# GEOLOGICAL AND DIAMOND DRILLING ASSESSMENT REPORT

on the
APPLE BAY PROJECT
(PEM100 CHALKY GEYSERITE,
P170 and 190 Areas)

Holberg Inlet Area, Wanokana Creek, Vancouver Island

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June 10, 2003LOGICAL SURVEY BRANCH ASSESSMENT REPORT

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#### 1.0 SUMMARY

- 1. Acquisition and a preliminary evaluation of the PEM100 Kaolinite and Chalky Geyserite Quarry was undertaken between September 1999 and August 2000 for Electra Gold Ltd. The alumina and silica resource at PEM100 is a source for the raw material requirements of the cement plant operated by Tilbury Cement Ltd. in Delta, British Columbia and Ash Grove Cement in Seattle.
- 2. Electra Gold Ltd. has optioned the higher-grade Al<sub>2</sub>O<sub>3</sub> material (>25% Al<sub>2</sub>O<sub>3</sub>) on the PEM100 Mining Lease and all other kaolinite-bearing zones in the remaining Apple Bay Claims.
- 3. A 25-35 metre thick Lower Jurassic sequence of intensely silicified and clay altered rhyolite flows and pyroclastic units of the Bonanza Group outcrop along a 320° trend for more than 800 metres from the PEM100 Quarry towards the Pemberton Hills.
- 4. The area is covered by the Apple Bay One to Twenty-two mineral claims totalling about 10,000 hectares. The PEM100 geyserite quarry is located on the Apple Bay two claim (20 units) and Mining Lease. The present quarry proposed currently covers about 8 hectares. There are 9 other geyserite zones known on the property.
- 5. Total estimated tonnage produced from the Western Forest Products quarry is approximately 250,000 tons between the late 1970's to present. This quarry has most recently produced coarse stone for road construction.
- 6. The general chalky geyserite and kaolinite section in the quarry area consists of an upper 20-35 metre thick rhyolite member exhibiting both flow banded and coarse pyroclastic units that have been intensely silicified and clay altered (silica and alumina). This sequence has then undergone intense acid sulphate and advanced argillic alteration. The upper sequence is underlain by a less altered lower sequence of pyritic rhyolitic tuff.
- 7. Diamond drilling was completed on the P170, P190 and PEM100 areas plus holes were drilled in the Beach and WN-M Zones totalling 1,786 feet (545.39m) of core in 22 holes in January and February 2003.

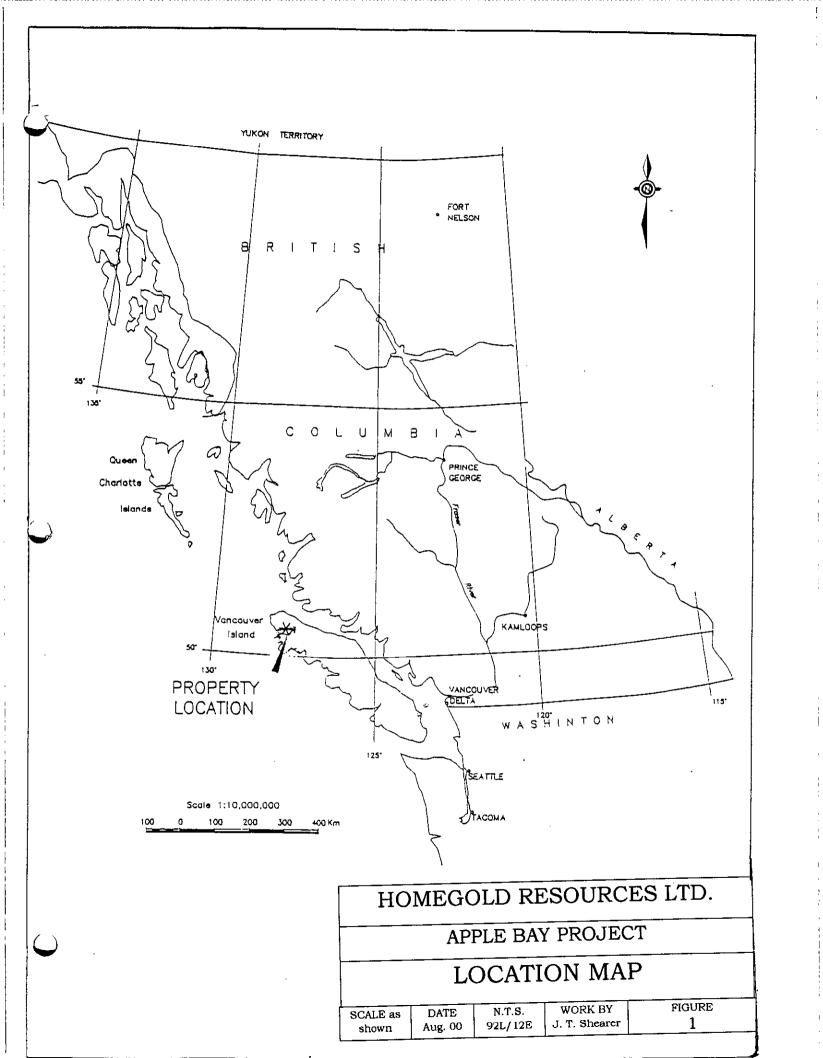
8. A bulk sample was excavated, crushed and barged to the Ash Grove Cement Plant in Seattle in February and March 2003.

Respectfully submitted

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June 10, 2003



#### 2.0 INTRODUCTION

This report documents assessment work competed in 2002 and up to March 5, 2003 and to summarize the Kaolinite potential and outline a future work program for the Apple Bay Project.

The Apple Bay One to Twenty-two mineral claims and Mineral Lease Lot 2223 cover readily accessible silica and alumina resources within the PEM100 Quarry and to the northwest towards the Pemberton Hills. The general geyserite section within the quarry and adjacent areas consists of an approximately 20-35 metre thick Lower Jurassic intensely silicified and clay altered rhyolite unit (flow banded and pyroclastic) above a lower less altered rhyolitic breccia. Drilling in 1999 and 2000 and surface assays indicate that 2 sub areas (Area A and B) contain about 5 million tonnes of material grading an average of 83.26% SiO<sub>2</sub>, 12.90% Al<sub>2</sub>O<sub>3</sub> and 0.08% SO<sub>3</sub>. A third area (Area C) lies between Areas A and B and may contain an additional 4.3 million tonnes of silicarich geyserite but more detailed drilling is required to determine total tonnage and grades.

Kaolinite has become an important constituent in many industrial applications. In British Columbia it is primarily used to make high quality paper, as a filler material in the paper making process and to impart a bright white colour and achieve stability qualities to the finished paper product.

Currently there is no source of high quality kaolinite in British Columbia and, as such, it is imported primarily from Georgia in the United States of America. The closeness of the Apple Bay kaolinite deposits to the large Pulp and Paper Industrial Complexes in British Columbia offers customers a potentially significant cost saving in terms of shipping a locally sourced product. Preliminary testing of the Apple Bay section indicates that the alumina values suggest locally high kaolinite content.

Kaolin accumulations may be either primary, as a result of in situ alteration of aluminabearing minerals to kaolinite, or secondary as a result of deposition usually in fresh water (Bristow, 1987). If leaching is particularly intense, kaolinite is replaced by bauxite and quartz. Other mechanisms for developing primary deposits include the hydrothermal alteration of rocks by circulating hot water such as deep circulation of water through granitic rocks high in radiogenic elements or solfatara alteration associated with the waning phases of felsic volcanism results from hot water rich in sulphur altering rocks along the route to discharging as geysers and hot springs.

Throughout the property a further 9 geyserite zones have been identified by geological mapping. A 5000 tonne bulk sample was shipped in 1968 by Lafarge Inc. from a geyserite deposit in central Apple Bay, which is now covered by the Apple Bay One Mineral Claim. The PEM100 Quarry is approximately 12 kilometres west of the village of Coal Harbour and is not directly drained by major streams. The company is committed to develop the deposit in a manner that does not cause significant environmental impact during operation or after mine closure.

A total of 627.29m of diamond drilling was completed in November and December 1999 and March 2000 in 24 holes. Three bulk samples were extracted from the PEM100 Quarry during 2000 and 2003. A 5400 tonne sample was taken in April 2000. This sample was trucked to Port Hardy and then barged to Tilbury's Cement Plant in Delta B.C. for testing. A second 4000 tonne bulk sample was taken in July 2000. This sample was trucked to Port Hardy. The third sample was excavated in March 2003 and sent to the Ash Grove Cement Plant in Seattle

This report documents the results of the work program and experience gained while producing material in 2003 and diamond drilling on P170 and P190 areas.

#### 3.0 LOCATION and ACCESS and FIELD PROCEDURES

The Apple Bay One to Twenty-two mineral claims are situated on rolling terrain with elevations ranging between 0m and 210m. The PEM100 Quarry is at an elevation of approximately 115m. The two Wann Knobs at the PEM100 quarry area gradually rise to the west into the Pemberton Hills.

Most of the claims are covered by second growth forest, some of which has been thinned. Some of the claims have been logged recently. Most of the logging occurred in 1988. Minor logging was done from the shore in the 1920's.

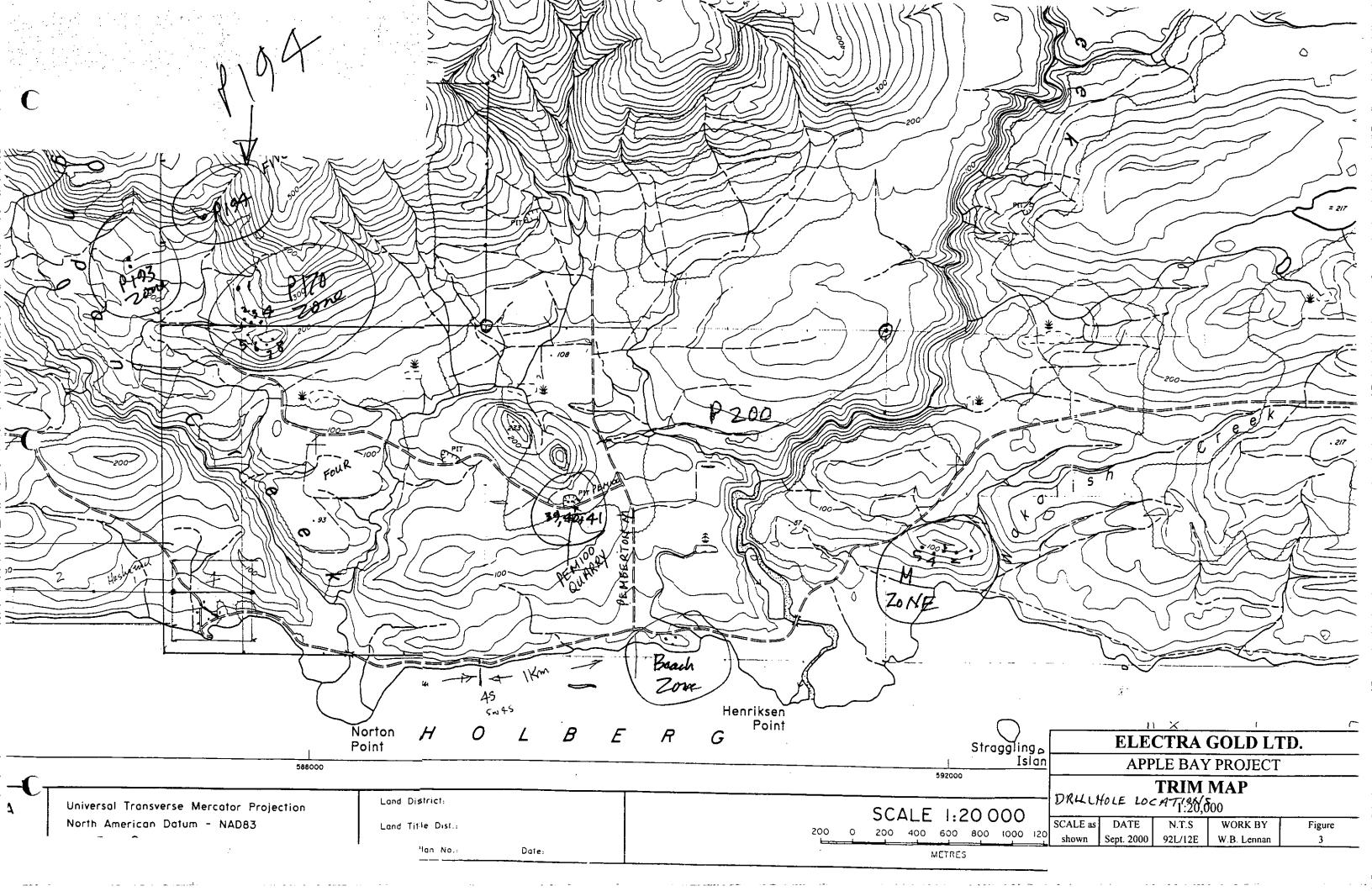
Access to the claims is gained by travelling south for 16 km from Port Hardy along a paved road to Coal Harbour. From Coal Harbour travel west for 12 km along the Wanokana Mainline logging road to the Pemberton Mainline logging road and turn off onto the P100 branch road.

A road use agreement was negotiated for the year 2000 with Western Forest Products Ltd. the holder of Tree Farm Licence 6. Payments were made based on the cubic metres of geyserite hauled over the road system. This agreement will be renegotiated for subsequent years based on tonnage rather than cubic metres.

#### Field Procedures

Geological mapping was conducted on a 1:5,000 basemap obtained from Western Forest Products. Parts of this map were digitized to form a base for mine planning. Later the digital Trim data from government sources was used to create an accurate grid and UTM co-ordinates on the formerly imperial units forest company map. The central claims were surveyed by a registered BCLS in preparation for bringing this area to a mining lease. The drillhole collar location survey was tied into the legal survey.

The drill program was accessed by ATV and small bulldozer. The drillcore was carefully logged in a warehouse-shop facility in Port Hardy. The core is presently stored on racks in a locked warehouse at 6625 Port Hardy Road. The bulk samples were produced by drilling and blasting on a 3m by 3m hole pattern and transported by 40 tonne truck and transfer to Port Hardy.



#### 4.0 CLAIM STATUS

The principal area of interest is covered by the Apple Bay 1 – 11 and Jody 1 and 2 mineral claims staked under the two-post and Modified Grid Systems and registered in the name of J.T. Shearer and R. W. Howich. A comprehensive legal agreement was executed between R. W. Howich and Homegold Resources Ltd. Homegold has now entered into an operating agreement with Electra Gold Ltd. The interaction between these agreements is beyond the terms of reference of this geological assessment.

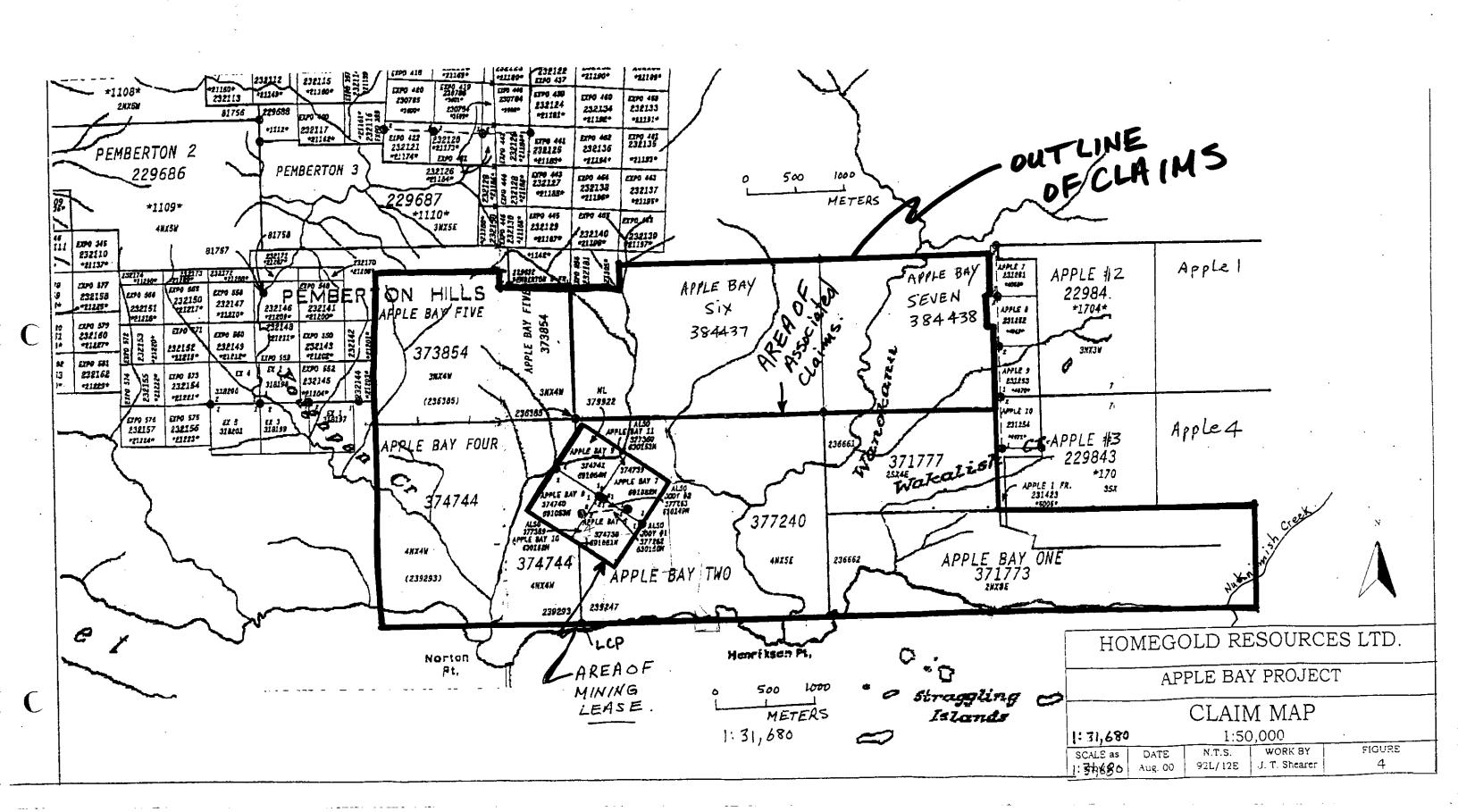
TABLE I List of Claims

Claim Name	Tenure #	Units	Size	Date Located	Current	Registered
					Anniversary	Owner
Apple Bay One	371773	16	2N8E	Sept. 16, 1999	Sept. 16, 2006	J. Shearer
Apple Bay Two	377240	20	4N5E	May 17, 2000	Sept. 16, 2006	J. Shearer
Apple Bay Three	371777	8	2\$4E	Sept. 18, 1999	Sept. 16, 2006	J. Shearer
Apple Bay Four	374744	16	4 <u>N4W</u>	March 11, 2000	Sept. 16, 2005	J. Shearer
Apple Bay Five	373854	12	3N4W	Dec. 5, 1999	Sept. 16, 2005	J. Shearer
Apple Bay Six	384437	20	4N5W	March 10, 2001	Sept. 16, 2004	J. Shearer
Apple Bay Seven	384438	16	4E4N	March 10, 2001	Sept. 16, 2004	J. Shearer
Apple Bay Eight	392518	18	3S6E	April 2, 2002	April 2, 2004	J. Shearer
Apple Bay Nine	392519	15	3S5W	April 3, 2002	April 3, 2004	J. Shearer
Apple Bay Ten	392520	15	3N5W	April 4, 2002	April 4, 2004	J. Shearer
Apple Bay Eleven	392727	9	3N3W	April 9, 2002	April 9, 2004	J. Shearer
Apple Bay Twelve	392728	12	3N4E	April 10, 2002	April 10, 2004	J. Shearer
Apple Bay Thirteen	392754	9	3N3W	April 19, 2002	April 19, 2004	J. Shearer
Apple Bay Fourteen	392755	18	3N6E	April 20, 2002	April 20, 2004	J. Shearer
Apple Bay Fifteen	392756	9	3S3W	April 19, 2002	April 19, 2004	J. Shearer
Apple Bay Sixteen	392757	18	3S6E	April 20, 2002	April 20, 2004	J. Shearer
Apple Bay Seventeen	394716	20	4N5W	July 4, 2002	July 4, 2004	J. Shearer
Apple Bay Eighteen	394717	20	4N5E	July 4, 2002	July 4, 2004	J. Shearer
Apple Bay Nineteen	394718	20	4S5W	July 5, 2002	July 5, 2004	J. Shearer
Apple Bay Twenty	398335	20	4N5W	Nov. 16, 2002	Nov. 16, 2004	J. Shearer
Apple Bay Twenty-one	398336	20	4N5W	Nov. 17, 2002	Nov. 17, 2004	J. Shearer
Apple Bay Twenty-two	403240	15	3S5E	Jan. 19, 2003	Jan. 19, 2004	J. Shearer
Mining Lease Lot 2323	379922	Approx		Surface Tax		R.W.
	· .	4 Units	<u> </u>	Payable		Howich

426 Units Total

Note: Apple Bay 6-11 and Jody 1 & 2 have been legally surveyed and a Mining Lease has been issued (Lot 2323).

Mineral title is acquired in British Columbia via the Mineral Act and regulations, which require approved assessment work to be filed each year in the amount of \$100 per unit per year for the first three years and then \$200 per unit per year thereafter to keep the claim in good standing.



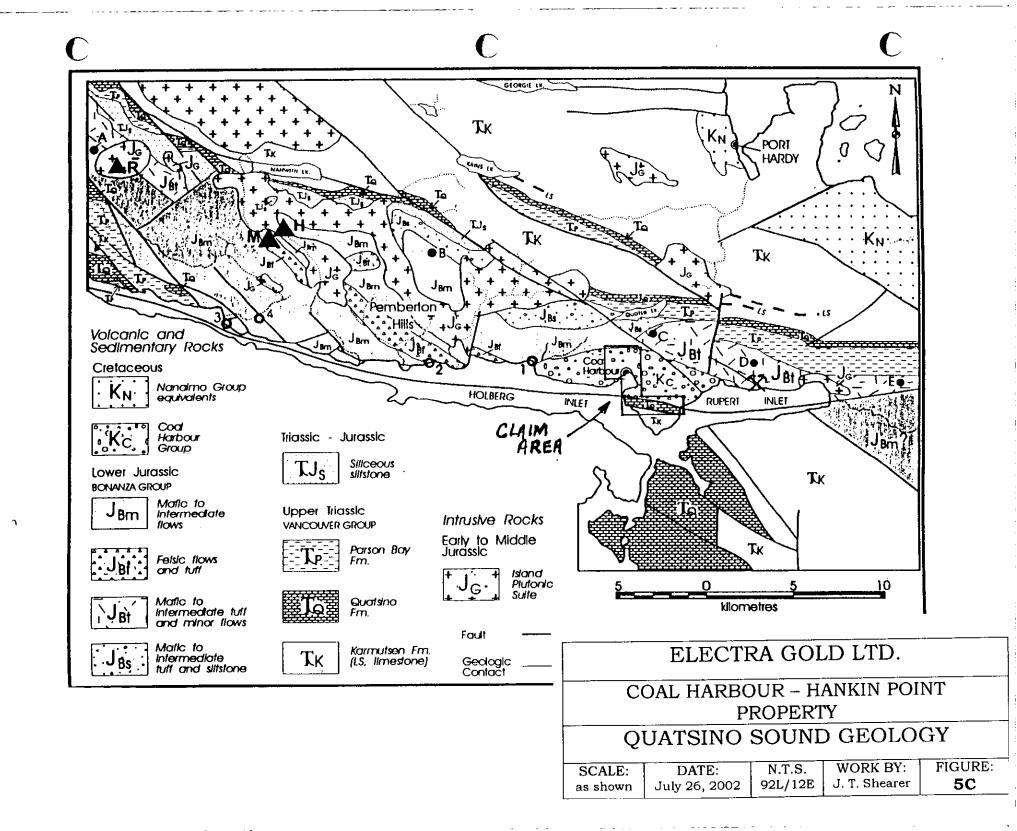
Under the present status of mineral claims in British Columbia, the consideration of industrial minerals requires careful designation of the products end use. An industrial mineral is a rock or naturally occurring substance that can be mined and processed for its unique qualities and used for industrial purposes (as defined in the *Mineral Tenure Act*). It does not include "Quarry Resources". Quarry Resources includes earth, soil, marl, peat, sand and gravel, and rock, rip-rap and stone products that are used for construction purposes (as defined in the *Land Act*). Construction means the use of rock or other natural substances for roads, buildings, berms, breakwaters, runways, rip-rap and fills and includes crushed rock. Dimension stone means any rock or stone product that is cut or split on two or more sides, but does not include crushed rock.

