

PROSPECTUS

92L 34

MONTEITH BAY GEYSERITE PROJECT

Kyuquot Sound Area, Vancouver Island N.T.S. 92L/3W Lat. 50°08' Long. 120°18'

Submitted by

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Submitted to

Mine Development Steering Committee B.C. MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES Victoria, B.C.

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1.0 FACT SHEET

TABLE 1

CORPORATE DATA						
PROJECT NAME:	Monteith Bay Quarry					
COMPANY NAME AND ADDRESS:	New Global Resources Ltd. 548 Beatty Street Vancouver, B.C. V6B 2L3 Telephone (604) 681-4902 FAX (604) 684-3854					
CONTACT/TITLE:	J.T. (Joe) Shearer, M.Sc., P.Geo., President M. McClaren, B.Sc., Secretary					
I	PROJECT DETAILS					
PROJECT LOCATION:	Monteith Bay, west side of Kashutl Inlet, Kyuquot Sound, NTS 92L/3W 50°08', 127°18'					
ESTIMATED CAPITAL COST:	\$1.0 million					
EXPLORATION COST TO DATE:	\$400,000					
MINERALS:	Geyserite					
MINE SYSTEM:	Quarry (negligible overburden or waste)					
ESTIMATED PRODUCTION:	70,000 tonnes per year					
PROCESS:	Jaw and cone crushers/stockpile					
PROPOSED MINE LIFE:	20 years plus					

MINERAL RESOURCES						
GEOLOGICAL RESERVES:	2.0 million tonnes plus (Geological Reserve)					
AVERAGE GRADE OF MATERIAL:	96% geyserite (used in the cement industry) (Geyserite is rock deposit from a fossilized hotspring)					
CUT-OFF GRADE:	N/A					
POTENTIAL FOR ADDITIONAL GEOLOGICAL RESERVES:	Large					
LOGISTICS						
ROAD:	Road at Fair Harbour connects to highway (77 km)					
ACCESS TO SITE:	Boat or seaplane					
SHIPPING:	Via barge to Vancouver, B.C.					
POWER SUPPLY:	On-site generation					
WORK	FORCE INFORMATION					
OPERATIONAL WORKFORCE:	Quarrying, crushing and stockpiling: 4 to 5 people 2 months per year Shipping: 2 people 8 months per year					
CONSTRUCTION WORKFORCE:	10 people for 2 months					
HOUSING OPTIONS:	On-site or at local logging camps. At home for local workers (if any)					
INDIRECT EMPLOYMENT:	5 to 6 person years (Purchased Services)					
DEVELOPMENT SCHEDULE						

PROSPECTUS:	September 1, 1993
SITE CONSTRUCTION START-UP:	Early January 1994 (on completion of permitting, etc.)
PRODUCTION START-UP:	Early April 1994

2.0 INTRODUCTION

New Global Resources Ltd. is a registered British Columbia company, engaged in the supply of raw materials to the Portland cement manufacturing industry for sales and delivery in British Columbia. New Global Resources Ltd. is entirely owned by lifelong B.C. residents. Since 1986, the company has focused on the search for and development of base and precious metal and industrial mineral properties throughout British Columbia and Yukon. Geyserite product from the Monteith Bay Quarry is for the modern "dry" process cement business, of which the best example in the Pacific Northwest is the cement plant at Tilbury in Delta operated by CBR. This prospectus document describes the intent of New Global Resources Ltd. to develop the Monteith Bay Geyserite Project as a quarry and to supply crushed geyserite to the cement industry.

Extensive exploration on the geyserite deposits has resulted in the definition of a suitable silica source needed for the Tilbury plant requirements. This source is located on the Too Easy mineral claim at Monteith Bay, Kyuquot Sound. This prospectus is intended to initiate a dialogue with the regulatory agencies to establish the terms of reference for mine development approval and related permits.

Portland cement manufacturing is a process of bringing together raw materials rich in lime (Ca), silica (Si), alumina (Al), iron (Fe) and gypsum (CaSO₄), then grinding the limestone (lime), shale and sand (silica), shale (alumina) and iron ore or industry mill scale (iron) to extreme fineness for intimate mixing to meet precise chemistry. The powder produced by grinding is then heated or "burned" in a rotary kiln to a temperature of 3,000 degrees, liquifying part of the powder and binding it together in what is called "clinker". Clinker consists of new compounds called hydraulic compounds. Hydraulic compounds enter into solution when water is added, forming a gel that binds to other minerals when set. The burned material clinker and added gypsum is then ground to extreme fineness. The resulting Portland cement becomes the "glue" to bond sand and aggregates together to form concrete.

Silica, one of the minor constituents of Portland cement manufactured by the Tilbury plant is to be supplied from the Monteith Bay geyserite property. This property covers

approximately 20 hectares and is owned 100% by New Global Resources Ltd. The company is committed to develop the deposit in a manner that does not cause significant environmental impact during operation or after mine closure.



3.0 PROJECT SETTING AND MINERAL TITLE

The Monteith Bay geyserite property is located on Vancouver Island, a large island off the southwest coast of British Columbia, having a length of 480 km and width of 140 km. The Kyuquot Sound area is approximately 150 km northwest of Campbell River and 380 km northwest of the cement plant in Delta. Monteith Bay is a small sheltered bay located about halfway up the west side of Kashutl Inlet, which is the northernmost inlet of Kuyquot Sound.

The main nearby centre is the village of Kyuquot located about 16 km south of Monteith Bay. Kyuquot is a mainly Native people's community with an area population of about 240 persons, with nearby non-Native residents totalling about 60. Fishing and smallscale logging are the main work activities.

Topography of the area varies from a flat coastal plain along Rugged Point and Brooks Peninsula to high peaks immediately east of Kyuquot. Monteith Bay is one of the small bays resulting from erosion controlled by major geological structures of the area.

New Global owns 100% of the Too Easy mineral claim as shown in Table I, Alberni Mining Division, N.T.S. 92L/3W. A foreshore lease application to cover the barge-loading facility area has been filed.

TABLE 2CLAIM STATUS

Claim Name	Tenure Number	Number of Units	Owner	Location Date	Current Expiry Date
Too Easy	1154 (200115)	1	New Global Resources	Aug. 23/80	Sep. 4/2003



The project will extend from a barge dock at tide water on the east side of Monteith Bay along a 50-meter conveyor-crushing system to geyserite stockpiles and small quarry, a total distance of about 300 meters.

