GEOLOGICAL AND DIAMOND DRILLING ASSESSMENT REPORT

on the

APPLE BAY PROJECT (PEM100 CHALKY GEYSERITE and KAOLINITE QUARRY)

Holberg Inlet Area, Wanokana Creek, Vancouver Island

Longitude 127°14'/Latitude 50°37' NTS 92L/12E (92L.062) Nanaimo M.D.

Owned by Homegold Resources Ltd. Unit 5 – 2330 Tyner Street, RECEIVED rt Coquitlam, B.C. V3C 2Z1 DEC 1 4 2000 Phone: 604-970-6402 Gold Commissioner's Offers: 604-944-6102 VANCOUVER, B.C.

Prepared by

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September 16, 2000

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1.0 FACT SHEET and SUMMARY

FACT	SHEET
CORPORA	TE DATA
PROJECT NAME:	PEM100 Kaolinite Project
COMPANY NAME AND	Homegold Resources Ltd.
ADDRESS:	Unit 5 – 2330 Tyner St.,
	Port Coquitlam, B.C.
	V3C 2Z1
	Telephone: 604-970-6402
	FAX: 604-944-6102
	E-mail: jo@homegoldResources.com
CONTACT/TITLE:	J.T. (Jo) Shearer, M.Sc., P.Geo.,
	President
	Quarry Supervisor #98-3550
	Doug Stelling
	Corporate Advisor,
PROJECT	DETAILS
PROJECT LOCATION:	Apple Bay, north side of Holberg Inlet,
	Quatsino Sound, NTS 92L/12W, 50 37',
	127 14'
ESTIMATED CAPITAL COST:	\$1.0 million, approximately
MINERALS:	Kaolinite, Iron and Silica
MINE SYSTEM:	Quarry (negligible overburden or waste)
ESTIMATED PRODUCTION:	24,000 tonnes per year
PROCESS:	Jaw and cone crushers/stockpile
PROPOSED MINE LIFE:	30 years plus
MINERAL I	
GEOLOGICAL POTENTIAL:	5 million tonnes plus
AVERAGE GRADE OF MATERIAL	80 - 84 % Silica
CUT-OFF GRADE:	<2% >20% Al ₂ O ₃
POTENTIAL FOR ADDITIONAL GEOLOGICAL	Several other known zones
RESERVES:	STICS
ROAD:	Road from Coal Harbour via Wanakana
KOAD.	Mainline (13 km)
ACCESS TO SITE:	Truck or Boat
SHIPPING:	Via barge to Vancouver, BC from Port Hardy
POWER SUPPLY:	On-site generation for crusher
WORKFORCE	
OPERATIONAL WORKFORCE:	Quality Control: 1 person 10 months per
	year
	Quarrying, crushing and stockpiling: 4 to
	5 people 6 months per year
	Shipping: 2 people 10 months per year
	Trucking: 2 Trucks 10 months per year
CONSTRUCTION WORKFORCE:	10 people for 4 months
HOUSING OPTIONS:	At home for local workers - Coal
	Harbour/Port Hardy
INDIRECT EMPLOYMENT:	5 to 6 person years (Purchased Services)

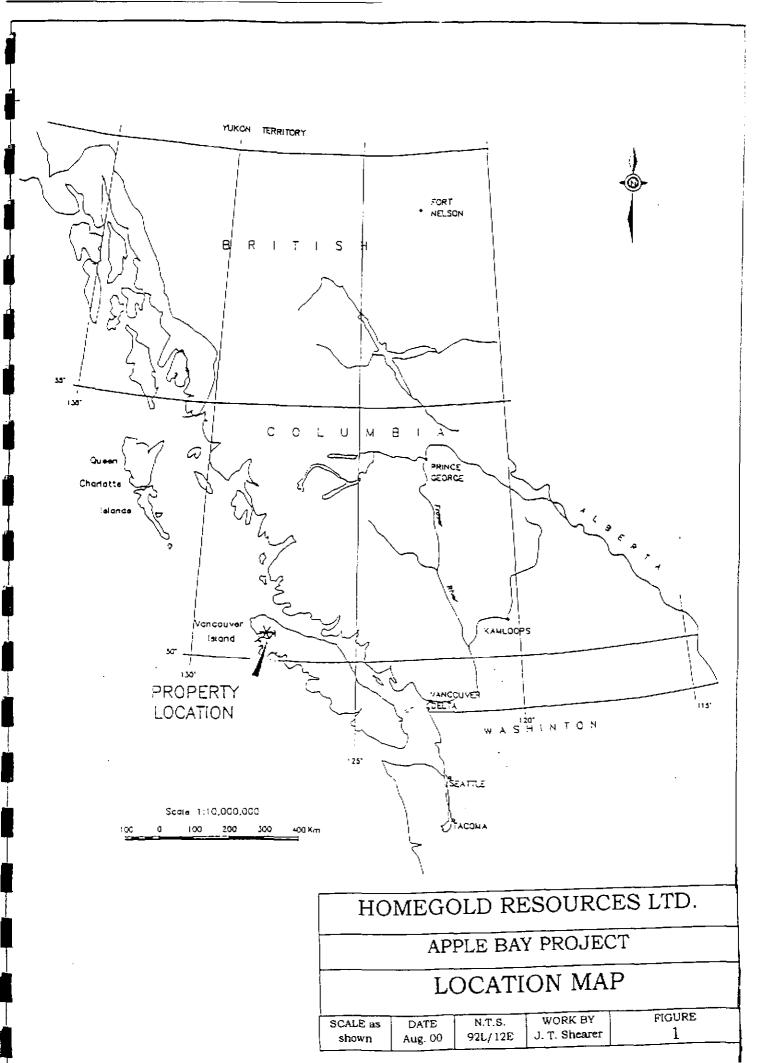
SUMMARY

- 1. Acquisition and a preliminary evaluation of the PEM100 Kaolinite and Chalky Geyserite Quarry was undertaken between October 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
- 2. Electra Gold Ltd. has optioned the higher-grade Al₂O₃ material (>25% Al₂O₃) 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 1-11 and Jody 1 and 2 mineral claims totalling 2000 hectares. The PEM100 geyserite quarry is located on the Apple Bay two claim (20 units) and Jody Claims. A Mining Lease Application is currently being processed. 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. Two main sub areas of chalky geyserite and kaolinite have been outlined by limited drilling to date on the PEM100 zone. Area A covers a 60,000m² area around the PEM100 quarry. This 27.77m thick zone contains about 3.91 million tonnes of geyserite grading approximately 83.66% SiO₂, 12.49% Al₂O₃ and 0.09% SO₃. 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 about 1.11 million tonnes of material grading approximately 81.84% SiO₂, 14.33% Al₂O₃ and 0.05% SO₃. The total tonnage and average grade of both Area A and B is 5.02 million tonnes grading 83.26% SiO₂, 12.90% Al₂O₃ and 0.08% SO₃.
- 8. Two bulk samples were collected from the PEM100 Quarry during 2000. A total of 9000 tonnes of material was mined and trucked to Port Hardy. The first 5400 tonne bulk sample was barged to the Tilbury Cement Plant in Delta, B.C. The second bulk sample is scheduled for shipping to Delta in late December 2000.
- 9. Crushing was completed by a one pass Hewitt-Robbins24"x36" jaw crusher and impactor to produce 2" minus product. Trucking to Port Hardy was by 40 tonne and end dump units with transfer trailers.
- 10. Expenditures are listed in Appendix II and the timing of work in Appendix III. Since Apple Bay Two was abandoned and relocated to accommodate the establishment of the Mining Lease the Assessment work is mainly on the first bulk sample work.

11. Proposed plans for 2001 call for at least 100,000 tonnes of production on the 100m to 124m bench levels with the crusher situated on the 100m bench to facilitate mucking by front end loader. A drill program and research program into commercial uses of the higher grade (>25% Al₂O₃) will be undertaken in 2001.

submitted, Respect MANU

J. T. Shearer, M.Sc., P.Geo. Consulting Geologist September 16, 2000



2.0 INTRODUCTION

This report documents assessment work competed in 1999 to 2000 and to summarize the Kaolinite potential and outline a future work program for the Apple Bay Project.

The Apple Bay 1 – 11 and Jody 1 and 2 mineral claims 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% SiO₂, 12.90% Al₂O₃ and 0.08% SO₃. A third area (Area C) lies between Areas A and B and may contain an additional 4.3 million tonnes of silica-rich 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.

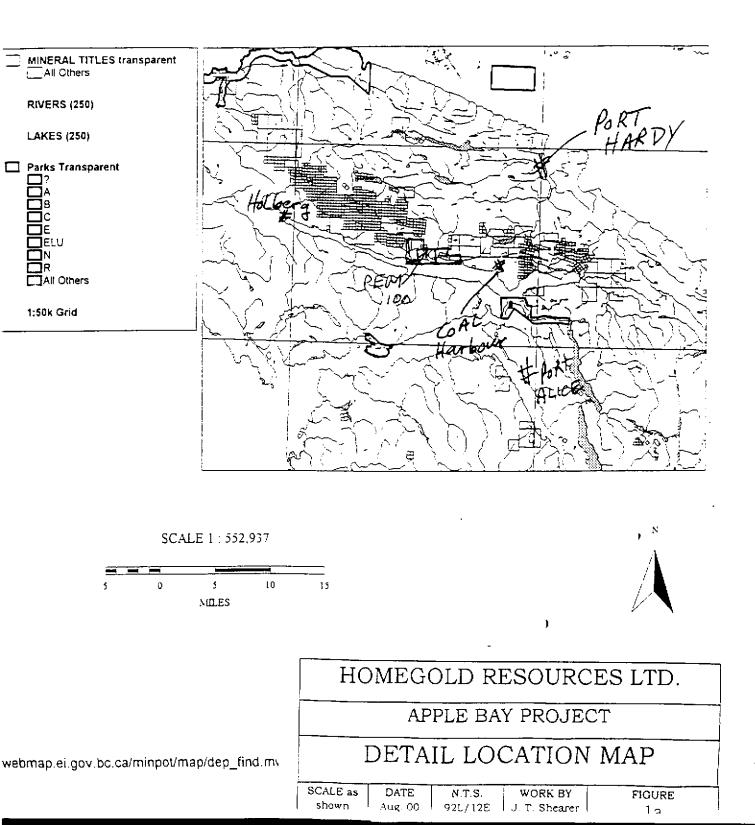
Currently there is no source of high quality kaolinite in British Columbia and, as such, it is imported primarily from Georgia in the United States of America. The closeness of the Apple Bay kaolinite deposits to the large Pulp and Paper Industrial Complexes in British Columbia offers customers a potentially 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.

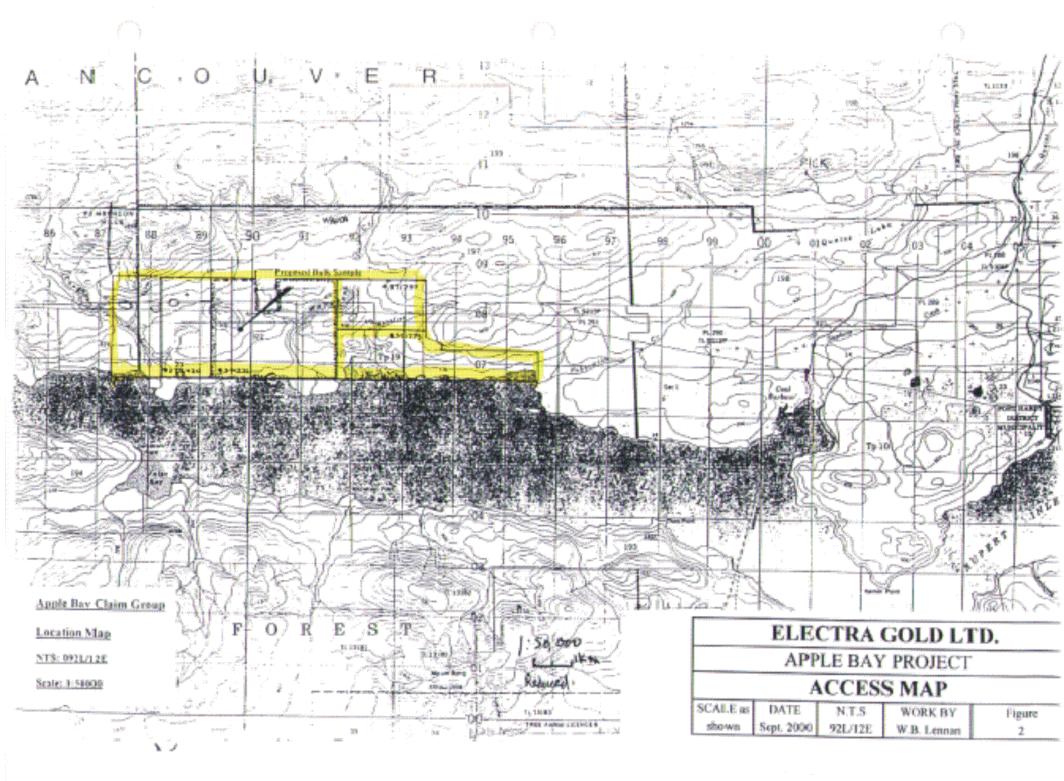
Throughout the property a further 9 geyserite zones have been identified by geological mapping. A 5000 tonne bulk sample was shipped in 1968 by Lafarge Inc. from a geyserite deposit in central Apple Bay, which is now covered by the Apple Bay One Mineral Claim. The PEM100 Quarry is approximately 12 kilometres 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. Two bulk samples were extracted from the PEM100 Quarry during 2000. 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 and shipment to the Tilbury Cement Plant in Delta, B.C. is planned for December 2000.

Iomegold Resources Ltd HOLBERG Kaolinite



This report documents the results of the work program and experience gained while producing material in 2000 while establishing the first open cut bench. A detail plan is included, which outlines proposed work in 2001 to produce 240,000 tonnes annually of geyserite from which silica and alumina is obtained, further diamond drilling and the initiation of a research program into commercial products made from the higher grade (<25%) Al₂O₃.



3.0 LOCATION and ACCESS and FIELD PROCEDURES

The Apple Bay 1 - 11 and Jody 1 and 2 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 three 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.

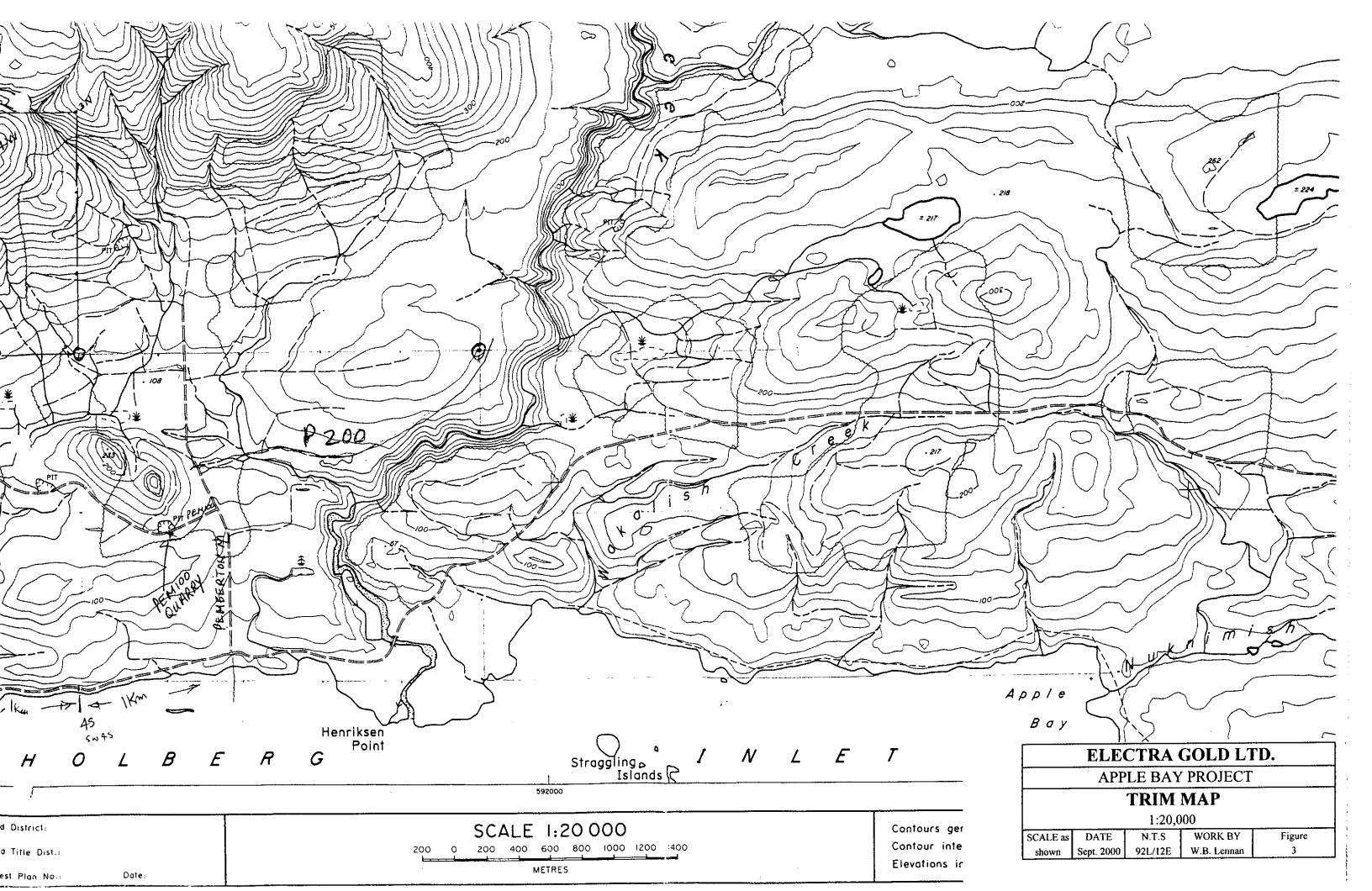
Access to the claims is gained by travelling south for 16 km from Port Hardy along a paved road to Coal Harbour. From Coal Harbour travel west for 12 km along the Wanokana Mainline logging road to the Pemberton Mainline logging road and turn off onto the P100 branch road.

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 undercover on pallets at 6625 Port Hardy Road. The bulk samples were produced by drilling and blasting on a 3m by 3m hole pattern and transported by 50 tonne truck and transfer to Port Hardy. The timing of the first bulk sample program was April 19 – May 15, 2000 and the second bulk sample was July 15 – 30, 2000.



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

Claim Name	Tenure #	Size	Units	Date Located	* Current Anniversary Date	Owner
Apple Bay One	371775	8E2N	16	Sept. 16, 1999	Sept. 16, 2005	J. T. Shearer
Apple Bay Two	377240	5E4N	20	May 17, 2000	May 17, 2005	J. T. Shearer
Apple Bay Three	371777	4E2N	8	Sept. 18, 2000	Sept. 18, 2005	J. T. Shearer
Apple Bay Four	374744	4N4W	16	March 11, 2000	March 11, 2006	J. T. Shearer
Apple Bay Five	373854	3N4E	12	Dec. 5, 1999	Dec. 5, 2005	J. T. Shearer
Apple Bay 6	374738	2 post	1	March 9, 2000	March 9, 2004	R. W. Howich
Apple Bay 7	374739	2 post	1	March 9, 2000	March 9, 2004	R. W. Howich
Apple Bay 8	374740	2 post	1	March 9, 2000	March 9, 2004	R. W. Howich
Apple Bay 9	374741	2 post	1	March 9, 2000	March 9, 2004	R. W. Howich
Apple Bay 10	377359	2 post	Fr	May 16, 2000	May 16, 2004	R. W. Howich
Apple Bay 11	377360	2 post	Fr	May 16, 2000	May 16, 2004	R. W. Howich
Jody 1	377262	2 post	1	May 11, 2000	May 11, 2004	R. W. Howich
Jody 2	377263	2 post	1	May 11, 2000	May 11, 2004	R. W. Howich

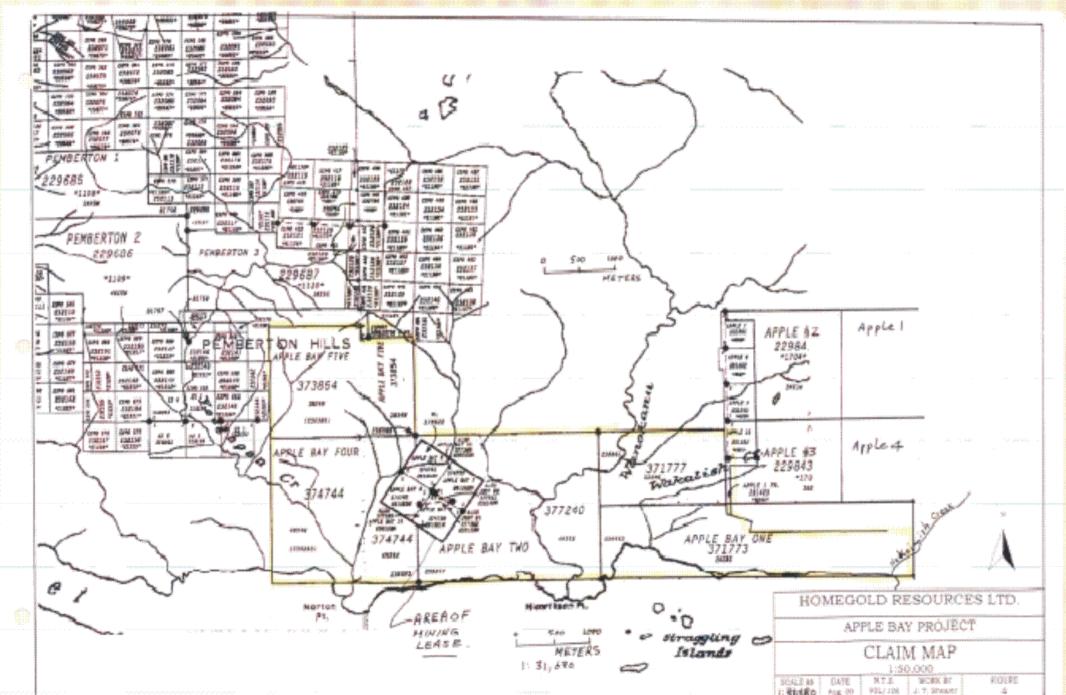
List of Claims

Total 80 units

Note: Apple Bay 6-11 and Jody 1 & 2 have been legally surveyed and a Mining Lease is presently being applied (Lot 2323). Tenure number of future lease will be 379922.

