	98.01		TiO2	8.49	Ti 1-Jun-1999 12:00 AM			
	O					18.49	4.21	61.82				8				
	Totals					70.5										
											Cation sum	4.94				
	grain 38	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	0.72	0.00532	0.7155	1.01	0.17	0.95	1.91		Al2O3	0.11	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	1.51	0.01221	0.8298	1.83	0.18	1.65	3.9		SiO2	0.2	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.65	0.00529	1.2236	0.53	0.13	0.34	0.64		K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	52.31	0.52308	0.9101	57.47	0.68	30.46	95.87		TiO2	3.68	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.72	0.00718	0.8324	0.86	0.24	0.39	1.11		FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					41.72	0.63	66.21				8				
	Totals					103.42										
											Cation sum	4.08				
phosphate	grain 39	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	0.99	0.00801	0.9211	1.08	0.26	1.22	2.31		SiO2	0.17	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	13.87	0.08213	1.3412	10.34	0.37	10.57	23.7		P2O5	1.44	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	36.59	0.32864	1.0159	36.02	0.52	28.45	50.39		CaO	3.87	Wollastonite 1-Jun-1999 12:00 AM			
	Y	L_SERIES	2.22	0.02222	0.8004	2.78	0.91	0.99	3.53		Y2O3	0.13	Y 1-Jun-1999 12:00 AM			
	O					29.71	0.77	58.78				8				
	Totals					79.92										
											Cation sum	5.61				
	grain 39	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	14.07	0.08329	1.3538	10.39	0.44	11.49	23.81		P2O5	1.57	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	35.85	0.32201	1.0243	35	0.64	29.9	48.97		CaO	4.08	Wollastonite 1-Jun-1999 12:00 AM			
	O					27.39	0.64	58.61				8				
	Totals					72.78										
											Cation sum	5.65				
	grain 39	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	13.94	0.08253	1.3532	10.3	0.51	11.18	23.6		P2O5	1.53	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	37.23	0.33441	1.0259	36.29	0.75	30.44	50.78		CaO	4.17	Wollastonite 1-Jun-1999 12:00 AM			
	O					27.79	0.75	58.38				8				
	Totals					74.38										
											Cation sum	5.7				
	grain 39	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	P	K_SERIES	14.29	0.08462	1.3536	10.56	0.31	11.38	24.19		P2O5	1.56	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	37.03	0.33259	1.0249	36.13	0.46	30.09	50.55		CaO	4.11	Wollastonite 1-Jun-1999 12:00 AM			
	O					28.06	0.46	58.53				8				
	Totals					74.74										
											Cation sum	5.67				
quartz	grain 40	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	50.37	0.40623	0.9805	51.37	0.56	33.33	109.9		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					58.53	0.6	66.67				8				
	Totals					109.9										
											Cation sum	4				
?K-feldspar	grain 40	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	11.16	0.08219	0.8902	12.53	0.51	10.34	23.68		Al2O3	1.33	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	22.03	0.17764	0.8098	27.2	0.69	21.57	58.19		SiO2	2.77	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.28	0.05974	0.9821	7.41	0.39	4.22	8.93		K2O	0.54	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.23	0.03234	0.8293	3.9	0.46	1.55	5.02		FeO	0.2	Fe 1-Jun-1999 12:00 AM			
	O					44.77	0.93	62.31				8				
	Totals					95.81										
											Cation sum	4.84				
?K-feldspar	grain 40	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	10.8	0.07956	0.8875	12.17	0.43	10.82	22.99		Al2O3	1.39	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	19.74	0.15917	0.8029	24.58	0.57	21	52.59		SiO2	2.7	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.03	0.0577	0.984	7.15	0.35	4.38	8.61		K2O	0.56	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.27	0.03271	0.8301	3.94	0.39	1.69	5.07		FeO	0.22	Fe 1-Jun-1999 12:00 AM			
	O					41.42	0.78	62.11				8				
	Totals					89.26										
											Cation sum	4.88				
quartz	grain 40	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	47.04	0.37937	0.9805	47.98	0.55	33.33	102.64		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					54.66	0.59	66.67				8				
	Totals					102.64										
											Cation sum	4				
albite	grain 41	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	6.58	0.0295	0.9243	7.12	0.57	6.16	9.59		Na2O	0.79	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.4	0.06185	0.8631	9.73	0.53	7.18	18.38		Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	28.18	0.22728	0.8232	34.23	0.81	24.27	73.24		SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	O					50.13	1.05	62.39				8				
	Totals					101.21										
											Cation sum	4.82				
	grain 41	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	6.69	0.03	0.9237	7.24	0.64	6.21	9.76		Na2O	0.8	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.09	0.05959	0.8624	9.38	0.58	6.85	17.72		Al2O3	0.88	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	28.89	0.23302	0.8272	34.93	0.92	24.52	74.72		SiO2	3.14	SiO2 1-Jun-1999 12:00 AM			
	O					50.66	1.19	62.42				8				

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Totals					102.21										
											Cation sum	4.82				
	grain 41	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	6.46	0.02897	0.9245	6.99	0.49	6.12	9.42		Na2O	0.79	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.47	0.06239	0.8637	9.81	0.45	7.32	18.53		Al2O3	0.94	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.68	0.22324	0.8215	33.69	0.71	24.17	72.08		SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	O					49.54	0.91	62.38				8				
	Totals					100.03										
											Cation sum	4.82				
chromian spinel	grain 42	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	5.47	0.03753	0.5861	9.34	0.39	9.84	15.48		MgO	1.38	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.54	0.07028	0.6289	15.17	0.38	14.4	28.67		Al2O3	2.03	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	23.93	0.23928	0.909	26.32	0.51	12.96	38.47		Cr2O3	1.82	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.97	0.10973	0.8447	12.99	0.47	5.96	16.71		FeO	0.84	Fe 1-Jun-1999 12:00 AM			
	O					35.51	0.64	56.84				8				
	Totals					99.34										
											Cation sum	6.07				
	grain 42	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	5.61	0.03845	0.5897	9.51	0.39	9.82	15.77		MgO	1.38	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.68	0.07134	0.6313	15.34	0.38	14.28	28.99		Al2O3	2.01	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.38	0.00306	0.6359	0.6	0.16	0.53	1.28		SiO2	0.07	SiO2 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	23.48	0.23481	0.9077	25.87	0.5	12.49	37.81		Cr2O3	1.75	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.13	0.11133	0.8447	13.18	0.45	5.92	16.96		FeO	0.83	Fe 1-Jun-1999 12:00 AM			
	O					36.3	0.65	56.96				8				
	Totals					100.8										
											Cation sum	6.05				
quartz	grain 43	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	50.66	0.40855	0.9805	51.67	0.47	33.33	110.53		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					58.86	0.5	66.67				8				
	Totals					110.53										
											Cation sum	4				
hydromuscovite	grain 43	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	13.64	0.10048	0.903	15.11	0.34	13.28	28.54		Al2O3	1.73	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.25	0.13909	0.781	22.08	0.42	18.64	47.24		SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.12	0.05846	0.9899	7.2	0.27	4.36	8.67		K2O	0.57	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.09	0.0188	0.9207	2.27	0.19	1.34	3.18		CaO	0.17	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.6	0.01604	0.827	1.94	0.23	0.82	2.5		FeO	0.11	Fe 1-Jun-1999 12:00 AM			
	O					41.53	0.59	61.55				8				
	Totals					90.13										
											Cation sum	5				
hydromuscovite	grain 43	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	13.59	0.1001	0.9073	14.98	0.43	13.81	28.3		Al2O3	1.79	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.49	0.133	0.7752	21.27	0.52	18.85	45.51		SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	K	K_SERIES	7.3	0.05988	0.9834	7.42	0.33	4.72	8.94		K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.7	0.01702	0.8282	2.06	0.28	0.92	2.64		FeO	0.12	Fe 1-Jun-1999 12:00 AM			
	O					39.67	0.72	61.7				8				
	Totals					85.39										
											Cation sum	4.97				
unknown	grain 43	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	1.12	0.00825	0.8962	1.25	0.24	0.96	2.36		Al2O3	0.12	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	33.67	0.27155	0.9493	35.47	0.55	26.14	75.88		SiO2	3.21	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	3.56	0.02108	0.9299	3.83	0.34	2.56	8.77		P2O5	0.31	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	9.35	0.08394	0.9426	9.91	0.34	5.12	13.87		CaO	0.63	Wollastonite 1-Jun-1999 12:00 AM			
	O					50.42	0.77	65.23				8				
	Totals					100.89										
											Cation sum	4.26				
muscovite	grain 43	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15	0.11053	0.914	16.42	0.37	14.09	31.02		Al2O3	1.82	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.78	0.14341	0.7738	22.98	0.45	18.95	49.16		SiO2	2.45	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.31	0.05997	0.9806	7.45	0.28	4.41	8.98		K2O	0.57	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.31	0.01314	0.8272	1.59	0.25	0.66	2.04		FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	O					42.76	0.63	61.89				8				
	Totals					91.2										
											Cation sum	4.93				
muscovite	grain 44	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.61	0.00421	0.8128	0.75	0.18	0.7	1.25		MgO	0.09	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	14.85	0.10939	0.9044	16.43	0.32	13.68	31.04		Al2O3	1.77	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18	0.14514	0.7727	23.28	0.39	18.63	49.81		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.51	0.06158	0.9824	7.64	0.24	4.39	9.2		K2O	0.57	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.61	0.00614	0.7986	0.77	0.15	0.36	1.28		TiO2	0.05	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.87	0.0087	0.8264	1.05	0.19	0.42	1.36		FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					44.01	0.57	61.82				8				
	Totals					93.94										
											Cation sum	4.94				
	grain 44	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	14.84	0.10933	0.9131	16.25	0.43	13.61	30.71		Al2O3	1.76	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.14	0.14631	0.7806	23.24	0.52	18.69	49.72		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.04	0.06594	0.986	8.15	0.32	4.71	9.82		K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.22	0.01217	0.7987	1.52	0.19	0.72	2.54		TiO2	0.09	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.71	0.00709	0.8261	0.86	0.26	0.35	1.1		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					43.87	0.73	61.93				8				
	Totals					93.9										
											Cation sum	4.92				
muscovite	grain 45	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	14.67	0.10808	0.9165	16.02	0.46	14.05	30.26		Al2O3	1.82	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.28	0.13936	0.7753	22.28	0.56	18.78	47.66		SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.1	0.06648	0.9825	8.25	0.36	4.99	9.93		K2O	0.65	MAD-10 Feldspar 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Fe	K_SERIES	1.01	0.01007	0.8268	1.22	0.3	0.52	1.57		FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	O					41.66	0.77	61.66				8				
	Totals					89.42										
											Cation sum	4.98				
	grain 45	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.59	0.11487	0.9158	17.03	0.53	14.13	32.19		Al2O3	1.83	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.28	0.14739	0.7736	23.62	0.64	18.82	50.52		SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.09	0.06635	0.9815	8.24	0.4	4.72	9.92		K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.17	0.01172	0.827	1.42	0.39	0.57	1.82		FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	O					44.15	0.89	61.76				8				
	Totals					94.45										
											Cation sum	4.95				
monazite	grain 46	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	7.38	0.04371	0.9745	7.58	0.32	13.59	17.36		P2O5	1.66	GaP 1-Jun-1999 12:00 AM			
	La	L_SERIES	16.94	0.15112	0.9808	17.27	0.98	6.91	20.25		La2O3	0.84	LaB6 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	26.94	0.24994	0.9552	28.2	1.16	11.18	33.03		Ce2O3	1.37	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	7.34	0.06713	0.9776	7.5	0.78	2.89	8.75		Nd2O3	0.35	NdF3 1-Jun-1999 12:00 AM			
	O					18.84	0.79	65.44				8				
	Totals					79.39										
											Cation sum	4.23				
	grain 46	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	7.09	0.04197	0.9587	7.39	0.31	15.79	16.94		P2O5	1.9	GaP 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	18.87	0.17508	0.9353	20.17	0.86	9.52	23.63		Ce2O3	1.15	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	16.01	0.14655	0.9568	16.74	0.83	7.68	19.52		Nd2O3	0.93	NdF3 1-Jun-1999 12:00 AM			
	Gd	L_SERIES	1.49	0.01347	0.902	1.65	0.64	0.69	1.9		Gd2O3	0.08	GdF3 1-Jun-1999 12:00 AM			
	O					16.04	0.66	66.32				8				
	Totals					61.99										
											Cation sum	4.06				
biotite	grain 47	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.29	0.01569	0.6384	3.59	0.29	3.59	5.95		MgO	0.49	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.65	0.0416	0.725	7.79	0.31	7.03	14.72		Al2O3	0.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.81	0.11139	0.7567	18.25	0.38	15.83	39.05		SiO2	2.14	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.24	0.05938	1.0312	7.02	0.25	4.37	8.45		K2O	0.59	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	2.2	0.022	0.848	2.59	0.2	1.32	4.33		TiO2	0.18	Ti 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.57	0.00573	0.835	0.69	0.2	0.3	0.89		MnO	0.04	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.27	0.16271	0.8547	19.04	0.53	8.3	24.49		FeO	1.12	Fe 1-Jun-1999 12:00 AM			
	O					38.91	0.66	59.24				8				
	Totals					97.87										
											Cation sum	5.5				
quartz	grain 47	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	50.29	0.40561	0.9805	51.3	0.56	33.33	109.73		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					58.44	0.6	66.67				8				
	Totals					109.73										
											Cation sum	4				

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

quartz	grain 48	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	48.91	0.39443	0.9805	49.88	0.62	33.33	106.71		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					56.83	0.66	66.67				8				
	Totals					106.71										
											Cation sum	4				
albite	grain 48	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	6.16	0.02762	0.9225	6.68	0.49	5.88	9		Na2O	0.75	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.23	0.0606	0.866	9.5	0.46	7.13	17.95		Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	28	0.22584	0.8257	33.91	0.7	24.45	72.55		SiO2	3.13	SiO2 1-Jun-1999 12:00 AM			
	O					49.41	0.91	62.54				8				
	Totals					99.5										
											Cation sum	4.79				
albite	grain 48	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	5.53	0.02482	0.9211	6.01	0.56	5.37	8.1		Na2O	0.69	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.92	0.06567	0.872	10.22	0.52	7.78	19.32		Al2O3	0.99	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.11	0.21861	0.8202	33.05	0.82	24.16	70.69		SiO2	3.08	SiO2 1-Jun-1999 12:00 AM			
	O					48.83	1.05	62.69				8				
	Totals					98.11										
											Cation sum	4.76				
albite	grain 48	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	5.62	0.0252	0.9212	6.1	0.36	5.63	8.22		Na2O	0.72	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.99	0.05885	0.8688	9.2	0.34	7.22	17.38		Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	26.82	0.21632	0.8261	32.47	0.54	24.5	69.46		SiO2	3.13	SiO2 1-Jun-1999 12:00 AM			
	O					47.29	0.7	62.65				8				
	Totals					95.06										
											Cation sum	4.77				
chlorite	grain 48	spectrum 5														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.22	0.01522	0.6026	3.68	0.33	3.99	6.11		MgO	0.54	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.4	0.05453	0.6887	10.75	0.4	10.49	20.31		Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.31	0.08312	0.6976	14.78	0.42	13.85	31.61		SiO2	1.86	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.3	0.22298	0.8676	25.7	0.68	12.12	33.06		FeO	1.63	Fe 1-Jun-1999 12:00 AM			
	O					36.18	0.74	59.55				8				
	Totals					91.09										
											Cation sum	5.43				
quartz	grain 48	spectrum 6														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	50.88	0.41031	0.9805	51.89	0.7	33.33	111.01		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					59.12	0.75	66.67				8				
	Totals					111.01										
											Cation sum	4				
zircon	grain 49	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	16.49	0.13297	1.011	16.31	0.46	21.18	34.89		SiO2	2.54	SiO2 1-Jun-1999 12:00 AM			
	Zr	L_SERIES	21.76	0.21757	0.7161	30.38	1.27	12.15	41.04		ZrO2	1.46	Zr 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	O					29.24	0.89	66.67				8				
	Totals					75.93										
											Cation sum	4				
muscovite	grain 50	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.29	0.11998	0.9263	17.59	0.43	14.62	33.23		Al2O3	1.88	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.96	0.14486	0.7714	23.28	0.52	18.59	49.8		SiO2	2.4	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.35	0.06033	0.9801	7.5	0.32	4.3	9.04		K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.7	0.00699	0.7965	0.88	0.19	0.41	1.46		TiO2	0.05	Ti 1-Jun-1999 12:00 AM			
	O					44.28	0.72	62.08				8				
	Totals					93.53										
											Cation sum	4.89				
	grain 50	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	14.95	0.1101	0.9049	16.52	0.3	13.62	31.21		Al2O3	1.76	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.07	0.1377	0.7779	21.95	0.36	17.38	46.96		SiO2	2.25	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	0.95	0.00561	0.9304	1.02	0.18	0.73	2.33		P2O5	0.09	GaP 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.58	0.05398	0.9916	6.63	0.22	3.77	7.99		K2O	0.49	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	3.17	0.02847	0.9259	3.42	0.18	1.9	4.79		CaO	0.25	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.4	0.00403	0.7943	0.51	0.12	0.24	0.85		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.12	0.01122	0.8259	1.36	0.17	0.54	1.75		FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	O					44.47	0.56	61.82				8				
	Totals					95.88										
											Cation sum	4.94				
	grain 50	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	15.51	0.11426	0.9187	16.89	0.34	14.32	31.91		Al2O3	1.85	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.82	0.14369	0.7718	23.08	0.41	18.8	49.37		SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.09	0.05821	0.9803	7.24	0.24	4.23	8.72		K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.38	0.00379	0.7982	0.47	0.15	0.23	0.79		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.78	0.00782	0.8263	0.95	0.2	0.39	1.22		FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					43.39	0.58	62.03				8				
	Totals					92.01										
											Cation sum	4.9				
	grain 50	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	14.7	0.10827	0.9178	16.02	0.44	14.53	30.27		Al2O3	1.88	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.51	0.13313	0.7689	21.46	0.53	18.7	45.92		SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.8	0.05577	0.9798	6.94	0.32	4.34	8.36		K2O	0.56	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.99	0.00991	0.8269	1.2	0.29	0.52	1.54		FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	O					40.46	0.73	61.9				8				
	Totals					86.08										
											Cation sum	4.92				
muscovite	grain 51	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	14.79	0.10894	0.9093	16.26	0.45	14.1	30.73		Al2O3	1.83	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.2	0.13868	0.7731	22.24	0.54	18.53	47.59		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.22	0.06748	0.9844	8.35	0.34	5	10.06		K2O	0.65	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.63	0.01629	0.828	1.97	0.29	0.82	2.53		FeO	0.11	Fe 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	O					42.08	0.75	61.54				8				
	Totals					90.91										
											Cation sum	5				
	grain 51	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	14.42	0.10622	0.9114	15.82	0.26	14.06	29.89		Al2O3	1.82	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.98	0.13694	0.7736	21.95	0.31	18.73	46.96		SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.16	0.05877	0.9827	7.29	0.19	4.47	8.78		K2O	0.58	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.32	0.00321	0.7993	0.4	0.1	0.2	0.67		TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.3	0.01301	0.8274	1.57	0.17	0.68	2.02		FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	O					41.29	0.44	61.86				8				
	Totals					88.32										
											Cation sum	4.93				
chromian spinel	grain 52	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.8	0.02605	0.5788	6.56	0.41	7.11	10.88		MgO	0.99	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.16	0.07485	0.6456	15.74	0.44	15.37	29.74		Al2O3	2.14	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	26.38	0.26384	0.9083	29.05	0.63	14.71	42.45		Cr2O3	2.05	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	9.45	0.09447	0.8421	11.22	0.53	5.29	14.43		FeO	0.74	Fe 1-Jun-1999 12:00 AM			
	O					34.94	0.74	57.52				8				
	Totals					97.51										
											Cation sum	5.91				
chromian spinel	grain 52	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.54	0.02427	0.5649	6.27	0.53	6.8	10.39		MgO	0.95	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.36	0.06894	0.6377	14.68	0.56	14.34	27.73		Al2O3	2	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	27.47	0.27473	0.915	30.02	0.81	15.22	43.88		Cr2O3	2.12	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.19	0.11188	0.8447	13.25	0.7	6.25	17.04		FeO	0.87	Fe 1-Jun-1999 12:00 AM			
	O					34.83	0.95	57.39				8				
	Totals					99.04										
											Cation sum	5.94				
pyrite	grain 52	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	F	K_SERIES	3.05	0.02348	0.2373	12.84	7.71	9.58	0			1.07	MgF2 1-Jun-1999 12:00 AM			
	S	K_SERIES	34.78	0.3056	0.9327	37.29	1.24	16.48	93.1		SO3	1.85	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	41.74	0.41739	0.8642	48.3	1.72	12.26	62.14		FeO	1.38	Fe 1-Jun-1999 12:00 AM			
	O					69.65	1.78	61.69				6.93				
	Totals					168.08										
											Cation sum	3.23				
rutile	grain 52	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	6.34	0.0511	0.8542	7.42	0.45	6.65	15.87		SiO2	0.8	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	45.51	0.45514	0.897	50.74	1.11	26.68	84.63		TiO2	3.2	Ti 1-Jun-1999 12:00 AM			
	O					42.34	1.03	66.67				8				
	Totals					100.5										
											Cation sum	4				
muscovite	grain 53	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.47	0.1213	0.9192	17.92	0.36	14.74	33.86		Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Si	K_SERIES	17.77	0.14328	0.7674	23.15	0.42	18.29	49.51		SiO2	2.36	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.65	0.06274	0.982	7.79	0.26	4.42	9.38		K2O	0.57	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.56	0.00555	0.7981	0.7	0.16	0.32	1.16		TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.69	0.00689	0.8263	0.83	0.18	0.33	1.07		FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					44.61	0.6	61.89				8				
	Totals					94.99										
											Cation sum	4.93				
	grain 53	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	0.96	0.00432	0.8897	1.08	0.27	1.04	1.46		Na2O	0.13	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	15.87	0.11687	0.9155	17.33	0.44	14.16	32.75		Al2O3	1.83	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.32	0.14773	0.7709	23.76	0.54	18.65	50.83		SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.93	0.05687	0.979	7.08	0.32	3.99	8.53		K2O	0.52	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.62	0.00624	0.7973	0.78	0.19	0.36	1.31		TiO2	0.05	Ti 1-Jun-1999 12:00 AM			
	O					44.83	0.76	61.79				8				
	Totals					94.87										
											Cation sum	4.95				
albite	grain 54	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Na	K_SERIES	4.45	0.01996	0.9006	4.94	0.46	4.34	6.66		Na2O	0.56	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.2	0.07516	0.8761	11.65	0.48	8.7	22.01		Al2O3	1.11	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	25.8	0.20807	0.8131	31.73	0.7	22.78	67.88		SiO2	2.92	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	3.19	0.02861	0.9387	3.39	0.28	1.71	4.75		CaO	0.22	Wollastonite 1-Jun-1999 12:00 AM			
	O					49.58	0.93	62.48				8				
	Totals					101.3										
											Cation sum	4.8				
quartz	grain 54	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	51.69	0.41685	0.9805	52.72	0.89	33.33	112.78		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					60.06	0.95	66.67				8				
	Totals					112.78										
											Cation sum	4				
chromian spinel	grain 55															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.98	0.02727	0.5583	7.13	0.75	7.57	11.82		MgO	1.06	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9	0.06628	0.6265	14.37	0.76	13.75	27.14		Al2O3	1.93	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	25.82	0.25817	0.9225	27.99	1.07	13.9	40.9		Cr2O3	1.95	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.48	0.1448	0.85	17.03	1.02	7.88	21.92		FeO	1.11	Fe 1-Jun-1999 12:00 AM			
	O					35.26	1.31	56.91				8				
	Totals					101.78										
											Cation sum	6.06				
illite	grain 56															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.98	0.00673	0.7956	1.23	0.22	1.06	2.05		MgO	0.14	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	14.76	0.10872	0.8844	16.69	0.37	12.92	31.53		Al2O3	1.68	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	19.59	0.15796	0.7738	25.31	0.45	18.83	54.15		SiO2	2.45	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.26	0.06779	0.9839	8.4	0.27	4.49	10.12		K2O	0.58	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.63	0.02628	0.8291	3.17	0.28	1.19	4.08		FeO	0.15	Fe 1-Jun-1999 12:00 AM			
	O					47.12	0.65	61.52				8				

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Totals					101.92										
											Cation sum	5				
chromite	grain 57	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.01	0.0069	0.4706	2.14	0.27	2.67	3.55		MgO	0.38	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.02	0.0149	0.5849	3.46	0.23	3.89	6.53		Al2O3	0.55	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	37.78	0.37782	0.9648	39.16	0.57	22.85	57.23		Cr2O3	3.22	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.03	0.22029	0.8606	25.6	0.58	13.91	32.93		FeO	1.96	Fe 1-Jun-1999 12:00 AM			
	O					29.89	0.59	56.68				8				
	Totals					100.24										
											Cation sum	6.11				
	grain 57	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.01	0.0069	0.4706	2.14	0.27	2.67	3.55		MgO	0.38	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.02	0.0149	0.5849	3.46	0.23	3.89	6.53		Al2O3	0.55	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	37.78	0.37782	0.9648	39.16	0.57	22.85	57.23		Cr2O3	3.22	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.03	0.22029	0.8606	25.6	0.58	13.91	32.93		FeO	1.96	Fe 1-Jun-1999 12:00 AM			
	O					29.89	0.59	56.68				8				
	Totals					100.24										
											Cation sum	6.11				
	grain 57	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.91	0.01312	0.491	3.9	0.31	4.63	6.47		MgO	0.65	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.53	0.02603	0.5923	5.97	0.28	6.39	11.27		Al2O3	0.9	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	34.57	0.34572	0.9539	36.24	0.58	20.13	52.97		Cr2O3	2.84	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.28	0.20284	0.858	23.64	0.58	12.23	30.41		FeO	1.73	Fe 1-Jun-1999 12:00 AM			
	O					31.37	0.62	56.63				8				
	Totals					101.12										
											Cation sum	6.13				
illite	grain 58	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	0.65	0.00449	0.7905	0.83	0.15	0.78	1.37		MgO	0.1	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	13.89	0.10231	0.8849	15.7	0.25	13.31	29.66		Al2O3	1.73	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.53	0.14137	0.7699	22.77	0.31	18.54	48.71		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.23	0.05931	0.9852	7.34	0.19	4.29	8.84		K2O	0.56	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.25	0.00253	0.8035	0.32	0.1	0.15	0.53		TiO2	0.02	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.68	0.02682	0.8298	3.23	0.2	1.32	4.16		FeO	0.17	Fe 1-Jun-1999 12:00 AM			
	O					43.08	0.45	61.6				8				
	Totals					93.26										
											Cation sum	4.99				
apatite	grain 58	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	P	K_SERIES	13.85	0.08203	1.3535	10.23	0.46	11.33	23.45		P2O5	1.55	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	36.17	0.32486	1.0251	35.28	0.68	30.18	49.36		CaO	4.13	Wollastonite 1-Jun-1999 12:00 AM			
	O					27.3	0.68	58.5				8				
	Totals					72.81										
											Cation sum	5.68				
?illite	grain 59	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Mg	K_SERIES	1.73	0.01185	0.7595	2.28	0.28	2.25	3.77		MgO	0.29	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	15.24	0.11225	0.8337	18.28	0.43	16.25	34.54		Al2O3	2.09	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	13.16	0.10617	0.707	18.62	0.46	15.91	39.84		SiO2	2.05	SiO2 1-Jun-1999 12:00 AM		
	Ti	K_SERIES	0.56	0.00558	0.8275	0.67	0.16	0.34	1.12		TiO2	0.04	Ti 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	6	0.05996	0.8376	7.16	0.41	3.07	9.21		FeO	0.4	Fe 1-Jun-1999 12:00 AM		
	O					41.47	0.72	62.18				8			
	Totals					88.48									
											Cation sum	4.86			
?tourmaline	grain 59	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Na	K_SERIES	0.78	0.00351	0.8004	0.98	0.2	1.02	1.32		Na2O	0.13	Albite 1-Jun-1999 12:00 AM		
	Mg	K_SERIES	1.86	0.01274	0.7458	2.49	0.2	2.46	4.13		MgO	0.32	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	14.29	0.10528	0.8195	17.44	0.29	15.54	32.95		Al2O3	2.02	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	12.84	0.10357	0.7076	18.15	0.31	15.53	38.83		SiO2	2.02	SiO2 1-Jun-1999 12:00 AM		
	Ca	K_SERIES	0.5	0.00454	0.9596	0.53	0.09	0.32	0.74		CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM		
	Ti	K_SERIES	0.76	0.00763	0.827	0.92	0.12	0.46	1.54		TiO2	0.06	Ti 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	5.93	0.05928	0.8376	7.08	0.28	3.05	9.1		FeO	0.4	Fe 1-Jun-1999 12:00 AM		
	O					41.02	0.51	61.62				8			
	Totals					88.61									
											Cation sum	4.98			
rutile	grain 59	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Al	K_SERIES	0.56	0.00413	0.71	0.79	0.16	0.78	1.49		Al2O3	0.09	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	0.7	0.00563	0.8274	0.84	0.16	0.8	1.81		SiO2	0.1	SiO2 1-Jun-1999 12:00 AM		
	Ti	K_SERIES	52.09	0.52088	0.9148	56.94	0.67	31.55	94.98		TiO2	3.8	Ti 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	0.88	0.00885	0.833	1.06	0.23	0.5	1.37		FeO	0.06	Fe 1-Jun-1999 12:00 AM		
	O					40.01	0.6	66.37				8			
	Totals					99.64									
											Cation sum	4.05			
?tourmaline	grain 60														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Na	K_SERIES	0.85	0.00382	0.7904	1.08	0.21	1.15	1.45		Na2O	0.15	Albite 1-Jun-1999 12:00 AM		
	Mg	K_SERIES	1.89	0.01296	0.7365	2.57	0.2	2.58	4.26		MgO	0.34	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	13.18	0.09708	0.8106	16.26	0.29	14.73	30.72		Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	13.08	0.10552	0.712	18.38	0.32	16	39.32		SiO2	2.08	SiO2 1-Jun-1999 12:00 AM		
	Ca	K_SERIES	0.32	0.00288	0.9601	0.33	0.09	0.2	0.47		CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM		
	Ti	K_SERIES	0.57	0.00568	0.8291	0.69	0.12	0.35	1.14		TiO2	0.05	Ti 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	6.56	0.06561	0.8389	7.82	0.3	3.42	10.06		FeO	0.44	Fe 1-Jun-1999 12:00 AM		
	O					40.3	0.52	61.57				8			
	Totals					87.42									
											Cation sum	4.99			
chlorite	grain 61	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard		
	Mg	K_SERIES	5.59	0.0383	0.6544	8.54	0.35	9.05	14.15		MgO	1.23	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	7.85	0.05786	0.6766	11.61	0.36	11.09	21.94		Al2O3	1.51	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	8.94	0.0721	0.6767	13.21	0.35	12.12	28.26		SiO2	1.65	SiO2 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	16.59	0.16592	0.858	19.34	0.53	8.92	24.87		FeO	1.21	Fe 1-Jun-1999 12:00 AM		
	O					36.54	0.65	58.83				8			
	Totals					89.23									

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

											Cation sum	5.6				
chlorite	grain 61	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	5.06	0.03471	0.6577	7.7	0.43	8.29	12.76		MgO	1.12	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.17	0.05278	0.6863	10.44	0.45	10.14	19.73		Al2O3	1.37	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.11	0.08157	0.6913	14.63	0.46	13.64	31.3		SiO2	1.84	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.64	0.15644	0.8564	18.27	0.66	8.57	23.5		FeO	1.15	Fe 1-Jun-1999 12:00 AM			
	O					36.26	0.82	59.36				8				
	Totals					87.3										
											Cation sum	5.48				
mixture	grain 61	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.9	0.0199	0.7133	4.07	0.45	3.36	6.75		MgO	0.43	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.04	0.03711	0.7848	6.42	0.5	4.78	12.13		Al2O3	0.6	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.27	0.21996	0.8122	33.58	0.79	24.02	71.84		SiO2	3.04	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.81	0.10805	0.8392	12.88	0.79	4.63	16.56		FeO	0.59	Fe 1-Jun-1999 12:00 AM			
	O					50.34	1.11	63.21				8				
	Totals					107.28										
											Cation sum	4.66				
quartz	grain 61	spectrum 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Si	K_SERIES	51.02	0.41145	0.9805	52.03	0.71	33.33	111.31		SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					59.28	0.75	66.67				8				
	Totals					111.31										
											Cation sum	4				
chromite	grain 62															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	2.17	0.01487	0.5333	4.07	0.63	5.52	6.75		MgO	0.75	MgO 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	37.61	0.3761	0.9604	39.16	1.21	24.86	57.23		Cr2O3	3.36	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.34	0.15341	0.8761	17.51	1.06	10.35	22.53		FeO	1.4	Fe 1-Jun-1999 12:00 AM			
	Br	L_SERIES	8.44	0.07591	0.5718	14.76	1.16	6.1	0			0.82	KBr 1-Jun-1999 12:00 AM			
	O					25.77	1.13	53.17				7.18				
	Totals					101.26										
											Cation sum	5.5				
unknown	grain 63	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.64	0.02492	0.7197	5.05	0.3	4.26	8.38		MgO	0.56	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.21	0.01629	0.7825	2.83	0.26	2.15	5.34		Al2O3	0.28	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	23.26	0.18756	0.8505	27.35	0.45	19.95	58.5		SiO2	2.64	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	21.17	0.19017	0.9792	21.62	0.42	11.05	30.25		CaO	1.46	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.68	0.04679	0.8234	5.68	0.37	2.08	7.31		FeO	0.28	Fe 1-Jun-1999 12:00 AM			
	O					47.25	0.68	60.51				8				
	Totals					109.78										
											Cation sum	5.22				
unknown	grain 63	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3.54	0.0243	0.7562	4.69	0.36	4.26	7.77		MgO	0.56	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.96	0.01445	0.8105	2.42	0.32	1.98	4.57		Al2O3	0.26	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	22.51	0.18156	0.8733	25.78	0.56	20.28	55.15		SiO2	2.68	SiO2 1-Jun-1999 12:00 AM			

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	Ca	K_SERIES	22.68	0.20367	0.9742	23.28	0.55	12.83	32.57		CaO	1.69	Wollastonite 1-Jun-1999 12:00 AM			
	O					43.9	0.81	60.64				8				
	Totals					100.06										
											Cation sum	5.19				
chromian spinel	grain 64	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	3	0.02055	0.5463	5.49	0.41	6.2	9.1		MgO	0.87	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.13	0.05986	0.6277	12.95	0.42	13.19	24.47		Al2O3	1.85	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	26.98	0.26975	0.9259	29.13	0.64	15.4	42.58		Cr2O3	2.16	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	13.92	0.13917	0.8497	16.38	0.6	8.06	21.07		FeO	1.13	Fe 1-Jun-1999 12:00 AM			
	O					33.27	0.75	57.15				8				
	Totals					97.22										
											Cation sum	6				
chromite	grain 64	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	1.7	0.01167	0.5004	3.4	0.34	4.04	5.64		MgO	0.57	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.14	0.03785	0.604	8.51	0.34	9.09	16.07		Al2O3	1.28	Al2O3 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.55	0.00546	0.9881	0.55	0.17	0.33	0.92		TiO2	0.05	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	29.68	0.29684	0.9512	31.21	0.61	17.31	45.61		Cr2O3	2.44	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.78	0.2078	0.8604	24.15	0.68	12.47	31.07		FeO	1.76	Fe 1-Jun-1999 12:00 AM			
	O					31.5	0.71	56.77				8				
	Totals					99.32										
											Cation sum	6.09				
muscovite	grain 65															
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Al	K_SERIES	16.7	0.12305	0.9311	17.94	0.64	14.97	33.9		Al2O3	1.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.92	0.14456	0.7685	23.32	0.76	18.7	49.89		SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.32	0.06006	0.9768	7.49	0.46	4.32	9.03		K2O	0.56	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					44.06	1.04	62.01				8				
	Totals					92.82										
											Cation sum	4.9				
chromian spinel	grain 66	spectrum 1														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.88	0.03348	0.5653	8.64	0.67	9.36	14.32		MgO	1.32	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.9	0.05816	0.6186	12.77	0.61	12.46	24.12		Al2O3	1.76	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	26.6	0.26598	0.9164	29.02	0.92	14.7	42.42		Cr2O3	2.07	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.98	0.11981	0.8459	14.16	0.82	6.68	18.22		FeO	0.94	Fe 1-Jun-1999 12:00 AM			
	O					34.49	1.1	56.79				8				
	Totals					99.08										
											Cation sum	6.09				
	grain 67	spectrum 2														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.92	0.03372	0.567	8.67	0.56	9.47	14.38		MgO	1.34	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.99	0.05885	0.6189	12.91	0.52	12.7	24.4		Al2O3	1.79	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	25.61	0.2561	0.9165	27.94	0.78	14.26	40.84		Cr2O3	2.01	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	12.14	0.12143	0.8465	14.35	0.71	6.82	18.45		FeO	0.96	Fe 1-Jun-1999 12:00 AM			
	O					34.2	0.93	56.74				8				
	Totals					98.07										
											Cation sum	6.1				

Table C: Scanning Electron Microscope semiquantitative chemical analyses of TS 4528.03B from the Louisbourg J-47 well.

	grain 67	spectrum 3														
	Element	Line	App. Conc	k ratio	Intensity cd	Weight%	Weight% s	Atomic%	Compound%		Formula	Number of	Standard			
	Mg	K_SERIES	4.94	0.03386	0.5677	8.7	0.66	9.54	14.43		MgO	1.34	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.76	0.05716	0.619	12.54	0.61	12.39	23.69		Al2O3	1.74	Al2O3 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.82	0.00816	0.9512	0.86	0.24	0.48	1.43		TiO2	0.07	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	25.1	0.25101	0.9138	27.47	0.92	14.08	40.15		Cr2O3	1.98	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.79	0.11792	0.846	13.94	0.84	6.65	17.93		FeO	0.94	Fe 1-Jun-1999 12:00 AM			
	O					34.12	1.12	56.86				8				
	Totals					97.62										
											Cation sum	6.07				

Note: (1) Grains 1-3 were recalculated, i.e. normalized to 100 because of suspect data. (2) For each grain, if only one mineral name is listed, this name pertains to the whole set of analyses for that particular grain.

