Kamloops

85-243-13617

5 yrs confidential

Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)	TOTAL COST
- Geophysical-Drilling-Drifting-Sampling	$1,886,931.38

AUTHOR(S) John Bellamy SIGNATURE(S) X J. Bellamy

Rodney Arnold X Rodney Arnold

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED APRIL 25, 1985 YEAR OF WORK 1984

PROPERTY NAME(S) Bralorne Mine, Lillooet Mining Division

COMMODITIES PRESENT Gold

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN 092JNE001, -002, -004, 007

MINING DIVISION Lillooet Mining Division NTS 92J 15W

LATITUDE 50° 47' 30" N. LONGITUDE 122° 50' E

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property (Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)):

see claim summary in Table 3 of report (a list of 4 pages)

OWNER(S)

(1) Bralorne Resources Limited (2) E. & B. Explorations Inc.

MAILING ADDRESS

3100, 205-5th Avenue S.W. 1440-800 West Pender Street

Calgary, Alberta T2P 2V7 Vancouver, B.C. V6C 2V6

OPERATOR(S) (that is, Company paying for the work)

(1) E & B Explorations Inc. (2)

MAILING ADDRESS

1440-800 West Pender Street
Vancouver, B.C. V6C 2V6

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

The Bralorne-Pioneer mining district is underlain by folded ~~Permian~~ to Jurassic sedimentary/volcanic rock units which have been faulted and intruded by subvolcanic Upper Jurassic aged gabbros, diorites, soda granites and albitic dykes. Andesitic-Dacitic volcanic units within the Bridge River Series are folded and metamorphased and are called the Pioneer Greenstones. Regional northwest striking reverse faults encompass the volcanic and intrusive units which host gold bearing fissure and tension veins.

REFERENCES TO PREVIOUS WORK

(over)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)			
Ground			
Photo			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
VLF Electromagnetic EMGR	~~2682m~~ 2.7 KM	L 539, L 1177, L 5468	$1,237.50
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ....)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core DIAD Surface	7022m NQ ~~in~~ 33 holes	L 539, L 5470, L 5468, L1177, L 673	$624,426.82
~~Non-core~~ UGD. UNDD	2019m AQ, BQ in 15 holes	L 459, L 457, L 665, L 587, L 579, L 665, L 587, L459	$262,355.86
RELATED TECHNICAL		L 579	
Sampling/assaying	2534 ~~Gold Fire Assays~~ Au	L 539, L 673, L 5470, L5468, L1177, L457, L5478	$113,645.95
Petrographic	22 ~~Thin Sections~~	L 539, L 673, L 5470, L 5468	
Mineralogic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)			$6,495.05
Topographic (scale, area)			
Photogrammetric (scale, area)			
Line/grid (kilometres)			
Road, local access (kilometres)	2.4 Km	L5469, L457, L539, L673, L1177, L5468, L5470	$17,490.18
Trench (metres)			
Underground (metres) UNDV	315.24m drifting	L 457, L 665, L 579	$861,280.02

Physical is excluded from PAC

TOTAL COST $1,886,931.38

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report) 1,884,431.38				1) require qualifications for core logger Tindall, Griesbach, X
Value of work approved	E+B EXPLORATIONS INC.			2) logs should be in Metric Measurment. /
Value claimed (from statement) 2,000.00				3) Appendix 6 missing (assay results) — ~~with~~ with logs O.K
Value credited to PAC account 1,023,651.36		—	1,023,651.36	4) couldn't find location of core storage in text or on X maps
Value debited to PAC account				Information Class 1
Accepted E.J. Date 21 NOV/85	Rept. No. 85-243-13617			minute old mill blu

Tindall - grad 1980 Geog. geologist
Griesbach - grad geol. 1982

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources
MINERAL RESOURCES BRANCH–TITLES DIVISION

SUB-RECORDER
RECEIVED
APR 25 1985
M.R. # 2272 /IE $ 110.00
VANCOUVER, B.C.

MINERAL ACT

FORM I

NOTICE TO GROUP

Mining Division LILLOOET Location BRALORNE

Name of group BRALORNE 85-1 Map No. 92J/15W

We, the undersigned owners* of the following adjoining claims, desire to group them according to the provisions of the *Mineral Act*:–

NAME OF CLAIM	No. of Units	Record No.	Month of Record	SIGNATURE OF OWNER*	Free Miner Certificate No.
Countless	1	L.1177		Erik Andersen	Andee/274280
Eagle Fr.	1	L.5468			
Eagle	1	L.5469			
Eagle No. 1	1	L.5470			
Little Joe	1	L.539		Agent for	
Exchange Fr.	1	L.673		Bralorne Resources	
Ida May	1	L.457		Limited	
Mary Fr.	1	L.459			
Blackbird	1	L.1176			
Hiram	1	L.581			
Copeland	1	L.580			
Night Hawk	1	L.666			
Lurgan Fr. No.1	1	L.667			
Alhambra	1	L.665			
Golden King	1	L.587			
Wood Chuck	1	L.579			
Cascade Fr.	1	L.5480			
Telephone Fr.	1	L.5489			
Telephone	1	L.670			
Invincible	1	L.3091			
Millbank	1	L.5582			
Cora Fraction	1	1800(6)	JUN	Agent for	
Ace Fraction	1	1984(2)	FEB	E&B Explorations Inc.	EBEX1/274279