Mineral title is acquired in British Columbia via the <u>Mineral Act</u> 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. On 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 puss 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.

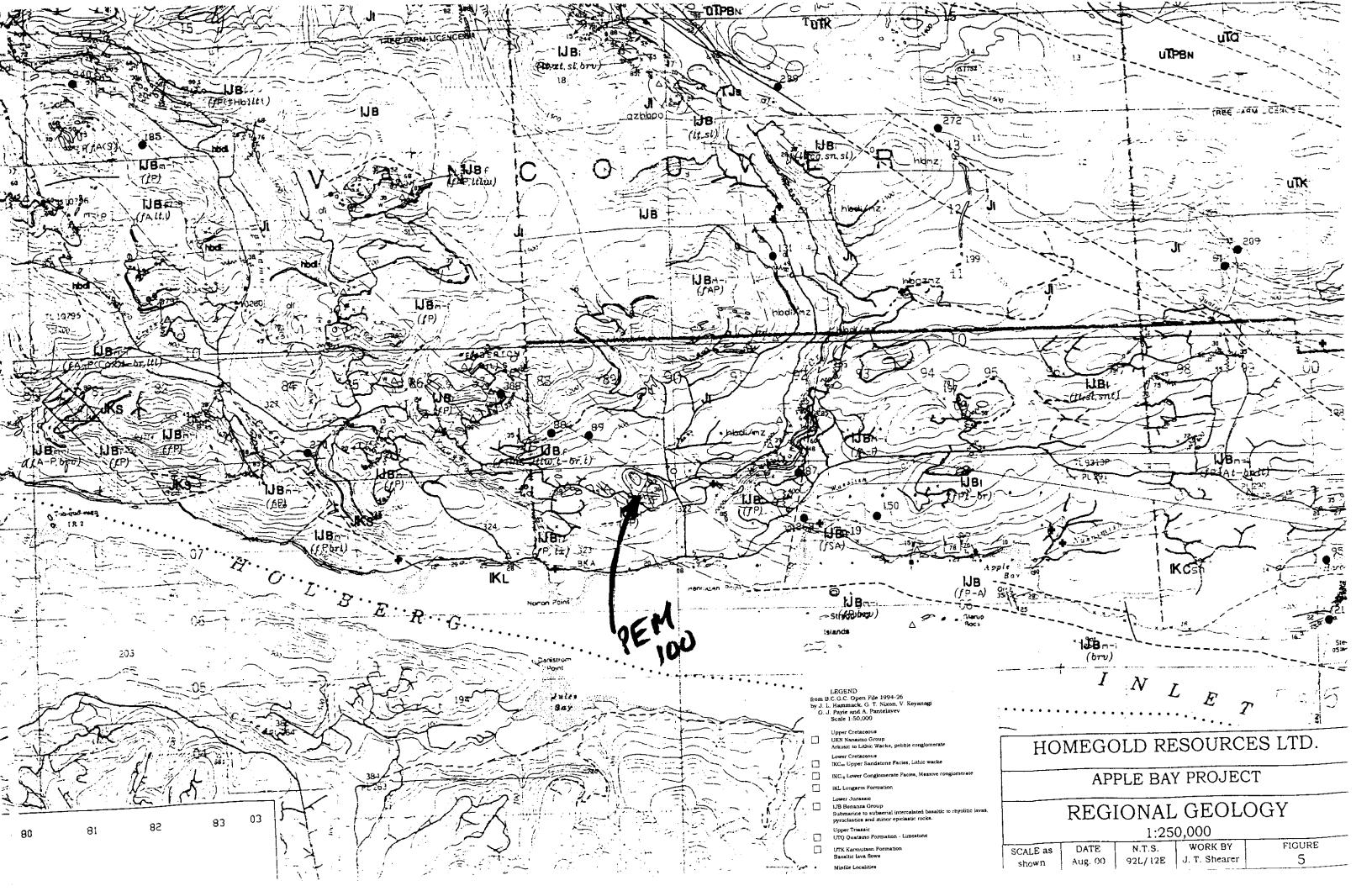
Following acquisition of the ground west and north of the Genstar claim by Western Pocasset Resources, Ltd. in 1982, B.C. Pearson made an inspection of outcrops exposed by the recent construction of logging roads. He noted that by the main haulage road cut across the northwestern margin of the western 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.

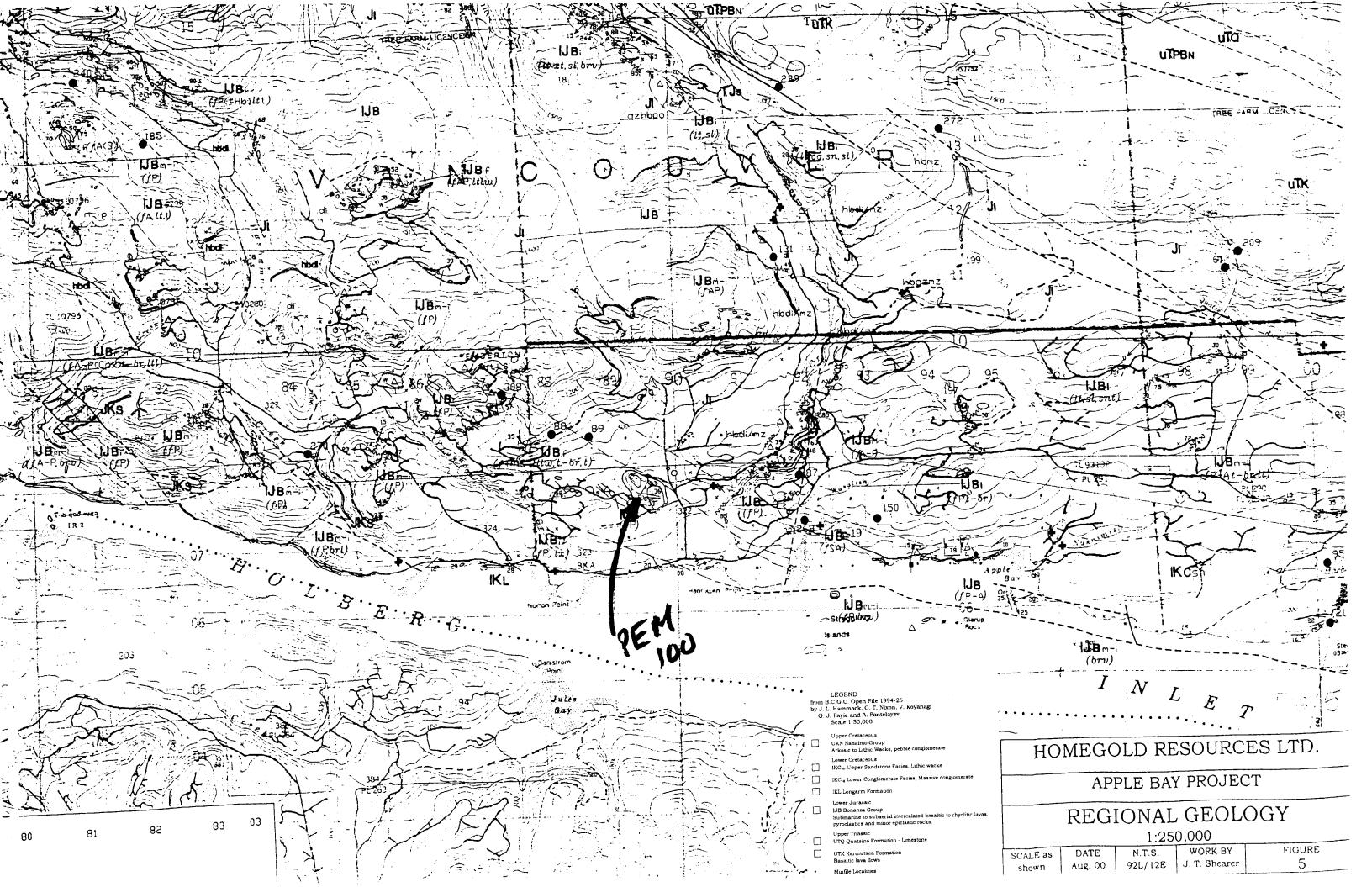
Pearson had carried out or supervised most of the logging of the drill core during the delineation of the Island Copper Orebody. He immediately recognized that the rock here was identical to that which formed a barren capping over the western half of the Island Copper deposit. The implications were clear. 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-zincgold-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.

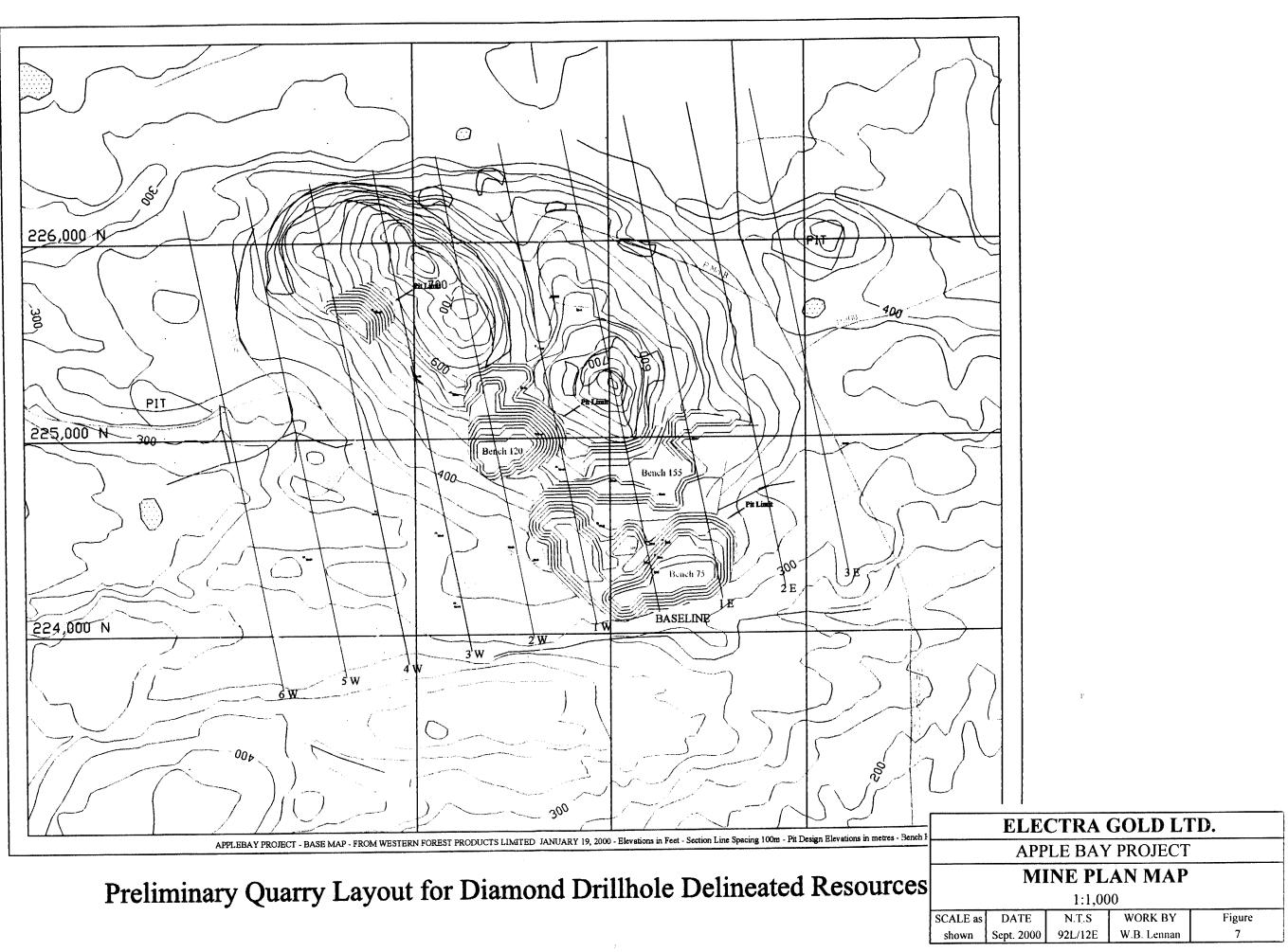
Following this period of basaltic volcanism, carbonate rocks (the Quatsino Limestone) accumulated to thicknesses of about 300 metres, although a much thinner section appears to be the rule north of Holberg Inlet. Of importance from an economic standpoint is the correlation between the Karmutsen – Quatsino 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.

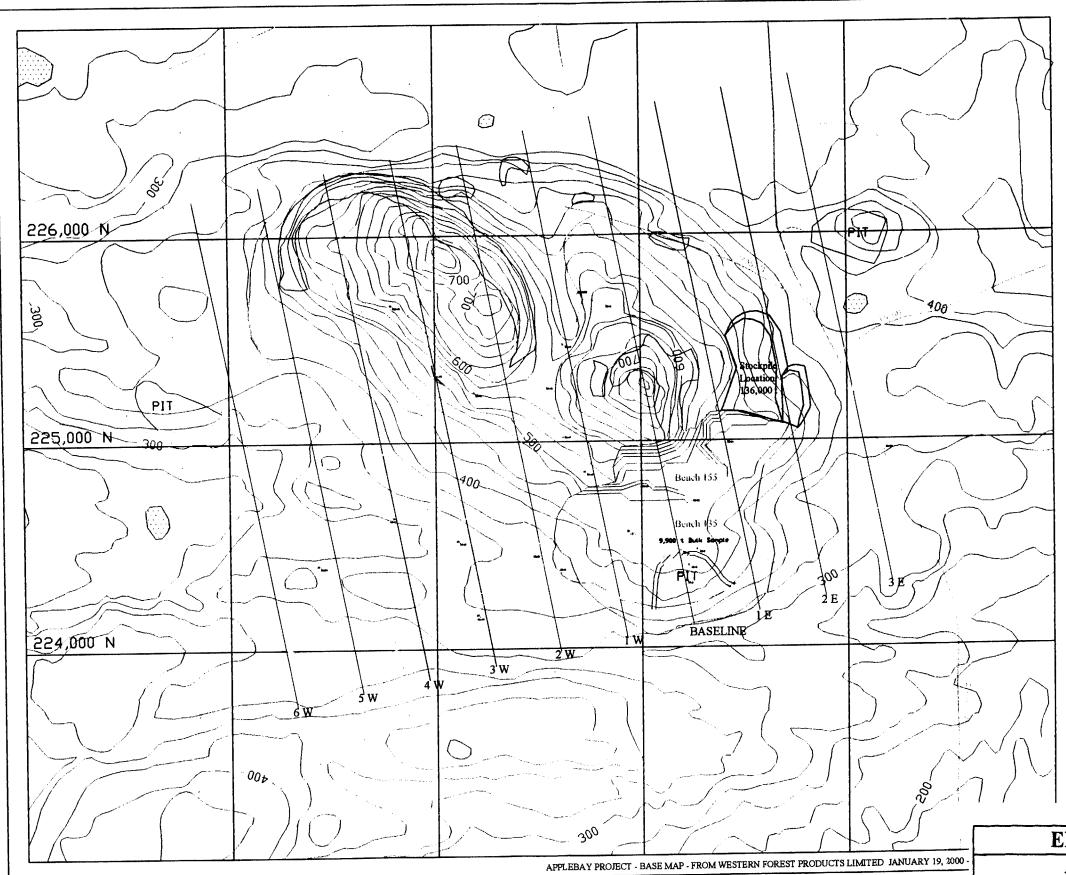
During and after eruption of the Bonanza Volcanics, granitic bodies were emplaced within the Karmutsen-Quatsino-Bonanza sequence. These bodies ranged in size from dykes and small plugs to masses of batholithic proportions. Some of these intrusives formed the underground reservoirs, which broke through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