Appendix 2D: Scanning Electron Microscope Backscattered Electron Images for TS # 5445.94

*** Note: The symbol (+) between two mineral names indicates a mixed composition between these two minerals.**

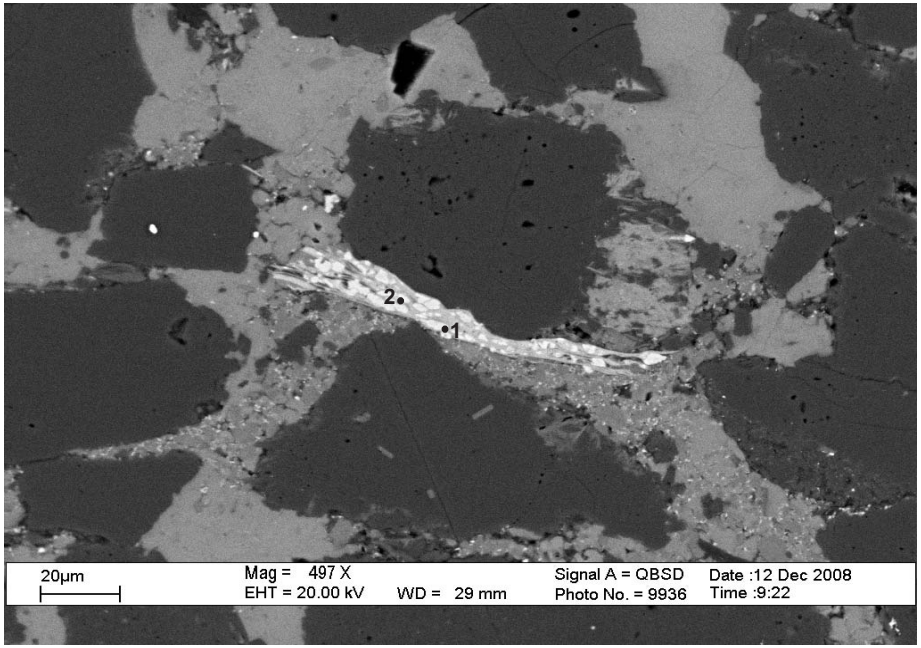


Figure 1: 5445.94 m., (?) Chlorite or Berthierine (pos.1,2)

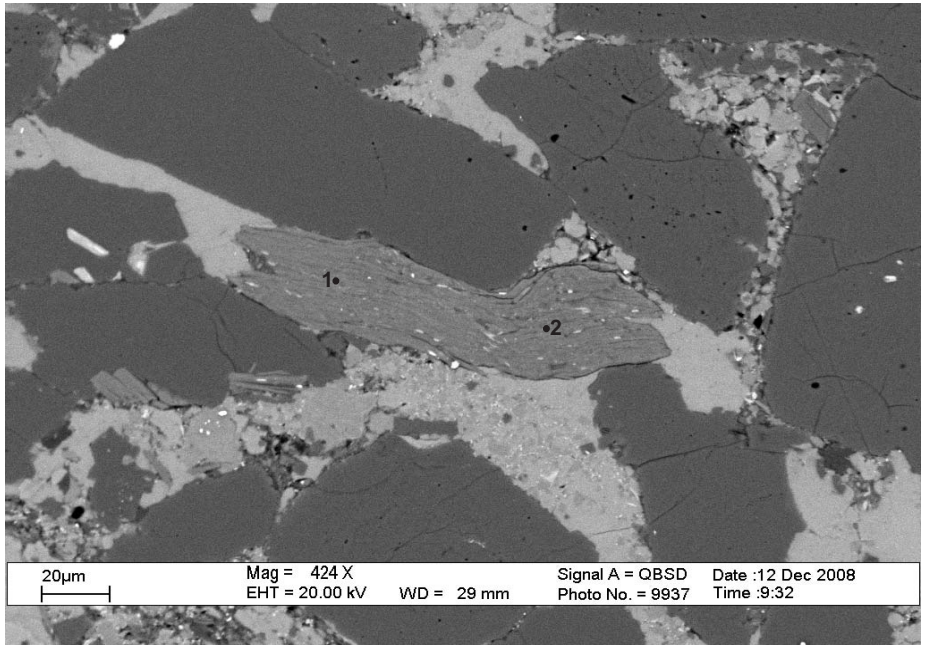


Figure 2: 5445.94 m., Muscovite (pos.1,2)

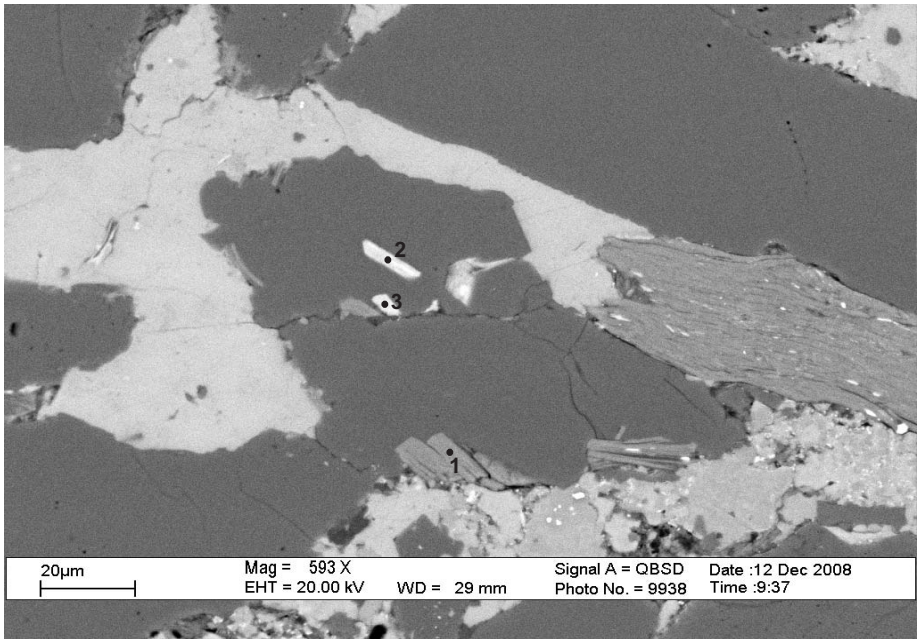


Figure 3: 5445.94 m., Quartz grain with inclusions of muscovite (pos.1) and (?) chlorite (pos.2,3)

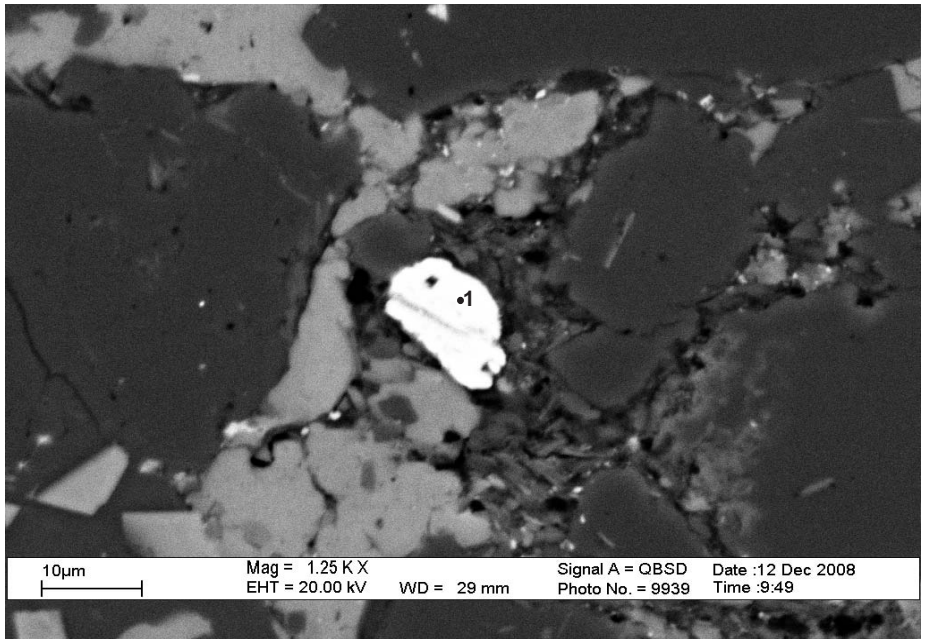


Figure 4: 5445.94 m., Rutile (pos.1)

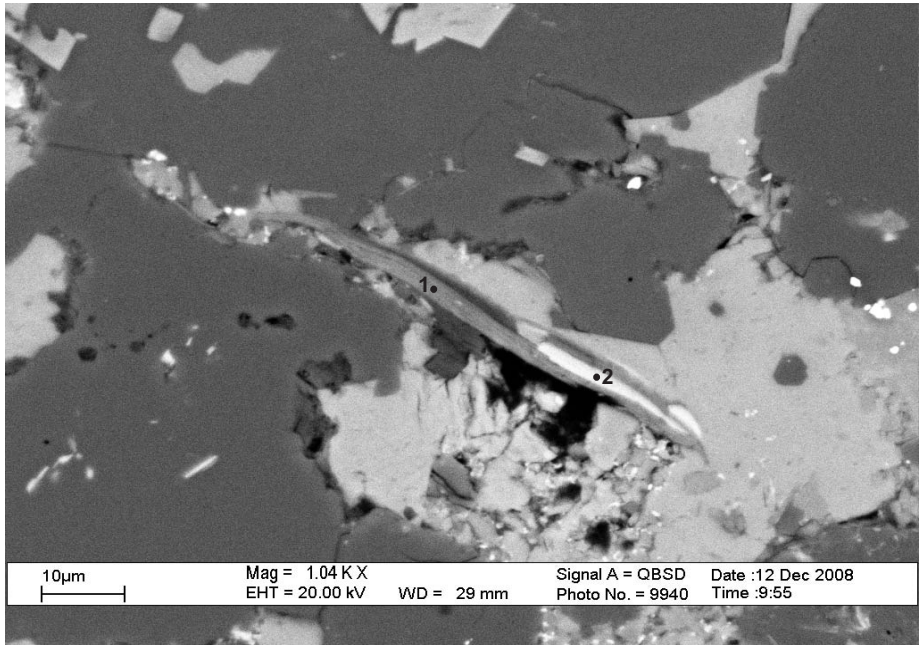


Figure 5: 5445.94 m., Muscovite (pos.1) altering to chlorite (pos.2)

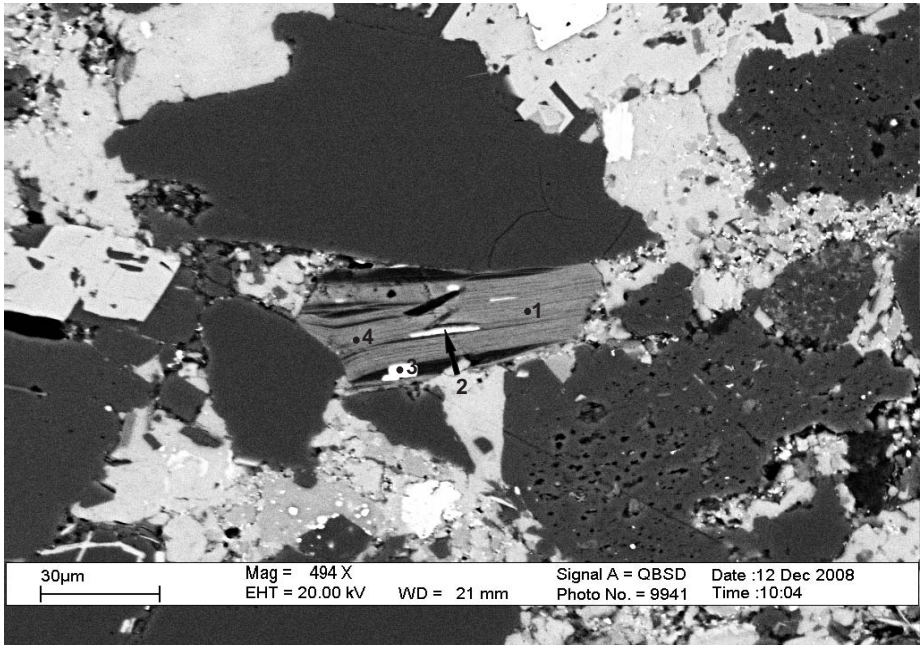


Figure 6: 5445.94 m., Muscovite (pos.1,4) with sphalerite inclusions (pos.2,3)

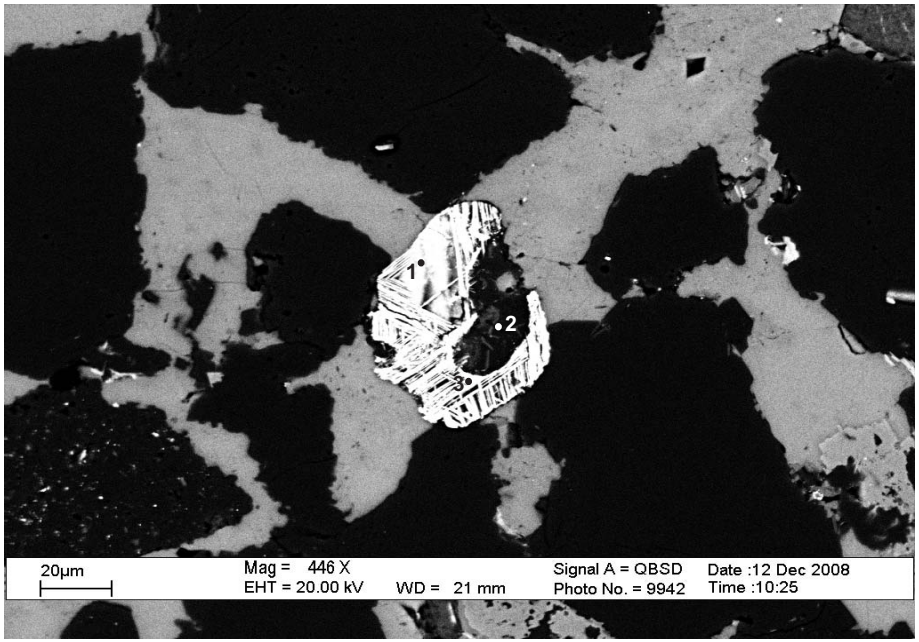


Figure 7: 5445.94 m., Rutile (pos.1,3) and quartz (pos.2)

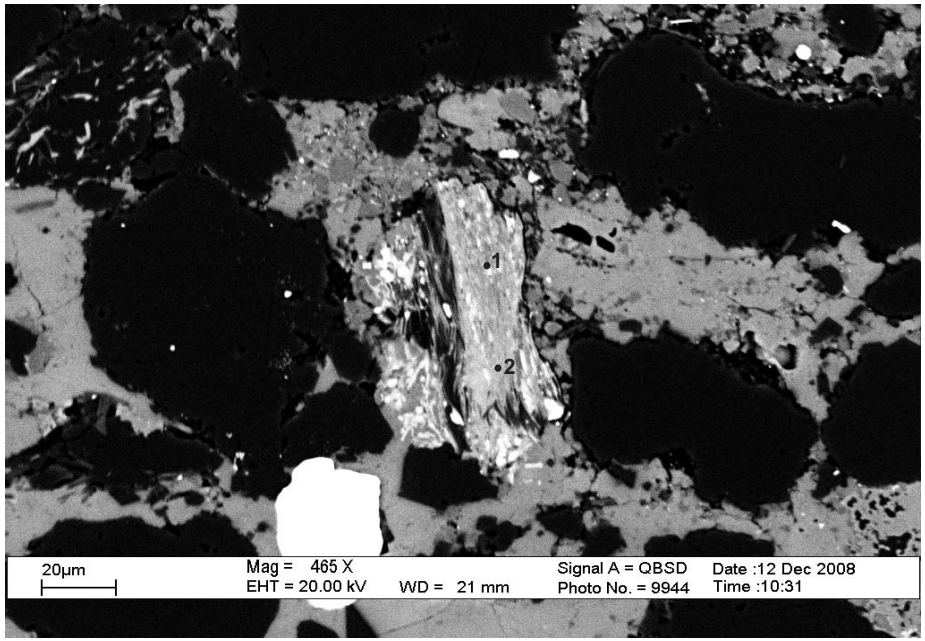


Figure 8: 5445.94 m., Chloritized mica (pos.1,2)

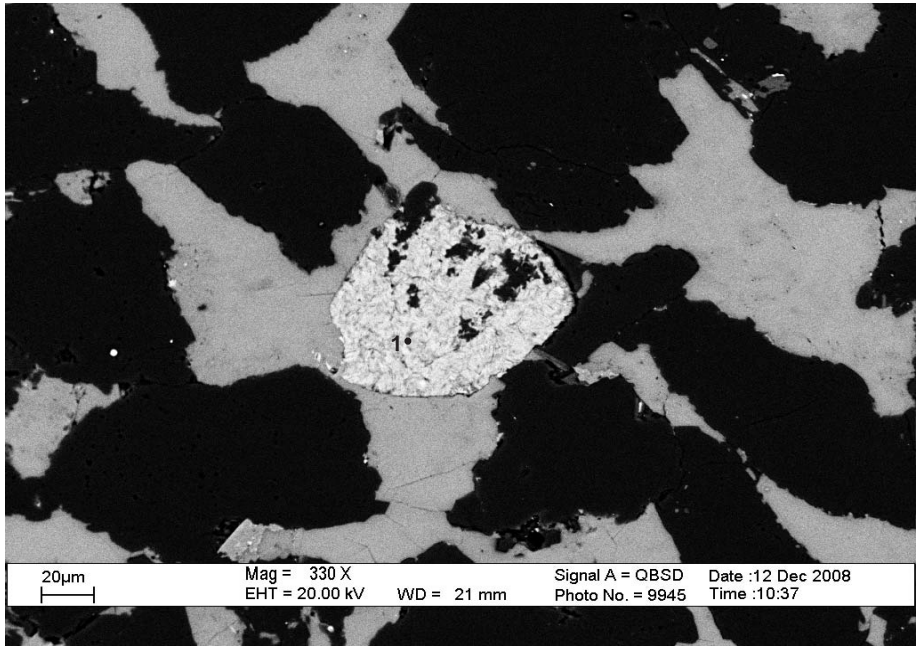


Figure 9: 5445.94 m., Chlorite (pos.1)

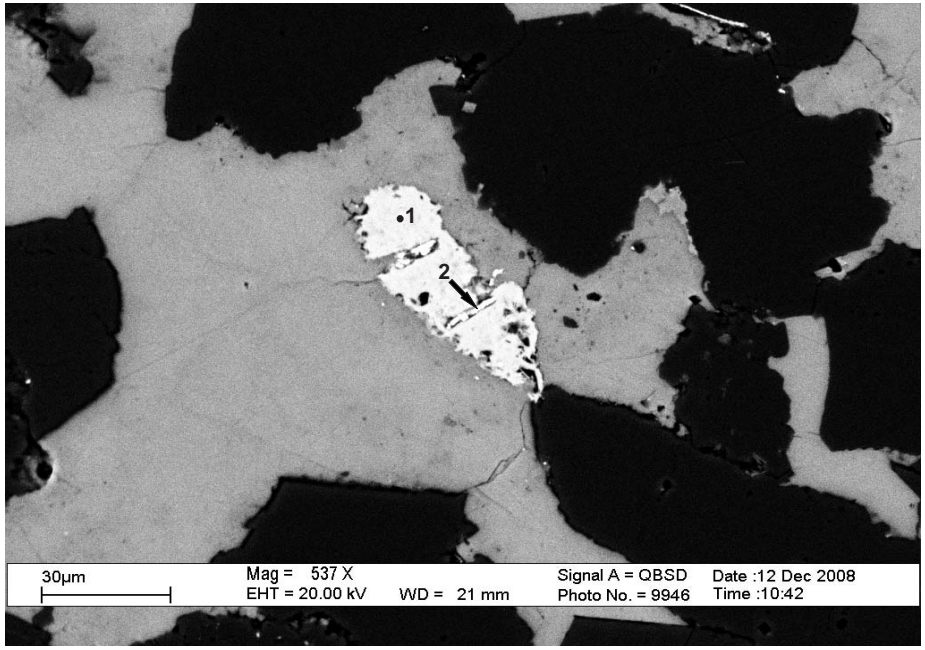


Figure 10: 5445.94 m., Chlorite (pos.1) and mixture (pos.2)

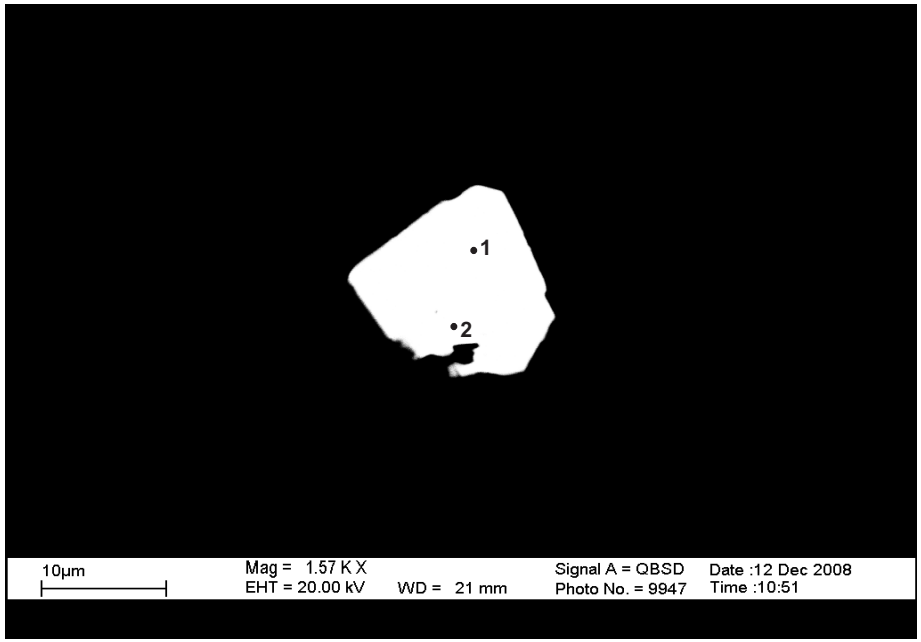


Figure 11: 5445.94 m., Sphalerite (pos.1,2)

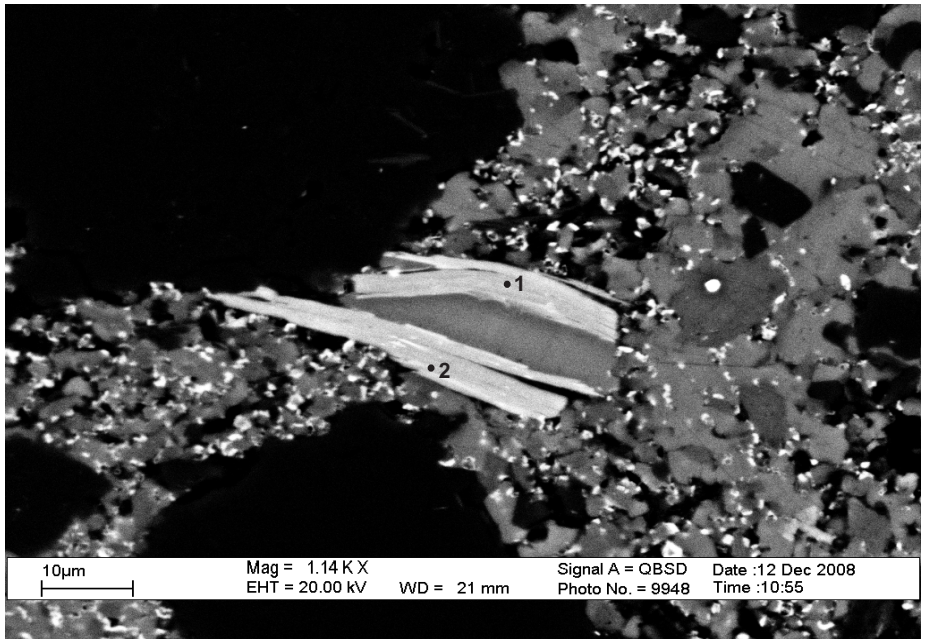


Figure 12: 5445.94 m., Muscovite and chlorite (pos.1,2)

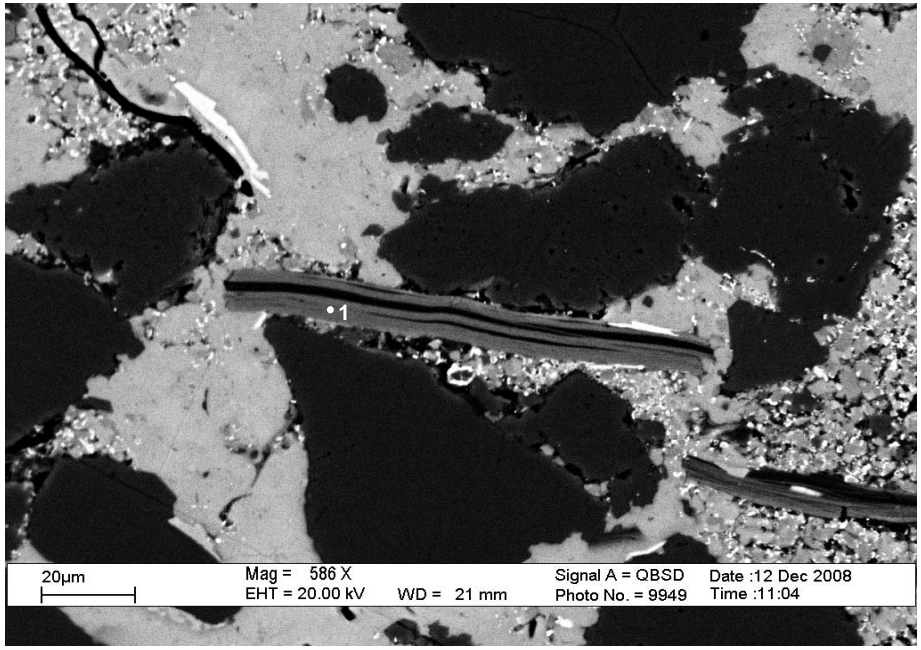


Figure 13: 5445.94 m., Muscovite (pos.1)

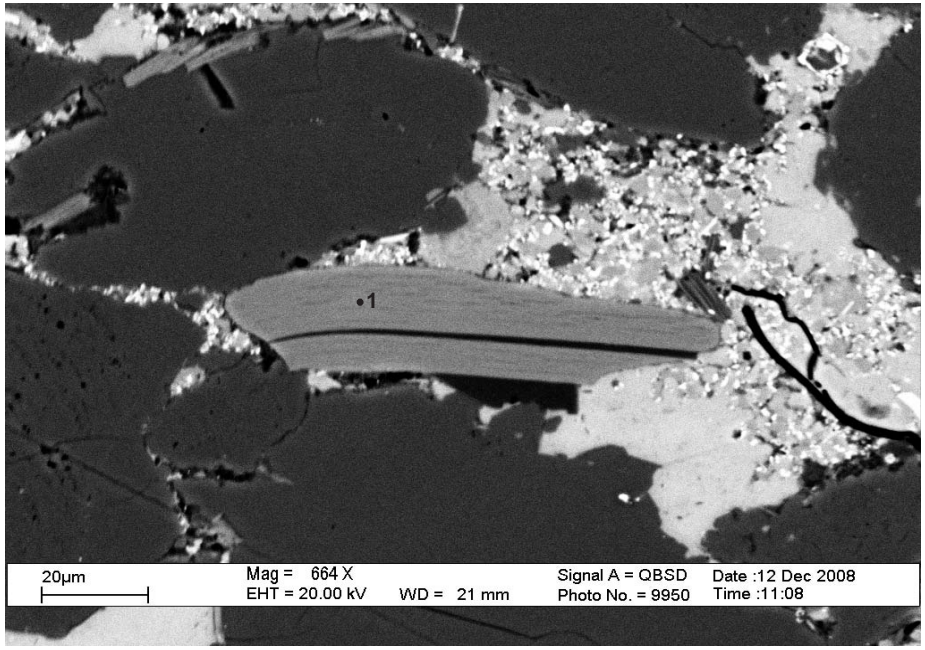


Figure 14: 5445.94 m., Muscovite (pos.1)

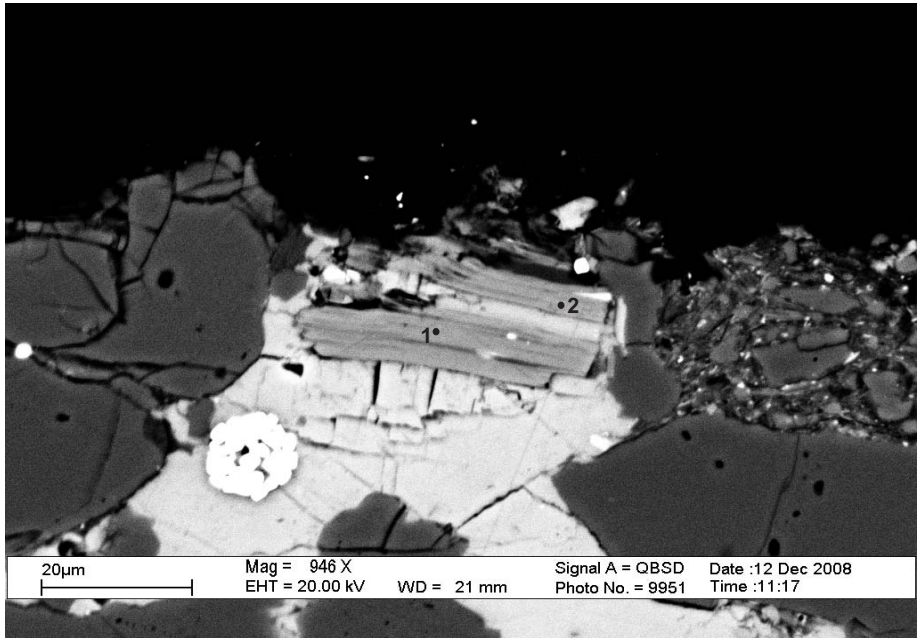


Figure 15: 5445.94 m., Muscovite (pos.1,2)

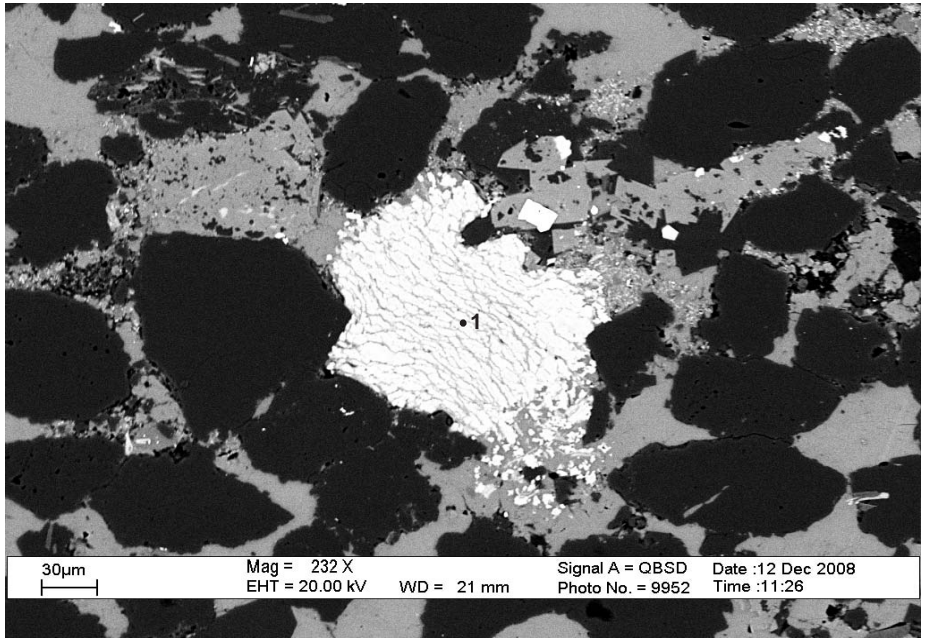


Figure 16: 5445.94 m., Siderite (pos.1)

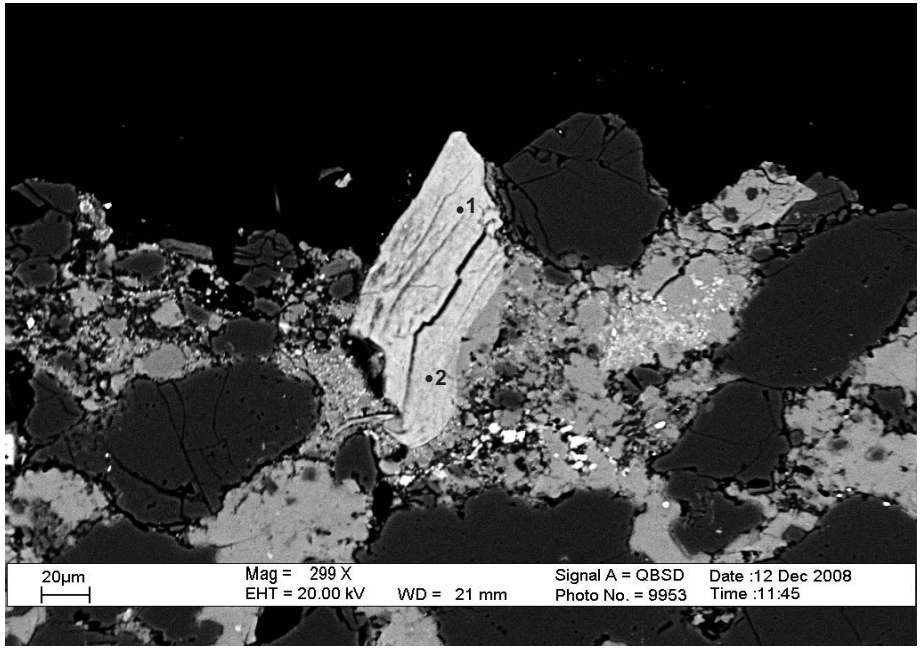


Figure 17: 5445.94 m., Chlorite (pos.1,2)