The immediate Monteith Bay area has no previous residential developments nor are any planned. There are no surface facilities on the site at present. The general area is a very sparsely settled fjordland-mountainous region. Much of the area has been clear-cut logged in the recent past. Minor amounts of coastal 'A' frame logging was done in the late 1940s. The Monteith Bay area was logged from the shoreline between 1945 and 1948. The northwestern part of Monteith Bay was logged by a local hand logger about eight years ago.

Access to the property is by boat, barge and float-equipped aircraft. The nearest road head is at Fair Harbour or the mouth of the Artlish River. Fair Harbour is 32 km by road from Zeballos and a further 45 km to the Island Highway. A large self-propelled ferry is available at Fair Harbour under contract with Intercan Resources Ltd. Major logging camps are located in nearby Chamiss Bay and Ououkinsh Inlet.



4.0 HISTORY

The claims covering the geyserite were staked in 1908. Nearby pyrophyllite deposits provided material for fire clay, pipe and other industrial uses for the B.C. Pottery Company and the San Juan Mining and Manufacturing Company from 1910 onward. The pilings of the pyrophyllite dock can still be seen on the south shore of Monteith Bay.

Comprehensive mapping of the deposits was completed in 1913 by C.H. Clapp of the Geological Survey of Canada, who suggested that the alunite and pyrophyllite may have been formed by hydrothermal replacement of volcanic rocks by ascending sulphuric solutions.

In 1952, the Crown-granted claims were purchased by St. Eugene Mining Corporation, who subsequently optioned the property to Westport Chemical Inc. during 1959-60. Drill testing was completed on the alunite-pyrophyllite zone, but these results are presently not available.

Two packsack holes were drilled to a depth of 25 feet in the alunite area by Falconbridge Nickel Mines, who acquired the property from St. Eugene in 1962. No sample data are available, but drill logs note the presence of quartz, which was colloform-banded and crustified, containing disseminated pyrite in altered volcanics.

The Kyuquot syndicate was formed in 1970 as a joint venture between Falconbridge and MacDonald Consultants Inc. to explore the area for porphyry copper deposits. Mapping and soil-sampling were completed near Easy Inlet.

Kennco Exploration staked claims over the Kayouk Peninsula-Jansen Lake area in 1972 and completed geological mapping and a rock geochemical survey. Analyses were completed for Mo, Cu, Zn, Pb, Ag, Au, Ni and Co with anomalous results being attributed to sulfides in quartz veins. C.S. Ney, in describing a siliceous bluff on the northwest side of Monteith Bay, suggested a similarity with 'geyserite' or siliceous sinter typical of hot springs activity.

PHOTOGRAPH OF MONTEITH BAY VIEWED FROM KASHUTL INLET LOOKING WEST



Barge in loading position. Screen of trees in front of bulk sample site. (Quarry will be hidden behind geyserite knoll immediately south of barge site.)

FIGURE 7

The B.C. Gold Syndicate, supervised by J.T. Shearer explored the Easy claims in 1980 by prospecting, soil-sampling and geological mapping to better evaluate the intense alteration zones as defined by the areas of pyrophyllization-alunite. No geochemically anomalous response was reported from the rock or soil-sampling. The Too Easy claim was located at this time.

Semco completed an examination of the Falconbridge property and Easy Inlet areas in 1980 as part of a program on three pyrophyllite occurrences in the area.

A preliminary report for Falconbridge Nickel Mines Ltd. was completed by Mr. G. Albino in June 1982 covering historical, exploratory and geological data from past examinations and including geological mapping and geochemical sampling as completed by Mr. Albino and Mr. C. Niles in June 1982.

In 1983, 1,066 meters of diamond drilling in seven holes was completed by Falconbridge, in joint venture with Cal Denver Resources Ltd., on the northern tip of the peninsula. Detailed mineralogical and petrographic studies on the drill core delineated two recognizable alteration zones: (1) a quartz, alunite, pyrophyllite, kaolinite zone to a depth of approximately 140 meters below sea level (low pH zone) and (2) a gypsum with lesser anhydride zone below. An airborne geophysical survey of 128 line kilometres (3-frequency electromagnetics, magnetometer and VLF-EM) was carried out by Aerodat Ltd. in May 1985. The general magnetic trend appears to be east-northeasterly with several north-south orientations suggesting later structural overprinting.

New Global Resources Ltd. initiated the purchase of the Too Easy claim in 1992 and completed detail geological mapping and sampling in November 1992 to January 1993. Accurate topographic surveying, hydrographic survey of Monteith Bay, biological study of the area and detail diamond-drilling were done between January and March 1993. A 9,000-tonne bulk sample and further diamond-drilling were done between March and July 1993. The cement plant processed the geyserite during August and September 1993. A large volume of information is now available on the characteristics of the geyserite with respect to an industrial size trial on grindability, power consumption of the roller mills,

abrasion, feed handling, burnability, consistent chemistry and ultimately the strength of cement and customer satisfaction.

5.0 GEOLOGY AND EXPLORATION

The geyserite deposit consists mainly of replacement silica in a concentration greater than ninety-six percent. It is a paleo-hotsprings deposit of massive thickness, originally of gently dipping bedding, now somewhat faulted, bent and dipping to the south about forty to fifty degrees. Surface samples were taken systematically over the area and cores were taken from drill holes to determine the extent of the deposit. The correlation and analysis was done by the Tilbury Cement laboratory and Chemex Labs Ltd.

Triassic to early Jurassic volcanic-sedimentary sequences underlie the northwest of Vancouver Island. The Triassic Karmutsen Formation consists of a very thick basaltic succession of pillow lavas and breccias, amygdaloidal and massive flows with infrequent interbedded tuffaceous sediments forming the lower part of the sequence.

Conformably overlying the Karmutsen formation are the Quatsino and Parson Bay formations which are mainly calcareous and shaly sedimentary sequences. These sediments are in turn overlain by the Bonanza group of early Jurassic age, consisting of flows and pyroclastics ranging in composition from rhyolite to basalt.

