GEOLOGICAL AND MAGNETOMETER SUMMARY REPORT

ON THE

LEXINGTON PROJECT

(CITY OF PARIS, LEXINGTON AND LINCOLN CLAIMS AND VACHER ZONE LOT 1095 NOTRE DAME DES MINES)

GREENWOOD MINING DIVISION
SOUTHEAST BRITISH COLUMBIA

Latitude 49°00'54" N, Longitude 118°37'12" W
NTS: 82 E/2E

22919

FOR

BRITANNIA GOLD CORP.
17th Floor, 401 West Georgia Street
Vancouver, B.C. V6B 5A1
(owner)

BY

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PART 1 OF 3

Vancouver, B.C.
April 1, 1993

Fieldwork completed between September 15 and October 30, 1992

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SUMMARY

This report documents a program of detail geological mapping (1:500 scale), associated relogging of selected diamond drill holes and ground magnetometer surveys in the area between the Vacher Zone and the Lincoln Adit (referred to as the Lexington Project). Although this is not the first geological mapping program to cover this area, previous work is either fragmentary in nature or not presently available.

The Lexington-Lonestar Project encompasses several important properties which have undergone considerable exploration work since the late 1800s. the claims straddle the international border about 10 km southeast of Greenwood, B.C. with the Lexington-Richmond area on the Canadian side and the Lonestar Mine in Washington State.

Since the early 1950s, over 160,000 feet of diamond drilling has been completed on both sides of the border by many operators, including Falconbridge Nickel, Teck Corp. and Granby. Small production in the period 1900 to 1918 of copper-gold was realized from the Lonestar (40,900 tons, of which 6,500 tons grade 2.6% Cu, 0.032 oz./ton Au and 0.19 oz./ton Ag, 3.14%) and City of Paris Mine (2,100 tons grading 3.14% Cu, 0.40 oz./ton Au and 2.1 oz./ton Ag).

Compilation and synthesis of all previous work (drilling, mapping and geophysics) onto common scale maps was substantially completed. The 1992 program focused on the most obvious gaps in surface mapping and follow-up to magnetic anomalies caused by serpentinite and gold-bearing magnetite layers. The area is underlain by northwesterly trending bands of altered volcanics/porphyritic intrusives, chloritic schist and serpentinite/talc schist/listwanite.

Current mapping and magnetic interpretation suggests that cross-cutting east-west fault structures are much more important than previously considered and are closely associated or control the high-grade intervals in the Main Zone, Vacher Zone and probably the Lexington Adit Zone and T-50/Lincoln Zones.

From drill hole TG-81 to the Lexington Adit, geologic mapping, magnetometer surveys and the plotting of sections and level plans from post-drill programs successfully defined two areas having significant potential to host gold mineralization. Although outcrop is sparse in this area, the magnetometer survey located a significant elongate high magnetic relief anomaly that is associated with serpentinite. Past diamond drilling located mineralized zones along a sheared contact between altered volcanics and serpentinite. Drill hole TG-81 carried the highest grade and thickest zone of gold mineralization; however, holes TG-86, TG-78 and others carried thinner zones with significant gold values. Relogging of these holes in 1992 revealed that the mineralization was associated with magnetite-rich stringer zones within talc schist lenses along the sheared contact. The magnetometer survey confirmed a major east-west fault offset of the mineralization contact zone in the vicinity of holes TG-81 and TG-86.

Talc schist float carrying anomalous gold in massive magnetite was located above the Lexington Adit. A detailed magnetometer survey conducted over a mini-grid indicates that the highly magnetic source is located below the float and extends northwesterly for at least 30 m. The float sample is very similar to the gold-bearing magnetite stringer zone from hole TG-81. A serpentinite outcrop located approximately 20 m south of the float sample noted above indicates the contact zone between serpentinite and magnetite-rich talc schist is near the surface in the vicinity of the float rock. Surface trenching is warranted in the area of the float material and magnetic anomaly to locate a bedrock exposure.

Respectfully submitted,

J.T. Shearer, P.Geo.

INTRODUCTION

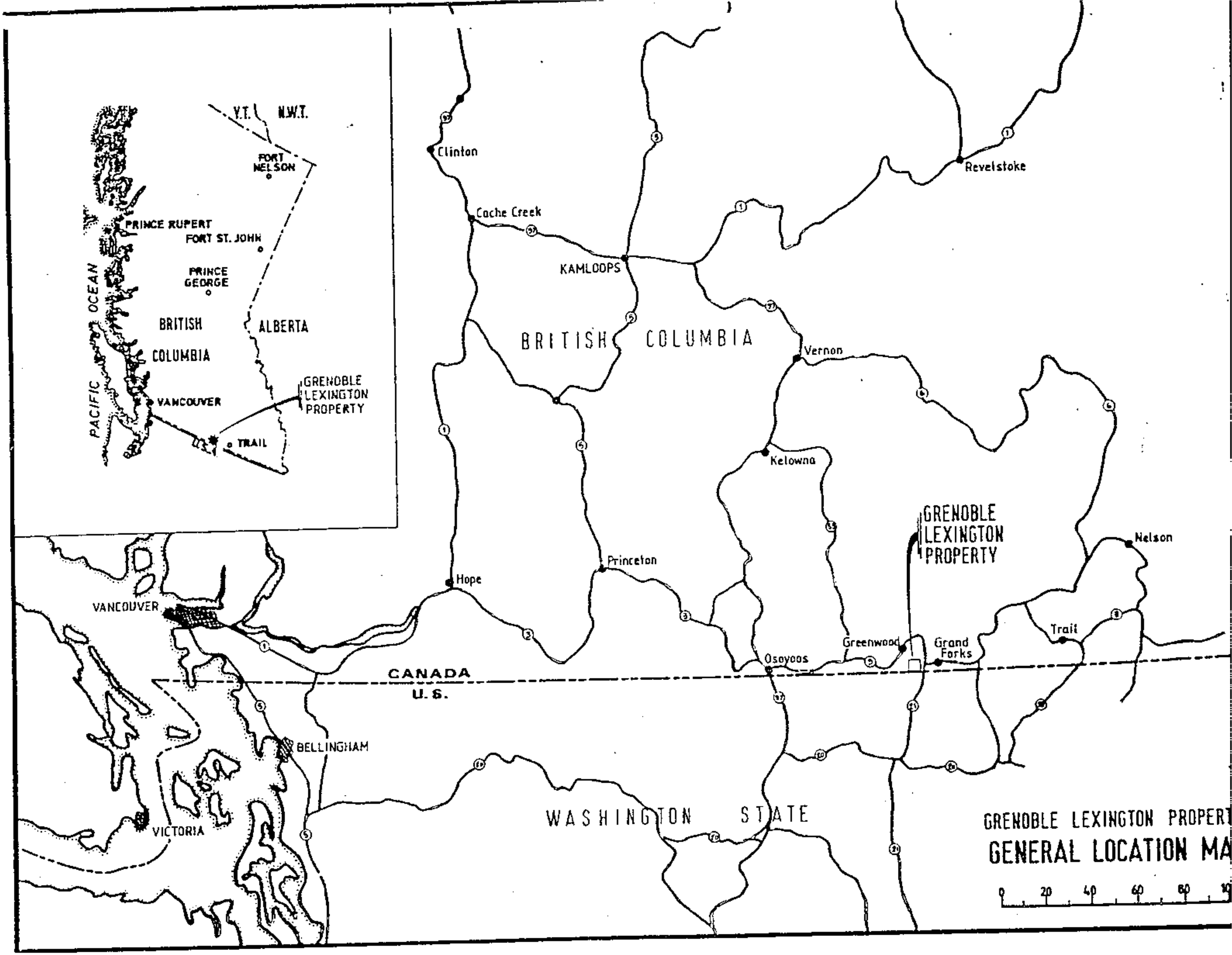
This report documents the results of a detailed geological mapping and relogging of a diamond drill core program completed on the Lexington Project owned by Britannia Gold Corp. It describes the extensive exploration history and for the first time provides an integrated approach to the detailed surface geology of the Lexington Project, reviews the general potential for defining economic gold/copper reserves and proposes an orderly exploration program for 1993.

The present evaluation of the property began in October 1991 with a management reorganization of the company's affairs, followed by a basic review of the data package (Shearer and McClaren, 1991). A small trenching, mapping and drilling program completed on the Vacher and T-50 Areas (Shearer and Butler, 1992) and the present mapping, relogging of drill core and detailed ground magnetometer program was initiated in September-October 1992.

Discovery of high-grade gold veins before 1900 led to limited production at the City of Paris and nearby properties early in this century. However, the most concentrated exploration effort began after the recognition of the overall porphyry copper-bulk tonnage environment of the belt in the 1960s.

A large amount of surface drilling and limited underground drifting has been completed on the property. However, much of this work has not yet been correlated together into a comprehensive structural synthesis. More data are required from the drillcore by relogging. Fortunately, much of the most recent core is available at the Skylark Minesite.

The property is situated close to the well established communities of Greenwood and Grand Forks, which have the full range of facilities. Roads reach to all parts of the project and hydroelectric power is nearby. Past large-scale mining in the immediate area suggests that environmental permitting will not encounter any unusual difficulties.



V.T.
N.W.T.
FORT NELSON
PRINCE RUPERT
FORT ST. JOHN
PRINCE GEORGE
PACIFIC OCEAN
BRITISH COLUMBIA
ALBERTA
VANCOUVER
TRAIL
GRENOBLE LEXINGTON PROPERTY
Clinton
Cache Creek
KAMLOOPS
Revelstoke
BRITISH COLUMBIA
Vernon
Kelowna
Princeton
Hope
Nelson
GRENOBLE LEXINGTON PROPERTY
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Greenwood
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GRENOBLE LEXINGTON PROPERT
GENERAL LOCATION MA
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LOCATION AND ACCESS

The Lexington Project is located approximately 10 km southeast of the city of Greenwood, B.C. and is close to the international border. Greenwood is about 540 km by road from Vancouver, Figure 1. The claims are situated between 1,200 and 1,300 m elevation. The geographical coordinates of the approximate center of the property are 49°00'54" N and 118°37'12" W, NTS 82E/2E.

Access to Greenwood is by the southern Trans-Canada Highway (Highway #3). A well maintained paved road starting 3.5 km south of Greenwood and then gravel road along the McCarren Creek valley leads to the City of Paris workings. Many subsidiary roads provide easy access to all other parts of the claim group. Access can also be obtained from Grand Forks via the steep dirt road along Stacy Creek.

A heavy-duty gravel road (Phoenix haul road) passes through the property within 2 km of the main drilling areas and can provide all-weather access. A natural gas pipeline and main electrical transmission line are within 3 km of the area (Figure 2).

The claims are covered with a wide-spaced Tamarack-pine forest with little underbrush. The merchantable timber on the City of Paris Crown grant was logged for Britannia Gold Corp.

Claim Status

The Lexington Project (exclusive of the Richmond/Lonestar portions) consists of seven modified grid claims, 11 crown-granted claims and six reverted crown-granted claims as listed in Table I and illustrated on Figure 3.

FIG. 2

GRENOBLE LEXINGTON PROPERTY

GENERAL TOPOGRAPHY & INFRASTRUCTURE

1 0 1 2 km

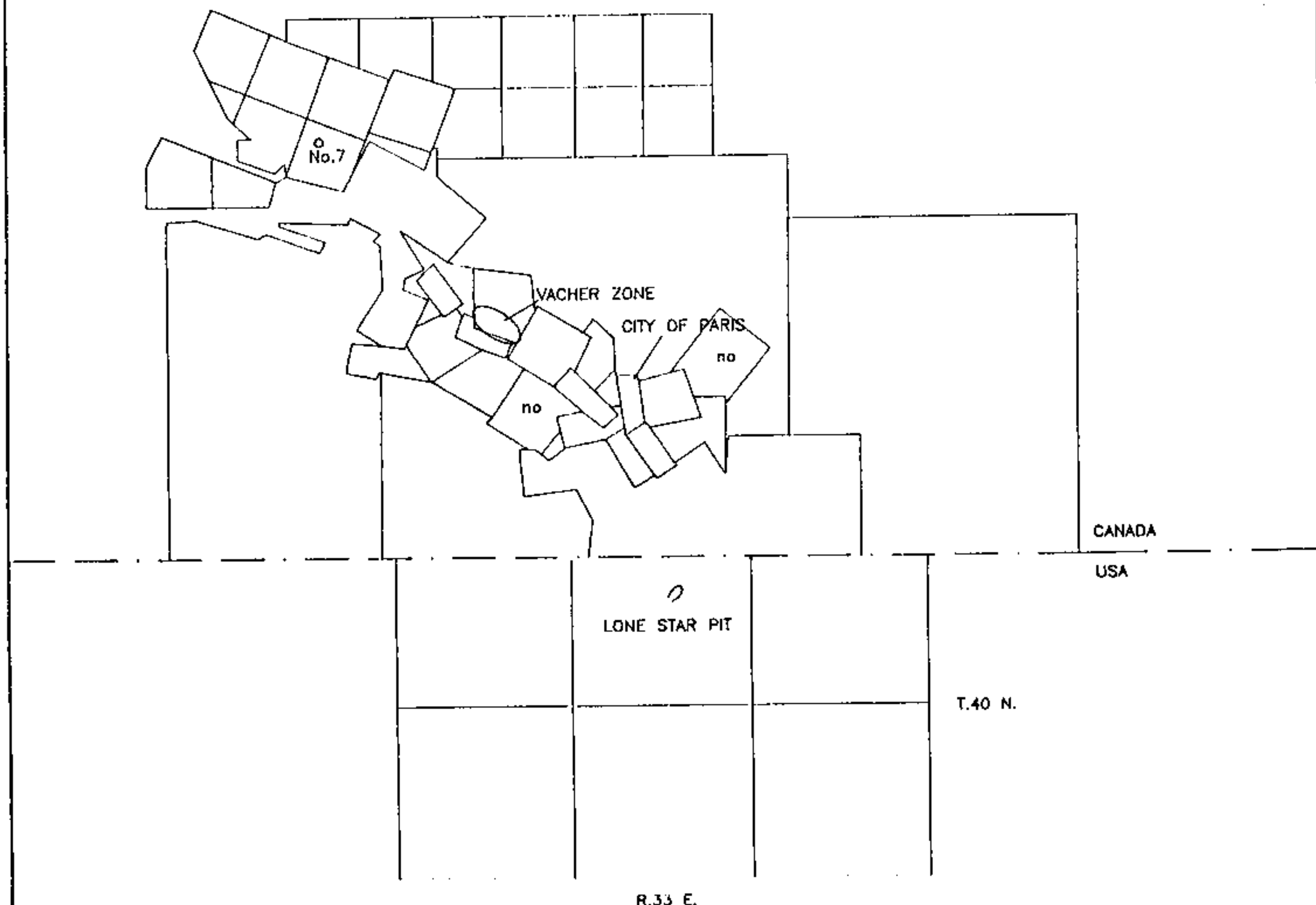
1: 50,000

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1927
Transverse Mercator Projection

Table I
List of Claims

Claim Name	Record Number (Lot No.)	Units	Size	Location Date	Current Anniversary Date*
Modified Grid Claims					
Bing	2765	20	4S5W	June 27, 1981	June 30, 1995
Bruce	2766	9	3N3E	June 28, 1981	June 30, 1995
Iron King	3821	20	5S4E	July 29, 1983	July 29, 1995
Dandy	4103	20	5N4W	July 30, 1984	July 30, 1995
Holly No. 1	214190	1	1 unit	July 28, 1978	Aug. 11, 1994
Holly No. 3	214191	1	1 unit	July 28, 1978	Aug. 11, 1994
Holly No. 12	214192	1	1 unit	July 29, 1978	Aug. 11, 1994
Reverted Crown Grants					
No. 5 (Bill Day)	L1878 (4707)	1	R.C.G.		Sep. 26, 1996
Maria Stuart	L868 (4444)	1	R.C.G.		Sep. 26, 1996
Exelsior	L2609 1351	1	R.C.G.		Oct. 16, 1996
St. Lawrence ??	L595 M47 995	1	R.C.G.		Apr. 19, 1996
New Jack of Spades	L2804 M47 996	1	R.C.G.		Apr. 19, 1996
Cuba	L1650 997	1	R.C.G.		Apr. 19, 1996
Crown Grants					
City of Paris	L622	1	C.G.	Annual taxes to be paid	
Lincoln	L621	1	C.G.		
No. 4	L791	1	C.G.		
City of Vancouver Fr	L2013	1	C.G.		
Lexington	L645	1	C.G.		
City of Denver	L1161	1	C.G.		
Notre Dame des Mines Fr	L1095	1	C.G.		
Oro	L614	1	C.G.		
Oro Fr	L1096	1	C.G.		
Puyallup	L1152	1	C.G.		
Golden Cache Fr	L955	1	C.G.		
Goosmus Fr (still owned by Teck)	214538	1	2767	June 29, 1981	June 30, 1994
LSE #1	1286			July 22, 1978	July 31, 1996
LSE #2	1287			July 22, 1978	July 31, 1996
LSE #3	1288			July 22, 1978	July 31, 1996
LSE #4	1289			July 22, 1978	July 31, 1996
(R.H. Seraphim purchase by Britannia)					