85-243-13617

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,617
PART 1 OF 4

4/89

BRALORNE MINE PROJECT

REPORT ON THE 1984 EXPLORATION WORK

Lillooet Mining Division
Bridge River Area, British Columbia
NTS 92 J/15
Latitude 50° 46'N Longitude 122° 48'E
Work Period: July 1 - December 31, 1984

E & B Explorations Inc.
1440 - 800 West Pender Street
Vancouver, B.C. V6C 2V6

March, 1985

J. Bellamy, Senior Geologist
R. Arnold, Project Geologist

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VOLUME 2

VOLUME 3

SUMMARY & RECOMMENDATIONS

The Bralorne mine property, which is comprised of 133 Crown Granted mineral claims and 2 staked mineral claims, includes the workings of two major former producers, Pioneer Gold Mines Ltd., and Bralorne Mines Ltd. In July 1980, E & B Explorations Inc., and partners entered into an agreement with Bralorne Resources Limited to acquire an interest in the Bralorne property through the expenditure of exploration funds. The 1980-1983 exploration program which cost $6.4 million earned E & B Exploration Inc. and its' partners a total interest of 55.8% of which E & B Exploration Inc.'s share was 20.3%. This program consisted of 27,592 feet of surface and underground drilling, shaft dewatering, hoist installation, vein sampling and the preparation of feasibility and Stage I Reports.

The 1984 exploration work continued the assessment of the gold reserve potential above 800 Level in the Alhambra area and in the hanging wall and footwall vein systems of the 51 structure. Surface drilling totalling 23,033 feet concentrated on near surface gold bearing shoots within the Taylor, 51B Footwall, Countless-77 and 52 Vein systems. Underground, 6624 feet of diamond drilling tested unexplored areas adjacent to the 800 Level workings and provided up dip information on newly explored vein structures. Four drift headings totalling 1034 feet opened up new veins and provided stations for further exploratory drilling.

From the 1980-83 studies, gold reserves in the proven, probable and possible categories between Levels 800 and 2600 total 915,000 tons grading 0.25 ounces gold per ton. Surface drilling during the 1984 work program in the area of the old Pioneer-Bralorne property boundary has indicated that additional gold reserves exist within the 51B Footwall Vein and subsidiary vein structures occurring in the hanging wall and footwall. A preliminary tonnage estimate from this program indicates 115,521 tons of proven and probable ore grading 0.40 ounces gold per ton and possible reserves of 27,332 tons grading 0.46 ounces gold per ton (diluted to 4.0 feet minimum width) for a total of 142,853 tons grading 0.41 ounce gold per ton.

A recommended exploration program for 1985 on the Bralorne project is summarized as follows:

a). Surface evaluations in designated areas to include geophysical and geochemical surveys, geological mapping and diamond drilling.

b) Rehabilitation of the Empire Shaft between the 300 and 400 Levels to provide access to the 451B FW Vein structure which will facilitate geological mapping and sampling.

c) Underground exploration to include geological mapping and resampling in several 800 Level locations, re-evaluation of 1980-81 drill data and diamond drilling.

d) Exploration drifting and underground drilling to help further delineate reserves in the area of the 51B FW structure.

By undertaking the recommended exploration program, it is reasonable to assume that a substantial increase in gold reserves of comparable grade can be realized. Estimated expenditures required to conduct this program are $1,750,000 CDN.