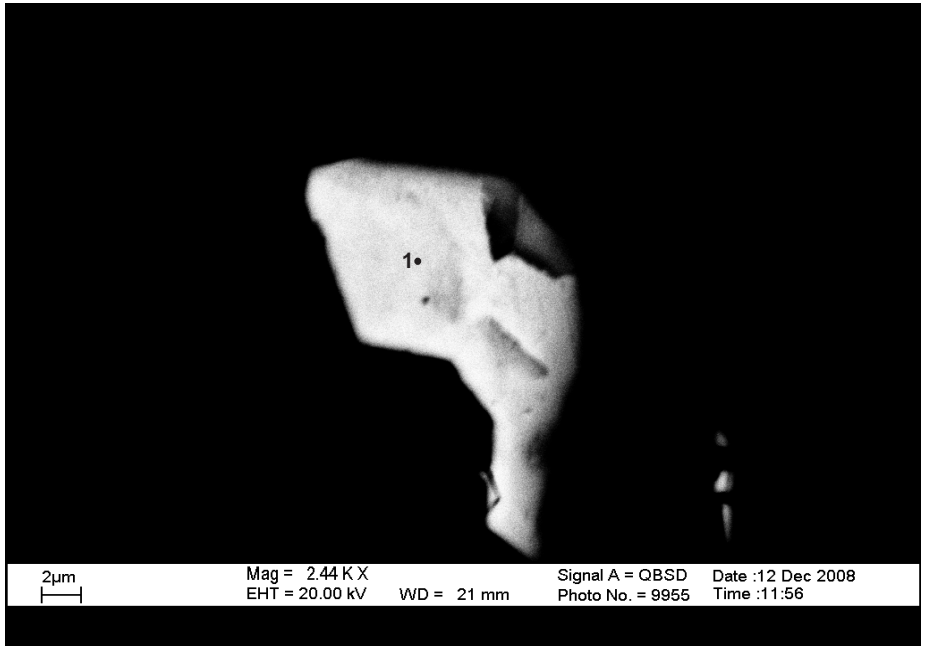


Figure 18: 5445.94 m., Sphalerite (pos.1)

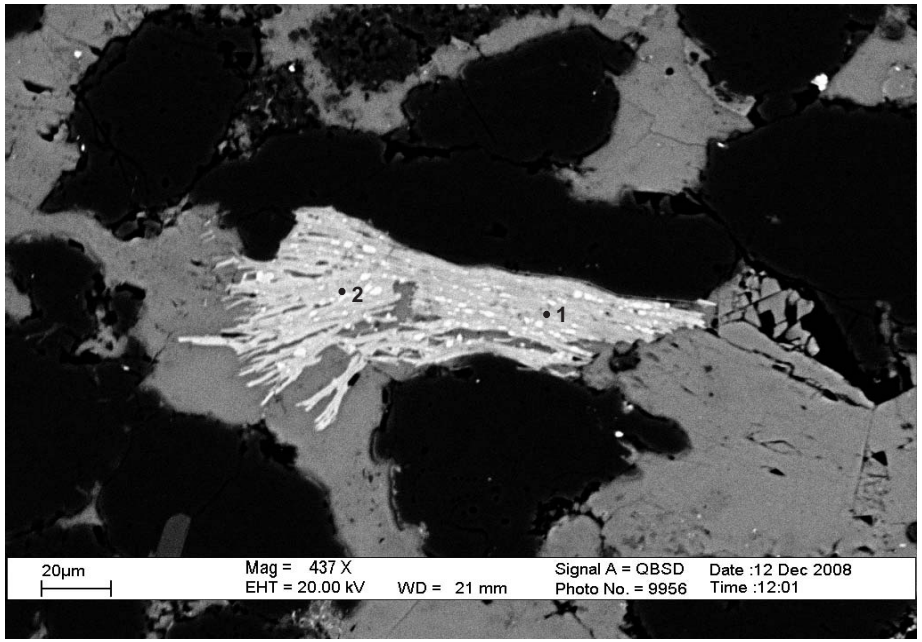


Figure 19: 5445.94 m., Chlorite and siderite (pos.1,2)

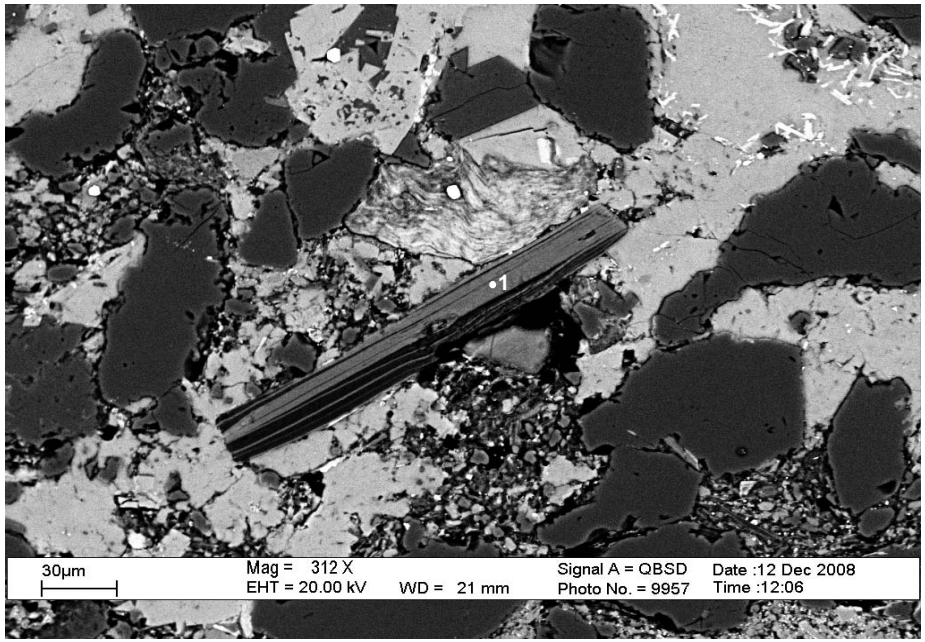


Figure 20: 5445.94 m., Muscovite (pos.1)

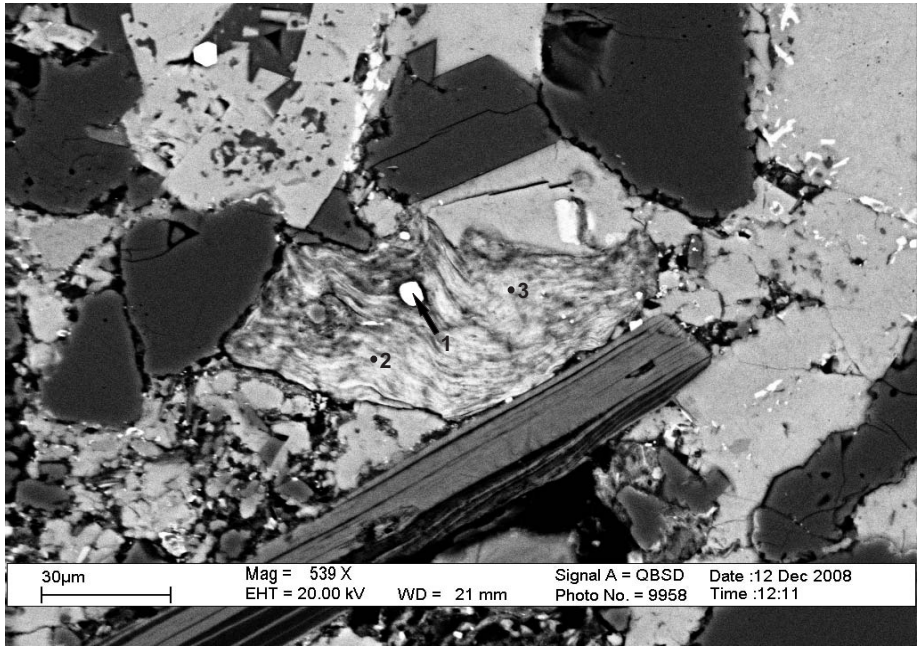


Figure 21: 5445.94 m., Chlorite after muscovite (pos.2,3) enveloping a rutile grain (pos.1)

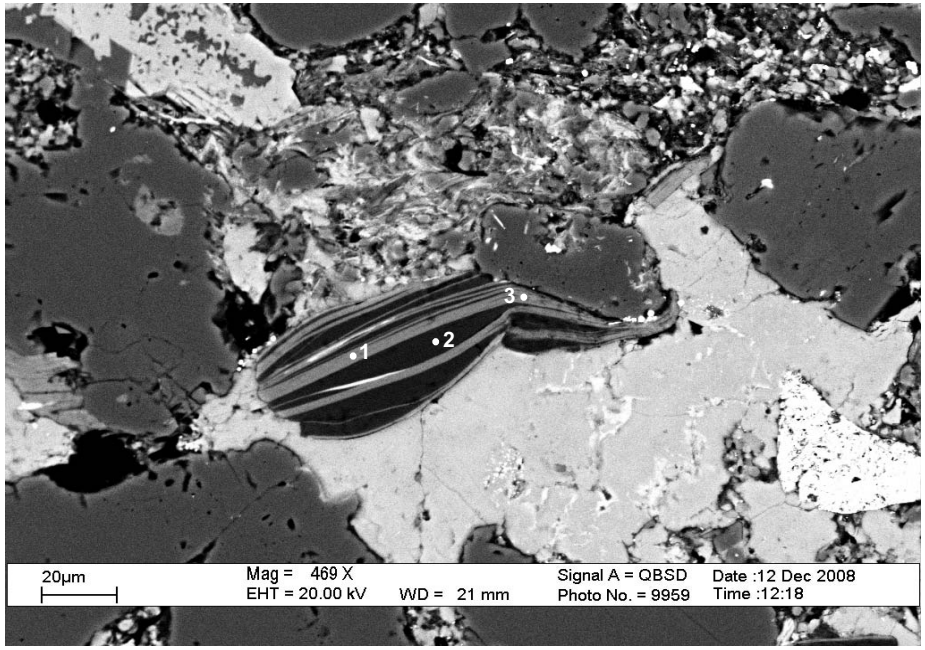


Figure 22: 5445.94 m., Muscovite (pos.1,3) and kaolinite (pos.2)

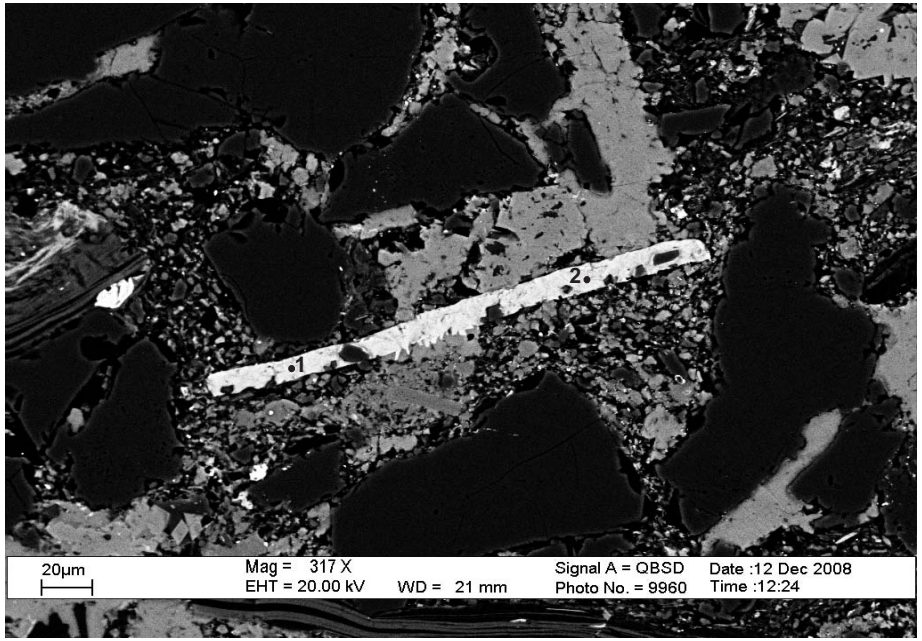


Figure 23: 5445.94 m., Chlorite (pos.1,2)

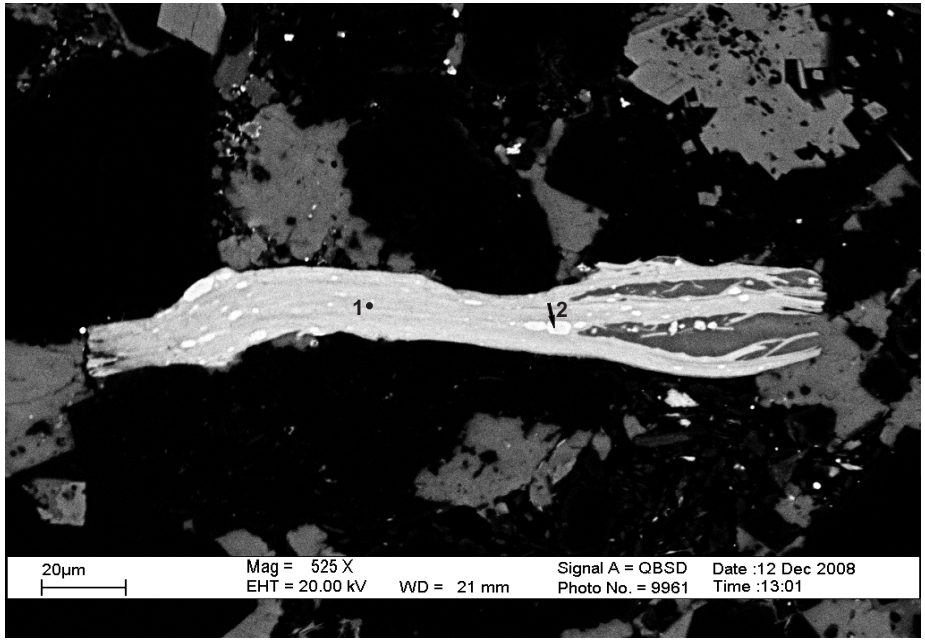


Figure 24: 5445.94 m., Chlorite (pos.1) and siderite (pos.2)

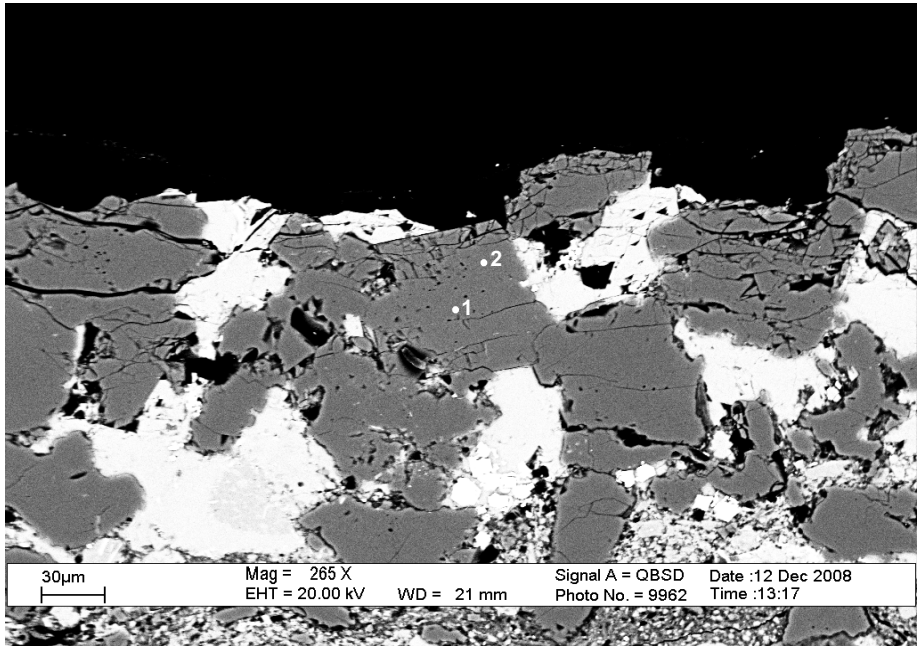


Figure 25: 5445.94 m., Albite (pos.1,2)

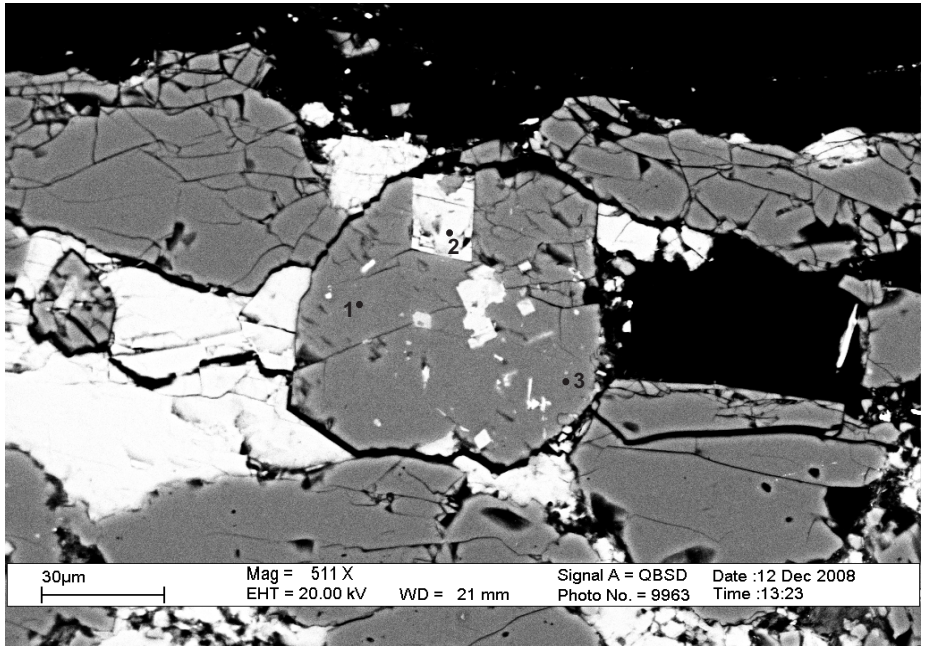


Figure 26: 5445.94 m., Albite (pos.1,3) with ankerite (pos.2)

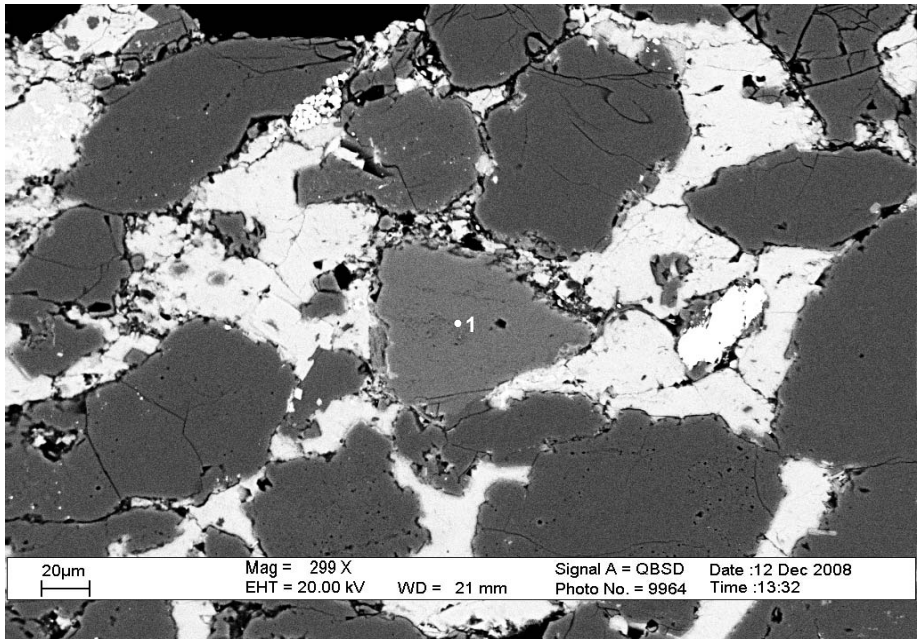


Figure 27: 5445.94 m., Albite (pos.1)

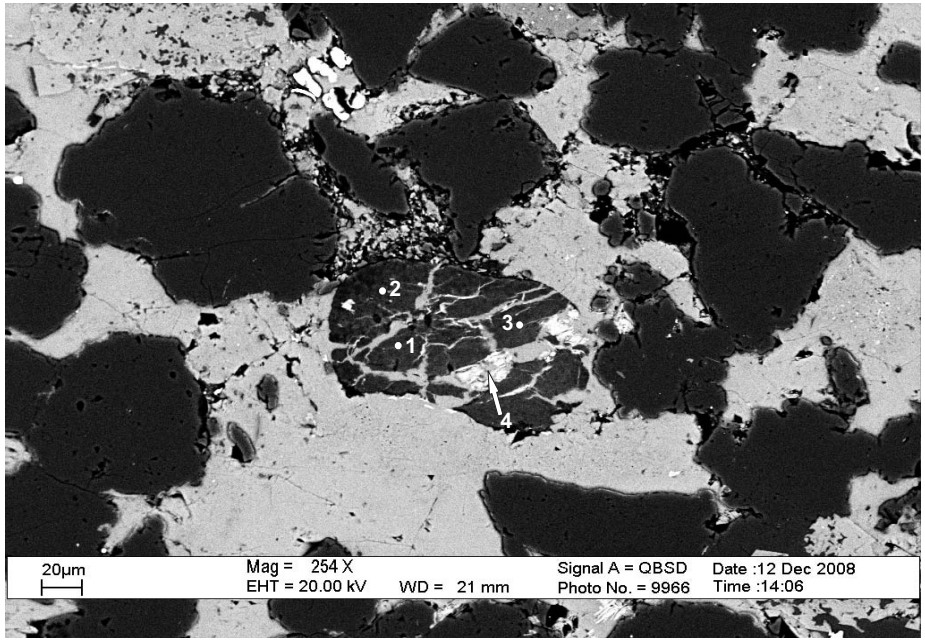


Figure 28: 5445.94 m., Albite (pos.1,2,3) and Mg- chlorite (pos.4)

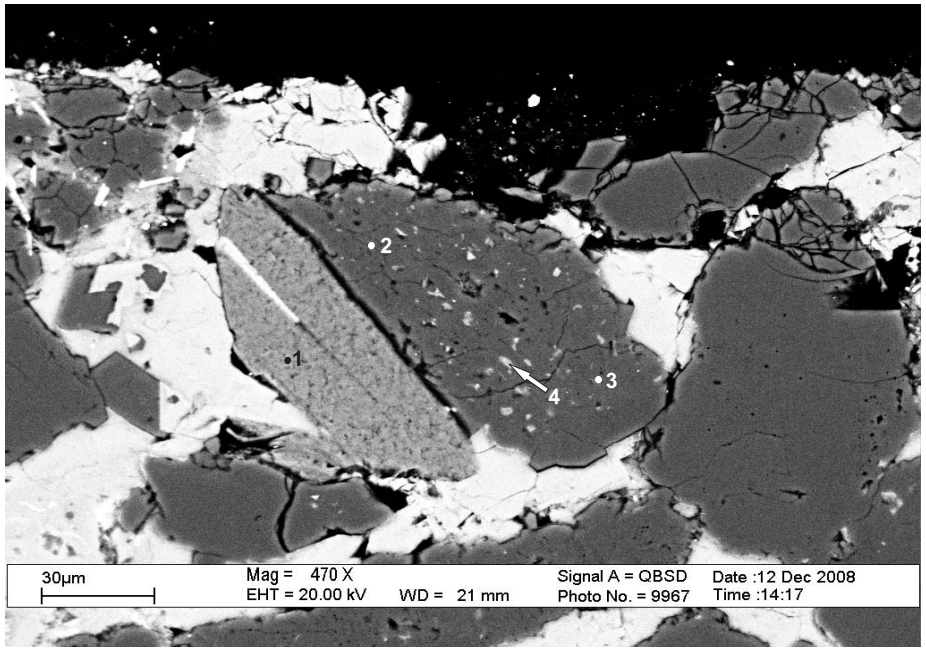


Figure 29: 5445.94 m., Muscovite (pos.1), quartz (pos. 2) with albite inclusions (pos.4)

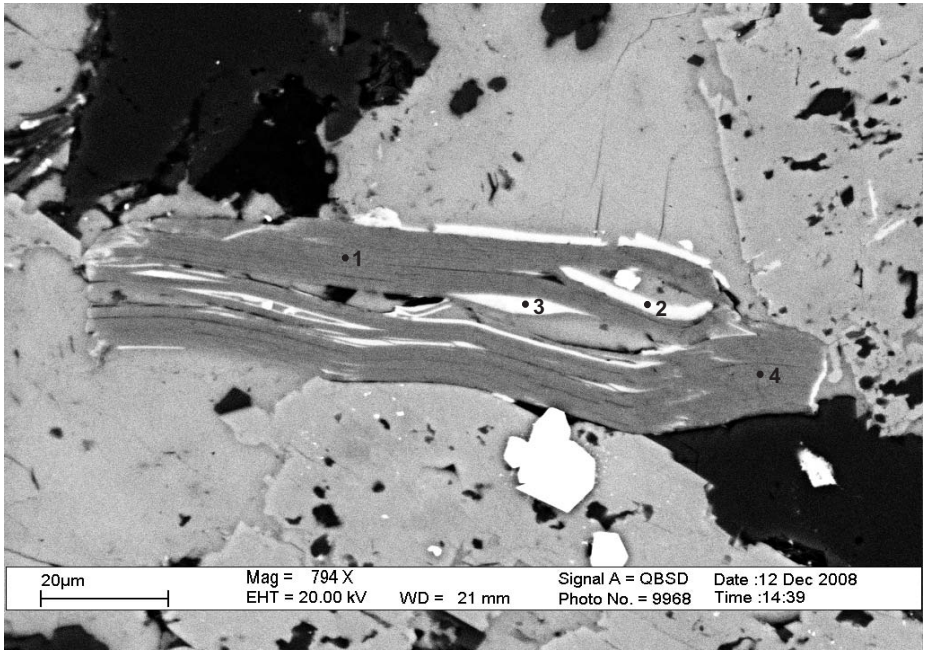


Figure 30: 5445.94 m., Mg- chlorite (pos.1,4) with phosphate (pos.2,3)

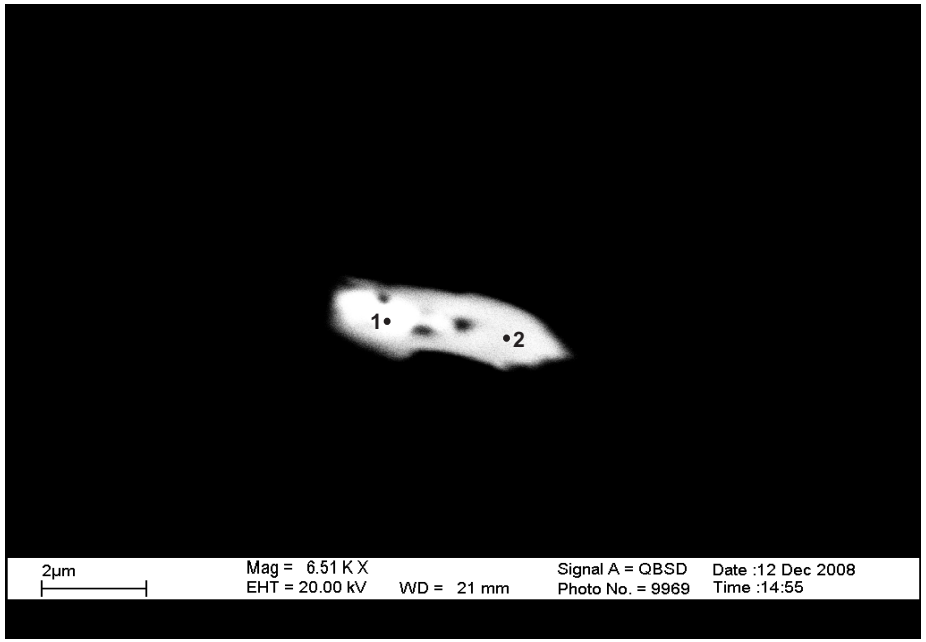


Figure 31: 5445.94 m., Monazite (pos.1,2)

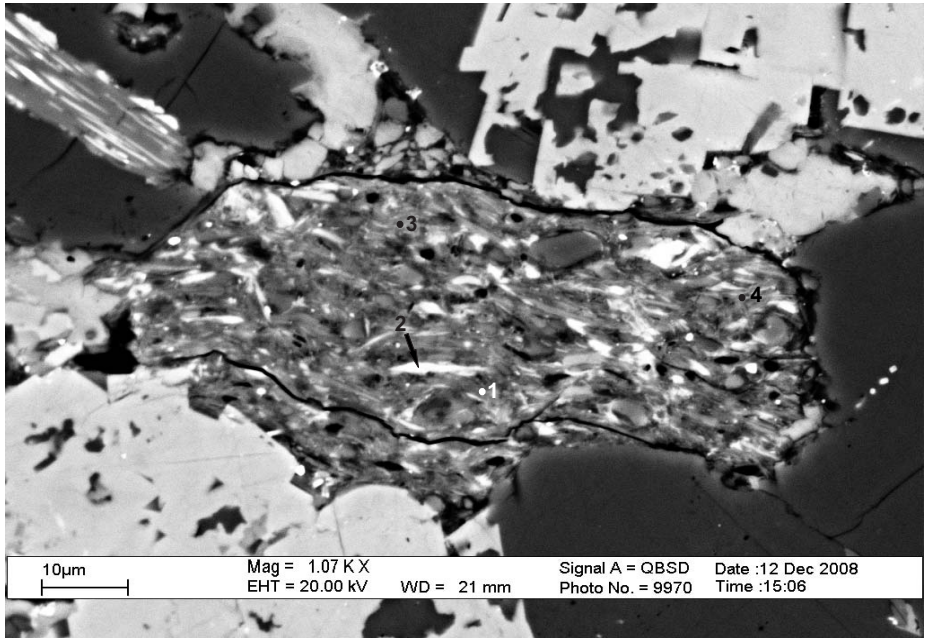


Figure 32: 5445.94 m., Unknown clast (volcanic?) (pos.1,2,3,4)

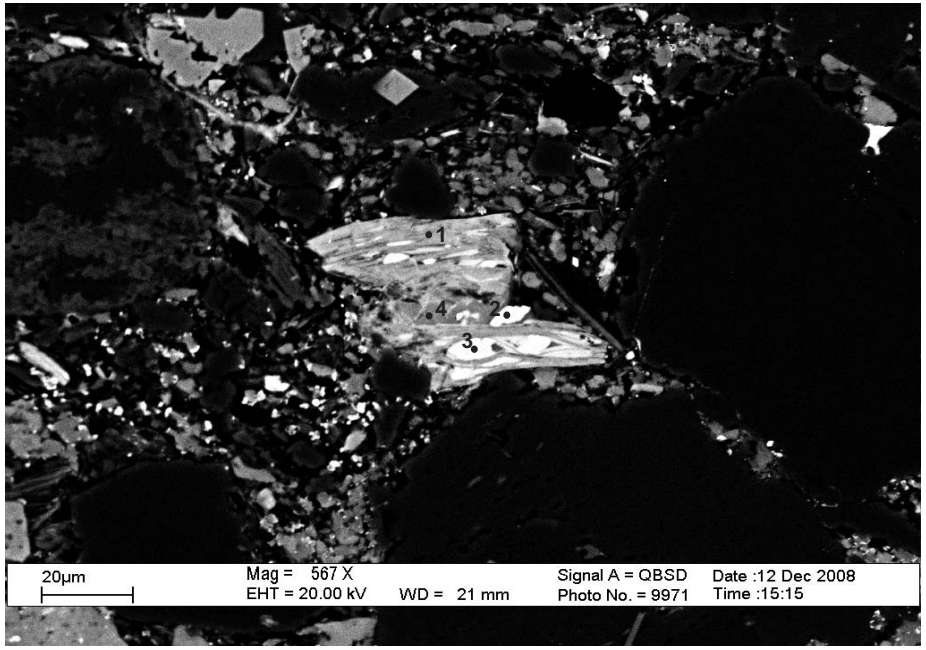


Figure 33: 5445.94 m., Chlorite (pos.1 & 4) and siderite (pos.2,3)

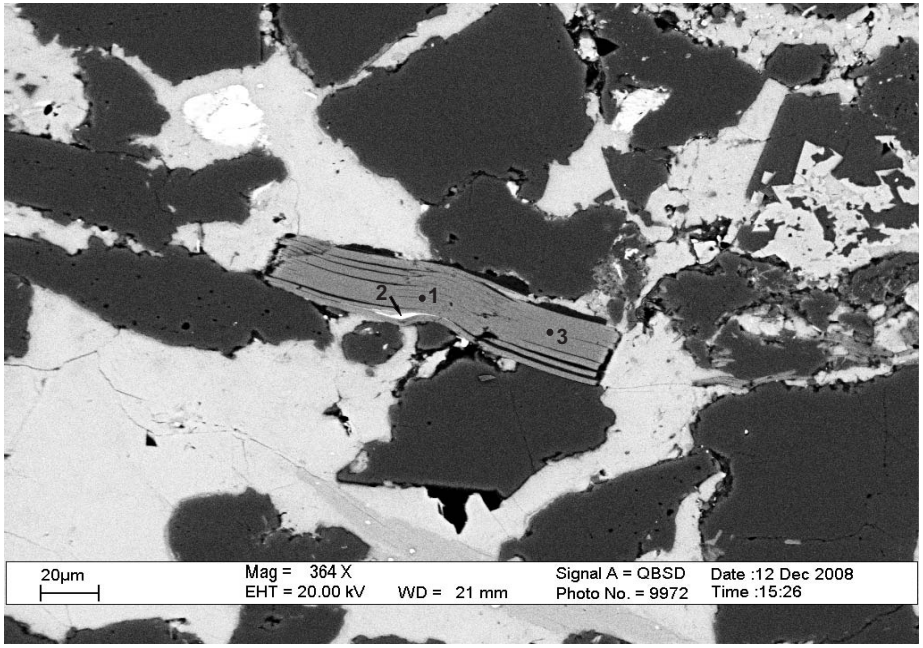


Figure 34: 5445.94 m., Muscovite (pos.1,3) and ankerite (pos.2)

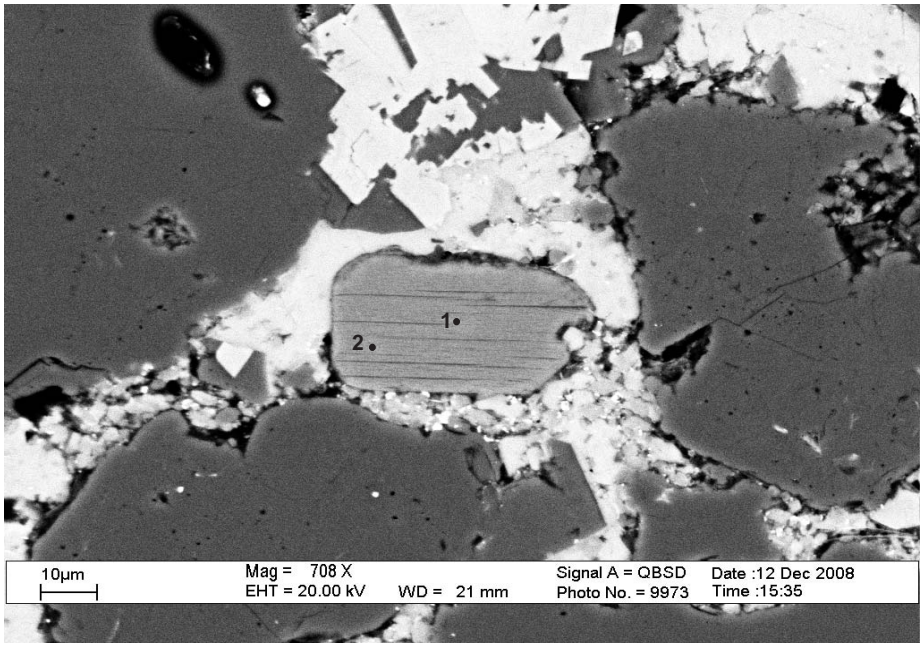


Figure 35: 5445.94 m., Muscovite (pos.1,2)