#### **5.0 HISTORY**

In the mid 1960's to mid 1970's the eastern and northern parts of Quatsino Sound, including the area northwest of Apple Bay, was explored by Utah Construction, which resulted in the discovery of the Island Copper Deposit in 1966. However several factors have combined to make Utah's work less than complete in the Apple Bay region. These are discussed by Pearson (1985) below:

- 1. During the drilling of the Island Copper Deposit and the early period of exploration to the west, Utah employed a staff of ten geologists, most of whom developed a considerable expertise in various phases of the work. When Utah decided to proceed with production, it drastically reduced exploration expenditures. Within a short time most of the staff had taken positions with other firms. The few remaining were transferred to other duties. Eventually new employees were assigned to carry out further study on the island. This loss in continuity cost very dearly in terms of efficiency and loss to the company of the personal knowledge of its former employees.
- 2. Early exploration work relied very heavily upon soil geochemical techniques whereby enhanced copper and molybdenum values in soil were assumed to reflect enhanced values in the underlying bedrock. In areas of deep soil cover, of glacially polished unweathered bedrock, and of glacially transported soils, all of which are common here, the technique loses much of its effectiveness. Previous results must be interpreted with extreme caution, and negative results cannot be assumed to have eliminated the ground from further consideration.
- 3. One of Utah's soil geochemical anomalies stood out so strongly that it attracted a disproportionate share of attention. This anomaly led to the discovery of the Hushamu Mineralized Zone, but served to distract from the systematic evaluation of other, somewhat more subtle anomalies, few of which were ever followed up.
- 4. Eventually, relatively new employees with no firsthand knowledge of the ground decided to begin divestiture of portions of the claim block. In the opinion of a number of former Utah employees, portions of this ground had exceptional merit but had received inadequate work. These particular areas were acquired by staking and a private company formed to facilitate exploration. Apparently Utah had serious misgivings after dropping the claims, for it attempted to restake them. In this attempt, however, it was too late.

At the time of the Utah staking in 1967, the area around the present location of the Apple Bay One Claim (H&W 6 and 8) was held by LaFarge Cement as a potential source of silica. A deep-water dock stood immediately adjacent to a small quarry carved in a shoreline bluff of highly silicified rock. Sample shipments were made in 1968. It was assumed by Utah geologists that the silica was secondary in nature because of the frequent appearance of ghost-like silicified fragments in the silicified matrix. The prevalence of pyrite lent weight to this interpretation. Silicification processes were attributed to a zone of faulting which had been postulated to pass up Holberg Inlet.



Utah's early work on and adjacent to the present location of the Genstar claims consisted of soil sampling along lines 500' apart at intervals of 200'. Rudimentary mapping of geological features was carried out by the college students employed in carrying out the soil survey. All of the LaFarge ground was included in this work, carried out under the direction of M. J. Young, who reported results in Assessment Report #2190.

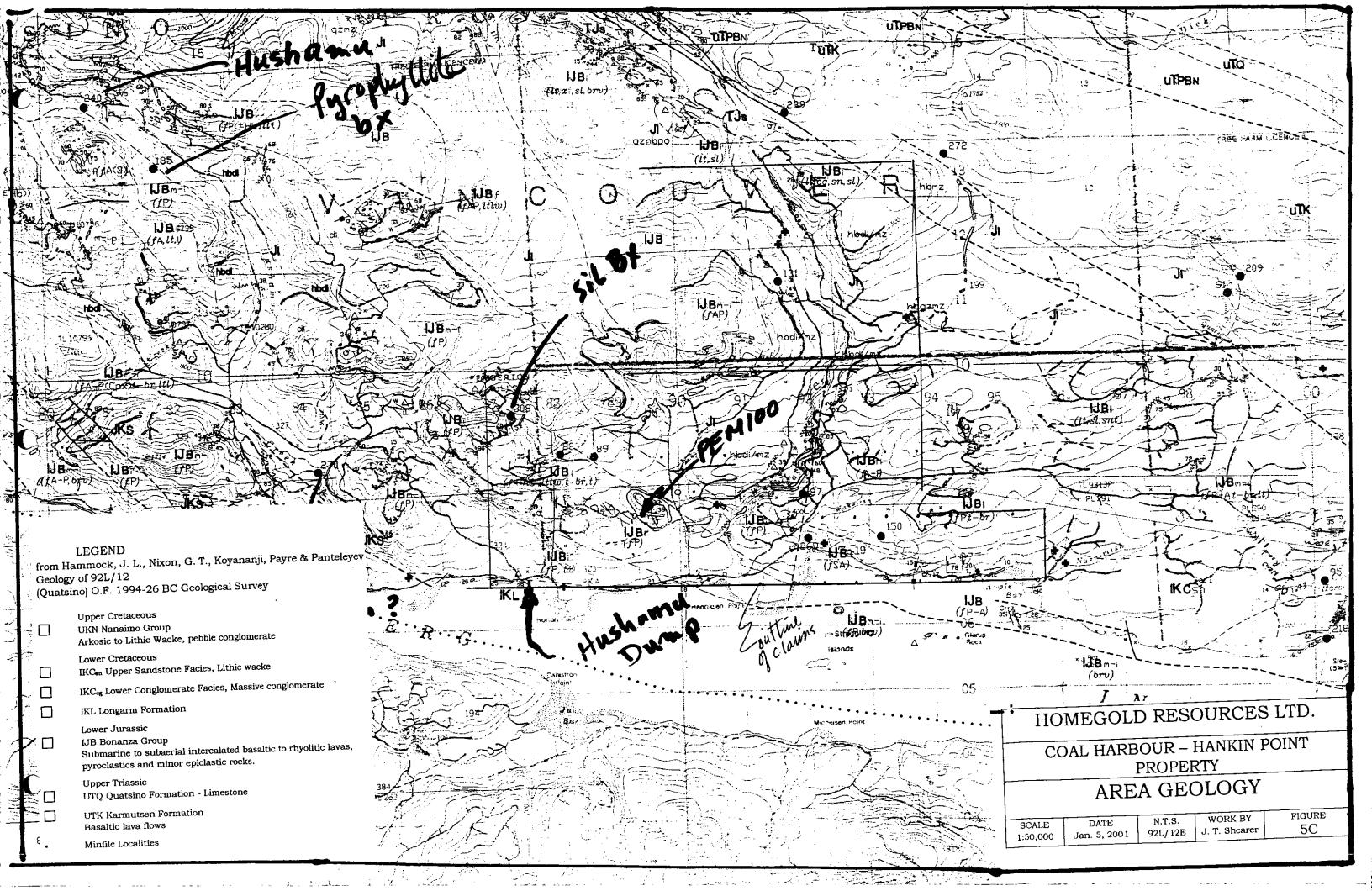
Young followed up this work with a program of nine very shallow x-ray drill holes (EC-40 to EC-48). These holes were closely grouped in an area now covered by Genstar claims H&W 1 and 3. The rationale for placement of the holes in this location is unknown to us, and cannot be justified on the basis of soil sampling data or the geological picture as then understood. Following the drilling, it was realized that the holes had been drilled outside the boundaries of Utah's claim holdings. There was no follow-up.

In 1971 G. A. Clouthier was assigned to carry out a detailed program on the southeastern portion of Utah's Expo group. The program consisted of geological mapping at a scale of 200' to the inch and ground magnetometer and induced polarization surveys. Clouthier's work was controlled by a grid established along lines 400' apart, with stations marked at intervals of 200'. Since Utah's boundaries were contiguous with those of the LaFarge claims and since these were immediately adjacent to the inlet, he included the ground for the sake of completeness.

Clouthier mapped, and recognized as secondary in nature, the quarry area earlier worked by LaFarge. He also mapped another area of alteration to the west, centred on a small east-west trending hill and extending down to the shore. He characterized most of the alteration as siliceous, but located on outcrop in the intertidal zone which was characterized by clay alteration and sulfide mineralization. Assays showed the presence of copper (0.41%) and molybdenum (0.001%). This zone is presently covered by Apple Bay One Claim (H&W 1 and 2). Because of the property situation, no follow-up was carried out.

Clouthier's induced polarization survey delineated several areas relatively rich in sulfides and/or clay. One of these lies about half a mile north of the present northern boundary of the Apple Bay One Claim on Apple Bay Three. Two drill holes totalling 1050' were put down. Logging was carried out by Clouthier under the supervision of B. D. Pearson. Core from both holes consisted of clay-silica-pyrite-altered volcanics throughout. Traces of molybdenum were found near the base of one hole. About this time attention was diverted to the Hushamu Zone. Utah carried out no further work of significance in the Wanokana area.

In 1979 Inland Cement, which had acquired eight claims along the sore of Holberg Inlet covering the ground formerly held by LaFarge, carried out a program under the direction of D. Blender. Results are reported in B.C. Department of Mines Assessment Report #8151. The main thrust of the work was the sampling of the siliceous rock in order to test for purity and to determine its grinding properties. At the same time, consulting geologist W. G. Stevenson was asked to prepare a geological map. This task was subcontracted to Harold Jones of G. A. Noel & Associates. Mr. Jones is a competent field geologist and, coincidentally, a former Utah employee, but he had had no previous experience on Utah's various properties in the Port Hardy area. He failed to recognize the secondary nature of the two silicified zones, referring to the eastern one as rhyolite (a light-coloured volcanic rock with above average silica content) and the western one as rhyodacite (a volcanic rock similar to rhyolite but with somewhat lower silica content). The boundaries of his rock units coincide will with those mapped by Clouthier. Only the interpretations differ. However, Jones failed to note the existence of the shoreline



outcrop, which contains copper-molybdenum mineralization. Possibly it was concealed by tidewater at the time of his examination.

Following acquisition of the ground west and north of the Genstar claim by Western Pocasset Resources, Ltd. in 1982, B.C. Pearson made an inspection of outcrops exposed by the recent construction of logging roads. He noted that by the main haulage road cut across the northwestern margin of the western alteration zone. He located samples in the outcrop, which were made up of breccia fragments containing secondary clay, silica, pyrophyllite and as much as 30% pyrite. Furthermore, mercury values ran as high as 1500 ppb, a clear indication of the hydrothermal nature of the rock alteration.

Pearson had carried out or supervised most of the logging of the drill core during the delineation of the Island Copper Orebody. He immediately recognized that the rock here was identical to that which formed a barren capping over the western half of the Island Copper deposit. The implications were clear. The hill very probably formed a barren capping over a concealed body of copper mineralization, and that capping was probably relatively thin, for copper mineralization outcropped along the southern margin at the shoreline.

Porphyry copper centres usually have other peripheral manifestations beside the intense alteration discussed above. One of these is the presence in the surrounding rocks of veins containing sulfide mineralization. We have been successful in locating such veins about 2500' to the west of the very intense alteration. Here they consist of pyrite in andesitic volcanic rock, which has been altered to a propylitic mineral assemblage, a type compatible with the marginal zone of a porphyry copper deposit. Analyses of the pyrite revealed a gold content of 149ppb. Normally one would expect a value under 5 ppb. An inspection of Clouthier's mapping showed that he too had located vein mineralization peripheral to the western alteration zone, in a location just north of Genstar claim H&W 3. He noted the presence of chalcopyrite (which contains copper), galena (lead) and sphalerite (zinc).

In the eastern part of the Pemberton Hills, Utah's early soil geochemical work revealed the existence of an anomalous zone with values co-incident in copper, molybdenum and zinc. The zone is elongate down a western slope and has a total length on the order of 4000'. Although outcrops are entirely lacking in the immediate area, early work by students and later detailed work by Ascensios indicates that the area is probably underlain by a complex contact zone between andesitic volcanic rocks and later dioritic and porphyritic monzonite intrusives. This environment is extremely suggestive in terms of its potential for localizing sulfide deposition, and should be investigated further in view of the presence there of the geochemical anomaly.

Two areas along the southern part of the block are underlain by fragmental rhyolitic rocks. These areas may be continuous with one another, but lack of outcrop precludes certainty at this time. During the period 1906-1907, about 1500 tons of limonite was mined from the surface here and shipped to an iron works in the Seattle area. The limonite was apparently derived by leaching of pyrite in the bedrock upslope from the swampy areas where deposition occurred. The western rhyolitic area has yielded two soil samples running 738 and 246 ppm copper. These values are the highest and fifth highest respectively of the over 3300 soil copper values obtained by Utah over the southeastern quarter of the 888 claim group. Reconnaissance samples yielded a mercury value in excess of 700 ppb, which tends to confirm the presence of hydrothermal activity in the area.

Within the second area of rhyolitic volcanism we have discovered a bed of pyrite and chert with anomalous values in arsenic. One specimen assayed 0.028 oz/ton in gold. (The presence of arsenic is often a clue to the presence of gold.) To the best of our knowledge, this is the first demonstration of bedded massive sulfides within the Bonanza sequence of northern Vancouver Island. The existence of such material was postulated in a report by Pearson to Chevron Minerals dated December, 1974, and amplified in a report to Metallgesellschaft dated March, 1978. We believe that this horizon should be traced laterally by geophysical means and, if results of the geophysical survey warrant, tested at depth for the possible presence of copper-zinc-gold-silver ore shoots. Values for the precious metals in a massive sulfide environment are likely to be enhanced with respect to base metal values as compared with those to be found in a porphyry copper environment.

#### 6.0 REGIONAL GEOLOGY

The basement upon which the rocks of northern Vancouver Island were laid down is probably of Middle to Upper Paleozoic Age. At the time of deposition, the landmass, which now makes up Vancouver Island, was located in the equatorial regions of the Pacific Ocean. It consisted of felsic to basic volcanics deposited in a submarine environment. The very important copper-zinc-gold-silver ore bodies at Western Mines' Buttle Lake operations were developed within this sequence.

In Upper Triassic time (about 200 million years ago), these basement rocks were covered by a series of pillow lavas and flows largely of basaltic composition. Total thicknesses extruded probably exceed 2400 metres. These rocks are known today as the Karmutsen Formation.

Following this period of basaltic volcanism, carbonate rocks (the Quatsino Limestone) accumulated to thicknesses of about 300 metres, although a much thinner section appears to be the rule north of Holberg Inlet. Of importance from an economic standpoint is the correlation between the Karmutsen – Quatsino section of Vancouver Island and the Nikolai Greenstone – Chitistone Limestone section of southeastern Alaska, both of which are part of the same Central Pacific terrane. The Nikolai, like the Karmutsen, is considerably enriched in copper as compared with the average basalt. The Chitistone Limestone was host to the very high-grade Kennecott Copper deposit, which was apparently derived by re-concentration of the much lower-grade copper disseminated through large volumes of Nikolai rock.

Above the Quatsino Formation there is generally found a clastic section of which appears to be of slightly different age and of varying composition in different parts of northern Vancouver Island. Depending on age, composition and location, it is known as the Parson Bay Formation or the Harbledown Formation. The Parson Bay is somewhat calcareous and of upper-most Triassic age while the Harbledown is more argillitic and of lower-most Jurassic age. Above the sedimentary section are the Jurassic Bonanza Volcanics, an assemblage of flows, tuffs and fragmentals largely of andesitic composition, but with minor basaltic and rhyodacitic sections.

During and after eruption of the Bonanza Volcanics, granitic bodies were emplaced within the Karmutsen-Quatsino-Bonanza sequence. These bodies ranged in size from dykes and small plugs to masses of batholithic proportions. Some of these intrusives formed the underground reservoirs, which broke through to surface to deposit the Bonanza Volcanics.

Reaction between these very hot, high-level vent zones and circulating groundwater and seawater led to the development of numerous zones of highly altered rock, within or adjacent to which are copper-gold-molybdenum deposits. The alteration zones are generally characterized by the presence of large amounts of silica, clay minerals, pyrite, pyrophyllite and laumontite. Of the various alteration zones, perhaps 90% are located in the belt immediately north of Rupert and Holberg Inlets particularly in the vicinity of the PEM100 Quarry and Pemberton Hills, which are covered by the Apple Bay and Jody Claims.

At some time during the latter part of the Jurassic, following a long period of northward drift, the Vancouver Island – Queen Charlotte Islands – Southeast Alaska terrane, apparently somewhat fragmented, collided with and fused to the North American Continent. Following this accretion, and a general elevation of the landscape probably

caused related to the mechanics of collision, highland portions of the terrane were eroded into basinal areas, forming continental transgressive sandstones of Cretaceous age, which included numerous coal measures, those of the Nanaimo basin being most notable. One of the small basins of sandstone extends from the western edge of the Island Copper Mill area to the vicinity of Apple Bay, which lies to the east of the claims. Since the deposition of these various sandstones, there has been minor volcanic and intrusive activity on the island.

Comprehensive geological mapping of Northern Vancouver Island was carried out during the late 1960's, the bulk of it by Dr. Jan Muller of the Geological Survey of Canada with major assistance by Dr. Kenneth Northcote of the B.C. Department of Mines. The results of their mapping are summarized on G.S.C. Map 1552A. More recently, mapping was carried out on map sheets NTS 97L/12 and 92L/11W by Hammock, J. L. et. al in the 1990's. The results of this work, which was produced by the Geological Survey Branch of the British Columbia government is available in both digital and hard copy formats.

#### 7.0 PROPERTY GEOLOGY and CHALKY GEYSERITE

#### 7.1 Geology and Alteration

Geological mapping and diamond drilling on the Apple Bay Project indicates that the area extending northwest from the PEM100 Quarry to and including the Pemberton Hills is underlain by a series of large-scale extrusive rhyolite dome. These rhyolite domes are made up of both flow banded and coarse pyroclastic units containing differing  $Al_2O_3$  contents. These units form steep bluffy knobs on the property and blocky talus fans occur at the base of the bluffs.

The introduction of intrusive granitic rocks into the Bonanza Volcanics created high level vent zones, which along with heated ground water, strongly altered the rhyolitic rocks with the introduction of silica and clay minerals. Late stage intense acid sulphide and advanced argillic alteration occurred throughout the entire system.

Geological mapping and drill core logging indicate that an intensely altered 20-35 metres thick section of rhyolite (identified as white chalky geyserite) overlies a unit of less altered rhyolitic breccia. the white chalky geyserite is of primary economic interest because of its silica and alumina content. The white chalky geyserite is made up of interbedded units of flow banded rhyolite and coarse pyroclastic (fragmented) rocks. These units are described below:

- 1) Flow Banded White Chalky Geyserite
  - Fine-grained matrix with weak to pronounced flow banding.
  - some flow folding is present as shown by convoluted bands.
  - flow banding often exhibits welded texture.
  - limonite staining is common and flow banded sections often appears to contain more kaolinite alteration than the more siliceous fragmented units.
  - · occasionally flow top brecciation is observed.
- 2) Fragmental White Chalky Geyserite (Breccia)
  - often intensely silicified matrix with chalky clay (argillic) altered fragments.
  - More strongly silicified fragment appears to be found near flow-bonded units. Some fragments appear to be partially digested.
  - fragments can be >10 cm in diameter and can vary from rounded to angular in shape.
  - fragments sometimes appear to be flattened into elongated shapes.

The fragmented rhyolitic (breccia) that underlies the white chalky geyserite is described below:

- 1) Less Altered Fragmented Rhyolite
  - · unit is medium green coloured.
  - fragments are fine grained, closely packed in a dark grey matrix
  - minor fine-grained pyrite along fractures possibly associated with some yellowish alunite alteration.
  - some fragments are kaolinized but are not bleached out.

Diamond drilling identified two areas that contained sufficient geological potential and grade projection to warrant a statistical analysis of reserves. This work is documented in Section and Plan maps and data tables prepared using computer smoothing

techniques by Nilsson (2000). A summary of the geyserite potential is approximated by manual method as outlined below:

#### Area A (Surrounding PEM100 Quarry)

Drill holes 1 - 6, 9, 13 and 19 used

The thicknesses of geyserite in each hole were averaged to produce a minimum thickness of 25.06m.

#### Area B (150m NW of Area A)

Drill holes 15 and 17 used

The thicknesses of geyserite in each hole was averaged to produce a minimum thickness of 21.34m.

Using a specific gravity of 2.6 tonnes per cubic metre for geyserite, the potential of chalky geyserite is estimated to be:

Geological Potential: Area A 60,000 m<sup>2</sup> x 25.06m thickness x 2.6 tonne/m<sup>3</sup> = 4 million tonnes grading 83.66% SiO<sub>2</sub>, 12.49% Al<sub>2</sub>O<sub>3</sub> and 0.09% SO<sub>3</sub>

Geological Potential: Area B 20,000 m<sup>2</sup> x 21.34m thickness x 2.6 tonne/m<sup>3</sup> = 1.11 million tonnes grading 81.89% SiO<sub>2</sub>, 14.33% Al<sub>2</sub>O<sub>3</sub> and 0.05% SO<sub>3</sub>

The total Chalky Geyserite Geological Potential is: 5.02 million tonnes grading 83.26% SiO<sub>2</sub>, 12.90% Al<sub>2</sub>O<sub>3</sub> and 0.08% SO<sub>3</sub>

The 150+ metre wide area between Area A and B requires more evaluation by drilling. this area is identified as Area C. Area C has the potential to contribute an additional 4.3 million tonnes to the chalky geyserite potential. An economic evaluation of this potential is recommended using as criteria the current price of a similar material from Sumas Mountain in Abbotsford. It appears that the barging in bulk from Port Hardy or Rupert Inlet is highly competitive with trucking from Sumas Mountain to Mission Loading Facility.

#### 7.2 Diamond Drilling

A total of 24 diamond drillholes were completed on the property between late 1999 and March 2000. In 2003 (January to February, the subject of this report) a further 22 diamond drillholes were completed, refer to Table III. The other 9 geyserite zones have not been drilled to date. Preliminary surface sampling suggests that the other zones have similar distribution of primary rock chemistry.

A typical sample of Chalky geyserite has the following trace elements:

TABLE II

Trace Element Content of Chalky Geyserite

Γ	Мо	Na%	Ni	P	Pb	S%	Sb	Sc	Sr	Ti%	T1	U	V	W
Ī	2	<0.01	1	110	24	0.02	<2	<1	33	<0.01	<10	<10	3	<10

Zn	Ag	As	В	Ва	Be	Bi	Cd	Co	Cr	Cu	Ga	Hg	Mn
<2	0.2	6	<10	60	<0.5	<2	<0.5	<1	12	12	<10	<1	<5

ppm except where shown

TABLE III

Diamond Drill Data

HOLE #	N.	E.	LENGTH	DIP	AZIMUTH	ELEVATION	REMARKS
P170-03-01			13.72 (45)	-70	080	780 ft	Lost in ovb.
P170-03-02			14.33 (47)	-90	000	750 ft	On northside
P170-03-03			23.47 (77')	-90	000	770 ft	On northside
P170-03-04	·		19.51 (64')	-70	350	870 ft.	On northside
P170-03-05			38.10 (125)	-70	360	75 ft	On southside
P170-03-06			37.19 (122)	-70	350	875 ft	On southside
P170-03-07			34.14 (112)	-70	350	875 ft.	On southside
P170-03-08			31.09 (102')	-70	170	875 ft	On southside
		Subtotal	211.55 (694)				
P193-03-01			38.10 (125')	-90	000	880 ft	P193 road
P193-03-02			30.48 (100')	-60	240	870 ft	
		Subtota	al 68.58 (225')				
P194-03-01			62.87 (203')	-90	000	1025 ft	P194 corner
		Subtota	al 62.87 (203')				
PEM100-03-39			15.24 (50)	-60	270	425 ft	On second beach
PEM100-03-40			15.24 (50')	-60	090	425 ft	
PEM100-03-41			15.24 (50')	-60	180	425 ft	
		Subtota	al 45.72 (150')				
WN-M-03-01			20.73 (68)	-90	000	120m	M Zone, east end
WN-M-03-02			16.15 (53)	-70	020	122m	
WN-M-03-03			22.25 (73')	-70	300	122m	
WN-M-03-04			21.64 (71)	-70	300	116m	
WN-M-03-05			15.24 (50')	-70	300	114m	M Zone, west end
		Subtota	al 96.01 (315)				
Beach-03-01			18.29 (60)	-90	000	15m	West side
Beach-03-02			21.95 (72)	-70	300	15m	East side
Beach-03-03			20.42 (67)	-70	180	15m	South side
		Subtota	al 60.66 (199')				
		То	tal Footage = 5	545.39	m = 1,786 ft.		

All drillholes have been completely assayed from the top of the hole to the bottom. Drill logging procedures, core splitting protocol and assaying have been reviewed and found to have been done to a high standard. Most of the assaying was done by the x-ray chemist at the Tilbury Cement Plant in Delta to exact cement industry standards. Check assays were completed with Chemex Labs.

The five holes drilled in the M Zone at the western end of Apple Bay, see figure 3. The drilling intersected a mixed assemblage of intensely altered rhyolite intercalated with less altered rhyolite-dacite containing abundant pyrite.

Three diamond drillholes were completed in the Beach Zone and exhibited an abundance of intensely sericitized and bleached crystal tuff not encountered at the other zones. Hole Beach-03-03 bottomed in a dark green and red volcanic breccia similar to the rock observed in hole APBY-02-38 in the PEM100 Quarry area. An abundance of calcite as breccia filling was noted at 14.92m in hole Beach-03-03.

