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FELDSPAR PROPERTY, SUMAS MOUNTAIN
BRITISH COLUMBIA, CANADA

1994 GEOLOGICAL EVALUATION

SUMUS SILICA GROUP

New Westminster Mining Division - NTS 92G/1E

Latitude 49°6' N - Longitude 122°10' W

Owner

QUALITY INDUSTRIAL MINERAL & SUPPLY INC.

37195 Ward Road, R.R. # 4

Box 12, Abbotsford, British Columbia

V2S 4N4

By

BAKKER GEOLOGICAL CONSULTING

Ebo Bakker, P.Geol. (Alberta)

4 Whitebrook Rise

Fairport, New York, 14450 - U.S.A.

CONSULTANTS.. Pegasus Earth Sensing Corp.

#1531 West Pender St., Vancouver, B.C. V6G 2T1

July 15, 1994

GEOLOGICAL BRANCH
 MINERAL DEVELOPMENT REPORT

23,450

SUMMARY

Quality Industrial Mineral & Supply Inc. (QUIMS) controls a group of twenty contiguous mineral claims in British Columbia, (the Feldspar property). The claims are in hood standing and total about 500 ha in

The Feldspar property is concluded to contain potential large amounts of valuable feldspar-rich deposits that can be used for the glass and ceramic industry. However, more work is required on iron extraction studies, and on the establishment of ore reserves and grades. The deposits are expected to be easily mined.

The feldspar property is close to the Trans Canada Highway and is easy accessible by paved road. The elevation ranges from about 350 m in the south-west to 550 m in the north-east. Most of the property has recently been logged and is now covered with shrub. Exploration work, including mapping, drilling and geochemistry, has been carried out in the period from 1986 to 1991.

The Feldspar property is underlain by Jurassic (?) sedimentary and volcanic rocks, and by Cretaceous hornblende quartz diorite/granodiorite of the Coast Range batholith. The batholith includes a feldspar-rich dacite/latite dike.

The feldspar-rich dike extends in a north-south direction for a few km, the width ranges from 70 to 200 m. Much of the dike is a porphyritic dacite. A second variety is a very fine to fine-grained, leucocratic dacite. The dike is generally well-jointed and the rocks break readily into angular fragments.

Feldspar-rich rocks are used in the glass and porcelain/ceramics industry. A critical factor is the iron content. Maximum allowable values range from 0.50 % Fe_2O_3 for fiberglass to 0.07 % for high quality glass and porcelain. The iron content of 41 samples of the feldspar-rich rocks range from 0.19 to 2.33 % Fe_2O_3 (average 1.0 %).

The iron in the feldspar-rich rocks is expected to be present in iron-bearing silicate minerals (intergrown with other minerals) and as iron (hydr)oxide coatings on joint surfaces. The amount of iron in the latter form might decrease with depth. Statements on the ways the iron is present in the feldspar-rich rocks, and on their relative amounts are conflicting.

A drilling program confirmed the present of feldspar-rich rocks at depth. A decrease of the iron content with depth was visually observed in some holes.

Experiments established that the iron content can be lowered by leaching with dilute acid.

Estimates on amounts of good quality feldspar-rich rocks are in the order of 36 million tonnes. The amounts could be 'immense', if feldspar-rich rocks with higher initial iron contents are included, after successful iron extraction with acid leach.

A microscopic-petrographic study of feldspar-rich rocks is concluded to be essential before any more work is done on iron extraction studies. Following this study the iron-extraction can be studied in detail.

Detailed mapping of the various types of feldspar-rich rocks (in relation to their iron-content) is recommended. A reverse circulation drilling program is recommended to block out ore reserves and grades. If desired, much of the mapping and drilling can be done in conjunction with mining once this has been started.

It is recommended that the possible presence of feldspar-rich rocks elsewhere on the property, and the possible continuation to the south to the EEL property is investigated. The claims of the EEL property, 1 km south of the Feldspar property, are also registered in Mr. Jack D. Lee's name. Study of the feldspar property and future evaluation should be done in conjunction with work on the EEL property.

