



BRITISH  
COLUMBIA

Ministry of Energy and Mines  
Resource Development Division

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## 2002 PRELIMINARY REVIEW

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### British Columbia Ministry of Energy and Mines

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#### SUMMARY

British Columbia's industrial mineral production for 2001 is estimated at \$54 million, and mineral exploration expenditures are estimated at \$2.6 million, which was about 8% of the province's exploration investment. Production is expected to increase this year, even while exploration expenditures declined.

The most economically significant industrial minerals produced are: magnesite, white calcium carbonate, limestone, silica, dimension stone, gypsum, sulphur, construction aggregate and crushed rock. Commodities produced in lesser quantities include jade (nephrite), magnetite, dolomite, barite, volcanic cinder, pumice, flagstone, clay, tufa, fuller's earth and zeolites. There are more than 40 mines or quarries and at least 20 major sites where upgrading of industrial minerals into value-added products takes place, not counting the aggregate operations listed by the British Columbia Aggregate Producers Association. Selected mining operations are shown on Figure 1, and processing plants are included on Figure 2. Most of these operations are concentrated close to existing infrastructure and markets.

#### TRENDS

Over the last three years, the most significant industrial minerals trend in British Columbia has been an increasing export of crushed stone and natural aggregate to urban centres along the west coast of the United States. This market, however, is becoming very competitive as industry identifies new potential for development.

Another important trend, which was not apparent during the 1990s, is the increase in value-added processing of raw industrial minerals. In 2001, we witnessed a development of a basalt quarry and related roofing-granule plant in the Ashcroft area of BC. The plant reached 50% of its designed capacity, of 500 000 tonnes, in mid July, 2002. The continuous investment by Roxul (West) International Inc. in its mineral wool plant near Grand Forks also supports this trend. In November 2002, Clayburn will start trial runs to produce light-weight aggregate based on the material from its Sumas Mountain shale quarry.

On a smaller scale, an increase in the number of flagstone operations, and a significant interest in tufa and other landscaping materials has been noted. Such projects do not require major capital investments and are ideally suited for family-type businesses.

It is expected that over the next few years, new opportunities will arise in the field of "green" minerals along the west coast. Green minerals are those that can be used in environmental clean-up, agriculture, waste disposal or otherwise improve the environment. Agricultural markets for zeolites appear to be improving this year and they may further benefit from the lifted moratorium on new, salmon-farm developments in the province. BC has number of well-documented bentonite deposits and at least few of them are worth rigorous laboratory testing. Depending on test results, some of these deposits could supply material for linings and barriers in waste disposal applications, and potentially for drill-mud applications.

Assuming that BC offshore development drilling takes off, and that BC bentonite meets specifications, this could provide a new development opportunity in BC.

Starting in 2002 there will also be an increase in the search for pozzolans near major population centers (materials sought after for their cementitious properties). Deposits of specialty, natural and light-weight aggregates, such as pumice, may be also on the upswing. An increase in the use of natural pozzolans and lightweight aggregates is expected, at least in part, as consequence of the Kyoto protocol. The use of natural pozzolans and fly ash, reduces energy consumption and greenhouse gas emissions. Niche markets will continue to provide opportunities for smaller scale operators.

#### GYPSUM

Westroc Inc. is forecasting production of 475 000 tonnes gypsum from its Elkhorn quarries near Windermere (Figure 3) in 2002. During the last three years, the company drilled 98 holes, which indicated a resource of 16.7 million tonnes of gypsum on its Koot property, northeast of Canal Flats. This year they completed a successful drilling pro-