A portion of the P170 zone was tested by eight short holes near the prominent outcrop of chalky geyserite on Branch Road P170. The first four holes were collared on the north side of the large gully and the last four holes were collared on the south side overlooking the continuation of PEM100 road. Holes P170-03-01 to P170-03-04 encountered geyserite and chalky geyserite above a faulted contact with pyritic tuff. The south side holes bottomed in iron oxide stained geyserite.

Farther west two holes were collared at Branch road P193. Chalky geyserite was the main rock type encountered. A short section of kaolinized intrusive diorite was noted between 17.68m to 26.52m in Hole P193-03-02.

At the hairpin corner near P194 hole P194-03-01 intersected a sericite-pyrite-brown pyrophyllite-kaolin zone between 51.82m and 58.52m.

#### 7.3 Bulk Sample

Three angled diamond drillholes were completed in the PEM100 quarry in the immediate vicinity of the bulk sample excavated in February and March 2003. Results are included in Appendix IV even though assays are not charged on the Statement of Expenditures. Samples of the split core were crushed, ground and prepared in 3 separate samples. The samples were assayed at Chemex Labs, Lehigh Cement and Ash Grove Cement to ascertain the variability in sample preparation and analytical errors.

The location of the bulk sample is shown on Figure 3. Results at the Seattle Cement Plant suggest sample assayed between 11-12% Al<sub>2</sub>O<sub>3</sub> and gave improved throughput in the primary roller mill, superior burning characteristics and high quality cement end products.

#### 8.0 FUTURE PLANS for 2003

Based on experience gained during the pioneering work in 2000 producing 10,000 tonne bulk sample of initial product, the following proposal is envisaged to produce at least 109,000 tonnes between elevation 135m and 115m.

- 1) Limited pioneering on bench level 100m and bench level 110m (immediately above the existing 100m bench established by the Forest Company), continuing south past the partially stripped area prepared in 2000. This will require some minor stripping and moving of overburden.
- 2) Set up jaw crusher in Port Hardy near barge loadout. Pit run material can then be trammed the short distance by bulldozer or rubber tired loader to the truck loading for the trip to Port Hardy.
- 3) Extend the haul road to the southern limit of the chalky geyserite exposure for ease of access to the 100m bench.
- 4) The jaw crusher should be increased to the 36"x48" size. Perhaps the jaw crusher could be co-ordinated with a short head cone crusher.
- 5) The drill pattern will remain at 9'x9' using a 3" hole diameter by Airtrac. Once a wide bench is established in the future, a larger production drill rig delivering a large diameter hole can be employed. The holes will be bottom primed and filled with Anfo. The relatively small wet areas will be carefully monitored and all stick powder used if required.
- 6) The bench height may be slightly less than 40 feet (12.2m) since the main machine moving muck is a Samsung 350-2 tracked excavator with a reach of 37.5 feet.
- 7) The slight acid rock drainage will be mitigated by a system of trenches, swales, ditches and settling ponds at an estimated cost of \$135,000.00

#### 9.0 CONCLUSIONS and RECOMMENDATIONS

Acquisition and preliminary evaluation of the PEM100 Chalky Geyserite and Kaolinite Quarry was undertaken in October 1999 for Homegold Resources, which has entered into an agreement with Electra Gold Ltd. The alumina and silica resource at PEM100 is a source for the raw material requirements of the cement plant operated by Tilbury Cement in Delta, B.C. A 25-35 metre thick Lower Jurassic sequence of intensely silicified and clay altered rhyolite flows and pyroclastic units of the Bonanza Group outcrop along a 320° trend for more than 800 metres from the PEM100 Quarry towards the Pemberton Hills. Electra Gold will concentrate on producing high-grade (>25% Al<sub>2</sub>O<sub>3</sub>), which will be investigated by a diamond drill program in 2001 and initiation of research into the manufacture of commercial kaolinite products.

Two main sub areas of chalky geyserite have been outlined by drilling to date on the PEM100 zone. Area A covers a 60,000m² area around the PEM100 quarry. This 27.77m thick zone contains a geological potential of about 4 million tonnes of geyserite grading approximately 83.66% SiO<sub>2</sub>, 12.49% Al<sub>2</sub>O<sub>3</sub> and 0.09% SO<sub>3</sub>. Area B is located approximately 150 metres northwest of Area A and it covers a 20,000m² area in a saddle between to Wann Knobs. The 21.34m thick Area B zone contains a geological potential of about 1.11 million tonnes of material grading approximately 81.84% SiO<sub>2</sub>, 14.33% Al<sub>2</sub>O<sub>3</sub> and 0.05% SO<sub>3</sub>. The total geological potential of both Area A and B is about 5 million tonnes grading 83.26% SiO<sub>2</sub>, 12.90% Al<sub>2</sub>O<sub>3</sub> and 0.08% SO<sub>3</sub>.

An area of approximately 8 hectares will be required to be cleared for the initial quarry development. Environmental impacts are expected to be minimal. Several options for reclamation are proposed. The initial open cut of about 5 million tonnes is expected to be sufficient for the cement plant's requirements for about 30 years.

Approximately 9400 tonnes of chalky geyserite were drilled and blasted in 2000 on the initial pioneer bench at 100m elevation. This material was barged to the cement plant for an industrial trial.

Diamond drilling in 2003 consisted of 22 holes totalling 1,786 feet of core located in the M Zone, Beach Zone, PEM1090 Zone, P170 Zone and the P190 area.

\ (// /

Illy submitted.

J. T. Shearer, M.Sc., P.Geo. Consulting Geologist

June 10, 2003

#### 9.1 Cost Estimate for Future Work

#### Phase I

Diamond Drilling, Geological Mapping, Research into Specific Products

Geological mapping and property n	naintenance	\$ 18,000.00
Diamond drilling, 400m @ \$82.50 p	er metre	33,000.00
Supervision, mob & demob, Core s	plitting	3,000.00
Analytical		6,000.00
Mapping, Report preparation, word	processing	5,000.00
Product research and production		 35,000.00
	Total Phase I	\$ 100.000.00

#### Phase II

Follow up Diamond Drilling, Quarry Design, Detail Sampling, Product Optimization

Geological Supervision		\$	12,000.00
Diamond drilling, 600m@\$82.50 per m	etre		49,500.00
Supervision, mob & demob, Core splitting	ıg		4,000.00
Analytical			8,000.00
Quarry design			15,000.00
Product Optimization			61,500.00
Tota	al Phase II	\$ :	150,000.00
Tota	al Phase I & II	\$ 2	250,000.00

Respectfully/submitted,

J. T. Shearer, M.Sc., P.Geo. Consulting Geologist June 10, 2003

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# APPENDIX I

## STATEMENT of QUALIFICATIONS

J. T. Shearer, M.Sc., P.Geo.

June 10, 2003

# Appendix I STATEMENT OF QUALIFICATIONS

I, JOHAN T. SHEARER, of 1817 Greenmount Avenue, in the City of Port Coquitlam, in the Province of British Columbia, do hereby certify:

- 1. I am a graduate of the University of British Columbia (B.Sc., 1973) in Honours Geology, and the University of London, Imperial College (M.Sc., 1977).
- 2. I have over 25 years experience in exploration for base and precious metals and industrial mineral commodities in the Cordillera of Western North America with such companies as McIntyre Mines Ltd., J.C. Stephen Explorations Ltd., Carolin Mines Ltd. and TRM Engineering Ltd.
- 3. I am a fellow in good standing of the Geological Association of Canada (Fellow No. F439) and I am a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (Member No. 19,279).
- 4. I am an independent consulting geologist employed since December 1986 by Homegold Resources Ltd. at #5-2330 Tyner St., Port Coquitlam, B.C.
- 5. I am the author of a report entitled "Geological and Diamond Drilling Assessment Report on the Apple Bay Project (PEM100 Chalky Geyserite and P170 & P190 Areas), Holberg Inlet Area, Wanokana Creek Vancouver Island" dated June 10, 2003.
- 6. I have visited the property in September 1999, October 12, November 30 December 15, 1999, and throughout 2000 while development and bulk sampling occurred. I have carried out mapping and sample collection and am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Apple Bay claims by examining in detail the available reports and maps and have discussed previous work with persons knowledgeable of the area.
- 7. I have an Open Pit Supervisor Ticket (#98-3550) for daily supervision duties in the Geyserite Quarry.
- 8. I have an interest in the Apple Bay Claims and own Homegold Resources Ltd.

Dated at Port Coquitlam, British Columbia, this 10th day of June, 2003.

J.T. Shearer, M.Sc., F.G.A.C., P.Geo.

Quarry Supervisor June 10, 2003

# **APPENDIX II**

**Statement of Expenditures** 

June 10, 2003

#### Appendix II STATEMENT of EXPENDITURES APPLE BAY PROJECT January 10, 2003 to March 5, 2003

Wages and Benefits (Homegold Resources Ltd.)	
J.T. Shearer, M.Sc., P.Geo., Quarry Supervisor #98-3550	
28 days @ \$400/day	\$ 11,200.00
Core Splitting, James Nelson	
81.5 hrs @ \$14/hr	1,141.00
Core Splitting, Mike Nelson	·
17.5 hrs @ \$14/hr	245.00
	\$ 12,586.00
GST	881.02
Subtotal Wages	\$ 13,467.02
Expenses	+, /-/ ·
Transportation, Truck Rental, Fully equipped 4x4	
28 days @ \$70/day	1,960.00
Gas	2,200.00
Meals & Food	
Camp (Fully equipped RV)	
28 days @ \$80/day	2,240.00
Detailed Base Maps (Eagle Mapping)	2,110.00
Mine Plan Engineering (J. Nilsson, P. Eng.)	4,000.00
Diamond Drilling (Boisvenu Drilling)	4,000.00
1,792 ft. @ \$20/ft.	35,940.00
Moves, Supplies, Waterline, Consumables	4,000.00
Mob & Demob of Drill	4,500.00
Excavator for Moving Drill & Trail Construction	4,625.00
Mob & Demob of Excavator	800.00
Drill & Blast of Bulk Sample & Explosives,	000.00
3,000 tonnes @ \$2.16/tonne	6,480.00
Truck to Port Hardy, 3000 tonnes @ \$5.10/donne	15,300.00
Crush Sample to Specification, 3,000 tonnes@\$4.65	13,950.00
Load Barge & Barge to Seattle for Processing	13,900.00
3,000 tonnes @ \$7.80/tonne	23,400.00
Radio Rental, 28 days @ \$20/day	560.00
Core Splitter Rental, 28 days @ \$40/day	1,120.00
Report Preparation	2,500.00
Word Processing and Reproduction	2,300.00 1,800.00
word i rocessing and reproduction	1,800.00
GRAND TOTAL A	\$140,249.02
GRAND TOTAL	\$140,249.02
GRAND TOTAL	h
1 X Well	<i>)</i>

# APPENDIX III

**Drill Logs** 

June 10, 2003

### APPLE BAY PROJECT

S	ECTION: <u>P1</u>	70 Zone
N1	r	
	orthing:	
E	asting:	<del></del>
E	levation:	Approx.
Α	zimuth:	000
I	nclination:	-90
G	irid:	No Grid
L	ength (m):	14.33m (47 ft.)
C	ore size:	BQTK
C	Contractor:	Boisvenu Drilling
Γ	orill Type:	<u>Hydraulic Packdril</u>

#### Diamond Drill Log

Drill Hole	survey	
Method:	Brunton	
Azimuth	Dip	Depth
000	-90	Collar
	<u> </u>	<u> </u>
		<del>                                     </del>
		<u> </u>

#### DDH#: P170-03-02

Property:	Apple Bay
NTS:	92L/12W
Claim:	Apple Bay Four
Date Started:	January 25, 2003
Date Complete	d:January 25, 2003
Logged by:	J.T. Shearer,
	M.Sc., P.Geo.

Samples Split (could be combined later)
0-5, 5-10, 10-15, 15-20
20-26.5

Purpose:		Orillholes in P170 Zone, on North Side of Gully orth of Knob at Gully			T
from (m)	to (m)	Description	from/to	width (m)	CaO
0.00	8.15	white to Light GREY GEYSERITE: very siliceous, high silica content, highly fractured at all angles, upper 2 metres are stained a light yellow, yellow gouge at 1.5m, and between 0.98-2.13m. Slightly darker light grey below 3.10m with short intervals with fewer fractures, fractures mainly at 20° to 30° to core axis, more vuggy intervals.  Reddish-brown iron oxide stain becomes prominent at 4.57m to 6.70m.  Heterolithic small fragments are more discernable below 5.49m.  Darker small frags have minor pyrite content and have largely weathered out.  Major fault zone starts at 7.92m to 8.15m, gougy rubble			
8.15	14.33 E.O.H.	HIGHLY PYRITIC LAPILLI ASHFLOW TUFF: Heterolithic angular fragments, pyrite mainlyh as fine grained convoluted matrix, but some fragments are replaced by pyrite banding at 11.10m is 40° to core axis.			
		End of Hole 14.33m (47 ft.)			

### APPLE BAY PROJECT

,			<del></del>			-				
SECTION: P170 Zone			Diamond Drill Log				DDH#: <u>P170-03-03</u>			
Azimuth:         000           Inclination:         -90           Grid:         No           Length (m):         23.4		90 No Grid 3.47m (77 ft) BQTK	Drill Hole survey  Method: Brunton  Azimuth Dip Depth  000 -90 Collar			Logg	Apple Bay  92L/12W  Apple Bay Four  January 25, 2003  d:January 26, 2003  J.T. Shearer,  M.Sc., P.Geo.			
Contract Drill Type	e: <u>H</u>	oisvenu Drilling ydraulic Packdrill Diamond Drillholes	on P170 Zone,	, Above No	rth Knob	later) 0-5,		10-15		ıed
from (m)	to (m)		Desc	cription			from/	to	width	CaC
0.00	7.72	fragmental, extrer siliceous, probabl	nely vuggy wit e high silica co	h 3 to 4mi ontent.	n diameter vi	ıgs, very				
<u> </u>		Red to purple iron more chalky appe Rubbly core at 5.2	arance at 0.06			, graduai				
		Gouge at 2.13m to More gouge and F Brecciated lower	o 2.44m 'eO layers at 6	.45m						
7.72	15.98	DARK GREY GEYSERITE: finely fragmental very hard, very siliceous, low pyrite content generally.  Minor bleaching along fractures 10.36m-15.24m.								
15.98		HIGHLY PYRITIO				grey				

SECTION: P170 Zone		Diamond Drill Log			DDH#: <u>P170-03-04</u>		
Northing: Easting: Elevation:	Aprox. 870 ft.	Drill Hole s Method: _ Azimuth	urvey <u>Brunton</u> Dip	 Depth	Property: NTS: Claim:	Apple Bay 92L/12W Apple Bay Five	
Azimuth: Inclination: Grid: Length (m): Core size:	350 -70 No Grid 19.51m (64 ft.) BOTK	350	-70	Collar	Date Started:	January 26, 2003 d:January 27, 2003 J.T. Shearer, M.Sc., P.Geo.	
Contractor: Drill Type:	Boisvenu Drilling Hydraulic Packdrill				Samples Split 0-5, 5-10, down to 50 ft.	then at 5' intervals	

from	to	Description	from/to	width	Cac
(m)	(m)			(m)	%
0.00	1.37	WHITE KAOLINITIC and PYRITIC GOUGE ZONE: soft, sticky,			
		white gouge zones intermixed with dark grey very pyritic gouge			
		Minor crystalline pyrite and pyrite filled veinlets in the less gouge			
		rich dark grey dacite at 70° to core axis			ļ
		Rubbly lower contact			<del> </del>
1.37	10.67	IRON OXIDE STAINED SILICEOUS GEYSERITE: well developed			
		vugs throughout, very fine grained, subrounded siliceous			
		fragments average 1 to 2mm across			ļ
		Short gouge sections highly stained by iron oxides around 3.05m			
		Kaolinite patches at 5.18 associated with hematite films, fine			
		grained matrix gradually becomes darker.			
10.67	13.41	IRON OXIDE STAINED FAULT ZONE: original textures masked			
		by iron staining, highly fractured geyserite, Only sand recovered			
		between 12.19m-13.41m.	<u></u>		<del> </del>
13.41	19.51	HIGHLY PIRITIC DACITE TUFF BRECCIA: mostly light grey,			
	E.O.H.	pyrite fills or replaces all interfragment space, some heavy pyrite			
		is lightly banded, white lithophase fragments occur at 17.37m,			
		white greasy alumite filling large vug in bleached zone at 16.90m-			
		16.99m.	. =.		
		End of Hole 19.51m (65 ft.)			
<del></del>	ļ <del></del>			+	<del> </del>

SECTION: _	P17	70 Zone South	Diamond l	Drill Log		DDH#	: <u>P170</u> -	03-05	
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m): Core size: Contractor: Drill Type:	36 -7 No 38 Boi		Drill Hole s Method: Azimuth  360	Brunton Dip -70	Depth Collar	Property: NTS: Claim: Date Started Date Comple Logged by:  Samples Spi 0-5, 5-10 in 5' interval	92 Ap I: Jan eted:Jan J.T. M.Se it	Shearer, c., P.Geo.	003
Purpose:									
from (m)	to (m)		Desc	cription		fro	m/to	width (m)	C
0.00 7.4	42	DARK GREY GEY	SERITE CRY	STAL TUF	F BRECCIA: v	ellowish		1 1	<del>                                     </del>

	ı <del></del>			T	
from (m)	to (m)	Description	from/to	width (m)	CaO %
0.00	7.42	DARK GREY GEYSERITE CRYSTAL TUFF BRECCIA: yellowish			
		crystal shards, very siliceous unit, normal extremely vuggy			
		throughout with small 1-3mm diameter vugs, very strong iron			
		oxides down to 1.52m, iron oxides on fractures down to			
( )	,	Some larger flattened fragments up to 10mm in length at 3.96m			
		Crush zone from 4.10-4.88 at approximately 30° to core axis,			
		some MnO staining.			}
		Small angular yellowish fragments prominent at 5.15m			1
		Dark grey matrix gradually changes to even more siliceous			
		whitish matrix, crystal content is less with prominent light grey			
		subrounded fragments			
7.42	38.10	VERY SILICEOUS GEYSERITE BRECCIA: highly fractured			
	E.O.H.	throughout, close packed fragments, internal iron staining of			
		fractures, very vuggy in places.			
		Some of the larger fragments (over 10mm) are bleached,			
		Iron oxide filled crush zonez occur at 15.24m and 10.05m-		ĺ	
		19.36m and 22.56m-22.95m - possibly the original interfragment			
	ļ	"matrix" has leached out.			
		Below 24.70m some of the fragments are stained yellow rather			
		than bleached,			
		Major fractures at 27.74m is subparallel to core axis, encrusted			
		with dark brown iron oxides, iron oxides are open space filling			
		with boxwork and ropy structure, fractures extend down to			
		33.22m (5.50m)			
		Chalky appearance between 34.75m-35.97m, gougy appearance			
		as well, very brecciated in brown matrix, last 2m of hole.			
		End of Hole 38.10m (125 ft.)		······································	<del></del>
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SECTION:	P170 Zone	Diamond I	Orill Log		DDH#: j	P170-03-06
Northing: Easting: Elevation:	Approx. 875 ft.	Drill Hole s Method: Azimuth	urvey <u>Brunton</u> Dip	 Depth	Property: NTS: Claim:	Apple Bay 92L/12W Apple Bay Four
Azimuth: Inclination: Grid: Length (m): Core size:	350 -70 No Grid 37.19m (122 ft.) BQTK	350	-70	Collar	Date Started: Date Complete Logged by:	January 29, 2003 d:January 30, 2003 J.T. Shearer, M.Sc., P.Geo.
Contractor: Drill Type:	Boisvenu Drilling Hydraulic Packdrill					10-15, 15-20, 5' intervals down to 64.5-85'

Purpose:	Initial Holes to Investigate Chalky Part of Southern P170 Area									
from (m)	to (m)	Description Collared in Bedrock	from/to	width (m)	CaO %					
0.00	19.66	IRON IXIDE STAINED VERY SILICEOUS GEYSERITE		()						
0.00	19.00	BRECCIA: yellowish-brown stained with iron oxides, extremely								
		vuggy, highly fractured with fractures at all angles								
		Mainly light to dark grey angular to subrounded fragments, close								
/ \		packed averaging about 8mm in length.								
igcup		Occasional bright yellow fragment		1						
ļ		Concentration of dark unaltered dark matrix between 6.10m to								
		6.49m								
		Brick red iron oxides common between 10.30m down to 14.60m								
į		Chalky intervals appear at 17.00m but liht and dark grey breccia								
		is the main rock type								
		Lower contact gradational over 15 to 20 cm								
19.66	25.91	CHALKY GEYSERITE: finer fragmental, no flow laminations are								
		discernable, highly vuggy with small less than 1mm vugs, light								
		brownish more uniform colour throughout, no dark iron oxide								
		staining.								
		Still relatively siliceous overall,								
		Trace of pyrite fragments								
		Gradational lower contact								
25.91	37.19	IRON OXIDE STAINED GEYSERITE: slightly coarser fragments								
	E.O.H.	on average, light and dark grey, abundance of light yellow			1					
		coloured fragments up to 4mm across			1					
		Many fragments are subrounded								
		Minor chalky appearing intervals at 30.78m								
		Large angular white "rhyolite" fragments up to 25mm in lenth are								
-	••	prominent against a darker grey matrix.		+						
		End of Hole 37.19m (122 ft.)								
<del></del>										

SECTION:	P170 Zone
Northing:	
Easting:	
Elevation:	<u> Approx 875 ft.</u>
Azimuth:	_350
Inclination:	70
Grid:	No Grid
Length (m):	34.14m (112 ft.)
Core size:	BOTK
Contractor:	Boisvenu Drilling
Drill Type:	Hydraulic Packdrill

Drill Hole s	survey	
Method:	Brunton	
Azimuth	Dip	Depth
350	-70	Collar
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Diamond Drill Log

Property: Apple Bay
NTS: 92L/12W
Claim: Apple Bay Four
Date Started: January 30, 2003
Logged by: J.T. Shearer,

DDH#: P170-03-07

M.Sc., P.Geo.

Samples Split 18-25, 25-30, 30-35, and down at 5' intervals to 110-115, 115-122

Purpose	Initial I	Holes on South Part of P170 Knolls to the East			
from (m)	to (m)	Description	from/to	width (m)	CaO %
0.00	5.49	NO CORE: overburden, going down along almost vertical cliff face			
5.49	10.97	TUFFACEOUS GEYSERITE: unusual mottled texture, not breccia and not flow laminated, medium grey almost purplish, minor indistinct small fragments, More siliceous toward lower part of interval, Highly fractured for last 1.5m			
		Lower contact sharp along minor fracture zone			
10.97	13.68	IRON OXIDE STAINED GEYSERITE FINE BRECCIA: highly vuggy, bleached appearance, some chalky sections in upper part of interval, punky at upper contact			
13.68	20.42	siliceous iron oxide stained geyserite fragmental: extremely vuggy, well fractured at mainly 60° to core axis, dark brown iron oxide staining on fractures Intense iron oxide at 17.68m possible FeO gouge Gradational lower contact			
20.42	23.77	SLIGHTLY MORE CHALKY GEYSERITE: only minor iron oxide staining, broken surfaces exhibit a more chalky appearance, however, still no flow laminations present, rock is finely fragmental, Core more broken than above or below			
23.77	28.04	LIGHT GREEN DACITIC TUFF: very fine grained, highly siliceous, vuggy, highly fractured, light green overall colour but masked by iron oxide staining, fractures coated with iron oxides.			
28.04	31.09	CHALKY GEYSERITE: whitish, fine grained, only 50% core recover, some large siliceous fragments withing the chalky matrix, vuggy Soft white kaolinite appears to have replaced fragments at 29.87 but within a "wispy" pattern			
31.09	33.53	SILICEOUS LIGHT GREY GEYSERITE: only 50% core recovery, vuggy very fine grained, dark brown iron oxide stained, cores well, yellowish soft material filling small vugs			
33.53	34.14 E.O.H.	CHALKY GEYSERITE: soft gougy, possible fault zone at End of Hole, very poor core recovery, rubbly core			
		End of Hole 34.14m (112 ft.)			