Muller et al (1974) have measured the stratigraphic sections of the Bonanza volcanics, indicating an average thickness of 2,500 m. Rhyodacite and siliceous units in the Kyuquot Sound area appear often as welded tuffs.

The Kashutl Inlet intrusive suite is one of a small linear set of plutons which have been emplaced near surface, within related volcanics and pyroclastics.

The volcanics in the Monteith Bay area consist of porphyritic andesite with hornblende and plagioclase phenocrysts in an often siliceous, aphanitic groundmass. Frequently amygdaloidal flows occur and flow breccias are observed commonly in more mafic units.

Felsic rocks located on the west shore of Kayouk Peninsula are generally limited in occurrence, appear to be banded, containing quartz phenocrysts and possibly fragments of pumice.

Late intrusive rocks occur as fine-grained porphyritic andesite to dykes and sills with a dark grey-green groundmass. These dikes are discordant to the bedding.

Alteration

Rocks in the general Easy Inlet area are altered to various degrees, with prophylitic, silicic and advanced argillic zones present. The lack of structural control, of associated large intrusions and overall distribution of the alteration assemblages suggest that the silicification took place contemporaneously with volcanism before significant structural dislocation. The sericite-rich alteration in Monteith Bay appears to correlate directly with the emplacement and shearing of the later andesite dykes. The presence of chalcedonic silica, alunite and pyrophyllite indicate a probable near surface origin for the main phase of alteration.

Diamond-drilling (refer to Figure 6 for hole locations) demonstrates the continuity and purity of the geyserite material. A typical geyserite analysis (by Chemex Labs) for major elements is as follows:

Al203	CaO	Cr203	Fe203	К20	MgO	MnO	Na20	P205	Si02	Ti02	Loss on	Total
%	%	%	%	%	%	%	%	%	%	%	Ignition	
1.02	0.13	< 0.01	0.34	0.26	0.04	<0.01	0.05	0.09	95.60	0.24	2.00	100.0

Volume calculations on cross-sections spaced 20 meters apart give a preliminary reserve of 2.0 million tons of pure geyserite.

6.0 **PROJECT DESCRIPTION**

The proposed project includes a quarry with a mobile crushing plant with a capacity of 200 tonnes per hour, a stockpile area for crushed material, a loading conveyor and a barge docking facility.

6.1 Quarry Development

The deposit, shaded on the development plan — Appendix 10.3, includes approximately the quarry area to be developed. Starting near the north boundary of the Too Easy claim, the quarry will be worked in a series of 11-meter-wide benches with backwalls of about 8 meters and will be developed as required to accommodate elevation increasing to about 40 meters to produce a total of about 2,000,000 tonnes at 70,000 to 100,000 tonnes per year. The initial quarry (Quarry A) containing about 1.3 million tons of geyserite will be mined to the +3 m elevation (just above highest high tide) for 15 years. An additional at least seven years of production will result from deepening the initial quarry to the -6 m elevation level, "Quarry B" (additional 500,000 tonnes).

If additional customers are found for the geyserite product, production could be up to 100,000 tons per year.

The removal of the minimal overburden, consisting of soil, sand, gravel and boulders, mainly in the southwest of the developing quarry, will be stored in a berm along the quarry edge. This may be utilized as filter beds for precipitation runoff and later in the reclamation of mined-out quarry areas and a portion will be mixed with sand and gravel for creation of the new saltmarsh area as described in Section 7.3.

6.2 Crushing Plant

The material will undergo primary crushing through a Hewitt-Robbins 24 X 36 jaw crusher being fed by a Cat 980C wheel loader. This will reduce the material to approximately 150 mm size. From the primary crusher the material is conveyed directly to a Nordberg 1352 Omnicone crusher for secondary crushing. The secondary crushing

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will reduce the material to 19 mm minus. From the secondary crusher the material is transported to the stockpile by a 30-meter radial stacking conveyor.

The crushing plant and surge pile will be located at the 3-meter level.

6.3 Conveyor System

The loading of the 19-mm material will be accomplished by feeding through a 12-cubicmeter surge bin, then onto a 15 meter conveyor which feeds the 30 meter stacker which deposits the material onto the barge.

6.4 Stockpile

A stockpile capable of holding up to 70,000 tonnes of crushed material ready for shipping will be required. The pile will cover approximately 4,000 to 6,000 square meters and reach a height of 8 to 10 meters. The stockpile will be located adjacent to the dock facility. Because of the proximity of the quarry to the foreshore, it will be necessary to fill between 500 and 1,500 square meters of high intertidal saltmarsh to accommodate the conveyor and possibly a portion of the stockpile. Section 7.3 outlines a plan to replace this lost habitat.

6.5 Barge Facilities

An examination of soundings taken at Monteith Bay by Alpha Hydrographic Surveys Ltd. and an on-site review of barge docking with tug operators indicates that barges can be successfully manoeuvred in and out of the bay under all but the most severe weather conditions. When particularly poor weather exists, barges may need to lay off shore until conditions improve.

An examination of the material underlying the bay was carried out and a dock structure was proposed by P. Steffens, P.Eng., Westview Dredging Ltd.

Barges are anticipated to have 5,000 to 10,000-tonne capacity. Barges of this capacity are typically up to 105 meters long and 22.5 meters wide. The loading conveyor would fill at the middle of the barge. The loading conveyor will be either a shuttle or 60-degree oscillating type, supported with a steel tower.

The barge may be moved into different positions during filling by winch or by tug. Barge filling may be assisted by a loader placed on the barge.

6.6 Reclamation

The quarry will be progressively reclaimed, as outlined in Section 7.5, as the mining area advances and sufficient ground is made available for reseeding to forest values.

7.0 ENVIRONMENTAL CONSIDERATIONS

7.1 Existing Conditions

The project, because of its proximity to Monteith Bay, affects upland, foreshore and marine environments. A report on a preliminary environmental assessment completed by New Pacific Ventures is included in this prospectus as Appendix 10.4.

The area is within the Nootka Public Sustained Yield Unit and has been extensively logged in the recent past. The largest nearby logging camp is located at Chamiss Bay. Other land uses include hunting, native food, sports and commercial fishing. There is an active salmon farm on the north side of Union Island (Intercan Resources Ltd.).