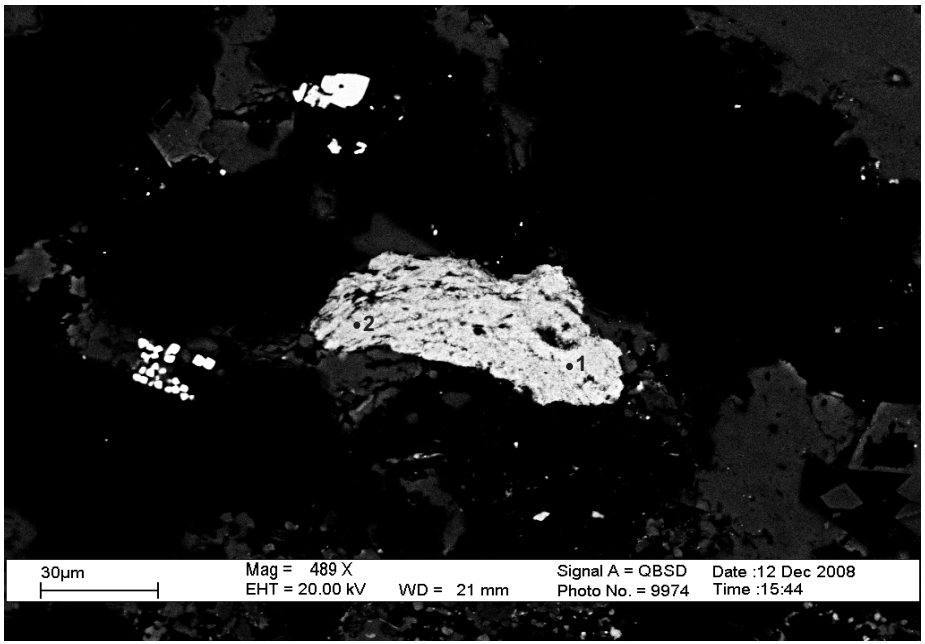


Figure 36: 5445.94 m., Aluminium sulphate phosphate mineral (pos.1,2)

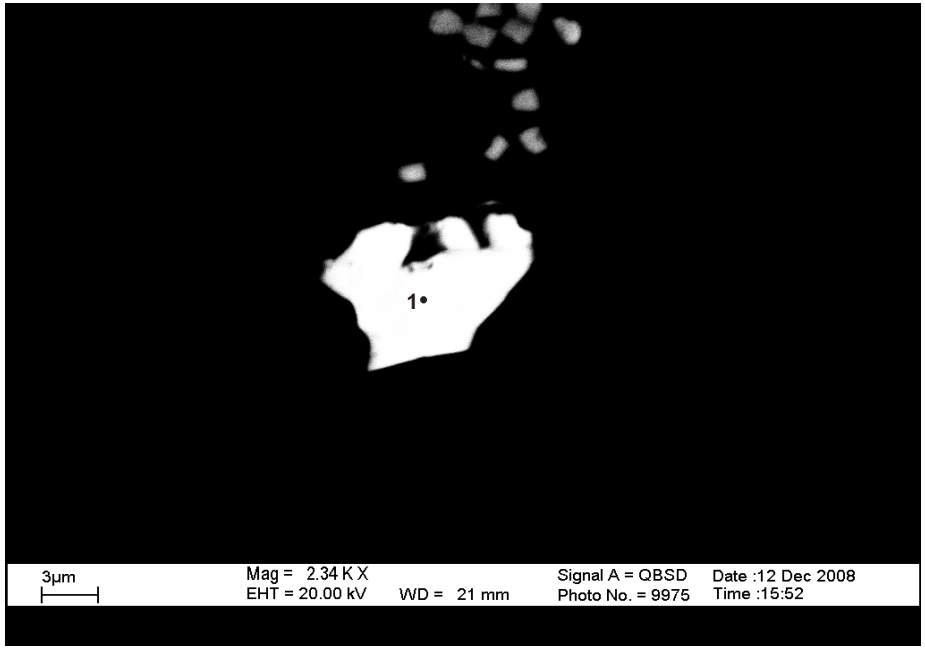


Figure 37: 5445.94 m., Sphalerite (pos.1)

Figure 38: 5445.94 m., Sphalerite (pos.1)

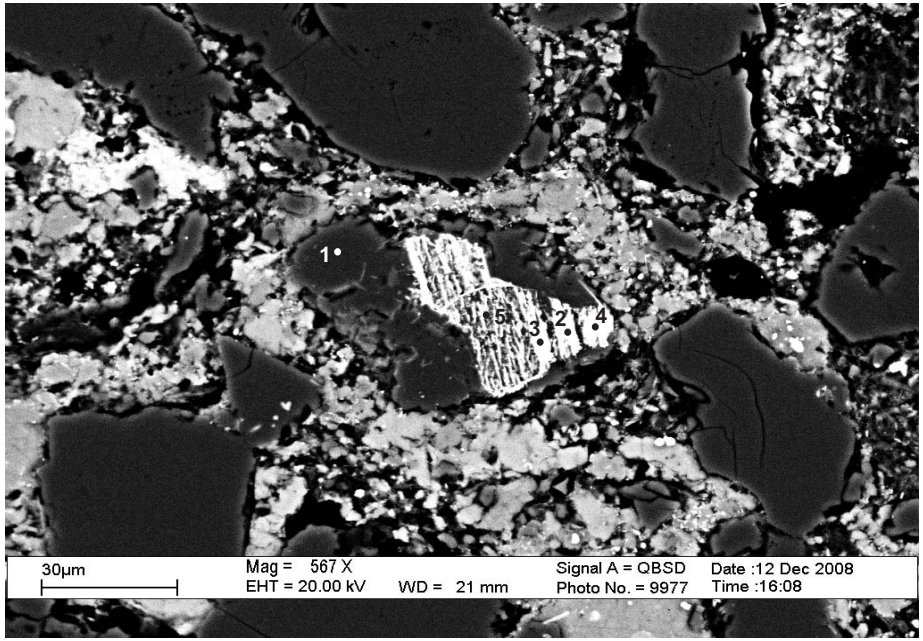


Figure 39: 5445.94 m., Rutile (pos.2,3,4,5) and quartz (pos.1)

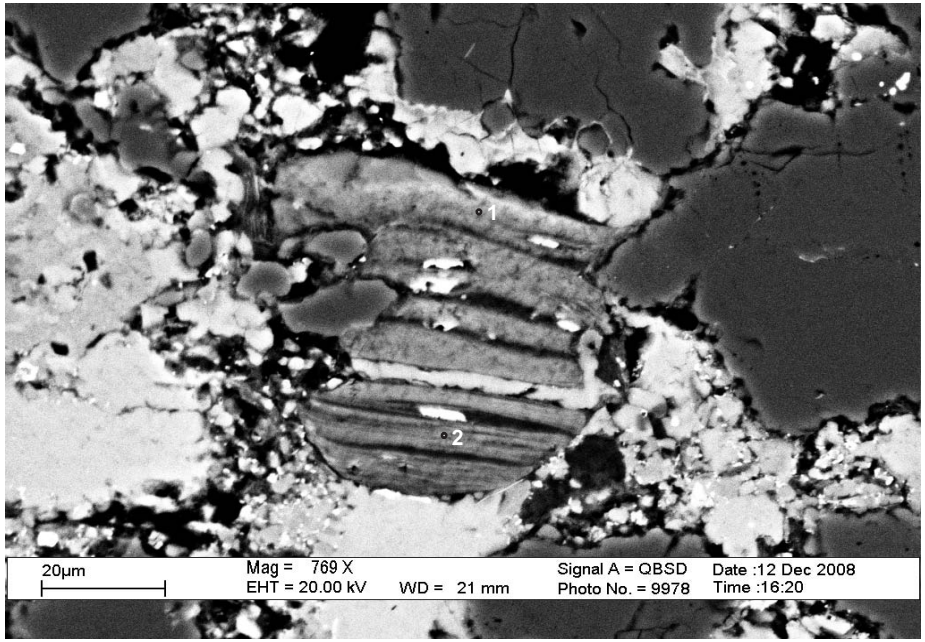


Figure 40: 5445.94 m., Muscovite (pos.1,2)

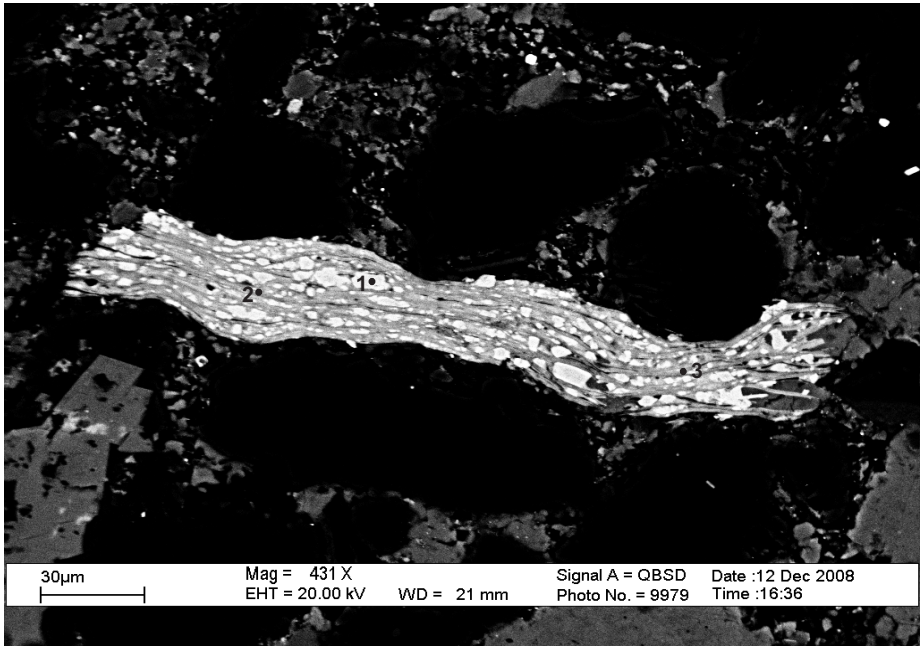


Figure 41: 5445.94 m., Chlorite (pos.2,3) and siderite (pos.1)

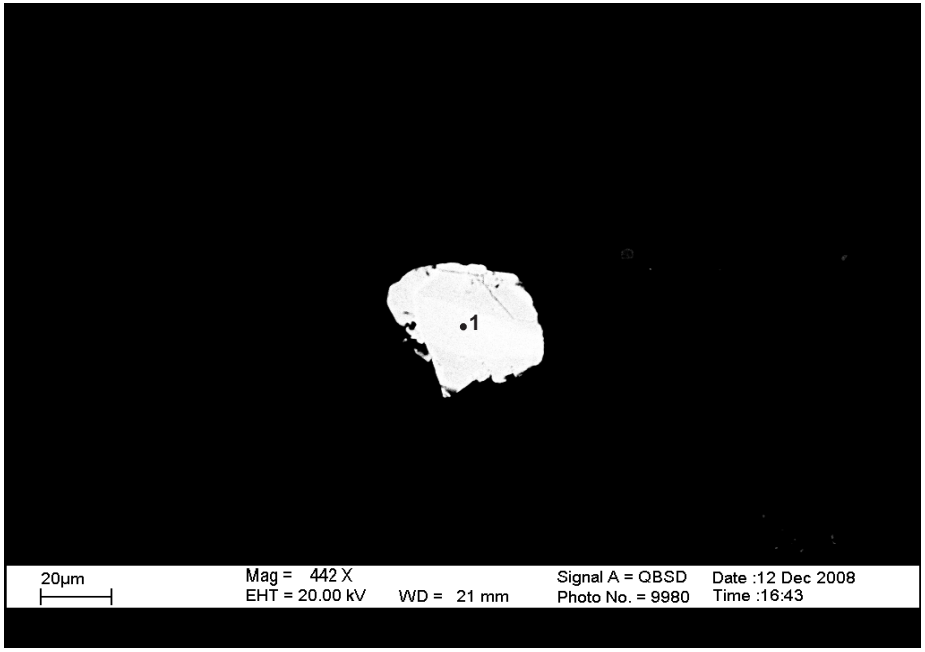


Figure 42: 5445.94 m., Xenotime (pos.1)

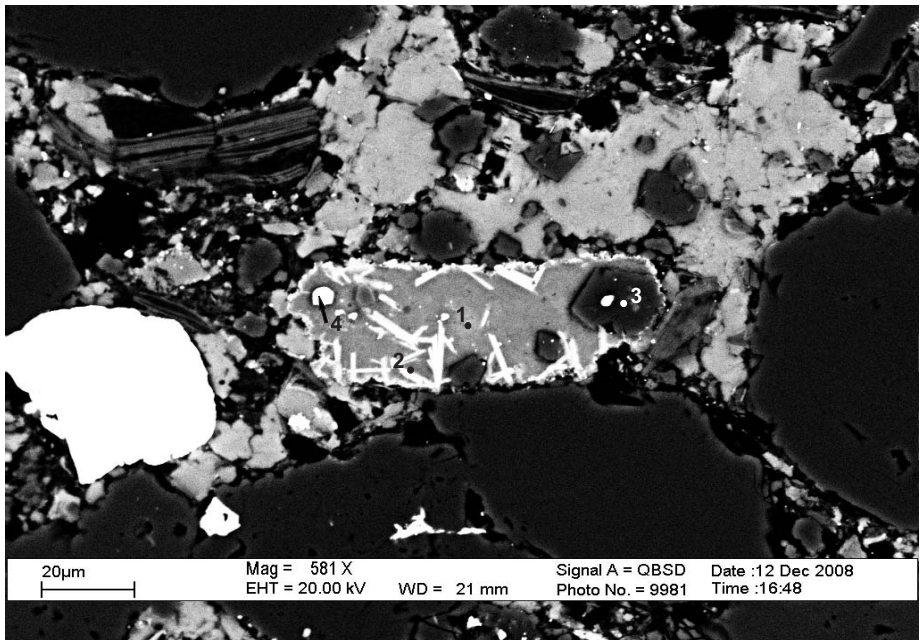


Figure 43: 5445.94 m., Fe-rich calcite (pos.1), siderite and chlorite (pos.2), quartz (pos.3) and pyrite (pos.4)

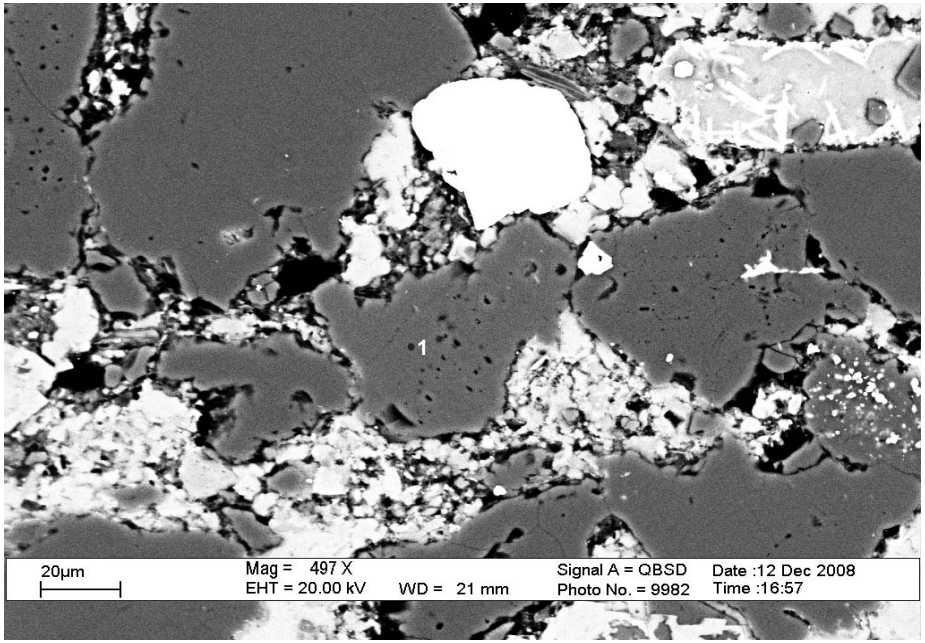


Figure 44: 5445.94 m., Albite (pos.1)

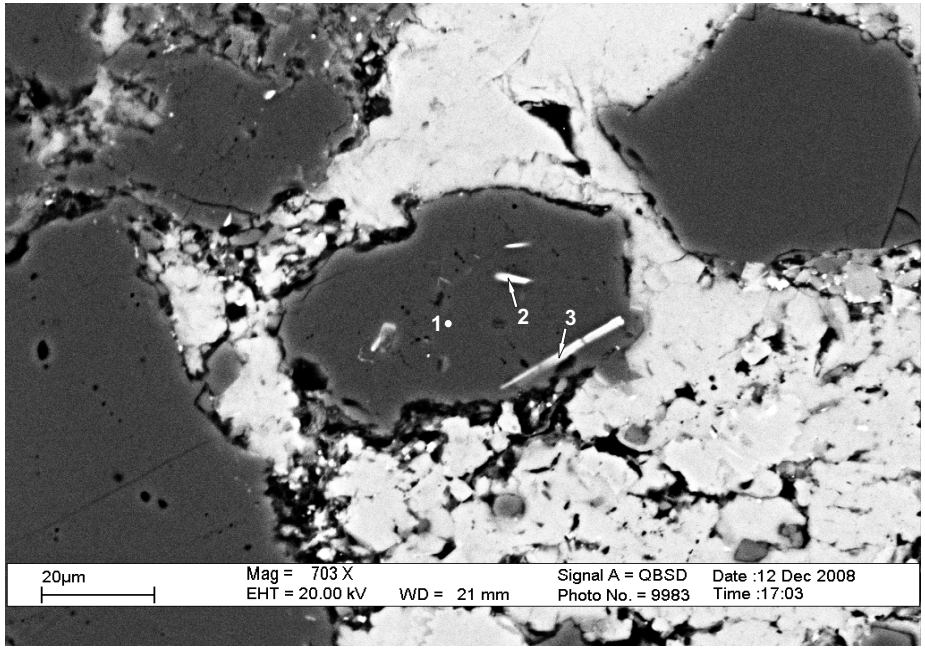


Figure 45: 5445.94 m., Quartz (pos.1) with rutile inclusions (pos. 2,3)

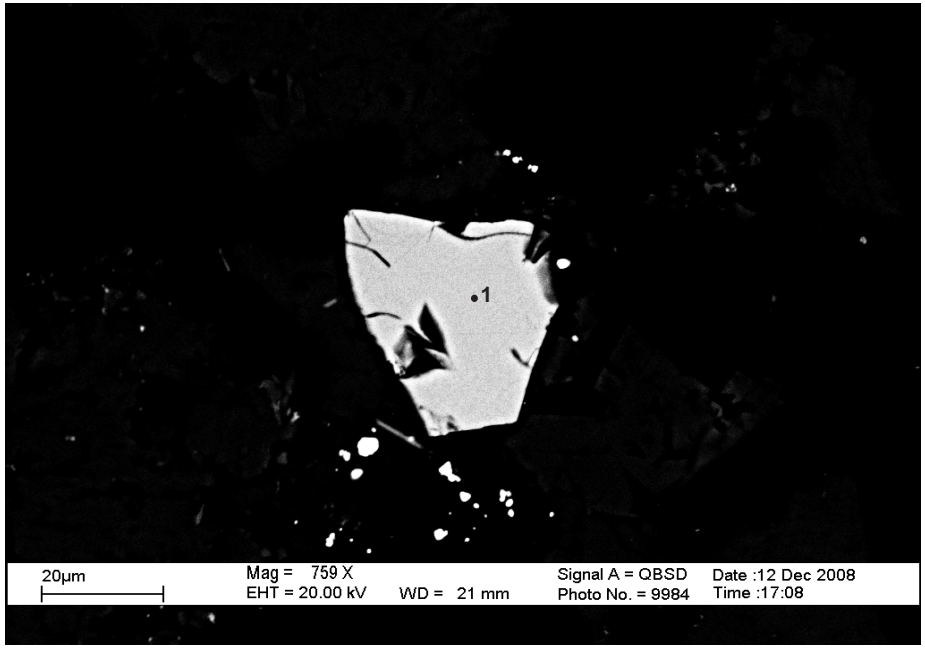


Figure 46: 5445.94 m., Chromian spinel (pos.1)

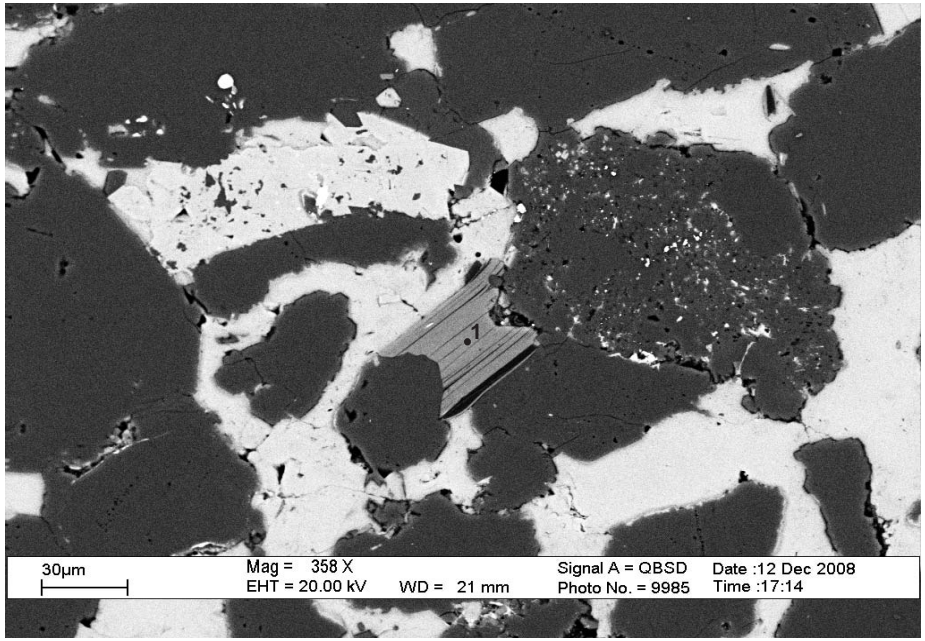


Figure 47: 5445.94 m., Muscovite (pos.1)

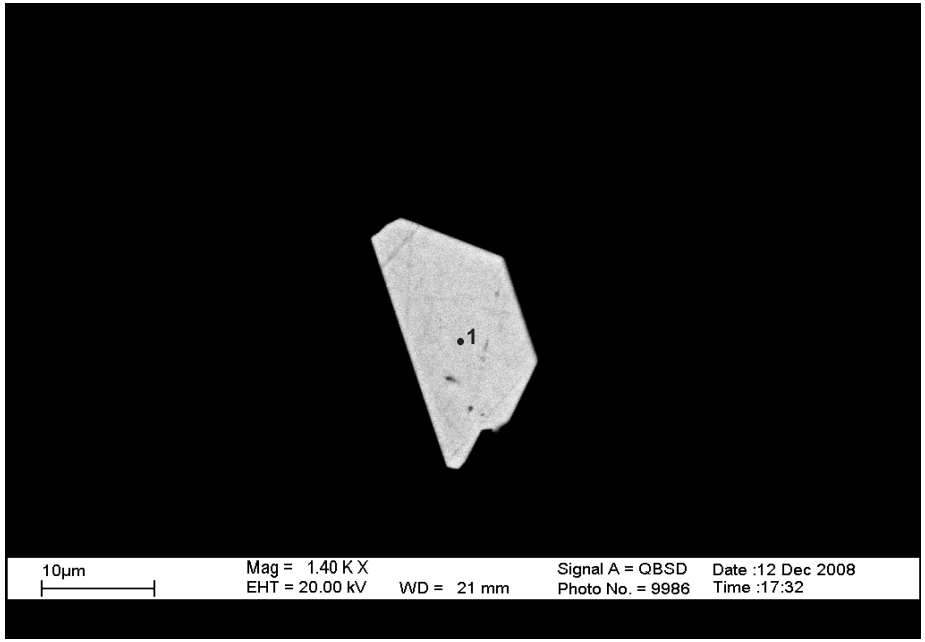


Figure 48: 5445.94 m., Sphalerite (pos.1)

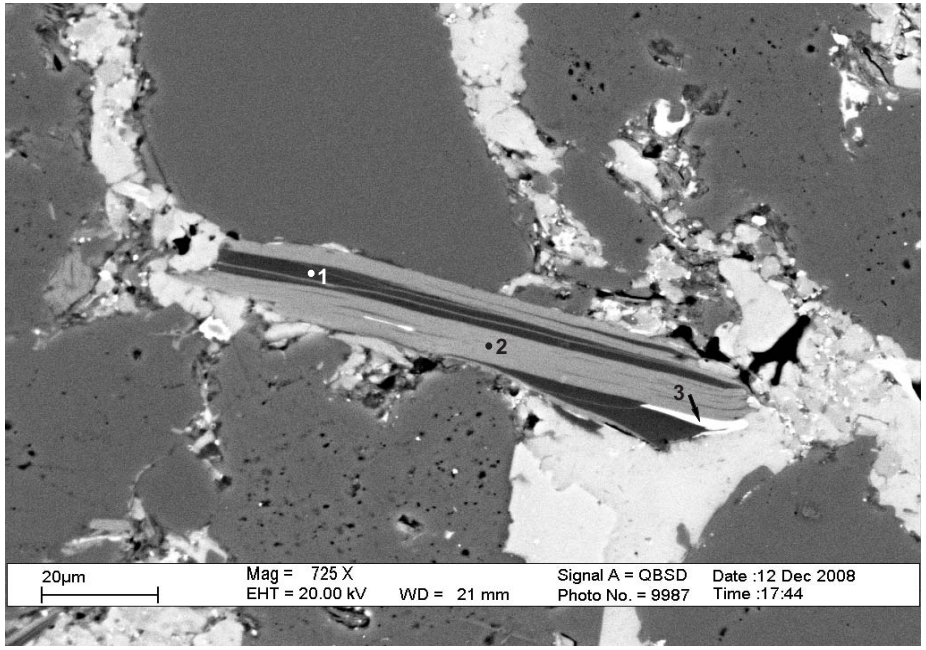


Figure 49: 5445.94 m., Kaolinite after muscovite (pos.1), muscovite (pos.2) and chamosite (pos.3)

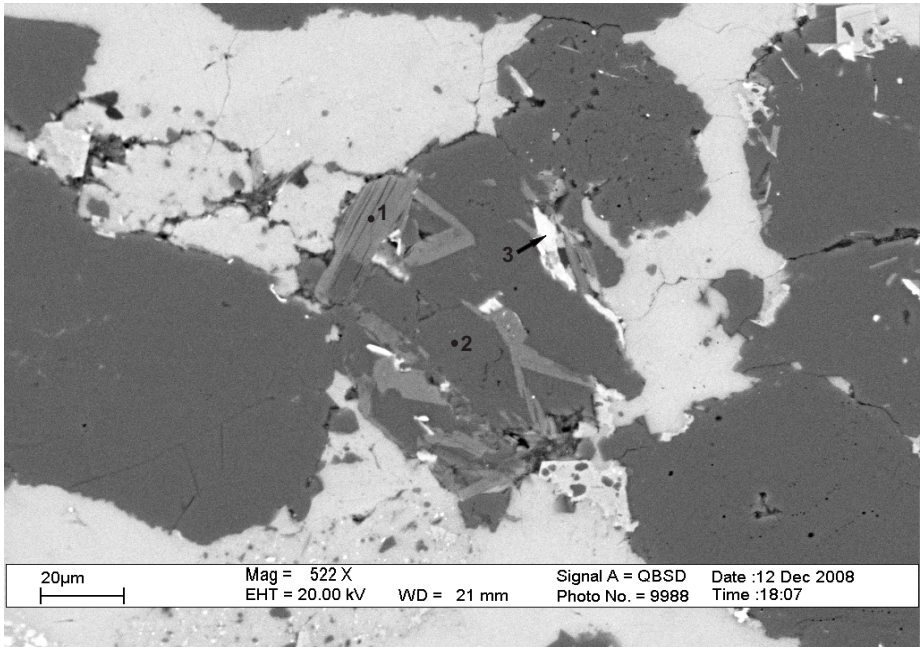


Figure 50: 5445.94 m., Muscovite (pos.1), quartz (pos.2) and chlorite (pos.3)

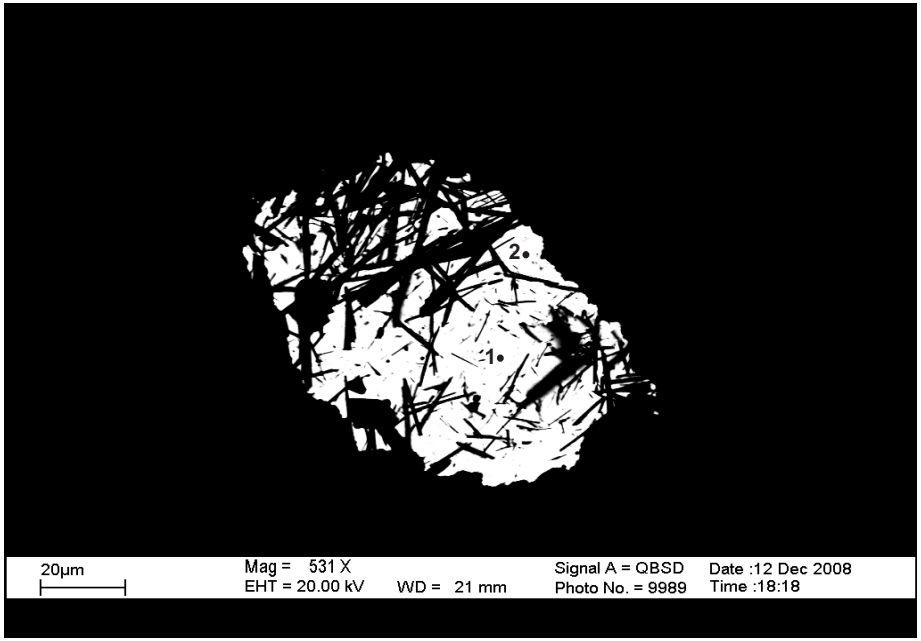


Figure 51: 5445.94 m., Barite (pos.1,2)

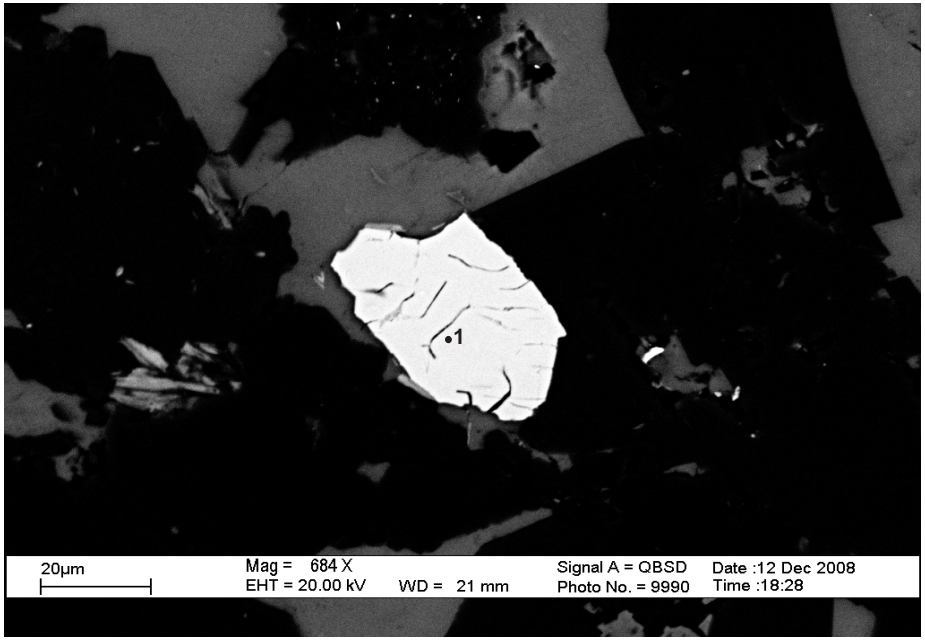


Figure 52: 5445.94 m., Chromian spinel (pos.1)

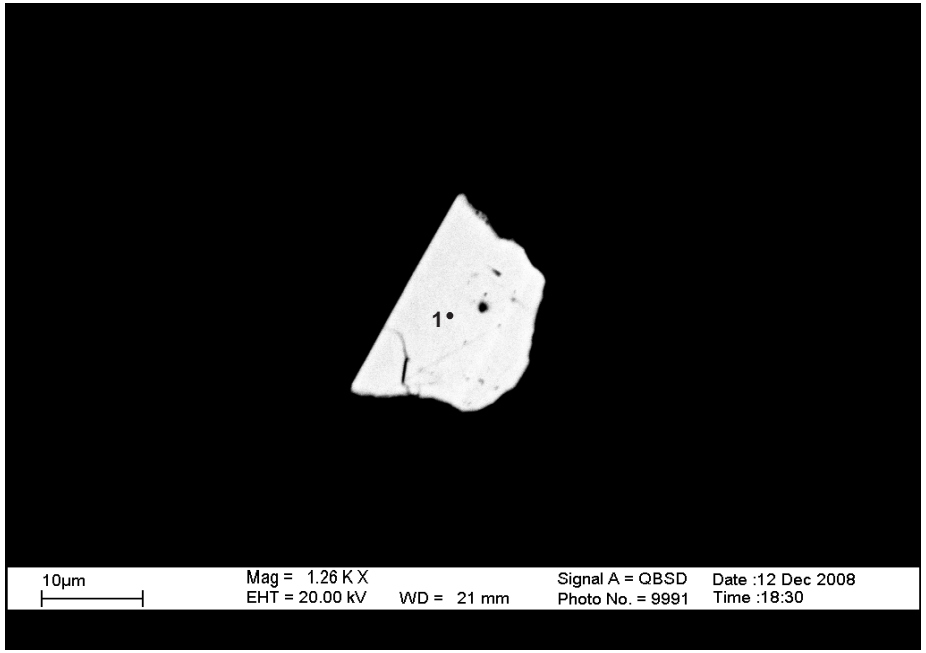


Figure 53: 5445.94 m., Sphalerite (pos.1)

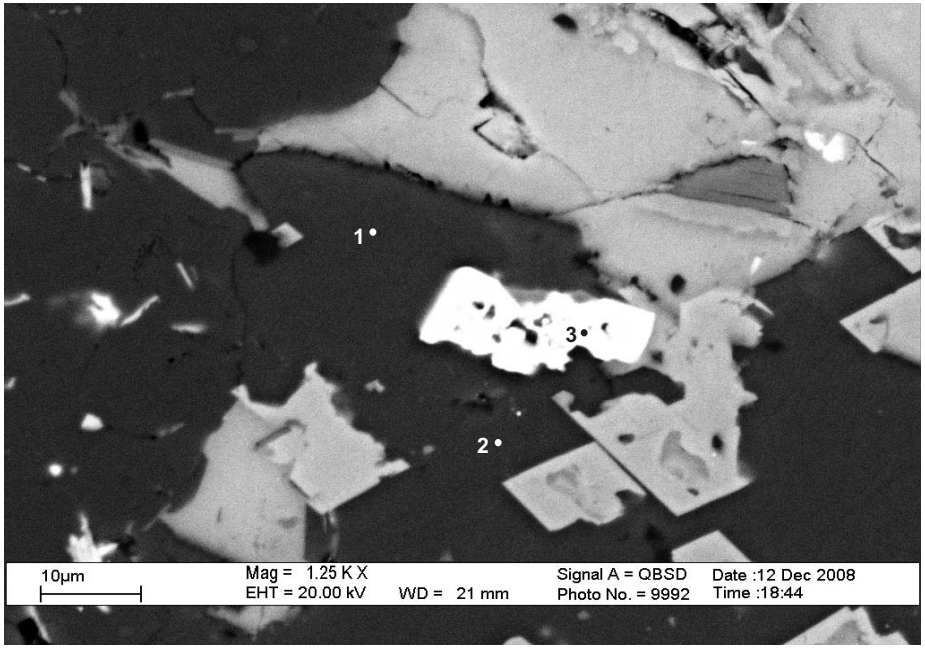


Figure 54: 5445.94 m., Albite (pos.1,2) with siderite (pos.3)