SECTION:	P170 Zone	Diamond I	Orill Log		DDH#: _	P170-03-08
Northing: Easting: Elevation:	Approx 875 ft.	Drill Hole s Method: _ Azimuth	urvey Brunton Dip	 Depth	Property: NTS: Claim:	Apple Bay Project 92L/12W Apple Bay Four
Azimuth: Inclination: Grid: Length (m): Core size:	170 -70 No Grid 31.09m (102 ft.) BSTK	170	-70	Collar	Date Started: Date Complete Logged by:	February 1, 2003 ed:February 1, 2003 J.T. Shearer, M.Sc., P.Geo.
Contractor: Drill Type:	Boisvenu Drilling Hydraulic Packdrill				Samples Split: 19-29, 29-39 then gap and : 82-91, 91-96	, 39-48, 48-56

Purpose:	Initial	Holes in the P170 Zone on the Southeast Knobs			τ
from (m)	to (m)	Description	from/to	width (m)	Ca(
0.00	5.79	NO CORE: overburden, soft till and boulders of Karmutsen Vole			
5.79	8.84	WHITE WEATHERING, IRON OXIDE STAINED BLEACHED GEYSERITE: traces of dark grey less altered and bleached material at 695m, fine grained, finely brecciated, core very broken and rubble between 8.84m – 9.45m Probable fault zone			
8.84	14.63	VARIABLY ALTERED PYRITIC DACITIC TUFF BRECCIA: intense pyrite mainly around breccia fragments, variable light grey with dark as a result of variable leaching, short vuggy 13,56m-13.82m highly leached white kaolin			
14.63	17.07	MAINLY WHITE HIGHLY LEACHED GEYSERITE: sections from 15.85m-16.61m is like swiss cheese, completely leached, some leached parts have remmanent straie suggesting a blade-like crystal has been removed Gradational lower contact over 10cm.			
17.07	24.99	MAINLY HIGHLY PYRITIC DACITE TUFF: dark grey in colour, minor slightly leached sections Laminations at 18.15m is at 38° to core axis, laminated section is 35mm in width White leached section from 18.90m-19.56m Sulfide-rich gouge-fault between 19.90m-20.22m shearing orientation appears to be at less than 10° to core axis Short white leached zone 22.10m-22.45m sheared at lower contact, Slickensides 22.70m at 20° to core axis within a laminated interval above coarse angular fragments			
24.99	29.26	LEACHED WHITE GEYSERITE: very vuggy, some short less altered and leached zones, breccia fragments relict but distinct, iron stained throughout, increase in pyrite content near lower contact  Lower contact gradational over about 10cm			
9.26	31.09 E.O.H.	DARK GREY UNIFORM HIGHLY PYRITIC DACITE TUFF: high pyrite content throughout, minor larger fragments near bottom of hole			
		End of Hole 31.09m (102 FT.)			

SECTION: _	P193 Zone	Diamond I	rill Log		DDH#: _	P193-03-01
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m):	Approx 880 ft. 000 -90 No Grid 38.10m (125 ft.)	Drill Hole s Method: Azimuth  000	Brunton Dip -90	Depth Collar	Property: NTS: Claim: Date Started: Date Complete Logged by:	Apple Bay Project 92L/12W Apple Bay Five February 2, 2003 d:February 3, 2003 J.T. Shearer, M.Sc., P.Geo.
Core size: Contractor: Drill Type:	BOTK Boisvenu Drilling Hydraulic Packdrill				Samples Split: 0-5, 5-10, down in 5' inte	10-20, 20-25

Purpose	Initial	hole on P193 Zone at East End of Spur Road			<del></del>
from (m)	to (m)	Description	from/to	width (m)	Al <sub>2</sub> O
0.00	3.60	DARK GREY to LIGHT GREY (WHITE) SILICEOUS GEYSRITE: white to light grey bleaching occurs along fractures and over about half of the interval bleaches the entire rock Iron oxides on most fractures, some pyrite in darkest grey short intervals but appears minor overall			
.60	22.86	HIGHLY LEACHED CHALKY GEYSERITE BRECCIA: intensely iron oxide stained, mostly soft throughout, white lenses common, pure white lenses of kaolinite developed within the rock, white mineral is quite sticky, very soft, greasy Medium grey rhyolite fragment are not leached only the surrounding matrix Short less altered pyritic sections occur throughout, the largest pyritic section is 10.35m-10.65m Entire section is gougy – core recovery 60-80%, Driller reports supposed cavities and very soft material which was not able to be recovered – perhaps gouge Rubbly core 12.20m-12.80m Rubbly core continues down to 21.34m Core recovery very low, Driller report pressure on float, apparently very soft material not being recovered Core recovery 40-45 – 60% 45-50 – 40% 50-55 – 70% 55-60 – 55% 60-65 – 45% 65-70 – 30% 70-75 – 60% Soft white kaolinite (dickite) throughout interval, entire interval is extremely iron oxide stained, very fractured			
22.86	26.53	VARIABLE GREY DACITIC WELDED TUFF BRECCIA: very pyritic, pyrite filling the interstitial space between breccia fragments, many round varioles present often rimmed by pyrite Minor white leached zones up to 3 cm wide centred around 70°-80° to the core axis fractures  Gradually the leached sections become dominant			

 SECTION:
 P193 Zone
 Page:
 2 of 2
 DDH#:
 P193-03-01

from (m)	to (m)	Description	from/to	width (m)	CaC
29.52	37.09	VERY IRON OXIDE STAINED, HIGHLY LEACHED CHALKY			
	 	GEYSERITE: iron oxides are distributed all through the rock			1
		mass, convoluted iron oxide banding from parallel to core axis to			
		80° to core axis, white kaolinite disseminat3ed throughout			
		Mainly soft, general tuffaceous appearance, core recovery around			
	ĺ	50%, soft material being washed out.			
37.09	37.60	PYRITIC DACITIC TUFF: remmenant, dark grey, intercalated			
		withrusty-chalky intervals, variably oxidized, fractures mainly at			
	}	80° to core axis about 55% core recovery			
37.60	38.10	VERY IRON OXIDE STAINED LEACHED CHALKY GEYSERITE:			
	E.O.H.	yellowish brown, gouge rich, white kaolin abundant throughout,			İ
		about 60% core recovery, gouge at the bottom of hole.			
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		End of Hole 38.10m (125 ft)			-
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ECTION:	P193 Zone	Diamond l	Drill Log		DDH#:	P193-03-02
Northing: Easting: Elevation:	Approx. 870 ft.	Drill Hole s Method: _ Azimuth	urvey Brunton Dip	 Depth	Property: NTS: Claim:	Apple Bay Project 92L/12W Apple Bay Five
Azimuth: Inclination: Grid: Length (m): Core size:	240 -60 No Grid 30.48m (100 ft.) BOTK	250	-60	Collar	Date Started:	February 3, 2003 d:February 4, 2003 J.T. Shearer, M.Sc., P.Geo.
Contractor: Drill Type:	Boisvenu Drilling Hydraulic Packdrill				·	, 20-28, 28-38* , 58-70, 70-80
Purpose: C	On West Side of P193 Zone	e, Near P190 I	Right o Wa	y, Excavator Ti	rench	

from	to	Description	from/to	width	CaC
(m)	(m)			(m)	%
0.00	3.05	PURPLE STAINED DACITIC TUFF BRECCIA: very siliceous, crowded fragments			
3.05	6.71	RUSTY SAND with PEBBLES of DACITIC TUFF and PYRITIC GEYSERITE: very siliceous			
<del>ق.71</del>	8.53	DARK GREY PRYITIC GOUGE: very soft, greasy, abundant white flecks (kaolin?) throughout			
8.53	11.58	white KAOLIN GOUGE: soft, greasy, white with some iron staining, brown gouge near end of interval, very rusty at lower contact dark brown red for 3 cm.			
11.58	17.68	DARK GREY PYRITIC GOUGE: very soft, entirely crushed interval Assay for Gold Occasionally there are white zones such as at 16.15m			
17.68	26.52	kaolinized intrusive diorite: disseminated pyrite throughout, plagioclase phenocrysts are mostly greenish in colour Assay for Gold Some pyrite is within the altered plagioclase crystals which are fractured, Minor pyrite along fractures at 40° to core axis at 24.99m  Lower section is grey pyritic gouge	·		
26.52	28.65	<b>GREY GOUGE</b> : uniform grey, very fine grained, only slightly pyritic.	-		
28.65	30.48 E.O.H.	<b>KAOLINIZED INTRUSIVE DIORITE</b> : disseminated diorite throughout, fractures are 80° to core axis, gouge along fractures as low as 40° to core axis, some 1mm miaoditic cavities near end of hole			
<u> </u>		End of Hole 30.48m (100 ft.)			

CECTION: _	P194 Zone	Diamond I	Prili Log	
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m):	Approx 1025 ft. 000 -90 No Grid 62.87m (203 ft.)	Drill Hole s Method: Azimuth	urvey Brunton Dip -90	Depth Collar
Core size: Contractor: Drill Type:	BOTK Boisvenu Drilling Hydraulic Packdrill			

Property: Apple Bay Project
NTS: 92L/12W
Claim: Apple Bay Five
Date Started: February 4, 2003
Date Completed: February 6, 2003
Logged by: J.T. Shearer,
M.Sc., P.Geo.

DDH#: P194-03-01

Samples Split: 24-30, 30-40, 40-50, 50-60, 60-70, 70-78, (78-89 pyrite) 89-100,100-110, 110-120, down in 10 ft. intervals to 170, 170-175, 175-180, 180-185 to 200

	MINFI	LE 308 - "silicified breccia at 285 trend containing pyrophyllite, sericite	, ca ciay		T
from (m)	to (m)	Description	From/to	width (m)	CaC
0.00	7.32	NO CORE: Road Fill, corner overburden			
7.32	14.02	PYRITIC DACITIC TUFF: dark grey, minor disseminated pyrite throughout, very faulted, dark grey gouge very common Prominent gouge zones: 9.14m-11.89m, 13.11m-14.02m Lower contact thin layer of white gouge			
14.02	23.77	BLEACHED DACITIC GEYSERITE: iron stained buff to yellow, vuggy, White gouge zone at 18.29m – apparently fracture controlled, very kaolinized for about 2 cm, core rubbly, phenocrysts kaolinized for another 2 cm White 50 ft. greasy mineral (kaolin) in vugs at 19.20 and sparsely throughout below Fragments well rounded are more distinct at 20.42 and down			
23.77	27.13	DARK GREY FAULT ZONE - PYRITIC: mostly dark grey gouge associated with disseminated pyrite, white flecks throughout common, short non-gouge interval 26.82m-27.13m			
27.13	32.00	LIGHT GREY to WHITE FRAGMENTAL DACITE-GEYSERITE: white soft greasy mineral (kaolin) replacing many fragments and filling vugs, fragments are usually slightly darker grey Vuggy throughout Intense iron oxide staining 30.78m-32.00m			
32.00	42.98	MEDIUM GREY SILICEOUS GEYSERITE: very vuggy, highly fractured, lots of iron oxide staining, very silica rich Gouge zone – light grey to white gouge, about 35.05m-36.38m highly kaolinized material at end Poor core recovery – 60% Highly fractured with low angle fractures below 36.38m, very iron oxide stained fractures Buff at last 3 metres of interval due to iron oxide staining Lower contact kaolinitic filled fault			

DDH#: P194-03-01 Page: 2 of 2 SECTION: P194 width CaO from/to from to Description (m) (m) % (m) 45.72 KAOLINIZED DARK GREY PYRITIC CRYSTAL TUFF: white 42.98 plagioclase phenocrysts, some sections the crystals are parallel to core axis at 42.59m Rubbly core is common Intense iron oxide stained fracture 45.11m-45.30m then 42 cm section of buff siliceous geyserite to 45.72m 45.72 51.82 GOUGE ZONE: dark grey, sparsely pyritic, has developed in kaolinized crystal tuff Very soft and mushy down to 51.82m SERICIE-PYRITE-BROWN PYROPHYLLITE-KAOLIN ZONE: 58.52 51.82 6.70m core interval of very light grey to whitish soft sericite containing wispy brown bands of pyrophyllite, pyrite disseminated throughout with some small massive lenses, host rock is a tuff breccia-agglomerate Vuggy in part, sericite forms lenses closely associated with pyrophyllite Should be higher K (potassium) Assay for Gold and Silver Slickensides throughout at 35° to 40° to core axis KAOLINIZED and PYRITIZED CRYSTAL TUFF: white flecks of 58.52 60.96 kaolin throughout replacing all plagioclase disseminated pyrite in E.O.H. short sections, rubbly core End of Hole 60.96m (200 ft.)

SECTION: PE	M100 Proto Quarry	Diamond I	Orill Log		DDH#: PEM100-03-39		
Northing: Easting: Elevation:	Approx. 425 ft.	Drill Hole s Method: _ Azimuth	urvey Brunton Dip	 Depth	Property: NTS: Claim:	Apple Bay Project 92L/12W Mining Lease	
Azimuth: Inclination: Grid: Length (m): Core size:	270 -60 Quarry Grid 15.24m (50 ft.) BOTK	270	-60	Collar	Date Started: Date Complete Logged by:	February 7, 2003 d:February 7, 2003 J.T. Shearer, M.Sc., P.Geo.	
Contractor: Drill Type:	Boisvenu Drilling Hydraulic Packdrill				Samples Split: 0-5, 5-10, down to 50ft.	and in 5' intervals	

Purpose:	_	Hole to Fine-tune Grade of Bulk Sample o Holes APBY-99-01, 05 & 06 Near 5 and Toward #4			1
from (m)	to (m)	Description	from/to	width (m)	CaO %
0.00	15.24 E.O.H.	WHITE CHALKY GEYSERITE: fine grained, light grey to white, Subrounded fragments in a flow matrix at 1.22m at 80° to core axis, Minor iron oxide staining White flecks start at 2.00m down to 2.44m and sporadically throughout Slightly greenish tinge at 3.96m down to 10.67m – reflective of a dacitic component, most well developed 30'-35' sample, suggestion of soft sediment formation at 4.47m flow laminated, dacitic interval 9.14m-10.82m Fragments in a flow matrix at 10.82m Rubbly core 12.120m-12.50m – probable open crack to surface, minor smearing of overburden brown clay in fracture. Relatively soft at 13.41m Near 100% core recovery except for 25'-30', which is about 95% core recovery			
		End of Hole 15.24m (50 ft.)			

SECTION: PEM100 Proto Quarry		Diamond Drill Log			DDH#: <u>PEM100-03-40</u>		
Northing: Easting: Elevation:	Approx. 425 ft.	Drill Hole s Method: Azimuth	urvey <u>Brunton</u> Dip	 Depth	Property: NTS: Claim:	Apple Bay Project 92L/12W Mining Lease	
Azimuth: Inclination: Grid: Length (m): Core size:	090 -60 Quarry Grid 15.24m (50 ft.) BQTK	090	-60	Collar	Date Started: Date Complete Logged by:	February 7, 2003 d:February 7, 2003 J.T. Shearer, M.Sc., P.Geo.	
Contractor: Drill Type:	Boisvenu Drilling Hydraulic Packdrill				Samples Split: 0-5, 5-10, down to 50ft.	and in 5' intervals	

Purpose:		Hole to Fine-tune Grade of Bulk Sample o Holes APBY-99-01, 05 & 06			
from (m)	to (m)	Description	from/to	width (m)	CaO %
0.00	9.14	white chalky geyserite: mainly white with some light grey, breccia fragments within a rough flow laminated matrix is common, very chalky appearance Flow laminations at 2.15m is at approximately 75° to core axis,	·		
C		the laminae are somewhat convoluted  Minor clay (overburden filled) filled cracks at 3.66m, 4.57m and 11.58m  Minor pyrite nodules up to 4mm across at 6.71, minor superficial iron oxide staining.  Gradual change toward lower contact over about 0.5m to slightly darker green colour, minor light grey varigation – non calcareous			
9.14	14.02	LIGHT GREEN DACITIC TUFF: light green, fine grained fractures subparallel to core axis coated with iron oxide film, non-calcareous, traces of disseminated pyrite			
14.02	15.24 E.O.H.	white chalky geyserite: distinctly lighter in colour to white, some elongated fragments at 65°-70° to core axis Very soft			
		End of Hole 15.24m (50 ft.)			
· · ·					

SECTION	N: <u>PEM10</u>	00 Proto Quarry	Diamond	Drill Log			DDH#: PE	EM 100-03	3-41			
Northing	<b>:</b>		Drill Hole	survey		Prope	erty:	Apple Bay	y Proj	ect		
Easting:			Method:			NTS:		92L/12V		_		
Elevation	ı: <u>A</u>	pprox. 425 ft.	Azimuth	Dip	Depth	Claim	1:	Mining I	ease	_		
Azimuth:		80	180	-60	Collar	Date	Started: I	February	_	_		
Inclination		60				Date	Completed: February 8, 2003					
Grid:		uarry Grid	—————		<del>                                     </del>			J.T. Shea				
Length (r		5.24m (50 ft.)	<u> </u>	<del></del>		30		M.Sc., P.0				
Core size		BOTK			<del> </del>		_					
Contracte	or: Bo	isvenu Drilling		+		Samp	oles Split:					
Drill Type	e: <u>Hy</u>	draulic Packdrill	<u> </u>	<del>-  </del>		0-5,	5-10, a	and in 5'	interv	rals		
			<del></del>	<del>- }</del>		down	to 50ft.					
			<del></del>		+							
			<u> </u>		<u> </u>							
Purpose:		Hole to Fine-tune C				<del></del>						
	Refer to	o Holes APBY-99-0	1,05 & 05, Ma	uniy Towar	ds APBY-99-01			<u>-</u>				
from	to		Des	cription			from/to	o   w	idth	CaC		
(m)	(m)					****			(m)	%		
0.00	15,24	WHITE CHALKY						Ì				
	1 1,12.	fragments within	a flow laminat	ted "matrix'	, tiny vugs con	nmon,						
	ĺ	Minor iron oxide	staining mino	r overburd	en clay in cracl	cs at		}		1		
1		1.22m, 3.66m ar		i overburd.	ch clay in chack	LS at						
				ark grains	suggestion of t	hin dark						
		outlines around				IIII dark						
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	ew Area "M Zone" Wanokana Mainline	Diamond I	Orill Log		DDH#: _	WN-M-03-01
Northing:		_	Brunton		Property: NTS:	Apple Bay Project 92L/12E + W
Easting:		Azimuth	Dip	Depth	Claim:	Apple Bay One
Elevation:	Approx. 120m	000	-90	Collar	Date Started:	<u>January 20, 2003</u>
Azimuth:	_000				Date Complete	d: <u>January 20, 2003</u>
Inclination:	90				Logged by:	J.T. Shearer,
Grid:	No Grid	<del></del>	<del> </del>			M.Sc., P.Geo.
Length (m):	20.73m (68 ft.)		<u> </u>			
Core size:	BOTK			+	Samples Split:	
Contractor:	Boisvenu Drilling			+	3-10, 10-20,	20-30, 30-40,
Drill Type:	Hydraulic Packdrill				40-50, 50-60	•

Purpose:		Diamond Drillhole to Investigate "m" Zone Geyserite and Chalky Geys	erite		
ł	Far Ea	st End of M Branch Road		1	
from (m)	to (m)	Description	from/to	width (m)	CaO %
0.00	0.91	NO CORE: geyserite, road fill, near outcrop			
0.91	4.10	WHITE VERY VUGGY GEYSERITE: quite chalky at 3.05m, extremely vuggy, highly leached, very fine grained, residual silica Iron oxide staining increase toward lower contact Lower contact gradational			
4.10	20.73 E.O.H.	DARK GREY VERY PYRITIC TUFF BRECCIA: pyrite fills the matrix around subangular to subrounded dark and light fragments, fragments up to 8mm in length.  Leaching variable in upper part – white section between 4.99m-6.28m and then 6.58m-7.04m  Kaolin development variable down to fault zone starting at 8.53  Fault gouge 8.53m-9.75m  Very pyritic down to end of hole, pyrite disseminated throughout but also filling 5° to core axis fractures  These low angle pyrite veinlets (up to15mm wide) have banded kaolin selveges			
		End of Hole 20.73 (68 ft.)			

SECTION: N	ew Area "M Zone <u>"</u>	Diamond D	rill Log		DDH#:	WN-M-03-02
	Wanokana Mainline					
		Drill Hole st	ırvey		Property:	Apple Bay Project
Northing:		Method:	Brunton		NTS:	92L/12E + W
Easting:		Azimuth	Dip	Depth	Claim:	Apple Bay One
Elevation:	Approx. 122m	020	-70	Collar	Date Started:	January 20, 2003
Azimuth:	020				Date Complete	d: <u>January 21, 2003</u>
Inclination:	-70				Logged by:	J.T. Shearer,
Grid:	No Grid					M.Sc., P.Geo.
Length (m):	16.15m (53 ft.)					
Core size:	BOTK	<del> </del>		<del></del>	Samples Split:	
Contractor:	Boisvenu Drilling			+	0-10, 10-20,	20-30, 30-40,
Drill Type:	Hydraulic Packdrill	<del></del>		<del>                                     </del>	40-50	
•		-		-		
		1	1	1		

to (m)	Description ·	from/to	width (m)	CaO %
0.33	WHITE WEATHERING PORPHYRITIC LEACHED TUFF: superficial weather, very rusty fractures, some MnO			
4.88	VERY PYRITIC FELDSPAR PORPHYRITIC TUFF: pyrite enveloping fragments, highly vuggy throughout, very dark Talc-like mineral filling fracture at 4.88m, 10° to core axis, white (perhaps white pyrophyllite?)			
16.15 E.O.H.	"layers" around fragments, vuggy sections common Most of the fragments roughly rimmed by pyrite are more aphanitic than the slightly porphyritic groundmass Soft white mineral filling vugs throughout Less porphyritic below 11.58, but vuggy in rough layers at 30° to core axis Coarse whitish fragments more common below 13.20m			
	End of Hole 16.15m (53 ft.)			
	0.33 4.88 16.15	0.33  WHITE WEATHERING PORPHYRITIC LEACHED TUFF: superficial weather, very rusty fractures, some MnO  4.88  VERY PYRITIC FELDSPAR PORPHYRITIC TUFF: pyrite enveloping fragments, highly vuggy throughout, very dark Talc-like mineral filling fracture at 4.88m, 10° to core axis, white (perhaps white pyrophyllite?)  16.15  FRAGMENTAL LIGHT GREY CRYSTAL TUFF (Dacite?): pyrite "layers" around fragments, vuggy sections common Most of the fragments roughly rimmed by pyrite are more aphanitic than the slightly porphyritic groundmass Soft white mineral filling vugs throughout Less porphyritic below 11.58, but vuggy in rough layers at 30° to core axis Coarse whitish fragments more common below 13.20m	0.33 WHITE WEATHERING PORPHYRITIC LEACHED TUFF: superficial weather, very rusty fractures, some MnO  4.88 VERY PYRITIC FELDSPAR PORPHYRITIC TUFF: pyrite enveloping fragments, highly vuggy throughout, very dark Talc-like mineral filling fracture at 4.88m, 10° to core axis, white (perhaps white pyrophyllite?)  16.15 FRAGMENTAL LIGHT GREY CRYSTAL TUFF (Dacite?): pyrite E.O.H. "layers" around fragments, vuggy sections common Most of the fragments roughly rimmed by pyrite are more aphanitic than the slightly porphyritic groundmass Soft white mineral filling vugs throughout Less porphyritic below 11.58, but vuggy in rough layers at 30° to core axis Coarse whitish fragments more common below 13.20m	0.33 WHITE WEATHERING PORPHYRITIC LEACHED TUFF: superficial weather, very rusty fractures, some MnO  4.88 VERY PYRITIC FELDSPAR PORPHYRITIC TUFF: pyrite enveloping fragments, highly vuggy throughout, very dark Talc-like mineral filling fracture at 4.88m, 10° to core axis, white (perhaps white pyrophyllite?)  16.15 FRAGMENTAL LIGHT GREY CRYSTAL TUFF (Dacite?): pyrite "layers" around fragments, vuggy sections common Most of the fragments roughly rimmed by pyrite are more aphanitic than the slightly porphyritic groundmass Soft white mineral filling vugs throughout Less porphyritic below 11.58, but vuggy in rough layers at 30° to core axis Coarse whitish fragments more common below 13.20m

-	ew Area "M Zone" Wanokana Mainline	Diamond :	Drill Log		DDH#: _	WN-M-03-03
Northing: Easting: Elevation: Azimuth: Inclination: Grid:	Approx. 122m 300 -70 No Grid	Drill Hole s Method: Azimuth	Brunton Dip -70	Depth Collar	Property: NTS: Claim: Date Started: Date Complete Logged by:	Apple Bay Project 92L/12E + W Apple Bay One January 21, 2003 d:January 21, 2003 J.T. Shearer, M.Sc., P.Geo.
Length (m): Core size: Contractor: Drill Type:	22.25m (73 ft.) BOTK Boisvenu Drilling Hydraulic Packdrill				Samples Split: 6-15, 15-25, 45-55, 55-65,	25-35, 35-45, 65-73

Purpose:		Diamond Drillhole to Investigate "M" Zone, Geyserite and Chalky Geys tub Road	erite	1	T -
from (m)	to (m)	Description	from/to	width (m)	CaC
0.00	1.83	NO CORE: rubble, road fill		<u> </u>	
1.83	13.41	SLIGHTLY PORPHYRITIC DARK GREY DACITE: very pyritic in places, dark indistinct rounded fragments occur sparsely throughout, semi-massive sulfides between 8.99m-9.21m White fragment at 12.25m, 6 cm long Lower contact sharp but contorted above a low angle core axis			
13.41	22.25 E.O.H.	PYRITIC HETEROLITIC VOLCANIC BRECCIA: very vuggy throughout, roughly 50% light grey rhyolite fragments and 50% dark rimmed fragments, abundant wispy matrix, soft white mineral (non-effervessing) mineral common filling vugs, possibly massive alunite or luxoxene or kaolinite Small vuggy throughout as well as large vugs Yellowish orange gouge at 14.72m  Broken core, appears at low angle to core axis <10°  Fragments are occasionally elongated parallel to core axis Large dark fragment 20.22m-20.43m at 40° to core axis, generally coarse fragments toward end of hole At bottom of hole core slightly gougy			
		End of Hole 22.25m (73 ft.)			