The on-site upland vegetation is mixed Cedar and Hemlock forest which is somewhat scrubby due to the presence of rock outcrops. No evidence of wildlife licks or trails has been observed, although bears and deer have been seen on the property during exploration work. Three small drainages convey runoff north, south and from the middle of the area. Two of these dry periodically and it is expected that the third will also dry. Some salmon fry were found using minnow traps in the mouth of the northern drainage. However, none were found above the intertidal zone. This third drainage is outside the area to be impacted directly by mining operations. Further ongoing studies are planned, Section 7.4.

The foreshore is divided between beach and rock and appears to be an area of low productivity. The beach is hard-packed mixed sand and gravel, inhabited by a few clams. A small area of saltmarsh exists in the bay adjacent to the barge-loading site.

The marine lands exhibit the same low productivity in evidence on the foreshore areas. The area does not directly support any commercially harvestable levels of fish or invertebrates. Some geoducks and eel grass were observed.

7.2 Environmental Impacts and Planned Mitigation

The rock to be quarried is relatively pure and chemically inert. Two knolls will be quarried leaving either level ground, or a quarry which will be below sea level. The total area to be affected by the quarry, stockpile and loading facilities will be about 4 hectares by the end of the 20-year mine life.

The overburden consists of a thin layer of topsoil which can be set aside and used as filter for quarry runoff until reclamation. The geyserite, with the exception of a few minor fault areas is fairly pure and the quarried material will be shipped out. The material in the fault areas is softer and somewhat mineralized and may not be useable. Thus, some waste material could be expected. This material can be used to form a base for the stockpile or returned to the pit. Some of the material will be used to create an intertidal platform for replacing saltmarsh area (Section 7.3).

Most of the stockpile will be located just above the high tide line, but a portion of the stockpile and/or the conveyor system will be placed in the high intertidal zone and will destroy an area of saltmarsh. A plan to replace this area in accordance with Department of Fisheries and Oceans policy is described in the next section.

Drainage from the quarry and from the stockpile will probably not be contained or treated. However, some filtration through overburden material or settling in a reservoir used for dust control is possible. The Workers' Compensation Board requires that workers who may be exposed to more than 50% crystalline silica dust above the regulated limits must wear suitable respiratory protection.

Subject to air-borne dust sampling, in most instances properly fit-tested one-half face respirators with High Efficiency Particulate Arrestor (HEPA) cartridges and disposable coveralls will be acceptable. Workers will be trained in the proper use of the respirators as well as the nature of the hazard to comply with Federal WHMIS regulations. New Global Resources Ltd. is committed to putting in place suitable controls to minimize the effects of dust generation.

The material, both the relatively pure geyserite and the mineralized geyserite will be tested for its acid-generating capacity. If it is necessary, the runoff from the material on site will be treated with lime.

Quarrying, crushing, stockpiling, and loading of the crushed rock are all physical activities. Water spray will be used to control dust if necessary, in which case some or all of the quarry drainage will be contained to provide a water source. All further processing will be off-site.

Reasonable efforts to minimize the visual impact of the project, particularly from the water, will be made. A screen of vegetation will be preserved wherever possible. Because the material is formed in a knoll, quarrying can be conducted either from the top down or back to front and this will be done subject to practical and economic constraints. The knoll formation also means that rock faces remaining at the end of the project will be low profile and easily screened by vegetation. A conveyor will be required for loading and some clearing and levelling of the immediate loading area will be required.

The loading facility is to be located just outside a small knoll, attached by a small isthmus to the mainland. The loading facility will consist of a floating pipe attached by stifflegs to the knoll and possibly some additional anchors. The bottom drops sharply to between 10 and 22 meters in the barge-loading area. This area is located to the north of the habitat containing geoducks and the habitat containing eel grass. Because the facility is floating and since the barges will not remain on-site for a prolonged period, impacts on the marine habitat are expected to be minimal.

As a result of the small scale of the project and the relatively benign nature of the environmental impacts, the anticipated environmental concerns for this project are relatively minor.

7.3 Replacement of Lost Saltmarsh Habitat

In order to effectively load the barges and to stockpile the material without interfering with the operation of the quarry, it is necessary to fill up to about 1,500 square meters of the intertidal zone. The area to be filled is high intertidal and contains vascular plants which are inundated with salt water of widely varying salinities. This habitat is deemed to be valuable by the Department of Fisheries and Oceans and to comply with the policy of no net loss of fish habitat, New Global Resources Ltd. is planning to replace this habitat.

New Global Resources intends to create an area at least two to three times the size and of similar elevation to the area being filled. The area proposed for this is immediately to the north of the filled area in the next bay, adjacent to the shore.

The fill will be made up of waste geyserite, crushed to a similar size as the existing beach material, with larger material as required to curtail erosion. Once the area is graded, plants from the proposed fill area will be transplanted. This transplanting will take place in the late fall or early spring when the plants are dormant.

7.4 Additional Environmental Assessment Planned

- 1) Collect water samples from the three drainages in the fall to complete baseline water quality information.
- 2) Continue to watch for wildlife signs as the developmental work continues.
- 3) Conduct additional trapping in any of the three drainages which maintain flows to determine presence or absence of fish.
- 4) Assess the acid generation potential of the geyserite and the soft mineralized geyserite either from the quarry or the stockpile.

These ongoing tests have been scheduled over the next few months.

7.5 Reclamation

At the end of the lifespan of this quarry (Phases I and II), it is expected that an excavation extending below sea level and in close proximity to the shoreline will remain. Two possible options for reclamation of the area involve flooding the quarry.

The first option would be to blast a short channel through the intertidal zone creating a lagoon. This small lagoon could be of interest to tourists and perhaps to a marine biology student wishing to study the colonization of new habitat.

The second option would be to use the pit as a mariculture facility and manipulate inflow and outflow using tidal variations and siphons. This would be a very desirable facility since it would be very secure and since water could be exchanged from various depths at each tide a significant control of parameters such as salinity, temperature and biotic content of the water could be attained.

The natural small cliff-scarp topography of the area would be replicated by the quarry walls. Backfilling is considered to be impractical since the geyserite product is shipped out in its entirety. The areas where quarrying is completed and the quarry floor is not below sea level, then the area will be progressively reclaimed.

In the event that the quarry is shut down before it extends below sea level, it would be graded and sloped with the overburden material remaining on site and reseeded. The stockpi le base will be graded back down to the former level in order to reestablish saltmarsh habitat.