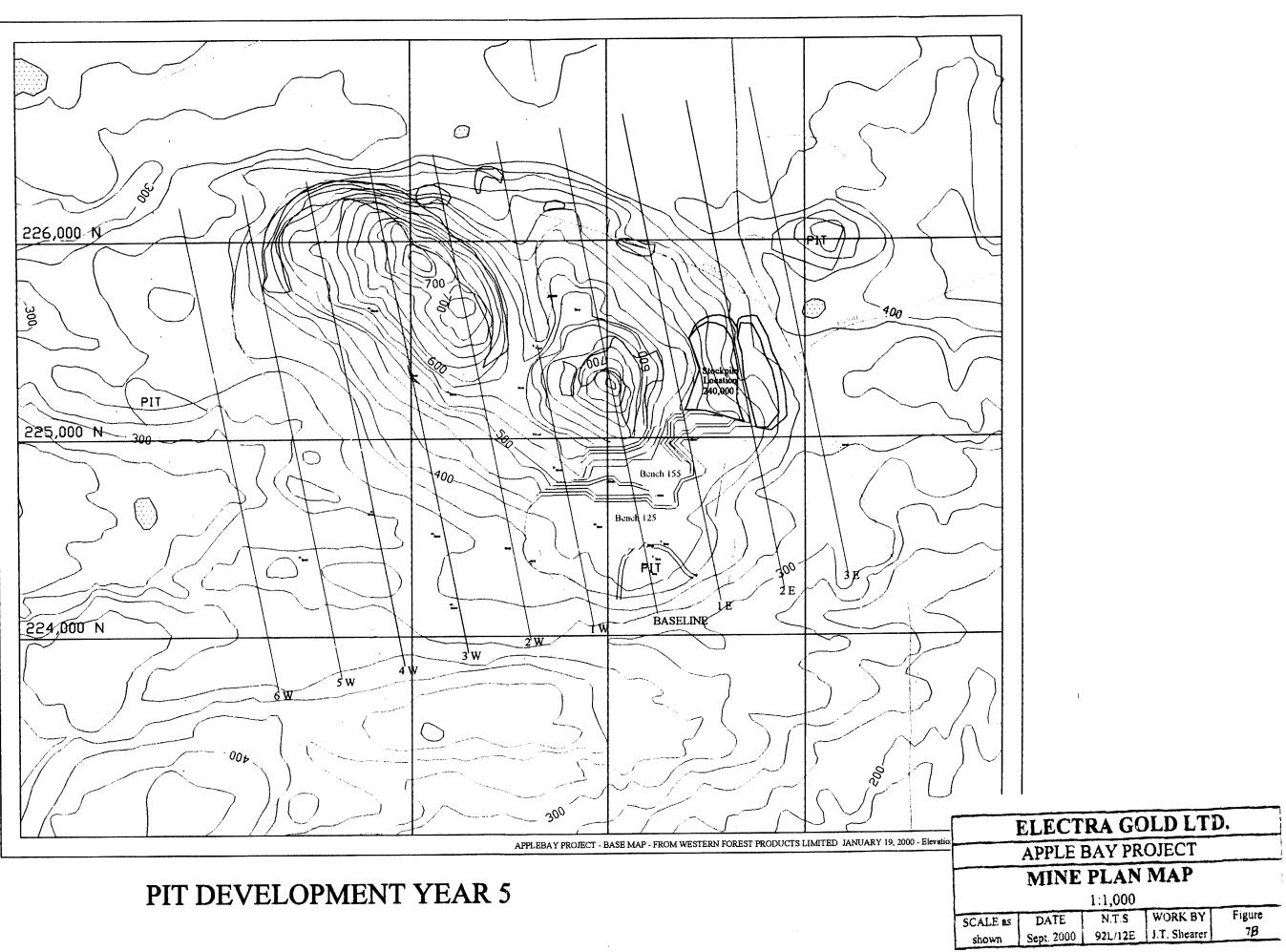


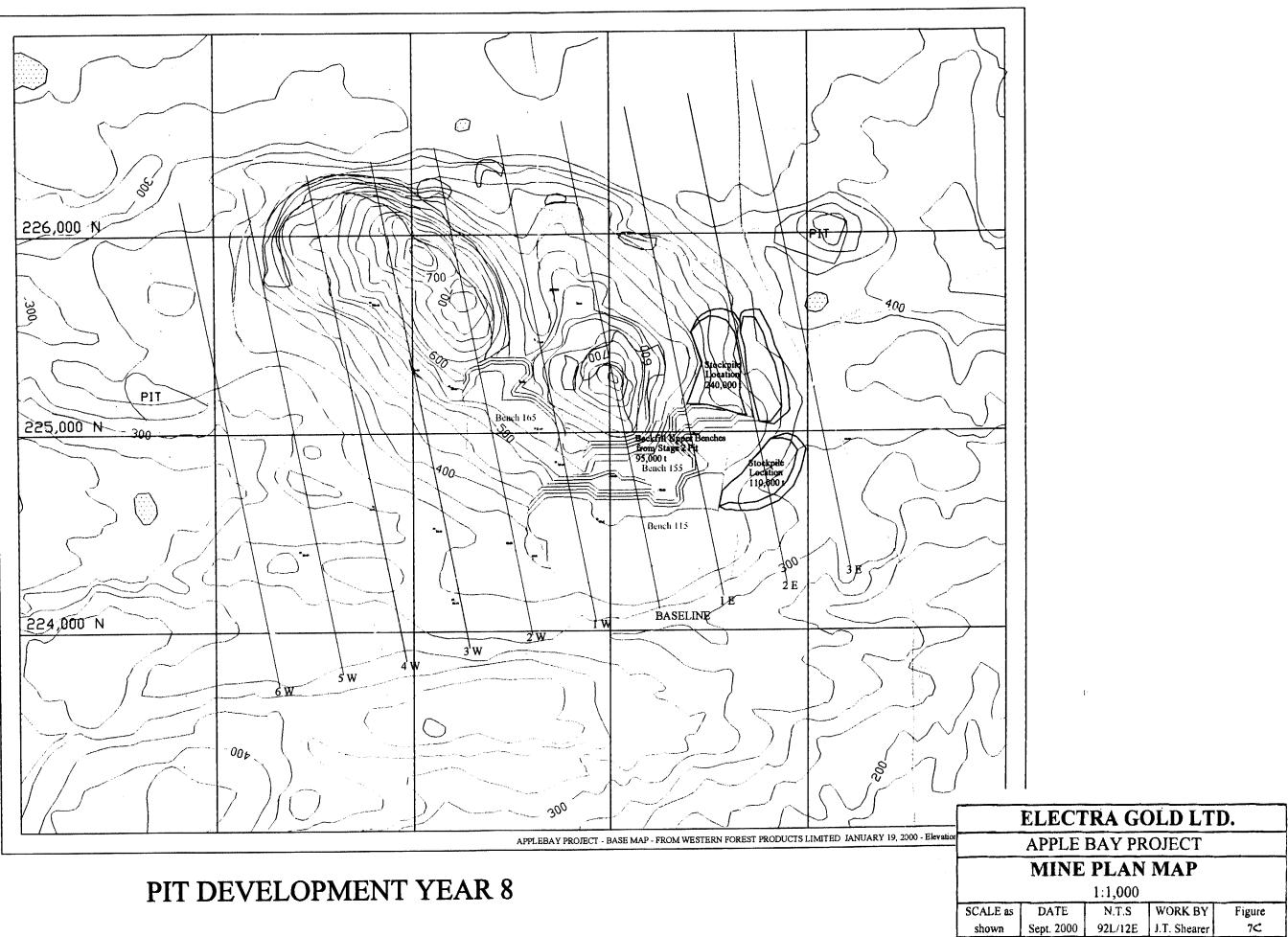
PIT DEVELOPMENT YEAR 3



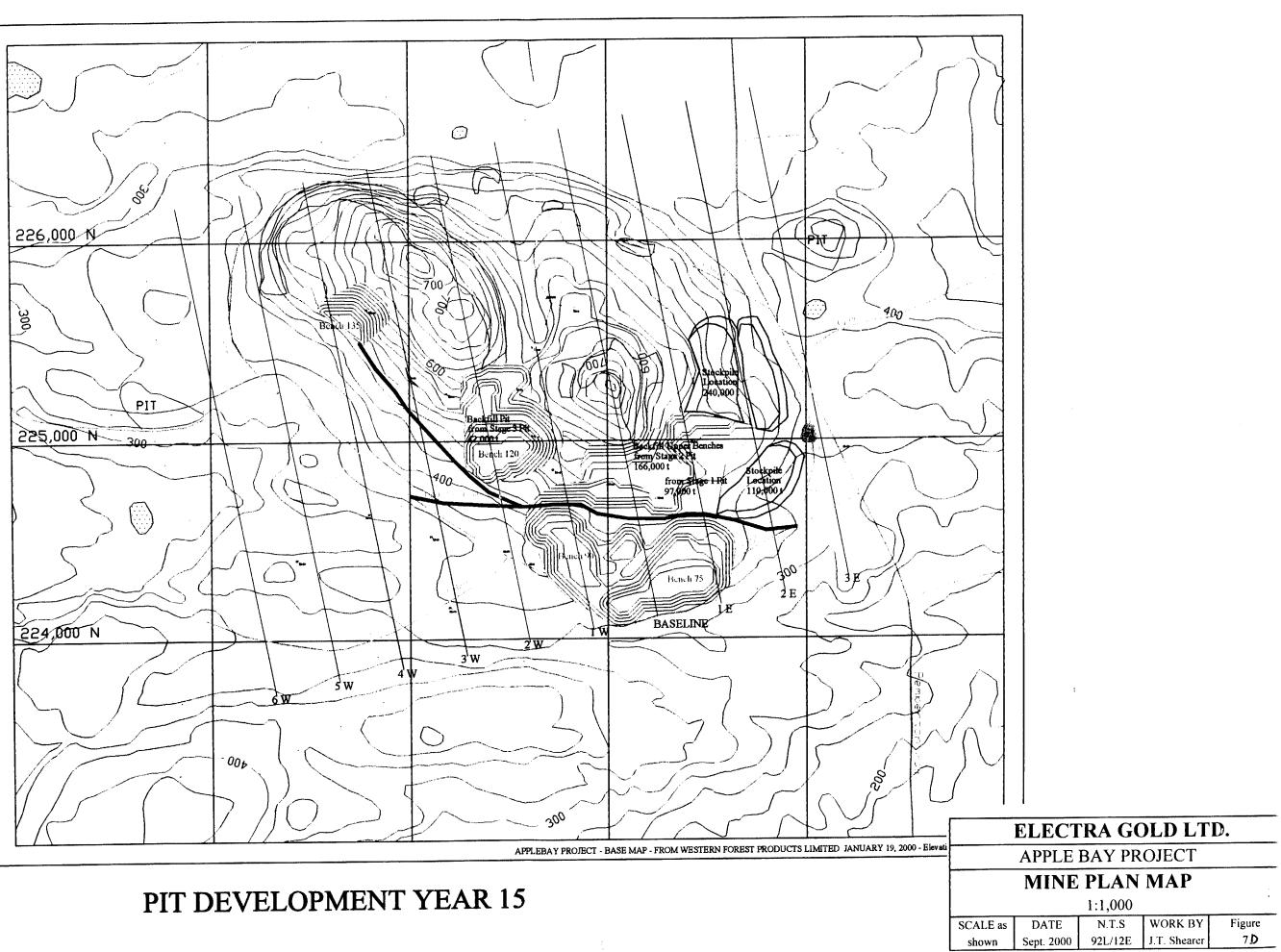
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_	ELE	CTRA	GOLD LT	D.				
-	APPLE BAY PROJECT							
MINE PLAN MAP 1:1,000								
								SCALE as DATE N.T.S WORK BY Figure
shown	Sept. 2000	92L/12E	W.B. Lennan	7 A				





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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.

	footage	LOI	SiO2	AI2O3	Fe2O3	CaO	MgO	Na2O	K20	SO3	CI	P2O5	TiO2	Total	H2O TALK
	-	FCT.									0.004	0.059	0,79	101.3	0.04
- 01	5 to 15 15 to 25	0.985	87.22 89.51	12.15 9.29	0.28	0.75	0.08	0.12	-0.06	-0.09	0.004	0.059	0.79	101.3	0.0
	25 to 35	0.96	81.03	19.03	0.23	2.03	0.12	0.17	-0.05	0.35	0.003	0.033	0.59	103.53	0.1
	35 to 44.5	1.01	80.98	15.91	0.35	0.88	0.10	0.15	-0.07	-0.04	0.004	0.031	0.74	99.04	
	44.5 to 57	1.09	65.89	18.93	4.76	0.62	0.22	0.17	-0.05	-0.06	0.005	0.083	0.79	91.37 101.67	
	57 to 70	89.0	85.84	13.27	0.60	1.02	0.09	0.14	-0.05	0.07	0.008	0.040	0.53	100.38	
	70 to 84 84 to 100	1.05	71.53	18.62	2.28	1.39	0.22	0.18	-0.04	0.14	0.006	0.072	0.57	94.93	
		unwit'd 5 to 100	80.74	15.11	1.28	1.10	0.12	0.14	-0.06	0.07	0.00	0.05	0.69	99.26	
	100 to 130											İ			
			89.4	10.00	0.98	1.60	0.05	0.08	-0.06	0.01	0.006	0,085	0.87	103.00	
9-02	0 to 10	0.97	77.25	16.58	0.63	2.24	0.12	0.14	-0.02	0.15	0.005	0.157	1.11	98.37	
	20 to 30	1,06	67.5	20.24	2.11	2.30	0.20	0.18	-0.01	0.05	0.017	0.097	1.05	93.80	
	30 to 40	1.00	85.13	10.02	1.59	1.81	0.10	0.09	-0.03	0.11	0.005	0.151	0.87	99.83	
	40 to 50	0.97	91.31	8.70	0.72	1.22	0.06	0.06	-0.05	0.13	0.005	0.108	0.87		
		wt'd 0 to 50	82.12	13.11	1.21	1.83	0.11	0.11	-0.03	0.09	0.005	0.12	0.91		
	50 to 53.8 53.8 to 60	1.03	79.37 58.89	13.20	13.63	1.13	0.14	0.14	0.00	0.20	0.004	0.174	1.21		
	60 to 70	0.97	90.51	8.70	0.58	2.28	0.07	0.13	-0.01	0.08	0.009	0.148	0.83	103.33	
	70 to 80	1.10	62.8	18.79	6.50	1.51	0.28	0.15	-0.02	0.08	0.005	0.086	0.75	90.94	
-	80 to 87' 1	0-											+		
				6 50	0.10		0.01	80.0	-0.05	0.02	0.004	0.098	0.77	103.91	0.0
9-03	0 to 10	0.96	96.14 89.21	5.56	0.18	1.11	0.01	0.08	-0.04	0.02	0.004	0.100	0.67		0.1
	10 to 20 20 to 30	0.97	90.67	7.54	0.25	3.81	0.06	0.09	-0.04	-0.01	0.006	0.075	0.81	103.66	0.0
<u> </u>	30 to 36	0.99	89.92	6.14	3.69	1.05	0.06	0.07	-0.06	-0.07	0.005	0.076	0.67	100.55	0.0
	36 to 45	0.96	93.79	6.06	0.86	1.62	0.04	0.06	-0.05	-0.07	0.010	0.080	1.09	103.49 103.31	0.0
	45 to55	0.97	89.87	10.64	0.41	1.12	0.05	0.09	-0.07	-0.07	0.005	0.062	1.20	103.31	0.0
		unwitd 0 to 55	91.60	7.87	1.01	1.64	0.05	0.09	-0.05	0.03	0.005	0.094	1,17	104.20	
	55 to 65 65 to 75	0.96	79.00	21.03	0.25	1.20	0.20	0.22	-0.03	0.31	0.005	0.185	1.14	98.00	
	75 to 85	1.02	62.50	30.42	0.20	1.00	0.24	0.24	-0.04	0.08	0.005	0.119	1.01	95.80	
	85 to 96'7	1.02	62.90	30.05	0.21	1.70	0.22	0.22	-0.05	1.53	0.007	0.086	0.89	97.80	0.0
															0.0
	10.00		76.70	20.27	0.09	2.30	0.13	0.18	0.00	-0.01	0.018	0.056	0.57	100.20	
9 -04	3 to 10 10 to 20	1.00	92.60	8.66	0.09	1.50	0.04	0.10	-0.04	0.09	0.006	0.123	0.56	103.80	
	20 to 30	0.96	95.90	7.04	0.16	0.80	0.02	0.06	-0.04	0.09	0.004	0.130	0.67	104.80	
	30 to 40	0.98	86.00	13.23	0.33	1.00	0.07	0.11	-0.04	0.07	0.004	0.127	0.78		
	40 to 50	0.97	94.90	4.73	1.56	0.70	0.03	0.04	-0.04	0.11	0.003	0.166	0.81	103.10	
	50 to 60	0.97	89.70	10.42	0.77	0.70	0.05	0.08	-0.05	0.04	0.004	0.112	0.68	102.50	
		unwit d 0 to 60	89.30 52.24	10.73	0.51 22.90	0.98	0.06	0.10	-0.03	0.21	0.005	0.134	1.05		
	60 to 70 70 to 80	0.99	84.73	13.64	0.37	1.33	0.08	0.14	-0.06	0.03	0.005	0.079	0.78	101.13	
	80 to 89	1.01	78.80	17.71	0.92	0.80	0.12	0.14	-0.06	-0.05	0.004	0.060	0.71	99.00	
	89 to 100	1.10	65.40	15.56	8.36	0.60	0.24	0.13	-0.05	0.02	0.004	0.083	0.57	90.90	·
	100 to 11	1.10	65.44	16.75		1.11	0.26	0.15	-0.05	-0.02	0.004	0.063	0.59		
	110 to 12	1.04	73.10	16.58	4.04	1.10	0.20	0,13	-0.04	0.43	0.010	0.055	0.43	30.10	
9 - 05	10 to 20	0.99	84.10	12.01	1.07	1.70	0.10	0.10	0.01	0.53	0.017	0.100	0.98		· _ · · · · · · · · · · · · · · · · · ·
33-05	20 to 30	0.97	75.80	24.91	0.16	0.80	0.16	0.18	-0.05	0.07	0.005		0.75		L
	30 to 40	1.06	72.10	16.46		0.60	0.18	0.13	-0.03	0.14	0.005		0.78		
	40 to 50	1.04	77.80	11.53		0.80	0.16	0.10	-0.03	0.23	0.006		0.73		
	50 to 60	1.08	69.10	15.27	6.26 3.11	0.60	0.21	0.11	-0.04	0.22	0.004		0.80		
		wt1 10 to 60	75.78	16.04	3.11	0.30	0.10	0.12							
9 - 06	0 to 10	0.96	97.60	3.75	0.97	0.80	0.04	0.03	-0.04	0.02	0.003	0.117	0.83		
	10 to 20	0.96	96.40	3.35		0.80	0.00	0.00	-0.06	0.09	0.004	0.180	2.12		
	20 to 30	0.99	86.80	8.78		1.40	0.08	0.05	-0.04	0.47	0.007	0.187	1.68		
	30 to 40	0.98	76.20	22.57		1.50	0.15		-0.04	0.14	0.008		0.92		
	40 to 50	0.97	69.50 67.80	28.98		1.80	0.18		-0.06	-0.01	0.008		0.53	101.50	
	50 to 60	.wt'd 0 to 60	82.38	16.44		1.48	0.11	0.12	-0.04	0.15	0.01		1,13	102.42	
													0.80	103.60	
99 - 07	0 to 10	0.96	96.20	0.44		0.60	0.01	-0.04	-0.09	1.98	0.003				
	10 to 20	0.95	99.10	0.37		0.60	-0.01	-0.04	-0.10	1.40	0.003				
	20 to 30	0.97	91.90	0.37		0.50	0.00		-0.10	1.68	0.003			104.30	
	30 to 40 40 to 50	0.96	97.90	0.34		1.20	0.00		-0.08	1.15	0.009	0.100	0.64		
	50 to 60	0.96	99.20	0.30		0.60	-0.01	-0.04	-0.10	1.30	• 0.003				
	60 to 70	0.94	102.10	0.36		1.20	-0.01		-0.07	0.65	0.010				
		wt'd 0 to 70	98.00	0.38	3.02	0.79	0.00	-0.75	-0.09	1.591	0.01	· · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
		High SO3			· · · · ·					+					· · · · · · · · · · · · · · · · · · ·
99 - 09	0 to 10	0.97	88.20	12.46	0.14	0.90	0.07		-0.05	0.02	0.008				
	10 to 20	0.98	84.60	15.53		0.50	0.08			-0.07	0.005				
	20 to 30	0.96	84.60	17.97		0.60	0.10			-0.02	0.006				
	30 to 40	0.96	73.80	28.82		0.60	0.17		-0.05	-0.12	0.006		0.99		
	40 to 50	0.97	70.50	30.51		2.40	0.21		-0.05	-0.11	0.004	0.047	0.56	100.80	1
	50 to 60 60 to 70	0.99	80.20	17.00			0.11		-0.05	-0.06	0.006	0.073	0.68	100.60	
	70 to 80	0.98	89.30	10.57		0.60	0.06	0.08	-0.05	0.05	0.004				
	80 to 90	0.97	92.30	8.19	0.28	0.60	0.03	0.05		0.15	0.004				
	90 to 100	1.01	77.50	17.19	0.24		0.10		-0.01	0.29	0.005				
		wt'd 0 to 100	82.05	17.73	0.22	0.82	0.11	0.13	-0.04	0.01	0.01	0.09	0.94	102.01	· · · · · · · · · · · · · · · · · · ·
		·										+			
		0.95	101.20	1.75	5. 0.62	1.20	0.01	0.02	-0.06						
00 10	:010.10	0.00					0.02					5 0.031	0.5	B 105.	5
99 -10	0 to 10	0.94	101.4	2.13	s. 0.77	0.0									
99 -10	10 to 20	0.94	101.4		0.71	0.6	-0.02	-0.03	-0.1	0.23					
99 - 10				0.58	3 0.71 5 0.37	0.6		2 -0.03 3 -0.04	-0.1 -0.1		0.00	0.011	0.6	2 107.	•

7.0 PROPERTY GEOLOGY and CHALKY GEYSERITE and KAOLINITE POTENTIAL

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.