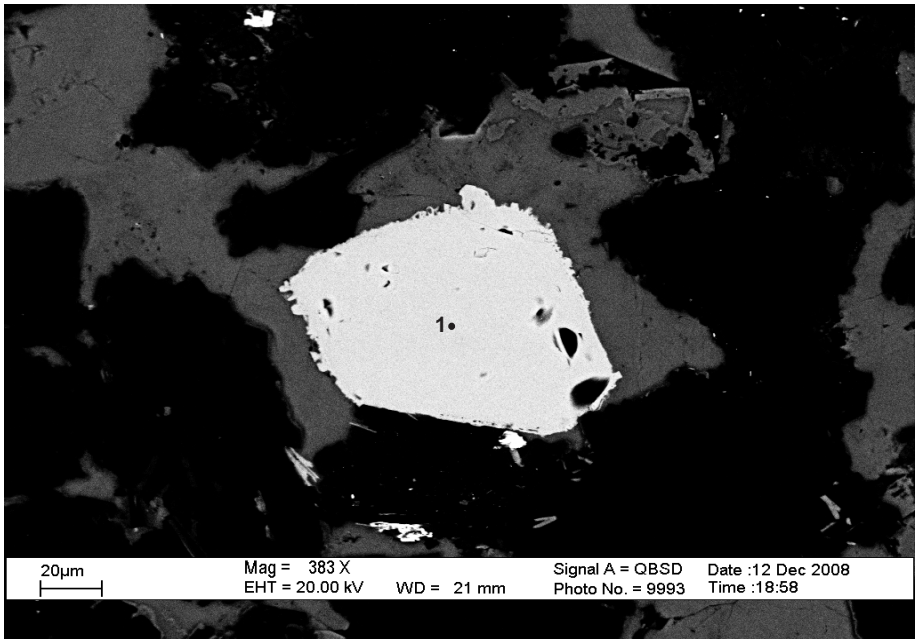


Figure 55: 5445.94 m., Apatite (pos.1)

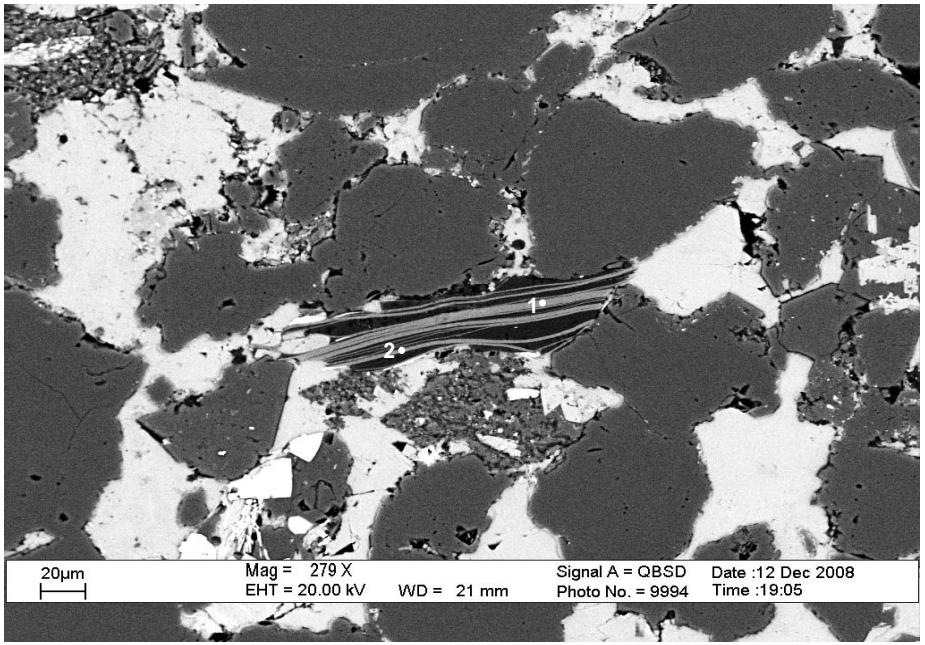


Figure 56: 5445.94 m., Muscovite (pos.1,2)

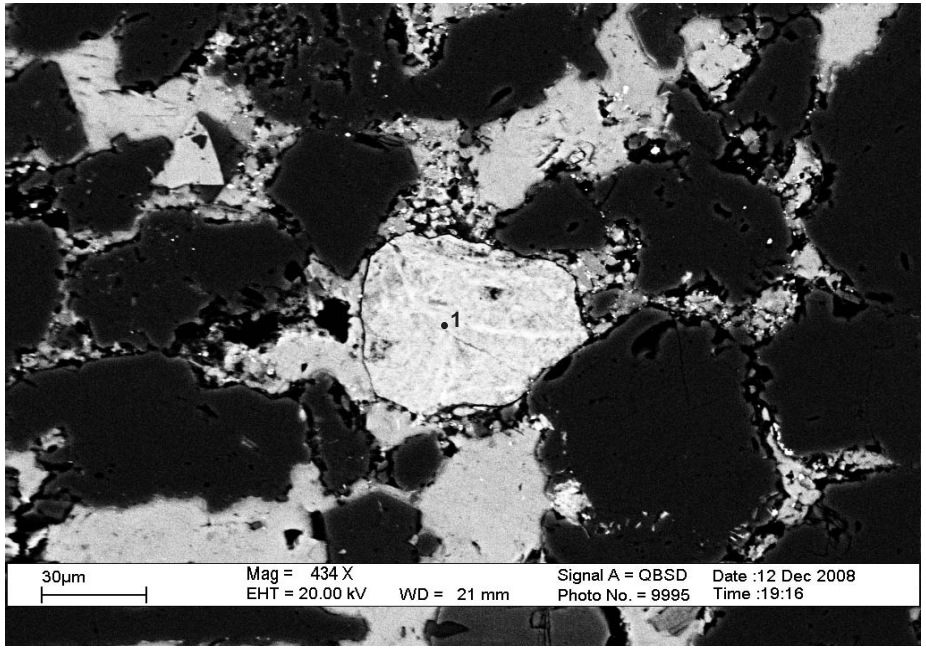


Figure 57: 5445.94 m., Mg-chlorite (pos.1)

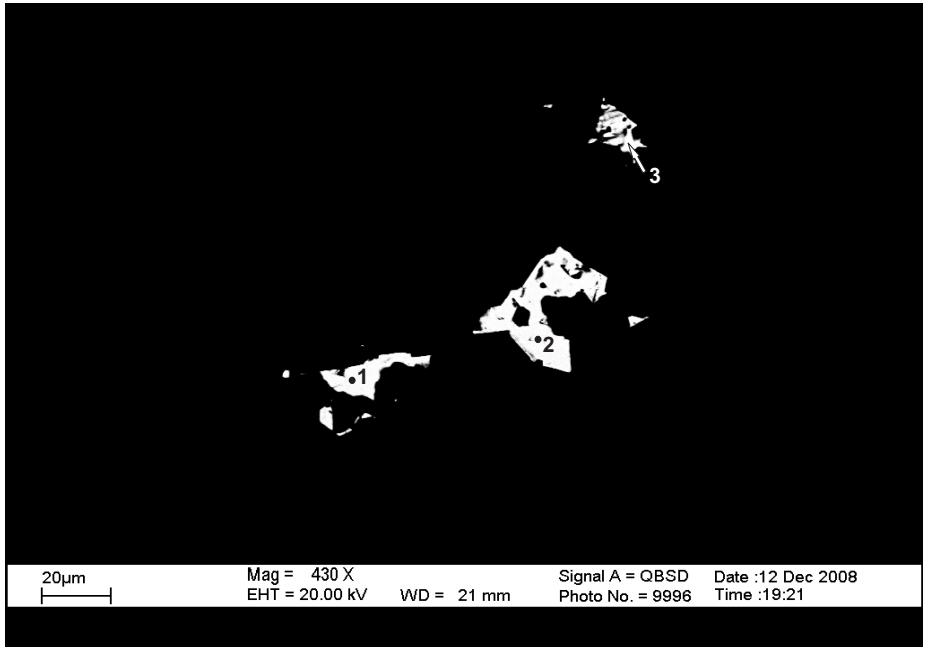


Figure 58: 5445.94 m., Sphalerite (pos.1,2,3)

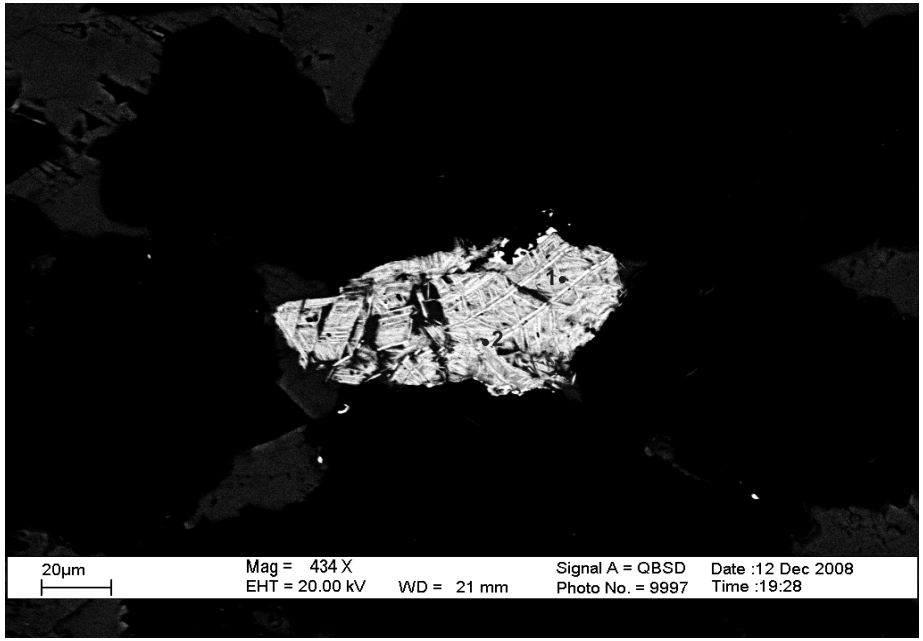


Figure 59: 5445.94 m., Rutile, (pos.1,2)

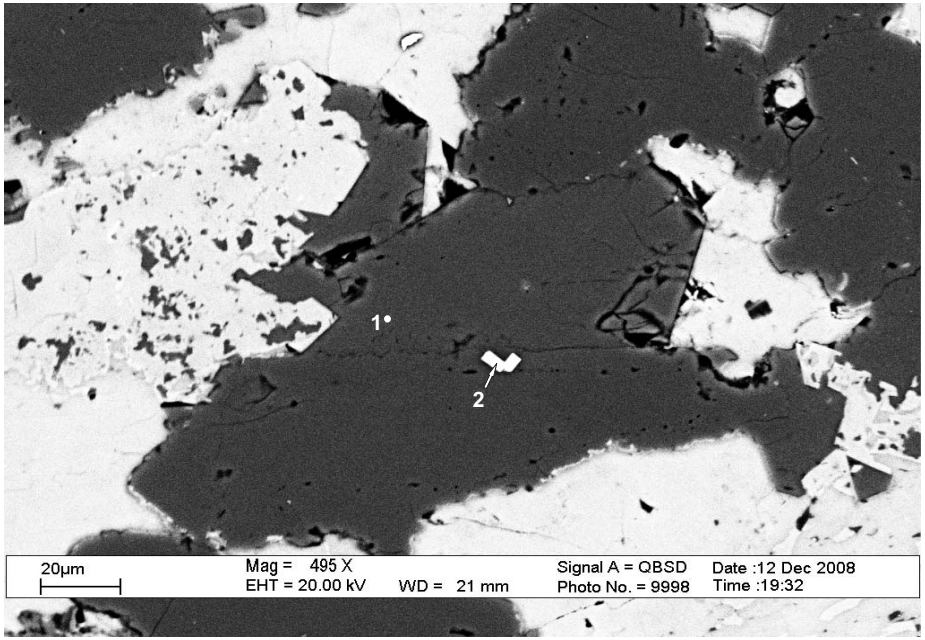


Figure 60: 5445.94 m., Albite (pos.1) with rutile inclusions (pos.2)

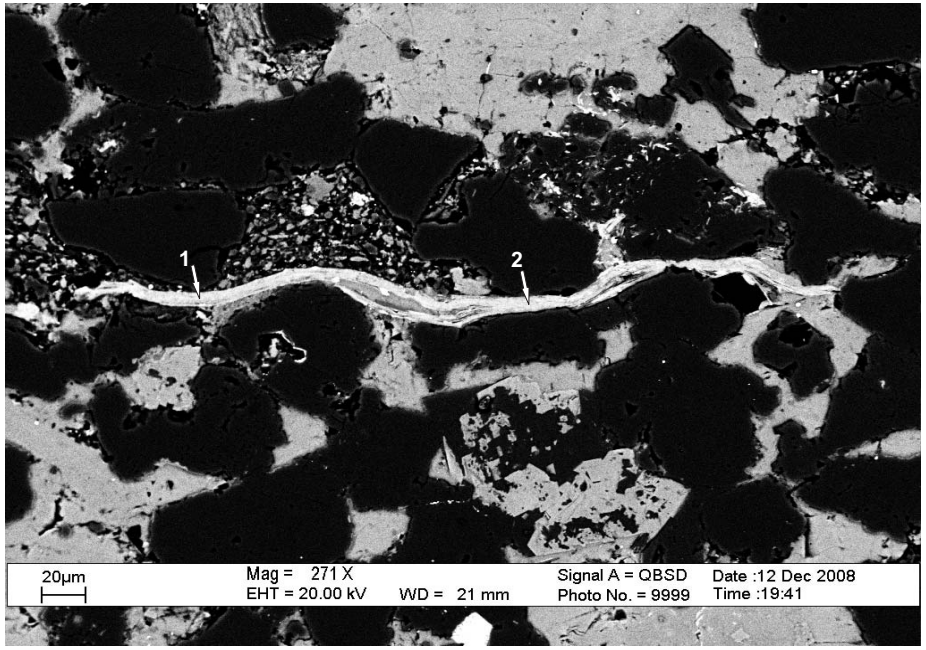


Figure 61: 5445.94 m., Chlorite after muscovite (pos.1,2)

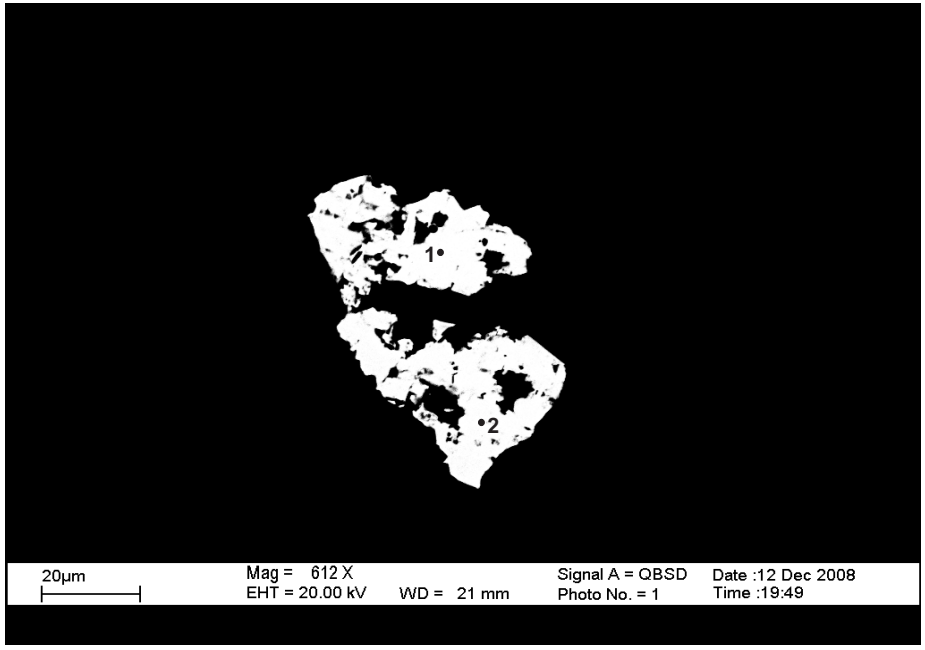


Figure 62: 5445.94 m., Barite (pos.1,2)

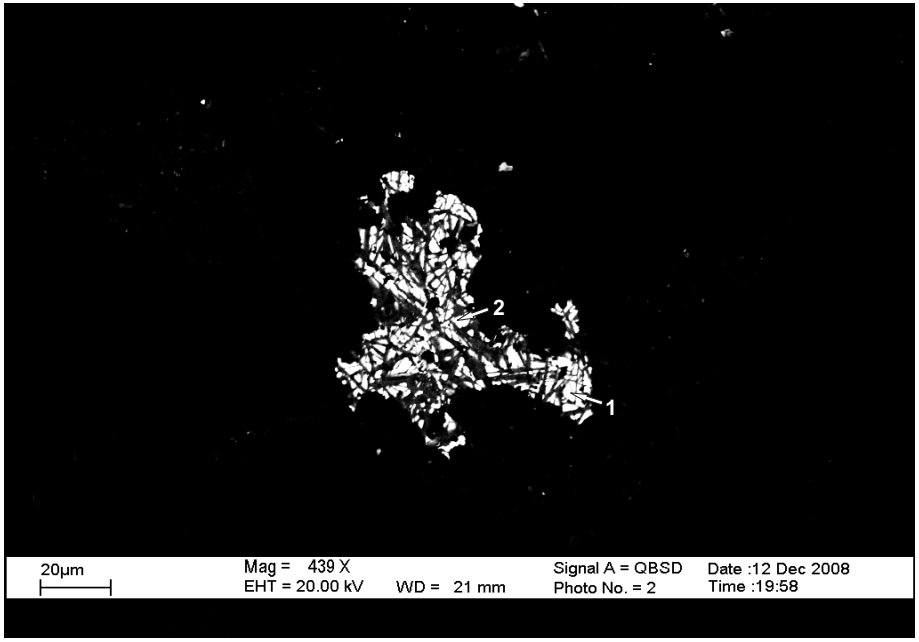


Figure 63: 5445.94 m., Highly fractured barite (pos.1,2)

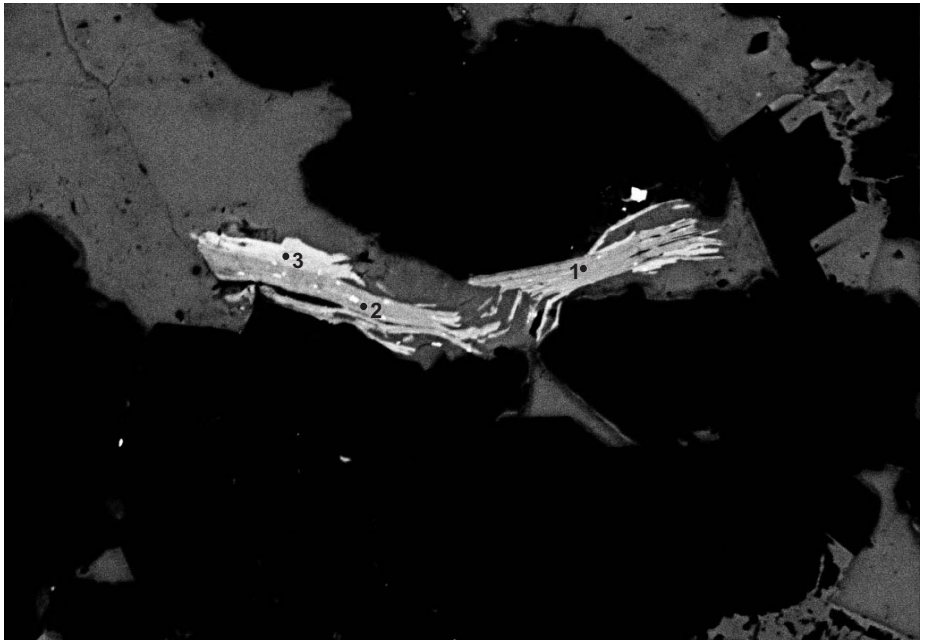


Figure 64: 5445.94 m., Chlorite (pos.1,2,3)

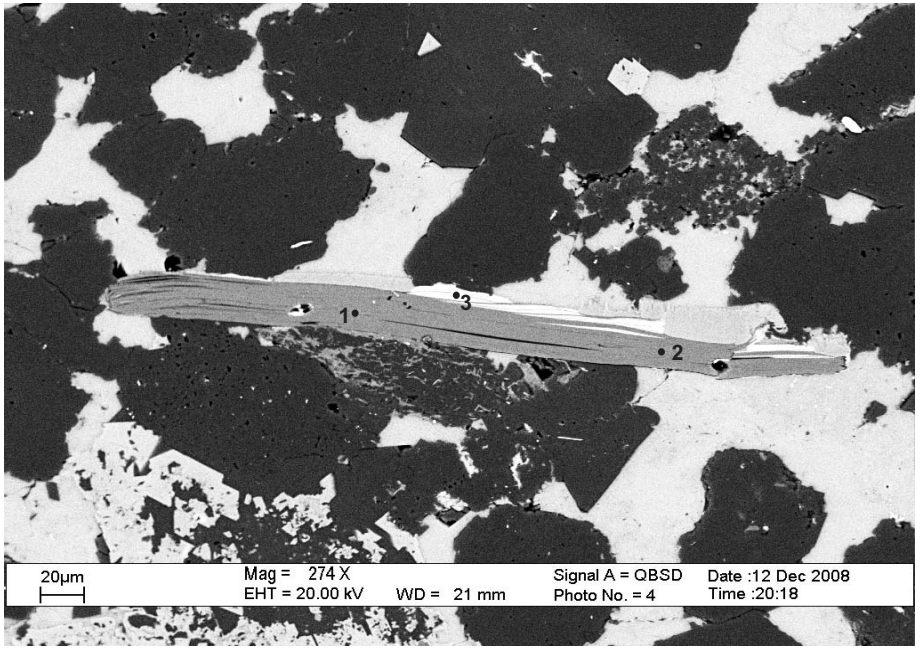


Figure 65: 5445.94 m., Muscovite (pos.1,2) and chlorite (pos.3)

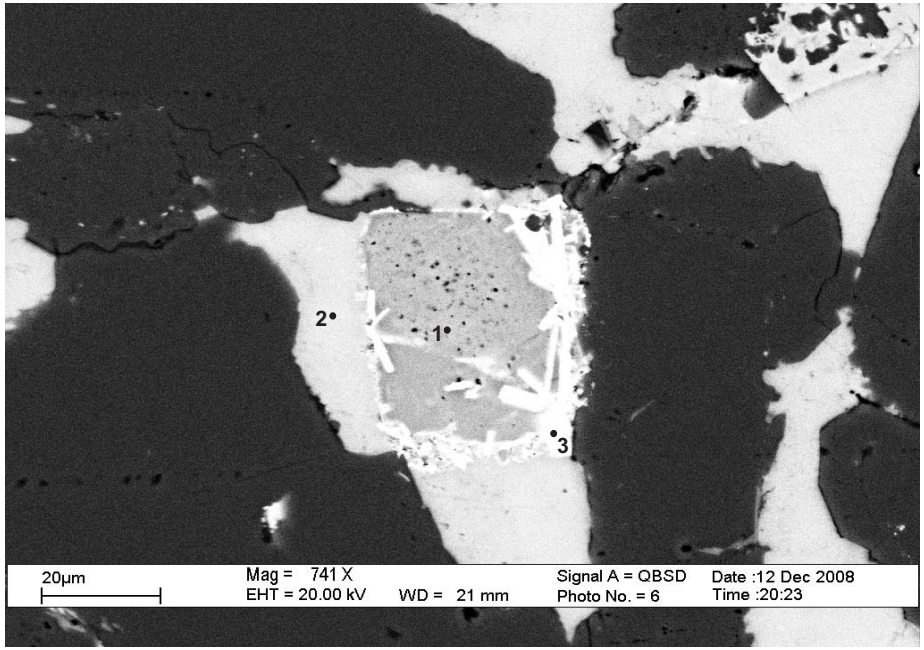


Figure 66: 5445.94 m., Mg-rich calcite (pos.1,2) and chlorite (pos.3)

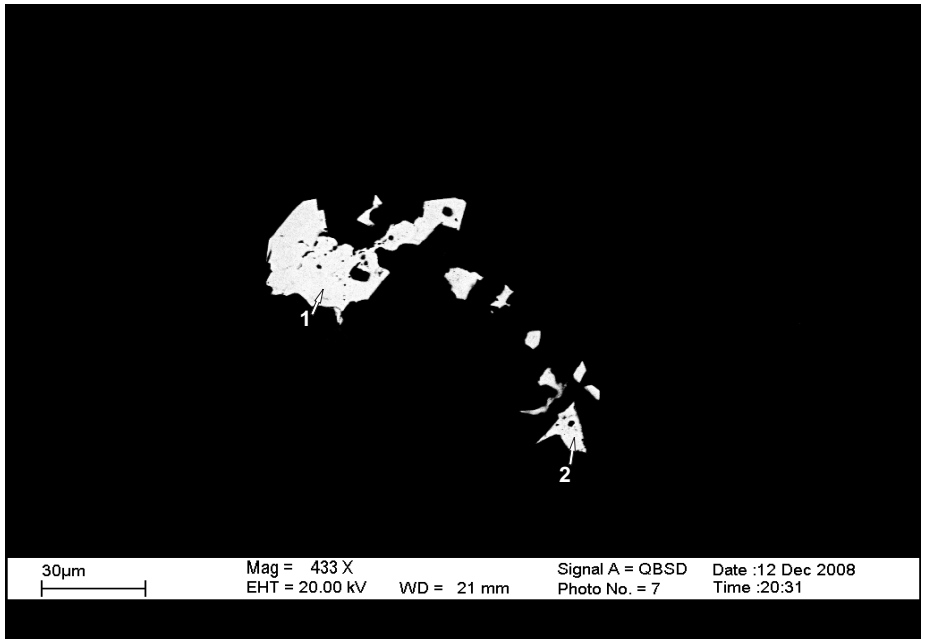


Figure 67: 5445.94 m., Sphalerite (pos.1,2)

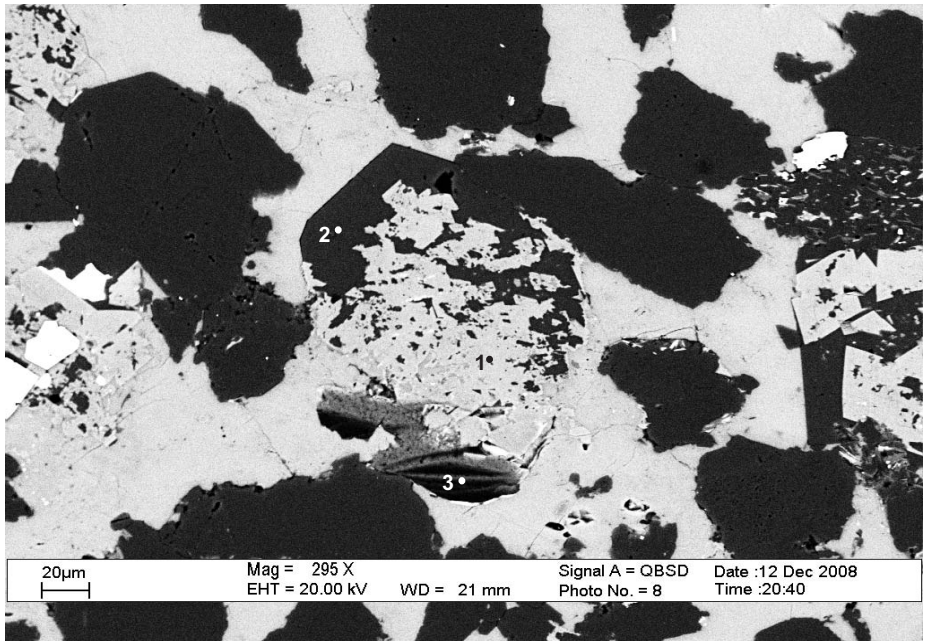


Figure 68: 5445.94 m., Ankerite (pos.1), albite (pos.2) and unknown (muscovite/kaolinite?) (pos.3)

Figure 69: 5445.94 m., Sphalerite (pos.1)

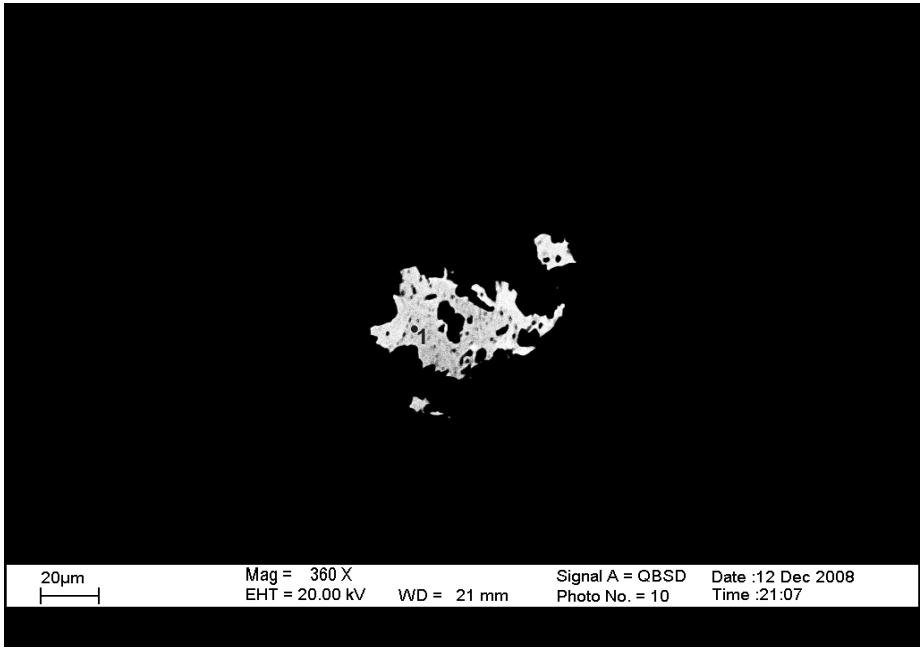


Figure 70: 5445.94 m., Barite (pos.1)

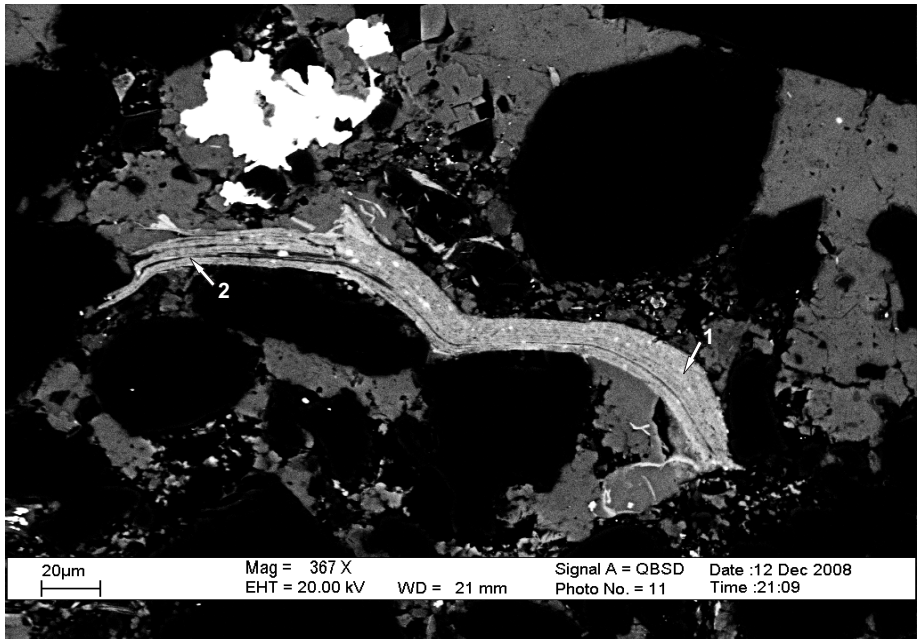


Figure 71: 5445.94 m., Chlorite after muscovite (pos.1,2)

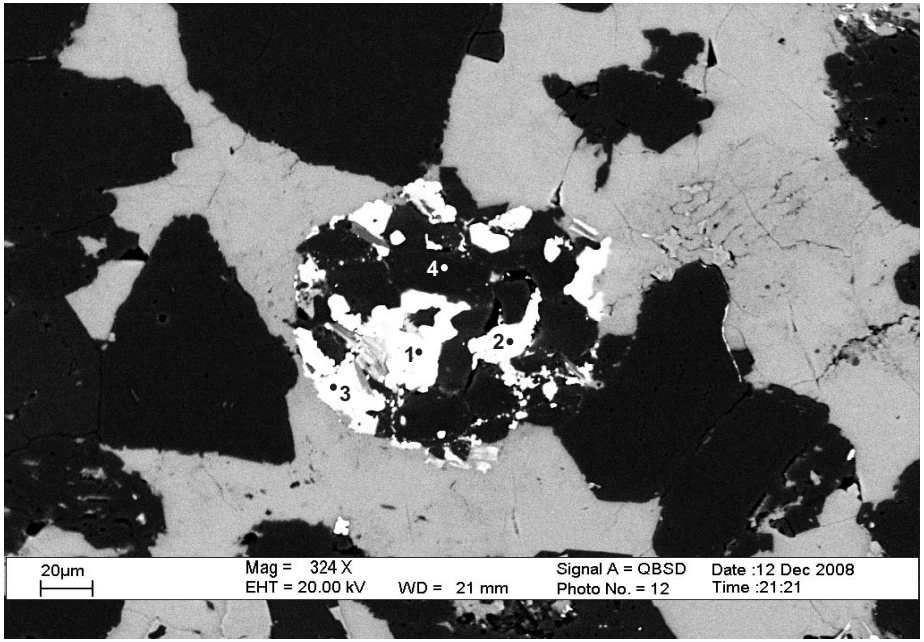


Figure 72: 5445.94 m., Chlorite and barite (pos.1,2,3) with quartz (pos.4)

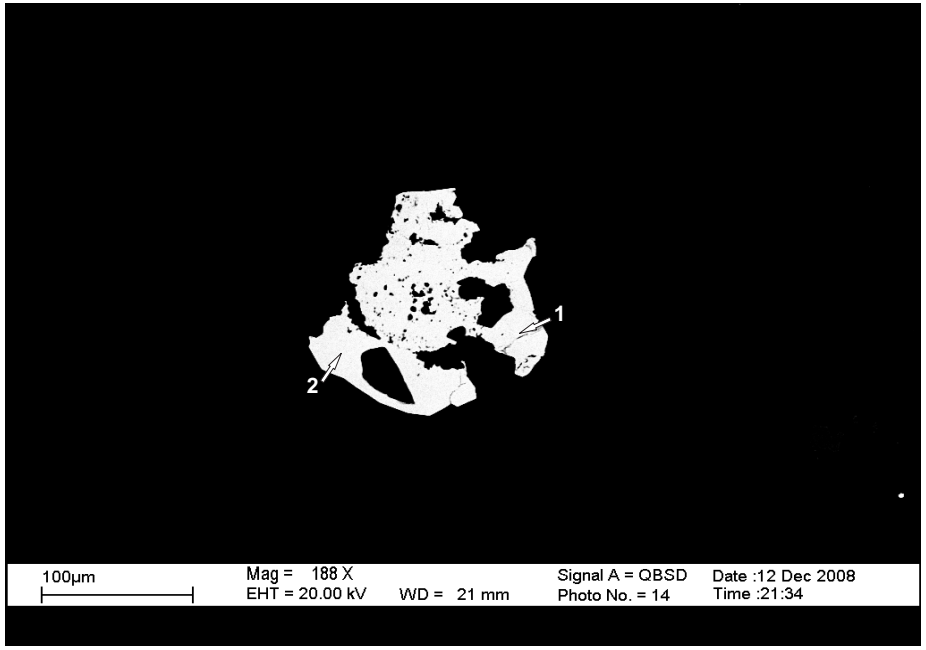


Figure 73: 5445.94 m., Sphalerite (pos.1,2)