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A. INTRODUCTION

A.1 Scope of Work

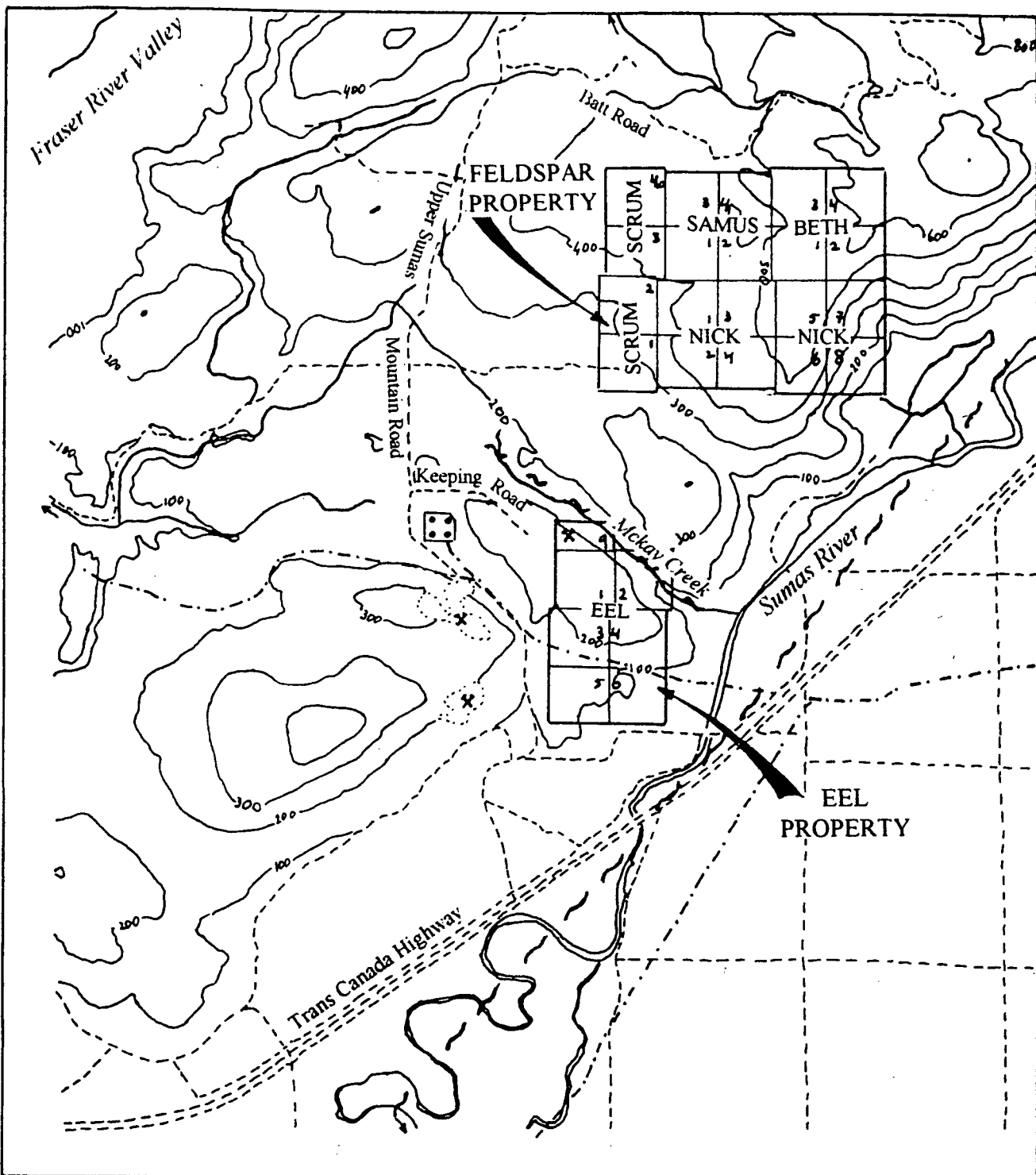
Bakker Geological Consulting ('BGC'), of Fairport, New York, United States, was requested by Pegasus Earth Sensing Corp. of North Vancouver, B.C., to evaluate a Feldspar property on Sumas Mountain in British Columbia for Quality Industrial Minerals & Supply Inc. of Abbotsford, B.C.. This report contains the evaluation of the property and recommendations for future work.







A.2 Legal Status

The Feldspar property consists of twenty mineral claims, all of which are in good standing (Figure 1):

| claim | number | size | expiry date |
|---------|--------|-------|-----------------|
| SAMUS 1 | 235617 | 25 ha | August 14, 1994 |
| SAMUS 2 | 235618 | 25 ha | August 14, 1994 |
| SAMUS 3 | 235619 | 25 ha | August 14, 1994 |
| SAMUS 4 | 235620 | 25 ha | August 14, 1994 |
| NICK 1 | 236295 | 25 ha | August 20, 1994 |
| NICK 2 | 236296 | 25 ha | August 20, 1994 |
| NICK 3 | 236297 | 25 ha | August 20, 1994 |
| NICK 4 | 236298 | 25 ha | August 20, 1994 |
| NICK 5 | 236299 | 25 ha | August 20, 1994 |
| NICK 6 | 236300 | 25 ha | August 20, 1994 |
| NICK 7 | 236301 | 25 ha | August 20, 1994 |
| NICK 8 | 236302 | 25 ha | August 20, 1994 |
| BETH 1 | 320221 | 25 ha | August 14, 1994 |
| BETH 2 | 320222 | 25 ha | August 14, 1994 |
| BETH 3 | 320223 | 25 ha | August 14, 1994 |
| BETH 4 | 320224 | 25 ha | August 14, 1994 |
| SCRUM 1 | 320225 | 25 ha | August 20, 1994 |
| SCRUM 2 | 320226 | 25 ha | August 20, 1994 |
| SCRUM 3 | 320510 | 25 ha | August 25, 1994 |
| SCRUM 4 | 320511 | 25 ha | August 25, 1994 |

The property measures about 2 by 2½ km and totals about 500 ha. The claims are registered in the name of Mr. Jack D. Lee of Abbotsford, B.C., the president of Quality Industrial Minerals Ltd., (QUIMS).



-  Creek/River
-  Road
-  Contours (interval 100 m)
-  Oil pipeline
-  Fault
-  Quarry

QUALITY INDUSTRIAL MINERAL & SUPPLY INC.

**FELDSPAR PROPERTY
SUMAS MOUNTAIN
NTS 92G/1E**

TO ACCOMPANY REPORT BY E. Bakker

**BAKKER
GEOLOGICAL
CONSULTING**

SCALE 1:50,000

DATE July 1994

FILE 202-

FIGURE 1

DRAWN EB

CHKD

A.3 Location and Access

The Feldspar property is situated on the south-west side of Sumas Mountain, just north-west of the Sumas River valley. The property is reached from the Trans Canada Highway by the Upper Sumas Mountain Road and the Batt Road. The Feldspar property is about one kilometer north of the EEL property, of which the claims are also registered in the name of Mr. Jack D. Lee.