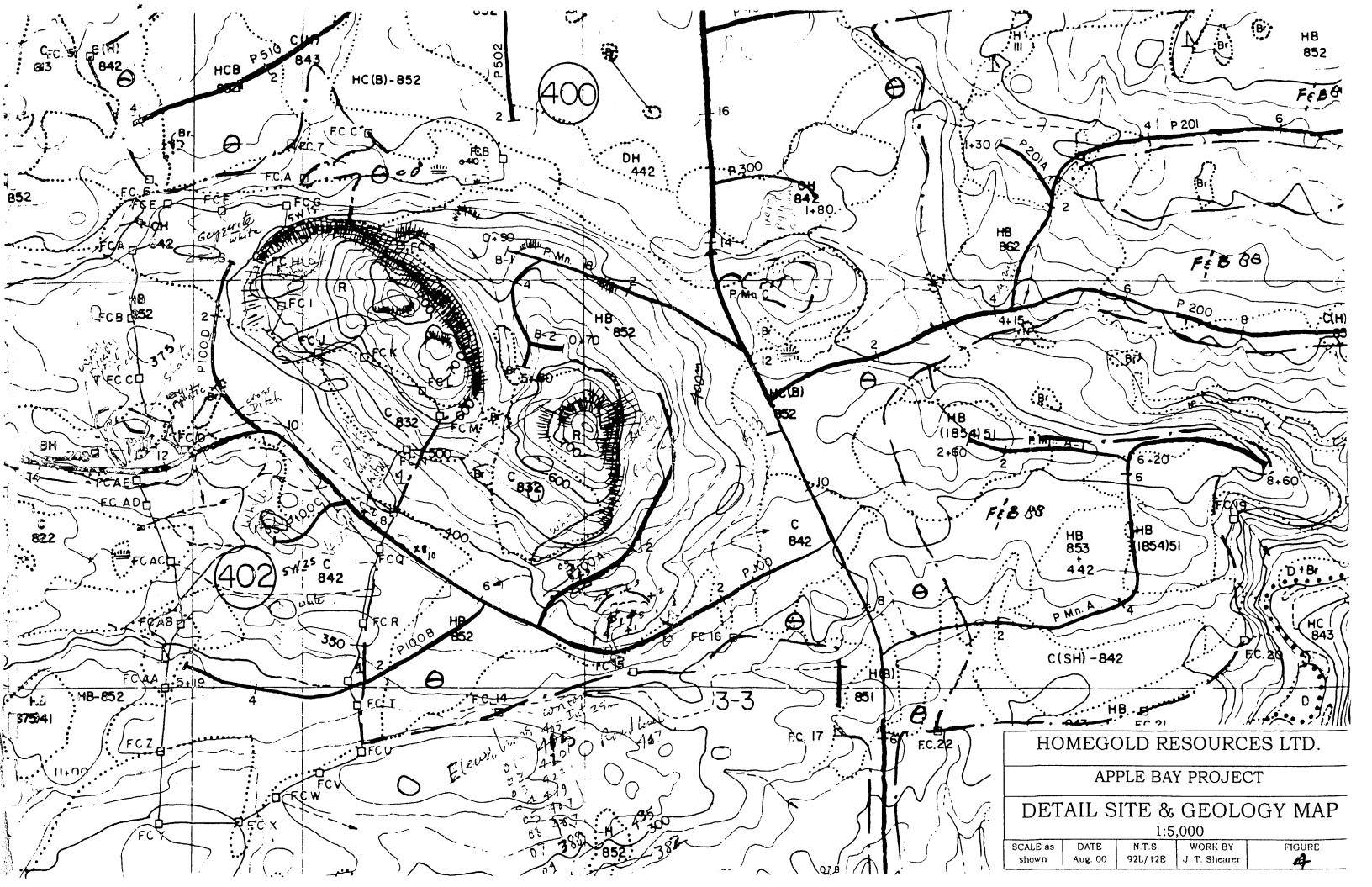
Geological mapping and drill core logging indicate that an intensely altered 20-35 metres thick section of rhyolite (identified as white chalky geyserite) overlies a unit of less altered rhyolitic breccia. the white chalky geyserite is of primary economic interest because of its silica and alumina content. 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 m² x 25.06m thickness x 2.6 tonne/m³ = 4 million tonnes grading 83.66% SiO₂, 12.49% Al₂O₃ and 0.09% SO₃

Geological Potential: Area B 20,000 m² x 21.34m thickness x 2.6 tonne/m³ = 1.11 million tonnes grading 81.89% SiO₂, 14.33% Al₂O₃ and 0.05% SO₃

The total Chalky Geyserite Geological Potential is: 5.02 million tonnes grading 83.26% SiO₂, 12.90% Al₂O₃ and 0.08% SO₃

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. The holes are listed in Table III (page 13). 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	Π
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Mo	Na%	Ni	Р	Pb	S %	Sb	Sc	Sr	Ti%	Tl	U	V	W
2	< 0.01	1	110	24	0.02	<2	<1	33	< 0.01	<10	<10	3	<10
					•								
Zn	Ag	As	B	Ba	Be	Bi	Cd	Co	Cr	Cu	Ga	Hg	Mn

Trace Element Content of Chalky Geyserite

ppm except where shown

TABLE III

Diamond Drill Data											
HOLE #	N.	E.	LENGTH	DIP	AZIMUTH	ELEVATION	REMARKS				
ABBY-99-01	9506.30	7685.30	39.62 (130)	-90	000	115.00	Removed top 20				
		1]		feet of drill hole in				
							Bulk Sample 2				
ABBY-99-02	9613.80	7731.40	45.72 (150)	-90	000	128.50					
ABBY-99-03	9589.10	7729.50	45.72 (150')	-90	000	129.50	in Bulk Sample 1				
ABBY-99-04	9562.00	7723.00	45.72 (150)	-90	000	129.00	in Bulk Sample 1				
ABBY-99-05	9601.40	7708.20	18.29 (60')	-90	000	118.20	First Bench				
ABBY-99-06	9580.00	7700.00	18.29 (60)	-90	000	116.00	First Bench				
ABBY-99-07	9164.30	7780.40	30.48 (100)	-90	000	111.20	West near 100C				
ABBY-99-08		verburden	(19')			· · · · =					
ABBY-99-09	9511.10	7758.70	30.48 (100')	-90	000	127.20	on Road P100A				
ABBY-99-10	9258.20	7745.90	29.77 (97)	-90	000	106.10	east of 7, west of				
	<u> </u>	l) 			site of 8				
		Su	ubtotal 1,016 ft	•							
ABBY-00-11	9457.0	8075.00	12.20 (40)	-90	000	176.76	In gouge				
ABBY-00-12	9417.10	8034.70	15.55 (51)	-90	000	156.80	In gouge				
ABBY-00-13	9601.50	7804.00	13.41 (60')	-90	000	140.00	Road 100A				
ABBY-00-14	9654.00	7890.00	15.25(50')	-90	000	150.00	Road 100A				
ABBY-00-15	9390.00	7974.00	12.20(75')	-90	000	168.00					
ABBY-00-16	9283.20	7964.20	30.79 (101)	-90	000	161.20	Upper drill road				
ABBY-00-17	9415.5	7901.9	30.49 (100')	-90	000	157.50					
ABBY-00-18	9447.50	7846.80	30.79 (101')	-90	000	156.20					
ABBY-00-19	9526.0	7825.00	30.79 (101')	-90	000	159.70					
ABBY-00-20	9222.30	7991.30	30.49 (100')	-90	000	167.64					
ABBY-00-21	9161.20	8093.50	21.39 (75')	-90	000	182.88					
ABBY-00-22			30 (76')	-90	000	103.63	at km 52 sign on				
							mainline				
ABBY-00-23			30 (61')	-90	000	102.11	on road 100B				
ABBY-00-24	9052.50	7710.60	40 (51')	-90	000	108.30	end of road 100C				

Diamond Drill Data

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.

Total Footage = 2,058 ft = 627.29m

7.3 Trenching and Bulk Sampling

The location of the bulk sample is shown on Figure 6a (in pocket). The grade of the bulk sample was estimated on the basis of diamond drillholes 3 & 4. Assays of the barge load at the Tilbury Plant showed a close correlation of these results averaging about 12% Al₂O₃. Handling characteristics, burning properties and quality of cement produced suggest that chalky geyserite is a superior raw material.

Subtotal 1,042 ft

8.0 PREVIOUS GEOCHEMISTRY and GEOPHYSICS

8.1 Previous Geochemistry

As noted in the History section, the entire property was covered by wide spaced soil lines in the early to late 1960's by Utah Construction shortly after the discovery of the Island Copper Deposit.

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.

On 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.

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.

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.

8.2 **Previous Geophysics**

In 1971, Utah Construction carried out a detailed geophysical program on the southeastern portion of their Expo Group covering the present Apple Bay Claims. The program consisted of ground magnetometer and induced polarization surveys conducted on lines 200' apart. Several of the Numerous anomalies were drilled in subsequent years.

8.3 Previous Diamond Drilling

The main program of diamond drilling was carried out in 1992 totalling over 6,000 feet in length (Pearson, 1992). The core from this program is stored south of Road branch P500 just north of the Wann Knobs. Some short holes were drilled on Apple Bay One in an earlier program. A series of highly altered rocks were encountered. Low grade copper-molybdenum was intersected about 1 km to the north of the Wann Knobs along the contact with an intrusive body. This is the same environment that hosted the Island Copper ore body (intrusive contact/Bonanza volcanics/intense alteration zones). This core should be relogged with specific attention given to the alteration facies and development of kaolinite.

9.0 PROJECT DESCRIPTION

9.1 Drilling

The proposed project includes a quarry with a mobile crushing plant with a capacity of 300 tonnes per hour, a stockpile area for crushed material, a loading conveyor and a truck loading facility.

9.2 Quarry Development

The deposit, shaded on the development plan, Figures 7 and 8, includes approximately the quarry area to be developed. Starting near the south boundary of Lot 2323 Mining Lease, the quarry will be worked in a series of 8 to 10 metre-wide benches with backwalls of about 12 metres and will be developed as required to accommodate elevation increasing by about 80 metres to produce a total of about 5,000,000 tonnes at 240,000 tonnes per year.

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

The initial configuration of the quarry during 2000 used the following equipment:

9.3 Crushing Plant

The material was primary crushed through a Hewitt-Robbins 24x36 jaw crusher being fed by a Cat 980C wheel loader. This reduced the material to approximately 150mm size (minus 6"). Some of the initial product was screened by a power screen into a minus 1" and 1"-6" resulting streams.

9.4 Conveyor System

The loading of the 19mm material was accomplished by feeding through a 12 cubic metre surge bin, then onto a 15 metre conveyor, which feeds the 30 metre stacker, which deposits the material into the trucks or stockpile.

9.5 Stockpile

A stockpile capable of holding up to 50,000 tonnes of crushed material ready for trucking was required. The pile will cover approximately 5,000 to 7,000 square metres and reach a height of 10-12 metres. The stockpile will be located adjacent to the crushing facility.

9.6 Trucking Facilities

The trucks and transfer trailers will be loaded from the stockpile by mobile rubber-tired loader.

9.7 Barge Facilities

Barging will be through a new dock structure and existing stacking conveyor near Jensen Cove in Port Hardy. A proposal has been designed by P. Steffens, P. Eng. Future developments may use the ship loader at the old Island Copper site on Rupert Island, which can load ships up to 45,000 tonnes capacity at a rate of 1600 tonnes per hour.

9.8 Reclamation

The quarry will be progressively reclaimed, as outlined in Section 8.4, as the mining area advances and sufficient ground is made available for reseeding to forest values.

10.0 ENVIRONMENTAL CONSIDERATIONS

10.1 Existing Conditions

The project, because of its proximity to Wann Knobs and Wanakana Creek riparian environment required careful planning to minimize impacts.

The area is within the Tree Farm Licence 6 held by Western Forest Products Ltd. and has been extensively logged in the recent past. The largest nearby logging centre is located at Port McNeill. Other land uses include hunting, native food, with sports and commercial fishing in nearby Holberg Inlet.

The quarry site is located within the Coastal Hemlock-Douglas Fir-Cedar biogeoclimatic zone. The area receives on the order of over 150+ cm of precipitation per year. The site is at an elevation of 100 to 250 metres ASL. The on-site upland vegetation is mixed Cedar, Fir and Hemlock forest, which is somewhat scrubby due to the presence of rock outcrops. No evidence of wildlife licks or trails has been observed, although bears and deer have been seen on the property during exploration work. Two small drainages convey runoff north from the area. These two appear to dry periodically. The ground slopes away to Wanakana Creek on the east, Holberg Inlet on the south and Youghpan Creek to the west.

The broader area of the Wanakana Creek watershed has been altered from its natural state through activities related to intensive forestry. In particular, the occurrence of logjams has cut off access to various areas of fish habitat.

10.2 Environmental Impacts and Planned Mitigation

The rock (chalky geyserite) to be quarried is relatively pure and chemically inert. The main knoll will be quarried leaving either level ground or a quarry, which extends down from the ridge crest to avoid the vertical cliffs on the north side of the knoll. The total area to be affected by the quarry, stockpile and loading facilities will be about 8 hectares by the end of the 30 year mine life.

The overburden consists of a thin layer of topsoil, which can be set aside and used as filter for quarry runoff until reclamation. The chalky geyserite, with the exception of a few minor fault areas is fairly pure and the entire amount of quarried material will be shipped out. A very minor amount of material in the fault/fold hinge areas is softer and somewhat mineralized and may not be useable. Thus, some minor waste material could be expected. This material can be used to form a base for the stockpile or returned to the pit.

Most of the stockpile may be located above the 100m elevation. Drainage from the quarry and from the stockpile will be directed into a major settling pond. Some filtration through overburden material or settling in a reservoir used for dust control is possible.

The minor silica content is mainly in the form of inert silica, and thus is not expected to be crystalline in nature. The Workers' Compensation Board requires that workers who may be exposed to more than 51% crystalline silica dust above the regulated limits must wear suitable respiratory protection. Subject to air-bourne dust sampling, in most instances properly fit tested on-half face respirators with High Efficiency Particulate Arrestor (HEPA) cartridges and disposable coveralls will be acceptable. Workers will be trained in the proper use of the respirators if required as well as the nature of the hazard to comply with Federal WHMIS Regulations. Homegold Resources Ltd. is committed to putting in place suitable controls to minimize the effects of dust generation, if necessary.

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

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

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

10.3 Fisheries Concerns

The Wanakana Creek supports anadromous stocks of sockeye, pink, chum, coho, chinook and steelhead as well as stocks of rainbow trout, Dolly varden and other nonsports fish. In addition to their contribution to commercial and native fisheries, these stocks form the basis of an important recreational fishery in the province.

Careful management of site drainage, removal of vegetation and overburden to prevent downslope impacts, particularly the introduction of silt laden water to any of the three watercourses will be undertaken. Because the site is located at the top of a hill site drainage concerns are limited to the precipitation falling on the site only. Overflow from the settling ponds will not exceed 75mg/1TSS.

As mentioned above, there are very significant fisheries resources in the vicinity. Due, however, to the location of the site on a hilltop and the nature of the material to be quarried, there should not be any impacts provided the site drainage is managed to prevent siltation problems. No treatment of site runoff is planned other than settling ponds and filtration required to address this issue.

The actual quarry will cover an area of 8 hectares and the vegetation and overburden will be removed from this area sequentially over the life of the quarry. Reclamation will be conducted on disused areas of the quarry using overburden, which has been stockpiled, or from areas which are to be opened. Replanting will be done using native plants, again from on site areas where possible. Existing roads and infrastructure are available for this project, thus, physical impacts are limited to the area of the quarry. The hilltop location east of the vertical cliff face eliminates any visual impacts of the project and simplifies final reclamation. Only stepped rock faces will be left at the end of the quarry life.

10.4 Reclamation

At the end of the lifespan of this quarry it is expected that an excavation extending below 100m elevation will remain. The proposed reclamation of the area is outlined below.

The first option is that the natural small cliff-scarp topography of the area would be replicated by the quarry walls. Backfilling is considered to be impractical since the chalky geyserite product is shipped out in its entirety. The areas where quarrying is completed and the quarry floor at the 100m level will be progressively reclaimed.

In the event that the quarry is shut down before it extends to the 100m level, it would be graded and sloped with the overburden material remaining on site and reseeded. The stockpile base will be graded back down to the former level in order to re-establish forest habitat.

11.0 FUTURE PLANS for 2001

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 100,000 tonnes in as shown on the Mine Plans.

- 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) Move jaw crusher to the 100m bench (eliminating Truck tramming of muck). Pit run material can then be trammed the short distance by bulldozer or rubber tired loader to the jaw crusher.
- 3) Convey the 6" minus crush (and screened, if required) to the existing stockpile area, a horizontal distance of 50m and use a radial stacker or:
- 4) extend the haul road to the southern limit of the chalky geyserite exposure for ease of access to the 100m bench (which gives the option for the truck and transfers to load at the crusher site as well as the present stockpile area).
- 5) The jaw crusher should be increased to the 36"x48" size. Perhaps this mobile jaw crusher could be co-ordinated with the plans to open the Port Hardy Shale Pit quarry.
- 6) 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.
- 7) 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.

12.0 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% Al₂O₃), 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 $60,000m^2$ 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% SiO₂, 12.49% Al₂O₃ and 0.09% SO₃. 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% SiO₂, 14.33% Al₂O₃ and 0.05% SO₃. The total geological potential of both Area A and B is about 5 million tonnes grading 83.26% SiO₂, 12.90% Al₂O₃ and 0.08% SO₃.

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. The results are ongoing.

Plans for 2001 propose pioneering a second bench level between 100m and 124m elevation toward the north with a 36"x42" jaw crusher on the 100m bench established in 2000. Detail plans are included in this report.

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

September 16, 2000

12.1 Cost Estimate for Future Work

<u>Phase I</u>

Diamond Drilling, Geological Mapping, Research into Specific Products

Geological mapping and property maintenance	\$ 18,000.00
Diamond drilling, 400m @ \$82.50 per metre	33,000.00
Supervision, mob & demob, Core splitting	3,000.00
Analytical	6,000.00
Mapping, Report preparation, word processing	5,000.00
Product research and production	35,000.00
Total Phase J	\$ 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 metre	49,500.00
Supervision, mob & demob, Core splitting	4,000.00
Analytical	8,000.00
Quarry design	15,000.00
Product Optimization	61,500.00
Total Phase II	\$ 150,000.00

Total Phase I & II

\$ 250,000.00

illy submitted, . T. Shearer, M.Sc., P.Geo. Consulting Geologist September 16, 2000

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APPENDIX I

STATEMENT of QUALIFICATIONS

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

September 16, 2000

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 Quarry Holberg Inlet Area, Wanokana Creek Vancouver Island" dated September 16, 2000.
- 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 16th day of December, 2000.

J.T. Shearer, M.Sc., F.G.A.C., P.Geo. Quarry Supervisor September 16, 2000

APPENDIX II

Statement of Expenditures

September 16, 2000

Appendix II STATEMENT of EXPENDITURES APPLE BAY PROJECT December 1, 1999 to September 26, 2000

J.T. Shearer, M.Sc., P.Gee. \$ 16,800.00 As days @ \$350/day \$ 16,800.00 Doug Stelling, Prospector/Coresplitter 20,000.00 Chris Scow, Corresplitter 224.00 Michael Neison, Corresplitter 224.00 12 hr. @ \$14/hr. 224.00 OGT 1.815.94 Subtotal Wages \$ 227,757.94 Expenses 1.200.00 Transportation, Truck Rental, Fully equipped 4x4 38 days @ 53.50 As days @ 53.50 2.033.00 Gas 1.200.00 Hotel, Meals, Ferries & Freight 3.100.00 Analytical Samples, 155 @ \$25/sample 3.875.00 Road Construction (North Island Rockpro Construction) 10,500.03 35 hrs. @ \$145/hr. \$.075.00 Site Preparation (North Island Rockpro Construction) 13,380.00 Camp Costs, 12 days @ \$120/day 1,440.00 Environmental Survey, Baseline Sampling and 4.675.00 Acid Drainage Potential Calculations, Phase I & 11 4.875.00 Diamond Drilling PHASE I - 1005 ft @ \$19.50/ft., Holes 11-24 20,675.50 Mobilization, Consumables, Moves & Core Boxes 9,400.00 Drilling & Blasting for B	Wages and Benefits	
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APPENDIX III

Timing of Work Completed

September 16, 2000

Appendix III

APPLE BAY PROJECT TIMING of WORK PROGRAM

Apple Bay One staked Restake Jody Claims	September 16, 1999 May 11, 2000	I
Diamond Drilling December 1-13, Drilling Holes 1-10 & Mapping 8	k Prospecting	\$ 20,320.00
March 8-18, 2000, Holes 11-24	1 10	\$34,763.02
Road Building, March 8-18, 200, Access Ramp Construct	ction, Dec. 1 &2	
Environmental, March 15 & 16, 2000, Dec. 9 & 10		
Aboriginal Consultation - March 16 & May 5, June 2 Ala	an Okabe, June *	
Legal Survey, March 12 – 14		\$13,380.00
Cross Sections & Mine Plan		
April 14, 15, June 12, 13, July 8, 10		
Site Prep, North Island Rockpro		\$ 10,500.23
First Bulk Sample, April 19-21	5,000 tonnes	
Drill & Blast		\$ 12,500.92
First Barge Out, May 15		
Second Bulk Sample,	5,000 tonnes	
Drill, July 15-24		
Crush July 20-26		
Trucking, July 21-27		
Barge December		
Mapping on Drill Road,		
J. T. Shearer & D. Stelling, July 18-22, 2000		
Sampling P130, P180		
J. T. Shearer & D. Stelling, July 24-27, 2000		
Chris Scow, Coresplitter		
March 9-13, 2000, 16 hr. @ \$14/hr.		
Michael Nelson, Coresplitter		
March 13-17, 2000, 12 hr. @ \$14/hr.		
Drafting, March 15, 1:500		
Mine Planning,		
J. Nilsson, P.Eng., May – Sept. 2000		
Dates of abandonment and restaking of Apple Bay Two -	March 10, 2000 & Ma	y 17, 2000