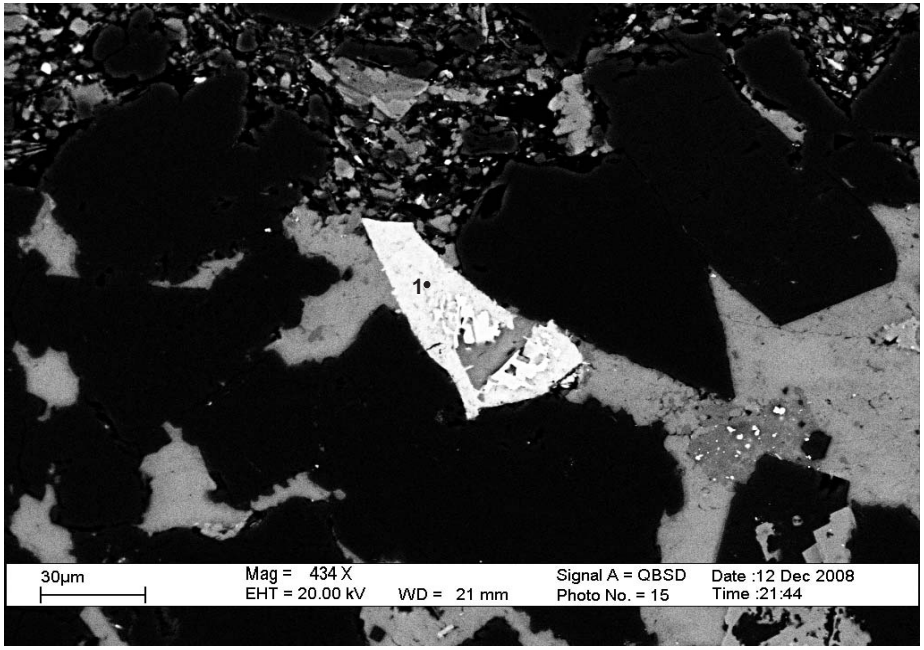


Figure 74: 5445.94 m., Chlorite (pos.1)

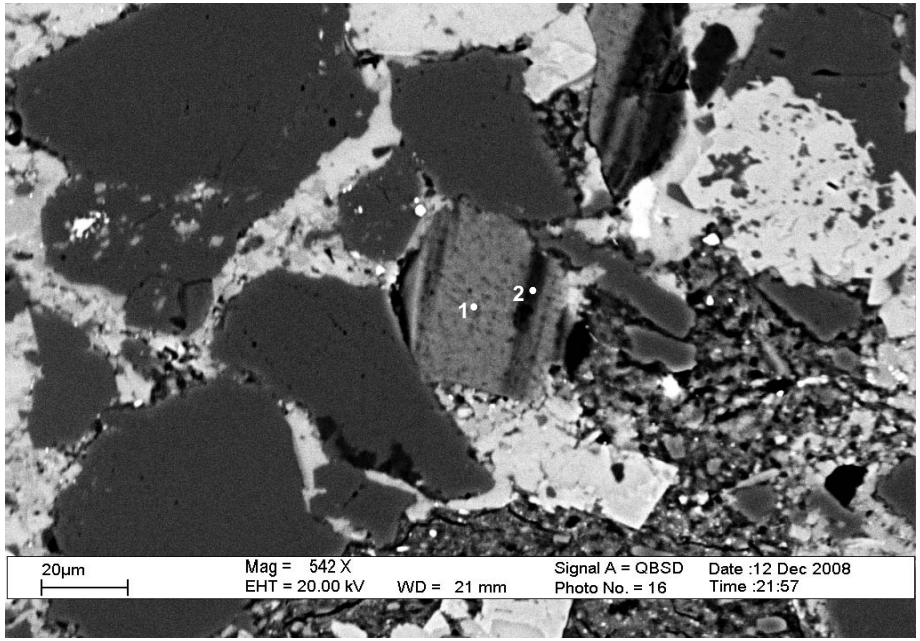


Figure 75: 5445.94 m., Muscovite (pos.1) and kaolinite (pos.2)

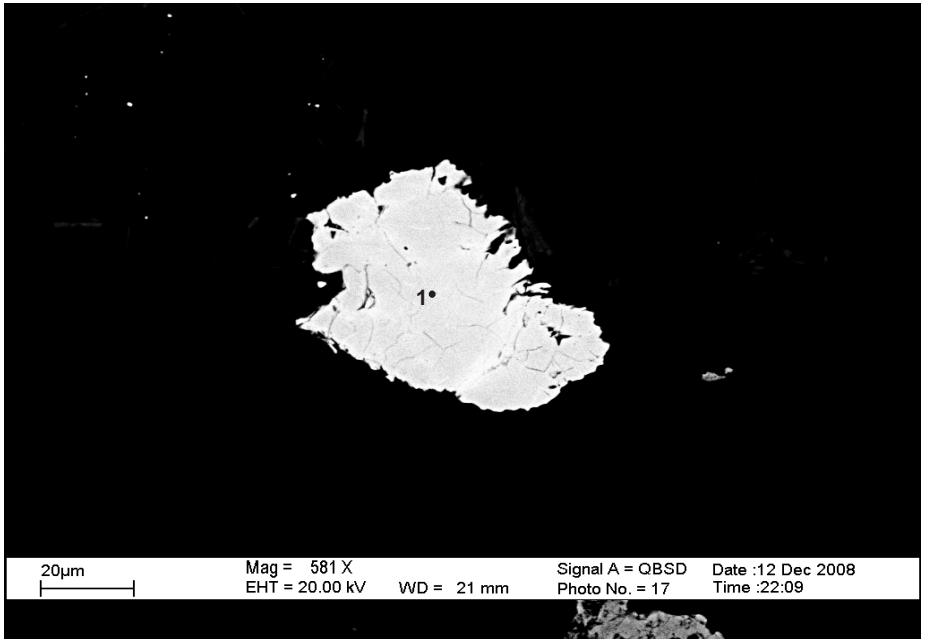


Figure 76: 5445.94 m., Chromite (pos.1)

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

Mineral Name															
Fe-rich chlorite	grain 1	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity corrn.	Weight%	Weight% sigma	Atomic%	Compound%	Formula	Number of ions	Standard			
	Mg	K_SERIES	1.44	0.00987	0.4817	2.99	0.49	4.82	4.96	MgO	0.7	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.84	0.01354	0.5805	3.17	0.41	4.6	5.98	Al2O3	0.67	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	3.56	0.02872	0.6754	5.27	0.39	7.35	11.28	SiO2	1.07	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.32	0.02088	1.0633	2.19	0.25	2.14	3.06	CaO	0.31	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	33.82	0.3382	0.903	37.45	1.05	26.27	48.18	FeO	3.83	Fe 1-Jun-1999 12:00 AM			
	O					22.39	0.91	54.83			8				
	Totals					73.46									
										Cation sum	6.59				
	grain 1	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.74	0.01193	0.5253	3.31	0.45	4.17	5.49	MgO	0.58	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.93	0.02897	0.6228	6.32	0.45	7.17	11.93	Al2O3	1	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	6.56	0.05292	0.687	9.55	0.44	10.41	20.43	SiO2	1.45	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.01	0.00903	1.0391	0.97	0.21	0.74	1.35	CaO	0.1	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.92	0.00922	0.9128	1.01	0.22	0.65	1.68	TiO2	0.09	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	31.62	0.31623	0.8877	35.62	0.96	19.54	45.83	FeO	2.73	Fe 1-Jun-1999 12:00 AM			
	O					29.94	0.92	57.32			8				
	Totals					86.72									
										Cation sum	5.96				
muscovite	grain 2	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.8	0.0055	0.7888	1.02	0.25	0.89	1.69	MgO	0.12	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	13.61	0.10028	0.8816	15.44	0.38	12.24	29.17	Al2O3	1.58	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.2	0.16288	0.7796	25.91	0.47	19.74	55.42	SiO2	2.55	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.57	0.05392	0.9809	6.7	0.26	3.67	8.07	K2O	0.47	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.13	0.03127	0.8297	3.77	0.33	1.44	4.85	FeO	0.19	Fe 1-Jun-1999 12:00 AM			
	O					46.37	0.68	62.01			8				
	Totals					99.2									
										Cation sum	4.9				
	grain 2	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.19	0.11191	0.9026	16.83	0.43	13.17	31.8	Al2O3	1.69	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.63	0.1664	0.7783	26.51	0.53	19.93	56.71	SiO2	2.55	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.95	0.04884	0.9776	6.09	0.28	3.29	7.33	K2O	0.42	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.58	0.02585	0.8288	3.12	0.31	1.18	4.01	FeO	0.15	Fe 1-Jun-1999 12:00 AM			
	O					47.31	0.72	62.43			8				
	Totals					99.86									
										Cation sum	4.81				
?muscovite	grain 3	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	16	0.11786	0.9151	17.49	0.56	13.45	33.05	Al2O3	1.73	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.75	0.16731	0.7806	26.57	0.68	19.62	56.83	SiO2	2.53	SiO2 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	K	K_SERIES	7.77	0.06375	0.9788	7.94	0.41	4.21	9.56	K2O	0.54	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.33	0.01331	0.8267	1.61	0.4	0.6	2.07	FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	O					47.91	0.95	62.12			8				
	Totals					101.51									
										Cation sum	4.88				
?chlorite	grain 3	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.8	0.01231	0.5763	3.12	0.42	3.21	5.17	MgO	0.43	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.53	0.04075	0.6745	8.2	0.45	7.61	15.5	Al2O3	1.02	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.24	0.09868	0.7164	17.08	0.52	15.22	36.54	SiO2	2.05	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.64	0.00578	1.0092	0.64	0.17	0.4	0.89	CaO	0.05	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	27.38	0.27375	0.8722	31.38	0.87	14.06	40.38	FeO	1.89	Fe 1-Jun-1999 12:00 AM			
	O					38.05	0.91	59.51			8				
	Totals					98.47									
										Cation sum	5.44				
?chlorite	grain 3	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.93	0.01322	0.6172	3.12	0.66	2.96	5.18	MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.15	0.06002	0.7112	11.46	0.76	9.78	21.65	Al2O3	1.29	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	13.99	0.11287	0.7174	19.51	0.83	16.01	41.74	SiO2	2.12	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.59	0.22589	0.8629	26.18	1.23	10.8	33.68	FeO	1.43	Fe 1-Jun-1999 12:00 AM			
	O					41.97	1.42	60.45			8				
	Totals					102.24									
										Cation sum	5.23				
rutile	grain 4														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Ti	K_SERIES	57.74	0.57735	0.9179	62.9	1.28	33.33	104.92	TiO2	4	Ti 1-Jun-1999 12:00 AM			
	O					42.02	1.05	66.67			8				
	Totals					104.92									
										Cation sum	4				
muscovite	grain 5	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	16.2	0.11936	0.8958	18.09	0.49	13.58	34.18	Al2O3	1.74	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	20.47	0.16511	0.771	26.56	0.6	19.15	56.81	SiO2	2.46	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.57	0.04573	0.9821	5.67	0.3	2.94	6.84	K2O	0.38	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.66	0.00589	0.9291	0.71	0.2	0.36	0.99	CaO	0.05	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.52	0.00517	0.8056	0.64	0.21	0.27	1.07	TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.04	0.03042	0.8294	3.67	0.37	1.33	4.72	FeO	0.17	Fe 1-Jun-1999 12:00 AM			
	O					49.26	0.85	62.37			8				
	Totals					104.6									
										Cation sum	4.83				
chlorite	grain 5	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.47	0.01008	0.6342	2.32	0.34	2.1	3.84	MgO	0.28	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.82	0.0797	0.7352	14.72	0.45	12.03	27.81	Al2O3	1.61	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.84	0.10355	0.713	18.01	0.47	14.14	38.53	SiO2	1.89	SiO2 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	K	K_SERIES	2.04	0.01674	1.0232	1.99	0.19	1.12	2.4	K2O	0.15	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.5	0.02245	0.9853	2.54	0.21	1.4	3.55	CaO	0.19	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.45	0.20445	0.858	23.83	0.68	9.41	30.66	FeO	1.26	Fe 1-Jun-1999 12:00 AM			
	O					43.38	0.82	59.8			8				
	Totals					106.79									
										Cation sum	5.38				
muscovite	grain 6	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	2.14	0.00961	0.8547	2.51	0.7	0.79	3.38	Na2O	0.1	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	47.41	0.34924	0.8977	52.81	1.09	14.18	99.78	Al2O3	1.85	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	53.78	0.4337	0.7653	70.27	1.29	18.13	150.33	SiO2	2.36	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	22.4	0.18381	0.9845	22.75	0.78	4.22	27.41	K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.46	0.01456	0.8022	1.81	0.47	0.27	3.03	TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.79	0.05789	0.8287	6.99	0.76	0.91	8.99	FeO	0.12	Fe 1-Jun-1999 12:00 AM			
	O					135.77	1.89	61.5			8				
	Totals					292.92									
										Cation sum	5.01				
sphalerite	grain 6	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	30.63	0.22561	0.6674	45.89	1.52	10.55	86.71	Al2O3	1.34	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	37.25	0.30041	0.6803	54.75	1.61	12.09	117.13	SiO2	1.54	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	17.77	0.15617	0.7612	23.35	1.14	4.51	58.3	SO3	0.58	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	11.55	0.09477	0.9872	11.7	0.75	1.86	14.09	K2O	0.24	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.43	0.03427	0.8995	3.81	0.88	0.42	4.9	FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	68.71	0.68711	0.8311	82.68	3.49	7.84	102.91	ZnO	1	Zn 1-Jun-1999 12:00 AM			
	O					161.86	3.2	62.73			8				
	Totals					384.04									
										Cation sum	4.75				
sphalerite	grain 6	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	1.18	0.0087	0.4927	2.4	0.55	0.55	4.53	Al2O3	0.07	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.46	0.01983	0.615	4	0.55	0.88	8.55	SiO2	0.11	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	54.19	0.47614	0.8069	67.16	0.93	13.01	167.68	SO3	1.64	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.17	0.00964	1.0033	1.17	0.28	0.19	1.41	K2O	0.02	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.96	0.00862	0.9899	0.97	0.28	0.15	1.36	CaO	0.02	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	4.29	0.04292	0.9864	4.35	0.47	0.48	5.6	FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.18	0.00179	0.8753	0.2	0.7	0.02	0.26	CuO	0	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	195.08	1.95078	0.8756	222.79	2.77	21.17	277.32	ZnO	2.67	Zn 1-Jun-1999 12:00 AM			
	O					163.66	2	63.54			8				
	Totals					466.7									
										Cation sum	4.59				
muscovite	grain 6	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	49.44	0.3642	0.9076	54.47	1.17	14.58	102.92	Al2O3	1.88	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	55.24	0.44548	0.7647	72.23	1.39	18.57	154.53	SiO2	2.4	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	20.8	0.17067	0.9806	21.21	0.82	3.92	25.55	K2O	0.51	MAD-10 Feldspar 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Fe	K_SERIES	6.31	0.0631	0.8287	7.62	0.77	0.98	9.8	FeO	0.13	Fe 1-Jun-1999 12:00 AM			
	O					137.27	1.93	61.95			8				
	Totals					292.8									
										Cation sum	4.91				
rutile	grain 7	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	12.47	0.10054	0.8717	14.3	0.27	11.76	30.6	SiO2	1.41	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	39.37	0.39366	0.88	44.73	0.51	21.57	74.62	TiO2	2.59	Ti 1-Jun-1999 12:00 AM			
	O					46.18	0.51	66.67			8				
	Totals					105.21									
										Cation sum	4				
quartz	grain 7	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	48.76	0.39326	0.9805	49.73	0.63	33.33	106.39	SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					56.66	0.67	66.67			8				
	Totals					106.39									
										Cation sum	4				
rutile	grain 7	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	0.6	0.0044	0.7226	0.83	0.23	0.77	1.56	Al2O3	0.09	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.85	0.02295	0.837	3.4	0.27	3.05	7.27	SiO2	0.37	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	51.17	0.51166	0.9069	56.42	0.89	29.64	94.11	TiO2	3.56	Ti 1-Jun-1999 12:00 AM			
	O					42.3	0.81	66.54			8				
	Totals					102.95									
										Cation sum	4.02				
unknown	grain 8	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.6	0.01094	0.6403	2.49	0.21	3.11	4.13	MgO	0.42	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.49	0.03309	0.7321	6.14	0.23	6.89	11.59	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	6.21	0.05009	0.7669	8.1	0.25	8.74	17.33	SiO2	1.18	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	4.52	0.02679	1.0626	4.26	0.22	4.17	9.76	P2O5	0.56	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	14.62	0.13134	1.0053	14.55	0.26	11	20.35	CaO	1.49	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.67	0.1067	0.8431	12.66	0.36	6.87	16.28	FeO	0.93	Fe 1-Jun-1999 12:00 AM			
	O					31.25	0.52	59.22			8				
	Totals					79.44									
										Cation sum	5.51				
chlorite	grain 8	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.81	0.01929	0.6266	4.49	0.29	4.92	7.45	MgO	0.66	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.57	0.05575	0.6986	10.84	0.33	10.69	20.47	Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.5	0.08468	0.6991	15.02	0.35	14.24	32.13	SiO2	1.9	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.76	0.18759	0.8621	21.76	0.52	10.37	27.99	FeO	1.39	Fe 1-Jun-1999 12:00 AM			
	O					35.94	0.61	59.79			8				
	Totals					88.04									
										Cation sum	5.38				
chlorite after	grain 9														

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.88	0.01289	0.6364	2.95	0.29	3.22	4.9	MgO	0.43	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.85	0.05784	0.7246	10.84	0.36	10.63	20.48	Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	11.9	0.09598	0.7167	16.61	0.39	15.65	35.53	SiO2	2.08	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.03	0.00845	1.0129	1.02	0.14	0.69	1.23	K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	17.21	0.17209	0.8589	20.04	0.57	9.5	25.78	FeO	1.26	Fe 1-Jun-1999 12:00 AM			
	O					36.45	0.66	60.31			8				
	Totals					87.9									
										Cation sum	5.26				
chlorite	grain 10	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.45	0.00994	0.5888	2.46	0.25	2.73	4.08	MgO	0.37	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.1	0.05969	0.6891	11.76	0.32	11.77	22.22	Al2O3	1.59	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.09	0.07329	0.6895	13.18	0.32	12.68	28.2	SiO2	1.71	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.48	0.00428	1.0074	0.47	0.11	0.32	0.66	CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.81	0.23811	0.8711	27.33	0.56	13.22	35.16	FeO	1.78	Fe 1-Jun-1999 12:00 AM			
	O					35.12	0.59	59.28			8				
	Totals					90.33									
										Cation sum	5.5				
unknown	grain 10	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.67	0.00462	0.5859	1.15	0.22	1.3	1.91	MgO	0.17	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.53	0.03334	0.7046	6.42	0.26	6.53	12.14	Al2O3	0.83	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	5.99	0.0483	0.7564	7.92	0.25	7.74	16.94	SiO2	0.99	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.79	0.00712	1.0878	0.73	0.12	0.5	1.02	CaO	0.06	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	22.2	0.22201	0.8899	24.95	0.42	14.3	41.61	TiO2	1.83	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	12.09	0.12093	0.8509	14.21	0.43	6.98	18.28	FeO	0.89	Fe 1-Jun-1999 12:00 AM			
	O					36.52	0.58	62.65			8				
	Totals					91.9									
										Cation sum	4.77				
sphalerite	grain 11	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	18.07	0.15882	0.8079	22.37	0.39	13.63	55.86	SO3	1.71	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.87	0.00873	0.9945	0.88	0.19	0.31	1.13	FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.21	0.00206	0.8788	0.23	0.27	0.07	0.29	CuO	0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	65.82	0.65819	0.8791	74.87	1.16	22.37	93.19	ZnO	2.81	Zn 1-Jun-1999 12:00 AM			
	O					52.12	0.77	63.63			8				
	Totals					150.48									
										Cation sum	4.57				
	grain 11	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	18.02	0.15834	0.8068	22.34	0.58	13.63	55.77	SO3	1.71	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.09	0.00092	0.8796	0.1	0.41	0.03	0.13	CuO	0	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	66.71	0.66705	0.8798	75.82	1.73	22.7	94.37	ZnO	2.85	Zn 1-Jun-1999 12:00 AM			
	O					52.02	1.13	63.63			8				
	Totals					150.27									

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

										Cation sum	4.57				
chlorite	grain 12	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.03	0.0139	0.6223	3.26	0.28	3.52	5.4	MgO	0.47	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.76	0.05717	0.7103	10.93	0.34	10.63	20.65	Al2O3	1.42	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.48	0.08451	0.7101	14.76	0.37	13.78	31.57	SiO2	1.84	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.01	0.00828	1.026	0.98	0.14	0.66	1.19	K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	2.18	0.02181	0.8682	2.51	0.19	1.38	4.19	TiO2	0.18	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.26	0.18262	0.8606	21.22	0.54	9.97	27.3	FeO	1.33	Fe 1-Jun-1999 12:00 AM			
	O					36.64	0.65	60.07			8				
	Totals					90.3									
										Cation sum	5.32				
	grain 12	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.06	0.0141	0.6186	3.33	0.35	3.5	5.51	MgO	0.47	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.73	0.05694	0.7076	10.93	0.42	10.36	20.64	Al2O3	1.39	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.61	0.08558	0.7117	14.91	0.45	13.58	31.9	SiO2	1.82	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.08	0.00887	1.03	1.05	0.17	0.69	1.26	K2O	0.09	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.45	0.01305	0.9975	1.46	0.18	0.93	2.04	CaO	0.12	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.62	0.01622	0.8642	1.88	0.22	1	3.13	TiO2	0.13	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	19.22	0.1922	0.8607	22.33	0.69	10.23	28.72	FeO	1.37	Fe 1-Jun-1999 12:00 AM			
	O					37.34	0.81	59.71			8				
	Totals					93.21									
										Cation sum	5.4				
muscovite	grain 13														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	0.72	0.00324	0.8684	0.83	0.2	0.8	1.12	Na2O	0.1	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	15.82	0.11652	0.9055	17.47	0.31	14.39	33.02	Al2O3	1.87	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.86	0.14405	0.7643	23.36	0.38	18.48	49.98	SiO2	2.4	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.89	0.05652	0.98	7.03	0.22	3.99	8.47	K2O	0.52	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.46	0.01456	0.8278	1.76	0.21	0.7	2.26	FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	O					44.39	0.54	61.64			8				
	Totals					94.85									
										Cation sum	4.98				
muscovite	grain 14														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.59	0.00408	0.8082	0.74	0.14	0.67	1.22	MgO	0.09	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	15	0.11051	0.9013	16.64	0.25	13.62	31.45	Al2O3	1.77	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.31	0.14764	0.7735	23.67	0.29	18.6	50.63	SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	8.07	0.06623	0.9833	8.21	0.18	4.63	9.89	K2O	0.6	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.35	0.00353	0.7987	0.44	0.1	0.2	0.74	TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.32	0.01319	0.8272	1.59	0.15	0.63	2.05	FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	O					44.68	0.43	61.65			8				
	Totals					95.98									
										Cation sum	4.98				
muscovite	grain 15	spectrum 1													

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.1	0.11125	0.9034	16.72	0.41	14.19	31.59	Al2O3	1.84	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.57	0.14171	0.7683	22.87	0.49	18.65	48.93	SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.06	0.05789	0.9826	7.18	0.3	4.21	8.65	K2O	0.54	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.3	0.02296	0.8292	2.77	0.29	1.14	3.56	FeO	0.15	Fe 1-Jun-1999 12:00 AM			
	O					43.19	0.69	61.82			8				
	Totals					92.73									
										Cation sum	4.94				
	grain 15	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.3	0.10536	0.8993	15.91	0.39	13.56	30.05	Al2O3	1.76	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.42	0.14053	0.7759	22.46	0.47	18.39	48.05	SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.18	0.05892	0.9901	7.25	0.3	4.27	8.74	K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.97	0.01766	0.9221	2.13	0.2	1.22	2.98	CaO	0.16	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.08	0.02077	0.8279	2.51	0.29	1.03	3.23	FeO	0.13	Fe 1-Jun-1999 12:00 AM			
	O					42.79	0.67	61.52			8				
	Totals					93.04									
										Cation sum	5				
siderite	grain 16														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.27	0.00868	0.4578	2.77	0.19	5.44	4.59	MgO	0.82	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	0.94	0.00689	0.5558	1.68	0.14	2.98	3.18	Al2O3	0.45	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	1.99	0.01605	0.6659	2.99	0.14	5.09	6.39	SiO2	0.76	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.79	0.01608	1.0803	1.66	0.09	1.98	2.32	CaO	0.3	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.53	0.00529	0.8948	0.59	0.14	0.51	0.76	MnO	0.08	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	32.78	0.3278	0.9142	35.86	0.44	30.7	46.13	FeO	4.61	Fe 1-Jun-1999 12:00 AM			
	O					17.83	0.36	53.29			8				
	Totals					63.37									
										Cation sum	7.01				
chlorite	grain 17	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.28	0.01562	0.612	3.72	0.34	4.05	6.17	MgO	0.54	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.26	0.05347	0.6959	10.43	0.41	10.24	19.71	Al2O3	1.37	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.67	0.08602	0.7036	15.16	0.44	14.29	32.43	SiO2	1.91	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.54	0.00538	0.8745	0.61	0.17	0.34	1.03	TiO2	0.05	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.44	0.20437	0.8646	23.64	0.69	11.2	30.41	FeO	1.5	Fe 1-Jun-1999 12:00 AM			
	O					36.18	0.77	59.87			8				
	Totals					89.75									
										Cation sum	5.36				
	grain 17	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.05	0.01406	0.6151	3.33	0.26	3.7	5.53	MgO	0.49	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.52	0.05536	0.702	10.71	0.32	10.71	20.23	Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.35	0.0835	0.7034	14.72	0.34	14.15	31.49	SiO2	1.89	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.35	0.0031	0.9983	0.35	0.11	0.23	0.48	CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.56	0.00564	0.872	0.65	0.13	0.36	1.08	TiO2	0.05	Ti 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Fe	K_SERIES	19.51	0.19509	0.8636	22.59	0.53	10.92	29.06	FeO	1.46	Fe 1-Jun-1999 12:00 AM			
	O					35.53	0.6	59.93			8				
	Totals					87.87									
										Cation sum	5.35				
sphalerite	grain 18														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	15.71	0.13805	0.8062	19.49	0.4	13.2	48.66	SO3	1.67	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.14	0.02135	0.9955	2.15	0.23	0.83	2.76	FeO	0.11	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.53	0.00534	0.8799	0.61	0.31	0.21	0.76	CuO	0.03	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	59.79	0.59786	0.8804	67.91	1.2	22.56	84.52	ZnO	2.86	Zn 1-Jun-1999 12:00 AM			
	O					46.56	0.8	63.2			8				
	Totals					136.7									
										Cation sum	4.66				
chlorite	grain 19	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.39	0.01635	0.6038	3.95	0.26	4.5	6.55	MgO	0.6	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.96	0.05124	0.685	10.16	0.29	10.41	19.19	Al2O3	1.4	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.33	0.07527	0.6958	13.41	0.31	13.21	28.69	SiO2	1.78	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.85	0.00854	0.8789	0.97	0.14	0.56	1.62	TiO2	0.08	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.72	0.20716	0.8668	23.9	0.5	11.84	30.74	FeO	1.59	Fe 1-Jun-1999 12:00 AM			
	O					34.41	0.56	59.49			8				
	Totals					86.8									
										Cation sum	5.45				
chlorite + siderite	grain 19	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	F	K_SERIES	6.02	0.04637	0.3632	16.57	1.95	25.14	0		3.02	MgF2 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.65	0.01134	0.496	3.33	0.3	3.95	5.53	MgO	0.48	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.75	0.02023	0.596	4.61	0.27	4.92	8.71	Al2O3	0.59	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	3.7	0.02981	0.6812	5.43	0.25	5.57	11.61	SiO2	0.67	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.71	0.01539	1.0525	1.63	0.14	1.17	2.28	CaO	0.14	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.49	0.00495	0.8734	0.57	0.19	0.3	0.73	MnO	0.04	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	30.21	0.30206	0.8913	33.89	0.65	17.5	43.6	FeO	2.1	Fe 1-Jun-1999 12:00 AM			
	O					23	0.58	41.44			4.98				
	Totals					89.02									
										Cation sum	4.01				
muscovite	grain 20														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.76	0.11607	0.9236	17.07	0.36	14.84	32.24	Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.17	0.1385	0.767	22.38	0.43	18.69	47.89	SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.74	0.05528	0.9777	6.89	0.26	4.13	8.3	K2O	0.53	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.61	0.00615	0.8261	0.74	0.19	0.31	0.96	FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					42.3	0.59	62.02			8				
	Totals					89.39									
										Cation sum	4.9				
rutile	grain 21	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Ti	K_SERIES	52.38	0.52382	0.9179	57.07	1.07	33.33	95.19	TiO2	4	Ti 1-Jun-1999 12:00 AM			
	O					38.12	0.88	66.67			8				
	Totals					95.19									
										Cation sum	4				
chlorite afer	grain 21	spectrum 2													
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.65	0.01132	0.6296	2.62	0.29	2.92	4.35	MgO	0.39	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.31	0.06119	0.722	11.51	0.37	11.54	21.74	Al2O3	1.54	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.82	0.08728	0.7077	15.29	0.4	14.73	32.72	SiO2	1.96	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.06	0.00868	1.0161	1.04	0.14	0.72	1.25	K2O	0.1	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	17.8	0.17797	0.8609	20.67	0.59	10.02	26.59	FeO	1.33	Fe 1-Jun-1999 12:00 AM			
	O					35.52	0.68	60.07			8				
	Totals					86.65									
										Cation sum	5.32				
chlorite afer	grain 21	spectrum 3													
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.5	0.01031	0.6312	2.38	0.28	2.78	3.95	MgO	0.37	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.72	0.05685	0.7249	10.65	0.36	11.17	20.11	Al2O3	1.48	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.85	0.08752	0.7124	15.23	0.4	15.36	32.59	SiO2	2.04	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.67	0.00553	1.014	0.66	0.14	0.48	0.8	K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.72	0.1672	0.8602	19.44	0.57	9.86	25	FeO	1.31	Fe 1-Jun-1999 12:00 AM			
	O					34.1	0.67	60.35			8				
	Totals					82.46									
										Cation sum	5.26				
muscovite	grain 22	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.79	0.10896	0.9209	16.07	0.34	14.41	30.36	Al2O3	1.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17	0.13713	0.771	22.05	0.41	19	47.17	SiO2	2.45	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.48	0.05317	0.9778	6.63	0.25	4.1	7.98	K2O	0.53	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.78	0.00777	0.8263	0.94	0.21	0.41	1.21	FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					41.04	0.57	62.08			8				
	Totals					86.72									
										Cation sum	4.89				
kaolinite	grain 22	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	16.82	0.12387	0.9406	17.88	0.3	16.43	33.78	Al2O3	2.06	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.57	0.13363	0.7449	22.24	0.36	19.64	47.59	SiO2	2.46	SiO2 1-Jun-1999 12:00 AM			
	O					41.24	0.47	63.93			8				
	Totals					81.37									
										Cation sum	4.51				
muscovite	grain 22	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.49	0.10672	0.9205	15.74	0.32	14.44	29.75	Al2O3	1.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.51	0.13317	0.7709	21.41	0.39	18.87	45.81	SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.68	0.05483	0.9789	6.83	0.23	4.32	8.22	K2O	0.56	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.76	0.00764	0.8264	0.93	0.19	0.41	1.19	FeO	0.05	Fe 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	O					40.06	0.53	61.96			8				
	Totals					84.97									
										Cation sum	4.91				
chlorite	grain 23	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.63	0.01116	0.5851	2.78	0.26	3.28	4.61	MgO	0.44	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.35	0.05414	0.6808	10.8	0.33	11.47	20.4	Al2O3	1.55	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.41	0.06786	0.6866	12.26	0.33	12.5	26.22	SiO2	1.69	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.18	0.2318	0.8726	26.56	0.58	13.63	34.17	FeO	1.84	Fe 1-Jun-1999 12:00 AM			
	O					33.01	0.6	59.12			8				
	Totals					85.41									
										Cation sum	5.53				
	grain 23	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.26	0.00864	0.5826	2.16	0.27	2.61	3.58	MgO	0.35	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.55	0.0556	0.6849	11.02	0.34	11.98	20.82	Al2O3	1.62	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.02	0.06472	0.6859	11.7	0.34	12.22	25.03	SiO2	1.65	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.4	0.00363	1.0101	0.4	0.12	0.29	0.56	CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	22.9	0.22897	0.8729	26.23	0.59	13.78	33.74	FeO	1.87	Fe 1-Jun-1999 12:00 AM			
	O					32.23	0.63	59.11			8				
	Totals					83.74									
										Cation sum	5.53				
chlorite	grain 24	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.06	0.01415	0.6013	3.43	0.26	3.96	5.69	MgO	0.53	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.19	0.05293	0.6882	10.44	0.31	10.85	19.73	Al2O3	1.46	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.09	0.07328	0.695	13.08	0.33	13.05	27.97	SiO2	1.76	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.39	0.00322	1.028	0.38	0.11	0.27	0.46	K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.63	0.00631	0.8788	0.72	0.13	0.42	1.2	TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.88	0.20878	0.8676	24.06	0.55	12.08	30.96	FeO	1.63	Fe 1-Jun-1999 12:00 AM			
	O					33.89	0.6	59.38			8				
	Totals					86									
										Cation sum	5.47				
siderite	grain 24	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.91	0.01309	0.4373	4.37	0.44	10.82	7.25	MgO	1.73	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.81	0.01627	1.0992	1.65	0.2	2.48	2.31	CaO	0.4	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	31.49	0.31493	0.9248	34.05	0.94	36.7	43.81	FeO	5.87	Fe 1-Jun-1999 12:00 AM			
	O					13.29	0.63	50			8				
	Totals					53.36									
										Cation sum	8				
albite	grain 25	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	5.59	0.02504	0.9212	6.06	0.46	5.56	8.17	Na2O	0.71	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.21	0.06046	0.8696	9.44	0.43	7.37	17.83	Al2O3	0.94	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	26.81	0.21626	0.8245	32.52	0.66	24.41	69.57	SiO2	3.12	SiO2 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	O					47.56	0.86	62.66			8				
	Totals					95.58									
										Cation sum	4.77				
	grain 25	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	5.81	0.02605	0.9219	6.3	0.25	5.73	8.5	Na2O	0.73	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.14	0.05993	0.8678	9.38	0.23	7.26	17.72	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.08	0.21841	0.8249	32.83	0.35	24.42	70.23	SiO2	3.12	SiO2 1-Jun-1999 12:00 AM			
	O					47.93	0.46	62.59			8				
	Totals					96.44									
										Cation sum	4.78				
albite	grain 26	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	5.79	0.02594	0.9214	6.28	0.34	5.71	8.46	Na2O	0.73	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.99	0.05884	0.8679	9.2	0.31	7.13	17.39	Al2O3	0.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.29	0.22008	0.8269	33	0.49	24.54	70.6	SiO2	3.14	SiO2 1-Jun-1999 12:00 AM			
	O					47.97	0.63	62.63			8				
	Totals					96.45									
										Cation sum	4.77				
ankerite	grain 26	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.55	0.01745	0.5545	4.59	0.21	10.42	7.61	MgO	1.64	MgO 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.58	0.00467	0.7368	0.79	0.12	1.54	1.68	SiO2	0.24	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	18.27	0.16412	1.0667	17.13	0.27	23.6	23.97	CaO	3.72	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.67	0.00674	0.83	0.81	0.16	0.82	1.05	MnO	0.13	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.11	0.11113	0.8553	12.99	0.37	12.85	16.71	FeO	2.02	Fe 1-Jun-1999 12:00 AM			
	O					14.71	0.35	50.77			8				
	Totals					51.02									
										Cation sum	7.76				
albite	grain 26	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	5.9	0.02645	0.9231	6.39	0.32	5.88	8.61	Na2O	0.75	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.17	0.06015	0.8663	9.43	0.3	7.39	17.81	Al2O3	0.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	26.47	0.21349	0.8222	32.19	0.46	24.24	68.87	SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	O					47.29	0.6	62.5			8				
	Totals					95.3									
										Cation sum	4.8				
albite	grain 27														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	4.9	0.02198	0.9111	5.38	0.24	4.94	7.25	Na2O	0.63	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.27	0.06832	0.8731	10.62	0.24	8.31	20.07	Al2O3	1.06	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	25.35	0.20442	0.8152	31.09	0.35	23.36	66.52	SiO2	2.99	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.56	0.01397	0.9357	1.66	0.12	0.87	2.33	CaO	0.11	Wollastonite 1-Jun-1999 12:00 AM			
	O					47.41	0.47	62.52			8				
	Totals					96.17									
										Cation sum	4.8				