8.0 SOCIAL AND ECONOMIC CONSIDERATIONS

The nearest community to the proposed quarry site is Kyuquot, which is approximately 20 kilometres away by water. The area population of Kyuquot is about 300, of whom about 80% are aboriginal.

Kyuquot band members live on Vancouver island as well as on two smaller islands. They participate extensively in commercial and traditional fishery activities, as well as in local logging activities.

The majority of the non-aboriginal community live on Walters Island and also rely heavily on commercial fishing and logging for their livelihood.

Informal contact has been made with members of the band and with members of the nonaboriginal community. The purpose of this contact has been to advise them of the project assessment procedure and of the likely impacts of the project.

Shortly after formal contact is made by the distribution of this prospectus, New Global Resources Ltd. will organize public meetings with the band and with the community at large to outline and discuss the development plans.

New Global Resources Ltd. is committed to working with community members to ensure that, to the extent possible, this project contributes to the wellbeing of both the aboriginal and non-aboriginal communities. Where possible, suitably qualified local workers will be utilized during the start-up and operation phases of the project.

The specific concerns of aboriginal peoples are also recognized, and New Global Resources Ltd. is committed to working with the Kyuquot Band to ensure that these concerns are addressed.

The nearest roadhead connecting to the Island Highway is at Fair Harbour, approximately 12 kilometres from Monteith Bay. Zeballos is approximately one hour by logging road from Fair Harbour (32 km) and the highway is a further 45 km. Purchase of support

goods and services can be expected at local logging camps, and in the communities of Kyuquot, Zeballos and Campbell River.

Tilbury Cement Ltd. intends to receive its silica needs for a period of twenty years from this deposit. This will replace geyserite currently purchased from the United States. Cost savings will be realized. Significant foreign expenditures will be replaced with spending in British Columbia on jobs and purchases of goods and services, such as marine towing. In the event that sufficient additional reserves of geyserite are proved, some production may be sold to other cement producers.

One of the major markets for Tilbury is in the U.S. This cost saving will further enhance their competitiveness and help to ensure that they can retain market share.

This project therefore has significant economic benefits through increased spending and tax revenue generation in British Columbia as well as through improved balance of payments.

The purpose of this prospectus is to notify the government of the project and to obtain review comments from regulatory agencies on the environmental assessment process prior to application for a mine development certificate.

9.0 REFERENCES

- Adams, M.A. and White, I.W., 1990. Fish Habitat Enhancement: A Manual for Freshwater, Estuarine, and Marine Habitats. Department of Fisheries and Oceans Canada. DFO 4474.330p.
- Band, R.B., 1971. Geochemical Report on the EASY, ON, BP and BW Claim Groups,B.C. Department of Mines Assessment Report 3008.
- British Columbia Minister of Mines, Annual Report: Geology, Exploration and Mining in British Columbia: 1971 p. 316, 1973 pp. 256, 552.
- Carson, D.J.T., 1973. The Plutonic Rocks of Vancouver Island, Geological Survey of Canada Paper 72-44, 70 pp.
- Clapp, C.H., 1915, The Geology of the Alunite and Pyrophyllite Rocks of Kyuquot Sound, Vancouver Island, Geological Survey of Canada Summary Report 1913, pp. 109-126.
- Fish Habitat Management Branch, 1986. Policy for the Management of Fish Habitat, Minister of Supply & Services Canada 1986. Cat. No. Fs 23-98/1986E.
- Gower, S.C. and Ney, C.S., 1973. Rock Geochemical Survey on Kashu Group #1, B.C. Department of Mines Assessment Report 4539.
- Heagy, A.E., 1984. Geological and Geochemical Report on the Too Easy Claim 92L/3W, Alberni M.D. Assessment Report 12,681, June 1984, 17 pp.

Hoadley, J.W., 1953. Geology and Mineral Deposits of the Zeballos-Nimpkish Area, Vancouver Island, Geological Survey of Canada Memoir 272, 82 pp.

- Ministry of Energy, Mines and Petroleum Resources, 1992. Guidelines for Mineral Exploration: Environmental Reclamation and Approval Requirements. Revised January 1992, 57 pp.
- Muir, J.E., 1984. Hydrothermal Alteration at the Kyuquot Gold Property, Vancouver Island, B.C. Private Falconbridge Report, March 30, 1984, 50 pp. and Analyses.
- Muller, J.E., Northcote, K.E., Carlisle, L., 1974. Geology and Mineral Deposits of Alert-Cape Scott Map Area, Vancouver Island, Geological Survey of Canada Paper 74-8, 77 pp.
- Norman, D.K., 1992. Reclamation of Quarries, Washington Geology Vol. 20, No. 4, Dec. 1992, pp. 3-9.
- Resource Management Branch 1992: Health, Safety and Reclamation Code for Mines in British Columbia. Ministry of Energy, Mines and Petroleum Resources, 1992, 13 parts plus Index, 200 pp.
- Robertson, W.F., 1921. Quartz Alunite Rocks, Kyuquot Sound, B.C. Department of Mines Annual Report, pp. N198-N202.
- Shearer, J.T., 1980. Geological and Geochemical Report on the Easy Group, Alberni M.D. Available as Assessment Report No. 8279, B.C. Department of Mines, Nov. 1980, 23 pp.
- Wilson, J.R., 1983. Diamond Drilling Report, KYU Group, B.C. Department of Mines Assessment Report 11,374, 7 pp.

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10.2 Preliminary Schedule



note:

1. Schedule begins after all Government Approvals

Preliminary Schedule Monteith Bay

10.3 Development Plan

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10.4 Environmental Report

REPORT ON PRELIMINARY ENVIRONMENTAL ASSESSMENT OF QUARRY SITE AT MONTEITH BAY, KYUQUOT SOUND

Prepared for:

New Global Resources Ltd. 548 Beatty Street Vancouver, B.C. V6B 2L3

Prepared by:

New Pacific Ventures 3676 Yale Street Vancouver, B.C. V5K 1C8

February 18, 1993

REPORT ON PRELIMINARY ENVIRONMENTAL ASSESSMENT OF QUARRY SITE AT MONTEITH BAY, KYUQUOT SOUND

INTRODUCTION

The purpose of this report is, first, to describe the results of a preliminary environmental assessment on the proposed site of a geyserite quarry to be located at Monteith Bay; second, to discuss the likely environmental impacts; and third, to discuss the implications for the developmental process of this project.