Respectfully Submitted

J. Bellamy, Senior Geologist

R. Arnold, Project Geologist

TABLE 1

SIGNIFICANT INTERSECTIONS ASSAYS

SURFACE DRILLING

					Location			Orientation		Length	Cumulative Total
Hole No.	Vein	Interval	Gold oz/ton	Width(ft.)	North	East	Elevation	Azimuth	Inclination	(Feet)	
84-17	Taylor	608.2-608.5	0.041	0.3	4566	12,795	4594.7	194°	-57°	947	10060
	51B FW (HW Split)	856.5-857.5	0.019	1.1							
	51B FW (HW Split)[1]	(856.5-858.5)	0.0295	2.2							
84-18	51B FW (HW Split)	108.1-109.3	0.171	1.2	4444	11,746	4415	194°	-45°	375	1322
	51B FW (HW Split)	205.0-205.4	0.14	0.4							
	Slic'fd Soda Granite	206.5-207.3	0.124	0.8							
	51B FW	207.3-208.3	1.815	1.0							
		208.3-209.3	0.188	1.0							
		(207.3-211.3)	0.518	4.0							
84-19	51B FW	280-281.5	0.031	1.5	4448	11,746	4415	196°	-71°	746	2068
		281.5-283.1	0.413	1.6							
		(280.0-283.1)	0.228	3.1							
	New Vein	562.7-563.5	0.547	0.8							
	New Vein	701.3-701.8	0.155	0.5							
	Countless(77) Vein (HW Split)	743.7-744.6	0.50	0.9							
84-20	51B FW (HW Split)	689.4-690.2	0.428	0.8	4848	11,717	4600	194°	-70°	815	2883
	51B FW	707.2-710.3	0.079	3.1							
	51B FW (FW Split)	734.2-737.2	0.038	3.0							
84-21	51B FW	221.7-223.4	0.302	1.7	4411	11,827	4425	190°	-45°	795	3678
	New Vein	495.5-497.0	0.389	1.5							
	New Vein	502.9-504.2	0.833	1.3							
	New Vein[1]	(495.5-504.2)	0.20	8.7							
	77 Vein (HW Split)	657.1-658.0	0.034	0.9							
84-22	New Vein	482.1-483.1	0.161	1.0	5102	11,368	4477	188°	-70°	797	4475
	51B FW	714.2-716.6	1.191	2.4							
84-23	51B FW[1]	243-1-249.9	0.914	6.8	4412	11,827	4425	194°	-70°	428	4903
	51B FW (FW Split)	258.9-266.8	0.522	7.9							
	New Vein	340.3-342.3	0.049	2.0							
	New Vein[1]	(340.3-345.0)	0.120	4.7							
84-24	51B FW	341.5-343.0	0.046	1.5	4520	11,654	4413	194°	-75°	390	5293
	51B FW (FW Split)	354.1-360.3	0.015	6.2							
84-25	51 Vein	175.3-176.3	0.047	1.0	4937	12,163	4607	194°	-65°	1087	6380
	51 Vein[1]	174.3-176.3	0.139	2.0							
	New Vein	789.9-790.9	0.014	1.0							
84-26	No Significant				4647	11,470	4411	192°	-65°	449	6829
84-27	51B FW	319.25-321.3	0.235	2.05	4784	11,294	4407	190°	-60°	394	7223
84-28	51B FW	305.7-306.6	0.185	0.9	4918	11,127	4409	194°	-65°	894	8117
	51B FW (FW Split)	308.1-308.8	0.178	0.7							
	New Vein	419.8-420.3	0.182	0.5							
	Countless (77)	859-859.5	1.116	0.5							
84-29	New Vein	102.7-103.2	4.075	0.5	4353	12,022	4439	194°	-60°	809	8926
	New Vein[1]	(102.7-105.0)	0.934	2.3							
	51B FW	305.8-308.0	0.740	2.2							
	New Vein	363.2-363.9	0.560	0.7							
	77 Vein	769.4-771.0	0.103	1.6							
	77 Vein	(769.4-772.2)	0.072	2.8							