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

albite	grain 28	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	6.39	0.02863	0.9246	6.91	0.39	6.22	9.31	Na2O	0.8	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.07	0.05944	0.8626	9.35	0.36	7.17	17.67	Al2O3	0.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.08	0.21842	0.8229	32.91	0.56	24.25	70.41	SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	O					48.22	0.72	62.36			8				
	Totals					97.39									
										Cation sum	4.83				
?chlorite	grain 28	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	8.71	0.05972	0.7637	11.41	0.3	13.1	18.91	MgO	1.78	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.71	0.06417	0.6949	12.54	0.31	12.97	23.69	Al2O3	1.76	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.37	0.0594	0.6592	11.17	0.28	11.11	23.9	SiO2	1.51	SiO2 1-Jun-1999 12:00 AM			
	Cl	K_SERIES	0.32	0.00327	0.6946	0.47	0.1	0.37	0		0.05	KCl 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.47	0.06466	0.8412	7.69	0.3	3.84	9.89	FeO	0.52	Fe 1-Jun-1999 12:00 AM			
	O					33.59	0.51	58.61			7.95				
	Totals					76.86									
										Cation sum	5.56				
?chlorite	grain 28	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	8.67	0.05943	0.7821	11.08	0.32	12.95	18.38	MgO	1.75	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.13	0.06724	0.7058	12.94	0.33	13.62	24.44	Al2O3	1.84	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.19	0.05802	0.6585	10.92	0.3	11.05	23.37	SiO2	1.49	SiO2 1-Jun-1999 12:00 AM			
	Cl	K_SERIES	0.53	0.00534	0.693	0.77	0.13	0.61	0		0.08	KCl 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.2	0.05203	0.8389	6.2	0.3	3.15	7.98	FeO	0.43	Fe 1-Jun-1999 12:00 AM			
	O					33.02	0.54	58.62			7.92				
	Totals					74.93									
										Cation sum	5.51				
?chlorite	grain 28	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	7.88	0.05401	0.7427	10.61	0.35	11.76	17.59	MgO	1.59	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.76	0.06453	0.6993	12.53	0.36	12.52	23.68	Al2O3	1.69	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.29	0.06687	0.6685	12.4	0.34	11.9	26.53	SiO2	1.61	SiO2 1-Jun-1999 12:00 AM			
	Cl	K_SERIES	0.28	0.00285	0.6963	0.41	0.12	0.31	0		0.04	KCl 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	8.02	0.08024	0.8436	9.51	0.38	4.59	12.24	FeO	0.62	Fe 1-Jun-1999 12:00 AM			
	O					34.98	0.6	58.93			7.96				
	Totals					80.44									
										Cation sum	5.51				
unknown	grain 28	spectrum 5													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	2.32	0.01711	0.727	3.19	0.34	5.51	6.04	Al2O3	0.81	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.8	0.02262	0.7882	3.56	0.33	5.9	7.61	SiO2	0.87	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	23.96	0.21523	1.0497	22.83	0.6	26.53	31.94	CaO	3.91	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	7.75	0.0775	0.8369	9.26	0.64	7.72	11.91	FeO	1.14	Fe 1-Jun-1999 12:00 AM			
	O					18.66	0.7	54.33			8				
	Totals					57.5									

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

										Cation sum	6.72				
muscovite	grain 29	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.84	0.11667	0.9203	17.22	0.31	15.02	32.53	Al2O3	1.94	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.51	0.13315	0.7647	21.58	0.37	18.09	46.17	SiO2	2.34	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.39	0.06063	0.982	7.52	0.23	4.53	9.06	K2O	0.59	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.41	0.00406	0.7977	0.51	0.13	0.25	0.85	TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.63	0.00632	0.8264	0.76	0.17	0.32	0.98	FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					42	0.52	61.79			8				
	Totals					89.6									
										Cation sum	4.95				
quartz	grain 29	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	1.62	0.00728	0.8859	1.83	0.25	1.6	2.47	Na2O	0.2	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	3.25	0.02391	0.9088	3.57	0.23	2.66	6.75	Al2O3	0.33	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	39.06	0.31498	0.9224	42.34	0.49	30.31	90.58	SiO2	3.71	SiO2 1-Jun-1999 12:00 AM			
	O					52.05	0.59	65.42			8				
	Totals					99.79									
										Cation sum	4.23				
albite	grain 29	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	4.16	0.01865	0.9062	4.59	0.34	4.09	6.19	Na2O	0.51	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.81	0.04278	0.8831	6.58	0.3	4.99	12.42	Al2O3	0.63	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	32.27	0.26027	0.868	37.18	0.54	27.13	79.53	SiO2	3.4	SiO2 1-Jun-1999 12:00 AM			
	O					49.8	0.67	63.79			8				
	Totals					98.14									
										Cation sum	4.54				
?carbonate	grain 29	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	15.44	0.12449	0.9301	16.6	0.5	20.34	35.5	SiO2	2.7	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	22.53	0.2024	0.993	22.69	0.62	19.49	31.75	CaO	2.59	Wollastonite 1-Jun-1999 12:00 AM			
	O					27.97	0.66	60.17			8				
	Totals					67.26									
										Cation sum	5.3				
?chlorite	grain 30	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	7.38	0.05059	0.6948	10.62	0.41	11.73	17.61	MgO	1.59	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.63	0.04883	0.6736	9.84	0.4	9.8	18.6	Al2O3	1.33	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.17	0.07399	0.6813	13.47	0.4	12.87	28.81	SiO2	1.75	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.87	0.11871	0.8502	13.96	0.52	6.71	17.96	FeO	0.91	Fe 1-Jun-1999 12:00 AM			
	O					35.09	0.72	58.89			8				
	Totals					82.98									
										Cation sum	5.59				
chlorite	grain 30	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.27	0.01558	0.6008	3.78	0.26	4.4	6.27	MgO	0.6	MgO 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Al	K_SERIES	7.58	0.05585	0.6834	11.1	0.32	11.63	20.96	Al2O3	1.58	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.19	0.06605	0.685	11.96	0.31	12.04	25.58	SiO2	1.63	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.99	0.00889	1.0048	0.99	0.12	0.7	1.38	CaO	0.09	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	21.07	0.21072	0.8681	24.27	0.53	12.29	31.22	FeO	1.67	Fe 1-Jun-1999 12:00 AM			
	O					33.33	0.57	58.93			8				
	Totals					85.42									
										Cation sum	5.58				
mixture (?)	grain 30	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.6	0.00414	0.6775	0.89	0.18	1.22	1.48	MgO	0.17	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.38	0.01014	0.7907	1.74	0.17	2.15	3.29	Al2O3	0.29	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.35	0.01896	0.8751	2.69	0.22	3.19	5.75	SiO2	0.44	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	9.05	0.05356	1.2172	7.43	0.27	8.01	17.03	P2O5	1.1	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	27.38	0.24595	1.0087	27.15	0.36	22.61	37.98	CaO	3.1	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	3.38	0.03382	0.8336	4.06	0.26	2.42	5.22	FeO	0.33	Fe 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	1.7	0.01584	0.8005	2.13	0.55	0.81	2.52	SrO	0.11	SrF2 1-Jun-1999 12:00 AM			
	Y	L_SERIES	2.31	0.02305	0.7501	3.07	0.74	1.15	3.9	Y2O3	0.16	Y 1-Jun-1999 12:00 AM			
	O					28.01	0.69	58.43			8				
	Totals					77.16									
										Cation sum	5.69				
chlorite	grain 30	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	7.31	0.05014	0.6966	10.5	0.27	11.49	17.41	MgO	1.56	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.12	0.05244	0.677	10.52	0.27	10.38	19.87	Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.01	0.0727	0.6781	13.29	0.26	12.6	28.44	SiO2	1.71	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.84	0.11838	0.8502	13.92	0.34	6.64	17.91	FeO	0.9	Fe 1-Jun-1999 12:00 AM			
	O					35.4	0.48	58.89			8				
	Totals					83.63									
										Cation sum	5.58				
monazite	grain 31	spectrum 1													
(inclusion)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	14.74	0.1189	0.7575	19.46	0.42	20.87	41.64	SiO2	2.58	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	3.88	0.02296	0.9464	4.1	0.31	3.98	9.39	P2O5	0.49	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	7.31	0.06567	1.0089	7.25	0.25	5.44	10.14	CaO	0.67	Wollastonite 1-Jun-1999 12:00 AM			
	La	L_SERIES	4.89	0.04365	0.8559	5.72	0.8	1.24	6.7	La2O3	0.15	LaB6 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	9	0.08347	0.8322	10.81	0.96	2.32	12.66	Ce2O3	0.29	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	5.97	0.05459	0.8491	7.02	0.73	1.47	8.19	Nd2O3	0.18	NdF3 1-Jun-1999 12:00 AM			
	O					34.36	0.84	64.68			8				
	Totals					88.72									
										Cation sum	4.37				
	grain 31	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	12.15	0.09801	0.817	14.88	0.48	17.48	31.83	SiO2	2.23	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	3.58	0.02117	1.0237	3.49	0.37	3.72	8	P2O5	0.48	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	14.57	0.13089	0.9992	14.58	0.42	12.01	20.4	CaO	1.53	Wollastonite 1-Jun-1999 12:00 AM			
	Y	L_SERIES	2.01	0.02013	0.6011	3.35	1.07	1.24	4.25	Y2O3	0.16	Y 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Ce	L_SERIES	6.69	0.06204	0.8003	8.36	0.95	1.97	9.79	Ce2O3	0.25	CeO2 1-Jun-1999 12:00 AM			
	Nd	L_SERIES	3.58	0.03272	0.8196	4.36	0.88	1	5.09	Nd2O3	0.13	NdF3 1-Jun-1999 12:00 AM			
	O					30.34	1.05	62.58			8				
	Totals					79.36									
										Cation sum	4.78				
unknown	grain 32	spectrum 1													
(biotite altering?)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.75	0.00512	0.7546	0.99	0.29	1.01	1.64	MgO	0.13	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.5	0.07738	0.8516	12.33	0.44	11.32	23.31	Al2O3	1.46	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.63	0.14222	0.7758	22.73	0.56	20.04	48.63	SiO2	2.58	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	4.01	0.03287	0.9835	4.07	0.27	2.58	4.91	K2O	0.33	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	5.35	0.05346	0.8347	6.4	0.45	2.84	8.24	FeO	0.37	Fe 1-Jun-1999 12:00 AM			
	O					40.19	0.81	62.21			8				
	Totals					86.73									
										Cation sum	4.86				
	grain 32	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.27	0.01554	0.6494	3.49	0.28	3.54	5.79	MgO	0.47	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.53	0.05546	0.7322	10.28	0.34	9.4	19.43	Al2O3	1.24	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	12.75	0.10284	0.7336	17.38	0.4	15.26	37.19	SiO2	2.02	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	0.98	0.00579	0.9432	1.04	0.19	0.83	2.38	P2O5	0.11	GaP 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.22	0.00998	1.0158	1.2	0.15	0.76	1.44	K2O	0.1	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.5	0.0225	0.9808	2.55	0.17	1.57	3.57	CaO	0.21	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.94	0.15942	0.8534	18.68	0.54	8.25	24.03	FeO	1.09	Fe 1-Jun-1999 12:00 AM			
	O					39.2	0.69	60.41			8				
	Totals					93.83									
										Cation sum	5.24				
	grain 32	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.3	0.00888	0.7467	1.73	0.26	1.77	2.88	MgO	0.23	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.58	0.07058	0.8335	11.5	0.37	10.54	21.72	Al2O3	1.36	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.76	0.14323	0.7741	22.94	0.48	20.21	49.08	SiO2	2.6	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	3.12	0.02559	0.9831	3.17	0.22	2.01	3.82	K2O	0.26	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.1	0.06097	0.836	7.29	0.43	3.23	9.38	FeO	0.42	Fe 1-Jun-1999 12:00 AM			
	O					40.24	0.7	62.24			8				
	Totals					86.88									
										Cation sum	4.85				
	grain 32	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.13	0.00772	0.7234	1.56	0.25	1.61	2.58	MgO	0.21	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.15	0.07474	0.8165	12.43	0.37	11.59	23.48	Al2O3	1.5	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	15.7	0.12665	0.7553	20.79	0.45	18.63	44.48	SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	3.29	0.02703	0.9909	3.32	0.21	2.14	4.01	K2O	0.28	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	8.11	0.08114	0.8406	9.65	0.45	4.35	12.42	FeO	0.56	Fe 1-Jun-1999 12:00 AM			
	O					39.21	0.68	61.68			8				
	Totals					86.97									

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

										Cation sum	4.97				
chlorite	grain 33	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	3.25	0.02227	0.6332	5.13	0.29	6.02	8.5	MgO	0.81	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.92	0.05098	0.6923	10	0.32	10.57	18.89	Al2O3	1.42	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.47	0.07639	0.6949	13.63	0.33	13.84	29.16	SiO2	1.86	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.87	0.16867	0.861	19.59	0.51	10	25.2	FeO	1.34	Fe 1-Jun-1999 12:00 AM			
	O					33.41	0.59	59.56			8				
	Totals					81.76									
										Cation sum	5.43				
siderite	grain 33	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	F	K_SERIES	1.9	0.01467	0.404	4.71	1.52	12.62	0		1.79	MgF2 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.82	0.01249	0.4382	4.16	0.35	8.71	6.9	MgO	1.24	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.2	0.01972	1.0969	2	0.17	2.54	2.8	CaO	0.36	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	32.76	0.32759	0.9202	35.6	0.75	32.44	45.8	FeO	4.61	Fe 1-Jun-1999 12:00 AM			
	O					13.74	0.5	43.69			6.21				
	Totals					60.21									
										Cation sum	6.21				
siderite	grain 33	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.8	0.01233	0.4344	4.14	0.36	10.06	6.87	MgO	1.61	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.7	0.01524	1.1022	1.54	0.17	2.27	2.15	CaO	0.36	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.72	0.0072	0.9073	0.79	0.25	0.85	1.02	MnO	0.14	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	32.29	0.32287	0.927	34.83	0.77	36.82	44.8	FeO	5.89	Fe 1-Jun-1999 12:00 AM			
	O					13.55	0.53	50			8				
	Totals					54.85									
										Cation sum	8				
mixture	grain 33	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	1.05	0.00776	0.7527	1.4	0.27	2.89	2.64	Al2O3	0.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	1.83	0.01478	0.8364	2.19	0.28	4.35	4.69	SiO2	0.66	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	27.56	0.24754	1.0578	26.06	0.65	36.25	36.46	CaO	5.48	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.96	0.02961	0.8199	3.61	0.44	3.61	4.65	FeO	0.55	Fe 1-Jun-1999 12:00 AM			
	O					15.18	0.61	52.9			8				
	Totals					48.43									
										Cation sum	7.12				
muscovite	grain 34	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.64	0.11519	0.92	17	0.42	14.73	32.13	Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17	0.1371	0.768	22.13	0.5	18.42	47.34	SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.72	0.06336	0.981	7.87	0.31	4.71	9.48	K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.82	0.00823	0.8266	1	0.25	0.42	1.28	FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					42.23	0.69	61.72			8				
	Totals					90.23									
										Cation sum	4.96				

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

ankerite +	grain 34	spectrum 2													
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.68	0.00467	0.63	1.08	0.26	1.63	1.79	MgO	0.23	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.62	0.03404	0.7397	6.25	0.33	8.5	11.8	Al2O3	1.2	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	5.75	0.04635	0.7601	7.56	0.33	9.88	16.17	SiO2	1.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.44	0.01179	1.096	1.31	0.2	1.23	1.58	K2O	0.17	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	16.38	0.14712	1.0119	16.19	0.41	14.83	22.65	CaO	2.09	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	9.19	0.09185	0.8417	10.91	0.53	7.17	14.04	FeO	1.01	Fe 1-Jun-1999 12:00 AM			
	O					24.74	0.65	56.76			8				
	Totals					68.04									
										Cation sum	6.1				
muscovite	grain 34	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.85	0.10937	0.9153	16.23	0.32	14.24	30.66	Al2O3	1.85	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.11	0.138	0.7723	22.15	0.38	18.67	47.38	SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.8	0.06399	0.9822	7.94	0.24	4.81	9.56	K2O	0.62	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.15	0.01152	0.8271	1.39	0.19	0.59	1.79	FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	O					41.69	0.53	61.69			8				
	Totals					89.4									
										Cation sum	4.97				
muscovite	grain 35	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.59	0.11484	0.9214	16.93	0.26	14.73	31.98	Al2O3	1.91	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.03	0.13731	0.7685	22.15	0.31	18.51	47.38	SiO2	2.4	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.53	0.06179	0.9803	7.68	0.19	4.61	9.25	K2O	0.6	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.72	0.00718	0.8264	0.87	0.15	0.37	1.12	FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					42.11	0.43	61.78			8				
	Totals					89.73									
										Cation sum	4.95				
	grain 35	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.44	0.11374	0.9196	16.8	0.41	14.79	31.74	Al2O3	1.92	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.68	0.13456	0.7671	21.74	0.48	18.39	46.52	SiO2	2.38	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.5	0.06153	0.9809	7.64	0.3	4.64	9.21	K2O	0.6	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.86	0.00858	0.8267	1.04	0.24	0.44	1.34	FeO	0.06	Fe 1-Jun-1999 12:00 AM			
	O					41.57	0.67	61.73			8				
	Totals					88.8									
										Cation sum	4.96				
aluminum	grain 36	spectrum 1													
phosphate	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	12.3	0.0906	0.8364	14.7	0.37	20.37	27.78	Al2O3	2.58	Al2O3 1-Jun-1999 12:00 AM			
	P	K_SERIES	5.6	0.03319	0.9402	5.96	0.41	7.19	13.66	P2O5	0.91	GaP 1-Jun-1999 12:00 AM			
	S	K_SERIES	1.39	0.01218	0.6938	2	0.24	2.33	4.99	SO3	0.29	FeS2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.77	0.0069	0.9629	0.8	0.16	0.74	1.12	CaO	0.09	Wollastonite 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	6.81	0.06331	0.6652	10.24	0.8	4.37	12.11	SrO	0.55	SrF2 1-Jun-1999 12:00 AM			
	La	L_SERIES	2.39	0.02132	0.8513	2.81	0.67	0.76	3.29	La2O3	0.1	LaB6 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Ce	L_SERIES	3.08	0.02857	0.8273	3.72	0.71	0.99	4.36	Ce2O3	0.13	CeO2 1-Jun-1999 12:00 AM			
	O					27.08	0.85	63.25			8				
	Totals					67.31									
										Cation sum	4.65				
	grain 36	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	11.98	0.08824	0.834	14.36	0.25	20.43	27.13	Al2O3	2.6	Al2O3 1-Jun-1999 12:00 AM			
	P	K_SERIES	4.97	0.0294	0.942	5.27	0.27	6.53	12.08	P2O5	0.83	GaP 1-Jun-1999 12:00 AM			
	S	K_SERIES	1.51	0.01331	0.6996	2.16	0.16	2.59	5.4	SO3	0.33	FeS2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.28	0.00229	0.9748	0.29	0.09	0.28	0.34	K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.72	0.0065	0.9621	0.75	0.1	0.72	1.05	CaO	0.09	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.83	0.00832	0.8651	0.96	0.16	0.66	1.24	FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	6.47	0.06016	0.6636	9.76	0.55	4.28	11.54	SrO	0.54	SrF2 1-Jun-1999 12:00 AM			
	La	L_SERIES	1.72	0.01537	0.8518	2.02	0.45	0.56	2.37	La2O3	0.07	LaB6 1-Jun-1999 12:00 AM			
	Ce	L_SERIES	3.08	0.0286	0.8277	3.72	0.49	1.02	4.36	Ce2O3	0.13	CeO2 1-Jun-1999 12:00 AM			
	O					26.22	0.58	62.92			8				
	Totals					65.53									
										Cation sum	4.71				
sphalerite	grain 37														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	16.78	0.14747	0.8058	20.83	0.42	13.51	52.01	SO3	1.7	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.3	0.003	0.8804	0.34	0.32	0.11	0.43	CuO	0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	63.3	0.63301	0.8806	71.89	1.24	22.87	89.48	ZnO	2.88	Zn 1-Jun-1999 12:00 AM			
	O					48.86	0.82	63.51			8				
	Totals					141.91									
										Cation sum	4.6				
sphalerite	grain 38														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	16.85	0.14809	0.8073	20.87	0.54	13.69	52.12	SO3	1.72	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.26	0.00265	0.8793	0.3	0.38	0.1	0.38	CuO	0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	61.62	0.61616	0.8795	70.06	1.59	22.53	87.2	ZnO	2.83	Zn 1-Jun-1999 12:00 AM			
	O					48.47	1.04	63.69			8				
	Totals					139.7									
										Cation sum	4.56				
quartz	grain 39	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	47.79	0.38542	0.9805	48.74	0.9	33.33	104.27	SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					55.53	0.96	66.67			8				
	Totals					104.27									
										Cation sum	4				
rutile	grain 39	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	1.1	0.00812	0.7288	1.51	0.13	1.48	2.86	Al2O3	0.18	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	3.67	0.02961	0.8335	4.41	0.16	4.14	9.42	SiO2	0.5	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.86	0.00709	1.196	0.72	0.1	0.49	0.87	K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.43	0.00389	1.1759	0.37	0.09	0.24	0.51	CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Ti	K_SERIES	44.65	0.44647	0.8992	49.65	0.45	27.33	82.83	TiO2	3.31	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.6	0.00601	0.8312	0.72	0.15	0.34	0.93	FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					40.04	0.44	65.98			8				
	Totals					97.42									
										Cation sum	4.12				
rutile	grain 39	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	N	K_SERIES	-2.17	-0.02171	0.4961	-4.38	1.69	-12.83	-16.87	N2O5	-1.59	Not defined 1-Jun-1999 12:00 AM			
	Si	K_SERIES	1.39	0.01124	0.839	1.66	0.12	2.43	3.55	SiO2	0.3	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	48.83	0.48834	0.9128	53.5	0.46	45.87	89.24	TiO2	5.69	Ti 1-Jun-1999 12:00 AM			
	O					25.14	2.88	64.53			8				
	Totals					75.92									
										Cation sum	4.4				
rutile	grain 39	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	0.36	0.00263	0.7117	0.5	0.13	0.51	0.95	Al2O3	0.06	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.91	0.00736	0.8315	1.1	0.13	1.08	2.35	SiO2	0.13	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.55	0.00495	1.2245	0.45	0.11	0.31	0.63	CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	49.66	0.49662	0.9124	54.43	0.57	31.4	90.79	TiO2	3.78	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.56	0.00562	0.8322	0.68	0.19	0.33	0.87	FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	O					38.43	0.52	66.37			8				
	Totals					95.59									
										Cation sum	4.05				
quartz + rutile	grain 39	spectrum 5													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	30.35	0.2448	0.9348	32.47	0.53	25.93	69.46	SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	13.09	0.13091	0.8273	15.82	0.49	7.41	26.39	TiO2	0.89	Ti 1-Jun-1999 12:00 AM			
	O					47.56	0.7	66.67			8				
	Totals					95.85									
										Cation sum	4				
muscovite	grain 40	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.83	0.10922	0.9049	16.39	0.37	14.4	30.96	Al2O3	1.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.79	0.13542	0.7665	21.91	0.43	18.5	46.87	SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.87	0.05634	0.9825	6.99	0.27	4.24	8.42	K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.1	0.02099	0.829	2.53	0.25	1.08	3.26	FeO	0.14	Fe 1-Jun-1999 12:00 AM			
	O					41.69	0.61	61.79			8				
	Totals					89.5									
										Cation sum	4.95				
unknown	grain 40	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.83	0.10922	0.9049	16.39	0.37	14.4	30.96	Al2O3	1.86	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.79	0.13542	0.7665	21.91	0.43	18.5	46.87	SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.87	0.05634	0.9825	6.99	0.27	4.24	8.42	K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.1	0.02099	0.829	2.53	0.25	1.08	3.26	FeO	0.14	Fe 1-Jun-1999 12:00 AM			
	O					41.69	0.61	61.79			8				

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Totals					89.5									
										Cation sum	4.95				
muscovite	grain 40	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.79	0.10895	0.9153	16.16	0.4	14.54	30.53	Al2O3	1.87	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.73	0.13495	0.7678	21.79	0.48	18.84	46.62	SiO2	2.43	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.1	0.05006	0.9784	6.24	0.27	3.87	7.51	K2O	0.5	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.25	0.0125	0.8273	1.51	0.29	0.66	1.94	FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	O					40.91	0.66	62.09			8				
	Totals					86.61									
										Cation sum	4.88				
mostly siderite	grain 41	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.41	0.00969	0.4377	3.23	0.22	7.43	5.36	MgO	1.16	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	0.25	0.00187	0.528	0.48	0.14	1	0.91	Al2O3	0.16	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.56	0.0045	0.6528	0.85	0.13	1.7	1.83	SiO2	0.27	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.88	0.01689	1.0975	1.71	0.11	2.39	2.4	CaO	0.37	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	0.5	0.00496	0.9045	0.55	0.15	0.56	0.71	MnO	0.09	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	33.11	0.33107	0.9243	35.82	0.5	35.83	46.08	FeO	5.61	Fe 1-Jun-1999 12:00 AM			
	O					14.63	0.39	51.1			8				
	Totals					57.28									
										Cation sum	7.66				
chlorite	grain 41	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.72	0.01181	0.576	2.99	0.17	3.56	4.96	MgO	0.48	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.07	0.04472	0.671	9.05	0.2	9.71	17.1	Al2O3	1.32	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.55	0.06898	0.6964	12.28	0.21	12.66	26.28	SiO2	1.72	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.39	0.00317	1.0387	0.37	0.07	0.27	0.45	K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.62	0.00555	1.0122	0.61	0.08	0.44	0.85	CaO	0.06	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.47	0.00471	0.8869	0.53	0.09	0.32	0.89	TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.89	0.23889	0.8733	27.35	0.37	14.18	35.19	FeO	1.93	Fe 1-Jun-1999 12:00 AM			
	O					32.52	0.39	58.85			8				
	Totals					85.71									
										Cation sum	5.59				
chlorite	grain 41	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	F	K_SERIES	2.88	0.02217	0.2949	9.75	1.41	13.44	0		1.67	MgF2 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.8	0.01237	0.5634	3.2	0.22	3.45	5.31	MgO	0.43	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.74	0.04228	0.6597	8.7	0.25	8.44	16.44	Al2O3	1.05	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.95	0.06413	0.6962	11.42	0.26	10.65	24.44	SiO2	1.32	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.42	0.00375	1.018	0.41	0.09	0.27	0.57	CaO	0.03	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.58	0.00583	0.8892	0.66	0.11	0.36	1.09	TiO2	0.04	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.28	0.23275	0.8729	26.66	0.47	12.5	34.3	FeO	1.55	Fe 1-Jun-1999 12:00 AM			
	O					31.1	0.49	50.89			6.33				
	Totals					91.91									

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

										Cation sum	4.43				
xenotime	grain 42														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	P	K_SERIES	10.32	0.06113	1.1821	8.73	0.32	15.65	20.01	P2O5	1.87	GaP 1-Jun-1999 12:00 AM			
	Co	K_SERIES	1.4	0.01398	0.9282	1.51	0.22	1.42	1.92	CoO	0.17	Co 1-Jun-1999 12:00 AM			
	Y	L_SERIES	14.86	0.14859	0.7626	19.49	0.69	12.17	24.75	Y2O3	1.46	Y 1-Jun-1999 12:00 AM			
	Gd	L_SERIES	1.28	0.01155	0.8773	1.45	0.39	0.51	1.68	Gd2O3	0.06	GdF3 1-Jun-1999 12:00 AM			
	Dy	L_SERIES	2.31	0.02089	0.8723	2.65	0.48	0.91	3.04	Dy2O3	0.11	DyF3 1-Jun-1999 12:00 AM			
	Yb	L_SERIES	3.49	0.03135	0.8619	4.05	0.65	1.3	4.61	Yb2O3	0.16	YbF3 1-Jun-1999 12:00 AM			
	Re	M_SERIES	2.9	0.02899	0.7551	3.84	1	1.14	4.99	Re2O7	0.14	Re 1-Jun-1999 12:00 AM			
	O					19.28	0.83	66.89			8				
	Totals					60.99									
										Cation sum	3.96				
ferroan calcite	grain 43	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.69	0.0047	0.6303	1.09	0.3	2.67	1.8	MgO	0.42	MgO 1-Jun-1999 12:00 AM			
	Si	K_SERIES	0.6	0.00481	0.8532	0.7	0.22	1.48	1.49	SiO2	0.23	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	31.01	0.27849	1.0684	29.02	0.71	43.21	40.61	CaO	6.81	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.44	0.0144	0.8122	1.77	0.49	1.89	2.28	FeO	0.3	Fe 1-Jun-1999 12:00 AM			
	O					13.6	0.62	50.74			8				
	Totals					46.19									
										Cation sum	7.77				
siderite + chlorite	grain 43	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.36	0.00929	0.5906	2.3	0.31	2.78	3.81	MgO	0.38	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.09	0.05223	0.6912	10.26	0.39	11.21	19.39	Al2O3	1.54	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.21	0.05818	0.6986	10.33	0.39	10.84	22.09	SiO2	1.49	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	6.28	0.05638	1.0151	6.18	0.27	4.55	8.65	CaO	0.62	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	20.33	0.2033	0.8654	23.49	0.68	12.4	30.22	FeO	1.7	Fe 1-Jun-1999 12:00 AM			
	O					31.6	0.73	58.22			8				
	Totals					84.16									
										Cation sum	5.74				
quartz	grain 43	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	42.94	0.34629	0.9763	43.98	0.58	32.45	94.09	SiO2	3.92	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	2.37	0.02127	0.927	2.55	0.21	1.32	3.57	CaO	0.16	Wollastonite 1-Jun-1999 12:00 AM			
	O					51.13	0.63	66.23			8				
	Totals					97.66									
										Cation sum	4.08				
pyrite	grain 43	spectrum 4													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	F	K_SERIES	2	0.01543	0.2336	8.57	4.65	6.91	0		0.79	MgF2 1-Jun-1999 12:00 AM			
	S	K_SERIES	32.06	0.28168	0.9323	34.38	0.77	16.43	85.85	SO3	1.88	FeS2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.62	0.01454	0.9889	1.64	0.24	0.63	2.29	CaO	0.07	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	41.21	0.41214	0.8653	47.63	1.13	13.06	61.27	FeO	1.5	Fe 1-Jun-1999 12:00 AM			
	O					65.76	1.13	62.97			7.21				

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Totals					157.98									
										Cation sum	3.45				
albite	grain 44														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	5.82	0.02608	0.9222	6.31	0.29	5.79	8.5	Na2O	0.74	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.04	0.05919	0.8671	9.27	0.26	7.24	17.51	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	26.81	0.21625	0.8248	32.51	0.41	24.41	69.55	SiO2	3.12	SiO2 1-Jun-1999 12:00 AM			
	O					47.47	0.53	62.57			8				
	Totals					95.56									
										Cation sum	4.79				
quartz	grain 45	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	48.35	0.38998	0.9805	49.32	1.01	33.33	105.5	SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					56.19	1.08	66.67			8				
	Totals					105.5									
										Cation sum	4				
rutile	grain 45	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	12.09	0.09751	0.868	13.93	0.47	10.73	29.8	SiO2	1.29	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	44.23	0.44229	0.8835	50.06	0.98	22.6	83.5	TiO2	2.71	Ti 1-Jun-1999 12:00 AM			
	O					49.31	0.95	66.67			8				
	Totals					113.3									
										Cation sum	4				
quartz + rutile	grain 45	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	35.69	0.28786	0.9374	38.08	0.64	26.4	81.45	SiO2	3.17	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	14.08	0.14077	0.8254	17.05	0.58	6.93	28.45	TiO2	0.83	Ti 1-Jun-1999 12:00 AM			
	O					54.77	0.83	66.67			8				
	Totals					109.9									
										Cation sum	4				
chromian spinel	grain 46														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	3.64	0.02495	0.5677	6.41	0.29	7.26	10.63	MgO	1.02	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	9.18	0.06764	0.6359	14.44	0.3	14.74	27.29	Al2O3	2.06	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	24.15	0.24154	0.9166	26.35	0.41	13.95	38.51	Cr2O3	1.95	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.81	0.11811	0.8471	13.94	0.39	6.87	17.94	FeO	0.96	Fe 1-Jun-1999 12:00 AM			
	O					33.22	0.51	57.17			8				
	Totals					94.36									
										Cation sum	5.99				
muscovite	grain 47														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.85	0.10942	0.918	16.19	0.21	14.17	30.58	Al2O3	1.83	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.22	0.13886	0.7742	22.23	0.25	18.7	47.56	SiO2	2.42	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	7.71	0.06324	0.9823	7.85	0.16	4.74	9.45	K2O	0.61	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.32	0.00322	0.7971	0.4	0.08	0.2	0.67	TiO2	0.03	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.76	0.00758	0.8263	0.92	0.12	0.39	1.18	FeO	0.05	Fe 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	O					41.86	0.35	61.81			8				
	Totals					89.45									
										Cation sum	4.94				
sphalerite	grain 48														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	16.68	0.14655	0.8074	20.66	0.5	13.46	51.58	SO3	1.7	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.62	0.01618	0.9939	1.63	0.26	0.61	2.09	FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	-0.01	-0.00009	0.879	-0.01	0.32	0	-0.01	CuO	0	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	61.83	0.61829	0.8794	70.31	1.45	22.47	87.52	ZnO	2.83	Zn 1-Jun-1999 12:00 AM			
	O					48.59	0.96	63.46			8				
	Totals					141.17									
										Cation sum	4.61				
kaolinite after	grain 49	spectrum 1													
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	17.01	0.1253	0.9401	18.1	0.35	16.46	34.19	Al2O3	2.06	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.6	0.13385	0.745	22.28	0.42	19.47	47.66	SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.45	0.00368	0.9581	0.47	0.11	0.29	0.56	K2O	0.04	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					41.57	0.55	63.78			8				
	Totals					82.41									
										Cation sum	4.54				
muscovite	grain 49	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.82	0.00564	0.8043	1.02	0.19	0.98	1.69	MgO	0.13	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	13.27	0.09775	0.8929	14.86	0.31	12.8	28.08	Al2O3	1.66	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	18.18	0.1466	0.7782	23.36	0.38	19.32	49.97	SiO2	2.5	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.98	0.05725	0.9806	7.11	0.23	4.23	8.57	K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.73	0.01726	0.8277	2.08	0.22	0.87	2.68	FeO	0.11	Fe 1-Jun-1999 12:00 AM			
	O					42.56	0.54	61.8			8				
	Totals					91									
										Cation sum	4.94				
chlorite	grain 49	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.11	0.00758	0.6384	1.73	0.22	1.82	2.87	MgO	0.24	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.78	0.07944	0.7412	14.55	0.32	13.75	27.49	Al2O3	1.82	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.85	0.08753	0.6984	15.54	0.33	14.11	33.25	SiO2	1.87	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.82	0.00669	1.0134	0.8	0.11	0.52	0.97	K2O	0.07	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	17.8	0.17796	0.8597	20.7	0.47	9.45	26.63	FeO	1.25	Fe 1-Jun-1999 12:00 AM			
	O					37.88	0.56	60.36			8				
	Totals					91.21									
										Cation sum	5.25				
muscovite	grain 50	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	16.32	0.12024	0.9331	17.5	0.41	15.14	33.06	Al2O3	1.94	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.55	0.14156	0.7651	22.94	0.49	19.08	49.08	SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.32	0.04367	0.9718	5.48	0.27	3.27	6.6	K2O	0.42	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					42.82	0.66	62.51			8				