	/ Area "M Zone" anokana Mainline	Diamond I	rill Log		<b>DDH#:</b> _	WN-M-03-04
Northing: Easting:		Drill Hole s Method: _ Azimuth	urvey <u>Brunton</u> Dip	—— Depth	Property: NTS: Claim:	Apple Bay Project  92L/12E + W  Apple Bay One
Elevation: Azimuth: Inclination: Grid:	Approx. 116m 300 -70 No Grid 21.64m (71 ft.)	300	-70	Collar	Date Started:	January 21, 2003 d:January 21, 2003 J.T. Shearer, M.Sc., P.Geo.
Length (m): Core size: Contractor: Drill Type:	BOTK Boisvenu Drilling Hydraulic Packdrill				Samples Split: 6-16, 16-26, 46-56, 56-66	26-36, 36-46,

Purpose:	1	nd Drillhole to Investigate "M" Zone, Geyserite and Chalky Geyserit Western Part of Branch M Road	e		Ī
from (m)	to (m)	Description	from/to	width (m)	CaO %
0.00	1.83	NO CORE: casing, rubble, road fill			
1.83	4.57	WHITE WEATHERED DACITE: vuggy, rusty Lower contact banded FeO & MnO			
4.57	21.64 E.O.H.	DACITE BRECCIA: very pyritic, large light grey fragments rimmed with thin bands of pyrite Attitude/orientation of breccia fragments quite variable throughout length of hole			
		End of Hole 21.64m (71 ft.)			

	w Area "M Zone" Vanokana Mainline	Diamond I	Orill Log		<b>DDH#:</b> _	WN-M-03-05
Northing: Easting:		Drill Hole s Method: Azimuth	urvey <u>Brunton</u> Dip	 Depth	Property: NTS: Claim:	Apple Bay Project 92L/12E + W Apple Bay One
Elevation: Azimuth: Inclination: Grid: Length (m):	Approx. 114m 300 -70 No Grid 15.24m (50 ft.)	300	-70	Collar	Date Started: Date Complete Logged by:	January 21, 2003 d:January 22, 2003 J.T. Shearer, M.Sc., P.Geo.
Core size: Contractor: Drill Type:	BOTK Boisvenu Drilling Hydraulic Packdrill				Samples Split: 0-10, 10-20, 40-50	20-30, 30-40,

Purpose:		and Drillhole to Investigate "M" Zone, Geyserite and Chalky Geyserite  Western Part of Branch M Road			
from (m)	to (m)	Description	from/to	width (m)	·CaO %
0.00	0.21	WHTIE LEACHED GEYSERITE: abundant iron oxide staining vuggy, leached appearance – surface weathering			
0.21	15.24 E.O.H.	KAOLINIZED LAPILLI TUFF: dark grey, abundant white kaolin flecks, disseminated pyrite throughout,  Minor thin white fractures controlled leaching down to bottom of the hole – usually 3 to4mm wide  The widest leached zone is 5.04m-5.48m – white fracture contol Very vuggy but dark at 12.50m for about 15 cm – pyrite has leached in this section,  Slightly coarser fragments at 13.41m  Rubbly core at end of hole – punky – possible faults	- h Monday-		
		End of Hole 15.24m (50 ft.)			

<u> </u>		<b>51</b>	D 111 W		<b>TATAL</b>	m
SECTION:	Beach Zone	Diamond 1	Drill Log		DDH#:	Beach-03-01
At 51	.8 km on the					
Wand	kana Mainline	Drill Hole s	survey		Property:	Apple Bay
Northing:		Method: _	Brunton		NTS:	92L/12W
Easting:		Azimuth	Dip	Depth	Claim:	Apple Bay Two
Elevation:	Approx 15m	000	-90	Collar	Date Started:	January 22, 2003
Azimuth:	000				Date Complete	d:January 22, 2003
Inclination:	90				Logged by:	J.T. Shearer,
Grid:	No Grid		···			M.Sc., P.Geo.
Length (m):	18.29m (60 ft.)			1		
Core size:	BQTK		-	<del>- </del>	Samples Split:	
Contractor:	Boivenu Drilling			+	6-15, 15-25	, 25-35, 35-45
Drill Type:	Hydraulic Packdrill				45-52, 52-60	
		-		<del>- </del>		
		i		1 1		

Purpose:	Initial	Drillhole Investigation of Road Quarry which Outcrops on the Beach			
from (m)	to (m)	Description	from/to	width (m)	CaO %
0.00	1.83	NO CORE: casing, fill in quarry floor			
1.83	6.84	DARK GREY to GREEN VERY SHEARED VOLCANIC BRECCIA: very soft, disseminated pyrite sparsely throughout, sericitized throughout, crowded breccia fragments are mainly light grey			
		within a dark grey-green matrix,  Numerous short bleached sections 4.63m-5.02m - light grey sericite rich, greenish massive sericite, soapy feel			
6.84	8.24	INTENSELY SERICITIZED and BLEACHED CRYSTAL TUFF: light greenish-grey, crowded relict crystals now completely replaced by soft sericite			
8.24	13.72	DARK GREY SHEARED FINE GRAINED TUFF: quite soft, sheared and sericitized throughout Short bleached and sericite rich zones 9.75m-10.06m, faulting at 30° to core axis at 10.06m			
13.72	18.29 E.O.H.	LIGHT GREYISH GREEN SERICITIZED and BLEACHED CRYSTAL TUFF: vuggy like geyserite, note assay of potassium, very soft friable Minor traces of brown iron oxide rich zones, gouge at 15.54m, purplish colouration over short sections below 15.54m, brown common Apple green sericite on fractures at 17.68m Somewhat gradually darker green in colour toward the end of the hole Minor sparry calcite veinlets at subparallel to core axis between 16.90m to 17.50m			
		End of Hole 18.29m (60 ft.)			
( )	-11				

	Diamond I	rill Log		<b>DD</b> H#: <u>1</u>	Beach-03-02
		5		Property:	Apple Bay
	_		— Depth	NIS: Claim:	92L/12W Apple Bay Two
Approx 15m	300	-70	Collar	Date Started:	January 22, 2003
300				Date Complete	d: <u>January 23, 2003</u>
-70		<del></del>		Logged by:	J.T. Shearer,
No Grid			†		M.Sc., P.Geo.
21.95m (72 ft.)			<del> </del>		
BOTK	<u> </u>		1	Samples Split:	
Boivenu Drilling		<u> </u>	<del> </del>	0-10, 10-20,	20-30, 30-40
Hydraulic Packdrill				40-50, 50-60	end
	300 -70 No Grid 21.95m (72 ft.) BQTK Boivenu Drilling	8 km on the tana Mainline	B km on the	B km on the	B km on the

Purpose	Initial	Drillhole Investigation of Road Quarry which Outcrops on the Beach			
from (m)	to (m)	Description	from/to	width (m)	CaO %
0.00	12.45	LIGHT to MEDIUM GREEN LAMINATED WELDED TUFF: soft, very fine grained, laminations at 4.50m are 35° to core axis giving			
$\bigcirc$		a mottled appearance overall Gouge commond down to 6.0m, very little pyrite			
12.45	15.54	Lower contact somewhat sheared at almost parallel to core axis  LIGHT GREENISH-GREY GEYSERITE: hard, vuggy, still has			
		fragmental-tuffaceous appearance Lower contact highly sheared and faulted at 5° to core axis			
15.54	17.98	GREENISH SOFT DACITIC TUFF: convoluted brown an white laminations at less than 20° to core axis  Very soft throughout			
17.98	21.95 E.O.H.	Overall sheared appearance, soapy - talc-like feel  DARK GREEN DACITE (?): still highly sheared, talcy appearance, brecciated in places			
		End of Hole 21.95m (72 ft.)			

SECTION: _	Beach Zone	Diamond I	Orill Log		DDH#: ]	Beach-03-03
At 51	.8 km on the					
Wand	kana Mainline	Drill Hole s	urvey		Property:	Apple Bay
Northing:		Method: _	Brunton		NTS:	92L/12W
Easting:		Azimuth	Dip	Depth	Claim:	Apple Bay Two
Elevation:	Approx 15m	180	-70	Collar	Date Started:	January 22, 2003
Azimuth:	180				Date Complete	d:January 23, 2003
Inclination:	-70				Logged by:	J.T. Shearer,
Grid:	No Grid			<del>                                     </del>		M.Sc., P.Geo.
Length (m):	20.42m (67 ft.)		<del> </del>	<del></del>		
Core size:	ВОТК	<u> </u>	<del> </del>		Samples Split:	
Contractor:	Boivenu Drilling		<del> </del>	+	0-10, 10-20	20-30, 30-37
Drill Type:	Hydraulic Packdrill		<del> </del>	+	37-45	
·J P +-			<del> </del>	<b></b>		
		Ĺ		<u> </u>		

from (m)	to (m)	Description	from/to ·	width (m)	CaC %
0.00	0.30	DARK GREY FINE GRAINED RHYOLITE "GEYSERITE": very			
		fine grained, minor cleavage flashes of plagioclase (?) very hard.			
,		Highly fractured, stained with iron and manganese oxides		ļ	ļ
ن.30	5.18	LIGHT GREEN RHYOLITE: very fine grained, hard, plagioclase			
	1	pheno throughout, vuggy, iron oxides on fracture surfaces,			
		Trace of veinlets-hairlines filled with clear vitreous mineral, core			]
		rubbly,			<u> </u>
5.18	7.62	FAULT ZONE - medium green gougy chloritic matrix containing			
		angular fragmenst of hard rhyolite			
		Pebbles of dark green slickensided "chlorite" zone, no solid core			<u> </u>
7.62	13.72	LIGHT GREEN APHANITIC RHYOLITE: very rubbly core all			
		through this interval, shearing common			
		Lower contact sheared and chlorite gouge present		<del> </del>	<b>├</b>
13.72	20.42	DARK GREEN and RED VOLCANIC BRECCIA: (like unit at			
	E.O.H.	bottom ofhole APBY-02-38) hematite rimming fragments common			l
		giving a variegated red colour to section, abundant chlorite, well			İ
		fractured			
	İ	Minor bleached sections			
	<u> </u>	Abundant calcite breccia filling at 14.92m for 33 cm		1	
		End of Hole 20.42m (67 ft.)		<del> </del>	

# **APPENDIX IV**

**Assay Certificates** 

June 10, 2003



#### **ALS Chemex EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd. 212 Brooksbank Avenue North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218 o: HOMEGOLD RESOURCES LTD. UNIT #5, 2330 TYNER ST. PORT COQUITLAM BC V3C 2Z1

Page #: 1 13-Mar-2003 Account: MWE

#### **CERTIFICATE VA03005802**

Project: 03-01702

P.O. No:

This report is for 30 PULP samples submitted to our lab in North Vancouver, BC, Canada on 5-Mar-2003.

The following have access to data associated with this certificate: JOE SHEARER .

	SAMPLE PREPARATION	
ALS CODE	DESCRIPTION	
WEI-21	Received Sample Weight	
LOG-24	Pulp Login - Rcd w/o Barcode	

	ANALYTICAL PROCEDU	RES
ALS CODE	DESCRIPTION	INSTRUMENT
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM
S-IR08	Total Sulphur (Leco)	LECO

To: HOMEGOLD RESOURCES LTD. **ATTN: JOE SHEARER** UNIT #5, 2330 TYNER ST. **PORT COQUITLAM BC V3C 2Z1** 

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:



#### **ALS Chemex**

**EXCELLENCE IN ANALYTICAL CHEMISTRY** 

ALS Canada Ltd.

212 Brooksbank Avenue North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218 C: HOMEGOLD RESOURCES LTD. UNIT #5, 2330 TYNER ST. PORT COQUITLAM BC V3C 2Z1

Page #: 2 - A - E es : 2 (A - E

Date: 13-Mar-2003 Account: MWE

Project: 03-01702

CERTIFICATE OF ANALYSIS VA03005802

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt kg 0.02	ME-XRF06 SIO2 % 0.01	ME-XRF06 Al2O3 % 0.01	ME-XRF06 Fe2O3 % 0.01	ME-XRF06 CaO % 0.01	ME-XRF06 MgO % 0.01	ME-XRF06 Na2O % 0.01	ME-XRF06 K20 % 0.01	ME-XRF06 Cr2O3 % 0.01	ME-XRF06 TiO2 % 0.01	ME-XRF06 MnO % 0.01	ME-XRF06 P2O5 % 0.01	ME-XRF06 SrO % 0.01	ME-XRF06 BaO % 0.01	ME-XRF06 LOI % 0.01
P100-03-039-0 - 5		0.12	85.74	8.72	0.38	0.09	<0.01	0.05	0.10	0.01	0.67	<0.01	0.29	0.07	0.17	3.83
P100-03-039-5 - 10		0.12	89.72	5.36	0.65	0.11	0.03	80.0	0.07	0.01	0.68	<0.01	0.26	0.06	0.15	2.51
P100-03-039-10 - 15		0.12	90.02	5.64	0.48	0.12	< 0.01	0.04	0.07	0.01	0.65	<0.01	0.28	0.07	0.14	2.52
P100-03-039-15 - 20		0.12	86.33	7.09	1.20	0.20	0.06	0.08	0.09	0.01	0.57	< 0.01	0.44	0.11	0.24	3.40
P100-03-039-20 - 25		0.10	76.72	14.29	0.85	0.14	0.02	0.09	0.11	0.01	0.76	<0.01	0.34	0.09	0.20	5.82
P100-03-039-25 - 30		0.14	76.43	14.25	1.27	0.15	0.04	0.04	0.08	0.01	0.76	<0.01	0.21	0.06	0.11	5.79
P100-03-039-30 - 35		0.08	80.06	11.11	1.66	0.11	<0.01	0.03	0.09	0.01	0.76	<0.01	0.25	0.07	0.13	4.86
P100-03-039-35 - 40		0.12	80.03	11.66	1.65	0.09	0.01	0.05	0.08	0.01	0.71	<0.01	0.12	0.02	0.07	4.85
P100-03-039-40 - 45		0.12	66.75	21.87	0.29	0.34	0.15	0.04	0.06	<0.01	0.91	<0.01	0.29	80.0	0.16	8.68
P100-03-039-45 - 50		0.12	88.50	6.71	0.34	0.07	<0.01	0.04	0.05	0.01	0.77	<0.01	0.16	0.05	0.08	3.01
P100-03-040-0 - 5		0.10	90.50	5.10	0.20	0.13	<0.01	0.05	0.07	0.01	0.95	<0.01	0.28	0.08	0.14	2.36
P100-03-040-5 - 10		0.10	86.00	7.84	0.18	0.13	<0.01	0.05	0.08	<0.01	1.21	<0.01	0.45	0.12	0.21	3.73
P100-03-040-10 - 15		0.10	81.50	10.31	0.23	0.12	<0.01	0.04	0.07	0.01	1.66	<0.01	0.49	0.11	0.22	4.58
P100-03-040-15 - 20		0.10	90.06	3.42	0.30	0.14	<0.01	0.04	0.06	<0.01	3.64	<0.01	0.45	0.06	0.13	1.68
P100-03-040-20 - 25		0.10	86.50	6.49	0.72	0.13	<0.01	0.02	0.07	<0.01	1.82	<0.01	0.42	0.09	0.21	3.20
P100-03-040-25 - 30		0.12	70.27	17.26	3.25	0.12	0.03	0.06	0.06	<0.01	1.56	<0.01	0.27	0.07	0.11	6.79
P100-03-040-30 - 35		0.10	53.47	24.44	9.30	0.25	0.20	0.06	0.08	<0.01	1.18	0.01	0.50	0.13	0.25	9.77
P100-03-040-35 - 40		0.10	53.71	29.32	3.03	0.18	0.05	0.08	0.11	<0.01	0.84	<0.01	0.43	0.14	0.21	11.60
P100-03-040-40 - 45		0.10	51.70	29.35	5.75	0.15	0.12	0.10	0.09	<0.01	0.78	<0.01	0.33	0.11	0.19	11.15
P100-03-040-45 - 50		0.10	62.00	24.13	2.38	0.16	0.01	0.07	0.06	<0.01	0.86	<0.01	0.31	0.10	0.17	9.49
P100-03-041-0 - 5		0.12	92.17	3.38	0.53	0.10	<0.01	0.10	0.07	0.01	0.89	<0.01	0.35	0.10	0.17	1.85
P100-03-041-5 - 10		0.14	90.50	4.65	0.20	0.08	<0.01	<0.01	0.05	0.01	0.82	<0.01	0.20	0.05	0.10	2.24
P100-03-041-10 - 15		0.12	92.60	3.79	0.23	0.08	<0.01	0.06	0.05	0.02	0.77	<0.01	0.22	0.06	0.12	1.88
P100-03-041-15 - 20		0.12	82.14	10.57	0.23	0.12	< 0.01	0.04	80.0	<0.01	1.13	<0.01	0.38	0.11	0.22	4.62
P100-03-041-20 - 25		0.12	75.44	15.04	0.38	0.14	<0.01	0.10	0.09	0.01	1.12	<0.01	0.49	0.13	0.38	6.38
P100-03-041-25 - 30		0.12	93.00	2.97	0.45	0.05	<0.01	0.01	0.04	0.01	0.99	<0.01	0.16	0.03	0.07	1.54
P100-03-041-30 - 35		0.12	86.01	7.64	0.72	0.11	0.05	0.09	0.05	0.01	1.49	<0.01	0.29	0.06	0.13	3.31
P100-03-041-35 - 40		0.14	59.01	27.06	0.90	0.13	<0.01	0.03	80.0	<0.01	1.12	<0.01	0.37	0.11	0.17	10.60
P100-03-041-40 - 45		0.12	65.27	22.33	0.93	0.20	<0.01	0.04	0.07	<0.01	1.04	<0.01	0.46	0.12	0.18	9.02
P100-03-041-45 - 50		0.14	80.12	12,35	0.40	0.15	< 0.01	0.03	0.06	< 0.01	1.35	< 0.01	0.28	0.06	0.10	5.14



#### **ALS Chemex**

**EXCELLENCE IN ANALYTICAL CHEMISTRY** 

ALS Canada Ltd.

212 Brooksbank Avenue North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218 HOMEGOLD RESOURCES LTD. UNIT #5, 2330 TYNER ST. PORT COQUITLAM BC V3C 2Z1 Page #: 2 - B
Total # of as: 2 (A - B)

Date: 13-Mar-2003 Account: MWE

Project: 03-01702

				CERTI	FICATE OF ANAL	YSIS VA	03005802	
Sample Description	Method Analyte Units LOR	ME-XRF06 Total % 0.01	S-IRO8 S % 0.01					
P100-03-039-0 - 5 P100-03-039-5 - 10 P100-03-039-10 - 15 P100-03-039-15 - 20 P100-03-039-20 - 25	···	100.10 99.67 100.05 99.82 99.45	0.14 0.13 0.14 0.21 0.16		·	No.		
P100-03-039-25 - 30 P100-03-039-30 - 35 P100-03-039-35 - 40 P100-03-039-40 - 45 P100-03-039-45 - 50		99.20 99.11 99.36 99.63 99.71	0.11 0.09 0.05 0.11 0.06					į
P100-03-040-0 - 5 P100-03-040-5 - 10 P100-03-040-10 - 15 P100-03-040-15 - 20 P100-03-040-20 - 25	<del>.</del>	99.86 100.00 99.34 99.93 99.65	0.13 0.18 0.19 0.17 0.33					
P100-03-040-25 - 30 P100-03-040-30 - 35 P100-03-040-35 - 40 P100-03-040-40 - 45 P100-03-040-45 - 50		99.84 99.63 99.70 99.82 99.75	0.18 0.24 0.25 0.23 0.22					
P100-03-041-0 - 5 P100-03-041-5 - 10 P100-03-041-10 - 15 P100-03-041-15 - 20 P100-03-041-20 - 25		99.70 98.87 99.87 99.58 99.66	0.15 0.09 0.08 0.17 0.26					
P100-03-041-25 - 30 P100-03-041-30 - 35 P100-03-041-35 - 40 P100-03-041-40 - 45 P100-03-041-45 - 50		99.32 99.95 99.54 99.67 99.97	0.05 0.19 0.29 0.24 0.19					