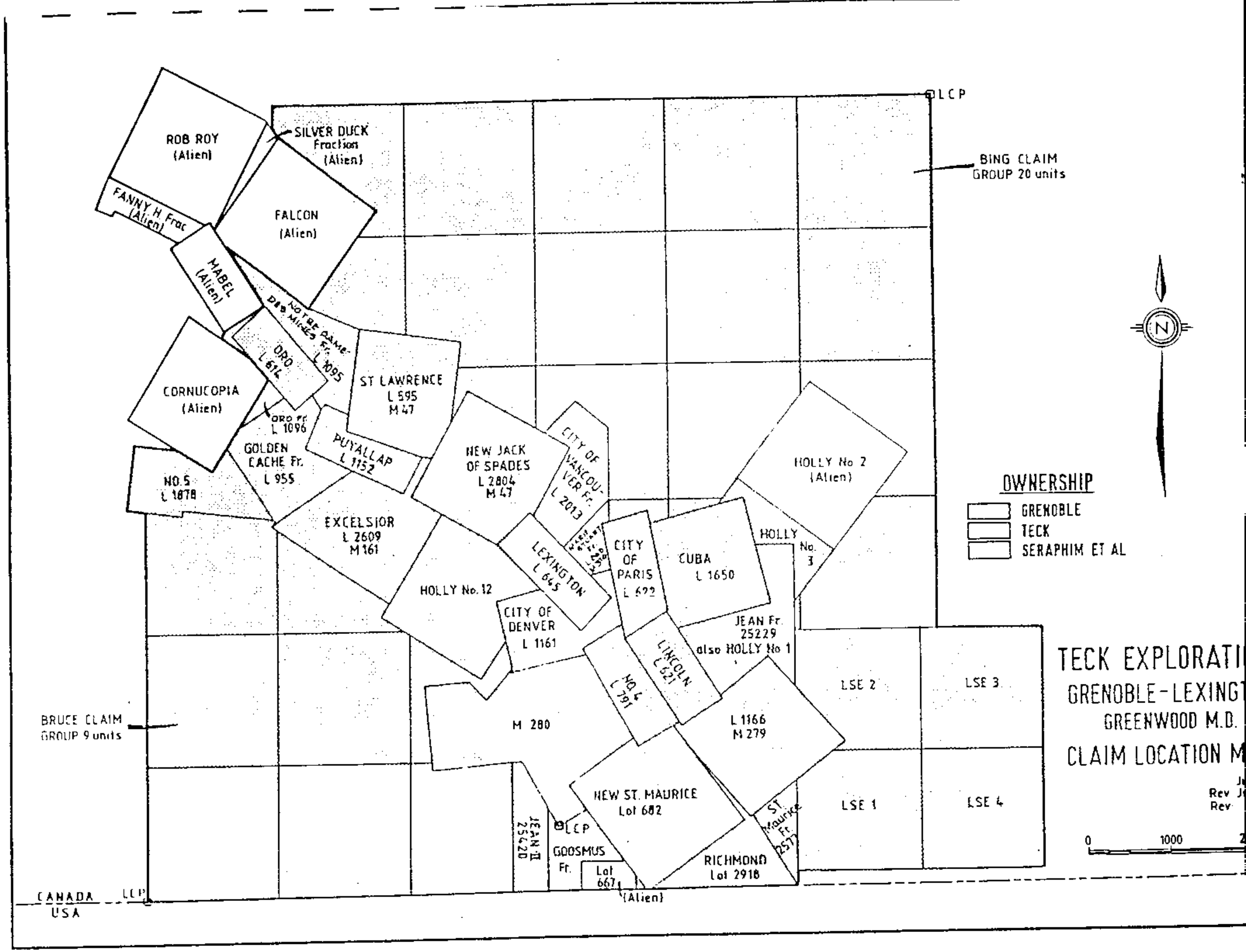
* with assessment work documented in this report



BRITANNIA GOLD CORPORATION

LEXINGTON PROJECT

CLAIM MAP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BRUCE CLAIM
GROUP 9 units
CANADA
USA
ROB ROY (Alien)
SILVER DUCK Fraction (Alien)
FANNY H. Frac (Alien)
FALCON (Alien)
MABEL (Alien)
NOTRE DAME DES MINES Fr. L 1095
ORO L 614
CORNUCOPIA (Alien)
ST LAWRENCE L 595 M 47
ORO Fr L 1096
GOLDEN CACHE Fr. L 955
PUYALLAP L 1152
NO.5 L 1878
NEW JACK OF SPADES L 2804 M 47
CITY OF VANCOUVER Fr. L 2013
EXCELSIOR L 2609 M 161
LEXINGTON L 645
CITY OF PARIS L 622
CUBA L 1650
HOLLY No 2 (Alien)
HOLLY No. 3
HOLLY No. 12
CITY OF DENVER L 1161
JEAN Fr. 25229 also HOLLY No 1
LINCOLN L 621
NO.4 L 791
L 1166 M 279
M 280
NEW ST. MAURICE Lot 682
ST Maurice Fr. 2577
RICHMOND Lot 2918
JEAN II 25420
GOOSMUS Fr.
Lot 667 (Alien)
LSE 1
LSE 2
LSE 3
LSE 4
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Field Procedures

Grid lines that had been established on the property by Canadian Pawnee in 1986 were refurbished to facilitate future soil sampling and geological mapping. The grid lines trend along azimuth 010° from an east-west trending baseline designated 0+00N. The distance between stations was hip-chained to ensure an accurate measuring for the relocation of station pickets. A 25 m interval between stations was used for the magnetometer survey. The lines are 50 m apart with baseline trending along azimuth 280°. Two separate detail grids were established in the Vacher and T-50 Areas for geological control.

The Vacher grid was established using compass and hipchain with a 400 m long baseline trending at 320° with 40 m long cross lines at 20 m spacings. The lines are flagged at 20 m intervals to allow detail work. This orientation was selected to be parallel to the ridge and roughly perpendicular to the mineralized zone.

The T-50 Area grid has a 200 m long baseline at a bearing of 320°. The cross lines were spaced 20 m apart and extend 60 m to the southwest and 200 m to the northeast.

Geological mapping in the area between the T-50 grid and the Lexington Adit was conducted along the 1986 Canadian Pawnee grid. This grid was also used to map the area between the Lexington Adit and the Vacher Zone, covering the Golden Cache Zone. A complete suite of hand specimen samples was collected for assay and petrology.

In conjunction with the mapping, a detailed magnetometer survey was conducted over selected parts of the property. The magnetometer survey was conducted over the T-50 grid, Vacher grid, between the TG-81 drill-hole area and the Lexington Adit along the 1986 grid lines and in the area between the Golden Cache showing and the Vacher Zone. Readings were taken at 10 m intervals along all grid lines.

A Scintrex Model MP-3 Proton Magnetometer was used to conduct the ground magnetic survey. The field unit is able to store readings in a memory system utilizing IGS-2 Integrated Geophysical System software. A recording base station was set up at the crew residence in Greenwood. The base station unit was the same as the field unit but was coupled to an automatic read system which recorded readings every five minutes. At the end of the field day, the raw data readings were downloaded into a Toshiba laptop computer using the IGS dump program. The readings recorded in the base station were also downloaded into the computer. Printouts of the field readings and base station readings were produced. This ensured a hard copy of the data before the field unit and base station unit were connected to each other so that the diurnal corrections could be made. This ensured backup in the event of problems with the transfer of data between the two units.

A data transfer sequence is entered and the field data are automatically corrected for diurnal variations recorded in the base station throughout the day. The corrected information is then downloaded into the laptop computer and printed out. The data are then ready for plotting.

A small grid was established over a zone of magnetite-rich talc above the Lexington Adit. Lines were spaced at 5 m and stations were spaced at 3 m intervals along the lines. This grid effectively outlined the outcropping zone and extended to a covered area which will need follow-up testing by trenching, mapping and sampling.

HISTORY

Early exploration on the property was focused on the City of Paris crown-granted claim, but minor underground workings were also driven on the Lexington and Lincoln claims. The first significant work in the City of Paris area was in 1892 when two adjacent shafts were sunk and underground drifting was begun on a pyrite-chalcopyrite-rich quartz vein. At the same time another shaft was sunk to a shallow depth and drifting began on a tetrahedrite-bearing quartz vein located about 600 feet to the southeast on the Lincoln claim. By 1899 the City of Paris Gold Mining Company had gained control of the property and commenced major underground development. A cross-cut drift 805 feet long was driven northeast, intersecting the southeasterly trending vein system at a depth of approximately 300 feet below the surface. A drift was run about 600 feet to the northwest from the cross-cut tunnel connecting with the City of Paris shaft; a second drift was extended 300 feet to the southeast toward the area under the Lincoln shaft. Other work included construction of an adit and 250 feet of drifting on a pyrite-chalcopyrite vein on the Lexington claim near Goosmus Creek, 2,000 feet northwest of the City of Paris portal.

After a year of production, in 1900, the City of Paris mine was dormant until 1922 when prospecting began again, and in 1938 minor production was realized. Total production from the City of Paris amounted to 2,100 tons grading 3.14% Cu, 0.40 oz. Au/ton and 2.1 oz. Ag/ton.

The No. 7 Mine between 1901 and 1945 produced a total of 13,748 tonnes of ore yielding 92 kilograms of gold, 3,110 kilograms of silver, 97 tonnes of lead and 6.2 tonnes of zinc.

No further exploration or development was done on the Lexington Project until 1962 when King Midas Mines Ltd. consolidated many of the old Crown-granted claims and carried out a reconnaissance geochemical survey. A short, northwesterly trending adit was driven at this time near the base of the Lincoln shaft, yielding a few tons of argentiferous ore.

Table II

Historical Summary, Lexington Project

Prior to 1900	Work done on City of Paris, Mabel + No. 7 Claims
1897	Production at No. 7 Mine, also 1901 + 1902
1898 (A)	City of Paris underground. 1,800 feet of drifting. Production in 1900.
(B)	Lexington 250 feet of drifting.
(C)	Mabel - trenching, shaft sunk.
1922	Prospecting.
1938	Small production City of Paris. Bring total to 2,124 tons @ 0.4 Au, 2.11 Ag, 3.13% Cu.
1937	100-foot shaft on Mabel.
1962	King Midas Mines Ltd., Lincoln Claim, City of Paris. 400 feet of underground drifting + geochemistry (claim consolidation, ground acquisition)
1967-1968	Lexington Mines Ltd. acquires property, mapping, geochemistry, Induced Polarization, 10,000 feet of bulldozer trenching.
April 1969- July 1970	18,000 feet of diamond drilling logs by Franchi, 33 holes. Discovery of Main Zone Cu-Au.
1971	Induced Polarization survey, NW part of property.
1971-72	Granby: percussion drilling. 6,620 feet in 37 holes. Induced Polarization anomalies. Only 3 holes in old area.
1974	Aalenian Resources. 13 percussion holes - 3,195, 4 NQ holes - 1,093 feet. Have logs.
1975	No work (?)
1979	Grenoble adit driven to test Main Zone, 3,466 feet underground drilling.
1981-1983	Teck Corp. diamond drilling, 14,880 feet. Have logs and assays. High Au.
1984	Canadian Pawnee acquired property from Grenoble
1986	Soil sampling, VLF, ground magnetometer
1987	Canadian Pawnee Oil Corp. files $117,225 assessment work. 1,039.37 in 9 holes. NQ.
1988	Canadian Pawnee Oil Corp. 2,780.21 m in 17 holes. Core stored at Skylark Mine. Have logs. 3 areas NQ.
1988-1992	No work.
1992	Geological mapping, bulldozer trenching, diamond-drilling in six holes totalling 746 feet.

On strike across the Canada-U.S. border (now March 1993 part of the Lexington Project) and occurring within the same geological environment, the Lone Star mine produced sporadically between 1890 and 1920, yielding about 40,900 tons, of which 6,500 tons graded 2.6% Cu, 0.032 oz. Au/ton and 0.19 oz. Ag/ton. In the early 1970s, this ground was extensively explored by a number of mining companies, finally achieving some 400,000 tons of production in 1977-78. This was trucked and treated at the Phoenix mill of Granby Mining Co. Ltd. During this period, Silver Standard Mines Ltd. and Granby explored the ground immediately south of the present Lexington project with some 34 percussion holes (R-1 through R-34) totalling about 2,546 m (8,353 feet) in the area southeast of the main zone but north of the U.S.-Canada border (Richmond property). This ground was included in the ground under option to Teck (Page, 1982). The ground south of the border was previously held by Azure Resources Ltd. but now held wholly by Britannia Gold Corp.

In 1967, Lexington Mines Ltd. acquired the claims covering most of the current property and gradually increased their holdings to 132 claims and mineral leases in 1970. Lexington's initial work involved geochem and IP surveys and approximately 10,000 feet of bulldozer trenching. Between April 1969 and July 1970, Lexington put down 33 BQ and NQ diamond drill holes (DDH-1 through DDH-33), totalling 5,564 m (18,225 feet) during which the copper-gold "Main Zone" was discovered.

In 1972, Granby Mining Co. Ltd. optioned the Lexington Mines property and drilled 37 percussion holes (P-1 through P-37) for a total of 2,018 m (6,620 feet). This drilling was conducted to test IP anomalies northwest of the main zone and attempted to outline open pit reserves of copper mineralization between the Lexington adit and the Main Zone.

Early in 1974, much of the Lexington Mines property was optioned to Aalenian Resources Ltd. who drilled four additional NQ core holes (DDH-34 through DDH-37) totalling 336 m (1,103 feet) and 13 percussion holes (P-74-1 through P-74-13) for a total of 974 m (3,195 feet). In 1975, the option was dropped and no work was conducted on the ground until Grenoble Energy Ltd. acquired the key claims in 1979.

Early in 1980, Grenoble contracted a seismic refraction study of the area where the main zone approaches the sub-crop surface and, starting on May 20, 1986, drove a 115 m horizontal test adit. A raise was cut into the mineralized area and 20 holes were drilled from the new workings for a total of 1,056 m (3,466 feet). The 45^{o} raise was driven for 16.7 m to intersect P-12 (55 feet of 0.9% Cu). The raise intersected 13.6 m of pods and disseminations of chalcopyrite mineralization.

Teck Corporation optioned the Grenoble Energy holdings in March 1981 and the ground to the southeast from Seraphim and others in June 1981. Teck concentrated on exploration drilling within and along the Main Zone. Twenty-three (23 NQ holes were completed -- T-38 through T-60) for a total of 4,535 m (14,880 feet) by early 1982). As a final Teck program, holes T-61 through T(G) 84 were drilled in late 1982 to May 1983 totalling 3,228.7 m east and southeast of the Main Zone.

The property was acquired by Canadian Pawnee Oil Corporation in July 1984 and other claims to the east and west were added in August 1986. Pawnee conducted linecutting geochemistry, geophysics (Pulse EM, Magnetometer, VLF and SP) and diamond-drilling during the summer of 1986. Drilling of seven NQ diamond-drill holes, L86-1 to L86-7, totalling 2,104 feet (641.3 m) tested targets outside the Main Zone in 1986. No records are presently available as to the results of the 1986 drilling.

In the period between January 16, 1987 to February 24, 1987, a diamond-drill program (Day, 1987) consisting of nine NQ holes totalling 3,410 feet (1,039 m) was completed by Canadian Pawnee Oil Corporation. The purpose of the program was to in-fill drill the Main Zone to upgrade previous reserve calculations.

In 1988, 10 holes, 88-1+2, 11, 12, 13, 14, 15, 16 and 17, were drilled in the Main Zone; four holes, 88-04, 05, 06 and 07, were drilled in the Vacher Zone; and three holes, 88-08, 09 and 10, were drilled in the Golden Cache Zone (Ellerington, 1988). Drilling in 1988 totalled 2,780.21 metres.

In 1992, Britannia Gold Corp. (formerly Canadian Pawnee) completed a geological mapping, bulldozer trenching, grid rehabilitation and limited diamond-drilling between January and April. Subsequently, a detailed geological mapping and follow-up ground magnetometer survey was completed in September-October 1993. This program is the subject of this report.

Table III

Drilling Summary
Lexington Project (including Richmond claims)

Date	Diamond Drill Hole	Percussion Drill Hole	Meters	(feet)	Drilled by
1967		R-1-R-5	457 m	(1,500')	Silver Standard
1968	68-1, 68-2		289 m	(947')	Silver Standard
1970		R-6-R-22	1,226 m	(4,022')	Silver Standard
1969-1970	DDH-1-DDH-33		5,564 m	(18,225')	Lexington
1972		P-1-P-37	2,018 m	(6,620')	Granby
1974	DDH-34-DDH-37		336 m	(1,103')	Aalenian
1974		P-74-1-P74-13	974 m	(3,195')	Aalenian
1976		R-23-R-34	863 m	(2,830')	Granby
1980	UG-1-UG-20		1,056 m	(3,466')	Grenoble
1981	T-38-T-60		4,535 m	(14,880')	Teck
1982	T61-TG-84		3,228.7 m	(10,593')	Teck
1986	L86-1-L86-7	? (no records available)	641 m	(2,104')	Canadian Pawnee
1987	CP87-1-CP87-9		1,039 m	(3,410')	Canadian Pawnee
1988	CP88-1-88-17	Ten holes	3,780.2 m	(9,121')	Canadian Pawnee
1992	92B1 to 92B6		227.53 m	(746.5')	Britannia Gold Corp.
(Lexington only)			23,262.43 m	(76,325.5')	
	Diamond Drilling		19,696.43 m	(64,625.5')	
	Percussion Drilling		5,538.0 m	(18,169')	
	TOTAL DRILLING		25,234.43 m	(82,794.5')	

REGIONAL GEOLOGY

The Lexington property lies at the northwest shear termination of the north-easterly trending Republic Graben, Figure 4.

The northwesterly trending Goosmus Shear Zone is bounded by serpentinite lenses that dip 20 degrees northeasterly and is infilled by quartz-eye porphyry; andesitic and dacitic rocks and Tertiary dioritic intrusions.