The assessment covers the upland, foreshore and marine areas which will be affected by the project. The information contained in this report is based on a field trip to the site on January 23 and 24, 1993, and on personal communication with relevant parties during January and February of 1993.

Environmental impacts are expected to be minimal because the area affected is small, the rock is to be quarried and crushed only, the rock is relatively inert, and the amount of economically or ecologically significant resources in the area is limited. As a result, the environmental problems this project is likely to face should be relatively easy to manage.

RESULTS

Topography

The property is located on Monteith Bay, about half-way up Kashutl Inlet. Monteith Bay is on the northern and seaward end of a small peninsula between Easy Inlet and Kashutl Inlet. Much of the terrain in this region has been logged.

Two small knolls rising to about 40 meters contain the bulk of the deposit. The surrounding hills rise to between 65 and 250 meters. The site is relatively small and the total developed area is not expected to exceed seven hectares.

Limnology

There are three small drainages on the property, located north, south, and between the two principal knolls of geyserite. All three of these streams are small and likely dry in summer. The following measurements were taken on January 24 in heavy rain conditions. On January 23, flows were about one-third of those reported below, indicating the effect of 24 hours of rain and snow melt.

Stream No.	Location	Temperature	Flow
1	South	3°C	15 litres/sec
2	Centre	5°C	8 litres/sec
3	North	3.5°C	125 litres/sec

Streams 1 and 3 contained no gravel for spawning and were mostly too shallow to place gee (minnow) traps, even in high flow conditions. Several small barriers would prevent or curtail migration of both adult and juvenile salmonids. No fish were captured in the gee traps placed in these streams.

Stream 2 is primarily groundwater which emerges about 10 meters from the high tide line. During the heavy rain and snow melt of January 24 there was surface flow, but this was on top of the soil and vegetation. There was no surface flow on January 23, despite the presence of melting snow.

To establish baseline information, a water sample was taken from each of the three drainages and analyzed for minerals, anions and physical parameters. The result of this testing is included as Appendix 1.

One sample from each water source is assumed to be adequate since the streams are very small, less than 300 meters long and are essentially all downstream from the geyserite deposit.

The water sample analyses indicate clean water with low dissolved solids. The low pH is probably due to the high content of rainwater or to organic acids dissolved as the water runs through the organic material of the forest floor. The high colour readings would also arise as a result of flow through organic materials.

Vegetation

The area is covered by a mixed cedar and hemlock forest with moderately thick underbrush. The outcropping of geyserite appears to have limited topsoil formation over much of the site area, but a few of the trees are large enough to have commercial value.

Wildlife

Other than a few ducks in the distance, no wildlife or tracks were observed despite the snow on ground. Impacts on wildlife should be minimal since only a very small area will be affected. In addition, the Easy Inlet side of the peninsula will remain intact, allowing wildlife to migrate to the end of the peninsula.

Foreshore

About half the foreshore is beach and half is rock. Five test clam holes revealed two juvenile horse clams in one and none in the other four. Digs took place at the most favourable tide available during this field trip, but were still at about the 1.5 meter level.

The beach was mixed gravel and sand. The material was angular and packed in a way which made digging difficult. The white gravel, presumably geyserite, made spotting clams difficult. A few butter clam shells were observed on the beach, but this does not appear to be a clam beach. No oysters were observed on January 23 or 24, but one native oyster was observed by another field worker on another occasion.

A small area of saltmarsh comprises part of the intertidal area adjacent to the site.

Environmental Report

Marine Lands

A SCUBA survey was completed for each of the two principal sites being considered for installation of loading facilities. These two sites are immediately adjacent to one another. The results of the survey are included in Appendix 2. The observed flora and fauna were typical of a low-current, protected site.

The area identified as site 1 had a mixed sand, gravel and silt bottom, similar to the beach material described above. About 10% of the area observed was rock outcrop. About 5% of the observed area supported sparse eel grass. A patchy band of geoducks was observed at about -10 meters. Geoducks are an important fishery in B.C., but this particular bed would not support commercial activity. The eel grass in this area could be an important repository for herring spawn, but the quantity of eel grass in this location is limited. In addition, the eel grass area is not likely to be significantly impacted by the activities planned for this site.

The area identified as site 2 was entirely rock and dropped quickly to depths beyond what is normally included in this type of survey. Only minimal flora and fauna were observed.

A third dive site contemplated for the Easy Inlet side was dropped upon consideration of topography and distance from the site of the deposit.

Fishery Considerations

It is unlikely that any commercial food or recreational fishery would occur in the immediate area of this project. There is a possibility that a herring spawn could take place, but this is unlikely since herring spawning in Kyuquot Sound has been very limited since the 1970s. It may be necessary to temporarily suspend developmental activities, if these activities are deemed by DFO to be detrimental to the herring spawn.

Jansen Lake Creek flows north into Easy Inlet. Annual escapement of sockeye, reported in the department of Fisheries and Oceans Stream Catalogues, ranges from 0 to 5,000 and for coho, 0 to 3,500. Coho salmon runs dropped off sharply after 1956, presumably as a result of logging

activities which took place in that watershed between 1953 and 1955. Sockeye were less adversely affected and are occasionally fished for food by members of the Kyuquot Band.

According to the DFO Stream Catalogue, a large log jam at the mouth of the lake and smaller log jams in the stream require continuous clearing because of the large amount of debris in the lake.

The Jansen Lake fishery is too far from Monteith Bay to be impacted by this project; however, if loading facilities were constructed on the Easy Inlet side, additional concerns might be raised by some of the regulatory agencies and other interested parties.

ENVIRONMENTAL IMPACTS

Physical Alteration of Quarry Area

The extent of the physical alteration of the area will depend on the extent and shape of the deposit. Once this is determined, a plan for restoration of the area can be formulated. The minimal overburden can be set aside, then utilized for restoration of the area once quarrying is completed.

Dust and Spillage

Dust from quarrying and crushing and spillage during loading is unlikely to have a significant impact because of the inert nature of the material. Large quantities of spillage and dust could increase turbidity and impact upon herring spawning or other fishery values but it should be fairly simple to prevent this and thus avoid any significant impacts.