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logge constraints	312-300000000000000000000000000000000000	10000 B00000	Holesia	Sept Description	Oate	sioa III	Al 2033	E COMMON INC.	######################################	March	NA KO	KOO III	464	XXXXX	TICO:	TALK I	205	Total
	SampleNum	peri	P100-03-039	Pem 100 Chalky Geyserite	13-Feb-2003 11:02	78.79	8.36	0.26	0.14	0.07	-0.01	0.09	0.49	0.10	0.63	0.05	0.33	89.25
E03		!;	P100-03-039	5-10 Chalky Geyserite	13-Feb-2003 13:26	89.91	5.43	0.50	0.10	0.07	-0.01	0.06	0.44	0.06	0.67	0.03:	0.34	97.59
E03		<del>.</del>	P100-03-039	10-15 Chalky Geyserite	13-Feb-2003 13:28	87.33	5.41	0.34	0.10	0.09	0.01	0.06	0.48:	0.06	0.65	0.04	0.35	94.88
E03	ļ		P100-03-039	15-20 Chalky Geyserite	13-Feb-2003 13:30:	85.93	7.40	1.04	0.17	0.15	-0.01	0.08	0.66	0.06	0.63	0.05	0.53	96.64
E03	. <del> </del>	🐩	P100-03-039	20-25 Chalky Geyserite	13-Feb-2003 13:32	76.01	14.54	0.69	0.13	0.17	0.00	0.10	0.52	0.05	0.81	0.06:	0.41	93.41
E03			P100-03-039	25-30 Chalky Geyserite	13-Feb-2003 13:33	77.63	14.85	1.01	0.09	0.16	0.00	0.06	0.40	0.06	0.77	0.04:	0.31	95.34
E03	. <del>(</del>	7	P100-03-039	30-35 Chalky Geyserite	13-Feb-2003 13:35	79.69:	11.60	1.55	0.09	0.17	-0.03	0.08	0.39	0.06	0.76	0.02	0.32	94.68
E03		A	P100-03-039	35-40 Chalky Geyserite	13-Feb-2003 15:59	79.58	12.26	1.50	0.07	0.15	0.02	0.06	0.27	0.06:	0.69	0.06	0.22	94.87
E03	· · · · · · · · · · · · · · · · · · ·	<u>.</u>	P100-03-039	40-45 Chalky Geyserite	13-Feb-2003 15:59	65.83	23.01	0.18	0.06	0.29	0.01:	0.06	0.34	0.05	0.93	0.05	0.35	91.12
E03		10	P100-03-039	45-50 Chalky Geyserite	13-Feb-2003 15:59	88.10	7.07	0.24	0.08	0.11	-0.02	0.05:	0.30	0.06	0.77	0.01	0.25	97.00
E03		11	P100-03-040	0-5 Chalky Geyserite	13-Feb-2003 15:59	90.67	4.91	0.10	0.09	0.08	-0.04	0.06;	0.43	0.06	1.00	0.00	0.38	97.72
E03	4	12	P100-03-040	5-10 Chalky Geyserite	13-Feb-2003 15:59:	84.22	8.05	0.05	0.10	0.09	-0.05	0.06	0.55	0.06	1.40	-0.01	0.52	95.05
E03		13	P100-03-040	10-15 Chalky Geyserite	13-Feb-2003 16:00	80.81	10.59	0.15	0.11	0.09	-0.06	0.07	0.63	0.05	1.93	-0.02	0.55	94.91
E03		13 14	P100-03-040	15-20 Chalky Geyserite	13-Feb-2003 16:00:	88.02	2.72	0.15	0.14	0.04	-0.06:	0.05	0.54	0.06	4.18	-0.02	0.52	96.38
E03		15	P100-03-040	20-25 Chalky Geysente	13-Feb-2003 16:00	86.03	6.59	0.63	0.14	0.10	0.05	0.06	0.90	0.05	2.02	-0.01	0.50	96.99
E03		16	P100-03-040	25-30 Chalky Geyserite	13-Feb-2003 16:00	70.16	17.88	3.11	0.10	0.23	-0.03	0.05	0.56	0.05	1.64	0.00	0.34	94.10 90.86
E03		17:	P100-03-040	30-35 Chalky Geyserite	13-Feb-2003 16:00:	53.80	24.83	9.00	0.18	0.46	-0.04	0.07	0.70	0.04	1.27 0.97	0.01	0.48	90.08
E03		18	P100-03-040	35-40 Chalky Geyserite	13-Feb-2003 16:00	54.40	30.12	2.87	0.14	0.27	-0.02	0.09	0.69	0.05		0.04	0.46	90.16
E03		19	P100-03-040	40-45 Chalky Geyserite	13-Feb-2003 16:20	52.16	30.25	5.32	0.08	0.43	-0.03	0.06	0.68	0.04 0.06	0.78 0.90	0.01; 0.06	0.36	91.08
E03		20 21	P100-03-040	45-50 Chalky Geyserite	14-Feb-2003 09:49	61.66	24.76	2.21	0.08	0.26	0.02	0.06	0.71	0.06	0.96	0.05	0.42	96.98
E03			P100-03-041	0-5 Chalky Geyserite	14-Feb-2003 09:53	91.15	3.23	0.41	0.08	0.11	0.01	0.06	0.34	0.05	0.80	0.00	0.28	95.27
E03		22:	P100-03-041	5-10 Chalky Geyserite	14-Feb-2003 09:55	88.92	4.64	0.09	0.02	0.10	-0.03 -0.05	0.05	0.36	0.05	0.78	-0.00	0.32	97.21
E03	:	23	P100-03-041	10-15 Chalky Geyserite	14-Feb-2003 09:58	91.63	3.84	0.12 0.13	0.03	0.09 0.15	-0.05	0.03	0.53	0.05	1.22	0.00	0.48	95.57
E03		24	P100-03-041	15-20 Chalky Geyserite	14-Feb-2003 10:00	81.87	11.04 15.37	0.13	0.10	0.15	0.15	0.08	0.78	0.09	1.26	0.20	0.56	92.74
E03	<del>.</del>	25 26 27	P100-03-041	20-25 Chalky Geyserite	14-Feb-2003 13:09	73.92 92.06	3.00	0.34	0.05	0.08	0.13	0.04	0.28	0.12	0.97	0.26	0.25	97.41
E03		26:	P100-03-041	25-30 Chalky Geyserite	14-Feb-2003 13 12	86.10	7.40	0.58	0.06	0.14	0.13	0.05	0.60	0.09	1.51	0.16	0.35	97.01
E03	.i	27:	P100-03-041	30-35 Chalky Geyserite	14-Feb-2003 13:16 14-Feb-2003 13:18	58.45	27.43	0.74	0.06	0.22	0.22	0.07	0.87	0.09	1.22	0.26	0.41	89.78
E03		28	P100-03-041 P100-03-041	35-40 Chalky Geyserite 40-45 Chalky Geyserite	14-Feb-2003 13:10	64.28	23.06	0.75	0.11	0.19	0.01	0.07	0.65	0.06	1.14	0.06	0.50	90.82
E03	.,	29 30	P100-03-041	45-50 Chalky Geyserite	14-Feb-2003 13:22	78.35	12.47	0.27	0.10	0.13	-0.04	0.05	0.61	0.06	1.37	0.00	0.34	93.71
E03		30	P100-03-041:	45-50 Charky Geyserite	14-1 60-2003 13.22.		!#:.7/:	<b>v</b> :=:										
			D100 00 000	00 05 Challan	;	83.59	8.23	0.57	0.13	0.11	0.00	0.08	0.52	0.07	0.68	0.05	0.39	94.35
			P100-03-039	20-25 Chalky Chalky		03.33;	0.23	9.31	9.13	9.111								
			P100-03-039	45-50 Geyserite		79.17	13.76	0.89	0.08	0.18	0.00	0.06	0.34	0.06	0.78	0.04	0.29 94	4.0.29
		• • • • • • • • • • • • • • • • • • • •																
			P100-03-040	0-25 Chalky		85.95	6.57	0.22	0.12	0.08	-0.05	0.06	0.61	0.06	2.10	-0.06	0.49	96.21
				Chalky														
			P100-03-040	25-50 Geyserite		58.44	25.57	0.45	0.12	0.33	-0.02	0.07	0.67	0.05	1.11	0.03	0.42	91.25
						06.60	7 69	0.21	0.06	0.12	0.01	0.06	0.50	0.06	1.00	0.05	0.41	95.55
			P100-03-041	0-25 Chalky Chalky		85.50	7.62		J.U6;			J.00						
		1	P100-03-041	25-50 Geyserite		75.85	14.67	0.54	0.08	0.15	0.11	0.05	0.60	0.08	1.24	0.15	0.37	93.75

Lehigh

ProjectiO i	npleNum	Hote ED	Depth Description	Date	502	AL203	E2CC	CAO	MGD	NA2G	K20 [	503	CL L	HO2	TALK I	P205	Tofal
													0.06	1.00	0.00	0.36	97.72
)3	11	P100-03-040:	0-5: Chalky Geyserite	13-Feb-2003 15:59	90.67	4.91	0.10	0.09	0.08	-0.04	0.06	0.43			-0.01	0.52	95.0
3	12.	P100-03-040	5-10 Chalky Geyserite	13-Feb-2003 15:59	84.22	8.05	0.05	0.10	0.09	-0.05	0.06	0.55	0.06	1.40			
3	13:	P100-03-040	10-15 Chalky Geyserite	13-Feb-2003 16:00	80.81	10.59	0.15	0.11	0.09	-0.06	0.07	0.63	0.05	1.93	-0.02	0.55	94.9
3		P100-03-040	15-20 Chalky Geyserite	13-Feb-2003 16:00	88.02	2.72	0.15	0.14	0.04	-0.06	0.05	0.54	0.06	4.18	-0.02	0.52	96.3
3	15	P100-03-040	20-25 Chalky Geyserite	13-Feb-2003 16:00	86.03	6.59	0.63	0.14	0.10	-0.05	0.06	0.90	0.05	2.02	-0.01	0.50	96.99
	!!!	P100-03-040	0-25 Chalky Geyserite		85.95	6.57	0.22	0.12	0.08	-0.05	0.06	0.61	0.06	2.10	-0.01	0.49	96.2
3	10	P100-03-040	25-30 Chalky Geyserite	13-Feb-2003 16:00	70.16	17.88	3.11	0.10	0.23	-0.03	0.05	0.56	0.05	1.64	0.00	0.34	94.1
3	17	P100-03-040	30-35 Chalky Geyserite	13-Feb-2003 16:00	53.80	24.83	9.00	0.18	0.46	-0.04	0.07	0.70	0.04	1.27	0.01	0.54	90.8
3	18	P100-03-040	35-40 Chalky Geyserite	13-Feb-2003 16:00	54.40	30.12	2.87	0.14	0.27	-0.02	0.09	0.69:	0.05	0.97	0.04	0.48	90.0
3	10	P100-03-040	40-45 Chalky Geyserite	13-Feb-2003 16:20	52.16	30.25	5.32	0.08	0.43	-0.03	0.06	0.68	0.04	0.78	0.01	0.36	90.1
3	20:	P100-03-040	45-50 Chalky Geyserite	14-Feb-2003 09:49	61.66	24.76	2.21	0.08	0.26	0.02	0.06	0.71	0.06	0.90	0.06	0.36	91.0
		P100-03-040	25-50 Chalky Geyserite		58.44	25.57	4.50	0.12	0.33	-0.02	0.07	0.67	0.05	1.11	0.03	0.42	91.25

SECTION SECTIO	mpleNum	Hole ID	Depth Description	Date	SiO2	Altoa	EEXOSSI	CAO	MGOSE	NA20	×26	. SO3 . I		1102	TALK	P205	Total
				······································		•••••	·· <del>ПТ••••••</del>		•••••	**************				••••••	***************************************		
E03		P100-03-039	Pem 100: Chalky Geyserite:	13-Feb-2003 11:02	78.79:	8.36	0.26	0.14	0.07	-0.01:	0.09	0.49	0.10	0.63	0.05	0.33	89.25
E03	2	P100-03-039	5-10 Chalky Geyserite	13-Feb-2003 13:26	89.91	5.43	0.50	0.10	0.07	-0.01	0.06	0.44	0.06	0.67	0.03;	0.34	97.59
E03	3	P100-03-039	10-15 Chalky Geyserite :	13-Feb-2003 13:28	87.33	5.41	0.34	0.10	0.09	0.01	0.06	0.48	0.06	0.65	0.04	0.35	94.88
E03	4	P100-03-039	15-20 Chalky Geyserite	13-Feb-2003 13:30	85 93	7.40	1.04	0.17	0.15	-0.01	0.08	0.66	0.06	0.63	0.05	0.53	96.64
E03	5	P100-03-039	20-25 Chalky Geyserite	13-Feb-2003 13:32	76.01	14.54	0.69	0.13	0.17	0.00	0.10	0.52	0.05	0.81	0.06	0.41	93.41
		P100-03-039	20-25 Chalky Geyserite		83.59	8.23	0.57	0.13	0.11	0.00	0.08	0.52	0.07	0.68	0.05	0.39	94.35
:																2.2.	
E03	6	P100-03-039	25-30 Chalky Geyserite	13-Feb-2003 13:33	77.63	14.85	1.01	0.09	0.16	0,00	0.06	0.40	0.06	0.77	0.04	0.31	95.34
E03	7	P100-03-039	30-35 Chalky Geyserite	13-Feb-2003 13:35	79.69	11.60	1.55	0.09	0.17	-0.03	0.08	0.39	0.06	0.76	0.02	0.32	94.68
E03	. 8	P100-03-039	35-40 Chalky Geyserite	13-Feb-2003 15:59	79.58	12.26	1.50	0.07	0.15	0.02	0.06	0.27	0.06	0.69	0.06	0.22	94.87
E03	9	P100-03-039	40-45 Chalky Geyserite	13-Feb-2003 15:59	65.83	23.01	0.18	0.06;	0.29	0.01	0.06	0.34	0.05	0.93	0.05	0.35	91.12
:E03	10	P100-03-039	45-50 Chalky Geyserite	13-Feb-2003 15:59	88.10	7.07	0.24	0.08	0.11	-0.02	0.05	0.30	0.06	0.77	0.01	0.25	97.00
***************************************			;														
	:	P100-03-039	45-50 Chalky Geyserite		78.17	13.76	0.89	0.08	0.18	0.00	0.06	0.34	0.06	0.78	0.04	0.29	94.60

Hrojectii)	mpleNum	Hote ID	Depth Description	Date	5802	AL203	FE203	CAO	MGD	NA2O	K20	903	CT.	1602	TALK	P205	Stota
																	<i>.</i>
E03	11	P100-03-040	0-5 Chalky Geyserite	13-Feb-2003 15:59	90.67	4.91	0.10	0.09	0.08	-0.04	0.06	0.43	0.06	1.00	0.00	0.38	97.72
E03	12	P100-03-040	5-10 Chalky Geyserite	13-Feb-2003 15:59	84.22	8.05	0.05	0.10	0.09	-0.05	0.06	0.55	0.06	1.40	-0.01	0.52	95.05
E03	13	P100-03-040:	10-15: Chalky Geyserite	13-Feb-2003 16:00	80.81	10.59	0,15	0.11:	0.09	-0.06	0.07	0.63	0.05	1.93	-0.02	0.55	94.91
E03	14	P100-03-040	15-20 Chalky Geyserite	13-Feb-2003 16:00	88.02	2.72	0.15	0.14	0.04	-0.06	0.05	0.54	0.06	4.18	-0.02	0.52	96.38
E03	15	P100-03-040	20-25 Chalky Geyserite	13-Feb-2003 16:00	86.03	6.59	0.63	0.14	0.10	-0.05	0.06	0.90	0.05	2.02	-0.01	0.50	96.99
	1	P100-03-040	0-25 Chalky Geyserite		85.95	6.57	0.22	0.12	0.08	-0.05	0.06	0.61	0.06	2.10	-0.01	0.49	96.21
	:							:	:								
E03	16	P100-03-040:	25-30 Chalky Geyserite	13-Feb-2003 16:00	70.16	17.88	3.11	0.10	0.23	-0.03	0.05	0.56	0.05	1.64	0.00	0.34	94.10
E03	17:	P100-03-040	30-35 Chalky Geyserite	13-Feb-2003 16:00:	53.80	24.83	9.00	0.18	0.46	-0.04	0.07	0.70	0.04	1.27	0.01	0.54	90.86
E03	18	P100-03-040	35-40 Chalky Geyserite	13-Feb-2003 16:00	54.40	30.12	2.87	0.14	0.27	-0.02	0.09	0.69	0.05	0.97	0.04	0.48	90.08
E03	19	P100-03-040;	40-45 Chalky Geyserite	13-Feb-2003 16:20	52.16	30.25	5.32	0.08	0.43	-0.03	0.06	0.68	0.04	0.78	0.01	0.36	90.16
E03	20:	P100-03-040	45-50 Chalky Geyserite	14-Feb-2003 09:49	61.66	24.76	2.21	0.08	0.26	0.02	0.06	0.71	0.06;	0.90	0.06	0.36	91.08
		P100-03-040	25-50 Chalky Geyserite		58 44	25.57	4 50	0.12	0.33	-0.02	0.07	0.67	0.05	1.11	0.03	0.42	91.25

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Trojecut)	144596ARRIT	F1092-1L2	Depth   Description	Date	302	A. 4. 4	FE203	CAD 1	MGD I	NAZIJ ]		303	**	1102	I ALA	P.A.CO	Total
E03	21	P100-03-041	0-5: Chalky Geyserite	14-Feb-2003 09:53	91.15	3.23	0.41	0.08	0.11	0.01:	0.06	0.50	0.06:	0.96	0.05	0.42	96.98
E03	22	P100-03-041	5-10 Chalky Geyserite	14-Feb-2003 09:55	88.92	4.64	0.09	0.02	0.10	-0.03	0.05	0.34	0.05	0.80	0.00	0.28	95.27
E03	23	P100-03-041	10-15 Chalky Geyserite	14-Feb-2003 09:58	91.63	3.84	0.12	0.03	0.09	-0.05	0.05	0.36	0.05	0.78	-0.01:	0.32	97.21
E03	24	P100-03-041	15-20 Chalky Geyserite	14-Feb-2003 10:00	81.87	11.04	0.13	0.08	0.15	-0.04	0.07	0.53	0.05	1.22	0.00	0.48	95.57
E03	25	P100-03-041	20-25 Chalky Geyserite	14-Feb-2003 13:09	73.92	15.37	0.27	0.10	0.17:	0.15	0.08	0.76:	0.09	1.26	0.20	0.56	92.74
1	.i	P100-03-041	0-25 Chalky Geyserite	• •	85.50	7.62	0.21	0.06	0.12	0.01	0.06	0.50	0.06	1.00	0.05	0.41	95.55
E03	26	P100-03-041	25-30 Chalky Geyserite	14-Feb-2003 13:12	92.06	3.00	0.34	0.05	0.08	0.23	0.04	0.28	0.12	0.97	0.26	0.25	97.41
E03	27	P100-03-041	30-35 Chalky Geyserite	14-Feb-2003 13:16	86.10	7.40	0.58	0.06	0.14	0.13	0.05	0.60	0.09	1.51	0.16;	0.35	97.01
E03	28	P100-03-041	35-40 Chalky Geyserite	14-Feb-2003 13:18		27.43	0.74	0.06	0.22	0.22	0.07	0.87	0.09	1.22	0.26	0.41	89.78
E03	29	P100-03-041	40-45 Chalky Geyserite	14-Feb-2003 13:20	64.28	23.06	0.75	0.11	0.19;	0.01	0.07	0.65	0.06	1.14	0.06	0.50	90.82
E03	30	P100-03-041	45-50 Chalky Geyserite	14-Feb-2003 13:22	78.35	12.47	0.27	0.10	0.13	-0.04	0.05	0.61	0.06	1.37	0.00	0.34	93.71
				:													
	· :	P100-03-041	25-50 Chalky Geyserite		75.85	14.67	0.54	0.08	0.15	0.11	0.05	0.60	80.0	1.24	0.15	0.37	93.75

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ROJECT: AMPLE:		PEM 100 APBY-02 1 WCG (	-37 85'-4		Chalky G			<b></b>	ļ										·· <del>}</del> · · · · · · · ·			· į			:			•				
		Metal Fig Aumnum	Antimony	Arsenic	Baoure	Beryllum	Bonuth	Cadmum	Celcum	Chromwim	Cobait	Cooper	Iron	Lead	Magnesium	Manganese																
eek No.	Date	Al (mg/kg/wis	Sb	As mulkgrato	Ba ung/ng/wio	Be (mg/kg/ws)	Bi (morky-wa)	Cd (mg/kg/ws)	Ca (mg/kg/wtq	Cr (mg/kg/wt)	Co (mg/kg/wk)	Cu (mg/kgrwso	Fe (mg/kg/at)	Pb (mg/kg/wc)	Mg (roylorwa	Min (mg/kg/wig	Hg Hg tro/Lg/Ms	Molytelanum Mo (mylegos)	Nickel Ni Impropus	Phosphorus P merkerwo	Potassium K (mg/sgr-40	Selenium Se organismo	Salicon Si ampangrado	Salver Ag (mg/kg/wo)	Socium Na markarina	Stronbum Sr (mallaplan)	The Burn Ti smarkerwo	Tan Sin (mg/kg/wig	Titanium Ti (mphgwis	Oranium U Impligrato	Vanadium V (mg/larvio	m Zn Zi o (menu
0	16-Apr-02							0.00010			0.00020			0.00020		0.00040	0.00020	0.00020	0.0010	0.060	0.32	0.0020	1.48	0.000020	3.67	0.00020	0.00020	0.00020	0.0040	0.000020	0.0020	0.00
2	23-Apr-02 30-Apr-02	0.38	0.00020	0.00079	0.0020	0.0010	0.0010	0.000090	0.044		0.00020	0.0032	0.022 0.036	0.00072 0.00040	0.010	0.00011	0.00018	0.00018 0.00020	0.00090	0.060	0.36 0.24	0.0047 0.0052	2.60 3.64	0.000018						0.000018		
4	07-May-02 14-May-02	0.13	0.00020	0.00020	0.0008	0.0010	0.0010		0.024	0.0010	0.00019 0.00020	0.0016		0.00019		0.00038	0.00019	0.00019	0.0010		0.10 0.20	0.0038	2.83 3.02	0.000019						0.000077		
6	21-May-02 28-May-02	0.25	0.00023	0.00023	0.0023	0.0011		0.00011		0.0010	0.00020		0.012	0.00020		0.00041	0.00020	0.00020 0.00023	0.0010	0.061	0.10	0.0041 0.0023	2.59 2.91	0.000020	1.92	0.00081	0.00020	0.00020	0.0020	0.000020	0.0020	0.00
8	04-Jun-02 11-Jun-02			0.00020	0.0012	0.0010		0.00010		0.0010	0.00020		0.0061	0.00020		0.00041	0.00020	0.00020	0.0010		0.24	0.0020	2.33 2.42	0.000020	1.46	0.00020	0.00020	0.00020	0.0020	0.000020	0.0020	0.00
9	18-Jun-02 25-Jun-02				0.0024			0.00010		0.0010	0.00020	********	0.0061	0.00020	0.010	0.00081	0.00020	0.00020	0.0010	0.061	0.32 0.37	0.0020	2.24	0.000020	1.49	0.00041	0.00020	0.00020	0.0020	0.000020	0.0020	0.00
11 12	02-Jul-02 09-Jul-02	0.0036	0.00018	0.00018	0.0069	0.00090	0.00090	0.000090	0.14	0.00090	0.00018	0.0058	0.0054	0.00018	0.025	0.0040	0.00018	0.00018	0.00090	0.054	0.36	0.0018	1.94	0.000020	1.35	0.0011	0.00018	0.00018	0.0018	0.000020 0.000018	0.0018	0.00
13	16-Jul-02 23-Jul-02			0.00018	0.021	0 00090	0.00090	0.000090	0.25	0 00090	0.00018	0.0025	0.0054	0.00018	0.047	0.0069	0.00018	0.00018	0.00090	0.054	0.51 0.54	0.0018	1.91 2.03	0.000018 0.000018	1.01	0.0018	0.00018	0.00018	0.0018	0.000018	0.0018	0.00
15	30-Jul-02 06-Aug-02	0.0020	0.00020	0.00020	0.043	0.0010	0.0010	0.00010	0.48	0.0010	0.00018	0.0028	0.016	0.00018	0.085	0.0079 0.013	0.00018 0.00020	0.00018 0.00020	0.0010	0.061	0.54 0.69	0.0018	1.89 1.98	0.000018						0.000018		
17	13-Aug-02	0.0068	0.00017	0.00017	0.072	0.00085	0.00085	0.000090	0.82	0.00085	0.00018	0.0030	0.0054 0.0051	0.00018	0.11 0.14	0.016	0.00018	0.00018 0.00017	0.00090		0.65 0.74	0.0018	1.74	0.000018						0.000018		
18	20-Aug-02 27-Aug-02	0.0041	0.00020	0.00018 0.00020	0.074	0.0010	0.0010	0.000090	1.06	0.00090	0.00018		0.0054	0.00018		0.026	0.00018	0.00018	0.00090	0.054 0.061	0.72 0.77	0.0018	1.80	0.000018	0.36		0.00072	0.00018	8100.0	0.000018	0.0018	0.0
20 21	03-Sep-02 10-Sep-02			0.00020 0.00018				0.00010		0.0010	0.00020 0.00036		0.0061	0.00020	0.22	0.032	0.00020	0.00020	0.0010		0.81 0.72	0.0020 0.001B	1.63	0.000020	0.28	0.0089	0.00081	0.00020	0.0020	0.000020	0.0020	0.0
22 23	17-Sep-02 24-Sep-02			0.00023	0.10	0.0011		0.00011		0.0011	0.00023	0.0045	0.018	0.00023	0.23	0.039	0.00023	0.00023	0.0011	0.068	0.72	0.0023	1.94	0.000023	0.14	0.011	0.00090	0.00023	0.0023	0.000018 0.000023	0.0023	0.0
24 25	01-Oct-02 08-Oct-02			0.00018		0.00090	0.00090	0.000090	1.35	0.00090	0.00036	0.0051	0.0054	0.00018		0.039	0.00018	0.00018	0.00090	0.054	0.58	0.0018	2.21 1.87	0.000022 0.000018	0.07	0.011	0.0011	0.0001B	0.0018	0.000022 0.000018	0.0018	0.0
26 27	15-Oct-02 22-Oct-02	0.032	0.00020	0.00020	0.071	0.0010		0.00010	1.17	0.0010	0.00020	0.0045	0.0061	0.00020	0.17	0.035	0.00020	0.00021 0.00020	0.0011	0.061	0.59 0.45	0.0021 0.0020	1.93 1.59	0.000021	0.041					0.000021		
28 29	29-Oct-02 05-Nov-02	0.0077	0.00019	0.00019	0.095	0.0010	0.0010	0 00010	1.51	0.0010	0.00038	0.0042	D.0061 D.0058	0.00020	0.18 0.26	0.034 0.045	0.00020	0.00020 0.00019	0.0010	0.058	0.41 0.50	0 0020 0 0019	1.49 1.97	0.000020						0.000020		
30	12-Nov-02	0.0043	0.00021	0.00020 0.00021	0.072	0.0010 0.0011	0.0011	0.00010	1.20	0.0011	0.00041 0.00043	0.0051	0.0061	0.00020	0.24 0.21	0.045	0.00020 0.00021	0.00020	0.0010	0.061 0.064	0.49 0.39	0.0020	1.99	0.000020						0.000020		
31 32	19-Nov-02 26-Nov-02	0.011	0.00018	0.00019 0.00018	0.075	0.0010 0.00090	0.00090	0.00010	1.44	0.0010	0.00038		0.0058 0.0054	0.0012	0.26 0.24	0.046	0.00019	D.00019 0.00018	0.0000	0.058 0.054	0.38 0.36	0.0019	1.81	0.000019	0.038	0.012	0.00077	0.00019	0.0019	0.000019 0.000018	0.0019	0.0
33 34	03-Dec-02 10-Dec-02			0.00021				0.00011			0.00043		0.0064	0.00086	0.23 0.25	0.042	0.00021	0.00021	0.0011		0.34 0.30	0.0021	1.54	0.000021	0.021	0.012	0.00086	0.00021	0.0021	0.000021 0.000017	0.0021	0.00
35 36	17-Dec-02 24-Dec-02			0.00022 0.00018				0.00011 0.000090		0.0011	0.00087	0.0043		0.00022	0.28	0.053	0.00022	0.00022	0.0011	0.065	0.35	0.0022	2.09	0.000022	0.022	0.015	0.00087	0.00022	0.0022	0.000022	0.0022	0.00
37 38	31-Dec-02 07-Jan-03			0.00012	0.055	0.00059	0.00059	0.000059	1.13		0.00047	0.0047	0.0035	0.00023	0.19	0.034	0.00012	0.00012	0.00059	0.035	0.22 0.19	0.0018	1.26 1.06	0.000012	0.023	0.0089	0.00070	0.00012	0.0012	0.000018 0.000012	0.0012	0.00
39 40	14-Jan-03 21-Jan-03	0.0070	0.00018	0.00018	0.063	0.00088	0.00088	0.000088	1.27	0.00088	0.00070	0.0046	0.0053	0.00028 0.00018	0.18	0.040 0.043	0.00014 0.00018	0.00011	0.00070	0.042 0.053	0.20 0.21	0.0014	1.28	0.000014		0.011				0.000014 0.000018		
41	28-Jan-03	0.122	0.00020	0.00021 0.00020	0.069	0.0010	0.0010	0.00011 0.00010		0.0010	0.00086 0.00081	0.0069	0.0061	0.0013	0.26 0.24	0.054 0.049	0.00021	0.00021	0.0011	0.064 0.061	0.26 0.10	0.0021	1.79	0.000021			0.00086	0.00021	0.0021	0.000021	0.0021	0.00
42 43	04-Feb-03 11-Feb-03			0.00022 0.00021				0.00011		0.0011	0.00087			0.00022	0.24 0.26	0.050 0.048	0.00022	0.00022	0.0011	0.065 0.064	0.11 0.11	0.0022	1.66	0.000022	0.022	0.013	0.00087	0.00022	0.0022	0.000022 0.000021	0.0022	0.00
mum				0.0016				0.00011	1.80	0.0011	0.00087	0.0093	0.036	0.0013	0 28	0.054	0.00023	0.00023	0.0011	0.068	0.81	0.0052		0.000023								
mum n	••••	0.0018	0.00012	0.00012	0.00040	0.00059	0.00059	0.000059	0.010	0.00059	0.00017	0.0011	0.0035	0.00017	0.009	0.00038	0.00012	0.00012	0.00059	0.035	0.10	0.0012	1.06	0.000012	0.018	0.00020	0.00018	0.00012	0.0012	0.000077 0.000012	0.0012	0.00
ian	Weeks	0.012	0.00020	0.00020	0.063	0.0010	0.0010	0.00010	1.15	0.0010	0.00021	0.0043	0.0061	0.00020	0.18	0.034	0.00020	0.00020	0.0010 0.0010		0.40 0.36	0.0022	1.90	0.000019	0.18					0.000022 0.000020		
			7.7774.0	J. 94020	0.000	U	0.0010	. 0.00010	1.50	0.0010	0.00082	U UU58	0.0061	0.00042	0.24	0.049	0.00020	0.00020	0.0010	0.061	0.16	0.0020	1.66	0.000020						0.000020		
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#### **ALS Chemex**

**EXCELLENCE IN ANALYTICAL CHEMISTRY** 

ALS Canada Ltd.