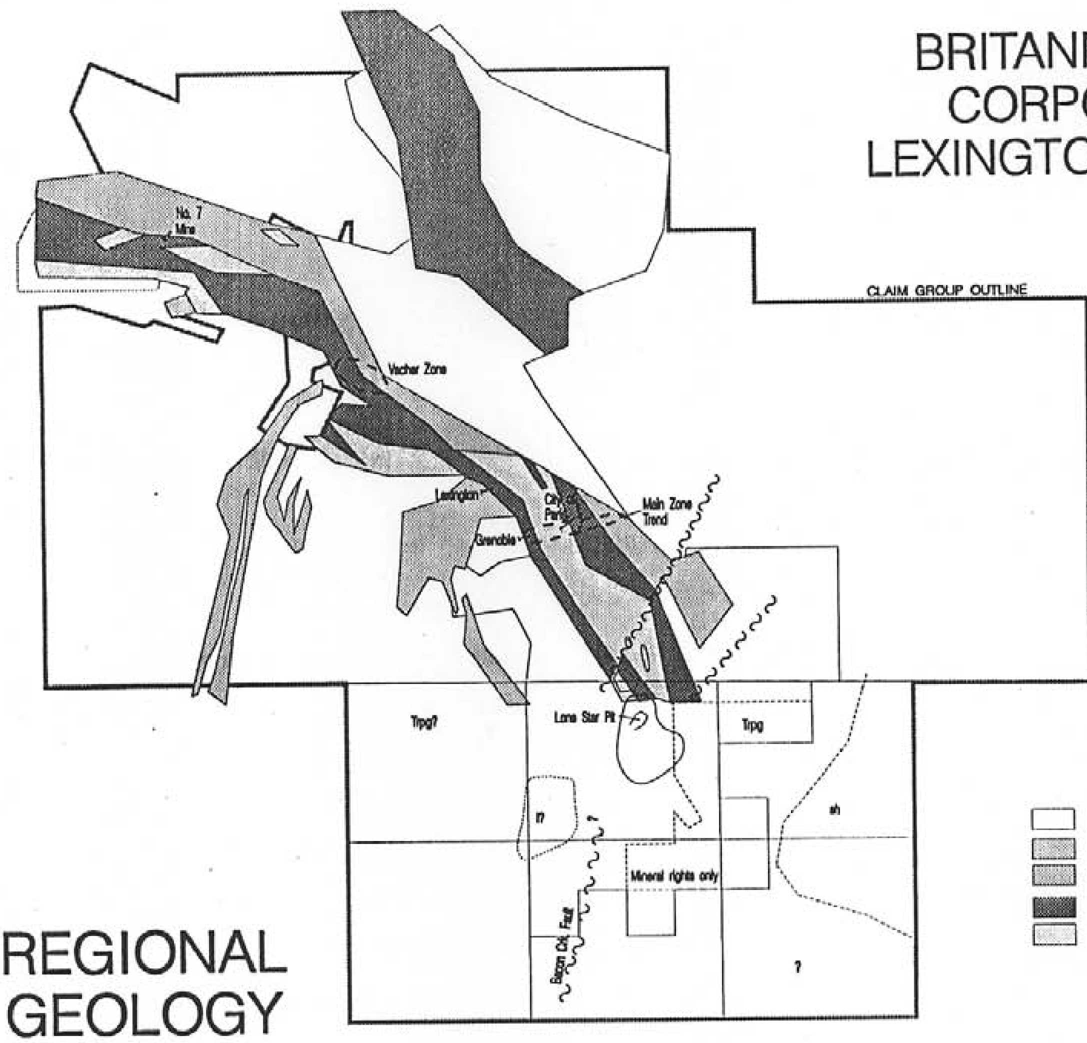
The serpentinized ultramafic rocks are widely distributed throughout the property area and have been emplaced as sills and irregular dike-like masses along unconformity surfaces and in low-angle fault zones. The sheared marginal phases of the ultramafic bodies are commonly altered to talc and talc carbonate schists. The carbonate dominated facies are commonly referred to as "listwanite". The age of the original ultramatics (Church, 1986, and Fyles, 1990) has always been uncertain (Little, 1983, p.22) and the latest regional work (Fyles, 1990) does not provide an unequivocal conclusion. Most, if not all, of the serpentinites are tectonically emplaced, and contact relationships seen in the field do not establish the age. The close association between serpentinite, the Old Dioirite and the greenstones of the Knob Hill Group, and the pillow lava-chert association within that group suggest that these rocks are parts of a disrupted ophiolite suite, a possibility recognized by Little (1983, p.4). The serpentinites are considered to be Carboniferous or Permian, and to have been emplaced tectonically along structures as they developed at various times during the Mesozoic and Tertiary. Age dates on galena collected from the Lexington shaft and No. 7 Mine and analyzed by Dr. C. Godwin (U.B.C. Geochronology Lab 1992) show a Tertiary age which groups with similar ages known for the Beaverdell silver veins.

The complexities of the regional geology have been recently addressed by Cheney (in press), who considers that major faults, such as the No. 7 Fault, have been folded. This interpretation is not supported by Fyles (1990), who has mapped the regional fault pattern as a bundle of stacked thrusts.

Mineralized intrusive quartz porphyry (dacite) is related to Early Jurassic to Early Eocene plutonism and volcanism that accompanied formation of volcano-tectonic depressions which included the Republic Graben. The age of the Lexington intrusive porphyry has been determined from samples taken in the City of Paris mine area submitted by Church (1986) which gave a uranium-lead zircon age interpreted as an "Early Jurassic zircon, probably Sinemurian, with inherited lead of early Proterozoic or Archean age" (The University of British Columbia Geochronology Laboratory report) (Fyles, 1990). Compositionally, the later intrusive and sub-volcanic dykes and sills found within the Lexington area are similar to the Tertiary Scatter Creek rhyodacites (Church, 1970). The Scatter Creek sub-volcanic intrusive assemblage is found throughout the Goosmus Shear Zone and the Republic Graben, characteristically occurring as dykes and sill-like bodies. Epigenetic precious metal deposits are generally spatially related to these sub-volcanic intrusives along major structures. The Eocene Scatter Creek Rhyodacite is considered to be an intrusive equivalent of the Sanpoil Volcanics (R.C. Pearson, Notes to Accompany USGS Map GQ-636). The rocks of O'Brien Creek Formation (Eocene (?)) and the Sanpoil Volcanics found in British Columbia were originally described by Daly (1912; pp.394-400) and named the Kettle River and Midway Volcanic Group, respectively.

Two principal structural elements are present in the Lexington area. The north-west trending Goosmus Shear Zone is of pre-Tertiary age and consists of a stacked thrust sheets with ultramafic margins (Fyles, O.F. 1990-25). Northerly normal faulting (average attitudes range from N15^{o}E to N35^{o}E) of Tertiary age appear to be steep with recognized displacements of up to 900 feet (Pearson, 1967). Mineralization in the Lexington area has previously been interpreted to occur at the intersection of the two principal structural fault systems and better-grade copper (Seraphim, 1976) has been suggested to occur near areas of greatest fracture density and have a south 45^{o}E plunge.

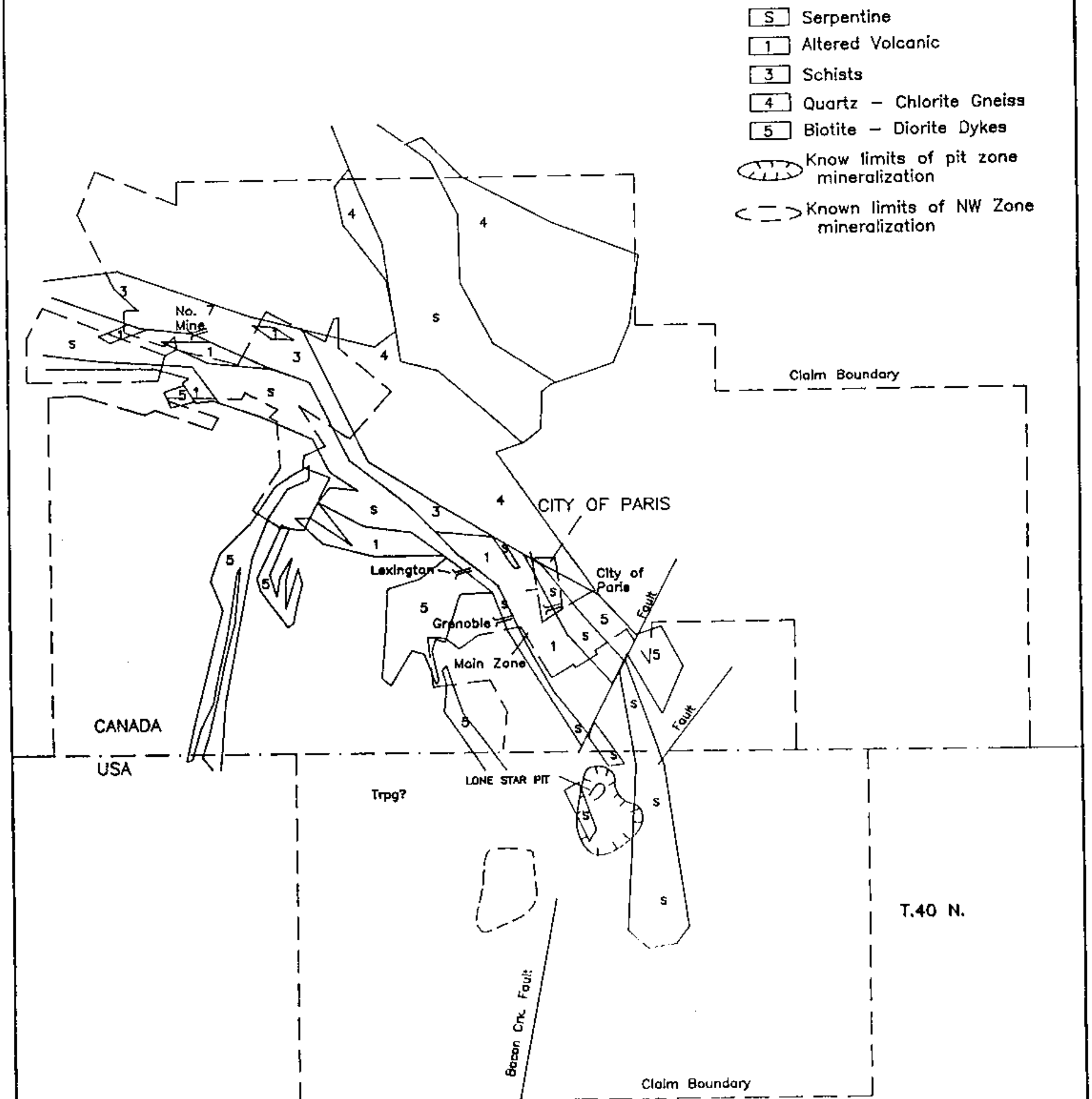
BRITANNIA GOLD CORPORATION
LEXINGTON PROJECT



LEGEND

- Quartz-chlorite, gneiss-schist
- Biotite diorite dykes
- Schists
- Serpentinite, Listwanite, Talc schist
- Very altered volcanic tuffs and flows

REGIONAL GEOLOGY



BRITANNIA GOLD CORPORATION
LEXINGTON PROJECT
REGIONAL GEOLOGY

Geo-Comp Systems

PROPERTY GEOLOGY AND DRILLING RESULTS

(a) Introduction

Numerous short reports document the diamond-drilling programs; however, although specific detailed mapping programs have been carried out (notably Granby, 1975), there is no previous comprehensive report available on surface geology.

Within the property area, bedded strata includes a schist-gneiss sequence and a younger sedimentary-volcanic succession. The older succession consists of thinly-layered quartz-chlorite gneiss, massive lenses of pure metaquartzite and graphitic quartzite, minor muscovite schist and carbonated schists and a major unit of amphibolite. The younger succession appears to be of Late Paleozoic-Early Mesozoic age and unconformably overlies the basement complex. Three major units are well exposed southwest of the property, including a lower zone of mafic lavas, an intermediate zone of carbonaceous phyllite and an upper zone of quartz wacke and conglomerate. These younger rocks are only locally deformed, their overall distribution being sub-horizontal.

Early Mesozoic intrusive rocks (which has included volcanic rocks in past work) consist of an assemblage of apparently related small stocks and hypabyssal felsic sills and dikes, including quartz-feldspar porphyry, quartz porphyry, felsite and schistose felsite. The largest of these units is a body of quartz-feldspar porphyry located west of the property, near the junction of McCarren and Gidon Creeks. An elongated, composite, quartz porphyry felsite intrusion (partly the property dacite) (in the present report, the rocks are separated into (1) intrusive Lexington porphyry and (2) extrusive altered volcanics) follows the general course of Goosmus Creek and appears to be an easterly extension of the larger quartz-feldspar porphyry stock.

The "dacite" (intrusive assemblage) exhibits a number of facies, including porphyritic, non-porphyritic phases, an equigranular (1-2 mm) phase and a fine-grained to aphanitic phase. The typical porphyry phase contains subhedral quartz phenocrysts and composite quartz eyes (2-7 mm diameter) set in a matrix of euhedral sodic plagioclase, chloritized biotite and interstitial fine-grained quartz and feldspar. Sericite and lesser chloritic alteration is dispersed throughout the intrusion.

Much of the "dacite" (predominantly volcanic in origin) on the property is moderately foliated and contains 0.5-1.0% disseminated pyrite. In the areas of the City of Paris, Grenoble and Lexington adits, the "dacite" contains 2-5% disseminated pyrite and frequently shows malachite as fracture coatings and fine disseminations.

The last Teck report (Betmanis, 1983), abruptly, introduced a number of geological concepts which had major implications for future work. Betmanis (1983) states:

> "From recent petrographic studies and examination of drill core, the dacite has been identified as a series of andesitic to dacitic fragmental and welded tuffs. Although variations between tuff beds have been identified, no specific marker bed has been recognized."

As work progresses by Britannia Gold Corp., more petrographic work will be required. **Clearly, as part of the mineralized "dacite" is volcanic and part intrusive, the relationship between these two very different rocks will have a major bearing on the future exploration strategy on the project.**

Other intrusives on the property include serpentinite masses, early Tertiary diorite and alkali diorite dikes and stocks and pre-diorite andesite dikes. The ultramafic bodies consist of two elongate masses and several smaller lenses, all consisting primarily of an antigorite-rich serpentinite (altered periodotite). Locally, the ultramafic body consists of foliated talc, talc and brucite (?) $\pm$ carbonate, or carbonate quartz $\pm$ mariposite rock (listwanite). These altered varieties appear to be related to hydrothermal and/or tectonic activity along faults. Foliated talcous rock is prominent along the "dacite" footwall contact and occurs locally as narrow dikes (usually less than one metre in thickness) within the main part of the "dacite" body.

The late intrusive andesite and diorite bodies are unmineralized and sharply cross-cut the "dacite". The andesite masses were subjected to regional deformation along with the dacite as they are moderately foliated and chloritized. The diorite dikes are massive, black, porphyritic rocks which followed both pre-existing weaknesses and later tensional structures within the dacite and older rock units.

(b) General descriptions of the main rock types (map units) are as follows:

Diorite (unfoliated) (Scatter Creek Suite)

Fine to medium-grained dark grey massive unit. Equigranular texture with feldspar and mafic crystals averaging 2 mm across. The occasional feldspar phenocryst reaches 4 mm in diameter, giving a very subtle porphyritic appearance to the rock. Thin biotite books up to 3 mm diameter also occur sporadically throughout the rock. This unit is, for the most part, fresh and unaltered. In areas where alteration occurs, the rock takes on a green tinge with chlorite alteration of the mafics and sausseritization.

Listwanite

Creamy white to a bright light green-coloured aphanitic unit. Speckled appearance common due to green fuchite grains. Forms massives bluffs and commonly exhibits weak foliation, defined by chlorite. Talc-rich sections occur within listwanite and are more foliated and generally carry less fuchite. Limonite commonly occurs along fractures. Listwanite outcrops often display a prominent network of quartz-feldspar-carbonate veining.

Talc Schist

Tan to dark grey banded unit. Lighter-coloured bands generally are very talc-rich. Pure talc commonly occurs as small lense-like features in a unit that displays strong schistosity. Relict serpentinite with minor magnetite is often observed within talc schist outcrops. Occasionally, lense-shaped pods of massive magnetite are observed. Ankerite commonly occurs as blebs along schistosity planes. Chlorite alteration can impart a dark greenish-grey colour to sections of talc schist where chlorite occurs along foliation planes.

Serpentinite

Typical serpentinite is a dark green massive to strongly schistose rock which forms large outcrops. Massive serpentinite is aphanitic to very fine-grained and exhibits little internal structure. Thin calcsilicate coatings occur on fracture planes. In areas of strong shearing, the serpentinite has developed prominent schistosity. The schistosity planes often exhibit shiny polished slickensides and calcsilicate alteration often occurs along the planes of schistosity. Intense talc development commonly occurs over widths of several meters along shear zones within serpentinite bodies. Magnetite lenses may also occur with the schistose layers. The talc forms creamy-coloured interlayers within the schistose texture. The serpentinite bodies have a strong ground magnetometer signature.

Andesite

Medium to dark grey-green, very fine-grained to weakly porphyritic with widely spaced white feldspar phenocrysts up to 3 mm in length. Weak, finely disseminated pyrite occurs throughout but generally less than 0.5%. Strong chlorite alteration occurs along fractures. Fractures often show rough polished slickensides, commonly laced with hairline quartz-carbonate veinlets.

Altered Volcanics (in the past lumped together as "dacite")

This assemblage of rocks describes volcanic rocks that have previously been classified as "dacites" and generally confused with the Lexington intrusive porphyry. The original volcanic textures have commonly been largely masked by a variety of alteration events. Ghost textures suggest the protolith probably consisted of more mafic crystal tuff units and porphyritic flows. In some areas, vague relict crystal shards and angular clasts have been noted while quartz eyes and outlines of feldspar phenocrysts have been observed elsewhere. The units are mapped primarily according to alteration because of the lack of clearly discernible textural and/or composition features at hand-specimen scale. The three primary alteration types that have been mapped are a) chlorite, b) bleached-silicified and c) sericite. Overall, this sequence of volcanics underlies the southern portion of the property primarily in the vicinity of the Lexington Adit, T-50 and City of Paris Adit. These units have a pervasive cream-white colouration modified by the varying degrees of chloritization or silicification. In the area described above, malachite staining is common with some areas exhibiting more intensive staining than others.

i) Chloritic Altered Volcanics: The light cream colour imparted to these altered volcanics is changed to a light to dark green. The matrix is light greenish-grey while fractures are heavily coated with dark green chlorite. Chlorite altered volcanics are are more intensely fractured than the bleached volcanics. Silicification is usually associated with the chlorite alteration, however, the darker green and more chloritized the unit, the weaker the silicification. Very fine-grained pyrite and chalcopyrite are found as disseminations and along fractures. Malachite staining is common on weathered surfaces.

ii) Bleached Volcanics - (Silicified): Depending on the intensity of silicification, the colour of the host unit ranges from creamy grey to a nearly white. The rock is very hard and intensely fractured but silicification imparts a more massive appearance to the rock. The fractures are usually healed with fine quartz-carbonate veinlets. Vuggy fractures are often coated with limonite. Ghostly outlines of quartz eyes and feldspar phenocrysts suggest an original mainly porphyritic texture. Dark patches in the rock indicate relict chloritic sections. As silicification becomes more intense, the chlorite altered areas disappear while the porphyritic or crystal tuff textures also become indistinct. The intensely bleached sections are a milky white colour, due to the strong silicification and take on a massive, aphanitic texture. Very fine-grained pyrite and chalcopyrite are found disseminated throughout and along fractures. The sulfide content is for the most part less than 0.5%; however, it is enough that large areas of this sequence carries malachite staining along weathered fracture surfaces.

iii) Sericite Schist/Mylonite: This type of alteration occurs in the altered volcanics where they have undergone shearing. The rock takes on a foliated or laminated appearance with a fine-grained sugary texture. The rock is white with intense rusty, yellowish-red limonite along foliation planes. The white-coloured laminations are mainly made up of sericite and quartz grains. The rock breaks apart easily along the laminations.