Ruarer

APPENDIX IV

Drill Logs

September 16, 2000

SECTION: Lower Bench PEM100

Diamond Drill Log

DDH#: APBY-99-01

44.6" - 57*"*9"

Northing: Easting:		Drill Hole s Method:	urvey Brun	iton	Property: NTS:	<u>Apple E</u> 92L/1	
Elevation:	121.3m (398ft)	Azimuth	Dip	Depth	Claim:		<u>Bay Two</u>
Azimuth:		Collar	-90	Collar	Date Starte		<u>ber 30, 1999</u>
Inclination:	-900				Date Comp	leted: <u>Decem</u>	
Grid:					Logged by:	<u>J.T. Sh</u>	nearer, M.Sc.,
Length (m):	39.62 m (130 ft)		<u> </u>	· · · · · · · · · · · · · · · · · · ·		P.Geo.	
Core size:	BQ (BTW)						
Contractor:	Boisvenu				Samples 5		57 .9" -70
Drill Type:	Pack drill hydraulic				1	.5' - 25'	70 - 84.1"
					2	:5' - 35'	84.1" - 100
				+	3	5' - 44.6"	100 - 130
					4	4.6" - 57'9"	

Purpose:	To test the dept	h of chalky geyserite	below the lower benc	h, bench appro	ximately 8 fee	et above PEM1	.00
	road level.						

from (m)	to (m)	Code	Description	sample No.	from	to (m)	Au (g/t)
000	1.52		CASING - no core recovered, but an				
			inspection of the collar shows that chalky				
			geyserite starts at 0.15 m down the hole.			·	
1.52	7.82		VERY WHITE CHALKY GEYSERITE - high				
	1	ł	brightness, extreme bleaching, original	1			
			fragmental origin shown by angular	1			
			volcanic fragments commonly up to 1.5 cm				
			in length.				
			This interval is a very altered fragmental				
			"rhyolite". Limonite stained down to end of interval.		}]	
			Layering of siliceous zones at 68° to core				
			axis but some layers are as high as 74° to				
			core axis at 4.88.				
			Mainly relatively soft, but one short interval				
			of very hard zone is 3.73 to 4.11.		ĺ	ſ	
			Traces of very fine grained pyrite (black				
			colour) at 6.02 associated with less				
			bleached dark fragments starting at 5.87				
			to 5.99.				
7.82	13.56		WHITE CHALKY GEYSERITE - slightly		44.5	57.9	
			less altered than the above interval.		57.9	70	
			Slightly more silica due to relative			, .	
			hardness.				
			Black hairline fractures 8.23 to 9.14				
			coated with a film of pyrite.				
			Very siliceous fragments up to 6 cm in				
			diameter sitting in a chalky matrix, some of				
			these fragments are relatively soft.				
			Short interval in very chalky material from				
			12.24 to 12.50 suggestive of welded]	
			textures and perhaps grading of fragments.			1	
Î			The fragments are more elongate.			I	I

SECTION:	Lower B	ench PE	2 Page: _2		DD	H#: <u>APBY-99</u>	9-01
from (m)	to (m)	Code	Description	sample No.	from	to	Au (g/t)
13.56	17.60		LIGHTER GREENISH GREY FRAGMENTAL				
			RHYOLITE - same textures as above but				
			without the pronounced white chalky				
			alteration and bleaching.				
			Welded textures, psamae fragments,				
			pumaceous in places.				
			Relatively soft throughout, but many short				
	I		very hard sections.]			
		1	All fractures are limonite stained but no				
			limonite staining core.				
			Gouge filled fractured at 15.39 and 15.85				
			and 14.55 up to 10 mm thick gouge.				
			Patchy mineral at 14.78 may be alunite.				
			Layering and lamination at 16.00 is at 58° to				
			core axis. Gradational lower contact over 30				
			cm.				
17.60	25.63		WHITE CHALKY GEYSERITE - bleached a		57*9"	70'	
			creamy white colour, fine grained matrix with		70	84'1"	
			highly fragmental texture throughout.		84'1"	100	
			Some darker laminae and irregular dark				
			fragments, laminations at 72° to core axis at 19.36.		100	130'	
			Fractured at 10° to CA at 20.42.				
			One elongate very filled with crystalline pyrite				
			at 20.73. Some very chalky intervals,				
			relatively soft.				
			Black hairlines coated with pyrite films at				
			21.95 to 22.56. Prominent gougy fracture at				
			22.56 at 9° to core axis. Core is limonite				
			stained below this fracture.				
1			Fragments near bottom of interval are welded				
			pumice shards, close packed, bleached,				
			relatively soft.				
25.63	39.62		MEDIUM GREEN FRAGMENTAL RHYOLITE				
			- mainly fine grained fragments, close packed				
			with dark grey matrix.				
			Some relatively few fragment zones 27.43 to				
			28.35. Gougy fragments at 28.65 to 32.00 at				
			0° to core axis, traces of pyrite along				1
			fractures, possibly associated with yellowish				
	ľ		alunite.	[
			Minor dendritic manganese oxide at 28.35.				
			Polymictic fragments at 31.39 up to 40 mm				
			in length densely packed in dark matrix.				
			Relatively soft and punky, considerable				
	1		kaolinite but without the bleaching.				
			Very sheared 36.73 to 37.01 shearing at				
			about 8° to core axis, abundant crystalline				1
			alunite in fault locally.				
		Į	Minor pyrite along narrow dark matrix				
+			laminae; sheared appearance at end of hole.				
	1	l l	END OF HOLE 39.62 m (130 feet)				
		•	·			-	

	Jpper Bench East PEM 100 Quarry	Diamond 1	Drill Log			DDH#: 4	APBY-99-02
		Drill Hole s	urvey		Property:	_ Appl	e Bay
Northing:		Method:	Brun	ton	NTS:	92L/	12W
Easting:		Azimuth	Dip	Depth	Claim:	Apple	<u>e Bay Two</u>
Elevation:	<u>Approx. 132.9m</u>	-	-90	Collar	Date Star	ted: Decem	ber 2, 1999
	(4336 ft.)				Date Com	pleted:Decem	ber 3, 1999
Azimuth:	000				Logged by		nearer, M.Sc.,
Inclination:	-90			1 1		P.Geo.	
Grid:			<u> </u>	<u>+</u>		··· · · · · · · · · · · · · · · · · ·	
Length (m):	45.72 (150 ft)		+				
Core size:	BTW				Samples	2' - 10'	50' - 53 ' 8"
Contractor:	Boisvenu			+	•	10' - 20'	53'8" - 60'
Drill Type:	Pack drill hydraulic	<u> </u>				20' - 30'	60' - 70'
51		L	1			30' - 40'	70' - 80'
						40' - 50"	80 - 87'10"

Purpose: | To test east side of upper bench.

fromto (m)CodeDescriptionsample No.fromto (m)Au (g/t)0000.61CASING - NO CORE recovered. Bedrock at about 30 cm.about 30 cm.about 30 cm.about 30 cm.0.6116.36VERY WHITE CHALKY GEYSERITE - extremely bleached, very iron FeO stained down to about 3.66. Highly fragmental in places, many fragments are rounded in upper sections, brownish hue at 3.96 to 4.27. Matrix dominates from 3.66 to 6.71, much flow textures. Small fragments, relatively soft. Minor irregular lenses of black pyrite throughout interval. Sometimes pyrite forms films on spider web-like fractures. Less white below 6.71, some slight greenish colour but mainly very light grey to white. Very fractured at 9.75 at low angle to core axis, pyrite as films along fractures. Rough layering at 54° to core axis. Most breaks show gougy-clay rich coatings. Pronounced fragmental appearance at 11.58, autobrecciation some flattenedsample from	i arpooo.					1	1	1
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Pronounced fragmental appearance at 11.58, autobrecciation some flattened				Most breaks show gougy-clay rich				
11.58, autobrecciation some flattened				coatings.				
		1		Pronounced fragmental appearance at				
			1	11.58, autobrecciation some flattened				
pumaceous welded textures in the				pumaceous welded textures in the				
fragments.				fragments.				
Small pyrite lenses weathering black.			ľ	Small pyrite lenses weathering black.				
All fractures limonite coated, fractures				All fractures limonite coated, fractures				
subparallel to core axis at 7.62 to 8.23.				subparallel to core axis at 7.62 to 8.23.	1	:		
Perhaps an ashflow contact at 15.77, close				Perhaps an ashflow contact at 15.77, close				
packed subrounded fragments in contact	ļ							
with white chalky fragments floating in a								
medium grey matrix, subangular.	ļ			• • • •				
Lower contact relatively sharp.				Lower contact relatively sharp.				

SECTION		per Bend M 100 Q			DDH#: _	APBY-9	<u>99-02</u>
from (m)	to (m)	Code	Description	sample No.	from	to	Au (g/1
16.36	26.77		DARK GREY TO MEDIUM GREEN		÷		
10.00	1.0.17		FRAGMENTAL RHYODACITE - dark		<u> </u>		
			matrix in top of section with matrix				
			becoming fragments farther down the hole.				
			Rough lamination at 18.44 are at 76° to				
			core axis but most of the interval is highly	í.			
			fragment without a preferred orientation of		f		
			fragments.				
			Relatively little pyrite.				
			Minor convoluted flowage 22.25 to 22.55.				
			Fault zone - crush zone 19.48 to 19.69,				
			approximately 20° to CA.				
			Chlorite becoming more intense starting] .			
			20.12 to 22.25 with resulting darker green				
			colour.				
]	Prominent welded textures 21.64, flattened		1		
			pumaceous shards.				-
			Shattering at 23.75 to 23.93, clay altered				
			along fractures.				
			Pyrite becomes progressively more	·			
			abundant from 24.99 and down to lower				
			contact.				
			Lower contact brecciated approximately 30°				
			to core axis.				
26.77	45.72		VERY PYRITIC DARK GREY "DACITIC"		44.5	57.9	
	(EOH)		CRYSTAL TUFF - fine grained black matrix		1		
			around angular fragments up to 10 cm and		57.9	70	
			feldspar crystals up to 4 mm in length.				
			Slickensides common at 46° to core axis.				
			Calcareous throughout.				
			Flow laminations are parallel to core axis at				
			32.00 down to 33.53 at gouge filled fracture				
			at 17° to core axis.				
			This 17° fracture is enveloped by 5 mm of				
			white alteration (chalky), similar fracture at				
			33.78 and 38.33.				
			Pyrite abundant to end of hole.				1
			Strong lamination at 34.60 at 49° to core				
			axis.				
			Lighter coloured from 35.66 to end of hole				i .
			due to abundance of feldspar crystals and				
			light coloured matrix; fragmental				
			throughout, welded textures.				
			Well laminated toward end of hole at 40.84,				
			52° to CA; 43.89, 49° to CA; 44.81, 53° to				
			CA				
			Calcite vein - breccia at 45.42 at 14° to core				
			axis.				
1		T	END OF HOLE 45.72 m (150 feet)			I	

	ipper Bench Central PEM 100	Diamond 1	Drill Log		DDH#: <u>APBY-99-03</u>			
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m):	<u>133.8m (439 ft.)</u> <u>-90</u> 45.72 (150 ft)	Drill Hole s Method:	Burvey Brur Dip -90	Depth Collar	Property: NTS: Claim: Date Starte Date Comp Logged by:	ed: <u>Decemi</u> leted: <u>Decem</u>	12W Bay Two per 3, 1999	
Core size: Contractor: Drill Type:	BTW Boisvenu Pack drill hydraulic					3' - 10' 10' - 20' 20' - 30' 30' - 36'2" 36'2" - 45"	45' - 55'	

Purpose: | To test central part of PEM100 quarry to depth.

from (m)	to (m)	Code	Description	sample , No.	from	to (m)	Au (g/t)
000	0.91		CASING TO 2.13 m, CORE RECOVERY STARTS at 0.914 m.				
0.91	9.14		 WHITE BLEACHED CHALKY GEYSERITE bright white, punky, limonite stained throughout. Rough lamination at 55° to core axis. Ferricrete zone 1.52 to 1.88, highly cemented, perhaps a crevice or horizontal crack, cemented bedrock chips and sand (not put in sample) Very altered (advanced argillic) rhyolite tuff breccia fragments; slight pinkish tinge at 4.65 - possible alumite. Highly brecciated at 7.32, breccia veining at <10° to core axis. Limonite stain through interior of rock, 				
			core splits easily; relatively competent in upper part, FeO on fractures.				
9.14	11.02		PUNKY GREEN MATRIX CHALKY GEYSERITE - FAULT BRECCIA - most of interval is relatively fine grained with large angular white fragments. Limonite accentuated laminations at 56° to CA at 10.06. Highly fractured at low angles to core axis.				
11.02	25.96		WHITE BLEACHED CHALKY GEYSERITE - very altered (advanced argillic) rhyolite tuff breccia; flow banding and welded pumaceous fragments. Angular cavities 11.13 to 11.43 filled with soft limonite. Lamination at 11.61 at 84° to core axis. Iron oxide staining on outside of core down to 17.07.				

SECTION		<u>per Beno</u> A 100	h Central Page: 2		DDH#:	APBY-9	99-0 <u>3</u>
	ـــــــــــــــــــــــــــــــــــــ			1	1	1	I
from (m)	to (m)	Code	Description	sample No.	from	to	Aı (g/
11.02	25.96		Matrix brown in colour for a short section		55	65	
	(cont.)		16.36 to 16.56.		65	75	
			Fractures common at 5° to core axis around				
			16.76 which are stained by FeO.		75	85'2"	
			Fragment at 18.44 at 58° to core axis.		85'2"	92"7"	
			Fractured interval 19.20 to 19.51, limonite		002	, , , , , , , , , , , , , , , , , , , ,	
			coating fractures.				
			Less altered 21.54 to 22.30, dark grey		-		
			fragmental				
			Trace of pyrite at 20.80 as 3 mm rounded				
			beds and along fractures partially oxidized.				
			Entire section has a distinct punky				
			appearance.				
			Abundant pumaceous fragment with welded				
			textures at 22.86 to 23.17.				
			Fault at 23.72 greenish gouge with angular				
			white fragments at 32° to core axis.				
	1		Rubble between 24.38 to 24.69, limonite.				
			Lower contact sharp at 84°.			L	
າ5.96	28.22		ALTERNATING VERY PYRITIC DARK				
			GREY DACITIC CRYSTAL TUFF with light				
			grey less altered CHALKY GEYSERITE -				
			light grey intervals 26.82 to 26.98, 27.23 to				
			28.22.				
			Distinctive flow banding laminations at 90 to				
			90.6 at 32° to core axis.	· · · - · ·		-	
28.22	39.78		VERY PYRITIC DARK GREY DACITIC				
			CRYSTAL TUFF - dark grey, very similar				
			textures to the chalky geyserite intervals -				
			fragments, welded and flow banding to				
			laminated textures.				
			Non calcareous - white altered plagioclase.				
	15 50		Gradational lower contact.			 	
39.78	45.72		SLIGHTLY LIGHTER COLOURED FLOW				
			BANDED CRYSTAL DACITE TUFF (very				
			pyritic in places) - prominent flow banding at				
			37° at top of interval. Very pyritic below 40.23 heavy dissemination and fracture				
			5				
			filling pyrite up to 3 mm wide. Flow banding at 18° at 40.39.				
			Minor white bleaching envelopes around 30°				
			fractures. Flow banding at 42.98 at 70° to				
	ľ		core axis. Minor siliceous brecciation at				
			43.18.				
						1	
			Slickensides subparallel to core axis at 43.89			1	
			to 44.5. Abundant pyrite through to EOH.			 	
			END OF HOLE 45.72 m (150 feet)				

HOMEGOLD RESOURCES LTD. Unit #5 – 2330 Tyner St., Port Coquitlam, B.C. V3C 2Z1

ECTION: U	PEM 100
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m): Core size: Contractor: Drill Type:	PEM 100 133.2m (437 ft.) 000 -90 no grid 45.72 (150 ft) BTW Boisvenu Pack drill hydraulic

Diamond	Drill	Log
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Property: NTS: Claim: Date Start Date Com Logged by		Apple Bay 92L/12W Apple Bay Two eccember 4, 1999 December 5, 1999 J.T. Shearer, M.Sc., P.Geo.
Samples	2' - 10 10' - 2 20' - 3 30' - 4 40' - 5 50' - 6	0' 70'- 80' 0' 80'- 89'10" 0' 89'10"-100' 0" 100'-110'

DDH#: APBY-99-04

Purpose: To test depth continuation on west side of PEM100 quarry.

from (m)	to (m)	Code	Description	sample No.	from	to (m)	Au (g/t)
000	0.61		CASING - NO CORE RECOVERY				
0.61	20.87		VERY WHITE CHALKY GEYSERITE - extremely altered rhyolite flow breccia - fragmented. Relatively minor limonite staining except around fractures. Minor dark bands at 1.47 m at 41° to core axis with fracturing at same orientation. Minor pyrite along fractures, black in colour at 1.47 m, pyrite film at 1.88. Minor MnO with limonite along fractures at 4.57 on fractures 10° to core axis. Blocky to rubbly core from 8.53 to 10.97, broken small gouge filled fault at 9.70 at 28° to core axis. Pumaceous fragments at 10.66, welded textures. Rhyolite breccia - fragmental textures between 10.67 to 11.51; well developed fractures at 13.72 at 0° and 36° to core axis. Brown gouge - fault at 11.51 at 21° to core axis. Intense limonite staining of entire rock from fault down to 15.19 at gouge filled fault at 23° to core axis. White punky chalky geyserite below 15.19. Gouge filled fault at 16.76. No angle measurable, pervasive limonite below fault down to gouge filled 18.64. Unaltered partial fragment at 16.92 with disseminated pyrite block 2 cm wide. Pronounced fragmental texture below 18.29.				
?0 . 87	21.06		FAULT ZONE - gouge filled, soft, green brown gouge laminated at 42° to core axis. Small angular white chalky geyserite chips at top; rubble at bottom.				