212 Brooksbank Avenue

North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218 ...: HOMEGOLD RESOURCES LTD. UNIT #5, 2330 TYNER ST. PORT COQUITLAM BC V3C 2Z1 # of pages: 2 (A -

Total # of pages: 2 (A - B)
Date: 21-Mar-2003

Account: MWE

Sample Description CRUSHER 1	Method Analyte Units LOR	ME-XRF06 Total % 0.01	8-IR08 S	S-IRO8			 		
CRUSHER 1		ויט.ט ן	% 0.01	803 % 0.02					
CRUSHER 2 CRUSHER 3 CRUSHER 4 CRUSHER 5		99.91 100.20 99.81 99.26 99.66	0.13 0.13 0.11 0.13 0.15	0.33 0.31 0.28 0.32 0.38					
BARGE PILE 1 COARSE BARGE PILE 2 FINES BBA PEM100 HOLE 09 SURFACE	<u> </u>	100.00 99.99 99.44 99.73	0.23 0.14 0.11 0.02	0.58 0.35 0.26 0.06	1				
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Comments: \*\*CORRECTED COPY for SO3 on all samples\*\*

# **ASH GROVE CEMENT SEATTLE**

#### Technical Lab Report

DATE: March 25, 2003

#### Comments

JTG

Samples were received in March 2003 from Homegold Resources Ltd. The samples were silica from the Port Hardy Quarry. They were to be analyzed for chemical nature to determine the suitability for use in cement manufacture.

Seattle No		SiO2	Al2O3	Fe2O3	CaO	MgO	SO3	Na2O3	K20	Total
0465-03	P100-03-39 0'-5'	81.08	6.98	0.54	2.09	0.13	0.34	0.08	0.09	91.33
0466-03	P100-03-39 5'-10'	87.81	4.43	0.68	0.48	0.08	0.27	0.05	0.06	93.86
0467-03	P100-03-39 10'-15'	89.38	4.51	0.56	0.29	0.08	0.30	0.05	0.06	95.23
0468-03	P100-03-39 15'-20'	85.37	5.91	1.22	0.26	0.09	0.42	0.07	0.08	93.42
0469-03	P100-03-39 20'-25'	74.91	11.56	0.91	0.27	0.10	0.34	0.07	0.10	88.26
0478-03	P100-03-39 25'-30'	74.52	11.91	1.26	0.35	0.09	0.23	0.07	0.06	88.49
0477-03	P100-03-39 30'-35'	78.17	9.43	1.82	0.39	0.10	0.21	0.09	0.09	90.30
0472-03	P100-03-39 35'-40'	77.23	10.30	1.67	0.20	0.09	0.11	0.06	0.06	89.72
0470-03	P100-03-39 40'-45'	64.66	17.97	0.41	0.86	0.11	0.24	0.07	0.07	84.39
0471-03	P100-03-39 45'-50'	86.33	6.18	. 0.45	0.27	0.08	0.15	0.04	0.05	93.55
0483-03	P100-03-40 0'-5'	90.00	4.08	0.32	0.39	0.08	0.28	0.05	0.06	95.26
0482-03	P100-03-40 5'-10'	84.38	6.72	0.27	0.25	0.08	0.40	0.05	0.07	92.22
0459-03	P100-03-40 10'-15'	91.94	3.21	0.34	0.47	0.08	0.20	0.05	0.05	96.34
0481-03	P100-03-40 10'-15'	80.25	8.45	0.36	0.40	0.09	0.42	0.07	0.07	90.11
0480-03	P100-03-40 15'-20'	89.96	2.25	0.35	0.47	0.10	0.36	0.11	0.06	93.66
0479-03	P100-03-40 20'-25'	83.78	5.19	0.83	1.70	0.13	0.62	0.10	0.07	92.42
0460-03	P100-03-40 25'-30'	68.43	14.46	3.17	0.32	0.12	0.35	0.09	0.05	86.99
0461-03	P100-03-40 30'-35'	57.14	20.02	8.94	0.37	0.15	0.50	0.12	0.08	87.32
0462-03	P100-03-40 35'-40'	56.73	24.14	3.15	0.34	0.13	0.49	0.10	0.09	85.17
0464-03	P100-03-40 40'-45'	55.53	23.89	5.52	0.39	0.15	0.43	0.09	0.07	86.07
0463-03	P100-03-40 45'-50'	61.63	20.00	2.44	0.75	0.14	0.44	0.09	0.07	85.56
0455-03	P100-03-41 0'-5'	92.40	2.73	0.62	0.18	0.07	0.34	0.06	0.07	96.47
0456-03	P100-03-41 5'-10'	90.38	3.93	0.32	0.55	0.09	0.20	0.07	0.05	95.59
0457-03	P100-03-41 15'-20'	80.01	8.99	0.35	0.31	0.09	0.36	0.08	0.07	90.26
0458-03	P100-03-41 20'-25'	73.42	12.64	0.49	0.27	0.10	0.51	0.08	0.08	87.59
0454-03	P100-03-41 25'-30'	93.54	2.59	0.55	0.18	0.07	0.13	0.06	0.04	97.16
0453-03	P100-03-41 30'-35'	84.78	6.11	0.77	0.41	0.09	0.38	0.08	0.05	92.67
0452-03	P100-03-41 35'-40'	60.36	22.34	0.94	0.17	0.11	0.57	0.09	0.07	84.65
0451-03	P100-03-41 40'-45'	64.27	18.87	0.98	0.28	0.10	0.47	0.07	0.07	85.11
0450-03	P100-03-41 45'-50'	77.05	10.55	0.50	0.42	0.09	0.37	0.07	0.06	89.11

#### ASH GROVE CEMENT SEATTLE ANALYSIS OF SILICA DRILL HOLES FOR SHOOTING CHEMICAL ANALYSIS BY FUSION XRF

	DATE	SEATTLE							202
_	REC	NUMBER	SOURCE	SiO2	Al2O3	Fe2O3	CaO	MgO	SO3
	3/9/03	0188-03	PORT HARDY	88.89	1.63	4.25	0.60	0.12	0.07
	3/11/03	0200-03	PORT HARDY	74.25	4.25	12.97	0.57	0.18	0.17 0.33
	3/17/03	0295-03	PORT HARDY	89.75	0.68	5.96	0.19	0.07	
	3/4/03	0111-03	PORT HARDY	98.12	0.17	1.73	0.16	0.07	0.06
	3/4/03	0117-03	PORT HARDY	93.29	0.17	4.75	0.17	0.07	0.11
	3/4/03	0114-03	PORT HARDY	98.21	0.38	0.75	0.22	0.07	0.09
	3/4/03	0120-03	PORT HARDY	98.29	0.14	1.53	0.10	0.07	0.04
	3/8/03	0185-03	PORT HARDY	91.11	0.95	4.88	0.23	0.08	0.22
	3/12/03	0239-03	PORT HARDY	88.26	0.75	7.49	0.35	80.0	0.32
	3/7/03	0173-03	PORT HARDY	88.54	1.15	6.29	0.17	0.07	0.36
	3/7/03	0171-03	PORT HARDY	74.06	1.52	17.52	1.27	0.11	0.74
	3/7/03	0179-03	PORT HARDY	91.36	0.61	3.87	0.44	80.0	2.00
	3/7/03	0175-03	PORT HARDY	94.82	0.60	3.71	0.16	80.0	4.78
	3/11/03	0212-03	PORT HARDY	92.95	0.29	3.82	0.12	0.07	2.77
	3/11/03	0203-03	PORT HARDY	93.64	0.15	3.97	0.35	80.0	2.31
	3/11/03	0210-03	PORT HARDY	90.69	0.26	6.79	0.06	0.07	9.52
	3/8/03	0183-03	PORT HARDY	75.75	1.42	15.85	0.22	0.08	0.57
	3/11/03	0211-03	PORT HARDY	69.18	12.18	8.02	0.56	0.11	7.49
	3/7/03	0177-03	PORT HARDY	91.61	1.07	3.60	0.86	0.08	1.05
	3/6/03	0169-03	PORT HARDY	92.19	1.23	3.96	0.33	0.08	0.24
	3/17/03	0298-03	PORT HARDY	95.21	0.26	2.37	0.19	0.07	0.11
	3/7/03	0176-03	PORT HARDY	91.01	0.74	4.48	2.23	0.13	5.60
	3/7/03	0172-03	PORT HARDY	68.24	3.21	24.25	0.20	0.08	0.75
	3/17/03	0267-03	PORT HARDY	67.94	9.17	11.56	0.40	0.10	12.94
	3/7/03	0174-03	PORT HARDY	89.55	3.03	3.41	1.00	0.10	0.61
	3/12/03	0237-03	PORT HARDY	34.32	-0.11	2.34	0.08	-0.05	0.01
	3/4/03	0116-03	PORT HARDY	93.91	0.18	4.78	0.08	0.07	0.07
	3/11/03	0216-03	PORT HARDY	99.10	0.07	0.80	0.15	0.07	0.14
	3/4/03	0118-03	PORT HARDY	97.28	0.27	2.21	0.19	0.07	0.04
	3/4/03	0112-03	PORT HARDY	96.55	0.29	2.42	0.28	0.07	0.07
	3/7/03	0178-03	PORT HARDY	95.47	0.44	2.79	0.18	0.07	0.15
	3/17/03	0285-03	PORT HARDY	98.36	0.11	2.26	0.09	0.06	0.17
	3/10/03	0195-03	PORT HARDY	97.96	0.07	1.52	0.12	0.06	0.10
	3/4/03	0115-03	PORT HARDY	97.98	0.13	1.46	0.16	0.07	0.17
	3/4/03	0110-03	PORT HARDY	96.30	0.06	2.77	0.09	0.06	0.07
	3/4/03	0124-03	PORT HARDY	92.03	0.13	5.99	0.56	0.08	0.12
	3/4/03	0113-03	PORT HARDY	94.60	0.13	3.62	0.32	0.07	0.11
	3/17/03	0302-03	PORT HARDY	97.98	0.11	3.06	0.11	0.07	0.04
	3/8/03	0181-03	PORT HARDY	97.39	0.14	1.48	0.57	0.10	0.10
	3/17/03	0291-03	PORT HARDY	99.31	0.08	1.96	0.11	0.07	0.04
	3/17/03	0283-03	PORT HARDY	95.17	0.14	3.43	0.24	0.07	0.15
	3/17/03	0292-03	PORT HARDY	85.86	1.46	6.59	0.87	0.09	3.12
	3/17/03	0301-03	PORT HARDY	94.28	0.16	3.35	0.33	0.07	0.04
	3/9/03	0192-03	PORT HARDY	91.79	80.0	6.27	0.17	0.06	0.05
	3/9/03		PORT HARDY	94.61	0.07	3.50	0.29	0.07	0.04
	3/17/03			94.34	0.12	4.55	0.10	0.06	0.06
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3/9/03	0190-03	PORT HARDY	89.35	0.39	7.58	0.16	0.07	0.08
3/17/03	0287-03	PORT HARDY	95.39	0.21	4.91	0.19	0.07	0.07
3/17/03	0289-03	PORT HARDY	98.88	0.18	2.49	0.66	0.08	0.08
3/17/03	0303-03	PORT HARDY	97.91	0.30	1.82	0.20	0.07	0.04
3/12/03	0236-03	PORT HARDY	90.50	0.15	7.08	0.16	0.07	0.09
3/12/03	0238-03	PORT HARDY	91.66	0.20	6.36	0.11	0.07	0.09
3/17/03	0290-03	PORT HARDY	97.29	0.09	4.08	0.22	0.07	0.09
3/11/03	0201-03	PORT HARDY	91.97	0.21	5.63	0.10	0.07	0.29
3/17/03	0284-03	PORT HARDY	95.64	0.04	3.35	0.11	0.06	0.08
3/7/03	0180-03	PORT HARDY	95.90	0.11	4.28	0.07	0.06	0.11
3/17/03	0286-03	PORT HARDY	96.45	0.07	3.50	0.51	0.08	0.12
3/11/03	0200-03	PORT HARDY	94.73	0.13	3.82	0.10	0.06	0.08
		PORT HARDY	95.15	0.09	3.54	0.23	0.07	0.19
3/17/03	0296-03		96.98	0.06	2.50	0.22	0.07	0.35
3/17/03	0270-03	PORT HARDY		0.00	3.45	0.16	0.07	0.38
3/17/03	0288-03	PORT HARDY	96.67			0.10	0.07	2.23
3/8/03	0182-03	PORT HARDY	96.84	0.04	3.59			
3/4/03	0122-03	PORT HARDY	92.72	0.10	5.62	0.40	0.07	0.61
3/4/03	0125-03	PORT HARDY	95.60	0.07	3.48	0.40	0.07	0.55
3/4/03	0121-03	PORT HARDY	91.20	0.25	4.23	3.40	0.14	1.25
3/5/03	0167-03	PORT HARDY	95.87	0.07	3.01	0.46	0.07	0.16
3/8/03	0184-03	PORT HARDY	96.91	0.11	2.87	0.63	0.10	0.19
3/8/03	0186-03	PORT HARDY	99.24	0.13	0.23	0.16	0.07	0.10
3/17/03	0268-03	PORT HARDY	99.97	0.06	0.19	0.17	0.06	0.06
3/11/03	0213-03	PORT HARDY	72.36	12.52	2.96	0.23	0.08	1.97
3/11/03	0226-03	PORT HARDY	97.79	0.09	1.43	0.27	0.07	0.04
3/11/03	0202-03	PORT HARDY	95.71	0.05	3.34	0.07	0.06	0.06
3/10/03	0199-03	PORT HARDY	97.31	0.03	2.42	0.17	0.07	0.05
3/11/03	0228-03	PORT HARDY	86.67	0.48	8.73	0.11	0.08	0.14
3/12/03	0240-03	PORT HARDY	95.76	1.18	1.25	0.16	0.07	0.29
3/5/03	0168-03	PORT HARDY	95.97	0.10	2.74	0.33	0.08	0.04
3/4/03	0119-03	PORT HARDY	97.68	0.18	1.85	0.18	0.07	0.04
3/5/03	0166-03	PORT HARDY	95.60	0.22	3.06	0.40	0.08	0.05
3/4/03	0123-03	PORT HARDY	94.68	0.16	3.58	0.22	0.07	0.05
3/17/03	0294-03	PORT HARDY	92.95	0.37	3.83	0.20	0.08	0.10
3/12/03	0233-03	PORT HARDY	93.59	0.26	4.03	0.38	0.08	0.06
3/17/03	0300-03	PORT HARDY	91.97	0.26	4.94	0.13	0.07	0.07
3/11/03	0204-03	PORT HARDY	89.15	0.42	7.20	0.14	0.08	0.08
3/17/03	0304-03	PORT HARDY	94.00	0.30	3.93	0.07	0.07	0.05
3/10/03	0197-03	PORT HARDY	90.74	0.37	6.79	0.08	0.07	0.08
3/17/03	0269-03	PORT HARDY	99.18	0.10	0.51	0.27	0.07	0.05
3/9/03	0187-03	PORT HARDY	97.50	0.18	0.67	0.84	0.10	0.05
3/17/03	0273-03	PORT HARDY	95.51	0.21	3.28	0.11	0.07	0.14
3/9/03	0189-03		96.05	0.18	2.30	0.18	0.07	0.05
3/10/03	0198-03	PORT HARDY	96.75	0.37	1.84	0.22	0.07	0.19
	0227-03	PORT HARDY	97.98	0.44	1.02	0.12	0.07	0.12
3/11/03	0227-03	PORT HARDY	96.10	0.45	1.06	0.12	0.08	0.19
3/12/03		PORT HARDY	70.08	15.00	2.13	0.28	0.09	3.08
3/11/03	0209-03				2.13	0.18	0.03	2.52
3/10/03	0193-03	PORT HARDY	73.41	11.47		0.66 0.16	0.12	3.85
3/11/03	0214-03	PORT HARDY	71.43	12.65	3.68		0.09	1.48
3/11/03	0215-03	PORT HARDY	86.58	3.94	3.20	0.72 0.07		
3/11/03	0218-03	PORT HARDY	93.48	0.13	4.84	0.07	0.06	0.12

	3/6/03	0170-03	PORT HARDY	98.78	0.10	0.49	0.39	0.08	0.08
$\langle \cdot \rangle$	3/10/03	0194-03	PORT HARDY	90.95	0.43	5.59	0.20	0.07	1.45
	3/11/03	0220-03	PORT HARDY	62.17	17.63	7.42	0.24	0.09	0.50
	3/17/03	0276-03	PORT HARDY	79.58	5.38	8.66	0.28	0.08	1.32
	3/11/03	0222-03	PORT HARDY	66.93	14.28	6.19	0.48	0.10	0.40
	3/10/03	0196-03	PORT HARDY	69.91	12.51	6.03	0.28	0.09	0.39
	3/11/03	0223-03	PORT HARDY	68.44	14.04	5.39	0.27	0.10	3.70
	3/17/03	0279-03	PORT HARDY	74.29	7.30	10.40	0.20	0.08	0.54
	3/17/03	0272-03	PORT HARDY	64.71	11.36	8.97	1.40	0.14	0.76
	3/17/03	0281-03	PORT HARDY	73.12	9.97	7.50	0.21	0.08	2.17
	3/17/03	0278-03	PORT HARDY	71.15	8.63	11.28	0.26	0.08	0.70
	3/17/03	0305-03	PORT HARDY	69.62	9.42	10.68	0.19	0.07	0.67
	3/11/03	0225-03	PORT HARDY	75.11	6.14	10.69	0.18	0.08	0.54
	3/17/03	0299-03	PORT HARDY	76.79	4.55	10.61	0.15	0.07	0.40
	3/17/03	0297-03	PORT HARDY	76.03	3.89	12.32	0.15	0.07	0.41
	3/17/03	0280-03	PORT HARDY	86.80	0.86	7.95	0.28	0.08	0.21
	3/11/03	0219-03	PORT HARDY	70.76	7.11	14.06	0.25	0.08	0.55
	3/17/03	0277-03	PORT HARDY	73.92	8.19	8.72	0.17	80.0	0.58
	3/17/03	0275-03	PORT HARDY	69.85	8.46	9.54	1.16	0.13	0.56
	3/12/03	0234-03	PORT HARDY	66.27	13.09	9.41	0.41	0.09	0.62
	3/17/03	0271-03	PORT HARDY	64.33	15.02	8.01	0.58	0.11	1.31
	3/17/03	0293-03	PORT HARDY	64.76	14.99	8.03	0.40	0.10	3.02
	3/17/03	0282-03	PORT HARDY	62.46	16.47	10.31	0.20	0.09	2.84
	3/11/03	0224-03	PORT HARDY	66.02	16.44	5.19	0.24	0.10	0.45
	3/11/03	0221-03	PORT HARDY	67.77	12.86	8.06	0.45	0.09	0.87
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		2002	Average	87.63	2.91	5.11	0.34	0.08	0.86
			Maximum	99.97	17.63	24.25	3.40	0.18	12.94
			Minimum	34.32	-0.11	0.19	0.06	-0.05	0.01
			St. Dev.	12.25	4.88	3.79	0.41	0.02	1.82
			Coef. Var.	13.98%	168.04%	74.16%	121.20%	27.97%	210.05%

Na2O	K2O	TOTAL	COMMENT
0.09	0.03	95.68	BEACH 03-03 30'-37'
0.16	0.03	92.58	BEACH 03-03 37'-45'
0.09	0.02	97.09	P170-03-0? 65'-70'
0.06	0.03	100.40	P170-03-02 10-15
0.08	0.02	98.66	P170-03-02 15-20
0.05	0.03	99.80	P170-03-02 20-26
0.06	0.03	100.26	P170-03-02 5-10
0.08	0.05	97.60	P170-03-03 0'-5'
0.09	0.03	97.37	P170-03-03 10'-15'
0.08	0.03	96.69	P170-03-03 15'-20'
0.22	0.04	95.48	P170-03-03 20'-25'
0.12	0.02	98.50	P170-03-03 25'-30'
0.09	0.02	104.26	P170-03-03 35'-40'
0.08	0.02	100.12	P170-03-03 40'-45'
0.08	0.02	100.60	P170-03-03 45'-50'
0.11	0.02	107.52	P170-03-03 50'-55'
0.16	0.09	94.14	P170-03-03 5'-10'
0.10	0.04	97.68	P170-03-04 0;-5;
0.08	0.07	98.42	P170-03-04 10'-15'
0.08	0.03	98.14	P170-03-04 20'-25'
0.06	0.02	98.29	P170-03-04 25'-35'
0.13	0.02	104.34	P170-03-04 30'-35'
0.22	0.03	96.98	P170-03-04 35'-40'
0.14	0.03	102.28	P170-03-04 40'-50'
0.10	0.03	97.83	P170-03-04 5'-10'
-0.20	0.01	36.40	P170-03-05 0'-5'
0.05	0.02	99.16	P170-03-05 100-105
0.04	0.02	100.39	P170-03-05 10'-15'
0.05	0.02	100.13	P170-03-05 105-110
0.05	0.02	99.75	P170-03-05 110-115
0.06	0.02	99.18	P170-03-05 115'-120'
0.04	0.02	101.11	P170-03-05 120'-125'
0.04	0.02	99.89	P170-03-05 15'-20'
0.05	0.02	100.04	P170-03-05 20-25
0.05	0.02	99.42	P170-03-05 25-30
0.08	0.02	99.01	P170-03-05 30-35
0.06	0.02	98.93	P170-03-05 35-40
0.05	0.02	101.44	P170-03-05 40'-45'
0.06	0.02	99.86	P170-03-05 45'-50'
0.04	0.02	101.63	P170-03-05 50'-55' P170-03-05 5'-10'
0.06	0.02	99.28	P170-03-05 5'-10'
0.11	0.06	98.16 98.31	P170-03-05 55'-60'
0.06	0.02	98.51	P170-03-05 60'-65'
0.07	0.02 0.02	98.65	P170-03-05 65'-70'
0.05	0.02	90.05 99.31	P170-03-05 05-70 P170-03-05 70'-75'
0.06	0.02	99.31	F170-03-03 70-13