A.4 Physiography

The Feldspar property has an undulating landscape that drains to the north-west and south-west. The elevation of the property ranges from about 350 m in the south-west to about 550 m in the north-east.

A.5 1993/4 Exploration

During the period September 12-15, 1993, April 14-16 and June 9-11, 1994 exploration activity on the Feldspar property consisted of geological mapping and blasting and bulk sampling for beneficiation studies. Geological mapping and analysis, subject of this report was undertaken by two Professional Geologists who spent 8 man days mapping 500 ha. and 3 days supervision for extraction of a 30 tonne bulk sample from two locations. Airphotos, orthophotos and Thommen 2000 altimeters were used for control. The beneficiation studies have not been completed.

B. PROPERTY HISTORY

Aside from some minor quarrying to provide aggregate for logging road construction, no work was done on the property prior to 1986.

John G. Payne mapped the property in 1986 for Wescan Energy Limited, (Payne 1986), and continued exploration in 1989 for Mr. Lee, (Payne, 1989). T.H.F. Reimchen executed an exploration program in 1989 and 1990, (Reimchen, 1990 and 1991a), and a drilling program in 1991, (Reimchen, 1991b). The Reimchen 1991b report includes a geological and geochemical summary. Reimchen, in a subsequent report, described in detail the mining of feldspar and its environmental implications, (Reimchen, 1992). E. Bakker, the author of this report executed an exploration program in 1990, (Bakker, 1990).

C. GEOLOGY

C.1 Regional Geology

Most of the region surrounding the Feldspar property is underlain by Mesozoic biotite and/or hornblende bearing intrusive rocks with compositions ranging from granites to diorites. Paleozoic to Recent sedimentary and volcanic deposits are present locally in subordinate amounts. Glacial drift is occasionally present in significant amounts, (see Roddick and Armstrong, 1956, and Roddick, 1956).

The major structural trend in the region is NE-SE parallel to the overall pattern of the Coast Mountains. SW-NW trends occur locally. The older Upper Paleozoic to Lower Mesozoic rocks are generally more severely deformed, and are generally higher metamorphosed than the younger rocks. In the younger rocks generally only low-temperature alteration products, such as chlorite, epidote and sericite are present.

Roddick and Armstrong (1956) describe three types of mineralization in the region:

1. The most common mineralization is a pyrite filling in narrow veins, or replacing large areas of fine-grained, dark hornblende granulites. Chalcopyrite and less commonly, other copper sulphides, sphalerite and galena are concentrated at scattered localities in the pyritized areas. These deposits are small, erratically distributed and discontinuous. Commonly the principal metal of value is copper, with minor amounts of gold and silver.
2. White quartz veins (most in non-granitic rock) containing minor amounts of pyrite and other sulphides. Gold is the only metal of value in these veins, but is rarely present in encouraging amounts.
3. Small, rust-colored pods of molybdenite and pyrite in fine-grained hornblende diorite, or hornblende-rich quartz diorite.

C.2 Property Geology and Geochemistry

C.2.a Geology

The property is situated just north-west of a significant SW-NE trending fault along the north-westerly edge of the Sumas River valley

Roddick mapped the Feldspar property as underlain by the Middle Jurassic Chehalis Volcanics, (Roddick and Armstrong, 1956), and described these volcanics as massive andesite and dacite porphyries characterized by phenocrysts of plagioclase and commonly quartz. Roddick, in a later mapping program mapped the property as underlain by rocks of the Cretaceous Coast Range batholith, (Roddick, 1965). The feldspar-rich rocks were not recognized at that time.

Payne (1986) mapped the property as being underlain by Cretaceous hornblende granodiorite and a complex feldspar-rich dike, probably also of Cretaceous age. Payne recognized five units on the basis of field mapping and laboratory analyses:

Feldspar-rich dacite/latite dike(s):

- 5 leucocratic cream to white
- 4 porphyritic medium green
 - 4i with mafic inclusions

Coast Range batholith:

- 3 hornblende quartz diorite/granodiorite
 - 3a altered, sheared

Jurassic (?) rocks:

- 2 andesite (metamorphosed)
 - 2a flow, flow breccia
 - 2b tuffaceous sediments
- 1 cherty argillite
 - 1a light grey, siliceous
 - 1b dark grey, black, dark green

The dike extends in a north-south direction for a few km, the width ranges from 200 m in the south to 70 m in the north. Payne, (quoted from Reimchen, 1991b), stated that:

The dike contains at least two major phases, whose relative ages are uncertain.

Much of the dike is a porphyritic dacite (Unit 4), with phenocrysts of plagioclase and quartz in an aphanitic, pale to medium green groundmass. The phenocrysts of plagioclase and to a lesser extent of quartz make up 10 to 25 % of the rock. In places, this unit contains minor to moderately abundant inclusions averaging several centimeters

across of an aphanitic, medium to dark green andesite (Unit 4i), probably equivalent to the andesite of Unit 2.

A second variety is a very fine- to fine-grained, leucocratic dacite (Unit 5) with fine-grained phenocrysts of plagioclase and quartz in a groundmass of feldspar (including K-feldspar) and quartz. This rock commonly is cream to white in color. Both the above units contain a few percent of hornblende and/or chlorite, with lesser Ti-oxide and locally with pyrite.

A variety of this unit is a white to grey flow-banded latite. It occurs along borders of some dikes and occupies the entire width of other narrow ones.