HOMEGOLD RESOURCES LTD. Unit #5 -- 2330 Tyner St., Port Coquitlam, B.C. V3C 2Z1

SECTION	· · · ·	per Benc M 100	:h West Page:2		DDH#:	API	<u>3Y-99-0</u> 4
	1	1	1				1
from (m)	to (m)	Code	Description	sample No.	from	to	Au (g/t)
21.06	27.38		VERY WHITE CHALKY GEYSERITE -				
21.00	27.00		advanced argillic altered rhyolite flow dome -				
			apron deposit, banded, flow banded 55° to				
			core axis at 21.54.				
			Rough slickensides at 32° to core axis.				
	ĺ	1	Minor pyrite along fractures at 38° at 22.55.	1			1
			Gouge filled fault 23.27 at 42° to core axis.				
			Bright white appearance turns to light grey				
			green (gradual change) starting 24.23 down				
			to 27.38. Soft white mineral in fracture				
			27.38 perhaps alumite.				
			Healed fault breccia 24.84 to 25.25 minor				
			slickensides at <5° to core axis, broken core.				
		1	Contact fractured, limonite on fractures		1		
			minor irregular unaltered patchy fragments.				
27.38	37.24	<u> </u>	LESS ALTERED GREENISH RHYODACITE				
21.00	01.2.1	1	- same textures as above (alteration				
			boundary); very fragmental, flow banded in				
		1	places.	1			
			BUT VERY LITTLE PYRITE - relative to the				
			pyritic sections noted in previous holes.				
			Broken core, healed fault between 27.38 to				
			about 28.96, abundant limonite on				
			fractures.				
			Minor pyrite 32.21 to 32.41 rimming				
			fragments. Fragments up to 4 cm	1			1
			fragments.				
			Short sections of less altered patchy pyritic				
			fragments 33.93; 3 cm wide at 44° to core				
			axis, also 34.39 to 34.44.				
			Alteration gradually lessens with gradual				
			increase in pyrite in less altered material.				
37.24	45.72		PYRITIC RHYODACITE - dark grey,				
,, . <u>.</u> .			abundant. Pyrite as fine disseminations.				
			White alteration gives pseudo-breccia				
			texture to upper part down to 38.00 and				
			continues to 39.32.				
			At 39.07 fracture with white chalky geyserite				
			alteration 10 mm walls, fracture 37° to core	1			
			axis.				
			Fracture at 39.29 filled with white chalky				
			geyserite. Small slickensided fault at 40.84				
			at 26° to core axis with gouge 2 cm thick.				
			41.38 to 41.76 fine breccia semi-angular,				
			very altered to chalky geyserite. Small fault		ļ		
]	at 42.65 with gouge 10 mm thick at 53° to				
			core axis with greater brecciation through				
			down hole while gradually decrease intensity				
			of brecciation to bottom of hole.				
			END OF HOLE 45.72 m (150 feet)				+

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	ower Bench PEM100	Diamond I	Drill Log		DDH#: <u>APBY-99-05</u>
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m):	<u>v east side near ramp</u> <u>124.06m (407 ft)</u> <u></u>	Drill Hole s Method: _ Azimuth	Brunton Dip -90	Depth Collar	Property:Apple BayNTS:92L/12WClaim:Apple Bay TwoDate Started:December 6, 1999Date Completed:December 6, 1999Logged by:J.T. Shearer, M.Sc.,P.Geo.
Core size: Contractor: Drill Type:	BTW Boisvenu Pack Drill hydraulic			· · · · ·	Sample Intervals: $0 - 10$ $10 - 20$ $20 - 30$ $30 - 40$ $40 - 50$ $50 - 60$

from (m)	to (m)	Code	Description	sample <u>No</u> .	from/to	width (m)	Au (g/t
000	0.61	<u> </u>	CASING: CORE RECOVERY STARTING 0.30m				
0.60	5.67		VERY WHITE CHALKY GEYSERITE: very white to 9'		<u>.</u>		~
	(18"6")		(2.74), slightly greyer 2.74 to 6.10m. Fractures at 0.81m are 30° to core axis.				
			Black oxidized pyrite coating fractures at 2.79m and below				
ĺ			also filling the interstitial space between fragments. Black	1			
			pyrite lenses. Cross fractures at 46° and 30° to core axis at				
			3.35m, fractures at 2.58 at 38° to core axis.				
			Fault at 6.71m at 60°d to core axis with gouge filling.	:			
			Slickensides rough at 4.37m.				
			Black oxidized pyrite coating fracture surfaces, partially			1 1	
			altered to FeO.				
			Flow banding starting at lower contact.		<u> </u>	· · · · · ·	
5.67	10.11		LIGHT FREY ALTERED flow banded Rhyodacite				
			Fragmental: fine grained, chloritized, limonite on fractures,				
1		1 1	lighter colour 7.32m to 10.06m. Flow banding at 81° to core axis at 6.71m.	1 1			
			Fracture at 6.22m at 49° to core axis. Fracture with				
			limonite stain at 6.83m at 68° to core axis. Rusty irregular				
			fractures at 9.32m to 9.47m.				
			Very little pyrite seen on split core.				
10.11	18.29		DARKER GREY flow banded Rhyodacite Fragmental:				
			occasional pyrite irregular fracture at 10.21 and limonitic				
			fracture at 10.29m at 44° to core axis. 10.46m to 11.07m				
			very fragmental with minor pyrite at 11.23m several				
			fractures the strongest at 35° to core axis. Limonitic coated				
			fractures at 55° to core axis, 12.12m. Flow banding		Ì		
			obscure, fractures at 8° to core axis.				
			Limonite stained fracture. Pyrite in fractures and small				
			lenses interstitial.				
			Darker grey green toward end of hole; chlorite development.				
			Rusty irregular fractures 17.37m to 17.88m subparallel to	• · · · · · · · · · · · · · · · · · · ·			
			core axis.				
			White Kaolinite coating fractures subparallel to core axis at				
			14.94m and 16.76m and also limonite.	├			

	ower Bench PEM100 Vest Side	Diamond	_
Northing:		Drill Hole	survey
Easting:		Method:	Brunton
Elevation:	124.06m (407 ft)	Azimuth	Dip
Azimuth:		-	-90
Inclination:	-90°		
Grid:			
Length (m):	18.29m(60 ft)		
Core size:	BTW		
Contractor:	Boisvenu		
Drill Type:	Pack Drill hydraulic		

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1.	

DDH#: _APBY-99-06 __

Property:	Apple Bay
NTS:	92L/12W
Claim:	Apple Bay Two
Date Started:	December 6, 1999
Date Completed	: December 6, 1999
Logged by:	J.T. Shearer, M.Sc.,
	P.Geo

from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
000	0.61	· · ·	CASING: NO CORE RECOVERY				
0.61	7.21		 VERY WHITE FRAGMENTAL CHALKY GEYSERITE: mainly bleached white with subrounded fragments, some areas of pervasive limonite, short sections. 0 to 6.46m very rubbly and broken. Chalky and bleached white. 1.24m to 1.68m broken and faulted. Banding is at 23° to core axis. Gouge - fault at 2.44m with 1 cm gouge filling associated with small angular rock fragments. More limonite and yellower tan in colour from 1.68m to 2.57m. Fault at 2.57m with 1 cm gouge at 13° to core axis at 2.72m. Fault between 3.48m to 3.56m at 26° to core axis with gouge. Fracture at 4.32m at 25° to core axis. Fracture at 4.55m at 53° to core axis. 				
7.21	18.29		LIGHT FREY FRAGMENTAL RHYODACITE (breccia): minor pyrite limonite on fractures, highly fragmental, fragments subrounded to partially bleached. Pyrite block at 28 ² about ¹ / ₄ in diameter along fractures more pyrite. Complex fractures and faults from 8.79m to 9.17m ranging from 15-35° to core axis. Medium grey well altered flow banded rhyolite 9.17m to 12.04m. Fractures mainly at high angle to core axis 11.25m to 11.38m. No pyrite in this section. Very vitric glassy fragment from 11.84m to 12.07m, quite soft.				

SECTIC	SECTION: Lower Bench		h Page: <u>2 of 2</u>	Page: <u>2 of 2</u>		DDH#: <u>APBY-99-06</u>			
from (m)	to (m)	Code	Description	•	sample No.	from/to	width (m)	Au (g/t)	
			Gouge coated limonitic fractures 12.04m, 12.37m and intermittently down to 17.07m, main fracture directions 1 and 34° to core axis. Well fractured intervals 12.90m to 14.66m. Gouge in fracture at 17.76m at 28° to core axis. Subparallel to core axis fractures common at 20° to 40° to core axis down to end of hole. More pyrite appearing as small lenses at 55° to core axis a 16.76m. Traces of pyrite also occur along fractures near end of hole.	D					
			End of Hole. 18.29m (60 feet)						

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SECTION: 500 m step out to WEST along PEM 100

Diamond Drill Log

DDH#: APBY-99-07

		Drill Hole s	urvey		Property:	Apple	<u>Bay</u>
Northing:		Method: E	Brunton		NTS:	<u>92L/1</u>	
Easting:		Azimuth	Dip	Depth	Claim:		Bay Two
Elevation:	118.26 m (388 ft)	-	-90°	collar	Date Started:		n <u>ber 7, 1999</u>
Azimuth:					Date Complet		
Inclination:	-900				Logged by:	<u>J.T. S</u>	Shearer, M.Sc.,
Grid:	PEM 100	[<u> </u>	<u></u>		P.Geo	<u>, </u>
Length (m):	30.48 m (103 ft)			+			
Core size:	BTW			<u> </u>	Sample Interv	'al:	
Contractor:	Boisvenu		-+	┼ ╍───┥	4-10' 4	40-50	75-80
Drill Type:	Pack Drill Hydraulic				10-20 5	50-60	80-90
				╉────┤	20-30 6	50-70	90-100
		L			30-40 7	70-75	

To est. geyserite outcrop 500 m west of PEM100 quarry and holes APBY-99-01 to 06 and 09. Purpose:

from (m)	(m)	Code	Description	sample No.	from/to	width (m)	Au _(g/t)
000	1.22		CASING				
1.22	7.11		CHALKY PYRITIC light grey geyserites fragmental: very broken rubbly core, brownish matrix. Very pyritic throughout as lenses and small fracture filling, pyrite averaging 5 to 10%. Interval is highly fragmental, rounded to subangular fragments, white and chalky. Core is very porous and highly fractured. Fractures mainly at 72° and 45° to core axis, often fractures are coated with pyrite. Rhyolite - silica altered fragments are commonly very closely packed, often the fragments are rimmed by pyrite. The minor matrix is brownish in colour and very hard.				
7.11	9.70		Darker GREY FRAGMENTAL CHALKY GEYSERITE: Interval characterized by slightly darker grey subrounded fragments, white matrix. Abundant interstitial pyrite and as fracture coatings, in places pyrite is so abundant it appears as if pyrite is the matrix.				
9.70	11.48		PUMACEOUS FRAGMENTAL CHALKY GEYSERITE: many fragments are pumice shards which have been flattened and exhibit welded textures. Lineation at 10.21 is at 48° to core axis, pitting of pumice fragments. Flow banded fragments occur at bottom of interval.				
11.48	22.10		WHITE close-packed very pyritic FRAGMENTAL CHALKY GEYSERITE: highly porous - vuggy due to intense advanced argillic alteration. White chalky subrounded to angular fragments within a highly siliceous darker grey to light brownish matrix. Minor "cross-cutting" matrix seams @ 14.63. Lineation and fragment orientation at 15.19 at 42° to core axis. Highly fractured at multiple angles, main direction <5° and 51° to core axis at 16.46. Pyrite as interstitial lenses and rimming fragments, pyrite is concentrated in the finer fragmental zones.				

SECTIO	SECTION: 500 m step out to west Page: 2 along PEM 100				DDH#: <u>APBY-99-07</u>				
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)		
22.10	22.71		PYRITE ZONE : abundant pyrite lenses interstitial to very siliceous white fragments subrounded,, overall pyrite about 25-30%. Rough orientation of pyrite lenses at 10° to core axis.						
22.71	27.58		WHITE close-packed pyritic fragmental CHALKY GEYSERITE: highly fractured, polymictic fragments, abundant white chalky fragments within a highly siliceous matrix, most fragments are subrounded. Gougy fault at 25.9, rubbly core.						
27.58	30.48		SILICEOUS CHALKY GEYSERITE: white subrounded chalky fragments in a darker grey matrix. Much less pyrite in this interval. Still vuggy due to advanced argillic acid sulfate alteration. Fragments autobrecciation, chalky fragments to end of hole.						
			End of Hole 30.48 m (100 feet)						

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DDH#: APBY-99-09 Diamond Drill Log SECTION: on 100A north of quarry collared on large outcrop Apple Bay Project Property: Drill Hole survey NTS: 92L/12W Method: Brunton Northing: Apple Bay Two Claim: Azimuth Dip Depth Easting December 8, 1999 Date Started: Elevation: 132.59 m (435 ft) -900 collar -Date Completed: December 9, 1999 Azimuth: J.T. Shearer, M.Sc., -90% Logged by: Inclination: PEM 100 P.Geo. Grid: 30.48 m (100 ft) Length (m): Samples Core size: BTW 10-20 1-10 30-40 Contractor: 20-30 Boisvenu 40-50 Drill Type: Pack Drill Hydraulic

	quarry	quarry on PEM 100.								
from [m]	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)			
000	0.30		CASING: core recovered after 1', collared on bedrock.							
0.30	5.28		WHITE FINE GRAINED CRYSTAL TUFF CHALKY GEYSERITE: abundant kaolinite replaced feldspar phenocrysts up to 3 mm							

Purpose: | To test north continuity of pyroclastic argillic altered horizon to the exposure on road 100A, 100 m north of

		CHALKY GEYSERITE: abundant kaolinite				
		replaced feldspar phenocrysts up to 3 mm				
		in length. Relatively fine ground mass.				
		Traces of pyrite along fractures with				
		limonite. Crystals appear to be randomly				
		oriented.]		1
		Main fracture direction 62° and 34° some				
		crude slickensides.				
		Rough banding, vague, at 66° to core axis				
		at 1.83 m.				
		Short sections of some darker fragments,				
		perhaps a flow top or bottom. Toward				
		bottom of interval, relatively sharp contact				
		with flow banding.				
5.28	18.75	WHITE FLOW BANDED CHALKY				ł
		GEYSERITE: fine grained matrix,				
		pronounced flow banding in places. Core				
		relatively broken and highly fractured.				
		Flow banding at 5.79 is 38° to core axis.		1		
		Minor fragmental sections for 5 to 10 cm.	:			
		Gouge and pebbly angular fragment filled				
		FAULT - 7.46 to 7.65. Highly broken				
		(faulted core) gouge wacked away 7.87 to 10.36.				
		Very pronounced flow banding with welded				
		textures 10.51 to 11.58. Flow bands at 49°				
		to core axis.				
		Numerous gouge filled fractures at 48° to		ļ	j	ļ
		CA between 10.97 to 11.58.				
		Fault - gouge filled MAJOR FAULT 12.75 to				
		15.19. Main shear direction 810 to core				
		axis. Greenish-yellow to white gouge, good				
	1	core recovery >90%. Some shearing at		1	1	1
		14.02 is at 15° to core axis.				

from (m)	to (m)	Code	Description	sample <u>No</u> .	from/to	width (m)	Au (g/t)
5.28	18.75	1	Very distinct flow banded and welded				ł
(cont'd)			texture at 15.04 banding at 66° to core				
· ·			axis.				
			Incipient autobrecciation between 15.29 to				
			16.51 becoming more fragmental toward				
			16.51.				
			LONG SECTION OF pronounced distinctive				
			flow banding 16.51 to 18.24 banding and				
			lamination from 81° to 88° to core axis.				
			Limonite stained throughout.				
			Section below alternating with flow banded				
	[and fragmental.				
18.75	30.48		WHITE to light grey FRAGMENTAL and				
	EOH		FLOW BANDED CHALKY GEYSERITE				
			highly altered siliceous advanced argillic				
			altered section.				
	1		Some chalky fragments > 10 cm in length,				
			some siliceous fragments are flow banded.				
			Fractures are gouge covered between 20.73				
			to 23.17, core highly fractured in short				
			intervals.				
			Mostly fragmental below 21.34, crowded			1 1	
			fragments, extensively limonite stained.				
			Rough slickensides between 27.43 to				
			28.96, rubbly fractured core. Main				
			slickenside orientation is 5° - 10° to core				
			axis. Pinkish colour to core due to				
			pervasive limonite.	[1	
			Section relatively soft in highly stained				
			zones to relatively soft in white bleached				
			zones.				

DD114 4 DD17 00 00

DDH#: APBY-99-10 **Diamond Drill Log** SECTION: West of PEM100 quarry 400m west, 100 m east Apple Bay Project of 99-07 Property: Drill Hole survey NTS: 92L/12W Method: Brunton Apple Bay Two Depth Claim: Northing: Azimuth Dip Date Started: December 9, 1999 Easting: --900 collar 116.44 m (382 ft) Date Completed: December 10, 1999 Elevation: Azimuth: 000 Logged by: J.T. Shearer, M.Sc., -90 Inclination: P.Geo. PEM100 Grid: Length (m): <u>29.77 m (97 ft)</u> Samples Core size: BTW 6-10 40-50 Contractor: Boisvenu 50-60 10-20 Drill Type: Pack Drill Hydraulic 20-30 30-40

Purpose: To define the west extent of pyritic chalky geyserite.

from (m)	to (m)	Code	Description	sample No	from/to	width (m)	Au (g/t)
000	1.83		CASING: no core recovered, minor				
			bleached and oxidized chalky geyserite.				
1.83	13.11		VERY SILICEOUS, WHITE FRAGMENTAL				
	1	1	CHALKY GEYSERITE: prominent rounded				
			to flattened and elongate white kaolinized				
			fragments throughout within a light grey to				
		1	white siliceous matrix.				
			MAJOR GOUGE ZONE 4.32 to 5.03, core				
	ļ	1	above and below is relatively shattered and				
			fractured at 10° to 15° to core axis.				
			Very little pyrite, traces of disseminated				
			pyrite occasionally observed.				
			Short sections of flow banding with				
			laminations at 76° to core axis at 9.30,				
			some of the flow banded intervals may be				
			large fragments.				
			Large, flattened chalky fragments at 10.67				
			elongated at 78° to core axis, these	1			
			fragments have been brecciated somewhat.				
13.11	19.28		FLOW BANDED, SILICEOUS WHITE				
			CHALKY GEYSERITE: finely flow banded,				
			welded throughout 77° to core axis mainly.				
			Occasionally banding is as low as 65° to				
			core axis reflecting flow folding. Small 3-				
			4mm elongate pumaceous fragments				
			common. Flow banded material appears	1			
			more kaolinitic than the siliceous				
			fragmental.				
}			Short fragmental interval 18.01 to 18.49				
			which may be a flow top breccia or faulted				
			segment.				
			Some core loss in middle of fragmental			1	
			interval, lower contact sharp between				
			fragmental flow banded zone and siliceous				
([[fragmental.	[1 1	

1

SECTION: West of PEM 100 quarry 400 m west, 100 m east of Page: _____

DDH#: <u>APBY-99-10</u>

<u>99-07</u>

from	to	Code	Description	sample No.	from/to	width	Au
<u>(m)</u> 19.28	(m) 29.77	+	VERY SILICEOUS WHITE FRAGMENTAL	IND.	<u> </u>	<u>(m)</u>	<u>(g</u> /t
19.20	29.11	1	CHALKY GEYSERITE: characterized by			1	
			rounded to partially absorbed white				
	}		kaolinized fragments within a light greenish				
			grey matrix which is highly vuggy due to				
			intense acid sulphate advanced argillic	}			
			alteration. Fragments average about 10				
	ļ		mm across and range from 1 mm to 50	.]			
			mm.				
]	Mostly the fragments are matrix supported,	ļ			
			abundant fragments throughout.				
			Darker grey fragments with the white				
		1 1	fragments begin to appear below 23.17			[[
			which is marked by a narrow flow banded				
		1 1	zone 23.01 to 23.09 laminated at 73° to	•		1 1	
			core axis.				
			Traces of euhedral pyrite in solution vugs			1 1	
			below 24.38, traces of pyrite in solution vugs				
			matrix in irregular lenses and rimming	.		1 1	
			fragments.				
			Pyrite appears to increase below 29.26			1 1	
			mainly as fracture coatings and fracture				
			fillings coincident with increase in fragment				
			size.				
		<u>├</u> ────┤	End of Hole 29.77 m (97'8" ft)			╶╂─────┤	

.

SECTION: Upper Wann Knobs

Diamond Drill Log

Northing:		Drill Hole	survey	
Easting:		Method:	Brunton	
Elevation:	176.79m (580 ft)	Azimuth	Dip	Depth
Azimuth:			-90	Collar
Inclination:	90			
Grid:				
Length (m):	m (40 ft)			
Core size:	_(BTW)			
Contractor:	Boisvenu			
Drill Type:	Pack Wireline			<u> </u>
			_ _	┼────
				·

Property:Apple Bay ProjectNTS:92L/12EClaim:Apple Bay 7Date Started:March 8, 2000Date Completed:March 8, 2000Logged by:J.T. Shearer, M.Sc.,P.Geo.

DDH#: APBY-2000-11

To test Chalky Geyserite on North Slope of First Wann Knob.									
to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)			
· 		OVERBURDEN: Grey Till							
		No Bedrock Encountered despite nearby bedrock above and below Drillsite.							
			(m) OVERBURDEN: Grey Till No Bedrock Encountered despite nearby	(m) No. OVERBURDEN: Grey Till No. No Bedrock Encountered despite nearby Image: Constraint of the second sec	(m) No. OVERBURDEN: Grey Till	(m) No. (m) OVERBURDEN: Grey Till			

SECTION: Upper Wann Knob	Diamond Drill Log	DDH#: <u>APBY-2000-12</u>
Northing: Easting: Elevation: <u>172.21m (565</u> Azimuth: Inclination: <u>-90</u> Grid: Length (m): <u>15.54m (51 ft)</u> Core size: <u>(BTW)</u> Contractor: <u>Boisvenu</u> Drill Type: <u>Pack Wireline</u>	Drill Hole survey Method: <u>Brunton</u> (t) Azimuth Dip Depth 90 Collar 90 Collar	Property:Apple Bay ProjectNTS:92L/12EClaim:Apple Bay 6Date Started:March 9, 2000Date Completed:March 9, 2000Logged by:J.T. Shearer, M.Sc.,P.Geo.P.Geo.Sample Intervals:(24.80 feet)25-3434-4134-4141-51

Purpose:	On No	On North Side of Saddle between Wann Knobs.								
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)			
0.00	7.56		OVERBURDEN : Very Compact Till, Rusty down to 7.01m green compact till 7.01 to 7.56m.							
7.56	15.54		GREY GOUGE : appears to be crushed pyritic dacitic crystal tuff. Abundant Calcite in places, sparry calcite veinlets 12.31m 8mm wide at 70° to core axis. Possible sparry gypsum also, brownish sparry vein at 13.72m at 70° to core axis.							
			END of HOLE 15.54M (51 feet)							

SECTION: P	<u>EM100A</u>	Diamond Drill Log			DDH#:	DDH#: <u>APBY-200</u> 0-13			
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m): Core size: Contractor: Drill Type:	143.26m (470 ft) -90 18.29m (60 ft) (BTW) Boisvenu Pack Wireline		ey inton -90	Depth Collar	Property: NTS: Claim: Date Started: Date Complet Logged by: Sample Interv 3-13 13-23 23-33 33-44 (13.41	red: <u>March 10, 2000</u> J.T. Shearer, M.Sc., P.Geo. vals:			

Purpose:	Up along P100A, 100m North of Hole APBY-99-09, Chalky Geyserite. Rusty Unit Immediately to the West.							
from (m)	to Code		Description	sample <u>No.</u>	from/to	width (m)	Au (g/t)	
0.00	1.07		OVERBURDEN : Core of boulders, core of very compact till, rusty weathering from 0.30-1.07m.					
07. י	4.57		ALTERED DACITE: Mainly greenish, fragmental black unaltered patches in places.					
4.57	13.41		ALTERED GEYSERITE: Greenish, not very white rusty fractures. Very convoluted dark flow banding at 9.14- 9.45m. Gradational alteration contact below.					
13.41	18.29 (EOH)		GREY DACITE CRYSTAL TUFF : Upper part of zone faulted, olive green gouge. Chalky Geyserite alteration (advanced argillic – acid sulphate) 17.04-18.13m approx 90% white chalky intense alteration, very vuggy and leached in places especially 17.45-17.74m. All sulphides removed. The protorock is pyritic dacitic lapilli- crystal tuff. Some flow banding at 17.90m convoluted at approx 70° to core axis.					
			END of HOLE 18.29m (60 feet)					

SECTION: _PE	M100A	Diamond I	Drill Log		DDH#:	APBY-2000-14
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m): Core size: Contractor: Drill Type:	<u>-90</u> <u>15.24m (50 ft)</u> (BTW) Boisvenu Pack Wireline	Drill Hole s Method:	Survey Brunton Dip -90	Depth Collar	Property: NTS: Claim: Date Started: Date Complete Logged by: Sample Interv 35-50	Apple Bay Project 92L/12E Apple Bay 6 March 10, 2000 ed: March 10, 2000 J.T. Shearer, M.Sc., P.Geo.