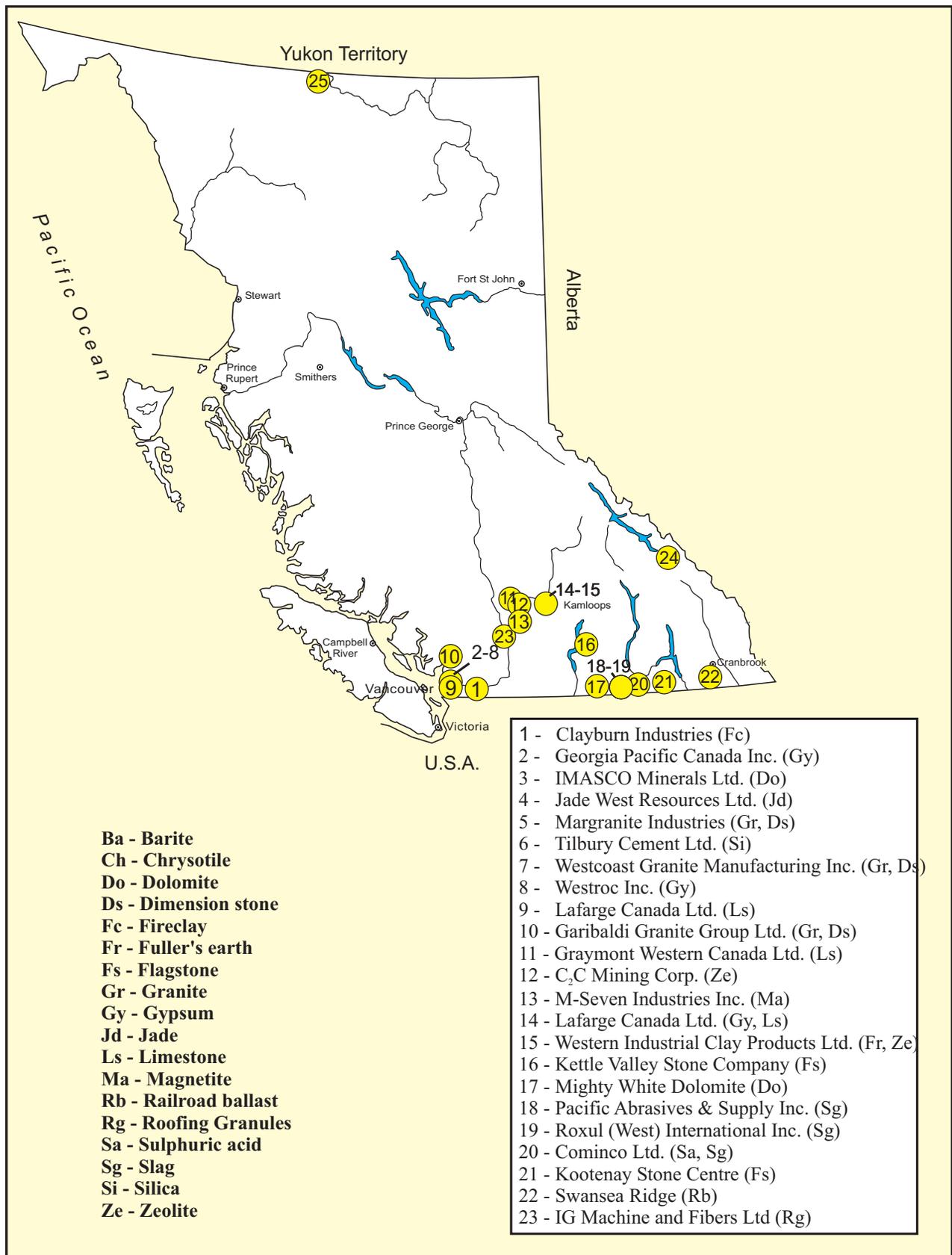


Figure 2. Selected industrial mineral processing plants.