To the west, the dike grades sharply in composition to andesite. This rock varies in texture, with some outcrops being of massive, aphanitic, dark green andesite, others being slightly coarser grained but without phenocrysts, and others being porphyritic, with plagioclase phenocrysts in a medium to dark green, aphanitic groundmass.

The dikes have potential for production for a low-iron industrial material for use in the fiberglass and glass industries, and possible in the ceramic industry. The feldspar-rich rock may have other uses because of its moderately high alumina content..... Of the rock types in the dikes, Unit 5 (leucocratic banded latite and leucocratic dacite) has the best potential for use as a low-iron industrial material.

The feldspar dike is generally well-jointed. Limonite and to a lesser extent hematite are common on joint fracture surfaces in the leucocratic varieties. Because the feldspar dikes are highly jointed and fractured and break readily into angular fragments suitable for road construction, minor quarrying has been done in the north-east claim to provide aggregate sub-base for nearby subdivisions.

The author in his previous report (Bakker, 1990) described that Unit 5 rocks are easily recognized when leucocratic, but the greenish and grey fine-grained rocks, by Payne also mapped as Unit 5, are difficult to separate from Unit 4 rocks. The contact between the two rock types is suggested to be gradual. Small scale fractures are particularly common in Unit 5 rocks. They contain usually iron hydroxides (limonite-goethite, but no magnetite). On a larger scale, cliffs and deep incisions indicate the probable presence of larger joints

and faults. A common orientation is NW-SE, also N-S and E-W are present. Faulting is expected to considerably influence the distribution of the feldspar rich rocks.

C.2.b Geochemistry

Payne, (1986 and 1989), Reimchen (1990, 1991a, 1991b, and 1993) and Bakker (1990) describe several aspects of the geochemistry of the feldspar-rich rocks. Some aspects are here summarized.

A critical factor in the evaluation of the economic significance of the feldspar-rich rock is the iron content and the way the iron is present in the rocks. Maximum allowable iron contents are, (Payne, 1986 and Reimchen 1991b):

| | | |
|----------------------------------|--------------|--|
| fiberglass | ≤0.25-0.35 % | (≤0.36-0.50 % Fe ₂ O ₃) |
| low quality glass | ≤0.30 % | (≤0.43 % Fe ₂ O ₃) |
| bathroom plumbing fixtures | 0.17 % | (0.24 % Fe ₂ O ₃) |
| high quality glass and porcelain | ≤0.05 % | (≤0.07 % Fe ₂ O ₃) |

The iron content of different rock types as reported by Payne (1989) and analyzed by Bakker (1990) ranges as follows:

| | | % Fe ₂ O ₃ | | | | |
|------|---------|----------------------------------|------|---------|---------|-------------------|
| Unit | Samples | Low | High | Average | St.dev. | |
| 5 | 27 | 0.19 | 2.33 | 0.99 | 0.54 | } equi- valent |
| 4b | 14 | 0.37 | 2.15 | 0.98 | 0.48 | |
| 4 | 42 | 0.47 | 2.84 | 1.61 | 0.53 | |
| 4i | 8 | 0.92 | 4.80 | 2.80 | 1.60 | } equi- valent |
| 3 | 9 | 0.81 | 5.44 | 2.70 | 1.46 | |

Payne (1989) performed a petrographical analyses which made him to conclude that much of the iron in the rocks was contained in iron-bearing minerals such as chlorite and actinolite, and to a lesser extent in hematite and pyrite. He stated that the minerals generally were intimately intergrown with feldspar and therefore would be difficult to separate. After examining crushed and probably ground rock he came to the conclusion that a moderate amount of iron was present as magnetite, most of which could be separated with a magnet.

Reimchen (1991b) reports on the drilling program. Ten vertical holes were completed to depths of up to 14.6 m (48 feet) in Unit 4 (# 1, 2, 3, 3a, and 9) and in Unit 5 (# 4, 5, and 6) rocks. The total depth was 96 m. The drilling confirmed the presence of porphyritic greenish dacite (Unit 4) and leucocratic dacite (Unit 5) at depth, however, insufficient laboratory testing was done to see if the iron content decreases with depth. Visual observations confirmed by laboratory analysis showed iron content to be less at depth of four to six meters in four bore holes.

The late Dr. Stan Hoffman of Prime Geochemical Methods Ltd. of Vancouver (1991) reported on iron extractability experiments. Experiments were done using diluted sulphuric acid, and cold and hot hydrochloric acid. Hoffman concludes that 'Regardless of the mineralogy, the experiments indicate that dilute acid will extract enough Fe in enough samples to produce an acceptable product. Although some samples contain more Fe than is satisfactory, dilution accompanying the blending of material from different parts of the deposit (for example, the average Fe content of the 8 samples leached by cold hydrochloric acid in 10 hours is 0.3%) and minor adjustment in reagent or experimental conditions could probably lead to production of a suitable product.'

C.3 Mining

Reimchen (1991b) made estimates of amounts of feldspar-rich rocks that are potentially suitable for mining. In the calculations, a depth of 50 meters is assumed, although the actual thickness of the dikes is considered to be a few hundred meters. Amounts of 36 million tonnes are estimated by Reimchen in areas where the rocks contain the lowest amounts of iron. This are areas around and near bore holes 4, 5 and 6, which are underlain by rocks of Unit 5. Reimchen states that 'These materials will need little beneficiation to meet the standards and specifications of the end users.', and 'In addition if one were to treat some of Unit 4 with a dilute acid wash the tonnage of feldspar-rich dacite would be immense....'.

The mine development and the environmental implications are excellently described in detail by Reimchen (1992).