	_ <u>ا</u>			<u> </u>	_ <u>_</u>		
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00	10.36		NO CORE RECOVERY			(***)	
10.36	10.67	-	CHALKY GEYSERITE: Chips may be a boulder.				
10.67	15.24 (EOH)		GREY GOUGE : Developed in dacitic crystal tuff. Uniform core, very soft. Can be cut with a knife easily Light grey gouge at very end of Hole 15.05- 15.24m.				
			END of HOLE 15.24m (50 feet)				

DH#: APBY-2000-14___

SECTION: _U	SECTION: Upper Wann Knob		Drill Log		DDH#: <u>APBY-2000-15</u>		
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m): Core size: Contractor: Drill Type:	176.79m (580 ft) -90 22.86m (75 ft) (BTW) Boisvenu Pack Wireline	Drill Hole s Method:	D	Depth Collar	Property: NTS: Claim: Date Started: Date Complete Logged by: Sample Interva 2-10 10-20'10" 20'10"-30 30-40	Apple Bay Project 92L/12E Apple Bay 6 March 11, 2000 d: March 11, 2000 J.T. Shearer, M.Sc., P.Geo.	

from	to	Code	Description	sample	from/to	width	Au
(m)	(m)			<u>No.</u>		(m)	_(g/t)
0.00	0.30		NO CORE RECOVERED: 6' of casing				
0.30	6.35		VERY WHITE CHALKY GEYSERITE:				
			Relatively massive, minor flow banding at				
			4.10m is 46° to core axis.	} }			
			Towards lower contact more pervasive	-			
			rusty stain.	└── ───┼			
6.35	12.28	T	LIGHT GREY ALTERED DACITE LAPILLI				
	ĺ		TUFF : Soft throughout, uniform aphinitic	[[1 1	
			down to 8.05-8.39m, which is fine breccia.				
			Slickensides throughout at <20° to core				
			axis.				
			Phritic zone 10.38-11.34m of darker grey,				
			fine grained, very fine grained minor pyrite				
			disseminated throughout. some rough				
		[slickensides, chalky below 11.34m.	[[
			Somewhat variable alteration but generally				
			intense. Relatively sharp lower contact at				
			44° to core axis.	<u> </u>			
12.28	22.86		DARK GREY PYRITIC DACITE: Subtle				
	(EOH)		Insitu brecciation, some convoluted rough				
			banding.				
			Gouge filled fractures 12.79-12.92m	1			
			between 25-30° to core axis, common down to 13.70m.				
			Semi healed fault zone, rusty stained 15.24-15.76m, highly fractured, core	{ }		1 1	
			breaks at 72° to core axis.				
			Breccia texture and outline of fragments				
		}	more prominent at 16.75m and down.]]		}	
			Fragments elongated at 17.95m at 65° tyo				
			core axis.				
			Darker and more pyrite content toward end				
			of Hole, crowded fragment zone 2060-				
			21.95m.				

SECTION:	Upper	Wann K	nob Page: 2 of 2	Page: <u>2 of 2</u>			2000-15
from (m)	to (<u>m</u>)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
			Minor altered (calcite) feldspar crystals. Gouge filled fractures sub-parallel to core axis at 22.55-22.81m, also at 20.05m at 5° to core axis.				
			END of HOLE 15.24m (50 feet)		· · · · · · · · · · · · · · · · · · ·		

SECTION: Upper Wann Knob Diamond

Diamond Drill Log

DDH#: APBY-2000-16

Northing: Easting: Elevation:	167.64m (550 ft)	Drill Hole s Method: _ Azimuth	survey <u>Brunton</u> Dip	 Depth
Azimuth: Inclination: Grid:	-90	000	-90	Collar
Length (m): Core size: Contractor:	30.78m (101 ft) (BTW) Boisvenu			
Drill Type:	<u>Pack Wireline</u>			

Property:	Apple Bay Project
NTS:	_92L/12E
Claim:	Apple Bay 6
Date Started:	<u>March 11, 2000</u>
Date Complete	d: <u>March 11, 2000</u>
Logged by:	J.T. Shearer, M.Sc.,
	P.Geo

Sample	Intervals	5:
5-10	40-50	80-90
10-20	50-60	90-101
20-30	60-70	
30-40	70-80	

	<u> Nouna</u>		Chalky Geyserite Along Tote Road and Above.	i — – – – – – – – – – – – – – – – – – –			
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/1
.00	1.52		NO CORE RECOVERY: Collar and broken				
			white geyserite,				
.52	30.78		VERY WHITE CHALKY GEYSERITE				
	(EOH)		FRAGMENTAL: Relatively hard.				
			Fragments range from very light grey to				
			white, most fragments are sub-angular to				
			sub-rounded, and are mainly matrix				
	ļ		supported. Cherty appearing fragments]]			
			are common.				
			Rusty coating pervasive from 3.96-5.79m,				
			minor greenish-yellow gouge at 5.79m.				
			Fragments at 4.88m are about 55° to core				
			axis elongation. Rusty coated fractures			1 1	
			common 6.60-7.38m.				
			Crowded framework supported fragments				
			at 6.40-9.38m. Light grey cherty section				
			12.45-12.72m.			1	
			Minor partly digested slightly darker grey				
			fragments between 9.62-9.71m contorted				
			sub-parallel to core axis.	ļ			
			Irregular darker fragments 12.22-12.28m.				
			No Pyrite observed in core.				
			Banding 12.74m is 68° to core axis (not				
			typical flow banding) gouge filled fractures				
			between 13.54-13/89m, greenish-yellow	. 1			
			gouge at sub-parallel to core axis.				
			Minor dark grey matrix and rough banding.				
			Crushed (rubble zone) 14.83-15.24m,				
			highly fractured at low angle to core axis.				
			Ghosting of fragments common (bleached				
1		[[out) up to 6 cm in length, sub-rounded.				
1			Darker grey, partly digested fragment				
			16.26-16.48m at about 19° to core axis,				
			partial digestion gives an overall spotted				
1		1	texture.			1 1	

SECTION	Upper	Upper Wann Knob Page: 2 of 2 DDH#: APBY-20					
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au _(g/t) _
1.52	30.78 (cont.)		Another dark fragment at 17.83-17.89m, same low angle to core axis, solid 0.6-0.9m core lengths. Well fractured core 19.21-19.76m at low angles, more pronounced chalky appearance although still very hard. Minor convoluted flow band at 20.24m at 23° to core axis. Core well fractured 21.36-23.16m, rough slickensides at variable angles between 30° to 65°. Gouge filled fractures, light grey gouge at 24° to core axis 26.87-27.43m. Very white chalky geyserite 28.04-28.35m, very chalky appearance but still relatively hard. Rubbly core 27.74-29.02m, well fractured at 54° to core axis, gougy from 29.02- 29.26m. Fault zone. Solid ghost fragment chalky geyserite 29.26-30.78m with minor gouge on fractures at 34° to core axis. END of HOLE				
			30.78m (101 feet)				

SECTION - U	pper Wann Knob	Diamond 1	Drill Log		DDH#:	APBY-2000-17
<u></u>	West Side		0			
		Drill Hole s	survey		Property:	Apple Bay Project
Northing:		Method:	Brunton		NTS:	<u>_92L/12E</u>
Easting:		Azimuth	Dip	Depth	Claim:	Apple Bay 8
Elevation:	175.26m (575 ft)		-90	Collar	Date Started:	
Azimuth:		· · · · · · · · · · · · · · · · · · ·			Date Comple	ed: <u>March 12, 2000</u>
Inclination:	-90				Logged by:	J.T. Shearer, M.Sc.,
Grid:	·			1		P.Geo
Length (m):	<u>30.48m (100 ft)</u>					
Core size:	BTW		- <u>-</u>	· ·	Sample Inter	/als:
Contractor:	Boisvenu			<u> </u>	2-10 40-5	0 80-90
Drill Type:	Pack Wireline			┼ ────┥	10-20 50-6	0 90-100
		-			20-30 60-7	0
					30-40 70-8	0

			e (100m west	of saddle)	-r	r
to (m)	Code	Description	sampl e No.	from/to	width (m)	Au (g/t)
0.62		NO CORE RECOVERY: Collar and rubbly				
10.67		VERY ALTERED LIGHT GREY FLOW BANDED RHYOLITE: Flow banding – lamination at 85° to core axis, 1 to 2mm thick at 0.92m, No pyrite. Fragments dominate below 1.00m but very bleached out and difficult to recognize, Relatively soft. Orange-yellow gouge filled fracture at 2.59- 2.72m at 18° to core axis. Isolated flow lamination at 3.21m at 28° to core axis. Rusty fractures at sub-parallel to core axis 2.91-4.29m, slightly darker grey convoluted fragmental below 4.29m. Crushed-gouge zone 6.09-6.77m gouge in places at 87° to core axis at bottom (6.77) and 48° to core axis at bottom (6.77) and 48° to core axis at 6.09m. Very vuggy (Intense Advanced Argillic Altered) between 6.46-7.14m. Short "alteration" bleaching fragments that are darker grey between 8.72-8.97m, 9.32-				
13.68		skin on core. SLIGHTLY DARKER GREY (less altered) DACITE : Insitu brecciation, mainly aphanatic, <u>minor pyrite</u> content, becomes lighter (more bleached) at 11.75m and then alternates with white geyserite 12.09-12- 22m, 12.59-12.68m, 12.79-12.94m, these				
	More C (m) 0.62 10.67	More Overburde	More Overburden on West Side Relative to East Knob.toCodeDescription(m)NO CORE RECOVERY: Collar and rubbly subcrop.10.62NO CORE RECOVERY: Collar and rubbly subcrop.10.67VERY ALTERED LIGHT GREY FLOW BANDED RHYOLITE: Flow banding - lamination at 85° to core axis, 1 to 2mm thick at 0.92m, No pyrite. Fragments dominate below 1.00m but very bleached out and difficult to recognize, Relatively soft. Orange-yellow gouge filled fracture at 2.59- 2.72m at 18° to core axis. Isolated flow lamination at 3.21m at 28° to core axis. Rusty fractures at sub-parallel to core axis 2.91-4.29m, slightly darker grey convoluted fragmental below 4.29m. Crushed-gouge zone 6.09-6.77m gouge in places at 87° to core axis at bottom (6.77) and 48° to core axis at 6.09m. Very vuggy (Intense Advanced Argillic Altered) between 6.46-7.14m. Short "alteration" bleaching fragments that are darker grey between 8.72-8.97m, 9.32- 9.44m at 19° to core axis, 10.12-10.19m skin on core.13.68SLIGHTLY DARKER GREY (less altered) DACITE: Insitu brecciation, mainly aphanatic, minor pyrite content, becomes lighter (more bleached) at 11.75m and then alternates with white geyserite 12.09-12- 22m, 12.59-12.68m, 12.79-12.94m, these	More Overburden on West Side Relative to East Knob.toCodeDescriptionsample No.0.62NO CORE RECOVERY: Collar and rubbly subcrop.No10.67VERY ALTERED LIGHT GREY FLOW BANDED RHYOLITE: Flow banding - lamination at 85° to core axis, 1 to 2mm thick at 0.92m, No pyrite. Fragments dominate below 1.00m but very bleached out and difficult to recognize, Relatively soft. Orange-yellow gouge filled fracture at 2.59- 2.72m at 18° to core axis. Isolated flow lamination at 3.21m at 28° to core axis. Rusty fractures at sub-parallel to core axis 2.91-4.29m, slightly darker grey convoluted fragmental below 4.29m. 	More Overburden on West Side Relative to East Knob. to Code Description sample from/to 0.62 NO CORE RECOVERY: Collar and rubbly subcrop. No. No. 10.67 VERY ALTERED LIGHT GREY FLOW No. No. No. 10.67 VERY ALTERED LIGHT GREY FLOW No. No. No. 10.67 VERY ALTERED LIGHT GREY FLOW No. No. No. 10.67 VERY ALTERED LIGHT GREY FLOW No. No. No. 10.67 VERY ALTERED LIGHT GREY FLOW No. No. No. 10.67 VERY ALTERED LIGHT GREY FLOW No. No. No. 10.67 VERY ALTERED LIGHT GREY FLOW No. No. No. 10.67 VERY ALTERED LIGHT GREY FLOW No. No. No. No. 10.67 BANDED RHYOLITE: Flow banding - lamination at 85° to core axis. 10.0m but very bleached out and difficult to recognize, Relatively soft. Orange-yellow gouge filled fracture at 2.59- 2.72m at 18° to core axis. Isolated flow lamination at 3.21m at 28° to core axis. Rusty fractures at sub-parallel to core axis 2.9.14.29m, slightly darker grey convol	More Overburden on West Side Relative to East Knob. to Code Description sample from/to width 0.62 NO CORE RECOVERY: Collar and rubbly subcrop. image: collar and rubbly image: co

SECTION	SECTION: <u>Upper Wann Knob</u> Page: <u>2 of 2</u> DDH#:						
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
13.68	19.31		WHITE CHALKY GEYSERITE: Very pervasive FeO coating fractures, creamy white to very pale light grey. <u>Relatively soft.</u> Fault zone-breccia 16.45-16.66m at 26° to core axis. Gougy filled fractures 17.22-17.33m at mainly 5° to core axis.				
19.31	21.49		LIGHT GREY RHYOLITE FRAGMENTAL: some minor pyrite, crowded framework supported sub-rounded fragments. White chalky geyserite 20.46-20.92m.				
21.49	23.04		WHITE ALTERED CHALKY GEYSERITE: Major Fault Zone 21.59-22.94m, crushed – gouge rich, white geyserite, FeO stained pervasively.				
23.04	24.18		DARKER GREY SILICEOUS DACITE: abundant pyrite 23.27-24.04m, some core loss.				
_4.18	30.48 (EOH)		WHITE ALTERED BLEACHED CHALKY GEYSERITE VERY FAULTED: Major fault 24.18-30.48m (EOH), very crushed and gouge rich. Poor recovery. About 40% recovery. END of HOLE				
			30.48m (100 feet)				

SECTION: <u>Upper Wann Knob</u> East Side	Diamond Drill Log	DDH#: <u>APBY-2000-18</u>
Northing: Easting: Elevation: <u>169.17m (555 ft)</u> Azimuth: <u></u> Inclination: <u>-90</u> Grid: Length (m): <u>30.78m (101 ft)</u> Core size: <u>BTW</u> Contractor: <u>Boisvenu</u> Drill Type: <u>Pack Wireline</u>	Drill Hole survey Method: <u>Brunton</u> Azimuth Dip Depth 90 Collar 	Property: Apple Bay Project NTS: 92L/12E Claim: Apple Bay 6 Date Started: March 12, 2000 Date Completed: March 12, 2000 Logged by: J.T. Shearer, M.Sc., P.Geo. Sample Intervals: 2-10 20-30 60-70 30-40 70-80

Purpose:	To the West of Hole APBY-2000-16 Toward Hole APBY-99-09 East of Main Saddle Upper Wann Knobs								
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)		
0.00	0.61		NO CORE RECOVERY : Except minor white geyserite rubble due to collar and broken rock, casing to 4'						
7.61	30.78 (EOH)		 WHITE CHALKY GEYSERITE FRAGMENTAL: Mostly white sub-rounded to sub-angular large fragments up to 6 cm in diameter, however, most fragments are in the 1-2 cm range, some fragments at 2.05m are elongated at 80° to core axis. Most fragments are floating in a slightly brown fine grained to aphanatic groundmass (well developed at 9.45m). Pronounced chalky appearance throughout, some very <u>vuggy</u> advanced argillic altered zones. Very minor flow banding section 3.51-2.63m, laminations at 78° to core axis. Gouge filled fractures at 7.01m down to 8.55m at 45° to core axis or sub-parallel to core axis. Minor flow banded section (or flow banded fragment?) at 11.18-11.26m, laminations at 80° to core axis. Fractured core below 12.5m, gouge and shatter zones below 14.35-15.24m. Fault zone. Slightly darker grey within the broken area above. Gouge on fractures 17.25-21.34m, highly fractured. More pronounced vuggyness below 21.35m (Advanced Argillic) tan brown (FeO) groundmass 22.70-30.78m. 						