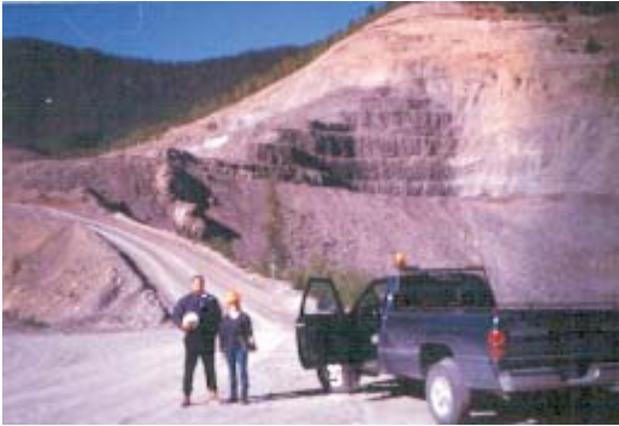


Figure 3. Elkhorn gypsum quarries near Windermere; Westroc Inc.

gram on Elkhorn West gypsum deposit, located immediately west of its Elkhorn quarry site. It consisted of 40 drillholes totaling 1600 metres. These new reserves at Elkhorn West will postpone need for development of Koot deposit.

Georgia Pacific Canada Inc. will produce an estimated 175 000 tonnes gypsum from its Four J mine near Canal Flats. Georgia Pacific ships about 100 000 tonnes of gypsum annually from its Four J quarry to its wallboard plant near Edmonton, Alberta.

Both Westroc and Georgia Pacific operate wallboard plants in the Vancouver area.

Lafarge Canada Inc. mined a small quantity of gypsum from its Falkland pit (approx. 6000 tonnes) for its Kamloops cement plant, supplemented by gypsum supplied by Westroc.

## MAGNESITE

Baymag Mines Company Ltd. produces magnesite at Mount Brussilof (Figure 4) at a rate of about 200 000 tonnes annually. The company has two plants in Exshaw,



Figure 4. Baymag Mines Company Ltd. mines magnesite at Mount Brussilof.



Figure 5. Silica processing plant, Golden area, Highwood Resources Ltd.

Alberta. The first site is a converted lime kiln producing sintered magnesia; the second (Figure 3), houses a 50 000-tonne capacity, multiple hearth furnace, vertical kiln, dedicated to specialty calcined MgO and also an electrofusing installation. Calcined magnesia is the main product, however, a portion is further processed to high-quality fused magnesia for export. The company has also started to sell crushed white magnesite for landscaping applications. It conducted a very modest drilling program in 2002

## SILICA

In 2002, Highwood Resources Ltd. expects to ship approximately 80 000 tonnes of silica (Figure 5) from its Moberly mine, mainly to Lavington BC. In the past, it has also shipped lump silica to Springfield, Oregon, and other destinations, however, since the collapse of the US silicon and ferrosilicon production these shipments have stopped.

The Horse Creek silica mine, which is owned by Silicon Metaltech of Seattle and was operated by Nugget Contracting Ltd., remained idle in 2002 as a result of the 1998 shutdown of the Wenatchee metallurgical grade silicon and ferrosilicon plant.

During the summer 2002, Monteith Bay Resources Ltd. supplied 30 500 tonnes of geyserrite (silica) to the Lehigh Northwest Cement Limited (formerly Tilbury Cement Ltd.) plant in Delta, from its quarry at Monteith Bay on western Vancouver Island. Lafarge Canada Inc. mined about 5000 tonnes of silica-alumina material from the Buse Lake deposit, as feedstock for its Kamloops cement plant. Electra Gold Ltd. and Homegold are planning diamond drill and metallurgical testing in late 2002 at their Apple Bay project near Port Hardy.

## LIMESTONE

The largest limestone production centre in the province is Texada Island (Figure 6), where two quarries, Gillies Bay (Texada Quarrying Ltd.) and Blubber Bay (Ashgrove



Figure 6. Gillies Bay Loading Facility, Vancouver Island; Texada Quarrying Ltd.

Cement Corporation), ship material to customers in British Columbia, Washington, Oregon and California, for cement, chemical and more recently, agricultural use. In 2002, 5.1 and 3.8 million tonnes of rock was quarried from Gillies Bay and Blubber Bay respectively, but not all was shipped. Texada Quarrying Ltd., recently invested \$10 million in an aggregate crushing plant and shipped crushed rock as far as Los Angeles and San Diego, California. Ash Grove upgraded their crushing plant in 2002, and is expected to ship over 2 million tonnes of rock, while Texada Quarrying is expected to ship about 4.1 million tonnes. Both operations currently have excess capacity and are aggressively marketing in Vancouver and the USA.