D. CONCLUSIONS AND RECOMMENDATIONS

D.1 Conclusions

1. The Feldspar property on the south-west side of Sumas Mountain just north-west of the Sumas River valley is registered in the name of Jack D. Lee, the president of Quality Industrial Mineral & Supply Ltd. The property consists of twenty contiguous claims, totaling about 500 ha. The claims expire in the period August 14 to 25, 1994.
2. Exploration work, including mapping, drilling and geochemistry, has been carried out from 1986 to 1991.
3. The Feldspar property is underlain by Jurassic (?) sedimentary and volcanic rocks, and by Cretaceous hornblende quartz diorite/granodiorite of the Coast Range batholith. The batholith includes a feldspar-rich dacite/latite dike.
4. The dike has a significant amount of feldspar-rich rocks with Fe_2O_3 contents ranging from 0.19 to 2.33 %, (average 1.0 % Fe_2O_3).
5. Iron contents of feldspar-rich rocks can be lowered by leaching with diluted acid. Low-iron feldspar-rich rocks are used in the glass and porcelain/ceramic industry.
6. The iron in the feldspar-rich rocks is expected to be present in iron-bearing silicate minerals (intergrown with other minerals) and as iron (hydr)oxide coatings on joint surfaces. Amount of iron in the latter form might decrease with depth. Statements on the ways the iron is present in the feldspar-rich rocks, and on their relative amounts are conflicting.
7. Estimated amounts of low-iron rocks of 36 million tonnes are mentioned. The amounts are called 'immense' if feldspar-rich rocks with higher initial iron contents are included, after iron extraction with acid leach.
8. Access to the feldspar-rich deposits on the Feldspar property on Sumas Mountain is excellent, and the deposits are expected to be easily mined.
9. A microscopic-petrographic study of feldspar-rich rocks is essential before

D.2 Recommendations

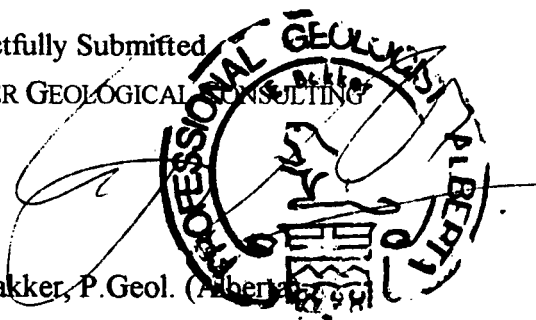
1. Execute a microscopic-petrographic study of feldspar-rich rocks, followed by a study of the iron extraction in detail.

2. Map the various feldspar-rich rock types in detail (in relation to their iron-content). Execute a reverse-circulation drilling program on the more promising locations to block out ore reserves and grades. Except the initial mapping and drilling, this can largely be done in conjunction with mining of the feldspar-rich rocks, if so desired.
3. Investigate the possible presence of feldspar-rich rocks elsewhere on the property and investigate the extension of feldspar-rich rocks to the south in the direction of the EEL property.
4. Study of the Feldspar property and future evaluation should be done in conjunction with work on the EEL property.

Respectfully Submitted

BAKKER GEOLOGICAL CONSULTING

Ebo Bakker, P. Geol. (Alberta)



E. REFERENCES

- Bakker, E. (1990) An update and review of the geology of the Sumas Mountain feldspar prospect, New Westminister Mining Division, NTS 92G/1E. Report by Bakker Geological Consulting for Pegasus Earth Sensing Corporation/Quality Minerals Ltd.
- Hoffman, Dr. Stan (1991) Sumas feldspar extraction experiments. Memorandum by Prime Geochemical Methods Ltd of Vancouver.
- Ministry of Energy, Mines and Petroleum Resources (1994) Mineral Titles Reference Map O92GO1E, updated April 25, 1994.
- Payne, John G. (1986) SAMUS Claim Group, New Westminister Mining Division, NTS 92G/1E - a feldspar prospect. Report for Wescan Energy Limited.
- Payne, John G. (1989) Sumas Soda Feldspar Property, Sumas Mountain, New Westminister Mining Division, NTS 92G/1E. Report for Jack D. Lee.
- Reimchen, T.H.F. (1990) A progress report on the geology of the Sumas Mountain feldspar prospect, New Westminister Mining Division, NTS 92G/1E. Report by Pegasus Earth Sensing Corporation, North Vancouver, for Quality Minerals Ltd.
- Reimchen, T.H.F. (1991a) An update of the geology of the Sumas Mountain feldspar prospect, New Westminister Mining Division, NTS 92G/1E. March 1991 report by Pegasus Earth Sensing Corporation, North Vancouver, for Quality Minerals Ltd.
- Reimchen, T.H.F. (1991b) Sumas Soda Feldspar Property, Sumas Mountain, NTS 92G/1E, New Westminister Mining Division - a feldspar project. September 1991 report by Pegasus Earth Sensing Corporation, North Vancouver, for Quality Minerals Ltd.
- Reimchen, T.H.F. (1992) Prospectus - Development of a feldspar prospect on Sumas Mountain, New Westminister Mining Division. Report by Pegasus Earth Sensing Corporation for Quality Industrial Mineral & Supply Inc. to be submitted to the British Columbia Mine Development Assessment Branch.
- Roddick, J.A. and Armstrong, J.E. (1956) Pitt Lake (Vancouver, East Half), 1:253,440. Geological Survey of Canada Map 8-1956.