[1] Including wall rock
[2] Approximate hole locations

SIGNIFICANT INTERSECTIONS ASSAYS

SURFACE DRILLING

					Location			Orientation		Length	Cumulative Total
Hole No.	Vein	Interval	Gold oz/ton	Width(ft.)	North	East	Elevation	Azimuth	Inclination	(Feet)	
SB-30	51B FW Countless (77)	350.6-351.4 1076.0-1076.7	1.150 0.028	0.8 0.7	5076	10,951	4406	194°	-60°	1134	10,060
SB-31	52 Vein	624.5-627.0	0.146	2.5	3747	12,389	4364	194°	-65°	747	10,807
SB-32	51B FW New Vein New Vein[1] New Vein New Vein New Vein New Vein[1] New Vein (HW Split)	318.4-319.5 491.8-492.1 (490.1-494.1) 504.0-504.7 505.45-505.9 (503.1-505.9) (503.1-507.9) 808.8-809.4 (806.0-809.4)	0.070 6.166 0.476 1.158 5.188 1.146 0.769 0.659 0.131	1.1 0.3 4.0 0.7 0.45 2.8 4.2 0.6 3.4	4397	11,925	4437	184°	-65°	947	11,754
SB-33	51B FW (HW Split) 51B FW* (HW Split) 51B FW	358.0-358.5 358.5-359.5 359.5-360.1 (358.0-361.1) 437.3-439.7	0.145 2.412 24.935 5.653 0.111	0.5 1.0 0.6 3.1 2.4	5254	10,844	4404	192°	-60°	594	12,348
SB-34	51B FW 51B FW (FW Split) New Vein 77 Vein	257.0-259.2 268.1-269.1 627.8-634.0 785.6-786.1	0.907 0.251 0.080 0.046	2.2 1.0 6.2 0.5	4520[2]	11,653[2]	4413[2]	191°	-45°	913	13,261
SB-35	51B FW New Vein 77 Vein	388.8-396.5 496-497 880.7-882.4	0.018 0.152 0.248	7.7 1.0 1.7	4330	12,220	4462	194°	-45°	1037	14,298
SB-36	Silc'fd Soda Granite Shear Gouge 51B FW New Vein 77 Vein 54 Vein	134.5-136.2 152.7-154.1 281.6-282.4 637.3-642.6 822.6-823.3 975.1-976.5	0.114 0.149 0.140 0.043 0.020 0.146	1.7 1.4 0.8 5.3 0.7 1.4	4647	11,470	4411	190°	-45°	998	15,296
SB-37	No Significant				4291	12,418	4494	166°	-50°	856	16,152
SB-38	51B FW (HW Split) 51B FW	333.1-333.9 337.4-339.7	0.146 0.348	0.8 2.3	4715	11,387	4402	185°	-45°	397	16,549
SB-39	Taylor Vein	141.0-142.5 (137.0-142.5)	0.189 0.055	1.5 5.5	4223	12,628	4516	188°	-55°	445	16,994
SB-40	51B FW	281.1-283.2	0.392	2.1	4786	11,296	4407	194°	-45°	405	17,399
SB-41	51B FW	485.0-486.9	0.095	1.9	5340	10,778	4400	194°	-50°	526	17,925
SB-42	51B FW 51B FW[1]	625.1-625.45 (623.6-627.6)	0.170 0.114	0.35 4.0	5194	11,184	4460	186°	-64°	841	18,766
SB-43	51B FW	371.3-372.0	0.183	0.7	5248	10,854	4405	190°	-45°	494	19,260
SB-44	51B FW (HW Split) 51B FW 51B FW[1] 51B FW (FW Split)	309.1-310.6 360.7-361.0 (359.2-362.4) 366.4-367.8	2.317 0.511 0.080 0.175	1.5 0.3 3.2 1.4	5148	10,905	4405	189°	-50°	516	19,776
SB-45	Lost Above 51B FW				4405	10,905	5148	192°	-76°	621	20,397
SB-46	51B FW (FW Split)	359.3-360.5	0.159	1.2	4311	12,085	4439	194°	-60°	516	20,913
SB-47	New Vein 51B FW 51B FW (FW Split)	523.3-524.2 704.6-706.3 771.4-771.8	0.257 0.063 0.114	0.9 1.7 0.4	4662[2]	11,870[2]	4488[2]	220°	-78°	827	21,740
SB-48	51B FW (HW Split)	242.1-242.8	0.089	0.7	4576	11,570	4412	194°	-60°	356	22,096
SB-49	51B FW (HW Split) 51B FW (HW Split) 51B FW (HW Split)[1]	795.8-798.8 802.0-804.0 (795.8-804.0)	0.427 0.364 0.268	3.0 2.0 8.2	4569[2]	11,582[2]	4510[2]	192°	-70°	937	23,033

[1] Including wall rock
[2] Approximate hole locations

TABLE 2

SIGNIFICANT INTERSECTIONG ASSAYS

UNDERGROUND DRILLING

					Location			Orientation		Length	Cumulative Total
Hole No.	Zone	Interval	Gold oz/ton	Width(ft.)	North	East	Elevation	Azimuth	Inclination	(Feet)	
UB-21	ALHAMBRA-809	73.9-75.25[1] 207.5-210.4[1]	0.062 0.051	1.35 2.9	9620	5822	3430	336.5°	0°	368	
UB-22	ALHAMBRA-809	102.5-115.5[1] 453-460.8[1] 468-471.8[1]	0.077 0.044 0.176	13.0 7.8 3.8	9542	6022	3431	53°	0°	717	1075
UB-23	ALHAMBRA-809	238.4-242.6 250.1-252.3 455.2-455.7	0.052 0.084 0.219	4.2 2.2 0.5	9542	6019	3432	359°	0°	468	1543
UB-24	ALHAMBRA-809	16.0-17.2 264.0-264.4 389.7-394	0.102 0.175 0.035	1.2 0.4 4.3	9542	6018	3432	342	0°	453	1996
UB-25	HW of 51	239-241.5	0.269	2.5	6291	9736	3455	12°	0°	1171	3167
UB-26	FW of 51 Vein	337.3-339.4	0.052	2.1	6063	9935	3456	152°	0°	609	3776
UB-27	FW of 51 Vein	136.5-137.4 137.4-138.4 (136.5-138.4)	3.023 0.410 1.648	0.9 1.0 1.9	6065	9931	3456	256°	0°	157	3933
UB-28	ALHAMBRA-809	250.4-251.3	0.094	0.9	8884	6411	3436	283°	+20°	452	4385
UB-29	ALHAMBRA-809	312.0-315.0[1]	0.047	3.0	8896	6423	3437	326°	+20°	351	4736
UB-30	ALHAMBRA-809	62.7-64.2	0.865	1.5	9862	5868	3436	228°	+30°	151	4887
UB-31	ALHAMBRA-809	33.4-35.0 33.5-35.0[1]	0.026 0.102	0.6 1.5	9865	5867	3436	263°	+35°	151	5038
UB-32	ALHAMBRA-809	137.2-138.0	0.169	0.8	9868	5867	3435	287°	+30°	200	5138
UB-33	HW of 51	182.4-183.1 182.4-184.9	0.377 0.127	0.7 2.5	6290	9738	3455	46°	0°	353	5591
UB-34	ALHAMBRA-809	342.2-343.0[1] 343.0-344.5 (342.2-344.5)[1]	0.352 0.114 0.197	0.8 1.5 2.3	9605	6257	3435	64°	0°	453	6044
UB-35	FW of 51	3.4-4.9 (3.4-5.9) 484.7-485.0	0.207 0.142 0.062	1.5 2.5 0.3	6024[2]	9736[2]	3456[2]	155°	0°	580	6624