In addition to pulp mills, which normally produce their own lime, three cement plants and two lime plants in British Columbia process limestone. Graymont Western Canada Inc.'s Pavilion Lake limestone quarry and lime plant, near Cache Creek, has a capacity of about 190 000 tonnes of lime annually. The Kamloops cement plant of Lafarge Canada Inc, forecasts they will mine about 187 000 tonnes of limestone, and produce about 122 000 tonnes of cement, from the Harper Ranch quarry. Lafarge's plant located in Richmond and Lehigh Northwest Cement Limited's plants in Delta are state-of-the-art operations. Lafarge's plant has the capacity to produce one million tonnes of cement. Pacific Lime Products Ltd. at Giscome, near Prince George, sells small quantities of limestone to pulp mills in the region.

Northrock Industries Ltd. provided a limited amount of limestone from its Dahl Lake quarry for riprap and landscaping. I.G. Machine and Fibers Ltd. and Homegold completed a 5000-tonne, bulk sample in 2002 from its South Slesse quarry near Chilliwack. Graymont Western Canada Inc. may submit its proposed 250 000-tonnes per year chemical limestone Var quarry, on Rupert Inlet near Port Hardy, to the Environmental Assessment Process. The company will have a modest exploration program on their Nimkish Lake limestone property, late in 2002..



Figure 7. Dolomite processing plant near Rock Creek; Mighty White Dolomite Ltd.

## WHITE CALCIUM CARBONATE

White, high-calcium carbonate is produced from deposits on Texada Island (Vananda and Gillies Bay). It is also produced at Benson Lake on Vancouver Island, and if needed at Lost Creek near Salmo. High-calcium carbonate has a variety of uses including paper, paint and plastic filler.

## DOLOMITE

Dolomite is quarried by IMASCO Minerals Inc. at its Crawford Bay mine on Kootenay Lake and by Mighty White Dolomite Ltd. near Rock Creek (Figure 7). Dolomite is used for; soil conditioning, white ornamental aggregate, stucco and roofing, fine aggregate, and in synthetic marble products.

## CRUSHED STONE AND AGGREGATE

Grassroots exploration for traditional construction materials is expanding along the British Columbia coastline. It is expected that shipments of crushed stone from Texada Island and other coastal sources will make significant inroads into the Vancouver, Seattle, San Diego, San Francisco and Los Angeles markets. Texada Island limestone producers have already started to exploit this market opportunity. Texada Island producers are well established, and crushed rock is the natural by-product of their limestone operations. Natural aggregate is the focus of similar market demands. Tilbury Cement Ltd. shipped aggregate from its facility at Sechelt to the San Francisco Bay area in 2001. Although Polaris Minerals Corporation abandoned its efforts to develop aggregate and crushed rock operations in Bella Coola, it is in the permitting process for a combined crushed rock/natural aggregate operation at Port Alberni. Other companies, including Southern Pacific Development Corp.'s project near in Renfrew area, Vancouver Island, propose similar ventures.

Railroad ballast stockpiles, produced last year from Canadian Pacific Railway's Giscome basalt quarry and

from British Columbia Railway's Ahbau basalt quarry, diminished. No new production took place at either of the two quarries. Canadian National Railways however also operated at least 6 other railroad ballast operations in British Columbia McAbee (near Ashcroft), Boulder (near Clearwater), Taverne (near Tete-Jaune), Pacific (East of Terrace) and Kwinita (Mile 40 on Skeena). Canadian Pacific Railway mined, crushed and shipped railroad ballast at its Swansea Ridge gabbro quarry south of Cranbrook.

No information is available about Wallachin quarry of Canadian Pacific. Teko pit, southwest of Taylor near Ft St. John, was a major aggregate crushing operation in 2001 and reactivation is expected later this year. This pit supplies material mainly for the oil and gas sector in northeastern BC (road metal, *etc*).