SECTION: <u>Upper Wann Knob</u> <u>East Side</u>				Page: <u>2 of 2</u>		DDH#: <u>APBY-2000-18</u>			
from (m)	 to (m)	Code	Description	sample No.	from/to	width (m)	Au _(g/t)		
0.61	30.78 (cont.)		Minor pervasive rusty FeO stain 24.69- 30.78m. Gougy fractures at 14° to core axis at 28.96m and sparsely toward 30.78m.						
			END of HOLE 30.78m (101 feet)						

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SECTION: <u>Upper Wann Knob</u> East Side	Diamond	Drill Log			
<u> </u>	Drill Hole survey				
Northing:	Method:	Brunton			
Easting:	Azimuth	Dip			
Elevation: <u>176.79m (580 ft</u>)		-90			
Azimuth:					
Inclination:90					
Grid:					
Length (m): <u>30.78m (101 ft)</u>					
Core size: BTW		·			
Contractor: Boisvenu					
Drill Type: Pack Wireline		_ <u>_</u>			

g

Drill Hole Method:	survey Brunton	
Azimuth	 Dip	Depth
	-90	Collar

DDH#: APBY-2000-19

Property: NTS:	Apple Bay Project
Claim:	Apple Bay 6
Date Started:	March 13, 2000
Date Completed	i: <u>March 13, 2000</u>
Logged by:	J.T. Shearer, M.Sc.,
	<u>P.Geo.</u>

Sample Intervals:

Purpose		Overlooking Hole APBY-99-09 on East Side of Saddle Upper Wann Knobs 100m East of APBY-2000-18.									
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (<u>g/t</u>)				
0.00	0.61	1	NO CORE RECOVERY: Collar elevation,								
			very weathered chalky geyserite.				· <u> </u>				
0.61	12.74	1	WHITE CHALKY GEYSERITE (VERY								
			FRAGMENTAL): Slightly unusual in that								
			the large fragments are very large (up to								
			>20 cm in length) with more sand sized								
			matrix grains (bimodal). The large								
	1		fragments are bleached chalky white but								
	}		the matrix, although containing abundant]							
			chalky kaolinite, also contains green grains								
			and a general brownish (FeO) stain.								
			Brown gouge zone 2.87-3.23m sub-parallel								
			to core axis, very vuggy (Advanced Argillic								
			Altered) 5.51-9.34m.								
	}	}	Brown Gouge zone also 5.84-6.07m.	}							
			Black, partly digested black fragment 8.22-								
			8.29m oriented at 37° to core axis.								
			Very chalky section 9.50-12.80m.		·						
12.74	14.46		LIGHT GREY CHALKY GEYSERITE: Still								
			very chalky in appearance, but including								
	{		some minor dark fragments, some								
			fragments quite chloritic, orientation of								
			fragments at 39° to core axis.								
14.46	27.38		WHITE CHALKY GEYSERITE: Highly								
			bleached, some zones of crowded								
			fragments, orientation of fragments at 74°								
	1		to core axis.			1 1					
			Very vuggy 20.65-23.47m (Intense								
			Advanced Argillic Altered).								
			Traces of pyrite in small 1-2mm lenses.								
			Fault Zone 23.96-24.44m at about 20° to								
	1		core axis, brownish gouge.								
		1	Some greenish matrix at 22.74-23.46m								
	1		within a crowded fragmental.								
	l	1	Fault gouge 25.26-25.70m irregular, sub-								
			parallel to core axis.			1					

SECTION: <u>Upper Wann Knob</u> <u>East Side</u>		_		Page: <u>2 of 2</u>			DDH#: <u>APBY-2000-19</u>			
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)			
27.38	30.78		GREENISH APHANITIC ALTERED (but not chalky) RHYOLITE: Fragmental and flow banded. Soft deformation slumps. Lamination at 29.57 is 52° to core axis.							
			END of HOLE 30.78m (101 feet)							

SECTION: _U	west Side	Diamond Drill Log	6	D ĎH#: _	APBY-2000-20
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m): Core size: Contractor: Drill Type:	<u>-90</u> <u>30.48m (100 ft)</u> BTW Boisvenu Pack Wireline	Drill Hole survey Method: <u>Bruntor</u> Azimuth Dip 90	Depth	Property: NTS: Claim: Date Started: Date Complete Logged by: Sample Interva 3-10 40-50 10-20 50-60 20-30 60-70 30-40 70-80) 80-90) 90-100)

from (m)	to (m)	Code	Description	sampl e No	from/to	width (m)	Au (g/t)
0.00	0.91		NO CORE: Minor rubble, collar elevation			·	<u> </u>
0.91	10.67		BLEACHED and ALTERED PYRITIC DACITE CRYSTAL TUFF: lamination variable from parallel to core axis to 65° to core axis at 1.05m and 1.10m. Section bleached most of pyrite has been "removed" (slightly more pyrite 6.55- 7.33m). Brown gouge filled fractures at 7.33m at 34° to core axis associated with bleaching.				
		ł	"Geyserite" white bleaching starting at 9.75m.				
10.67	12.80		TUFF MAINLY ALTERED to GEYSEITE (Transition Rock-type): Mottled appearance, rough banding at 27° to core axis. Lower contact faulted, gougy.				
12.80	30.48 (EOH)		 WHITE CHALKY GEYSERITE FRAGMENTAL (Coarser Fragmental than "Normal"): Very vuggy throughout. Numerous darker grey angular fragments common. FeO staining along fractures very pronounced 12.80-16.76m. Somewhat darker grey, very vuggy indicating intense Advanced Argillic Alteration – Acid Sulphat leaching from 16.75-18.29m. Insitu brecciation at 16.85-17.95m to rusty fracture. Angle of lower contact at 46° to core axis. Chalky and vuggy appearance pronounced down to 30.48m, matrix highly leached around fragments. Fragments in some cases appear less altered. Matrix supported fragments mostly. 				

SECTION: _U	pper Wann Knob	Diamond D	rill Log		DDH#: <u>APBY-2000-21</u>		
Northing: Easting: Elevation: Azimuth: Inclination: Grid: Length (m): Core size: Contractor: Drill Type:	West Side 182.88m (600 ft) -90 22.86m (75 ft) BTW Boisvenu Pack Wireline	Drill Hole su Method: <u>E</u> Azimuth	rvey Brunton Dip -90	Depth Collar	Logged by: Sample Interv 5-10 40-5 10-20 50-6 20-30 60-7	0 0 0	
					20-30 60-7 30-40 70-7.	-	

	L	- -		<u> </u>	•		
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au _(g/t)
0.00	1.52		NO CORE RECOVERY: collar elevation, rubble.	_			
1.52	8.95		PYRITIC WHITE CHALKY GEYSERITE FRAGMENTAL: Very abundant pyrite in places, semi-massive pyrite nodules 2.26- 2.31m, 2.39-2.41m, 2.44-2.46m, 2.48- 2.52m, 3 - 4mm diameter round nodules of pyrite 3.76-3.89m. Minor flow banding, bleached out at 5.52 at 20° to core axis. More disseminated and fracture controlled pyrite below 6.40m down to lower contact. Fault zone 7.81-8.24m some partings sub- parallel to core axis. Gradual lower contact of 20 cm.				
8.95	22.86 (EOH)		DARK GREY PYRITIC "DACITIC" COARSE PYROCLASTIC FRAGMENTAL: Angular fragments up to 5cm in length. Minor flow banding at 9.91m at 85° to core axis. Banding at 14.30 is 48° to core axis, crowded fragmental to Insitu brecciation. Fracturing and chalky coating of fractures 16.15-16.54m. Overall the core is bleached much of the pyrite has been removed except for short dark grey to black "layers", which retain FeS ₂ . Layering at 21.64m is 39° to core axis. Dark to black fine-grained layer is 74° to core axis between 22.16-22.21m.				

Collar

SECTION: Upper Wann Knob

Diamond Drill Log

Northing:	_	Drill Hole	survey	
Easting:		Method	Brunton	
Elevation:	103.63m (340 ft)	Azimuth	Dip	Depth
Azimuth:			-90	Collar
Inclination:	-90			
Grid:			·······	
Length (m):	23.16m (76 ft)			
Core size:	BTW			+
Contractor:	Boisvenu			
Drill Type:	Pack Wireline			<u> </u>
••				<u> </u>

DDH#: _APBY-2000-22

Property:	Apple Bay Project
NTS:	92L/12E
Claim:	Apple Bay 7
Date Started:	March 14, 2000
Date Complete	d: March 14, 2000
Logged by:	J.T. Shearer, M.Sc.,
V	P.Geo.

Sample Intervals: No samples

Purpose:	At 53k	m Sign or	n Pemberton Mainline -				
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00	3.05		NO CORE: collar elevation and overburden.				
3.05	12.34		TILL and WASHED PEBBLES: grey clay- rich with angular dark siliceous fragments.				
3.05	23.16 (EOH)		VERY PYRITIC GREEN "DACITIC" CRYSTAL TUFF: Minor hematite matrix at 12.51m. Crowded with white trachytic crystals at 45° to core axis, some small clusters. Fault parallel to core axis at 13.11-13.45m. Gouge at 70° to core axis at 16.15m. Grey clay seams – 15.85-16.76m and 17.99-18.52m. Large fuzzy fragments for short interval at 21.03-21.72m. Granulated 21.64-22.86m (faulted).				
			END of HOLE 23.16m (76 feet)				

SECTION: <u>Upper Wann Knob</u>

Diamond Drill Log

Northing:		Drill Hole	survey	
Easting:		Method:	Brunton	
Elevation:	102.11m (335 ft)	Azimuth	Dip	Depth
Azimuth:			-90	Collar
Inclination:	90			
Grid:	- <u></u>			
Length (m):	<u>18.59m (61 ft)</u>		1	1
Core size:	BTW			······································
Contractor:	Boisvenu			
Drill Type:	Pack Wireline			<u> </u>
				<u> </u>
			<u> </u>	

DDH#: APBY-2000-23

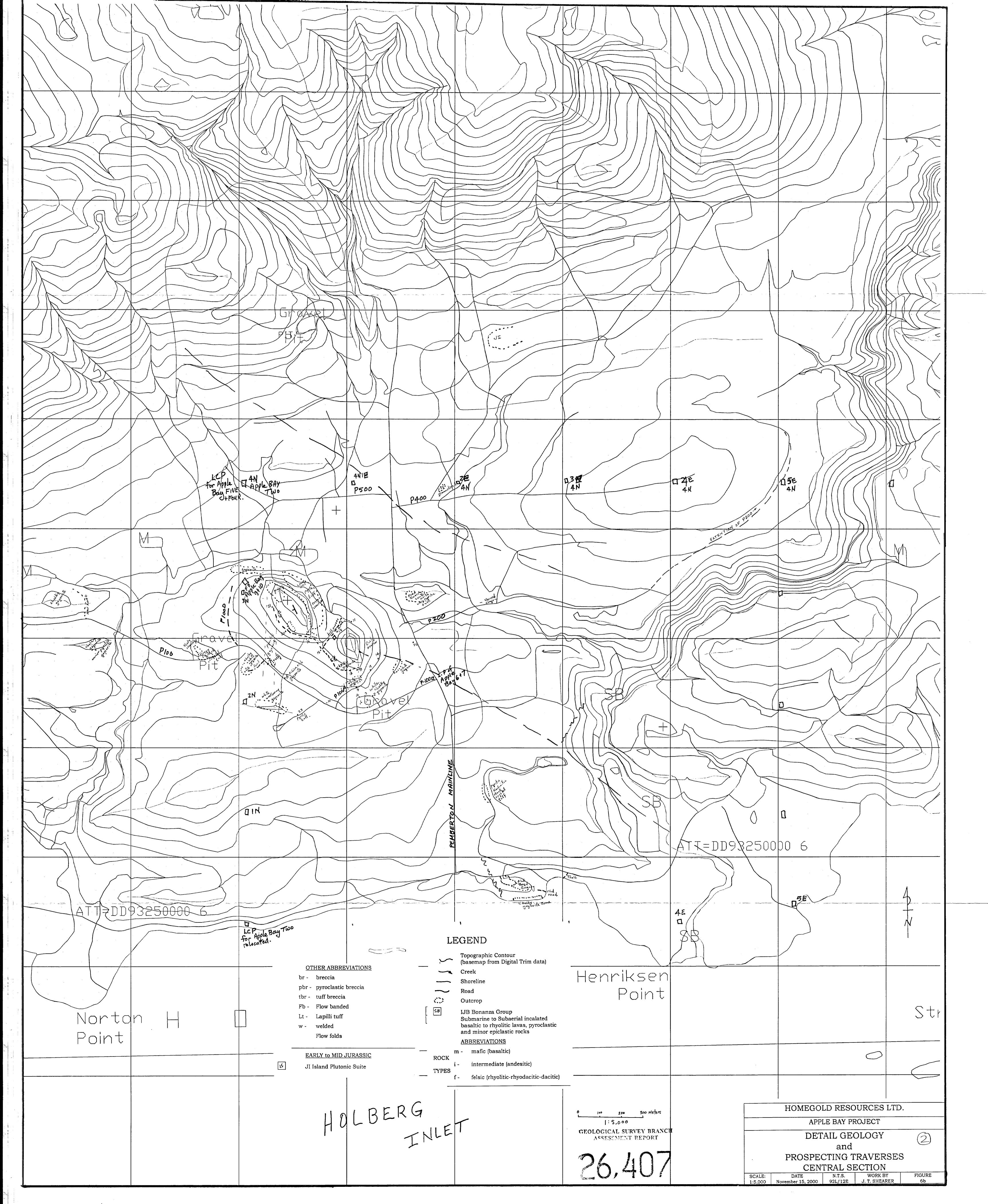
Property:	Apple Bay Project
NTS:	92L/12E
Claim:	Apple Bay 6
Date Started:	March 15, 2000
Date Completed	1: <u>March 15, 2000</u>
Logged by:	J.T. Shearer, M.Sc.,
	P.Geo.

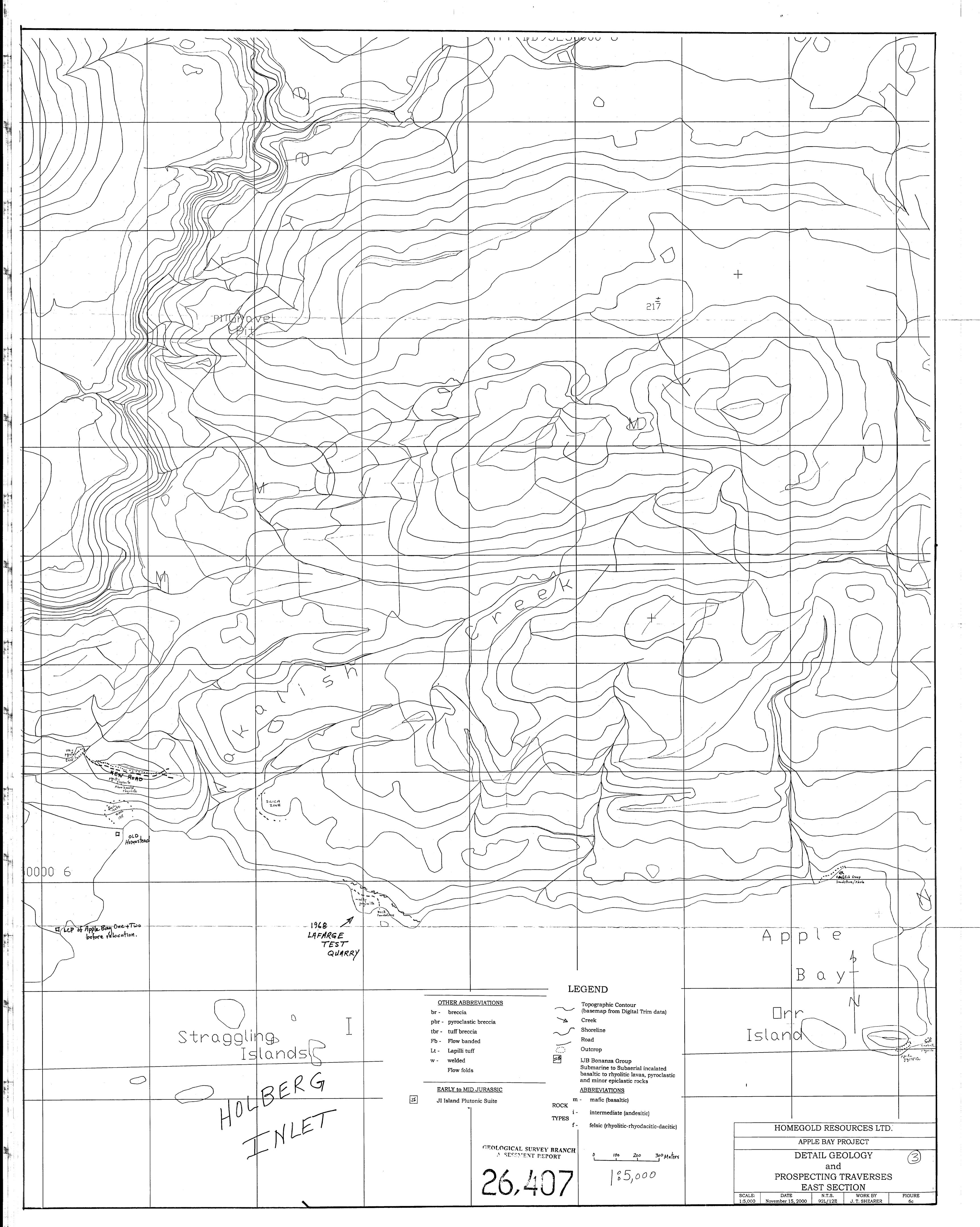
Sample Intervals:

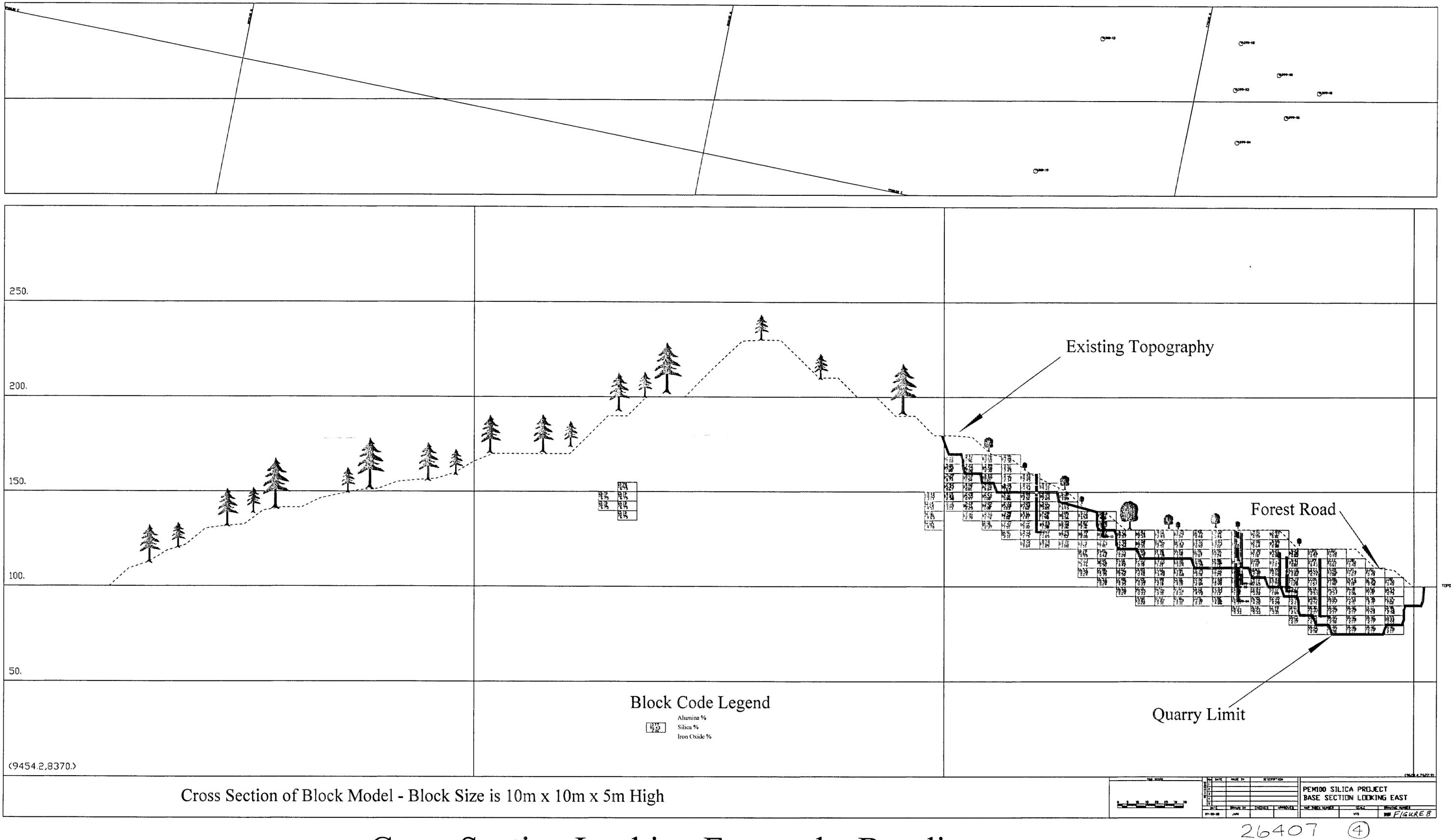
Purpose:	At 53k	m Sign o	n Pemberton Mainline -			····,····,	·
from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au (g/t)
0.00	4.57		NO CORE RECOVERY		· ·		
4.57	11.48		TILL and CLAY and RUSTY TILL				
11.48	· · · ·		LIGHT GREEN (CHLORITC) POLYMICTIC LAPILLI TUFF: Rough alignment of fragments at 15.64m is 66° to core axis and at 16.25m is 62° to core axis.				
					·		
	· · · · · · · · · · · · · · · · · · ·						
			END of HOLE 18.59m (61 feet)				

SECTION: Lower Wann Knob	Diamond Drill Log	DDH#: <u>APBY-2000-24</u>
Northing: Easting: Elevation: Azimuth: Inclination:90 Grid: Core size: Contractor:Boisvenu Drill Type:Pack Wireline	Drill Hole survey Method: <u>Brunton</u> Azimuth Dip Depth -90 Collar -90 Lollar	Property:Apple Bay ProjectNTS:92L/12EClaim:Apple Bay 7Date Started:March 15, 2000Date Completed:March 15, 2000Logged by:J.T. Shearer, M.Sc., P.Geo.Sample Intervals:5-10geyserite10-20sulfide30-40geyserite
Purpose: At South End of Branch P	100C, Set Up on Top of Chalky Geyserite	Outcrop

from (m)	to (m)	Code	Description	sample No.	from/to	width (m)	Au _(g/t)
0.00	1.52		NO CORE RECOVERY: Collar elevation, soil overburden.				
1.52	3.28		WHITE CHALKY GEYSERITE FRAGMENTAL: Gradational lower contact over 70 cm from 3.28m patchy white bleaching.				
3.28	9.04		DARK GREY WELL BANDED PYRITIC LAPILLI TUFF: banding At 6.30m is 78° to core axis.				
9.04			WHITE CHALKY GEYSERITE FRAGMENTAL:				
					·		
			END of HOLE 18.59m (61 feet)				









Cross Section Looking East at the Baseline

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