[1] Includes wall rocks
[2] Approximate hole location

INTRODUCTION

The Bralorne-Pioneer gold quartz deposits occur along the eastern flank of the Coast Range Batholith approximately 100 miles due north of Vancouver, British Columbia. The property which contains several historic gold producers is jointly held by E & B Explorations Inc., Vancouver, B.C. and Bralorne Resources Limited, Calgary, Alberta with E & B Explorations Inc. and partners having the majority interest. This interest was earned through the expenditure of exploration funds directed at proving up sufficient gold bearing reserves to facilitate a production decision.

The 1980-83 work program expended approximately $6.4 million and earned E & B Explorations Inc. and partners a 55.8% interest in the project. Reserves compiled from this program would not support a production decision because of the ensuing decline in gold prices.

The 1984 exploration program was initiated to enhance reserve economics by proving up higher grade ore zones extractable at lower costs than reserves below 800 Level. These reserves located on and above the 800 haulage level were pursued by surface and underground drilling, surface geophysics, map research and underground drifting. The work program was successful in locating blocks of higher grade reserves on the 51B FW Vein, on several subsidiary vein systems in the hanging wall of the 51B FW and between this vein and the 77 Vein. Although reserve blocks were not calculated for the Countless-77 Vein, due to the narrow vein widths, diamond drilling did prove up the continuity of this structure between the Coronation and Countless workings.

Underground diamond drilling concentrated on two main target areas:

1) vein potential deep in the hanging wall of the 851 structure and in the 851 FW and B FW structures and

2) vein potential around the 809, 812 (Alhambra) and 813 Vein systems.

Short exploratory drifts totalling 948 feet provided vein sample locationsand exposed several new cross veins which assayed well over short sample intervals. These cross structures appear to be related to apophysis of soda granite which intrude augite diorites.

In addition, 86 feet of drifting in the 851 FW Vein area represents the start of 800 Level access to the 51B FW Vein structure. The importance of these new structures and associated gold mineralization remains to be determined by further exploration.

E&B EXPLORATIONS INC.