## ROOFING GRANULES

In October 2001, IG Machine and Fibers Ltd., a subsidiary of IKO Industries Ltd., opened its Ashcroft basalt quarry and roofing-granule plant (Figure 8). The plant currently produces at about 50% of its rated capacity of 300 000 tonnes of granules per year in six distinct colours. Basalt is quarried, crushed, sized and coloured on site, prior to shipping to IKO Industries shingle plants in Sumas, Washington, Calgary, Winnipeg and Chicago.

## INDUSTRIAL CLAY AND SHALE/SANDSTONE

Clayburn Industries Ltd. of Abbotsford processes fire-clay from Sumas Mountain into a variety of refractory bricks and castable products, which are exported worldwide. Sumas Clay Products Ltd also produces small quantities of flue-line pipe and ornamental and facing bricks from near Abbotsford.

Clayburn, Lafarge Canada Inc. and Tilbury Cement Ltd. are scheduled to produce around 500 000 tonnes of shale and sandstone from their Sumas shale quarry in 2001. Clayburn is developing new light-weight aggregate with good isolation properties based on this material.

## MEDICAL CLAYS

Ironwood Clay Company Inc. is the largest producer of cosmetic/medical clay in BC. They mine seasonally from the De Cosmos Lagoon on Hunter Island.

Similar material from at least one other BC locality, Carrie Cove Clay of Comox Valley, also reached market. It is currently sold by Carrie Cove Cosmetics for medicinal and cosmetic applications. It is also expected that Glacial Marine Clay Inc. will be producing a clay for specialized hydroponics applications. Mr. Robert Davie has an undeveloped clay deposit on the King Island. The market for cosmetic/medical clay is limited, however, the processed product may retail about \$100/kg. The market for specialized hydroponics clays is less stringent and larger, however, the material still retails at prices around \$ 20/kg.



Figure 8. Ashcroft roofing-granule plant; IG Machine and Fibers Ltd. (subsidiary of IKO Industries Ltd.)

## DIATOMITE, ZEOLITE AND BENTONITE

Western Industrial Clay Products Ltd. produces domestic and industrial absorbents, principally from its Red Lake fuller's earth deposit near Kamloops. In the Princeton area, the company also controls the Bee and Brom zeolite properties and is mining bentonite from the Bud property. In 2001 the company began to market "leonardite" (low-grade oxidized coal) as an organic soil conditioner, however this branch of the company may be closed by the end of 2002. The company secured a contract to sell humic acid (a leonardite derivative) to a major retail chain. The leonardite occurs between the diatomite horizons at Red Lake. There is a number of known bentonite deposits in British Columbia, however the most recent promising discovery was made by Willy Kovacevic in the Clinton area.

Highwood Resources Ltd. reports increasing annual sales of zeolite from the Ranchlands Z-1 quarry near Cache Creek. It has drawn from existing stockpiles and there was no mining in 2001, however company will extract more raw materials before the end of 2002. C2C Zeolite Mining Corporation recently sold its Z-2 zeolite quarry near Cache Creek and its Ashcroft processing and packaging plant to Industrial Mineral Processors of Calgary, Alberta. C2C Zeolite and Zeo Tech Enviro Corp and GSA Resources Inc. have created an alliance for processing, product and technology development, and marketing production from respective zeolite deposits in the Cache Creek and Princeton areas. Zeo-Tech prepared an application for a 75 000 tonne per year quarry on the Zeo property at Princeton. The site was striped and drilled in 2002.

Canmark International Resources Inc. tries to develop a market in the Lower Mainland for zeolite from its Sunday Creek deposit near Princeton, but the mine remained inactive.

New zeolite occurrences near Manual Creek, in the Keremeos area, were discovered by Neil Church under the auspices of the Ministry of Energy and Mines' 2001 Prospectors Assistance Program. The x-ray diffraction results and the cation exchange capacity of grab samples are promising.



Figure 9. Integrated granite Processing Plant; Margranite Industries in Surrey.