Quarry Drainage

Water draining through the quarry and through the stockpile could introduce contaminants to the environment. The low level of dissolved minerals in the water samples, however, indicates that

Environmental Report

this is unlikely to be a problem. Also, the discharge will probably be directly to salt water, which is more able to receive such discharge without ill effects.

Miscellaneous

Environmental concerns related to storage of fuel, disposition of sewage, source of domestic water, etc., will come to the attention of regulatory agencies through referrals from the Ministry of Crown Lands and will need to be addressed in later planning.

RECOMMENDATIONS AND CONCLUSIONS

This project is not likely to give rise to major environmental concerns. The material to be extracted is inert, only physical processes are taking place on site and the environment of the project area is not particularly sensitive either economically or ecologically. The small area to be affected by the project further reduces the scope of any environmental problems and the risk of any unforeseen problems.

Some further effort to demonstrate that there are no fish in stream 3 may be a reasonable part of the ongoing assessment since one session of gee trapping in winter is not really conclusive. Field personnel should continue to monitor water flows to obtain an indication of high and low water levels and continue to collect water samples for each season. If flows in these creeks are maintained, then some further effort to look for fish could be undertaken.

Other items to check or monitor would be the presence of wildlife and wildlife trails or licks and the abundance of clams and suitable substrate at lower tide levels.

The expected impact on marine resources is minor for both of the areas checked, and development of docking facilities in either area should be acceptable. However, development of docking facilities on dive site 2, the rock face area, would, other things being equal, be preferable.

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Assay results following the drilling program and acid generation prediction or testing should address any concern regarding pollutants from quarry or stockpile drainage. In the event that drainage from this material is problematic, some type of containment system or treatment system would be required.

The quarry itself will obviously have a physical impact on the landscape, and some plan to restore this area should be developed in conjunction with the concerns of the regulatory agencies.

Continuation of the environmental assessment program throughout the development of the quarry should ensure that the concerns of the public and of the regulatory agencies can be adequately addressed. Those parties contacted during the course of this study appeared to support and appreciate the effort being made to inform them of the planned development.

APPENDIX 1

WATER SAMPLE RESULTS

quanta trace laboratories inc.

#401-3700 Gilmore Way, Burnaby, B.C., V5G 4M1 Tel:(604)438-5226 Fax:436-0565

ANALYSIS OF ENVIRONMENTAL SAMPLES

To: NEW PACIFIC VENTURES 3676 Yale Street Vancouver, B.C. V5K 1C8

Workorder: 20101 Received : 26-Jan-93 Completed: 29-Jan-93

Attn: Bruce F. Wright

Re: Water Samples

			1							
Sample type Identification Lab Reference #	WATER ∎1 20101-001	WATER #2 20101-002	WATER #3 1 20101-003							
Gravimetric - Solids+++++++										
Dissolved Results in	16. 1 ms/1	1 24. I ms/1	25. mg/1							
Physical Tests	•	•	•							
Colour TCU PH	1 20. I 5.6	40. 1 4.3	30. 6.0							
Alkalinity as mg/l (Alkalinity as mg/l CaCO3++++++									
Hydroxide	1 < 1.	< 1.	i < 1.							
Carbonate	1 < 1.	1 < 1.	1 < 1.							
Bicarbonate	1 3.	$ \langle 1 $	7.							
lotal	1 3.		7.							
Kesults in	1 NS/1 +	i ns/1 +	1 NS/1 +							
IEC - Water Soluble	' Anions	• •	• •							
Fluoride F	1 < 0.1	1 < 0.1	1 < 0.1							
Chloride Cl	1 2.5	1 3.0	1 2.9							
Nitrite NO2-N	1 < 0.1	i < 0.1	I < 0.1							
Phosphate PO4-P	1 < 0.3	Í < 0.3	1 < 0.3							
Nitrate NO3-N	< 0.01	I < 0.01	0.02							
Sulfate SO4	1.07	1 0.59	1 2.06							
Results in	1 ms/1	l ma/1	ng/1							
	· ···· ··· ··· ··· ··· ··· ··· ··· ···									

quanta trace laboratories inc.

#401-3700 Gilmore Was, Burnabs, B.C., V5G 4M1 Tel:(604)438-5226 Fax:436-0565

To: NEW PACIFIC VENTURES

W/0: 20101 Pase 2

Sample type Identificatio	n	 	WATER #1	 	WATER #2	 	WATER #3
Lab Reference #			101-001	1 20	101-002	20	101-003
		+		t		r	
CP - Ultraso	nic Ne	buli	zation	+		•	
Method used		fil	t. 0.45u	lfil	t. 0.45u	lfil	t. 0.45u
		IRAK	soluble	IRAR	soluble	RAR	soluble
			SSOLVED	I DI	SSOLVED		SSOLVED
Aluminum	A1	1	0.067	F 	0,066	r	0.042
Antimony	Sb	1 <	0.02	<	0.02	<	0.02
Arsenic	As	I <	0.04	<	0.04	<	0.04
Barium	Ba	<	0.001	<	0.001	ļ	0.002
Beryllium	Be	I < .	0.0002	<	0.0002	<	0.000
Bismuth	Bi	I <	0.02	<	0.02	<	0.02
Cadmium	Cd	I <	0.0003	<	0.0003	<	0.000
Calcium	Сa	I	1.32		0.12		2.97
Chromium	Cr	<	0.001	<	0.001	<	0.001
Cobalt	Co	<	0.001	I < .	0.001	<	0.001
Copper	Cu	1	0.006	ł	0.01		0.007
Iron	Fe	1	0.009		0.072		0.007
Lead	Рb	I <	0.004	<	0.004	<	0.004
Lithium	Li	I <	0.05	<	0.05	<	0.05
Ma⊴nesium	Ыя	1	0.14	l	0.21	1	0.19
Mansanese	Mri	1	0.001		0.001		0.002
Molybdenum	No	1 <	0.003	<	0.003	<	0.003
Nickel	Ni	I <	0.001	<	0.001	<	0.001
Phosphorus	P	1 <	0.02		0.02		0.03
Potassium	ĸ	<	0.05		0.05	<	0.05
Selenium	Se	<	0.02	<	0.02	<	0.02
Silicon	Si	<	0.05		0.05		0.34
Sodium	ВИ	1	1.45	1	1.44		1.55
Strontium	Sr	1	0.002		0.001		0.006
Thorium	Th	<	0.01		0.01	<	0.01
litanium	Ti.	1 <	0.001		0.001	<	0.001
Uranium	U	1 <	0.02		0.02	<	0.02
Vanadium	v 	<	0.001	<	0.001	<	0.001
21NC 74	Zn	1	0.002		0.004		0.002
∠irconium Beeult:	2r	1 <	0.001	. <	0.001	<	0.001
RESUITS	10	1	M3/1	1	11971 I		69/1

Test results are for internal use only. Quanta Trace liability is limited to the testing fee paid.