Chlorite Schist

This rock is found mainly northeast of the Vacher Zone. The chlorite schist unit ranges from a strongly contorted schistose unit exhibiting a laminated appearance to a more massive fine-grained weakly schistose unit. The unit is usually dark grey-green. On the strongly schistose sections, the schistosity planes often show polished chloritic slickensides. The slickensided sections can resemble strongly sheared serpentinite. The unit often contains lighter brownish-coloured laminations of sericitic composition. Sporadic bull quartz veining is found throughout.

Sericitic-Muscovite Schist

Tan to brownish-coloured, moderate to strongly schistose unit exhibiting contorted laminations. A lustrous sheen is often observed on schistosity planes. Greenish patches are due to weak chlorite alteration.

Argillaceous Schist

Black to dark grey-green moderate to strongly schistose unit. Lighter grey quartz-carbonate bands are common. Some pyrite-rich banding occurs parallel to schistosity. Graphite development is very common along schistosity planes and cross-cutting fractures. Drusy quartz coats some fractures. The foliation is often crenulated and stylolite development also occurs.

Diorite (roughly foliated)

A roughly foliated gold-bearing diorite dyke is found in the Vacher Zone. It is light to moderate grey-green, medium crystalline. Weak chlorite alteration and/or sausseritization impart the varying intensity of the greenish colouration. Mafic mineral phenocrysts are up to 2 mm long and can have indistinct rims. Plagioclase (albite) phenocrysts are up to 5 mm in diameter in some areas. Weak pyrite mineralization is disseminated throughout and also along hairline fractures. Sphalerite, galena and anomalous values in gold are occasionally found where diorite cuts listwanite.

(c) Map Areas

Figure 7 (Southeast Sheet) Lincoln - T-50 Area: Detailed geologic mapping was carried out at a scale of 1:500 along old grid lines established on the property in 1986 by Canadian Pawnee. The grid lines trend 010^{o} from an east-west trending baseline designated 0+00. The lines are 50 m apart. Mapping was also completed on a detailed (mini) grid established over the northern portion of this map sheet. The T-50 Area mini-grid has a 200 m long baseline at a bearing of 320^{o}. The cross lines were spaced 20 m apart and extend 60 m to the southwest and 200 m to the northeast. Stations on the two grids were tied into each other when they came into close proximity to each other.

The geology in this area, from the mapping and drill sections, consists of a stacked assemblage of chloritic and bleached (silicified) altered volcanic rocks and serpentinite-talcschist-listwanite. A fresh diorite stock intrudes these rocks on the northern extremity of the map sheet northwest of line 160 NW north of stations 170 NE (1992 grid). Shasket Creek diorite dykes intrude mainly altered volcanic rocks between lines 80 NW and 100 NW southwest of the baseline.

The initial focus in the area was near surface gold values intercepted in hole T-50. These 0.2 oz./ton range gold intercepts were in magnetite-rich sections of core. Trenching and drilling in the spring of 1992 located magnetite-rich pods in sheared altered volcanics and talc schist that were highly anomalous in gold. Two surface samples carried 0.136 oz./ton gold and 0.132 oz/ton gold, respectively. Drill hole 92-B-5 intersected 1.75 m of 0.032 oz/ton gold within massive pyrite and magnetite lenses separated by an 0.56 m length of talc schist. Drill hole 92-B-6 intersected 1.5 m of 0.430 oz./ton gold in sericite altered volcanics. This mineralized area is within a strongly sheared contact zone between serpentinites located north-east of the 1992 baseline and altered volcanic rocks and diorite dykes located to the southwest. The shear zone trends 150° and dips 85° NE and has been traced over a strike length of 150 m. Between lines 100 NW and 140 NW and up to 30 m northeast of the baseline (1992 grid), mapping indicates a westward offset of the listwanite and talc schist due to east-west faulting.

Northeast of the 1992 baseline is primarily underlain by northwest-trending interlayered thick slices of sheared to massive serpentinite, talc schist and listwanite. The listwanite forms a prominent bluff located between

L40NW and L120NW between stations 130 NE and 160 NE. Quartz-feldspar carbonate veins form a lacy network throughout the listwanite.

Southwest of the 1992 baseline is primarily underlain by a thick sequence of bleached and/or chlorite-altered volcanic rocks. Relict textures indicate at least three types of volcanic rocks have undergone intensive bleaching by pervasive silicification, chlorite and sericite alteration. Relict feldspar phenocrysts and quartz eyes are commonly observed in some of these altered rocks while relict hornblende laths and chlorite altered angular clasts are found in others. Occasionally, ghosts of shards of feldspar and other crystals are observed indicating a crystal tuff. The silicification and bleaching appear to be a later alteration event than the chlorite alteration. Where silicification and bleaching are less prominent, chlorite alteration is prevalent along fractures and of mafic minerals. As silicification intensity increases, the green-coloured chlorite-altered mafics become more vague and ghostly in appearance until they are completely obliterated by complete bleaching as indicated by a milky white colouration to the rock. Malachite staining is widespread within this altered sequence of rocks.

West to northwesterly trending small shears are commonly found in the altered volcanics and are identified by rusty sericitic envelopes along the shears. The shears are mainly less than 10 cm wide.

Two dykes have been mapped to date that cross-cut the altered volcanic unit. The Shasket Creek feldspar porphyritic diorite is the major intrusion southwest of the 1992 baseline. It is found in the Lincoln portal area. A second extremely weathered (crumbly) feldspar porphyry dyke is found along an old trench that crosses the main access road near line 6+50 E station 4+40 S (1986 grid).

<u>Figure 8 (Central Sheet)</u>: This map sheet adjoins the west side of the previously described southeast sheet (Figure 7). Old cat trenches were mapped using the 1986 grid for control. This map covers an area extending

northwestward of Paris workings. The mapping covered the area northeast of the main access road and up to the T-50 Area access road.

The northwest-trending sequence of bleached and/or chlorite altered volcanics continues from the southeast sheet (Figure 7) to underlie most of the central map sheet. Two major shearing trends become more evident as shown by one-metre-wide rusty and intensely sericite-altered shear zones trend NNW between 348 to 354° and dip northeasterly from 48 to 58°. Samples of this direction are found in a trench on L 2+50E station 0+50 S (1986 grid) and along a drill road cut at L 2+90E station 1+30 S (1986 grid). Shearing trending between 295 and 315° and dipping between 34 and 45° NE is also a prevalent direction. These shears are generally less than 0.5 m wide but are still very rusty and sericite-altered. A 2-m-wide feldspar-hornblende porphyry dyke is exposed in a trench near L 2+50E station 0+40 N (1986 grid) striking north and cutting the altered volcanic sequence.

Figure 9 (Northwest Sheet): This map adjoins the central sheet at its northern limit. It covers an area extending westward from the T-50 access road at the east edge of the map to the Lexington Adit. Mapping was conducted along the 1986 grid lines. Outcrops are relatively scarce and are mainly found in the bottoms of old cut trenches or on the edges of road cuts.

The target of the mapping effort was to focus on the area between drill-hole TG-81 and the Lexington Adit. Hole TG-81 intersected 4.8 m of high-grade gold in magnetite-rich stringer zones where the bleached altered volcanic unit package is in contact talc schist, talc-altered serpentinite and serpentinite.

The central part of the map area is underlain by northwest-trending bleached and chlorite-altered volcanics which form a thick sequence between talc schists and serpentinites on both its "upper" belt to the east and its "lower" belt to the west.

East of hole TG-81, the upper contact of the altered volcanic sequence near the T-50 access road is characterized by an intensely altered, silicified and chloritized fault breccia which exhibits both bleached volcanic and serpentinite fragments. Malachite staining is common. Eastward towards the T-50 access road, talc schist and chlorite-altered talc schist were observed. A major fault is exposed in several large road cuts and trends 130^{o} dipping 56^{o} northeast, which brings talc schist into contact with sheared and slickensided serpentinite. The fault is masked by 1 m thickness of gouge. Intense shearing and faulting in this area has produced inter-layered slices of talc schist, chlorite-altered talc schist and serpentinite.

Going west from hole TG-81 towards the Lexington Adit, a lense-shaped body of fresh-looking dark green fine-grained andesite occurs above the bleached altered volcanic sequence near the lower contact with talc schist and serpentinite. A large outcrop of the andesite occurs at L O station 1+80N.

The western altered volcanic sequence, below the andesite unit, has an unusual textural appearance. It is strongly foliated, bleached, soft and crumbly in places (often flaggy) and exhibits relict crystal shards and occasionally quartz eyes. It is an intensely altered crystal tuff. Outcrops occur along an access road above the Lexington Adit. At L1+50W station 2+00N, the altered volcanics are intensely sericitized and contain disseminated and massive pyrite. This type of alteration and mineralization is found in the Lexington shaft located at L1+38W station 1+80N.

The lower contact of the altered volcanics with talc schist and serpentinite found between hole TG-81 and the Lexington Adit appears to form fault wedges between fresh biotite diorite found in the southwest corner of the map area. The talc schist and serpentinites are often highly contorted and sheared within this area.

Massive magnetite was found in talc schist rubble adjacent to an old road located above and southeast of the Lexington Adit. Line 0+50W station 1+15N lies 8 m west of these pits. The nature of the mineralization and the anomalous gold values contained therein are very similar in nature to the gold-bearing magnetite-rich talc schist zones found in hole TG-81 and T43. A small detailed grid was established over the pit area (lines 5 m apart and stations 3 m apart) and a magnetometer survey was conducted on the grid. Very strong magnetic anomalies occur in the vicinity of the pits and extend eastwards to drill-hole sites TG-61 and 62. The similarity of this zone with the zone intersected in hole TG-81 along with the overall trend of the units suggest a structural link between the two, although cross-faults may be present. The success of the detailed magnetometer survey as a mapping and prospecting tool in this area has been established. The detailed survey should be continued eastward towards TG-81 to trace these magnetite-rich talc schist zones and locate offsets of the zone by cross-faults.

(d) Golden Cache - Vacher Area Maps

Figure 11 - Golden Cache. Although the Vacher grid area had been mapped in 1992, the importance of structural controls on mineralization and a better understanding of the importance of contact relationships between talc schist, serpentinite and the altered volcanic sequence necessitated fill in mapping in the area between the Lexington Adit and the Vacher Zone. Mapping was done at a scale of 1:500 along the 1986 grid. The Golden Cache Adit and associated sulfide mineralization is located approximately mid-way between the Vacher and Lexington Zones. Very little outcrop was found on this map sheet. Two deeply incised valleys trend west-northwest across the lower portion of the map area and are separated by a narrow ridge. The straight and deeply incised valleys indicate the presence of substantial fault zones. Serpentinite boulders are occasionally found along the crest of the intervening ridge. An outcrop of slightly magnetic talc schist is located in the road cut at L3+50W station 2+00N. Fresh diorite intrusive is located immediately to the south. This outcrop of magnetite-bearing talc schist should be trenched and sampled. The terrain slopes steeply to the west from the main access road and appears to be underlain by altered volcanics as projected from the Lexington Adit map (northwest sheet). The

altered volcanics may be in fault contact with the serpentinites along the northwest-trending incised valley. A magnetometer survey followed by trenching should be conducted in this area to follow this important contact between the altered volcanics and serpentinites. The stacking of talc schist and serpentinite units adjacent to northwest-trending faults and shears continues westerly to the Golden Cache area.

Figure 10 (Center Sheet) - Vacher Area: In the southeastern section of the map area that adjoins the Golden Cache sheet, it appears that the bleached altered volcanic unit may be pinching out against fault slices of serpentinite and talc schist. Although there is a lack of outcrop, the altered volcanics are not found westward beyond L7+50W station 4+50N.

Mapping was carried out along the 1986 grid in the Golden Cache area and northward across the Vacher Zone. The Vacher Zone had been mapped in detail in 1992 along the 1992 grid with a baseline trending 320^{o}. The two grids have been tied together where stations on both grids are in close proximity to each other. On the 1986 grid, the Vacher Zone lies between line 7+00W and L 10+00W between stations 5+00N and 8+00N. The detailed 1992 grid is shown on this map and crosses the 1986 grid at an oblique angle.

The local geology of the Vacher Zone is characterized by a layered sequence of listwanite, talc schist and serpentinite. On surface, the diorite dyke is surrounded by listwanite. The listwanite is defined by 1% to 10% bright green fuchsite, which is disseminated and in clumps within a silicified and carbonatized creamy white and light coarse-crystalline matrix. This is crossed by an often irregular set of silicious veins and veinlets. The veining is often feldspathic and oriented in an en-echelon series of tension gashes (approximately 1/2 cm wide by 8 to 15 cm long) surrounded by a random set of veinlets. These silica-filed tension gashes do not occur along schistosity.

Talc schist is found surrounding and interlayered with listwanite on an outcrop scale. The original serpentinite has been altered to greater than

80% talc. Creamy white, tan, light and dark green and black bands are common. Variable amounts of quartz, chlorite and relict serpentine are present. The schistosity of the talc schist and surrounding units generally varies between a strike of 110° to 150°, dipping at 30° to 50° to the northeast. Locally, the schistosity has been highly contorted but is more regular, out from the Vacher Zone mineralized area. The talc schist becomes less altered and has increasing chlorite and remnant serpentine content, farther from the area of present drilling. Serpentinite forms relatively few small outcrops in the immediate Vacher Area. The serpentinite is dark green to black, often with a well developed schistosity and variable talc content.

The Vacher area is characterized by a single northwesterly trending, generally orange weathering ridge and gully pair. The ridge is a resistant feature due to the development of the listwanite units. The gully appears to be the east-bounding fault of the Lower Serpentinite Belt. To the northeast of this depression is a series of chlorite and chlorite-sericite schists, of probable volcanic origin, and several argillaceous schist outcrops. Within these units are several bull quartz veins that were sampled but do not contain any gold or copper and two narrow diorite dykes that may be faulted off sets of the Vacher Zone dyke.

Four drill holes were drilled from two locations in the Vacher Zone. These holes were drilled to bracket the previous two holes, CP88-4 and CP88-5. The results of this program are discussed in a May 20, 1992 report by J.T. Shearer and Sean P. Butler.

Relogging of the 1988 core (Appendix IV) clearly indicates that the mineralized zone is related to, but not always within, an altered, sheared, slightly foliated, diorite dyke. The diorite dyke is fine-grained, generally light in colour, with silicious or sericitic alteration. There is a weak foliation developed parallel to the regional schistosity. The best gold values are within zones of higher silicification and pyritization. This alteration is mainly in the form of quartz veinlets, but also includes silica and sericite flooding associated with fine to medium-grained disseminated euhedral pyrite. The diorite dyke and mineralization trend approximately 080° Az, and dips 45° to the north. Mineralization also occurs in altered sections of highly contorted talc schist. The diorite dyke fingers into several sub-parallel dykes in several locations. The mineralized dyke weathers recessively relative to the surrounding listwanite and forms a narrow depression crossing the ridge crest from which several grab samples were collected that had relatively high gold values.

During the fall of 1992, mapping continued westerly on this map sheet to 1986 grid line 12+00W. There is a lack of outcrop between lines 10+50W and line 12+00W.

Outcrop increases along L12+00W which lies along a northerly-trending resistant ridge. Rock units on this line change abruptly from those observed on the Vacher and Golden Cache areas. Rusty silicified dark grey argillite or siltstone outcrop between stations 6+00N and 6+75N. Serpentinite outcrops sporadically along the line to station 8+00N. Approximately 10 m west of line 12+00W between stations 6+75N and 7+20N, the serpentinite contacts a fresh feldspar porphyritic diorite stock. The serpentinite seems relatively unaltered along this contact, in contrast to the often bleached to moderately chlorite-altered diorite. At L11+00W station 8+00N, a small outcrop of sheared and brecciated sericite-muscovite schist was found. A small adit had been excavated on the outcrop. It follows a 4-cm-wide pyrite-rich vein.

Mapping on the Vacher area continued northwestward onto this map sheet from the central sheet. From station 8+00N on Line 12+00W, the serpentinite contacts rusty weathering, silicified argillite. The contact is not exposed. The argillite carries minor disseminated pyrrhotite mineralization. Feldspar porphyry diorite outcrops approximately 10 m east of the line near station 8+50N. Very little outcrop occurs from station 8+50N to the main access road that runs northwest between the Vacher area and the No. 7 Mine workings. Mapping along the road encountered small outcrops of serpentinite. A large body of massive to sheared serpentinite lies just north of the road. This body of serpentinite and the small outcrops appear to be transected by a 5 m wide dyke of foliated chlorite-altered porphyritic diorite. This dyke roughly parallels the road to the west-northwest for approximately 110 m from where L12+00W crosses the road. Small outcrops of talc schist, chlorite schist and serpentinite occur along the north side of the road in this same area and, although not directly observed other than in one outcrop, they contact the foliated diorite dyke. Mineralization was not observed.

(e) TG-81 - Lexington Adit Area. Previous diamond and percussion drilling.