LOCATION MAP

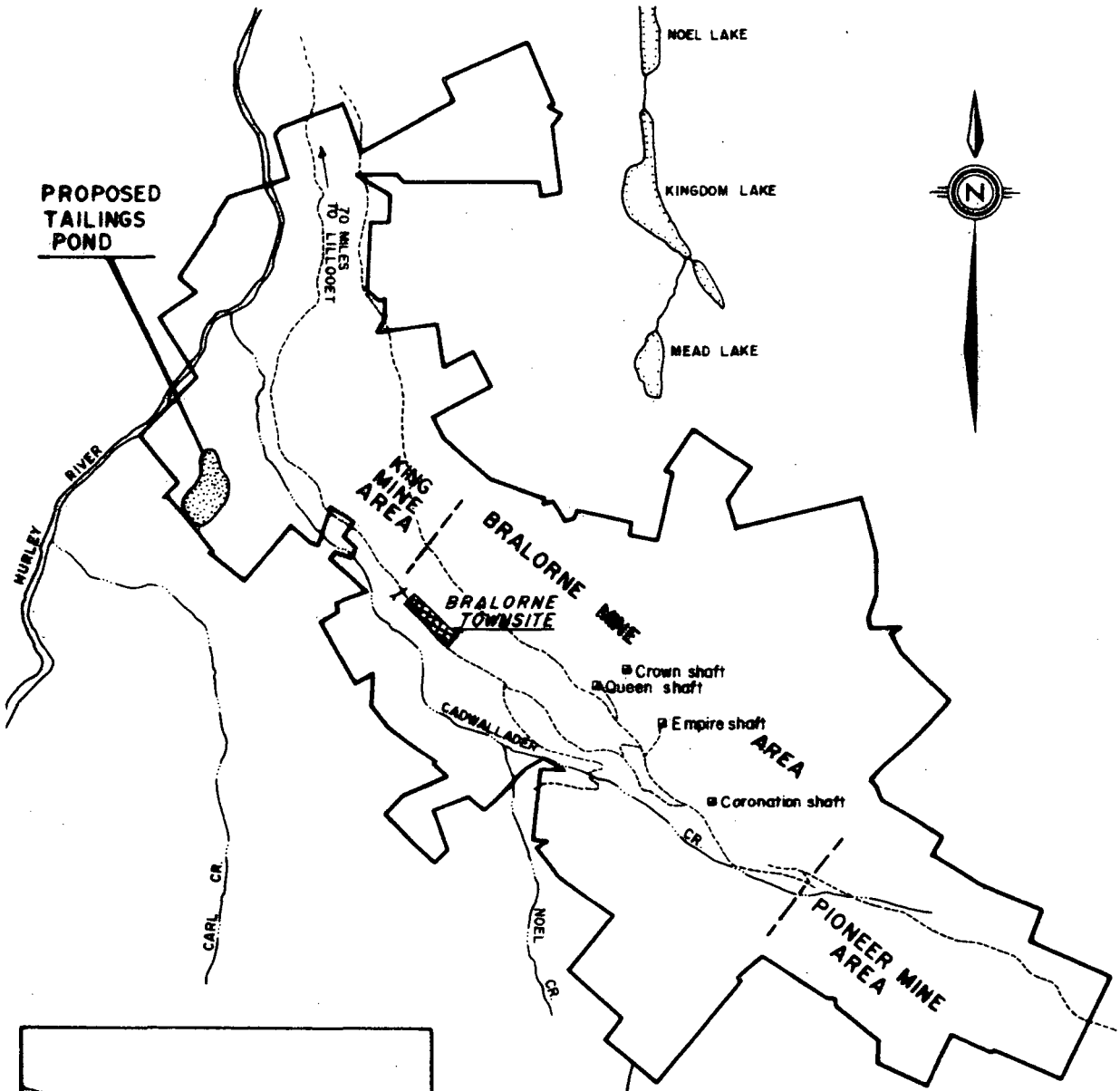
100 50 0 100 200

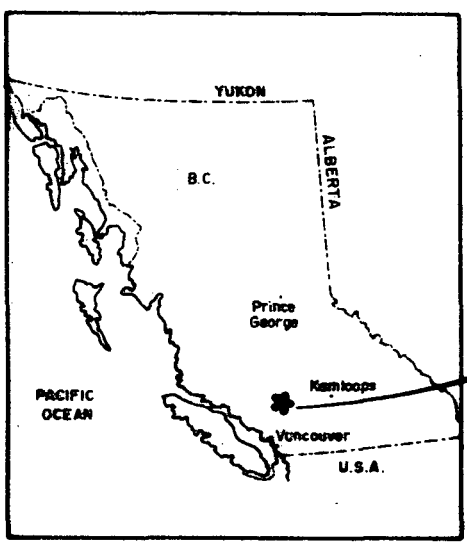
SCALE IN MILES

DATE: DEC. 1984

FIG. 1

ALTAIR drafting services ltd.





BRALORNE PROJECT
LILLOOET MINING DIVISION

1500 0 1500 3000 4500
FEET

E & B EXPLORATIONS INC. VANCOUVER CANADA			BRALORNE PROJECT CLAIM MAP		
DATE	OFFICE	DEPARTMENT	MAP INDEX NO.	SCALE	DRAWING NO.
DEC. 1984				As Shown	FIG. 2

CLAIM STATUS

The Bralorne property is comprised of 133 Crown Granted mineral claims, two staked mineral claims and two placer leases totalling 4053 Acres (1639.8 hectares) which are located in the Lillooet Mining Division. Title to the Crown Granted claims is held by Bralorne Resources Limited and is subject to a Joint Venture Agreement dated July 9, 1980 between E & B Explorations Limited Partnership and Bralorne Resources Limited. E & B Explorations Inc. through the expenditure of exploration funds in the 1980-83 work program acquired an undivided 20.3 percent interest in the property. An additional 39.57 percent interest can be acquired with the 1984 work expenditures and with future exploration and production financing. The 1984 expenditures earned E & B Explorations Inc. approximately 8 percent more interest. Surface rights to four Crown Granted Claims is vested in the joint venture along with the title to various land holdings covering the proposed tailings disposal area. The claim schedule is listed in Table 3.

Location & Access

The Bralorne mine site is located approximately 100 miles due north of Vancouver, B.C., 60 miles west of Lillooet B.C. and some 6 miles south east of the hamlet of Gold Bridge. The major road access is Highway 40, an all-weather gravel road from Lillooet. It passes through Gold Bridge then along the east bank of Cadwallader Creek and traverses the mining camp from Bralorne to the abandoned Pioneer mill site. Summer access is possible over the Hurley Pass to Pemberton.