## DIMENSION STONE

Westcoast Granite Manufacturing Inc. in Delta, Margranite Industries in Surrey (Figure 9), Matrix Marble Corporation in Duncan and Garibaldi Granite Group Inc. in Squamish operate principal stone-processing plants. Margranite processes imported granite, and nine granite varieties, from at least three quarries located in the East Anderson River, Beaverdell and Skagit Valley areas. Garibaldi Granite owns a processing plant in Squamish and is mining and processing three granite varieties from nearby quarries. The company also produces a variety of basalt landscape products. Huckleberry Stone Supply Ltd. of Burnaby and Mountain High Properties Ltd. of Pemberton produced basalt from small quarries in the Whistler area. Mountain High recently installed a hydra-splitter at its Pemberton factory. In 2001, Matrix Marble Ltd. concentrated on processing materials at its plant near Duncan, but it also extracted blue and white marble from its Tahsis quarry in Tlupana Bay.

Hardy Island Granite Quarries Ltd. extracted about 3500 tonnes of stone this year and the product was sold through Bedrock Granite Sales in Coquitlam, BC. In 2001, Quadra Stone Ltd. produced a small tonnage of Cascade Coral blocks from a new granite quarry near Beaverdell, no information is available for 2002. Near Kelowna, the Kettle Valley Stone Company produced flagstone, ashlar, thin veneer and landscape rock products from several quarries.

Revelstoke Flagstone Quarries, Kootenay Stone Centre, and other small operators in the West Kootenays quarried flagstone. Small flagstone quarries were also opened in the North Thompson and Golden areas. In 2001, Dome Creek Structural Slate Company quarried a limited tonnage of attractive green slate from its Dome Creek deposit on Highway 16, east of Prince George, however there was no activity in 2002. Rocky Mountain Slate opened a new slate quarry east of Golden. The blue-gray and beige materials from this location are used as flagstone. Rocky Mountain



Figure 10. Pum property on Mount Meager, north of Pemberton; Great Pacific Pumice Ltd.

Tufa produced around 2500 tonnes of tufa, mainly for landscaping applications.

## JADE

Jade West Resources Ltd. and its affiliated company, Polar Gemstones Ltd., are the main nephrite producers. In 2001 they produced about 200 tonnes of nephrite from the Kutcho Creek and Serpentine Lake areas, northwestern BC. There was no activity in 2002, however the company expects to be active in mid-2003. Jade West also operates a jade processing facility in south Surrey. The company is currently looking for partners to set up a facility to produce nephrite tiles. Jedway Enterprises Limited extracted small quantities of nephrite from Kutcho, Cassiar and Polar.

## PUMICE, TEPHRA AND LAVA ROCK

Canada Pumice Corporation produced about 30 000 cubic metres of tephra from its Nazko quarry, west of Quesnel. The material is used for landscaping, sporting facilities, growing and filtration media, and lightweight aggregate applications. Shipments have gone by rail as far as Toronto, and the company is negotiating contracts to ship lightweight aggregate to the western USA. Great Pacific Pumice Ltd. (Figure 10) is shipping a variety of pumice-based products from its Pum property on Mount Meager, north of Pemberton. Production in 2001 was estimated at 12 000 cubic metres. Garibaldi Aggregates Ltd. started to produce pumice from the same area as Great Pacific Pumice Ltd. Mr. George Wollanski staked a property in the Falkland area, which may produce three, colored varieties of vesicular basalt, potentially marketed as a lava rock for landscaping.

## MINERAL WOOL

Further investments into plant improvements are expected at an insulation/mineral wool manufacturing plant in Grand Forks (Figure 11) operated by Roxul (West) International Inc. Since 1999 it invested \$25 million, while in 2002 it spent about \$4 million to improve competitiveness,