0.07	0.02	97.72	P170-03-05 75'-80'
0.07	0.02	100.93	P170-03-05 80'-85'
0.06	0.02	102.45	P170-03-05 85'-90'
0.04	0.02	100.40	P170-03-05 90'-95'
0.06	0.02	98.13	P170-03-05 95'-100'
0.08	0.02	98.59	P170-03-06 0'-5'
0.06	0.02	101.92	P170-03-06 100'-105'
0.07	0.02	98.36	P170-03-06 10'-15'
0.05	0.02	99.35	P170-03-06 105'-110'
0.06	0.02	100.61	P170-03-06 110'-115'
0.07	0.02	100.82	P170-03-06 115;-122'
0.06	0.02	99.00	P170-03-06 15'-20'
0.06	0.02	99.35	P170-03-06 20'-25'
0.05	0.02	100.25	P170-03-06 25'-30'
0.06	0.02	100.85	P170-03-06 30'-35'
0.07	0.02	103.08	P170-03-06 35'-40'
0.08	0.02	99.62	P170-03-06 40-45
0.07	0.02	100.26	P170-03-06 45-50
0.13	0.03	100.63	P170-03-06 50-55
0.06	0.02	99.72	P170-03-06 55'-60'
0.09	0.02	100.92	P170-03-06 60'-65'
0.05	0.02	100.00	P170-03-06 70'-75'
0.04	0.02	100.57	P170-03-06 80'-85'
0.06	0.02	90.22	P170-03-06 82'-90'
0.05	0.04	99.76	P170-03-06 85'-90'
0.05	0.02	99.37	P170-03-06 90'-100'
0.06	0.02	100.13	P170-03-06 90'-95'
0.00	0.02	96.35	P170-03-07 100'-105'
0.12	0.02	98.79	P170-03-07 105'-112'
0.06	0.02	99.34	P170-03-07 103 172
0.05	0.02	100.07	P170-03-07 15-23
	0.02	99.49	P170-03-07 20'-35'
0.06		98.84	P170-03-07 35-40
0.06	0.02	97.64	P170-03-07 40'-45'
0.08	0.03	98.51	P170-03-07 45'-50'
0.07	0.04		
0.07	0.02	97.53 97.17	P170-03-07 50'-55' P170-03-07 55'-60'
0.07	0.03 0.02	98.50	P170-03-07 55'-65'
0.06			P170-03-07 65'-70'
0.08	0.02	98.23	P170-03-07 70'-75'
0.05	0.02	100.25	P170-03-07 75'-80'
0.06	0.02	99.42	
0.07	0.02	99.41	P170-03-07 80'-85'
0.06	0.02	98.91	P170-03-07 85'-90'
0.07	0.02	99.53	P170-03-07 90'-95'
0.05	0.02	99.82	P170-03-07 95'-100'
0.05	0.03	98.24	P170-03-08 19'-29'
0.06	0.04	90.66	P170-03-08 29'-39'
0.08	0.03	91.37	P170-03-08 39'-48'
0.07	0.03	91.96	P170-03-08 48'-56'
0.08	0.03	96.12	P170-03-08 91'-96'
0.06	0.02	98.78	P170-06-06 5'-10'

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0.06	0.02	100.00	P170-07-06 75'-80'
0.07	0.03	98.79	P193-03-01 0'-5'
0.09	0.05	88.19	P193-03-01 100'-105'
0.10	0.04	95.44	P193-03-01 10'-15'
0.09	0.05	88.52	P193-03-01 105'-110'
0.08	0.07	89.36	P193-03-01 110'-120'
0.10	0.05	92.09	P193-03-01 120'-125'
0.11	0.04	92.96	P193-03-01 15'-20'
0.14	0.05	87.53	P193-03-01 20'-25'
0.09	0.04	93.18	P193-03-01 25'-30'
0.11	0.05	92.26	P193-03-01 30'-35'
0.12	0.04	90.81	P193-03-01 35'-40'
0.12	0.04	92.90	P193-03-01 40'-45'
0.11	0.03	92.71	P193-03-01 45'-50'
0.12	0.03	93.02	P193-03-01 50'-55'
0.09	0.03	96.30	P193-03-01 5'-10'
0.13	0.04	92.98	P193-03-01 55'-60'
0.11	0.04	91.81	P193-03-01 60'-65'
0.14	0.04	89.88	P193-03-01 65'-70'
0.11	0.06	90.06	P193-03-01 70'-75'
0.10	0.08	89.54	P193-03-01 75'-80'
0.11	0.07	91.48	P193-03-01 80'-85'
0.10	0.04	92.51	P193-03-01 85'-90'
0.08	0.06	88.58	P193-03-01 90'-95'
0.11	0.07	90.28	P193-03-01 95'-100'
0.08	0.03	97.04	
0.22	0.09	107.52	
-0.20	0.01	36.40	
0.04	0.01	6.76	
53.00%	50.54%	6.96%	

#### ASH GROVE CEMENT SEATTLE ANALYSIS OF SILICA DRILL HOLES FOR SHOOTING CHEMICAL ANALYSIS BY FUSION XRF

			CHEMICAL ANA	LA212 RA	FUSION X	KF							
	DATE	SEATTLE					0-0	14-0	SO3	Na2O	K2O	TOTAL	COMMENT
_	REC	NUMBER	SOURCE	\$iO2	1,63	Fe2O3 4.25	0.60	0.12	0.07	0.09	0.03	95.68	BEACH 03-03 30'-37'
	3/9/2003	0188-03	PORT HARDY	88.89 74.25	4.25	12.97	0.57	0.12	0.17	0.16	0.03	92.58	BEACH 03-03 37'-45'
	3/11/2003	0200-03 0295-03	PORT HARDY PORT HARDY	89.75	0.68	5.96	0.19	0.07	0.33	0.09	0.02	97.09	P170-03-0? 65'-70'
	3/17/2003	0111-03	PORT HARDY	98.12	0.17	1.73	0.16	0.07	0.06	0.06	0.03	100.40	P170-03-02 10-15
	3/4/2003	0117-03	PORT HARDY	93.29	0.17	4.75	0.17	0.07	0.11	0.08	0.02	98.66	P170-03-02 15-20
	3/4/2003	0114-03	PORT HARDY	98.21	0.38	0.75	0.22	0.07	0.09	0.05	0.03	99.80	P170-03-02 20-26
	3/4/2003	0120-03	PORT HARDY	98.29	0.14	1.53	0.10	0.07	0.04	0.06	0.03	100.26	P170-03-02 5-10
	3/8/2003	0185-03	PORT HARDY	91.11	0.95	4.88	0.23	80.0	0.22	0.08	0.05	97.60	P170-03-03 0'-5'
	3/12/2003	0239-03	PORT HARDY	88.26	0.75	7.49	0.35	0.08	0.32	0.09	0.03	97.37	P170-03-03 10'-15'
	3/7/2003	0173-03	PORT HARDY	88.54	1.15	6.29	0.17	0.07	0.36	0.08	0.03	96.69	P170-03-03 15'-20' P170-03-03 20'-25'
	3/7/2003	0171-03	PORT HARDY	74.06	1.52	17.52	1.27	0.11	0.74	0.22	0.04	95.48	P170-03-03 25'-30'
	3/7/2003	0179-03	PORT HARDY	91.36	0.61	3.87	0.44	0.08	2.00	0.12	0.02	98.50 104.26	P170-03-03 25'-40'
	3/7/2003	0175-03	PORT HARDY	94.82	0.60	3.71	0.16	0.08 0.07	4.78 2.77	0.09 0.08	0.02 0.02	100.12	P170-03-03 40'-45'
	3/11/2003	0212-03	PORT HARDY	92.95	0.29	3.82 3.97	0.12 0.35	0.07	2.31	0.08	0.02	100.60	P170-03-03 45'-50'
	3/11/2003	0203-03	PORT HARDY	93.64 90.69	0.15 0.26	6.79	0.06	0.07	9.52	0.11	0.02	107.52	P170-03-03 50'-55'
	3/11/2003 3/8/2003	0210-03 0183-03	PORT HARDY PORT HARDY	75.75	1.42	15.85	0.22	0.08	0.57	0.16	0.09	94.14	P170-03-03 5'-10'
	3/11/2003	0211-03	PORT HARDY	69.18	12.18	8.02	0.56	0.11	7.49	0.10	0.04	97.68	P170-03-04 0;-5;
	3/7/2003	0177-03	PORT HARDY	91.61	1.07	3.60	0.86	0.08	1.05	0.08	0.07	98.42	P170-03-04 10'-15'
	3/6/2003	0169-03	PORT HARDY	92.19	1.23	3.96	0.33	0.08	0.24	0.08	0.03	98.14	P170-03-04 20'-25'
	3/17/2003	0298-03	PORT HARDY	95.21	0.26	2.37	0.19	0.07	0.11	0.06	0.02	98.29	P170-03-04 25'-35'
	3/7/2003	0176-03	PORT HARDY	91.01	0.74	4.48	2.23	0.13	5.60	0.13	0.02	104.34	P170-03-04 30'-35'
	3/7/2003	0172-03	PORT HARDY	68.24	3.21	24.25	0.20	0.08	0.75	0.22	0.03	96.98	P170-03-04 35'-40'
	3/17/2003	0267-03	PORT HARDY	67.94	9.17	11.56	0.40	0.10	12.94	0.14	0.03	102.28	P170-03-04 40'-50' P170-03-04 5'-10'
	3/7/2003	0174-03	PORT HARDY	89.55	3.03	3.41	1.00	0.10	0.61	0.10	0.03	97.83	P170-03-04 9-10
	3/12/2003	0237-03	PORT HARDY	34.32	-0.11	2.34	80.0	-0.05	0.01	-0.20	0.01 0.02	36.40 99.16	P170-03-05 100-105
	3/4/2003	0116-03	PORT HARDY	93.91	0.18	4.78	0.08	0.07	0.07 0.14	0.05 0.04	0.02	100.39	P170-03-05 10'-15'
	3/11/2003	0216-03	PORT HARDY	99.10	0.07	0.80	0.15 0.19	0.07 0.07	0.04	0.05	0.02	100.13	P170-03-05 105-110
	3/4/2003	0118-03	PORT HARDY	97.28 96.55	0.27 0.29	2.21 2.42	0.19	0.07	0.07	0.05	0.02	99.75	P170-03-05 110-115
	3/4/2003	0112-03 0178-03	PORT HARDY PORT HARDY	95.47	0.44	2.79	0.18	0.07	0.15	0.06	0.02	99.18	P170-03-05 115'-120'
	3/7/2003 3/17/2003	0178-03	PORT HARDY	98.36	0.11	2.26	0.09	0.06	0.17	0.04	0.02	101.11	P170-03-05 120'-125'
	3/10/2003	0195-03	PORT HARDY	97.96	0.07	1.52	0.12	0.06	0.10	0.04	0.02	99.89	P170-03-05 15'-20'
	3/4/2003	0115-03	PORT HARDY	97.98	0.13	1.46	0.16	0.07	0.17	0.05	0.02	100.04	P170-03-05 20-25
	3/4/2003	0110-03	PORT HARDY	96.30	0.06	2.77	0.09	0.06	0.07	0.05	0.02	99.42	P170-03-05 25-30
	3/4/2003	0124-03	PORT HARDY	92.03	0.13	5.99	0.56	80.0	0.12	80.0	0.02	99.01	P170-03-05 30-35
	3/4/2003	0113-03	PORT HARDY	94.60	0.13	3.62	0.32	0.07	0.11	0.06	0.02	98.93	P170-03-05 35-40
	3/17/2003	0302-03	PORT HARDY	97.98	0.11	3.06	0.11	0.07	0.04	0.05	0.02	101.44	P170-03-05 40'-45' P170-03-05 45'-50'
	3/8/2003	0181-03	PORT HARDY	97.39	0.14	1.48	0.57	0.10	0.10	0.06	0. <b>02</b> 0.02	99.86 101.63	P170-03-05 50'-55'
	3/17/2003		PORT HARDY	99.31	0.08	1.96	0.11	0.07 0.07	0.04 0.15	0.04 0.06	0.02	99.28	P170-03-05 5'-10'
	3/17/2003	0283-03	PORT HARDY	95.17	0.14	3.43 6.59	0.24 0.87	0.07	3.12	0.00	0.02	98.16	P170-03-05 5'-10'
	3/17/2003	0292-03	PORT HARDY	85.86 94.28	1.46 0.16	3.35	0.33	0.07	0.04	0.06	0.02	98.31	P170-03-05 55'-60'
	3/17/2003		PORT HARDY PORT HARDY	91.79	0.10	6.27	0.17	0.06	0.05	0.07	0.02	98.51	P170-03-05 60'-65'
	3/9/2003 3/9/2003		PORT HARDY	94.61	0.07	3.50	0.29	0.07	0.04	0.05	0.02	98.65	P170-03-05 65'-70'
	3/17/2003	0274-03	PORT HARDY	94.34	0.12	4.55	0.10	0.06	0.06	0.06	0.02	99.31	P170-03-05 70'-75'
	3/9/2003	0190-03	PORT HARDY	89.35	0.39	7.58	0.16	0.07	80.0	0.07	0.02	97.72	P170-03-05 75'-80'
	3/17/2003		PORT HARDY	95.39	0.21	4.91	0.19	0.07	0.07	0.07	0.02	100.93	P170-03-05 80'-85'
	3/17/2003		PORT HARDY	98.88	0.18	2.49	0.66	0.08	0.08	0.06	0.02	102.45	P170-03-05 85'-90'
	3/17/2003		PORT HARDY	97.91	0.30	1.82	0.20	0.07	0.04	0.04	0.02	100.40	P170-03-05 90'-95'
	3/12/2003			90.50	0.15	7.08	0.16	0.07	0.09	0.06	0.02	98.13	P170-03-05 95'-100'
	3/12/2003	0238-03		91.66	0.20	6.36	0.11	0.07	0.09	0.08	0.02	98.59	P170-03-06 0'-5' P170-03-06 100'-105'
	3/17/2003	0290-03	PORT HARDY	97.29	0.09	4.08	0.22	0.07	0.09	0.06	0.02	101.92 98.36	P170-03-06 100-105
	3/11/2003			91.97	0.21	5.63	0.10	0.07	0.29 0.08	0.07 0.05	0.02 0.02	99.35	P170-03-06 105'-110'
	3/17/2003			95.64	0.04	3.35	0.11	0.06 0.06	0.08	0.06	0.02	100.61	P170-03-06 110'-115'
		0180-03		95.90 06.45	0.11 0.07	4.28 3.50	0.07 0.51	0.08	0.12	0.07	0.02	100.82	P170-03-06 115;-122'
	3/17/2003			96.45 94.73	0.07	3.82	0.10	0.06	0.08	0.06	0.02	99.00	P170-03-06 15'-20'
	3/11/2003 3/17/2003			95.15	0.09	3.54	0.23	0.07	0.19	0.06	0.02	99.35	P170-03-06 20'-25'
	3/17/2003	0230-03	PORT HARDY	96.98	0.06	2.50	0.22	0.07	0.35	0.05	0.02	100.25	P170-03-06 25'-30'
	3/17/2003			96.67	0.04	3.45	0.16	0.07	0.38	0.06	0.02	100.85	P170-03-06 30'-35'
		0182-03		96.84	0.04	3.59	0.22	0.07	2.23	0.07	0.02	103.08	P170-03-06 35'-40'
		0122-03		92.72	0.10	5.62	0.40	0.07	0.61	0.08	0.02	99.62	P170-03-06 40-45
		0125-03		95.60	0.07	3.48	0.40	0.07	0.55	0.07	0.02	100.26	P170-03-06 45-50
		0121-03		91.20	0.25	4.23	3.40	0.14	1.25	0.13	0.03	100.63	P170-03-06 50-55
	3/5/2003	0167-03	PORT HARDY	95.87	0.07	3.01	0.46	0.07	0.16	0.06	0.02	99.72	P170-03-06 55'-60' P170-03-06 60'-65'
		0184-03		96.91	0.11	2.87	0.63	0.10	0.19	0.09	0.02	100.92 100.00	P170-03-06 70'-75'
)		0186-03		99.24	0.13	0.23	0.16	0.07	0.10	0.05	0.02 0.02	100.00	P170-03-06 80'-85'
	3/17/2003	0268-03	PORT HARDY	99.97	0.06	0.19	0.17	0.06	0.06	0.04	0.02	(60.57	1 170 700 700 700

								4.03	0.00	0.04	90.22	P170-03-06 82'-90'
3/11/2003	0213-03	PORT HARDY	72.36	12.52	2.96	0.23	0.08	1.97	0.06	0.04	90.22 99.76	P170-03-06 85'-90'
3/11/2003	0226-03	PORT HARDY	97.79	0.09	1.43	0.27	0.07	0.04	0.05	0.02		
3/11/2003	0202-03	PORT HARDY	95.71	0.05	3.34	0.07	0.06	0.06	0.06	0.02	99.37	P170-03-06 90'-100'
3/10/2003	0199-03	PORT HARDY	97.31	0.03	2.42	0.17	0.07	0.05	0.06	0.02	100.13	P170-03-06 90'-95'
3/11/2003	0228-03	PORT HARDY	86.67	0.48	8.73	0.11	80.0	0.14	0.12	0.02	96.35	P170-03-07 100'-105'
3/12/2003	0240-03	PORT HARDY	95.76	1.18	1.25	0.16	0.07	0.29	0.06	0.02	98.79	P170-03-07 105'-112'
3/5/2003	0168-03	PORT HARDY	95.97	0.10	2.74	0.33	80.0	0.04	0.06	0.02	99.34	P170-03-07 18'-25'
3/4/2003	0119-03	PORT HARDY	97.68	0.18	1.85	0.18	0.07	0.04	0.05	0.02	100.07	P170-03-07 25-30
3/5/2003	0166-03	PORT HARDY	95.60	0.22	3.06	0.40	0.08	0.05	0.06	0.02	99.49	P170-03-07 30'-35'
3/4/2003	0123-03	PORT HARDY	94.68	0.16	3.58	0.22	0.07	0.05	0.06	0.02	98.84	P170-03-07 35-40
3/17/2003	0294-03	PORT HARDY	92.95	0.37	3.83	0.20	0.08	0.10	80.0	0.03	97.64	P170-03-07 40'-45'
3/12/2003	0233-03	PORT HARDY	93.59	0.26	4.03	0.38	0.08	0.06	0.07	0.04	98.51	P170-03-07 45'-50'
3/17/2003	0300-03	PORT HARDY	91.97	0.26	4.94	0.13	0.07	0.07	0.07	0.02	97.53	P170-03-07 50'-55'
	0204-03	PORT HARDY	89.15	0.42	7.20	0.14	0.08	0.08	0.07	0.03	97.17	P170-03-07 55'-60'
3/11/2003		PORT HARDY	94.00	0.30	3.93	0.07	0.07	0.05	0.06	0.02	98.50	P170-03-07 55'-65'
3/17/2003	0304-03		90.74	0.37	6.79	0.08	0.07	0.08	80.0	0.02	98.23	P170-03-07 65'-70'
3/10/2003	0197-03	PORT HARDY	99.18	0.10	0.73	0.27	0.07	0.05	0.05	0.02	100.25	P170-03-07 70'-75'
3/17/2003	0269-03	PORT HARDY			0.57	0.84	0.10	0.05	0.06	0.02	99.42	P170-03-07 75'-80'
3/9/2003	0187-03	PORT HARDY	97.50	0.18	3.28	0.11	0.07	0.14	0.07	0.02	99.41	P170-03-07 80'-85'
3/17/2003	0273-03	PORT HARDY	95.51	0.21		0.11	0.07	0.05	0.06	0.02	98.91	P170-03-07 85'-90'
3/9/2003	0189-03	PORT HARDY	96.05	0.18	2.30		0.07	0.19	0.07	0.02	99.53	P170-03-07 90'-95'
3/10/2003	0198-03	PORT HARDY	96.75	0.37	1.84	0.22		0.13	0.05	0.02	99.82	P170-03-07 95'-100'
3/11/2003	0227-03	PORT HARDY	97.98	0.44	1.02	0.12	0.07	0.12	0.05	0.03	98.24	P170-03-08 19'-29'
3/12/2003	0235-03	PORT HARDY	96.10	0.45	1.06	0.28	80.0		0.06	0.04	90.66	P170-03-08 29'-39'
3/11/2003	0209-03	PORT HARDY	70.08	15.00	2.13	0.18	0.09	3.08			91.37	P170-03-08 39'-48'
3/10/2003	0193-03	PORT HARDY	73.41	11.47	2.86	0.88	0.12	2.52	0.08	0.03	91.96	P170-03-08 48'-56'
3/11/2003	0214-03	PORT HARDY	71.43	12.65	3.68	0.16	0.09	3.85	0.07	0.03		P170-03-08 91'-96'
3/11/2003	0215-03	PORT HARDY	86.58	3.94	3.20	0.72	0.09	1.48	0.08	0.03	96.12	P170-06-06 5'-10'
3/11/2003	0218-03	PORT HARDY	93.48	0.13	4.84	0.07	0.06	0.12	0.06	0.02	98.78	P170-07-06 75'-80'
3/6/2003	0170-03	PORT HARDY	98.78	0.10	0.49	0.39	0.08	0.08	0.06	0.02	100.00	
3/10/2003	0194-03	PORT HARDY	90.95	0.43	5.59	0.20	0.07	1.45	0.07	0.03	98.79	P193-03-01 0'-5'
3/11/2003	0220-03	PORT HARDY	62.17	17.63	7.42	0.24	0.09	0.50	0.09	0.05	88.19	P193-03-01 100'-105'
3/17/2003		PORT HARDY	79.58	5.38	8.66	0.28	80.0	1.32	0.10	0.04	95.44	P193-03-01 10'-15'
3/11/2003		PORT HARDY	66.93	14.28	6.19	0.48	0.10	0.40	0.09	0.05	88.52	P193-03-01 105'-110'
3/10/2003	0196-03	PORT HARDY	69.91	12.51	6.03	0.28	0.09	0.39	0.08	0.07	89.36	P193-03-01 110'-120'
3/11/2003		PORT HARDY	68.44	14.04	5.39	0.27	0.10	3.70	0.10	0.05	92.09	P193-03-01 120'-125'
3/17/2003		PORT HARDY	74.29	7.30	10.40	0.20	0.08	0.54	0.11	0.04	92.96	P193-03-01 15'-20'
3/17/2003		PORT HARDY	64.71	11.36	8.97	1.40	0.14	0.76	0.14	0.05	87.53	P193-03-01 20'-25'
3/17/2003		PORT HARDY	73.12	9.97	7.50	0.21	80.0	2.17	0.09	0.04	93.18	P193-03-01 25'-30'
		PORT HARDY	71.15	8.63	11.28	0.26	0.08	0.70	0.11	0.05	92.26	P193-03-01 30'-35'
3/17/2003		PORT HARDY	69.62	9.42	10.68	0.19	0.07	0.67	0.12	0.04	90.81	P193-03-01 35'-40'
3/17/2003		PORT HARDY	75.11	6.14	10.69	0.18	0.08	0.54	0.12	0.04	92.90	P193-03-01 40'-45'
3/11/2003		PORT HARDY	76.79	4.55	10.61	0.15	0.07	0.40	0.11	0.03	92.71	P193-03-01 45'-50'
3/17/2003			76.03	3.89	12.32	0.15	0.07	0.41	0.12	0.03	93.02	P193-03-01 50'-55'
3/17/2003				0.86	7.95	0.28	0.08	0.21	0.09	0.03	96.30	P193-03-01 5'-10'
3/17/2003			86.80	7.11	14.06	0.25	0.08	0.55	0.13	0.04	92.98	P193-03-01 55'-60'
3/11/2003			70.76		8.72	0.17	0.08	0.58	0.11	0.04	91.81	P193-03-01 60'-65'
3/17/2003			73.92	8.19	9.54	1.16	0.13	0.56	0.14	0.04	89.88	P193-03-01 65'-70'
3/17/2003			69.85	8.46		0.41	0.09	0.62	0.11	0.06	90.06	P193-03-01 70'-75'
3/12/2003			66.27	13.09	9.41			1.31	0.10	0.08	89.54	P193-03-01 75'-80'
3/17/2003			64.33	15.02	8.01	0.58	0.11	3.02	0.10	0.07	91.48	P193-03-01 80'-85'
3/17/2003			64.76	14.99	8.03	0.40	0.10		0.10	0.04	92.51	P193-03-01 85'-90'
3/17/2003			62.46	16.47	10.31	0.20	0.09	2.84			88.58	P193-03-01 90'-95'
3/11/2003	0224-03	PORT HARDY	66.02	16.44	5.19	0.24	0.10	0.45	0.08	0.06	90.28	P193-03-01 95'-100'
3/11/2003			67.77	12.86	8.06	0.45	0.09	0.87	0.11	0.07	50.20	F 133-03-01 33 - 100
	200	2 Average	87.63	2.91	5.11	0.34	0.08	0.86	0.08	0.03	97.04	
		Maximum	99.97	17.63	24.25	3.40	0.18	12.94	0.22	0.09	107.52	
		Minimum	34.32	-0.11	0.19	0.06	-0.05	0.01	-0.20	0.01	36.40	
		St. Dev.	12.25	4.88	3.79	0.41	0.02	1.82	0.04	0.01	6.76	
		Coef. Var.	13.98%	168.04%	74.16%	121.20%	27.97%	210.05%	53.00%	50.54%	6.96%	
		Occi. Vai.	19.007									