Topography and Physical Environment

The Bralorne mining camp lies between the eastern flank of the Coast Range Batholith and a Cretaceous outlier, the Bendor Batholith. It is situated immediately east of the confluence of the Cadwallader Creek and Hurley River some 4.1 miles above the junction of the Hurley and Bridge Rivers at Gold Bridge. The area is characterized by rugged steeply-sided peaks rising to over 9400 feet (Mt. Truax 9,495 feet) and plunging to narrow valley floors below 3,000 feet. A bench at approximately 4200 feet lies along the eastern side of the Bralorne camp and is a topographic expression of the more resistant Bralorne Intrusions, host to the camps' gold bearing veins.

The mountain slopes are heavily forested with jack-pine and poplar while stands of pine and fir dominate the flat glacial terraces.

TABLE 3

MINERAL TITLE - CANADA

BRALORNE

Province : B.C.
Mining Division: Lillooet
NTS : 92J/15W
Property : Bralorne
Land District : Lillooet
Location : 63 km west of Lillooet
165 km north of Vancouver

Date Revised: Nov 01/83
Prepared by : EA/
Page 1 of 6

Operator: E & B

A. CROWN GRANTED MINERAL CLAIMS

LOT NO.	NAME	ACRES	HECTARES	CERTIFICATE OF TITLE (MINERALS)	UNDERSURFACE CHARGE NUMBER
456	PIONEER	51.14	20.70	9797 D	
457	IDA MAY	45.71	18.51	1813	23034 E
458	NELLIE FRACTION	1.14	.46	1813	
459	MARY FRACTION	35.21	14.26	1813	
460	TRIO FRACTION	44.66	18.08	1814	23035 E
539	LITTLE JOE	51.65	20.91	9461 D	
540	WHITE CROW	42.64	17.26	9461 D	
541	BEND'OR FRACTION	5.50	2.23	9461 D	
542	JIM CROW FRACTION	.90	.36	9461 D	
543	DELIGHTED	26.22	10.62	9461 D	
579	WOOD CHUCK	38.20	15.47	1850	23261 E
580	COPELAND	24.61	9.96	1850	23261 E
581	HIRAM	42.35	17.15	1813	
586	MARQUIS	24.50	9.92	1850	23261 E
587	GOLDEN KING	45.44	18.40	1850	23261 E
588	LORNE	50.25	20.34	1850	23261 E
665	ALHAMBRA	24.65	9.98	1850	23261 E
666	NIGHT HAWK	28.25	11.44	1850	23261 E
667	LURGAN FR. NO. 1	3.62	1.47	1850	23261 E
668	LURGAN FR. NO. 2	8.55	3.46	1850	23261 E
669	METROPOLITAN	32.83	13.29	1850	23261 E
670	TELEPHONE	28.70	11.62	1850	23261 E
671	WOOD DUCK	24.58	9.95	1850	23261 E
673	EXCHANGE FR.	21.85	8.85	1813	23034 E
1176	BLACKBIRD	37.70	15.26	9461 D	
1177	COUNTLESS	44.30	17.94	9797 D	
1179	NELLIE	39.50	15.99	1431	19859 E
1221	WHIP POOR WILL	44.00	17.81	1430	
1222	DUKE	19.00	7.69	1430	
1224	ROYAL	23.70	9.60	1430	
1225	LeROY	39.30	15.91	1430	
1226	MAUD S FR.	30.50	12.35	1696	
2372	SILVER DOLLAR	46.62	18.87	5224	63783 E

MINERAL TITLE - CANADA

BRALORNE

Province : B.C.
Mining Division: Lillooet
NTS : 92J/15W
Property : Bralorne
Land District : Lillooet