Figure 21, TG-81 Area Cross-section, North Section 1, 1:250

This cross-section is provided in the plane of drill-hole DH-5. Percussion holes P-22 and P-23 projected onto this section are located 20 m and 50 m northwest of the section, respectively. Drill-hole DH-5 carries weak gold mineralization in bleached altered volcanics at the top of the hole. The andesite (dyke?) observed on surface may have cut out the mineralized part of the altered volcanic unit. A repetitive series of serpentinites and altered bleached volcanics fault slices is evident throughout the hole. At 70 m, (elevation 1220 m), a major fault zone is encountered forming a talc-rich contact between the upper serpentinite unit and an altered volcanic unit. Minor gold and copper mineralization occurs at this contact. The percussion holes appear to have penetrated primarily serpentinite with very weak mineralization.

The Northwest and Northeast 1225 Level Plans (Figures 15 and 16) indicate that the northwest-striking fault structure is a major one and extends southeastward for at least 225 m. On the surface, a gold-bearing magnetite-rich talc schist was discovered during the fall of 1992. The elevation of the discovery showing suggests it occurs in the vicinity where this structure would come to the surface. Follow-up investigations are warranted.

Figure 22. TG-81 Area - North Section 2 (AZ-045) Looking Northwest: This cross-section lies immediately southeast of holes TG-77 and TG-61 and TG-62. Only holes noted above are within 10 m of the section line and the remainder are significantly further away (from 20 to 40 m). Hole TG-77 intersected the deepest down-dip contact between the altered volcanic unit and lower serpentinite. The down dip extension of a major fault structure found in hole DH-5 on section 1 appears to penetrate the serpentinite at the 1194 m elevation level. The contact zone between the altered volcanics and serpentinite unit does not appear to be intensely sheared. Gold values are elevated over 1.5 m along the contact and assay 0.026 oz./ton Au. The fault zone, within the serpentinite, contains a 0.5 m section carries 0.095 oz./ton Au and a 1.5 m section carries 0.013 oz./ton gold.

This strong fault structure is intersected up dip holes TG-61 and TG-62. The sheared zone in these two holes occurs in the contact zone between the altered volcanics and serpentinites. Talc is very abundant. A 1 m section carries 0.023 oz./ton gold in hole TG-61 along this shear contact while further up dip in hole TG-62 there is no anomalous gold contact. Although 40 m off section to the southeast hole TG-79 intersected a strong faulted contact zone between the altered volcanics and serpentinite. In hole TG-79, this zone is elevated in gold over a 3 m width ranging between 0.014 and 0.018 oz./ton Au. Several other parallel fault and/or shear zones within the serpentinite are found below the main contact zone shear zone. Those fault systems intersected in these holes are plotted on the 1225 Level Northwest Plan map (Figure 16). The down dip intersection of these faults as found in holes TG-61, TG-79 and TG-77 show a strong persistence along the northwest-southeast strike direction when projected onto the 1200 elevation Northwest Level Plan (Figure 18). Fill-in drilling between holes TG-77 and TG-61 may be warranted. A detailed magnetometer survey should be conducted over this area prior to drilling.

Figure 23. North Section 3 (AZ 045) Looking Northwest: This cross-section lies 10 to 15 m north of holes TG-80, TG-78 and percussion hole P-17. The holes are projected northwest onto the section. Hole TG-80 intersected two

talc altered shear zones within bleached altered volcanics above the 1250 m elevation level, but neither of 2 to 3 m wide talc-rich zones carried gold values. Three other small talcose faults were intersected above the 1225 m elevation level within the altered volcanic sequence and each contained elevated gold values. Sample intervals were 1 m wide and assays ranged between 0.015 and 0.061 oz./ton Au. At the 1195 m elevation level, hole TG-80 intersects the contact between the altered volcanics and serpentinite. Major shearing and faulting 3 m into the serpentinite resulted in a 5 m thick zone of talc schist intercalated with serpentinite slices. The fault zone carries 0.093 oz./ton gold over 1 m. A lower fault zone at the 1188 m elevation carries weak gold into the lower serpentinite with values ranging from 0.007 to 0.027 oz./ton gold. The zone carrying 0.093 oz./ton gold mentioned above may correlate with the TG-81 intersection. Hole TG-78 intersected the up dip projections of all the faults encountered in hole TG-80. The fault zone lying within serpentinite below the altered volcanic serpentinite contact is also seen in TG-78. Mineralization is very weak with only one 0.5 m sample carrying 0.024 oz./ton gold. Hole 78 is 50 m northwest of hole TG-81 along the same longitudinal section line 1+00E. The fault zone is at a slightly lower elevation (approximately 5 m) in hole TG-78 than in TG-81. It appears there may be some warping in fault plane. Northeast and Northwest 1200 Elevation Level Plans (Figures 17 and 18) do not suggest cross-fault displacement. The strong mineralized zone found in TG-81 is not apparent.

Figure 24, North Section 4 (AZ 045) Looking Northwest: This cross-section illustrates holes DH-10A, TG-81, TG-86 and P-15. Hole TG-81 intersected the most significant gold mineralization found in the area. Hole TG-81 intersected the main contact between the altered volcanic sequence and the serpentinite unit at the 1220 m elevation level. Approximately 4 m into the serpentinite strong shearing and talc alteration has caused an interlaying of serpentinite and talc schist slices. From 1217 level down to the 1211 m elevation, a 4.8 m section of magnetite stringer mineralization occurs within talc schist and talc-altered serpentinite. Gold values range between

0.013 and 0.82 oz./ton gold. The zone continues up-dip where it is intersected in hole TG-86. In hole TG-86, however, the gold grades are lower than those found in hole TG-81 ranging between 0.034 and 0.081 oz./ton gold due to an increase in talc content in TG-86 (refer to relogging of TG-86, Appendix IV). The mineralization consisting of a stringer zone magnetite is identical in both holes. Hole DH-10A located approximately 80 m northeast of hole TG-81 intersected the contact between altered volcanics and serpentinite down-dip from hole TG-81 at an elevation of 1167 m. The contact area is an intercalated section of serpentinite and talc schist. Anomalous gold values occur over a 7 m width in DH-10A ranging between 0.010 and 0.090 oz./ton gold.

The mineralized zone and altered volcanic-serpentinite contact in the vicinity of hole TG-86 and TG-81 are elevated approximately 5-7 m above the zone intersected in hole TG-78 on section 3, Figure 23, approximately 50 m to the northwest. This contact area intersected in holes TG-86 and TG-81 is also elevated (32 m and 15 m) compared to the contact position in hole TG-82 and TG-84 located on North Section 5 (Figure 25), 60 m to the southeast. Holes TG-78, TG-81 and TG-82 are closely aligned along longitudinal reference line 1+00E as shown on the cross-sections. A major cross-fault occurs between North Section 4 (Figure 24) and North Section 5 with a possible rotational component dropping the contact zone more substantially between TG-81 and TG-82 than between hole DH-10A and TG-84 as illustrated on North East 1200 m Elevation Level Plan (Figure 17).

<u>Figure 25. North Section 5 (AZ 045) Looking Northwest</u>: Shearing has occurred at the altered volcanic-serpentinite contact zone. The mineralization in these holes is very weak compared to hole TG-81 located 60 m to the northwest. Hole TG-82 contained only a 1 m interval along the contact which carried 0.051 oz./ton gold. All other values ranged between 0.001 and 0.007 oz./ton gold. Hole TG-85 was not drilled deep enough to reach this contact zone. Hole TG-84 located 47 m northeast intersected the sheared contact zone down-dip from TG-82. A 1 m interval in TG-84 along this contact carries 0.018 oz./ton gold.

(f) Main Zone

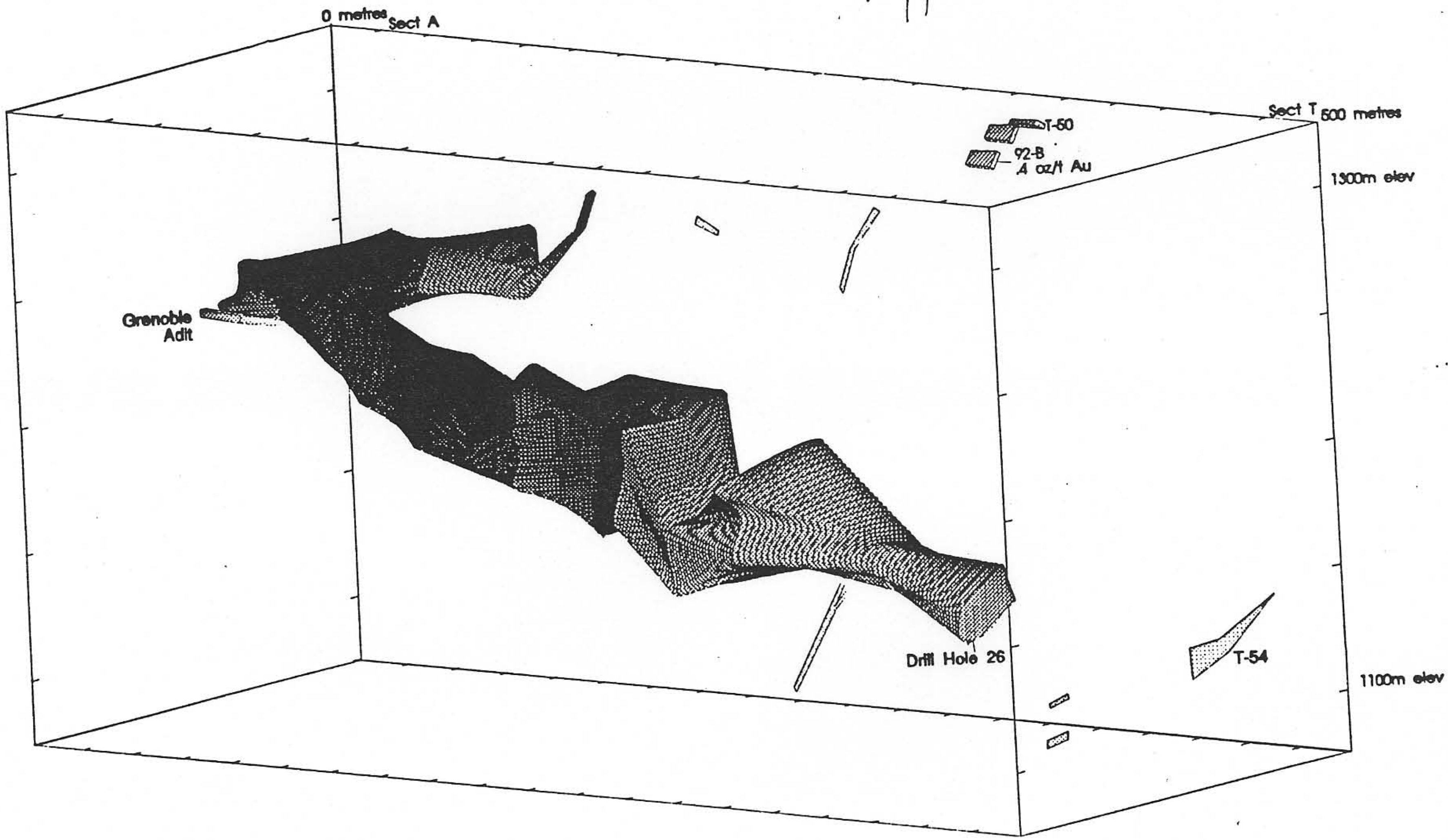
The Main Zone was previously outlined as a gently sinuous mineralized body of variable width (25-70 m) and thickness (2-24 m), extending for a length of about 375 m. The zone often lies at or near the footwall contact of the "dacite" intrusive, plunging gently to the southeast.

Most of the extensive work completed between 1969 and 1988 has been directed toward outlining tonnage on the Main Zone. Page (1982) describes the Main Zone as a vein-complex replacement, consisting of both low-angle veins, high-angle veins and heavily disseminated sulphides. The enclosed "dacite" host in such zones is extensively pyritized (10-15% pyrite) and generally contains 0.5-1.5% copper as disseminations and lacey fracture fillings of chalcopyrite. As such, the Main Zone style of mineralization lends itself to lower-cost open pit and bulk underground mining methods and has been the primary exploration target on the property in the immediate past.

Somewhat surprisingly, there is no detailed geological description of the Main Zone in any of the old reports presently available. Also, no compilation of all previous drilling on one set of sections and plans was found. The comments that follow are from the new set of drill sections (sections A to T) incorporating all known drill holes. These sections were developed as part of the 1992 project and are spaced at 25 m intervals and oriented at 020^{o}. This orientation is perpendicular to the Main Zone, unlike previous sets of sections. These 1992 sections incorporate the 1987 and 1988 Canadian Pawnee drill holes plus a few more late Teck holes. Missing assays were also found for and added to previously reported holes.

Hole U4 (section B) with 1.328 oz./ton Au and 2.27% Cu over 2.1 m is located above the Grenoble Adit. The raise by Grenoble apparently was driven on the lower-grade P-12 intersection farther to the south.

BRITANNIA GOLD CORPORATION
LEXINGTON PROJECT



ISOMETRIC
MAIN ZONE

Figure 12.

The 1987 drilling consisted of seven holes in a small area of about 30 by 50 m apparently reproducing some of the older holes and stepping out slightly on others. Most of these holes appear on Section F with some 5-7 m thick intercepts of interesting grades. The stacked sequence, usually of three mineralized zones, is on most sections in this area.

Main Zone narrows considerably but is possibly open to the southwest on Section G, but still includes 0.40 oz./ton Au and 1.65% Cu over 1.5 m and 0.63 oz./ton Au and 3.34% Cu over 1.5 m near the footwall contact in DH37. The zone is stacked and broken on Sections H and I with the best zone often following a narrow serpentinite band.

The zone consists of two stacked zones on Section J with hole T-45 intersecting a zone 24 m long including the lower 12 m grading 0.224 oz/ton Au and 1.28% Cu and narrowing in T-46 to 3.0 m of 0.196 oz./ton Au and 0.87% Cu.

Drill hole DH21 had a high-grade gold drill intercept that was twinned in hole 88-2.

The assays from DH21 are:

From	To	Length	Au	Cu
141.70	146.00	4.30	1.080	1.160
146.00	146.60	0.60	0.260	22.800
146.60	150.30	3.70	0.030	0.840
150.30	153.30	3.00	0.090	0.640

The assays from 88-2 are:

From	To	Length	Au	Cu
143.00	144.00	1.00	0.024	0.934
144.00	145.00	1.00	2.832	8.970
145.00	146.00	1.00	0.188	1.780
146.00	147.00	1.00	0.089	0.279
147.00	148.00	1.00	0.034	0.156
148.00	149.00	1.00	0.230	2.290
149.00	150.00	1.00	0.134	1.320
150.00	151.00	1.00	1.090	3.230
151.00	152.00	1.00	0.324	1.490
152.00	153.00	1.00	0.125	3.210
153.00	154.00	1.00	0.016	0.434

The weighted average of these holes is:

DDH#	From	To	Length	Au (oz/ton)	Cu (%)
DH21	141.7	153.3	11.6 m	0.447	2.043
88-2	143.0	154.0	11.0 m	0.462	2.190

Note: Copper in 88-2 analyzed geochemically (ppm) and converted to percent for comparison. The zone is open to the southwest and further drilling would define this area better.

There is a complicated sequence of different rock types (Section L) that appears to disrupt the zone to the southeast. The zone again narrows on Section M. Drill hole 88-12 contains 2 m of 1.61% Cu and 1.014 oz/ton Au on the footwall of the "dacite". **This is an expansion of the high-grade gold values as a result of the 1988 program.**

Drill hole T-41 intersected 5.3 m averaging 0.17 oz/ton Au and 0.9% Cu. To the southwest, hole T-40 contains less gold, but similar copper values, 4.0 m averaging 0.0846 oz./ton Au and 0.676% Cu.

A broken and disrupted area is defined by several dykes (Section O) and the mineralized zone was not intersected. This may be related to a possible east-west fault that was inferred to cause an offset observed in the T-50 Area surface geology. Drill hole T42 and 88-17 should be relogged for detail structural data.

Drill hole DH26 is the only hole in this area; it includes 3.0 m of 0.17 oz./ton Au and 1.78% Cu and 1.5 m of 0.28 oz./ton Au and 1.01% Cu. Hole DH26 is the last hole used in the early Mineral Inventory calculations.

Hole T-51 (Sections Q and R) intercepted 1.8 m averaging 0.127 oz./ton Au and 0.356% Cu. TG-83 has low values to the southwest of T-50. Surface mapping in the T-50 Area suggests that the Main Zone could have been displaced to the west and lower down along E-W faults. If this interpretation is confirmed, it will require testing by several drill holes on Sections Q and R.

Drill hole T54 (Section S) intercepted 6 m averaging 0.128 oz./ton Au and 0.99% Cu. This mineralized zone appears to be typical Main Zone material. Its displacement to the west indicates that careful attention is needed to correlate mapping of surface structures with the detailed data already available from diamond-drilling.

(g) Mabel to No. 7 Mine Area

A geological mapping traverse was conducted along the access road that connects the Vacher area, Mabel area and the No. 7 mine workings. Along the road from where L12+00W crosses to the Mabel mine area, at a distance of approximately 110 m, a 5 m wide dyke of foliated chlorite-altered porphyritic diorite cut a large body of massive to sheared serpetinite that lies primarily north of the road. The dyke roughly parallels the road. It appears that talc schist and chlorite schist has developed in small areas along the dyke-serpentinite contact. In the immediate vicinity of the Mabel workings, the diorite dyke widens to form a stock-like body. As the road turns northwestward from the Mabel mine, the serpentinite body outcrops along the northeast side of the road for approximately 60 m. On the southwest side of the road the terrain flattens and outcrops disappear. The serpentinite appears to be overlain by a light green-coloured fissile and well laminated chlorite schist. This unit forms a ridge and bluff feature that parallels the trend of the serpentinite body mentioned above.