APPENDIX 1

**LIST OF CLAIMS
COST STATEMENT
STATEMENT OF QUALIFICATIONS**

LIST OF CLAIMS

| <u>CLAIM</u> | <u>RECORD#</u> | <u>SIZE</u> | <u>EXPIRY DATE</u> |
|--------------|----------------|-------------|--------------------|
| SAMUS 1 | 235617 | 25 ha | August 14, 1994 |
| SAMUS 2 | 235618 | 25 ha | August 14, 1994 |
| SAMUS 3 | 235619 | 25 ha | August 14, 1994 |
| SAMUS 4 | 235620 | 25 ha | August 14, 1994 |
| NICK 1 | 236295 | 25 ha | August 20, 1994 |
| NICK 2 | 236296 | 25 ha | August 20, 1994 |
| NICK 3 | 236297 | 25 ha | August 20, 1994 |
| NICK 4 | 236298 | 25 ha | August 20, 1994 |
| NICK 5 | 236299 | 25 ha | August 20, 1994 |
| NICK 6 | 236300 | 25 ha | August 20, 1994 |
| NICK 7 | 236301 | 25 ha | August 20, 1994 |
| NICK 8 | 236302 | 25 ha | August 20, 1994 |
| BETH 1 | 320221 | 25 ha | August 14, 1994 |
| BETH 2 | 320222 | 25 ha | August 14, 1994 |
| BETH 3 | 320223 | 25 ha | August 14, 1994 |
| BETH 4 | 320224 | 25 ha | August 14, 1994 |
| SCRUM 1 | 320225 | 25 ha | August 20, 1994 |
| SCRUM 2 | 320226 | 25 ha | August 20, 1994 |
| SCRUM 3 | 320510 | 25 ha | August 25, 1994 |
| SCRUM 4 | 320511 | 25 ha. | August 25, 1994 |

COST STATEMENT 1994

Geological Mapping/bulk sampling

| | |
|---|-----------|
| Senior Geologist--4 days x \$500/day | \$2000.00 |
| Intermediate Geologist--5days x \$400/day | \$2000.00 |

Logistics

| | |
|--|-----------|
| Transportation-truck rental 11 days x \$100. | \$1100.00 |
|--|-----------|

Equipment Rental for bulk sampling

| | |
|--|-----------|
| Drilling and blasting for 15 tonnes | \$ 600.00 |
| Cat 988A loader @ \$120/hr. | \$ 960.00 |
| Lowbed for Mob and demob 3 hrs.@ \$65/hr | \$ 195.00 |
| Trucking of sample 2 hrs. @ \$55/hr | \$ 110.00 |
| Labour \$150@day | \$450.00 |

Reporting

| | |
|------------------------------------|-----------|
| Senior Geologist--2days x \$500.00 | \$1000.00 |
| Technician 10 hours x \$25/hr. | \$ 250.00 |
| Secretary -1 day x \$200.day | \$ 200.00 |

| | |
|---------------------------|-------------------------|
| <u>GRAND TOTAL</u> | <u>\$8865.00</u> |
|---------------------------|-------------------------|

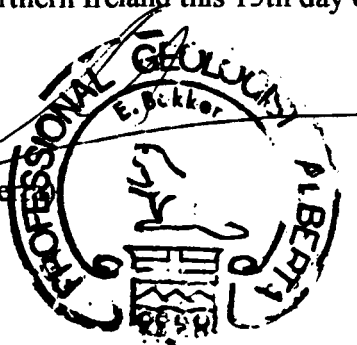
STATEMENT OF QUALIFICATIONS

I, Ebo Bakker, of 4 Whitebrook Rise, Fairport, in the state of New York, United States of America, do hereby certify that:

1. I am registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, since 1985.
2. I am a Fellow of the Geological Association of Canada since 1981 and a Member of the Irish Association of Economic Geology since 1992.
3. I am a graduate of the University of Leiden in the Netherlands where I obtained a B.Sc. Degree in Geology with Mathematics, Physics and Chemistry in 1973, and an M.Sc. Degree in Geology in 1979.
4. I have practiced my profession as a geologist since 1973 in Sweden, Canada, U.S.A., Mexico, Turkey, Costa Rica and Brazil.
5. I am the author of this report on the Sumas Mountain Feldspar property in British Columbia, Canada. The report is based on a visit by myself in June 1994 and on a review of existing material.
6. I am an independent consulting geologist and have no direct or indirect interests in the Feldspar property, nor in Pegasus Earth Sensing Corporation, nor in Quality Industrial Mineral & Supply Inc., nor do I expect to receive any.

DATED at Rostrevor, Northern Ireland this 15th day of July 1994.

Ebo Bakker, P.Geol. (Alberta)





PEGASUS

earth sensing
corporation

4761 COVE CLIFF ROAD
NORTH VANCOUVER, BRITISH COLUMBIA
CANADA, V7G 1H8
TELEPHONE: (604) 929-0244
FAX: (604) 929-7231

October 27, 1994

T.E. Kalnins, P. Eng.

Ministry of Energy Mines and Petroleum Resources

Geological Survey Branch

15th Floor, 1810 Blanshard Street

Victoria, B.C.

V8V 1X4

Dear Sir:

I have been out of Canada during the preparation of this assessment Report. I was personally involved in taking the 2-15 tonne bulk samples which are mandatory in developing an industrial mineral. Prior to taking these samples the area was remapped looking for new outcrops and structure as well as confirming existing boundaries. Units 4 and 5 were found to be gradational and could not be readily defined on the basis of color as originally suggested by Payne. Based on similar chemistry using previous ICP and whole rock analysis it was decided to bulk sample both Unit 4 and 5.