Analyst:

	Quanta Trace Laboratories Q U A L I T Y C S A M P L E	0 N T R D L 1 2 0 1 0 1	R E P O R T L - 0 0 1	29-Jan-93
	Cations			
	Calcium Sodium	1.32 Magn 1.45 Pota	esium assium	•14 0
inr	Anions			
	Phenolthalein Alkalinity Sulphate(SO4) Fluoride(F)	0 Tota 1.07 Chic 0 Nitr	al Alkalinity pride(Cl) pate Nitrogen(NO3)	3 2.5 0
	Residue Check			
	SIO2(Si)	0 Filt	erable Residue	16
iar	Results For Sam	ple ≇20101-001		
ier		STATUS	LIMITS:	
-	Cation-Anion Bal.: Cation Sum = .140459 Anion Sum = .152753	PASSED		
	Difference = .122937E-01		<= .108868	
	Residue Check: F.R.Detected = 16	PASSED		
-	F.R.Calculated = 8.28 Difference = 7.72		F.R.Detected	>=F.R.Cale.

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jur	Quanta Trace Laboratories Q U A L I T Y S A M P L E	C O N T R # 20	0 L REPORT 1 0 1 - 0 0 2	29-Jan-93
W	Cations			
i.	Calcium Sodium	•12 1•44	Ka⊴nesium Potassium	·21 0
	Anions			
Þ	Phenolthalein Alkalinity Sulphate(SO4) Fluoride(F)	8 0 •59 0	Total Alkalinity Chloride(Cl) Nitrate Nitrogen(NO3)	0 3 0
U	Residue Check			
	SIO2(Si)	0	Filterable Residue	24
	Results For Sa	sm⊳le ‡2010	1-002	
		STAT	US LIMITS:	
	Cation-Anion Bal.: Cation Sum = .859026E-01 Anion Sum = .969197E-01	PASS	SED	
	Difference = .110171E-01		<= .108002	
-	Residue Check: F.R.Detected = 24 F.R.Calculated = 5.74	PASS	ED	
•	Difference = 18.64		F.R.Detected	>=F.R.Calc.

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Quanta Trace Labor (atories QUALITY C SAMPLE	0NTR #20	0 L REPORT 1 0 1 - 0 0 3	29-Jan-9
Cations				
Calcium		2,97	Magnesium	.19
Sodium		1.55	Potassium	0
Anions	•			
Phenolth	slein Alkalinity	0	Total Alkalinity	7
Sulphate	(\$04)	2.06	Chloride(Cl)	2.9
Fluoride	(F)	0	Nitrate Nitrogen(NO	3) .02
Residue Check				
SIO2(Si)		.34	Filterable Residue	25
	Results For Samm	∘le ‡ 201	01-003	
		STA	TUS LIMITS:	
Cation-Anion Bal.:		PAS	SED	
Cation Sum	231257			
Anion Sum	266007			
Difference	= .347492E-01		<= .11062	3
Residue Check:		PAS	SED	
F.R.Detected	= 25			
F.R.Calculated	= 14.6862			
JITTEPENCE	= 10.3138		r.K.Vetec	teo >=r+K+C810

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APPENDIX 2

SCUBA SURVEYS

SCUBA SURVEY New Pacific Ventures 3676 Yale Street Vancouver, B.C. V5K 1C8 (604) 299-7541 SITE NUMBER: 2 LOCATION: Montieth Bay, Kyuquot Sound January 24, 1993 TIME: 1:30 PM DATE: TIDE: 11 feet PROPOSED USE: Barge tie up for quarry DIVERS: Bruce Wright & Alex Routh SUBSTRATE: percent of dive area 100% Rock Gravel Sand Silt VEGETATION: percent cover Eel Grass 0% Kelp ٥\$ 5% Laminaria Sea Lettuce 0% Filamentous ٥% Other 0 INVERTEBRATES: or Total number Observed in 10 square Meters Observed . Swimming Scallops 3 2 Sea cucumbers Starfish 2 FISH: Number Observed Rock Cod 1 Small Percoid (school) approx. 100 Blennies 5 ESTIMATED DIVE AREA: 200 square meters COMMENTS: A steep rock face dropped sharply from the shoreline to at least 65 feet.

SCUBA SURVEY New Pacific Ventures 3676 Yale Street Vancouver, B.C. V5K 1C8 (604) 299-7541 SITE NUMBER: 1 Montieth Bay, Kyuquot Sound LOCATION: TIME: 12:30 PM DATE: January 24, 1993 TIDE: 10 feet PROPOSED USE: Barge tie up for quarry DIVERS: Bruce Wright & Alex Routh percent of dive area SUBSTRATE: 10% Rock Gravel } Mixed 90% Sand } Silt } **VEGETATION:** percent cover Eel Grass 5% 0% Kelp 0% Laminaria 0% Sea Lettuce Filamentous 0% Other 0 **INVERTEBRATES:** Observed in Total number or 10 square Meters Observed 10 in patches 75 Geoducks Sea Cucumbers 3 Starfish 3 1 Nudibranchs Seapen 1 Swimming Scallops 3 Moonsnails 2 FISH: Number Observed Blennies 10 ESTIMATED DIVE AREA: 600 square meters COMMENTS: The bottom slope was about 12% resulting in a fairly narrow band for scuba observation. The small percentage of rock was in outcrops near the shore. The geoducks observed were in a patchy band at about -30 feet. Although this was a winter dive, the relatively low abundance of fauna suggests a relatively unproductive area. This combined with

low current, coarse substrate, and small harvestable area would severely

·limit geoduck harvest opportunity.