Outcrop along the main road is very scarce until a distance of 365 m from the main No. 7 vent raises. At this point, two caved trenches or short adits occur on either side of the road, and a large vent raise occurs approximately 75 m northeast of the road. The outcrop here is a fine-grained dark grey-green amphibolite (B.W. Kyba, 1984) unit. A slice of serpentinite transects the amphibolite unit on the northeast side of the road. These two units continue along a west-northwest trend to the main No. 7 mine vent raises and dump piles located on the northwest and southeast sides of the access road. The serpentinite unit occurs immediately west of the vent raises. The raises have come up along the No. 7 quartz vein within the hanging wall amphibolites. A bluff of amphibolite occurs on the east side of the raises that are located south of the access road. This unit contacts a talc schist lense to the immediate southeast of the raises and bluffs. The terrain becomes very flat in this area and no other outcrop is observed. It is suspected that the serpentinite contact with the talc schist occurs in this subdued area. Samples of vein material from the vent raise carry anomalous gold. This may have important implications for the location of further gold-bearing zones along the contact between the serpentinite and amphibolite unit where talc schist is present. In particular, if magnetite-rich bodies within the talc schist can be located, significant gold mineralization may be found, as is the case in the Lexington TG-81 area. The success of using the magnetometer as a prospecting tool in the Lexington area could be applied to this area. The area along the serpentinite-amphibolite contact between the main No. 7 vent raise and the vent raise described previously located 365 m east-southeast should be mapped in more detail and surveyed using the magnetometer on a detailed grid.

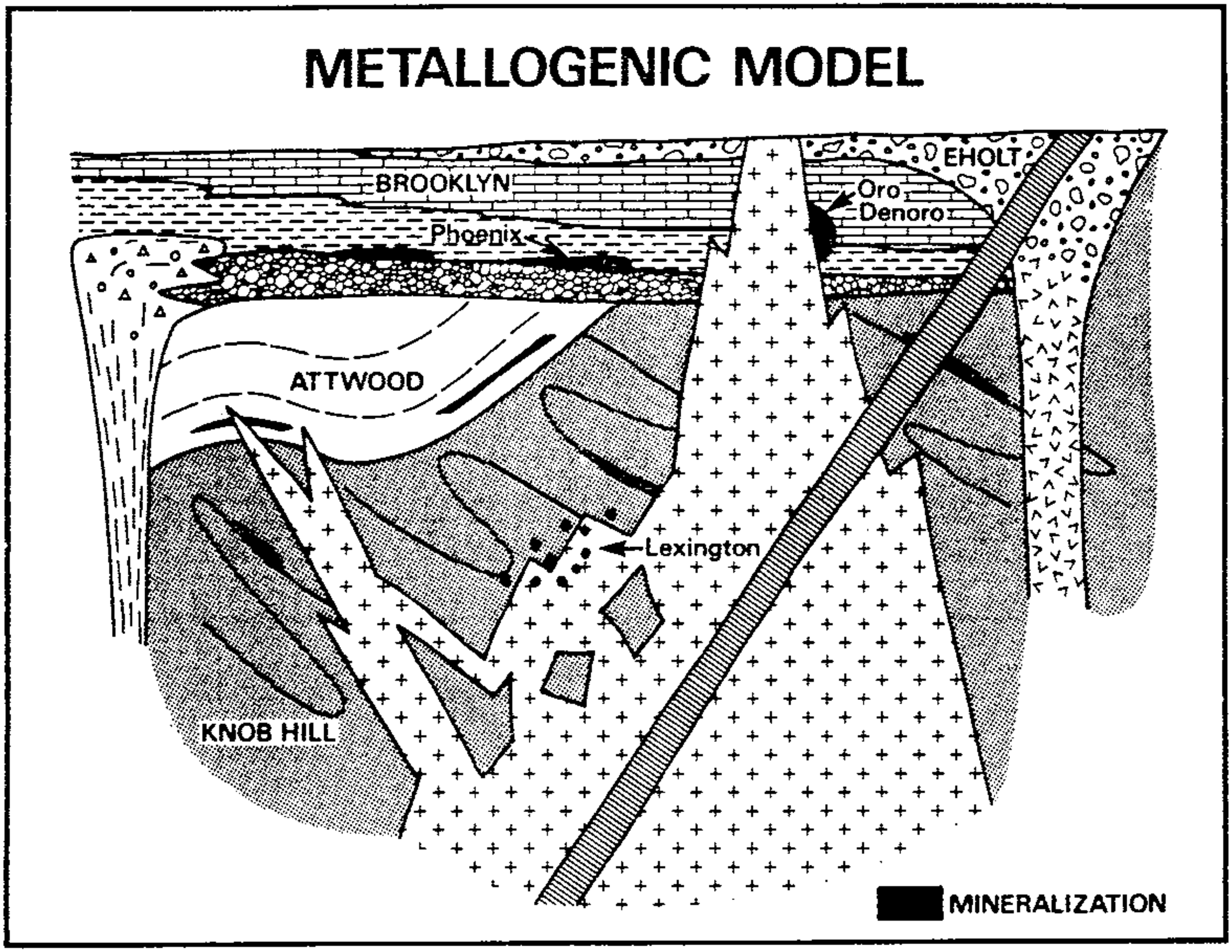

METALLOGENIC MODEL
BROOKLYN
EHOLT
Oro
Denoro
Phoenix
ATTWOOD
Lexington
KNOB HILL
MINERALIZATION

FIGURE 26

GEOLOGICAL MODELS AND MINERAL DEPOSITS OF SIMILAR METALLOGENIC AFFINITY

The Lexington Project Main Zone Deposit is similar to the Overlook and Key Deposits of Echo Bay Mines/Crown Resources located near Republic, Washington. These deposits are considered to be epigenetic replacement and clastic hosted flat-lying quartz/sulfide vein swarms proximal to Tertiary (?) sills of felsic to intermediate composition (Scatter Creek intrusive compositional affiliation).

The Overlook deposit consists of sub-horizontal lenticular bodies arranged symmetrically around a detachment contact between Permo-Triassic limestones and greywackes. The felsic sills and mineralization are controlled by low-angle cataclastic/mylonitic shears. Gold-rich, base-metal-deficient, massive magnetite in association with an unusual gangue of iron silicates and the occurrence of quartz-sulfide veinlets, distinguish the Overlook Deposit as a unique type of gold occurrence. The iron silicates consist of talc, iron chlorite and iron-rich greenalite (serpentine).

Massive sulphide lenses consisting of pyrrhotite, pyrite and chalcopyrite occur within the magnetite portion of the deposit. Copper content is generally less than 0.25%. Total minerable gold reserves of the Overlook Deposit are 2.45 million tons at 0.19 oz./ton gold.

Two-thirds of the gold reserves occur in the massive oxide-sulfide zone which consists of tabular to lenticular bodies of magnetite, pyrrhotite, pyrite and hematite in association with minor amounts of quartz, calcite and iron silicates. Gold in these massive ores is finely disseminated but unevenly distributed, averaging 0.3 oz./ton gold. Gold in the veined clastic rocks averages 0.12 oz./ton over thicknesses up to 100 feet. The discovery of the Overlook Deposit was the result of geochemical and ground magnetic surveys. The uppermost ore grade mineralization is approximately 250 feet below the surface.

The Key Deposits are replacement bodies in limestone and consist primarily of magnetite with associated pyrite, pyrrhotite and chalcopyrite. The original deposit was sufficiently high in magnetite content to be mined as a flux. One replacement body mined during 1907 to 1915 was 100 feet long, 100 feet wide and 25 feet thick. The mineralization contained 0.08 to 0.25 oz./ton gold and less than 1% copper and 40% iron.

The classical metallogenic model for the area, Figure 26, has been postulated by early workers such as LeRoy, McNaughton, Seraphim and Little. It relates mineralization in a wide range of host rocks to igneous intrusive events, especially the emplacement of granodiorite plutons (Church, 1986). However, this simplistic model does not adequately explain the anomalous coherence of lead isotope results which is characteristic of mixing and convergence of diverse hydrothermal plumbing systems. The Lexington Project probably represents a hydrothermal system related to the early faulting and cold intrusion of the ultramatic rocks and then overprinting of other hydrothermal systems related to the intrusion of the "dacite" and Tertiary dykes. Clearly, most, if not all, mineralization on the Lexington Project is structurally controlled where the igneous intrusions served principally as heat engines in the process of convection and dispersion of hydrothermal solutions.

GEOPHYSICS

Several geophysical surveys have been completed over the Lexington and Lonestar Projects. These are summarized below:

Table VI

Geophysical Surveys
Lexington Project

	Type of Geophysical Survey	Date	Area	Results
1.	Induced Polarization	1971	City of Paris "NW Sector"	One anomaly found
2.	Induced Polarization	1968	SE Sector	Seigel & Assoc., Zones A
3.	Magnetometer and VLF	1986		G. White Geophysics
4.	Magnetometer, IP	1970s	Lonestar	Falconbridge and others

Homenuke (1975) considers that the most useful data are from the induced polarization (I.P.) surveys carried out by Seigel Associates Limited on behalf of Lexington Mines Ltd. (Baird, 1968, and Fominoff and Baird, 1971).

The I.P. results are characterized by widespread resistivity lows and chargeability highs, some of which appear to be related to mineralization associated with the areas of the altered volcanic assemblage.

The resistivity lows (less than 800 ohm-meters) and the chargeability highs (greater than 10 milliseconds) in these areas form discrete anomalies. Composite anomaly maps are not presently available, but could be compiled from assessment reports.

P.E. Walcott and Associates are presently compiling all the magnetometer surveys on both sides of the border to a common scale for ease of interpretation.

The 1986 property-wide total field has been replotted and is shown as Figure 27 (in pocket). The data were also assessed by second derivative enhancement techniques. Vertical derivates are a moving average calculation that amplifies short wavelength information to emphasize shallow local anomalies in comparison to regional background.

The very high magnetic responses are generally due to serpentinite which commonly has a high magnetite content. The serpentinite response also tends to show sharp high and low variations due to the highly inhomogeneous distribution of magnetite. The altered volcanic assemblage also shows a more uniform pattern, due to a more disseminated character to the magnetite distribution and low background. Diorite shows a somewhat reduced anomaly response and the older schists sequence give a very low overall amplitude of response.

The magnetometer survey, Figure 27, clearly shows the serpentinite belt dividing into two separate zones east of line 250W. Surface mapping indicates that the lower (or westernmost) serpentinite continues west of Line 350^{o}W but is represented by highly altered talc schist. The magnetic high on Lines 500W and 550W at 300N is perhaps the covered continuation of the Lower Serpentinite toward the Golden Cache area. Generally, the very high magnetic anomalies (reflecting the serpentinite bodies) are separated by narrow zones of low magnetic response. These zones of low magnetic values suggest that a series of east-west (80^{o}-100^{o}) faults offset (left lateral) and alter the serpentinite to non-magnetic schist. The most prominent of these east-west faults are:

(1) 600-700N in the Vacher Zone Area
(2) 400N in the Golden Cache Area
(3) 100-150N north of the Lexington Adit
(4) 150-200S north of the Grenoble Adit
(5) 300S through the T-50/Lincoln Area
(6) 1000N Line 1200W

The intense negative readings encountered in the 1986 work are probably spurious since the common areas surveyed in 1992 do not show such negative results. Care was taken in 1992 to take multiple readings until the magnetometer unit came to equilibrium in the areas of steep magnetite gradients. This was apparently not done in 1986.

The Vacher Zone Mini-grid, Figure 28, shows an area of relatively low magnetic response between Line 0 ad Line 80W which coincides with the area diamond drilled in 1992. This area is underlain by interlayered talc schist and listwanite. Higher magnetic values to the west of Line 80W reflect the sheared, but less altered serpentinite which is exposed along the main access road (south) and also west of Line 200 West. The gold-bearing diorite dyke is located in the centre of the low magnetic pattern which suggests that the dyke is along the major east-west cross-cutting fault noted on the property-wide magnetic survey, Figure 27. Magnetic modelling (Walcott, 1993) indicates a southerly dipping body (dyke-like) as the cause of the magnetic anomaly on Line 160E and L140W. Surface geology, Figure 10, defines an easterly dipping stack of talc schist and listwanite which is underlain by serpentinite.

The Golden Cache Grid, Figure 29, shows an area of high magnetic relief between 450N and 550N on Lines 850W to 1050W reflecting the serpentinite exposed along the main access road. The Golden Cache showings at L750W + 325N are immediately east of a large magnetic anomaly which is probably an overburdened covered belt of ultramafic rocks and perhaps a continuation of the Lexington Area serpentinite-talc schist.

The T-50 Zone Mini-grid, Figure 30, shows two elongate northerly trending zones of high magnetic relief. The most prominent zone extends from L20W station 55 northerly to L180W station 100N. This magnetic high feature outlines a highly schistose elongate serpentinite body that forms a well exposed ridge. Talc schist is found on both the east and west flanks of this serpentinite body. The talc schist lying to the west of the serpentinite body is strongly foliated and carries lenses of sulfide and magnetite mineralization. These mineralized zones carry anomalous gold values. Hole 92-85 and 92-86 were drilled to test the mineralized faults. A prominent fault trending 185° and dipping steeply southeasterly under the serpentinite body is found within the talc schist. This fault parallels the contact between the talc schist and serpentinite. The talc schist is reflected by an elongate magnetic low paralleling the strong magnetic high over the serpentinite body.

A second northerly trending zone of high magnetic relief is found 30 to 50 m east of the above-noted serpentinite body. This second zone trends northerly from L0 station 60 to 100N to L120W station 150N. The intensity of this magnetic high feature weakens from L60W northward. This magnetic high zone coincides with a massive serpentinite body that forms a 60 to 80 m wide knoll in the vicinity of L20W between stations 40N and 110N. This body narrows considerably to the north and outcrops disappear near L60W. A bluff of listwanite occurs between 80W and L120W and may represent the weaker magnetic high extending northerly from the much higher gradient zone represented by serpentinite.

Between these two zones of high magnetic gradient lies a parallel zone of low magnetic response. Outcrops of non-magnetic highly foliated talc schist are found in outcrop in this area.

A break in the western-most magnetic high zone in the vicinity of L40W from station 10 to 30N suggests a west-northwest trending structure. It extends west-northwest from L0 station 50N to L40W station 0. Trenching in this area is recommended.

A small magnetic anomaly located on L180W at station 10N may represent a magnetite-rich zone in talc schist or a slice of serpentinite. Compass deflections occur in this area. Trenching is warranted to locate the cause of this anomaly.

The Lexington Grid, Figure 31, shows a prominent elongate area of high magnetic relief between L100E and L100W. The elongate feature continues northwesterly beyond L100 to at least L300W; however, the strength of the anomaly is weaker. This anomaly coincides with a serpentinite unit intersected in the TG drill holes. The strongest anomaly shown on Figure 31 on L50W station 120N coincides with a small zone of massive magnetite in talc schist near its contact with serpentinite. This is a similar occurrence to the gold-bearing magnetite-rich talc schist and serpentinite intersected in hole TG-81.

The strong magnetic anomaly is offset between L50E and L100E in the vicinity of the baseline (0). This offset indicates presence of a west-northwest trending right lateral fault. R.H. Seraphim (1983) proposes three drill holes (total 1,200 feet) to test for extensions as plotted on Figure 31.

The Lexington Zone Mini-grid, Figure 32, shows a small area with a very high magnetic relief. This survey was conducted in detail to trace the source of massive magnetite float. The float occurs on the edge of two old small hand-dug pits located 10 to 20 m east of L50W station 120N. A small outcrop of serpentinite is located on L50W at station 100N. The strength of the northwest trending anomalies is considerably stronger than those found over other serpentinite covered by the 1992 surveys and suggest that the magnetite-rich lense extends from L10E to L10W. Line 10E terminates near hole TG-63 at station 30N. Samples of the magnetite-rich talc schist float (BL92-77 and 82) were strongly anomalous in gold. The area should be trenched to locate the bedrock source of the float. This mini-grid survey showed the value of using the magnetometer as a prospecting tool to determine trends of mineralized zones.

CONCLUSIONS

The Lexington Project represents several attractive exploration targets of both narrow, high-grade copper/gold in small lenses and more disseminated bulk-tonnage porphyry-style copper/gold mineralization. Important listwanite-gold targets are also present in the northern part of the property.

Most of the work completed between 1969 to 1988 was directed toward outlining ore reserves in the Main Zone which occurs along the footwall contact of the dacite and serpentinite. Investigation of the Main Zone culminated in a small underground program in 1980 and systematic surface drilling in 1981 and 1982.

Mineral Inventory estimates for the Main Zone range from an early 1.1 million tons averaging 0.93% Cu and 0.13 oz./ton Au (Phendler, 1972) to 180,000 tons averaging 1.18% Cu and 0.193 oz./ton Au (Dunsford/Page, 1982). The amount of relatively low-grade, disseminated copper mineralization occurring up-dip from the more massive zone accounts for most of the variation between the estimates. Considering the generally optimistic estimates of Phendler, a reasonable initial conclusion appears justified that present drilling has outlined in the Main Zone around 200,000 to 250,000 short tons of mineralization grading about 1.0 to 1.2% copper and 0.18 to 0.2 oz./ton gold (drill-indicated).

Defining the high-grade (>1.0 oz./ton Au) gold zones within the Main Zone and other zones near surface such as the T-50 zone, is critical to the potential exploitation of the resource. Presently, not enough data are available to rigorously define the extent of the very high-grade gold zones or the behaviour of the gold grades throughout the rest of the massive mineralization.

In the T-50\Lincoln area, significant gold values are associated with a strong shear system within talc schist and altered volcanic along their contact with a serpentinite body located to the northeast. Drilling in 1992 and surface sampling located significant gold-bearing zones within this system. The gold is associated with both magnetite-bearing sections and massive pyrite-bearing lenses along this shear contact. The 1992 work indicates that the sheared contact zone is an important localizer of gold mineralization and should be further evaluated in the area presently covered by the new mini-grid and to the northwest and southeast.

In the Vacher area, the mapping and drilling conducted in 1992 and the drilling conducted in 1988 indicates that mineralization in this area is related to a foliated diorite dyke. Intensely silicified and pyritized areas within the diorite dyke and host wall rocks.