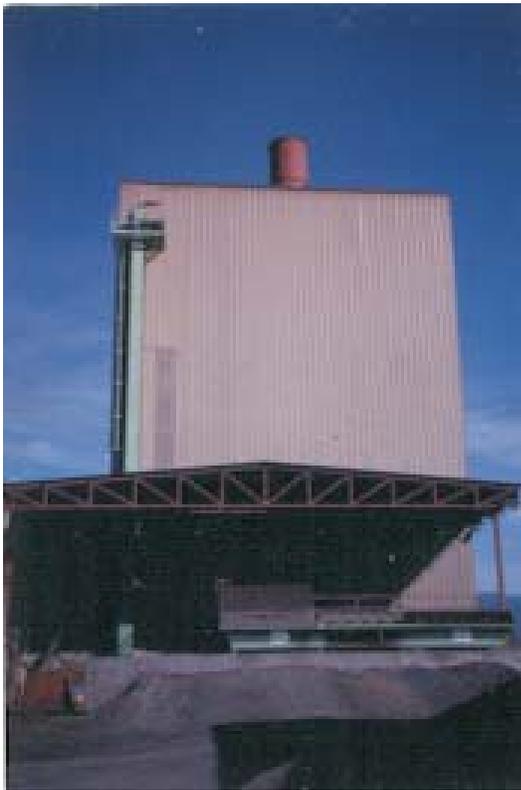


Figure 11. Rock wool plant, Roxul (West) International Inc.

and on environmental initiatives. The main source of rock for the plant was the Winner diorite quarry in the Greenwood mining camp, 4 km south of the former Phoenix mine. In 2002, approximately 50 000 tonnes of diorite were mined and crushed there. The material from Winner Quarry is supplemented by talus material from Cannon Creek. During the last few years, slag was recovered from Roxul's operation in Greenwood, however, this year the company reverted to Pacific Abrasives & Supply Inc., its original, local supplier in Grand Forks.

## SLAG

Pacific Abrasives & Supply Inc. is producing and processing slag from Grand Forks dumps, mainly for sand-blasting at major shipyards and for roofing granules. Some slag was also shipped from Anyox by Tru-Grit as abrasive for cement industry applications, mainly in the Vancouver area, including roofing granules and some abrasive applications. Teck Cominco Ltd. is also a major slag producer at its Trail smelter. It markets its products mainly for cement production and abrasive applications. The company is converting one of the old furnaces into a second fuming furnace. The use of two furnaces doubles the fuming time and results in substantially lower base metal levels in the slag, improving the quality of the product. For the last few years, the slag was also recovered in the Greenwood area, mainly as one of the raw materials for the production of mineral wool by Roxul (West) International Inc. in Grand Forks,

however in 2002 Roxul was supplied with slag from Grand Forks.

## MAGNETITE

M-Seven Industries Inc. produces between 60 000 and 70 000 tonnes of magnetite annually for industrial applications, by processing the Craigmont tailings. The company is supplying most coal mines in western Canada with heavy media material for their wash plants. Homegold Resources Ltd. optioned its Iron Mike magnetite occurrence, approximately 6 kilometres south of Sayward to a major coal company. Drilling and bulk sampling, on this property, is expected to start in November, 2002. Benson Magnetics Ltd. is investigating the feasibility of installing a 25 000 tonne per year plant near Benson Lake, on Northern Vancouver Island.

## GRAPHITE

In 2002, Crystal Graphite Corp. released new resource calculations for its Black Crystal graphite deposit in the Slocan Valley. The weathered zone has 648 000 tonnes containing 1.82% "fixed carbon" in measured and indicated resources, and 516 000 tonnes of inferred resources containing 1.69% "fixed carbon". The underlying unweathered zone has indicated resources of 4 763 000 tonnes containing 1.21% "fixed" carbon, and 4 591 000 tonnes of inferred resources containing 1.24% "fixed carbon". The company also received a mining permit to process flake graphite to a maximum feed rate of 250 000 tonnes per year. Some metallurgical work was also performed. A recent press release indicates that the company will be delisted from the TSX Venture Exchange.

## SULPHUR

West Coast Energy Inc., Petro-Canada Inc., TransCanada Midstream and Amoco Canada Petroleum Company Limited produce sulphur, a byproduct of natural gas, at a number of processing plants in the northeast of the province. Liquefied SO<sub>2</sub> and sulphuric acid are also produced at Cominco's smelter in Trail. No data is available for 2002, however, for 2001 the production was 904 000 tonnes.