The samples were taken along former logging access roads in Nick 3 and Samus 1. Sample (Nick 1) was gathered from Map Unit 4, a medium green to grey porphyritic dacite with numerous phenocrysts of plagioclase and quartz in a groundmass of feldspars?. Nick 1 was taken from the northeast boundary of Nick 1 & 3 on the west side of a rock knob. Sample (Samus 1) was taken from Map unit 5, on the south side along a bend in the access road. It is a grey to white fine-grained leucocratic dacite with fine grained phenocrysts of plagioclase and quartz in a groundmass of K-feldspars.

For each sample 6-8 vertical and inclined shot holes averaging 6 m deep, were drilled into the side of exposed rock outcrops. A Tamrock-Dp 438 self propelled Rotary Hammer rig was transported to the site by truck. The holes were loaded with ammonium nitrate and blasted. Sufficient rock was obtained using one blast from each site. Rock was removed by a Cat 988A loader and transported to the main forestry

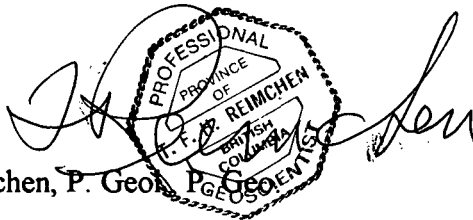
trunk access termed Batt Road. The rock was then transported to the acreage of Jack Lee located south of the Tank Farm of Trans Mountain. for storage prior to crushing and grinding for later beneficiation studies.

In order to produce a saleable product potential customers must have between 500kg and 1000kg. of sample ground to a variety of size factions. The different end uses, from glass to fibreglass to porcelain to boron absorbtive glass for the Handford Project need a blended product of various sizes and standard chemical composition to see if the Sumas feldspar is suitable for use. Several requests for various sizes from the following companies must be prepared: Consumers Glass--40 mesh,-Lavington, B.C., Fibreglass Canada-Edmonton for -80 mesh, Mannisville-Innisfail, Alberta, Canadian Potteries -Burnaby for the -200 mesh, and United Liberty Resources Ltd-Ellensburg, Washington Backup data can be provided upon request. The samples have been crushed and are awaiting grinding .

I have taken Ebo Bakkers field notes and have drawn the revised geology map. It also includes new data that we have since gathered. Developing an industrial mineral Property is really very different that that of a precious metal. Work seems to go in fits and starts. All of the samples have since been crushed to -3/4 " // 19 mm size prior to grinding to specific end user request.

Sincerely,

T.H.F. Reimchen, P. Geol.

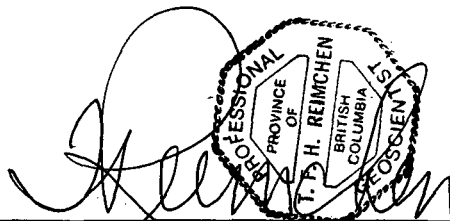


CERTIFICATE

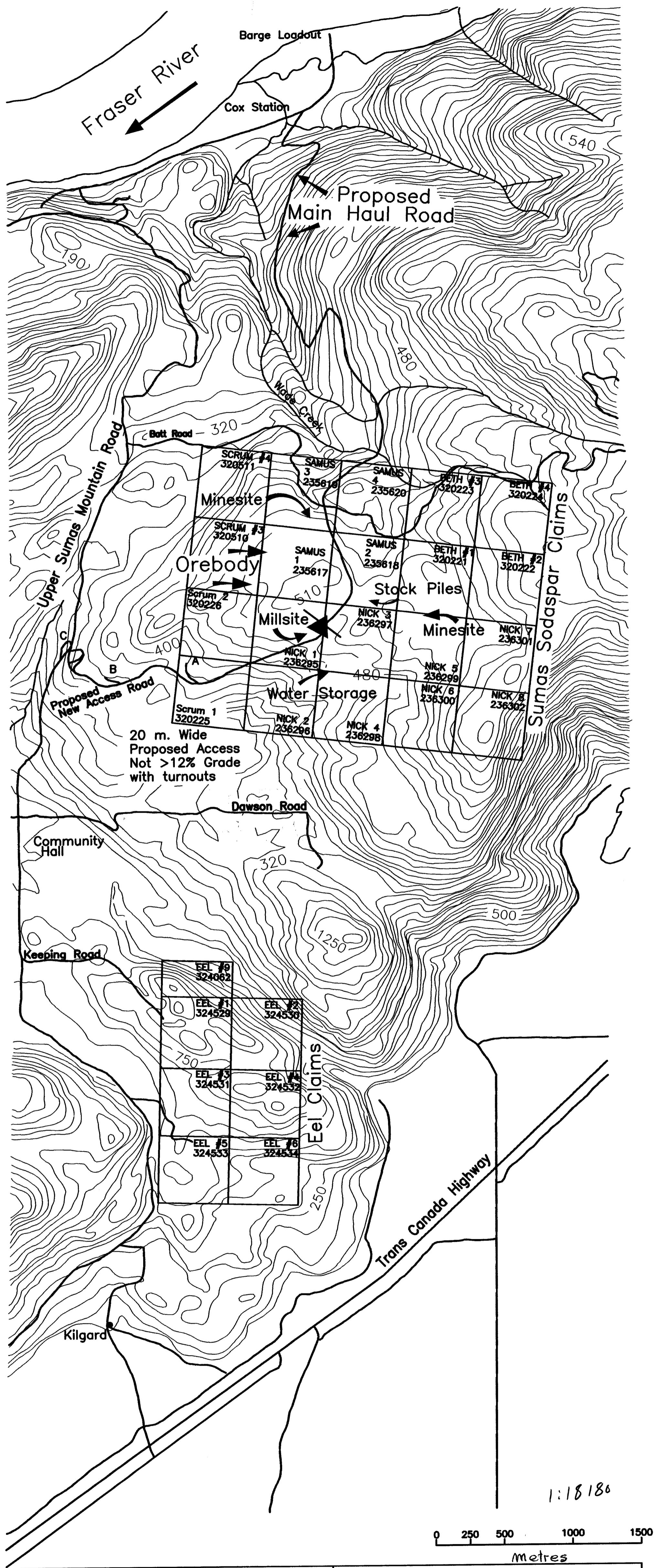
I, TED. H.F. REIMCHEN OF 4761 COVE CLIFF ROAD, North Vancouver, in the Province of British Columbia, Canada, DO HERBY CERTIFY:

1. THAT I am a Professional Geoscientist(1991-B.C.) and Professional Geologist(1972-Alta) with an office at the above address.
2. THAT I am a graduate of the University of Alberta located at Edmonton, Alberta where I obtained a BSc. and MSc. Degree in Geology in 1966 and 1968 respectively.
3. THAT I have been practicing my profession as a Professional Consulting Geologist in the Province of British Columbia, since 1972.
4. THAT I am a registered **Professional Geoscientist in the Association of Professional Engineers and Geoscientists of British Columbia (1991)** and a **Professional Geologist in the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1972.**
5. THAT I have personally prepared a portion of this report, taken the bulk samples, and remapped outcrops of Sumas Mountain.
6. THAT I have a 25% non registered interest in the Silica Property.

Dated this 28 day of October, 1994 at the City of North Vancouver in the Province of British Columbia.



T.H.F.REIMCHEN, P. Geol. (1972, Alta.), P. Geo. (1991 B.C.)



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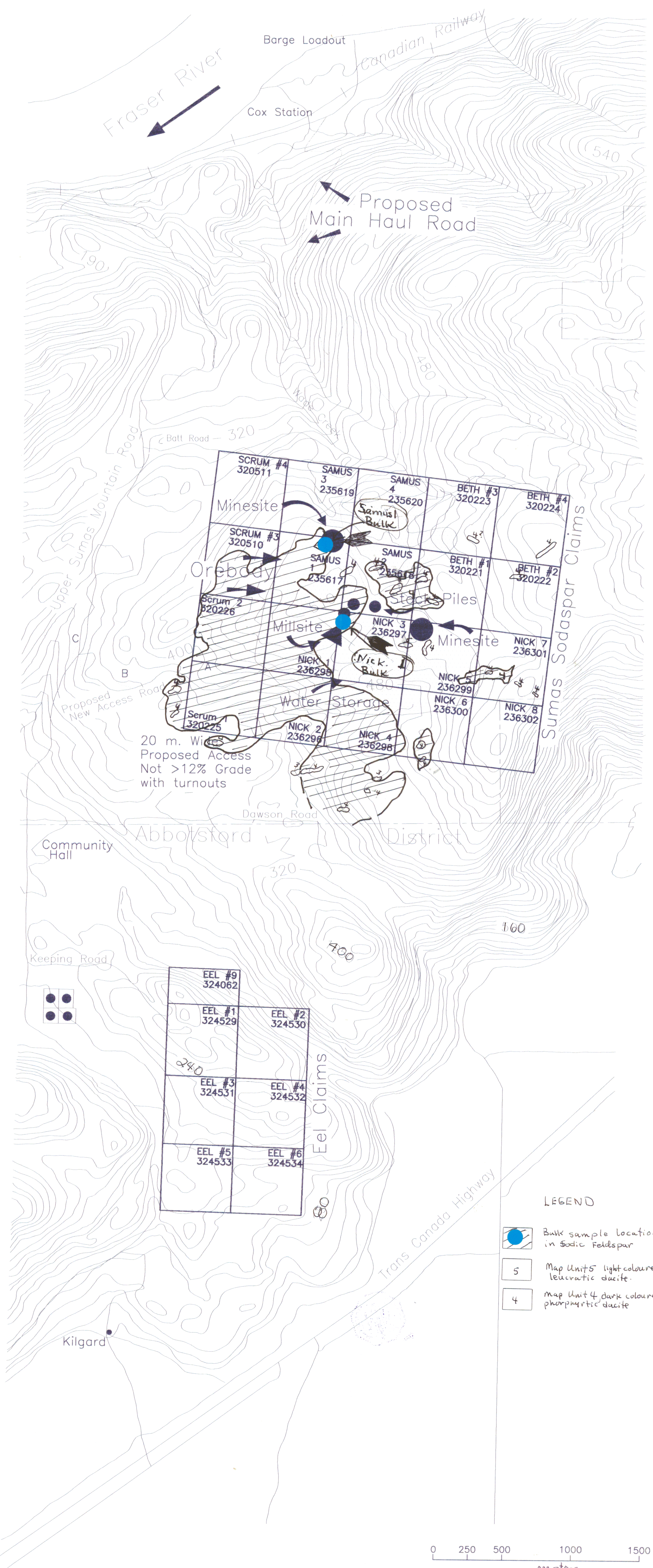
Quality Industrial Minerals and Supply

CAD/CAM by:
Jeff Raimchen
Date:
August, 1994

LOCATION

Figure:
1.

Map #
820E



AR 23450

Quality Industrial Minerals and Supply

CAD/CAM by:
Jeff Reimchen
Date:
October 27, 1994

GEOLOGY



Pegasus Earth Sensing Corp.

Figure:
1.