The Golden Cache area was mapping in 1992 and connected the areas between the Vacher Zone and the Lexington Adit together. From L7+50W to Line 2+00W (SE of the Golden Cache Adit), the lack of outcrop has not clearly revealed the contact relationships between talc schist, serpentinite and the altered volcanics. The topography suggests significant fault zones occur in this area and may influence mineralization localization particularly along fault contacts. A detailed magnetometer survey should be conducted between L3+00W and L5+50W. This will assist in directing future exploration efforts in this area.

The TG-81 drill hole and Lexington Adit area should be the primary target for future exploration work north of the Richmond Area. TG-81 and other holes demonstrate the importance of the sheared contact relationship between altered volcanics and serpentinite for magnetite-associated gold mineralization. Talc schist development along the contact is also an important component of localization of gold mineralization. The relogging of the TG holes in 1992 and the generation of new drill section in 1992 supports the conclusions by R.H. Seraphim (1983) that further drilling be done to test for extensions of the significant gold intersection found in hole TG-81. The drill sections and the 1992 ground magnetic survey suggest a warp in the fault plane occurs between North Section 3 and North Section 4 (Figures 23 and 24). This area is between holes TG-81 and TG-78. The warping may cause a thickening in talc schist along the shear contact, which if mineralized could provide for a gold-bearing zone of similar thickness to that intersected in hole TG-81.

The drill sections North Section 4 and North Section 5 (Figures 24 and 25) indicate that a major east-west cross-fault (right lateral) occurs between these two sections. The contact zone in North Section 5 (Figure 25) down-dropped and possible rotated compared to its location in North Section 4 (Figure 24). The existence of this fault is clearly supported by the magnetometer survey results (Figure 31). It appears that the east-west cross-faulting event influenced the deposition of magnetite, sulfide and gold mineralization into the surrounding altered shear contact. The possibility that the cross-faulting has some bearing on mineralization in this area should be kept in mind as the TG holes adjacent to this fault carry significant gold values. Further drilling in this area is warranted, with particular emphasis in the area covered by North Section 4 (Figure 24) in particular. Hole TG-85 should be drilled deeper.

The Mabel area to the No. 7 mine area should be explored in more detail. In the Mabel area, the contact relationship between diorite and serpentinite should be examined. A detailed grid should be established in the area of the contact to facilitate mapping, sampling and magnetometer surveys. Trenching based on favourable results will be required. In the No. 7 mine area, the contact relationship between the serpentinite and amphibolite unit needs petrographic study. The discovery in 1992 of a small outcrop of talc schist in contact with the amphibolite southeast of the main No. 7 vent raises suggests a talc-altered zone may define the contact between the serpentinites and amphibolites. Gold mineralization as found in the quartz veins in the vent raise may find a more favourable depositional site within talc-rich lenses along this contact. A detailed grid should be established between these main No. 7 mine vent raises and another vent raise located approximately 365 m to the southeast and detailed mapping and a magnetometer survey should be conducted on this grid.

Respectfully submitted,

J.T. Shearer, P.Geo.

RECOMMENDATIONS

The data file on past work has been assembled. Missing drill logs from Teck Corporation (especially T-43) have been obtained or relogged. Assembly of all information is almost complete.

Several options for further development of the Lexington property are apparent:

1. Analysis of specific areas that could develop small high-grade, easily mineable material. This would include preliminary computer modelling to define reserves.

   An economic model of minimum size and grade based on operating cost criteria would be developed using recent studies on portable modular mills (with site-specific circuits and operating costs) in conjunction with an appropriate mining method;

   i.e. 10,000 tons @ 1.0 oz./ton Au, perhaps open pit, copper concentrate/ further exploration required and metallurgical testing;

2. Model for bulk tonnage deposit (>1,000,000 tons)/ further exploration required. Prioritize bulk tonnage targets.

3. Test program outlined and costed;

   i.e. 1,500 tons @ 1.0 oz./ton Au, development muck from decline, presently drill-indicated from underground drillholes and/or possible tracked excavator bulk sample pit in the near-surface T-50 zone. Detailed magnetometer survey on close-spaced grid warranted.

   Clearly, new ore reserve calculations should be done to outline the high-gold areas and formulate mining plans based on small-tonnage but high-value production.

The following program is recommended for 1993:

Work Program - May to November 1993

1. Finish detail geological mapping over Vacher and to No. 7 and Richmond Areas 1:500, fill in geological mapping at 1:2,500 using 1986 grid (already mostly re-cut in 1992).

2. Continue trenching T-50 Area and Vacher Zone.

3. Continue diamond-drilling at the T-50 Area and new targets on the Vacher Zone.

4. Relog existing drill core, relog selected other holes and assay unsplit magnetite sections, survey core with magnetic susceptibility meter. Redefine mineralized zones on the Main Zone and recalculate Mineral Inventory.

5. Define the spatial relationship between raising done by Grenoble and high-grade Au in UG-4, transit survey and close-spaced chip-sampling.

6. (a) Diamond-drill section north and south of cross-section 202N;

   (b) Investigate by drilling "down contact" zone on cross-section 584N, hole 17.

7. Diamond-drill between TG-81 and the Lexington Adit.

COST ESTIMATE FOR FUTURE WORK

Relogging of Existing Drill Core, Diamond Drilling in TG81 Area

Phase I

Senior Geologist, 18 days @ $300/day	$ 5,400
Geologist, 25 days @$230/day	5,750
Core Splitter/Stacker, 20 days @ $175/day	3,500
Diamond Drilling, 2,000 feet @ $16/foot	32,000
Rental of Skylark Core Facility and Splitter	500
Transportation - 4 x 4 Rental, 25 days @ $50/day	1,250
Mileage and Gas	350
Room and Board, 50 man-days @ $45/day	2,250
Analytical, 250 samples @ $23/sample	5,750
Consumables and Communication	250
Report Preparation	1,500
Drafting	700
Word Processing and Reproduction	500
G.S.T. on Wages	815
TOTAL	$ 60,515

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APPENDIX I

STATEMENT

OF

QUALIFICATIONS

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

STATEMENT OF QUALIFICATIONS

I, JOHAN T. SHEARER, of 1817 Government 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 20 years of experience in exploration for base and precious metals and other 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 New Global Resources Ltd. at 548 Beatty Street, Vancouver, British Columbia.

5. I am the author of a report entitled "Geological and Magnetometer Summary Report on the Lexington Project (City of Paris, Lexington and Lincoln and Notre Dame Des Mines Claims), Greenwood Mining Division, Southeast British Columbia", dated April 1, 1993.

6. I have visited the property on numerous occasions in 1991 and 1992, carried out geological mapping of the Lexington Project in September and October 1992, collected samples and checked a diamond drill core. I am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Lexington property by examining in detail the available reports, plans and sections, and have discussed previous work with persons knowledgeable of the area.

7. I do not own or expect to receive any interest (direct, indirect or contingent) in the property described herein nor in securities of Britannia Gold Corporation in respect to services rendered in preparation of this report.

8. I consent to authorize the use of the attached report and my name in the company's Statement of Material Facts or other public document.

Dated at Vancouver, British Columbia, this 1st day of April, 1993.

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

APPENDIX II

COST STATEMENT

Lexington Project

Fieldwork Done

Between September 15 and October 30, 1992

<u>COST STATEMENT - LEXINGTON PROJECT</u>

Fieldwork between September 15 and October 30, 1992

Wages and Benefits

J.T. Shearer, P.Geo., Geologist September 22-30, October 1-15, December 10-17, 1992 25 days @ $300/day	$ 7,500.00
W.B. Lennan, P.Geo., Geologist September 22-30, October 1-15, December 10-17, 1992 34 days @ $250/day	8,500.00
T. Finnigan, Magnetometer Survey September 23-26, 1992 4 days @ $125/day	500.00
W. Markin, Magnetometer Survey September 28-30, October 1-7, 1992 9 days @ $150/day	1,350.00
S.P. Butler, P.Geo., Geologist February 2-26, March 1-19, 1993 24 days @ $235/day	5,640.00
Wages Subtotal	23,490.00
G.S.T. on Wages	1,644.30
Total Wages	25,134.30

Transportation

Truck Rental	1,408.56
Gas	630.83
Meals and Accommodation (meals $586.94)	1,645.85
Field Supplies (topo thread, vellum)	187.59
Magnetometer and Base Station	1,641.40
Computer Rental and Software	2,000.00
Plotter Rental	600.00
Report Preparation	900.00
Word Processing	300.00
Reproduction	150.00
GRAND TOTAL	$ 34,598.53

APPENDIX III

ASSAY METHODS AND CERTIFICATES, 1992 SAMPLING
LEXINGTON PROJECT

Sample No. 1	TG-61	42 m - Massive pyrite in talc serpentinite
Sample No. 2	TG-62	39.6-40.5 - Magnetite
Sample No. 3	TG-63	9.0-9.62 - Silicified magnetic talc
Sample No. 4	TG-63	9.62-9.95 - Massive pyrite
Sample No. 5	TG-63	52.8-54.01 - Massive pyrite
Sample No. 6	TG-63	58.28-59.6 - Massive sulfide
Sample No. 7	TG-80	82.8-83.8 - Massive sulfide
Sample No. 8	TG-80	93.3 - Bleached hole
Sample No. 9	TG-80	129.5 - Pyrite, magnetite, chalcopyrite
Sample No. 10	TG-81	79-80 - Ore zone
Sample No. 11	TG-81	80-81 - Ore zone
Sample No. 12	TG-81	81-82 - Ore zone
Sample No. 13	TG-81	82.4-83.8 - Massive sulfide
Sample No. 14	TG-85	36.35 - Pyrite veining, not split
Sample No. 15	TG-85	65.95 - Pyrite veining, not split
Sample No. 16	TG-85	69 - Quartz sulfide vein
Sample No. 17	TG-85	76.3-76.5 - Quartz sulfide vein
Sample No. 18	TG-85	81.5-81.69 - Quartz sulfide vein
Sample No. 19	TG-85	87.1-90.4 - Quartz sulfide vein
Sample No. 20	TG-85	100.6-101 - Sulfide mineralization
Sample No. 21	TG-85	105 - Massive sulfide
Sample No. 22	TG-86	35.4 - Sulfide zone in siliceous zone
Sample No. 23	TG-86	67.64-67.84 - Small ore zone
Sample No. 24	TG-86	68.34-68.9 - Massive sulfide band
Sample No. 25	TG-86	69-70 - Ore zone
Sample No. 26	TG-86	70.45-70.9 - Ore zone

Samples Selected for Assay

BL 92-48	Intense quartz vein flooding of chloritic talc schist Lincoln vent raise - 1:2,500 map
BL 92-50	Quartz - sericite material from dump of City of Paris - rusty and pyritic, 1:2,500 map
BL 92-52	Diorite at L4+50E at baseline - slightly chloritized, 1:2,500 map
BL 92-58	Fine-grained chlorite - minor disseminated pyrite. On baseline area L2+50W, NW, 1:500 sheet
BL 92-60	Mineralized quartz vein material from Lexington shaft area from L150W to 1+80N, NW, 1:500 sheet
BL 92-65	Altered volcanic - grey green with malachite on line 536 near station 100N by DDH10, NW, 1:500 sheet
BL 92-68	Highly altered light cream-coloured, brecciated. Abundant malactite and chalcopyrite in trench downslope from near T-50 branch road NW, 1:500 sheet
BL 92-69	Very siliceous felsite adjacent to BL 92-68. Blebs of pyrite and chalcopyrite, NW, 1:500 sheet
BL 92-71	Shear zone material in trench east of L2+50E station 60S, center, 1:500 sheet
BL 92-73	Shear zone material in same trench as BL 92-71, center, 1:500 sheet
BL 92-79	Shear zone material in same trench as BL 92-71, abundant malachite, Center, 1:500 sheet
BL 92-76	Rusty quartz sericite - pyrite rock from sheared area. Float sample taken at the 150W station 2+00, NW, 1:500 sheet
BL 92-77	Magnetite-rich talc schist 10 m east of two magnetite-rich pits near Lexington (between L0 and L50W stations 120N
BL 92-82	Magnetite-rich talc schist 10 m east of two magnetite-rich pits near Lexington (between L0 and L50W stations 120N
BL 92-83	Massive magnetite from small pits near Lexington east of L50W 120N, NW, 1:500 sheet
BL 92-81	Weakly pyritic altered volcanic. Often abundant malachite. Ranges from light grey green to medium grey green depending on chlorite alteration, NW, 1:500 sheet

BL 92-84	Light grey-green altered volcanic. Relict phenocrysts, porphyritic textures. Some quartz eyes. Center, 1:500 sheet, near line 3+00E 2+855, in trench
BL 92-86	Altered volcanic with abundant malachite and minor chalcopyrite in trench along L4+50E near station 1+50S, 1:2,500 map
BL 92-88	Altered porphyritic volcanic with white matrix and minor mafic laths in trench down hill from L6+00W station 3+20S, Golden Cache, 1:500 south sheet
BL 92-94	Sulfide vein material near opening of old adit L1100W station 800N, Vacher 1:500 center sheet
BL 92-95	Brecciated and altered sericitic host rock for vein sampled in BL 92-94. Serpentinite sections. Vacher, 1:500 center sheet
BL 92-108	Siliceous siltstone, black with abundant po. on L1200W near old log cabins, probably near station 850N, Vacher 1:500 center sheet
BL 92-117	Quartz vein from No. 7 main large vent raise
BL 92-122	Quartz vein from No. 7 vein in caved stope between No. 7 portal and vent raises

APPENDIX IV

DRILL RECORDS

(Relogging of Previous Drilling)

BRITANNIA GOLD CORPORATION
LEXINGTON PROJECT
DIAMOND DRILL RECORD

HOLE NUMBER:	88-04
Area:	Vacher Zone
Location:	Latitude 4411N, Departure 4944E
Elevation:	1466
Bearing:	225°
Dip:	45°
Length:	
Date Started:	1988
Date Completed:	1988
Original Log:	J. Ellerington
Relogged:	March 1992 by J.T. Shearer

From	
0.00 - 1.20	CASING. NO CORE.
1.20 - 6.10	LISTWANITE: Bright green fuchsite prominent 5-10% average fuchsite irregularly distributed, irregular white quartz-feldspar veining common, abundant ankarite, minor limonite along fractures especially in upper sections, traces of chlorite, associated with fuchsite layers. Non-magnetic or occasional trace of magnetite schistose at 60° to C.A.
6.10 - 10.60	TALC SCHIST: Dark grey talc-rich sections with minor fuchsite in patches, schistosity at 55-60° to C.A., minor feldspar veining at abundant carbonate, gradational contact both above and below minor relict magnetite, variable angles.
10.60 - 1.60	LISTWANITE: Bright green 8% fuchsite prominent limonite common. 2% diss. chl. Foliation very rough. Foliation defined by chlorite 70° to C.A. Feldspar-quartz veining less than above, mostly at 25° to C.A.
11.67 - 12.20	Bleached and Altered "DIORITE" DYKE, relict biotite, possible relict plagioclase, fine-grained 2-4% disseminated pyrite, traces of sphalerite and galena. Slickensides at top along fractures at 30°to C.A. 90° to fracture surface. 11.80 m - 1 cm quartz vein with galena sp?? & cpy
12.20	LISTWANITE: Spotty fuchsite development, abundant talc throughout, 3% fuchsite overall, upper contact marked by slickensides on fracture at 35° to C.A. Minor diss. chlorite, talc schist 12.20 - 12.50, irregular feldspar veining, limonite along fractures.

Gradual decrease in fuchsite, increase in talc

18.4 - 21.3 — TALC SCHIST: Light and dark alternating bands, schistosity at 60° to C.A., wispy banding common, minor relict magnetite, very talc-rich, traces of fuchsite, traces of chlorite (?)

21.1

21.3 - 34.0 — ALTERED DIORITE:
(MINERALIZED ZONE)
Light grey, relict igneous texture with ghosts of plagioclase, definitely foliated, at 60°to C.A. throughout, feldspar veining irregularly at low angles to C.A., ankeritic salvages, relatively hard (no talc or sericite alteration), trace of relict biotite now mostly altered to sericite, euhedral + disseminates, pyrite variable (higher gold values with higher pyrite contact), pyrite aligned mainly along schistosity plans

Samples collected for petrology

Core not spilt very well, 78 - 83 feet (some ???? not split at all)

34.0 - 36.0 — LISTWANITE: Talc-rich schist with fuchsite along schistosity planes, fuchsite strongest near diorite with a gradual decrease towards end

Some quartz-feldspar veinletting at variable angles. Schistosity variable around 65° to C.A.

36.00 - 40.20 — TALC SCHIST: Light and dark grey banded, less lighter bands than above, very talc-rich, 1% magnetite, darker bands predominate, schistosity at 70°to C.A., gradational lower contact, fuchsite gradually becomes more abundant.

40.20 - 53.8 — LISTWANITE: Bright green fuchsite throughout but short sections of dark talc schist within the listwanite interval at 42.8 - 43.9, magnetic talc schist. Light-coloured zone of listwanite 150' - 160' with fragments of less altered serpentinite up to 10 cm long. Bright fuchsite-rich section 160' to 53.8 gradational lower contact over 1 m. Schistosity in lower listwanite at 40 - 45° to C.A., very crude schistosity but variable over short distances.

53.8 - 64.6 — TALC SCHIST: Mostly light grey and dark grey, banded, very talc-rich. Relict serpentinite common throughout, schistosity at 50°.

Gouge 58.2 - 58.5 at 60° to C.A. contact, more gouge at 63.5 - 63.7, grey colour at 75° to C.A. Relatively sharp lower contact at 64.6 m - 55° to C.a. schistosity.

64.60 - 73.60 SERPENTINITE: Talc-rich, mainly dark green, sheared appearance.

73.60 - 79.20 TALC SCHIST: Alternating light and dark banding, highly contorted appearance.

Foliation near end of interval 10° to C.A., changing to 50° at EOH. Moderate magnetite throughout talc schist.