## HIGH TECH MINERALS

Commerce Resources Corporation drilled its Fir carbonatite deposit near Blue River in 2002. Its 2001 resource estimate for the nearby Verity deposit was 3.06 million tonnes containing 196g/t tantalum pentoxide, 646 g/t niobium pentoxide, and 3.2% phosphate. The company completed six drillholes on the Fir project; the thickness of the carbonatite intersected averaged 40 metres. The Fir ferrocolumbite and pychlore-bearing carbonatite (Figure 12) appears flat-lying, and has been outlined over an area 425 by 325 metres. The company recently announced completion of two preliminary cost assessments on processing



Figure 12. Pyrochlore from the Verity deposit Blue River Area.

and beneficiation of tantalum and niobium enriched carbonatites at Fir and Verity.

There was no work done on the Cross Lake Minerals Ltd. 's Myoff Creek niobium, tantalum, and rare earths property in 2002.

## GEMSTONES

In 2001, Skeena Resources Limited drilled five holes to test the RAM 5 and RAM 6 kimberlite pipes on its Ice diamond property near Elkford. Diamonds have been previously reported from surface samples. One hole on the RAM 6 site intersected 105 metres of kimberlite. In addition, a 4-tonne bulk sample was collected from surface on the nearby Bonus kimberlite pipe. Caustic fusion analysis of the drillcore kimberlite samples identified no microdiamonds, and dense media separation of the 4 tonne bulk sample failed to find diamonds in the +0.5 mm to 6.0 mm size range. A number of untested geophysical and indicator mineral anomalies remain on the property, and the RAM 5 and Bonus pipes have had limited drill testing.

In 2001, Pacific Ridge Exploration Limited conducted a modest chip-sampling program on the RAR 3, RAR 5 and RAR 7 zones of its tantalum and rare earth element-bearing Xenon property, 140 kilometres east of Dease Lake. A 10-kilogram bulk sample was also taken from a diatreme breccia phase for diamond indicator mineral processing. The results released in 2002 indicate that one microdiamond was recovered.

Okanagan Opal Inc. continues to cut, test and market precious opal from the Klinker locality near Vernon. Follow-up prospecting and excavating was conducted on the Northern Lights precious opal occurrence in the Whitesail Range, south of Houston in 2001. This year there was no

new mining; however, a small quantity of opal was retrieved from the material mined in 2001.

Mr. Schaefer of Burns Lake discovered precious opal bearing boulders, or subcrop, in 1999, on the Firestorm property west of the Burns Lake area. In 2001, Cantec Ventures Inc. excavated trenches to bedrock, and washed a 20 cubic metre bulk sample to recover opal and opalized basalt. Most of the trenches were rehabilitated in 2002. The Schaefer family apparently continue to extract precious opal by hand.

## BARITE

Tiger Ridge Resources Ltd. continued underground development and bulk sampling of two adits on its barite project at Jubilee Mountain, west of Spillimacheen. In addition, surface exploration drilling northwest of the adits, continued in 2002. The investigation of barite potential for the adjacent past producer, Siver Giant Mine was also carried out. In 2001, the company installed a jig concentrator at the minesite to preconcentrate the barite and reduce the cost of transportation to the mill.

In 2001, Fireside Minerals Inc. mined 15 000 tonnes barite from the Bear vein at the Fireside mine, 125 kilometres east of Watson Lake, and used jigs to recover 10 000 tonnes of barite for the northwest British Columbia and Alberta oil and gas drilling industry. In 2002 Fireside shipped only 1500 tonnes.

## WOLLASTONITE/GARNET

Clearview Minerals Ltd. and Tri-Sil Minerals Ltd. completed a 6-hole, 1000 metre diamond drilling program on their Mineral Hill wollastonite/garnet skarn project, near Sechelt. One hole intersected 91.2 meters @ 50% wollastonite and 35% garnet.

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