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Totals					88.73									
										Cation sum	4.8				
quartz	grain 50	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	48.28	0.38936	0.9805	49.24	0.87	33.33	105.34	SiO2	4	SiO2 1-Jun-1999 12:00 AM			
	O					56.1	0.92	66.67			8				
	Totals					105.34									
										Cation sum	4				
chlorite	grain 50	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.35	0.00926	0.5932	2.28	0.19	2.67	3.78	MgO	0.36	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.34	0.0541	0.6936	10.59	0.24	11.18	20.01	Al2O3	1.5	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.29	0.07496	0.6969	13.34	0.25	13.53	28.54	SiO2	1.82	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.43	0.00383	1.0048	0.42	0.08	0.3	0.59	CaO	0.04	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	21.79	0.21787	0.8695	25.05	0.42	12.78	32.23	FeO	1.72	Fe 1-Jun-1999 12:00 AM			
	O					33.46	0.45	59.56			8				
	Totals					85.15									
										Cation sum	5.43				
barite	grain 51	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	0.62	0.00453	0.5849	1.05	0.19	1.91	1.99	Al2O3	0.23	Al2O3 1-Jun-1999 12:00 AM			
	S	K_SERIES	6.98	0.06133	0.805	8.67	0.26	13.27	21.65	SO3	1.61	FeS2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	42.01	0.3922	0.9116	46.09	0.72	16.47	51.46	BaO	1.99	BaF2 1-Jun-1999 12:00 AM			
	W	M_SERIES	5.18	0.05176	0.5996	8.63	0.61	2.3	10.89	WO3	0.28	W 1-Jun-1999 12:00 AM			
	O					21.54	0.54	66.05			8				
	Totals					85.98									
										Cation sum	4.11				
	grain 51	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	7.73	0.06789	0.8052	9.6	0.46	14.21	23.96	SO3	1.7	FeS2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	43.56	0.4066	0.9111	47.8	1.27	16.53	53.37	BaO	1.98	BaF2 1-Jun-1999 12:00 AM			
	W	M_SERIES	5.92	0.05924	0.6073	9.76	1.05	2.52	12.3	WO3	0.3	W 1-Jun-1999 12:00 AM			
	O					22.48	0.89	66.73			8				
	Totals					89.64									
										Cation sum	3.99				
chromian spinel	grain 52														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	3.01	0.02061	0.5641	5.33	0.39	5.97	8.84	MgO	0.84	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	10.38	0.07648	0.6427	16.16	0.42	16.3	30.53	Al2O3	2.28	Al2O3 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.73	0.00728	0.941	0.77	0.16	0.44	1.29	TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	20.1	0.20103	0.9229	21.78	0.52	11.41	31.83	Cr2O3	1.6	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.3	0.15302	0.8541	17.91	0.57	8.73	23.05	FeO	1.22	Fe 1-Jun-1999 12:00 AM			
	O					33.58	0.7	57.15			8				
	Totals					95.54									
										Cation sum	6				
sphalerite	grain 53														

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	16.69	0.14664	0.8105	20.59	0.37	13.39	51.41	SO3	1.69	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.9	0.00903	0.9903	0.91	0.18	0.34	1.17	FeO	0.04	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	-0.16	-0.00155	0.8853	-0.18	0.3	-0.06	-0.22	CuO	-0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	62.57	0.62566	0.8862	70.6	1.08	22.53	87.88	ZnO	2.84	Zn 1-Jun-1999 12:00 AM			
	Hg	M_SERIES	2.93	0.02669	0.7457	3.93	1.05	0.41	4.24	HgO	0.05	HgTe 1-Jun-1999 12:00 AM			
	O					48.63	0.78	63.39			8				
	Totals					144.49									
										Cation sum	4.62				
albite	grain 54	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	5.42	0.02429	0.9212	5.88	0.38	5.56	7.93	Na2O	0.71	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.99	0.05884	0.8697	9.19	0.35	7.39	17.35	Al2O3	0.94	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	26.01	0.20975	0.8242	31.55	0.54	24.4	67.5	SiO2	3.11	SiO2 1-Jun-1999 12:00 AM			
	O					46.16	0.7	62.66			8				
	Totals					92.78									
										Cation sum	4.77				
albite	grain 54	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	6.37	0.02854	0.9251	6.88	0.51	6.25	9.28	Na2O	0.8	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.1	0.05965	0.8623	9.39	0.48	7.27	17.74	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	26.65	0.21496	0.8213	32.45	0.74	24.15	69.43	SiO2	3.1	SiO2 1-Jun-1999 12:00 AM			
	O					47.72	0.96	62.33			8				
	Totals					96.44									
										Cation sum	4.84				
siderite	grain 54	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.52	0.01044	0.4362	3.49	0.35	8.28	5.79	MgO	1.33	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	1.33	0.01194	1.101	1.21	0.17	1.74	1.69	CaO	0.28	Wollastonite 1-Jun-1999 12:00 AM			
	Mn	K_SERIES	1.22	0.01219	0.9136	1.33	0.29	1.4	1.72	MnO	0.23	Mn 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	34.22	0.34218	0.9338	36.64	0.84	37.82	47.14	FeO	6.08	Fe 1-Jun-1999 12:00 AM			
	Rb	L_SERIES	0.8	0.00796	0.5237	1.52	0.45	1.02	1.66	Rb2O	0.16	Not defined 1-Jun-1999 12:00 AM			
	O					13.81	0.58	49.74			8				
	Totals					58									
										Cation sum	8.08				
apatite	grain 55														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	0.93	0.00749	0.9119	1.02	0.26	1.29	2.18	SiO2	0.18	SiO2 1-Jun-1999 12:00 AM			
	P	K_SERIES	11.91	0.07053	1.3306	8.95	0.36	10.28	20.51	P2O5	1.41	GaP 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	34.73	0.31195	1.0249	33.89	0.54	30.07	47.41	CaO	4.12	Wollastonite 1-Jun-1999 12:00 AM			
	O					26.25	0.6	58.36			8				
	Totals					70.1									
										Cation sum	5.71				
muscovite	grain 56	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.78	0.11626	0.918	17.19	0.39	14.92	32.48	Al2O3	1.93	Al2O3 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Si	K_SERIES	16.97	0.13684	0.7647	22.19	0.46	18.5	47.47	SiO2	2.39	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.67	0.0547	0.979	6.81	0.27	4.08	8.2	K2O	0.53	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.08	0.01079	0.8271	1.3	0.26	0.55	1.68	FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	O					42.34	0.64	61.96			8				
	Totals					89.83									
										Cation sum	4.91				
muscovite	grain 56	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	16.33	0.12032	0.9205	17.74	0.48	15.24	33.53	Al2O3	1.96	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.21	0.13881	0.7598	22.65	0.57	18.69	48.46	SiO2	2.4	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	5.25	0.04304	0.9748	5.38	0.31	3.19	6.48	K2O	0.41	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.03	0.0103	0.8269	1.25	0.32	0.52	1.6	FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	O					43.05	0.79	62.36			8				
	Totals					90.07									
										Cation sum	4.83				
chlorite	grain 57														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	3.47	0.02379	0.6179	5.62	0.26	6.69	9.31	MgO	0.9	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5.22	0.03842	0.6748	7.73	0.26	8.3	14.61	Al2O3	1.12	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.99	0.08054	0.7048	14.17	0.29	14.61	30.32	SiO2	1.97	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.35	0.18346	0.8636	21.24	0.44	11.02	27.33	FeO	1.48	Fe 1-Jun-1999 12:00 AM			
	O					32.8	0.5	59.38			8				
	Totals					81.56									
										Cation sum	5.47				
sphalerite	grain 58	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	17.91	0.15737	0.8085	22.15	0.66	13.8	55.31	SO3	1.73	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.62	0.00621	0.8786	0.71	0.56	0.22	0.88	CuO	0.03	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	63.75	0.63747	0.8788	72.54	1.94	22.17	90.3	ZnO	2.78	Zn 1-Jun-1999 12:00 AM			
	O					51.09	1.29	63.8			8				
	Totals					146.49									
										Cation sum	4.54				
sphalerite	grain 58	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	17.37	0.15259	0.8081	21.49	0.64	13.57	53.65	SO3	1.71	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.47	0.01467	0.9932	1.48	0.33	0.54	1.9	FeO	0.07	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	-0.04	-0.0004	0.8785	-0.05	0.52	-0.01	-0.06	CuO	0	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	63.36	0.63358	0.8789	72.09	1.87	22.33	89.73	ZnO	2.81	Zn 1-Jun-1999 12:00 AM			
	O					50.22	1.25	63.57			8				
	Totals					145.23									
										Cation sum	4.58				
sphalerite +	grain 58	spectrum 3													
unknown	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Fe	K_SERIES	1.48	0.01481	0.9998	1.48	0.27	0.65	1.9	FeO	0.08	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	0.16	0.00161	0.9422	0.17	0.38	0.07	0.21	CuO	0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	62.43	0.62427	0.9471	65.91	1.54	24.63	82.04	ZnO	3.18	Zn 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Mo	L_SERIES	35.17	0.35169	0.7499	46.9	1.34	11.94	70.36	MoO3	1.54	Mo 1-Jun-1999 12:00 AM			
	Hg	M_SERIES	5.04	0.04596	0.7998	6.3	1.54	0.77	6.81	HgO	0.1	HgTe 1-Jun-1999 12:00 AM			
	O					40.56	1.31	61.94			8				
	Totals					161.33									
										Cation sum	4.92				
rutile	grain 59	spectrum 1													
(altering?)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	3.72	0.0274	0.71	5.24	0.35	5.91	9.9	Al2O3	0.75	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	5.23	0.04218	0.7684	6.81	0.36	7.38	14.56	SiO2	0.93	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	23.38	0.23376	0.8968	26.07	0.64	16.57	43.48	TiO2	2.09	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.43	0.1043	0.8503	12.27	0.61	6.69	15.78	FeO	0.84	Fe 1-Jun-1999 12:00 AM			
	O					33.34	0.8	63.45			8				
	Totals					83.72									
										Cation sum	4.61				
	grain 59	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.45	0.00309	0.5773	0.78	0.22	1.07	1.3	MgO	0.14	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	1.69	0.01246	0.7008	2.41	0.23	2.98	4.56	Al2O3	0.39	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	2.27	0.01829	0.7934	2.86	0.21	3.39	6.12	SiO2	0.44	SiO2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	10	0.08985	1.1225	8.91	0.29	7.4	12.47	CaO	0.96	Wollastonite 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	23.31	0.23311	0.8679	26.86	0.54	18.66	44.8	TiO2	2.42	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	6.66	0.06662	0.8403	7.93	0.42	4.73	10.2	FeO	0.61	Fe 1-Jun-1999 12:00 AM			
	O					29.69	0.64	61.77			8				
	Totals					79.44									
										Cation sum	4.95				
albite	grain 60	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	6.29	0.02822	0.9244	6.81	0.44	6.08	9.18	Na2O	0.78	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.42	0.06204	0.8643	9.75	0.4	7.41	18.41	Al2O3	0.95	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.09	0.21848	0.8206	33.01	0.62	24.12	70.62	SiO2	3.09	SiO2 1-Jun-1999 12:00 AM			
	O					48.65	0.81	62.39			8				
	Totals					98.22									
										Cation sum	4.82				
rutile (inclusion)	grain 60	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Si	K_SERIES	5.08	0.04096	0.8501	5.97	0.4	5.39	12.78	SiO2	0.65	SiO2 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	47.65	0.47648	0.9011	52.88	1.13	27.95	88.2	TiO2	3.35	Ti 1-Jun-1999 12:00 AM			
	O					42.13	1.02	66.67			8				
	Totals					100.98									
										Cation sum	4				
chlorite after	grain 61	spectrum 1													
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.21	0.01516	0.6321	3.5	0.32	3.99	5.8	MgO	0.53	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.5	0.05526	0.7128	10.53	0.39	10.82	19.89	Al2O3	1.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	10.4	0.08386	0.7076	14.69	0.41	14.51	31.44	SiO2	1.93	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.6	0.00491	1.0172	0.59	0.15	0.42	0.71	K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Ti	K_SERIES	0.72	0.00717	0.8651	0.83	0.18	0.48	1.38	TiO2	0.06	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	16.78	0.16781	0.8598	19.52	0.59	9.69	25.11	FeO	1.29	Fe 1-Jun-1999 12:00 AM			
	O					34.67	0.72	60.09			8				
	Totals					84.32									
										Cation sum	5.31				
	grain 61	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.38	0.01631	0.625	3.81	0.32	4.29	6.31	MgO	0.57	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.42	0.05467	0.7044	10.54	0.38	10.69	19.91	Al2O3	1.43	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.68	0.07804	0.7048	13.73	0.4	13.39	29.37	SiO2	1.78	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.52	0.00426	1.0253	0.51	0.13	0.35	0.61	K2O	0.05	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	2.23	0.02227	0.8689	2.56	0.21	1.46	4.27	TiO2	0.2	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	17.21	0.17212	0.8603	20.01	0.61	9.81	25.74	FeO	1.31	Fe 1-Jun-1999 12:00 AM			
	O					35.07	0.72	60.01			8				
	Totals					86.21									
										Cation sum	5.33				
barite	grain 62	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	7.82	0.06875	0.8318	9.4	0.5	14.29	23.48	SO3	1.75	FeS2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	50.29	0.46948	0.9261	54.32	1.44	19.27	60.64	BaO	2.36	BaF2 1-Jun-1999 12:00 AM			
	W	M_SERIES	2.34	0.02335	0.5789	4.03	0.95	1.07	5.09	WO3	0.13	W 1-Jun-1999 12:00 AM			
	O					21.46	0.92	65.36			8				
	Totals					89.21									
										Cation sum	4.24				
	grain 62	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	7.99	0.0702	0.8395	9.52	0.39	14.74	23.76	SO3	1.82	FeS2 1-Jun-1999 12:00 AM			
	Co	K_SERIES	-0.53	-0.00529	0.9065	-0.58	0.27	-0.49	-0.74	CoO	-0.06	Co 1-Jun-1999 12:00 AM			
	Sr	L_SERIES	1.53	0.01426	0.6173	2.49	0.64	1.41	2.94	SrO	0.17	SrF2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	50.22	0.46876	0.927	54.18	1.15	19.6	60.49	BaO	2.42	BaF2 1-Jun-1999 12:00 AM			
	O					20.85	0.69	64.74			8				
	Totals					86.44									
										Cation sum	4.36				
barite	grain 63	spectrum 1													
(highly fractured)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.68	0.00465	0.5401	1.26	0.3	1.71	2.08	MgO	0.23	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	5	0.03681	0.6268	7.97	0.38	9.76	15.06	Al2O3	1.29	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	6.09	0.04915	0.6739	9.04	0.38	10.64	19.35	SiO2	1.41	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	2.1	0.01844	0.7937	2.64	0.25	2.72	6.6	SO3	0.36	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	15.04	0.15043	0.8752	17.19	0.58	10.17	22.11	FeO	1.34	Fe 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	16.29	0.15203	0.8662	18.8	0.72	4.52	20.99	BaO	0.6	BaF2 1-Jun-1999 12:00 AM			
	O					29.3	0.77	60.48			8				
	Totals					86.2									
										Cation sum	5.23				
	grain 63	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Mg	K_SERIES	0.8	0.00549	0.532	1.5	0.34	2.06	2.5	MgO	0.27	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	4.41	0.03246	0.6142	7.17	0.42	8.83	13.55	Al2O3	1.16	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	5.41	0.04365	0.6717	8.06	0.42	9.53	17.24	SiO2	1.26	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	2.88	0.02527	0.8016	3.59	0.3	3.72	8.96	SO3	0.49	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	14.56	0.14561	0.8764	16.62	0.66	9.89	21.38	FeO	1.3	Fe 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	18.99	0.17728	0.8701	21.83	0.88	5.28	24.37	BaO	0.7	BaF2 1-Jun-1999 12:00 AM			
	O					29.22	0.88	60.69			8				
	Totals					87.99									
										Cation sum	5.18				
chlorite after	grain 64	spectrum 1													
muscovite	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.92	0.01316	0.6098	3.15	0.27	3.53	5.22	MgO	0.47	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.64	0.05626	0.6995	10.92	0.33	11.04	20.63	Al2O3	1.48	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.6	0.0774	0.7003	13.71	0.35	13.31	29.32	SiO2	1.78	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.71	0.00582	1.027	0.69	0.12	0.48	0.83	K2O	0.06	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.15	0.01154	0.8742	1.32	0.16	0.75	2.2	TiO2	0.1	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	19.88	0.19883	0.8648	22.99	0.55	11.22	29.57	FeO	1.5	Fe 1-Jun-1999 12:00 AM			
	O					35.01	0.63	59.67			8				
	Totals					87.78									
										Cation sum	5.41				
	grain 64	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.72	0.01182	0.6095	2.83	0.29	3.27	4.69	MgO	0.44	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.9	0.05083	0.7021	9.83	0.36	10.23	18.57	Al2O3	1.37	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.92	0.07999	0.7095	13.98	0.38	13.98	29.91	SiO2	1.87	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.76	0.00626	1.0276	0.74	0.14	0.53	0.89	K2O	0.07	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	1.52	0.0152	0.8733	1.74	0.19	1.02	2.9	TiO2	0.14	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.97	0.18973	0.8639	21.96	0.6	11.04	28.25	FeO	1.47	Fe 1-Jun-1999 12:00 AM			
	O					34.14	0.69	59.92			8				
	Totals					85.22									
										Cation sum	5.35				
	grain 64	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.3	0.00891	0.5792	2.24	0.37	2.59	3.72	MgO	0.35	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.34	0.06141	0.6819	12.23	0.48	12.71	23.1	Al2O3	1.73	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.84	0.06324	0.6784	11.56	0.46	11.55	24.73	SiO2	1.57	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	24.71	0.2471	0.8747	28.25	0.84	14.19	36.34	FeO	1.93	Fe 1-Jun-1999 12:00 AM			
	O					33.61	0.86	58.95			8				
	Totals					87.89									
										Cation sum	5.57				
muscovite	grain 65	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	13.12	0.09667	0.9008	14.57	0.46	13.28	27.53	Al2O3	1.71	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.29	0.13946	0.7777	22.24	0.55	19.47	47.57	SiO2	2.51	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.2	0.05087	0.9812	6.32	0.33	3.97	7.61	K2O	0.51	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.3	0.02301	0.8291	2.78	0.39	1.22	3.57	FeO	0.16	Fe 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	O					40.38	0.77	62.06			8				
	Totals					86.28									
										Cation sum	4.89				
muscovite	grain 65	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	14.29	0.10523	0.9029	15.82	0.44	14.06	29.89	Al2O3	1.82	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.91	0.13637	0.7698	21.97	0.52	18.75	46.99	SiO2	2.43	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.75	0.05541	0.9826	6.87	0.31	4.21	8.28	K2O	0.55	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	2.22	0.0222	0.8292	2.68	0.34	1.15	3.45	FeO	0.15	Fe 1-Jun-1999 12:00 AM			
	O					41.27	0.73	61.83			8				
	Totals					88.61									
										Cation sum	4.94				
chlorite	grain 65	spectrum 3													
(+muscovite)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.22	0.00837	0.6153	1.98	0.38	2.24	3.29	MgO	0.3	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.93	0.0658	0.717	12.46	0.52	12.7	23.54	Al2O3	1.7	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.55	0.07699	0.6967	13.7	0.52	13.42	29.32	SiO2	1.8	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	1.28	0.01051	1.0226	1.25	0.21	0.88	1.51	K2O	0.12	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	19.49	0.19493	0.8648	22.54	0.81	11.1	29	FeO	1.49	Fe 1-Jun-1999 12:00 AM			
	O					34.71	0.91	59.66			8				
	Totals					86.65									
										Cation sum	5.41				
Mg-rich calcite	grain 66	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.82	0.00564	0.6459	1.27	0.19	3.1	2.11	MgO	0.5	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	34	0.30536	1.0711	31.74	0.5	46.9	44.41	CaO	7.5	Wollastonite 1-Jun-1999 12:00 AM			
	O					13.51	0.35	50			8				
	Totals					46.52									
										Cation sum	8				
calcite	grain 66	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Ca	K_SERIES	32.13	0.28858	1.0769	29.83	0.8	50	41.74	CaO	8	Wollastonite 1-Jun-1999 12:00 AM			
	O					11.91	0.5	50			8				
	Totals					41.74									
										Cation sum	8				
chlorite	grain 66	spectrum 3													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	F	K_SERIES	2.52	0.01941	0.2895	8.7	2.48	11.09	0		1.39	MgF2 1-Jun-1999 12:00 AM			
	Mg	K_SERIES	1.46	0.00998	0.5781	2.52	0.34	2.51	4.17	MgO	0.31	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.25	0.06077	0.681	12.12	0.44	10.87	22.89	Al2O3	1.36	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	8.77	0.0707	0.6887	12.73	0.42	10.98	27.23	SiO2	1.38	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.88	0.23883	0.871	27.42	0.74	11.89	35.27	FeO	1.49	Fe 1-Jun-1999 12:00 AM			
	O					34.79	0.78	52.66			6.61				
	Totals					98.27									
										Cation sum	4.55				
sphalerite	grain 67	spectrum 1													

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	16.84	0.148	0.8062	20.89	0.57	13.59	52.16	SO3	1.71	FeS2 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	-0.19	-0.00192	0.88	-0.22	0.41	-0.07	-0.27	CuO	-0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	63.14	0.6314	0.8802	71.73	1.68	22.89	89.29	ZnO	2.88	Zn 1-Jun-1999 12:00 AM			
	O					48.77	1.1	63.59			8				
	Totals					141.18									
										Cation sum	4.58				
	grain 67	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	15.75	0.13841	0.809	19.47	0.58	13.38	48.62	SO3	1.69	FeS2 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	0.68	0.00611	0.994	0.68	0.18	0.38	0.96	CaO	0.05	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.74	0.01739	0.9908	1.75	0.31	0.69	2.26	FeO	0.09	Fe 1-Jun-1999 12:00 AM			
	Cu	K_SERIES	-0.16	-0.00163	0.8782	-0.19	0.46	-0.06	-0.23	CuO	-0.01	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	57.93	0.57929	0.8786	65.93	1.72	22.23	82.07	ZnO	2.81	Zn 1-Jun-1999 12:00 AM			
	O					46.01	1.15	63.38			8				
	Totals					133.67									
										Cation sum	4.62				
albite	grain 68	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.56	0.01752	0.5668	4.51	0.37	10.2	7.48	MgO	1.61	MgO 1-Jun-1999 12:00 AM			
	Ca	K_SERIES	19.44	0.17462	1.0605	18.33	0.48	25.17	25.65	CaO	3.98	Wollastonite 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	11.75	0.11748	0.8617	13.63	0.63	13.43	17.54	FeO	2.12	Fe 1-Jun-1999 12:00 AM			
	W	M_SERIES	1.29	0.01294	0.6469	2	0.57	0.6	2.52	WO3	0.09	W 1-Jun-1999 12:00 AM			
	O					14.71	0.61	50.6			8				
	Totals					53.18									
										Cation sum	7.81				
ankerite	grain 68	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Na	K_SERIES	5.36	0.02405	0.9195	5.83	0.58	5.33	7.86	Na2O	0.68	Albite 1-Jun-1999 12:00 AM			
	Al	K_SERIES	8.15	0.06003	0.872	9.35	0.53	7.27	17.66	Al2O3	0.93	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	27.24	0.21966	0.8274	32.92	0.84	24.61	70.42	SiO2	3.14	SiO2 1-Jun-1999 12:00 AM			
	O					47.85	1.08	62.79			8				
	Totals					95.94									
										Cation sum	4.74				
unknown	grain 68	spectrum 3													
(musc + kaol?)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	16.63	0.12253	0.9366	17.76	0.57	16.07	33.55	Al2O3	2.04	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.45	0.13263	0.7523	21.86	0.68	19.01	46.77	SiO2	2.41	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.88	0.02365	0.9657	2.98	0.3	1.86	3.6	K2O	0.24	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					41.31	0.92	63.06			8				
	Totals					83.92									
										Cation sum	4.69				
sphalerite	grain 69														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	16.73	0.14705	0.8082	20.71	0.57	13.62	51.7	SO3	1.71	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	1.16	0.01156	0.9935	1.16	0.29	0.44	1.5	FeO	0.06	Fe 1-Jun-1999 12:00 AM			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Cu	K_SERIES	-0.09	-0.00088	0.8785	-0.1	0.42	-0.03	-0.13	CuO	0	Cu 1-Jun-1999 12:00 AM			
	Zn	K_SERIES	60.88	0.60885	0.8789	69.28	1.67	22.35	86.23	ZnO	2.81	Zn 1-Jun-1999 12:00 AM			
	O					48.26	1.11	63.62			8				
	Totals					139.31									
										Cation sum	4.57				
barite	grain 70														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	S	K_SERIES	7.23	0.06356	0.8216	8.8	0.38	14.06	21.98	SO3	1.71	FeS2 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	46.37	0.43288	0.9234	50.24	1.06	18.73	56.09	BaO	2.28	BaF2 1-Jun-1999 12:00 AM			
	W	M_SERIES	3.32	0.03316	0.5866	5.66	0.8	1.58	7.13	WO3	0.19	W 1-Jun-1999 12:00 AM			
	O					20.51	0.71	65.63			8				
	Totals					85.2									
										Cation sum	4.19				
Fe-rich chlorite	grain 71	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.74	0.0119	0.6098	2.85	0.29	3.29	4.72	MgO	0.44	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.14	0.05262	0.7019	10.18	0.36	10.59	19.23	Al2O3	1.41	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.92	0.07999	0.7056	14.06	0.38	14.05	30.07	SiO2	1.88	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	0.5	0.00411	1.0249	0.49	0.13	0.35	0.59	K2O	0.05	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Ti	K_SERIES	0.91	0.00912	0.8739	1.04	0.16	0.61	1.74	TiO2	0.08	Ti 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	19.3	0.19295	0.8646	22.31	0.6	11.22	28.71	FeO	1.5	Fe 1-Jun-1999 12:00 AM			
	O					34.13	0.68	59.89			8				
	Totals					85.05									
										Cation sum	5.36				
	grain 71	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	1.71	0.01174	0.6175	2.77	0.5	3.31	4.6	MgO	0.44	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	7.39	0.05444	0.7077	10.44	0.62	11.23	19.73	Al2O3	1.5	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	9.85	0.07941	0.7019	14.03	0.66	14.49	30.02	SiO2	1.93	SiO2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	18.17	0.18169	0.8639	21.03	1	10.92	27.05	FeO	1.46	Fe 1-Jun-1999 12:00 AM			
	O					33.12	1.13	60.05			8				
	Totals					81.4									
										Cation sum	5.32				
barite + chlorite	grain 72	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	0.95	0.00651	0.5556	1.71	0.29	2.17	2.83	MgO	0.29	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	6.1	0.04496	0.6535	9.34	0.37	10.69	17.65	Al2O3	1.44	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	7.16	0.05772	0.6813	10.51	0.37	11.55	22.47	SiO2	1.55	SiO2 1-Jun-1999 12:00 AM			
	S	K_SERIES	0.83	0.00726	0.7826	1.06	0.19	1.02	2.64	SO3	0.14	FeS2 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	21.39	0.21386	0.8763	24.4	0.65	13.49	31.39	FeO	1.82	Fe 1-Jun-1999 12:00 AM			
	Ba	L_SERIES	6.15	0.05739	0.8601	7.15	0.52	1.61	7.98	BaO	0.22	BaF2 1-Jun-1999 12:00 AM			
	O					30.81	0.74	59.47			8				
	Totals					84.97									
										Cation sum	5.45				
barite	grain 72	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Si	K_SERIES	2.56	0.02062	0.6719	3.81	0.35	6.82	8.14	SiO2	0.83	SiO2 1-Jun-1999 12:00 AM		
	S	K_SERIES	6.44	0.0566	0.8379	7.69	0.4	12.06	19.19	SO3	1.47	FeS2 1-Jun-1999 12:00 AM		
	Co	K_SERIES	-0.06	-0.00064	0.8893	-0.07	0.33	-0.06	-0.09	CoO	-0.01	Co 1-Jun-1999 12:00 AM		
	Ba	L_SERIES	38.96	0.3637	0.9074	42.93	1.17	15.72	47.94	BaO	1.92	BaF2 1-Jun-1999 12:00 AM		
	O					20.82	0.75	65.46			8			
	Totals					75.18								
										Cation sum	4.22			
barite + chlorite	grain 72	spectrum 3												
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard		
	Al	K_SERIES	2.31	0.01703	0.5948	3.89	0.44	5.73	7.35	Al2O3	0.73	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	2.9	0.02342	0.6818	4.26	0.46	6.03	9.11	SiO2	0.77	SiO2 1-Jun-1999 12:00 AM		
	S	K_SERIES	5.15	0.04528	0.8017	6.43	0.45	7.97	16.05	SO3	1.02	FeS2 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	6.62	0.0662	0.8873	7.46	0.6	5.31	9.6	FeO	0.68	Fe 1-Jun-1999 12:00 AM		
	Sr	L_SERIES	2.84	0.02643	0.6375	4.46	0.94	2.03	5.28	SrO	0.26	SrF2 1-Jun-1999 12:00 AM		
	Ba	L_SERIES	32.33	0.30183	0.8908	36.3	1.29	10.51	40.53	BaO	1.35	BaF2 1-Jun-1999 12:00 AM		
	O					25.11	1.08	62.42			8			
	Totals					87.91								
										Cation sum	4.82			
quartz	grain 72	spectrum 4												
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard		
	Si	K_SERIES	48.39	0.39025	0.9805	49.35	0.93	33.33	105.58	SiO2	4	SiO2 1-Jun-1999 12:00 AM		
	O					56.23	1	66.67			8			
	Totals					105.58								
										Cation sum	4			
sphalerite	grain 73	spectrum 1												
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard		
	S	K_SERIES	17.02	0.14955	0.8089	21.04	0.62	13.86	52.54	SO3	1.74	FeS2 1-Jun-1999 12:00 AM		
	Cu	K_SERIES	0.12	0.00123	0.8782	0.14	0.49	0.05	0.17	CuO	0.01	Cu 1-Jun-1999 12:00 AM		
	Zn	K_SERIES	60.42	0.60419	0.8784	68.78	1.81	22.23	85.62	ZnO	2.78	Zn 1-Jun-1999 12:00 AM		
	O					48.37	1.2	63.86			8			
	Totals					138.33								
										Cation sum	4.53			
	grain 73	spectrum 2												
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard		
	S	K_SERIES	17.03	0.14966	0.809	21.05	0.69	13.77	52.57	SO3	1.73	FeS2 1-Jun-1999 12:00 AM		
	Fe	K_SERIES	0.92	0.00916	0.9927	0.92	0.3	0.35	1.19	FeO	0.04	Fe 1-Jun-1999 12:00 AM		
	Cu	K_SERIES	-0.29	-0.00291	0.878	-0.33	0.61	-0.11	-0.41	CuO	-0.01	Cu 1-Jun-1999 12:00 AM		
	Zn	K_SERIES	60.81	0.60813	0.8783	69.24	2.04	22.22	86.19	ZnO	2.79	Zn 1-Jun-1999 12:00 AM		
	O					48.64	1.36	63.77			8			
	Totals					139.53								
										Cation sum	4.54			
unknown	grain 74													
(chlorite?)	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard		
	Mg	K_SERIES	1.48	0.01013	0.5832	2.53	0.39	2.91	4.2	MgO	0.39	MgO 1-Jun-1999 12:00 AM		
	Al	K_SERIES	8.04	0.05925	0.6826	11.78	0.5	12.21	22.26	Al2O3	1.65	Al2O3 1-Jun-1999 12:00 AM		
	Si	K_SERIES	8.03	0.06475	0.6825	11.77	0.48	11.71	25.17	SiO2	1.59	SiO2 1-Jun-1999 12:00 AM		

Table D: Scanning Electron Microscope semiquantitative chemical analyses of TS 5445.94 from the Louisbourg J-47 well.

	Cr	K_SERIES	1.3	0.01299	0.9515	1.37	0.26	0.73	2	Cr2O3	0.1	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	23.21	0.23214	0.8714	26.64	0.84	13.34	34.27	FeO	1.81	Fe 1-Jun-1999 12:00 AM			
	O					33.81	0.9	59.09			8				
	Totals					87.9									
										Cation sum	5.54				
muscovite	grain 75	spectrum 1													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	15.03	0.1107	0.9213	16.32	0.44	14.47	30.83	Al2O3	1.87	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	17.14	0.1382	0.7706	22.23	0.53	18.93	47.56	SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	6.67	0.0547	0.9781	6.82	0.32	4.17	8.21	K2O	0.54	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	0.75	0.00749	0.8263	0.91	0.28	0.39	1.17	FeO	0.05	Fe 1-Jun-1999 12:00 AM			
	O					41.49	0.74	62.04			8				
	Totals					87.76									
										Cation sum	4.89				
?muscovite	grain 75	spectrum 2													
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Al	K_SERIES	16.31	0.12014	0.9365	17.41	0.52	15.86	32.9	Al2O3	2.01	Al2O3 1-Jun-1999 12:00 AM			
	Si	K_SERIES	16.58	0.1337	0.7546	21.97	0.63	19.22	47	SiO2	2.44	SiO2 1-Jun-1999 12:00 AM			
	K	K_SERIES	2.76	0.02265	0.9652	2.86	0.27	1.8	3.44	K2O	0.23	MAD-10 Feldspar 1-Jun-1999 12:00 AM			
	O					41.1	0.84	63.12			8				
	Totals					83.34									
										Cation sum	4.67				
chromite	grain 76														
	Element	Line	App. Conc	k ratio	Intensity co	Weight%	Weight% s	Atomic%	Compound	Formula	Number of	Standard			
	Mg	K_SERIES	2.37	0.01624	0.5079	4.66	0.31	5.73	7.73	MgO	0.8	MgO 1-Jun-1999 12:00 AM			
	Al	K_SERIES	2.96	0.02183	0.6012	4.93	0.26	5.46	9.31	Al2O3	0.76	Al2O3 1-Jun-1999 12:00 AM			
	Cr	K_SERIES	40.18	0.40176	0.9327	43.08	0.62	24.74	62.96	Cr2O3	3.44	Cr 1-Jun-1999 12:00 AM			
	Fe	K_SERIES	10.25	0.10254	0.8408	12.2	0.44	6.52	15.69	FeO	0.91	Fe 1-Jun-1999 12:00 AM			
	O					30.83	0.6	57.55			8				
	Totals					95.69									
										Cation sum	5.9				

Note: If there is only one mineral name per grain, this name pertains to all analyses of said grain.