EOH

BRITANNIA GOLD CORPORATION
LEXINGTON PROJECT
DIAMOND DRILL RECORD

HOLE NUMBER:	88-05
Area:	Vacher Zone
Location:	Latitude 4411N, Departure 4944E
Elevation:	1466
Bearing:	225°
Dip:	-90°
Length:	65.5 m (215 ft.)
Date Started:	
Date Completed:	
Original Log:	J. Ellerington
Relogged:	April 1992 by S.P. Butler

From	
0.00	CASING. NO CORE.
	Box 1 spilled
	11.6 m start of Box 2, 17.5 m End of Box 2
11.6 - 14.2	LISTWANITE: Bright green fuchsite 1 to 5% with quartz-feldspar veinlets at irregular angles within a talc-schist gradual decrease in fuchsite towards end of unit.
14.2 - 17.5	TALC SCHIST: Grey and white talc schist with minor fuchsite along schistosity. Schistosity angles variable from 45° to 90° C.A. Some minor quartz-feldspar veinlets.
	Box 3 and 4 spilt.
28.9 - 37.8	ARGILLACEOUS SCHIST: Finely laminated black and creamy contorted and folded argillite schist. Minor narrow veinletting also folded.
32.8 - 40.8	TALC SCHIST: Laminated black and white talc schist with minor fuchsite (0.5 - 1%) and quartz veinlets. Schistosity highly variable from 55° to 90° C.A. Some ankerite near 35 m in blebs along schistosity planes.

40.8 - 42.7 — LISTWANITE: 5-10% bright green fuchsite with 5% quartz-feldspar veinlets often sub-parallel to C.A. Schistosity of talc schist origin is about 45° C.A.

42.7 - 60.8 — ALTERED DIORITE: Light green, fine-grained diorite. Possibly sericite alteration although locally it is silicified and veinletted. Fine-grained disseminated py throughout this unit, locally up to 5%. Contacts are broken and lost when core was split. Tan brown weathering. There are some rose pink and creamy veinlets. There is an increase in silicification and disseminated py from 51.5 m to the end (60.8 m).

60.8 - 65.5 — SERPENTINITE: Dark green and black layered rock with some creamy talc interlayers. Lenses of magnetite. Layers (schistosity?) at 70 to 85° to C.A., some contorted and folded layers.

BRITANNIA GOLD CORPORATION
LEXINGTON PROJECT
DIAMOND DRILL RECORD

HOLE NUMBER:	88-06
Area:	Vacher Zone
Location:	Latitude , Departure
Elevation:	
Bearing:	240°
Dip:	-45°
Length:	182.6 m
Date Started:	1988
Date Completed:	1988
Original Log:	J. Ellerington
Relogged:	March 1992 by J.T. Shearer

From

0.00 - 6.10 — CASING. NO CORE.

6.10 - 15.8 — SILTY SCHIST: Mainly grey-green, some brownish sections, relatively fine-grained. Foliation varies from 55 - 75° to C.A., irregular foliation intensity, some highly foliated intervals. Abundant light grey feldspar schistosity bands. 0.5% pyrite disseminated, traces of cpy along low-=angle fractures. Tan-green laminations are carbonate-rich. Original rock - impure siltstone (?)

15.8 - 17.7 — ALTERED DIORITE (DYKE): Vague feldspar phenocryst, 7501A. Chloritic along fractures. Trace of disseminated pyrite. Lower contact at 50° to C.A.

17.7 - 22.3 — ARGILLACEOUS SCHIST: Black, finely laminated. Abundant white carbonate bands. Schistosity at 55 - 65° to C.A. Prominent alternating black and white texture. Very little pyrite with occasional ?? positions.

22.3 - 23.0 — ALTERED DIORITE (DYKE): Fine-grained, grey with greenish tint. Some fine (~ 1 mm) feldspar phenos, trace dissem. py.

23.0 - 27.4 (?) — Box 4 spilt in stacking.

27.4 - 34.7 (?) — SCHIST: Fine-grained, banded biotite and creamy carbonate schist. Banding (schistosity) varies from 90 to 30° to C.A. Colour variable from tan-brown to grey-green with creamy white carbonate interbanding 0.5 - 1% disseminated py. Occasional quartz and quartz-carb veinlets ?? to schistosity.

34.7 - 51.7 (?)	Boxes 6, 7 and 8 spilt in stacking.
51.7 - 72.2	<u>SCHIST</u>: Quartz biotite schist with very irregularly shaped quartz bands rough ???? to schistosity defined by biotite and minor chlorite. Colour is variably tan to light green with white quartz interbands. Minor disseminated py. Schistosity is 50 to 75° to C.A.
72.2 - 77.9	<u>ALTERED DIORITE (DYKE)</u>: Fine-grained light green limonite and carbonate along healed fractures. Trace fine-grained disseminated py. Limonite increases toward the bottom of unit. No angle on contacts.
77.9 - 103.3	<u>CHLORITIC SCHIST</u>: Quartz-sericite (chlorite)-carbonate-chlorite schist. Fine-grained medium to dark green with white bands, relatively uniform overall. Schistosity ~ 60 - 75° to C.A. but poorly developed and tension gashes. Fault (healed fragments) 83.2 - 83.8. Pyritic, strong limonite staining on fracture at low angles to C.A. with fault, 95.1 - 96.6 fragments strong (sericite?) alterations. Slightly elevated gold values, very chloritic, some disseminated py in ???? chlorite. Possible: originally andesite, perhaps tuffaceous.
103.3 - 109.0	Box missing, Box 20
109.0 - 119.8	<u>CHLORITIC SCHIST</u>: Dark green, relatively uniform, poorly schistose quartz-sericite-carbonate-chlorite-limonite along some fractures.
119.8 - 121.9	<u>SERPENTINITE</u>: Dark green gradational contact as serpentine and minor chlorite-epidate increases. 1-2% disseminated py. No developed direction of foliation/schistosity. 1-2% magnetite.
121.9 - 143.9	<u>LISTWANITE</u>: Bright green fuchsite prominent, well banded at 60 - 70° to C.A. Carbonate common throughout, also carbonate veining. Minor intervals of dark sericite-chlorite and bleaching representing relict fragments of serpentinite. Minor magnetite in areas of lesser fuchsite. These are grey talc-rich zones. 138.6 - 30 cm ground core, rubble, fault zone, variable carbonate-feldspar veining, fuchsite more abundant at lower end. Gradational lower contact of units, gradual decrease below serpentinite fracture and bleaching 139.6 - 140.4 of fuchsite content. More abundant talc-rich sections.
143.4	<u>TALC SCHIST</u>: Dark grey, very talc-rich, pervasive talc crudely banded dark grey and light grey. Only trace of magnetite left. Abundant carbonate. Probably very sheared and altered serpentinite, very soft.

Schistosity at 75 - 85° to C.A. Easily fractured at 60 - 80° to C.A. but overall rock is competent.

151.3 - 151.6 gouge at 90° to C.A., also 154.2 - 154.4 at 50° to C.A. lower. Pinkish stain in gouge. Possible relict serpentinite short interval 160.0 - 160.5.

Alteration lessens 171.6 and below, more relict serpentinite. More wispy layers of talc. Much more relict magnetite near end of hole. Schistosity at EOH at 50° to C.A.

EOH 182.6

BRITANNIA GOLD CORPORATION
LEXINGTON PROJECT
DIAMOND DRILL RECORD

HOLE NUMBER:	88-07
Area:	Vacher Zone
Location:	Latitude , Departure
Elevation:	
Bearing:	
Dip:	
Length:	147.32
Date Started:	
Date Completed:	
Original Log:	J. Ellerington
Relogged:	March 1992 by J.T. Shearer

From

0.00 - 3.0 — CASING. NO CORE.

3.0 - 27.6 — ARGILLACEOUS SCHIST: Black to dark green, lighter grey quartz-carbonate bands common. Non-magnetic. Pyrite layers parallel to schistosity. In upper part schistosity varies from 20 to 30° to C.A., fracturing cutting foliation. Graphite very common throughout along fractures parallel at a high angle to schistosity 30° C.A. at 25 m. Drusy quartz coating some fractures. Altered ???? dyke at 14.4 - 14.5 contacts parallel to schistosity 35°. 1% finely disseminated pyrite, slightly foliated.

27.6 - 29.0 — DIORITE DYKE: Light to moderate green, medium crystalline, slightly altered, saussuritized, mafic minerals phenos up to 2 mm long ghosts, trace disseminated pyrite throughout, lower contact at 35° to C.A., upper contact variable.

29.0 - 32.8 — ARGILLACEOUS SCHIST: Black and light grey crenulated layers.

32.8 - 33.5 — DIORITE DYKE: Medium grey-green, med ????

33.5 - 36.8 — ARGILLACEOUS SCHIST: Dark grey-black, gre????. Lot more quartz and ??.

34.4 diorite dyke at 50° to C.A., 5 cm wide. Foliation crenulated toward lower part, micro movement along foliation planes, stylolite development.

36.8 - 37.4	DIORITE DYKE: Upper contact parallel in part and cross-cutting in part to schistosity 35°. Lower contact at high angle (65°) ??? for tiny schistosity.
37.4 - 48.4	ARGILLACEOUS SCHIST: Black, abundant graphite. Carbonate zone 38.4 - 39.0 Pyrite seams and ???? common. Schistosity very contorted and crenulated.
48.4 - 53.45	PORPHYRITIC DIORITE DYKES: Medium green, medium ????. ???? phenos up to 5 mm long. Short argillaceous section 48.7 - 48.9. Min. Lower contact 95° to C.A.
53.45 - 55.56	ARGILLACEOUS SCHIST
55.56 - 56.70	DIORITE DYKE: Very weakly porph
56.70 - 59.85	ARGILLACEOUS SCHIST: Black --- more graphitic, schistosity still very irregular but generally steeper. Dyke 56.9 - 57.0, carbonate content increasing.
59.85 - 60.34	DIORITE
60.34 - 62.3	SILICIFIED ZONE: White quartz that extends as intense silicification in the argillaceous schist. Gradational lower contact. Sphalerite at 61.0. Galena in quartz ???? 61.7 and disseminated pyrite.
62.3 - 66.75	SILICIFIED ARGILLACEOUS SCHIST: Narrow dyke at 63.0
66.75 - 67.4	DIORITE: Disseminated pyrite throughout, small lenses of fuchsite. Trace graphite on fractures.
67.4 - 68.23	ARGILLACEOUS SCHIST: At contact traces of sphalerite and galena.
68.23 - 69.40	DIORITE: Geochem. Gold anomalous 940 ppb, straddling contact.
69.40 - 72.40	SILICIFIED ARGILLACEOUS SCHIST: Slightly greenish in colour. (NOT Andesite). More silicified sections have less well developed foliation. Minor graphite on 10 - 20° fractures.
72.40 - 73.30	DIORITE DYKE: Altered, brownish, fine-grained 1% finely disseminated pyrite, siliceous appearance. Brecciated lower contact.

73.30 - 74.16	ARGILLACEOUS SCHIST: Schistosity irregular to convoluted. Increase in ankerite along schistosity graphite along fracture.
74.16 - 77.50	DIORITE DYKE: Medium crystalline in part, abundant black hairlines. Chlorite-quartz vein at 0 - 10° to C.A., 1 cm wide 76.0.
77.50 - 91.81	BROWNISH ARGILLACEOUS SCHIST: Relatively pronounced colour change to mainly brown, layering and schistosity at 35° to C.A. Much more abundant ankerite throughout central portion of interval is irregular network of veining and patches. Chlorite common on fractures near lower contact and slightly more siliceous appearing, very chlorite lower contact at 80° to C.A.
91.81 - 92.54	DIORITE: Medium to fine-grained crystalline, uniform, slight foliation. Two sets of fractures at 80° + 50° to C.A., both chlorite-coated.
92.54 - 93.16	BROWN ARGILLACEOUS SCHIST: Pronounced brecciated appearance, flow texture, chlorite on fractures at 40° to C.A.
93.16 - 95.36	DIORITE: Medium to fine crystalline, pyrite and chlorite films on fractures, uniform, brecciated lower contact over a short distance.
95.36 - 99.13	ARGILLACEOUS SCHIST: More dark grey colour, less brecciated. Narrow pyrite seams and layers common, fracturing mainly 10 - 20° near lower contact.
99.13 - 102.30	DIORITE: Sparse but well developed phenocrysts up to 5 mm around central part of interval, minor schist inclusion 100.2
102.30 - 104.10	BROWN ARGILLACEOUS SCHIST: Schistosity 70° to C.A. changing to irregular 10° near lower contact.
104.10 - 107.00	DIORITE: Medium crystalline, 1 - 2% of disseminated fine-grained pyrite, rough foliation. Schist fragments up to 2 cm in diameter, up to 10 cm before contact, partly digested.
107.0 - 109.0	ARGILLACEOUS SCHIST: More brownish and greenish layers "m???? in fractures", irregular schistosity ?? 70° to C.A. Hairline seams and lenses of py and disseminated py. Very chl fract at contact 10 - 20° to C.A.
109.0 - 110.7	DIORITE: Medium to fine-grained, relatively uniform. Lower contact 70° to C.A.

110.7 - 111.3	BROWN ARGILLACEOUS SCHIST: Less well developed schistosity 70° to C.A.
11.30 - 112.8	DIORITE: Medium to fine-grained, fractures coated with chl at 65° to C.A.
112.8 - 126.4	ARGILLACEOUS SCHIST: Top of interval is more uniform brown to 114, then pronounced change to greenish-grey schist. Interlayered with white bands at 70° to C.A. Fault - Graphitic Zone - 117.4 - 119.1, brecciation at 65 - 75° to C.A. Greenish to dark grey schist to lower contact, some parts have abundant flow-breccia textures or fragmental origins, schistosity varies between 50 and 75°.
126.4 - 141.65	DIORITE: Much more fractured, punky appearance in upper part, rust-chl-coated fractures. Very altered 127.0 - 128, fine-grained siliceous appearance. Sparse chl on fract, relatively uniformly disseminated. 1% pyrite, pyrite also along fractures. Occasional lense of dark green chlorite around coarse calcite crystals -- appears to be open space filling. Siliceous Zone 135.85 - 138.20, white, very fine-grained, minor chl wisps. Siliceous Zone 139.70 - 141.65.
141.65 - 147.32	INTERLAYERED ARGILLACEOUS AND CHLORITIC SCHIST: Schistosity at 35° to C.A., pronounced kinking of schistosity along fractures.

EOH

TG-85

Teck log not presently available

Relog October 14/92

JTS + WBL

0-7.32 OV6

7.32-39.5 chl alt volcanics

dark green, quartz veining subparallel to C.A.
slight bleaching below 11.58-13.50 qtz veining 80° to C.A.

13.50 back to very chloritic

15.0 core broken - FeO, Malachite

21.8 shear zone 75° to C.A.

25.8 - split core, siliceous band, some rubble

28.35 - Bleached, very rubbly core at 31.0

34.14 Dark Fault gouge. Core ground
Slickensides -
Fracturing 45°
Mod to slight chlorite, Malachite

White-bleached 36.35-38.50 gouge 37.00

Should be split Massive pyrite + cpy veining @ 36.35 m @ 30° to C.A.
and @ 39.40 m @ 25-30° to C.A.

Shear zone - slight gouge @ 30° to CA. 38.5

38.5-56.9 Chloritic altered volc. upper contact 65° to C.A. with bleached
Small shear 43.30 - 15° to C.A.
Minor py blebs in qtz at 44.0
- 46.8 fracture 5° to C.A.
- 51.21 more intense chl. altn on fractures ~ 45° to C.A.
- 52 m fault zone w/ chl a bx matrix and qtz
vein 30-35° to C.A.
- 52.4 m shear adjacent to a 4 cm qtz vein 75° to C.A.

56.9-57.4 Dk. grey to charcoal porphyritic (feldspar) dyke
- upper coated w/ chl alt'd volc - gradation at a 75° to C.A.
- lower contact 87° to C.A.

57.4-71.96 - Chlorite alt'd volc. light grey green massive w/ chl. on fract. More bleached and silicified.
- 65.75 sulphide veining adjacent to qtz vein 28° to C.A.
(sampled - cove not split)
from 65.75 to 69.2 m weakly dissem. sulfides some along fract
- 69 m qtz sulfide vein 10 cm thick 73° to C.A.
- sample taken (not split)

71.96-72.66 - small apple green fine-grained dyke - brecciated and qtz filled upper & lower contacts 75° to 80° to C.A.

72.66-79.5 - Bleached & chl. alt'd volcanic - sheared with increasing graphite w/ chl. on shear planes - particularly at 7??

- 74.4 to 75.5 - darker green version not sulfides erratically distributed along fract. - From 72.8 to 75.5 should be split.

75.5-78.5 - broken core - very fractured bleached volc. with clay and talc? altn along fract. dominant fracturing 75° to lip but many other angles

Core split starting at

- 76.3 to 76.5 20 cm brecciated and qtz-sulfide veined section take sample

78.5-78.9 - very clay alt'd alt'd volc brecciated as one approaches fault gouge at 78.9

*78.9-81.5 lite greenish Fault Gouge - possibly 35° to C.A.
From 78.8 m to 81.5 m approx. 1.5 m of core missing
From after gouge or 79.2? m to 81.5 m - lt. grey green chl. & clay alt'd volc.

81.5-81.69 - Qtz sulfide vein ~ 65° to C.A.

~ 82 m-83.3 Fault Gouge - No angle to C.A. available

NQ-BQ 83 m change (very faulted section)

From 81.69 to 83.3 m green gouge only 0.6 m of core 1.0 m missing

83.3- - lite grey green alt'd volc. sheared. w/ graphite occasionally on slip surfaces, qtz zones with py throughout

87.1, 89.0-90.4 pyrite lenses in qtz, sample taken gradually becoming more chloritic generally sheared appearance

pyrite lense at 94.49
graphite throughout

Assy Pyrite lense - 100.62 - 101
just above very rubbly & gouge zone
102.5 - 104.0

102.4-114.0 Very sheared. Serpentine contact - very sheared
20 cm of talc on top 102.2 - 102.4
Punky fault gouge 111.0 - 112. 25° to C.A.
25° - 30°

Talc altered

Assay Shearing 77° to C.A.
67° - 77°
pyrite zone 104.85 - 105.
sample 1048? pyrite ground up too

114.0 Slightly less sheared serp

EOH - 121.31 metres