Date Revised: Jan 21/83
Prepared by : EA/

Operator: E & B

LOT NO.	NAME	ACRES	HECTARES	CERTIFICATE OF TITLE (MINERALS)	UNDERSURFACE CHARGE NUMBER
2374	GOLDEN RIBBON	50.00	20.24	5224	68783 E
2375	ALMA	34.97	14.16	5224	68783 E
2376	UNION FR.	45.86	18.57	5224	63783 E
2377	GOLD QUEEN FR.	45.11	18.26	5224	63783 E
2378	SILVER KING	37.61	15.23	5224	63783 E
2379	MOTHERLODE FR.	27.52	11.14	5224	63783 E
2380	ANDY FR.	10.69	4.33	5224	63783 E
2381	DON F	48.98	19.83	5224	63783 E
2382	DON C	19.11	7.74	5224	63783 E
2383	DON A	25.63	10.38	5224	63783 E
2384	DON E	38.11	15.43	5224	63783 E
2385	DON B	13.73	5.56	5224	63783 E
2387	ROBIN	5.89	2.38	5224	63783 E
2388	RAINIER	42.41	17.17	5224	63783 E
2389	TACOMA	31.63	12.81	5224	63783 E
2390	SEATTLE	16.68	6.75	5224	63783 E
2393	NUGGET KING	51.65	20.91	5224	63783 E
2394	DON Z	5.47	2.21	5224	63783 E
3045	SUNSET	47.19	19.11	5589	
3046	GREAT FOX	51.65	20.91	9797 D	
3047	EAST PACIFIC	51.30	20.77	9797 D	
3048	CLIFTON	51.65	20.91	9797 D	
3049	CORASAND	41.27	16.71	9797 D	
3050	EMMADALE	44.00	17.81	9797 D	
3051	UNION JACK FR.	9.25	3.74	9797 D	
3053	TITANIC FR.	9.15	3.70	5589	
3091	INVINCIBLE	40.49	16.39	1430	19857 E
5323	LEON NO. 1	27.27	11.04	1664	21183 E
5324	LEON FR.	23.59	9.55	2286	25313 E
5325	LEON NO. 2	50.25	20.34	1666	21182 E
5326	LEON NO. 3	48.00	19.43	1816	23031 E
5328	LEON NO. 4	34.55	13.99	1814	23035 E
5331	VICTOR FR.	8.84	3.58	1814	23035 E
5332	HIRAM FR.	.27	.11	1669	21178 E
5468	EAGLE FR.	23.18	9.38	5589	
5469	EAGLE	34.58	14.00	5589	

MINERAL TITLE - CANADA

BRALORNE

Province : B.C.
Mining Division: Lillooet
NTS : 92J/15W
Property : Bralorne
Land District : Lillooet

Date Revised: Jul 26/83
Prepared by : EA/

Operator: E & B

LOT NO.	NAME	ACRES	HECTARES	CERTIFICATE OF TITLE (MINERALS)	UNDERSURFACE CHARGE NUMBER
5470	EAGLE NO. 1	49.79	20.16	2245	
5475	LUCKY BOY FR.	8.41	3.40	1660	20656 E
5476	BESSIE FR.	39.15	15.85	1662	20658 E
5477	SAVOY	45.70	18.50	1813	
5478	EMPIRE FR.	20.06	8.12	1813	
5479	EUREKA	40.70	16.48	1813	
5480	CASCADE FR.	26.43	10.70	1850	23261 E
5481	COSMOPOLITAN FR.	25.93	10.50	1661	
5482	DUKE FR.	3.90	1.58	1658	
5483	CORONATION FR.	.76	.31	1815	
5484	POLNUD	47.54	19.25	1850	23261 E
5485	MACK FR.	40.65	16.46	1813	23034 E
5486	NIGHT HAWK FR.	2.17	.88	1850	23261 E
5487	POLNUD FR.	1.54	.62	1850	23261 E
5488	PASADENA FR.	7.70	3.12	1816	23037 E
5489	TELEPHONE FR.	11.42	4.62	1850	23261 E
5508	MONICA MARJORIE	42.40	17.17	5589	
5517	A FRACTION	6.92	2.80	5589	
5518	HILDA	43.03	17.42	5589	
5519	B FRACTION	2.77	1.12	5589	
5520	MARGARET	37.69	15.26	5589	
5521	HOPE	38.88	15.74	5589	
5522	DAVID	12.50	5.06	5589	
5523	JACK	38.08	15.42	5589	
5524	ANNETTE FR.	21.39	8.66	1813	
5525	BUCK FR.	2.36	.96	1671	21176 E
5582	MILLBANK	50.34	20.38	5224	63783 E
5591	GREAT DIVIDE FR.	3.01	1.22	5589	
5594	DEVELOPMENT NO. 2	18.94	7.67	5589	
5595	DEVELOPMENT NO. 1	27.89	11.29	5589	
5596	DEVELOPMENT NO. 2A	46.91	18.99	5589	
5597	DEVELOPMENT NO. 3	49.36	19.98	5589	
5598	DEVELOPMENT NO. 4	47.63	19.28	5589	
5742	SUNBEAM	26.53	10.74	2815	
5743	COMSTOCK NO. 5	24.86	10.06	2815	
5744	COMSTOCK NO. 2	28.88	11.69	2815	

MINERAL TITLE - CANADA

BRALORNE

Province : B.C.
Mining Division: Lillooet
NTS : 92J/15W
Property : Bralorne
Land District : Lillooet

Date Revised: Jan 21/83
Prepared by : EA/

Operator: E & B

LOT NO.	NAME	ACRES	HECTARES	CERTIFICATE OF TITLE (MINERALS)	UNDERSURFACE CHARGE NUMBER
5745	HOMESTAKE	25.14	10.18	2815	
5746	SUNSHINE	37.20	15.06	2815	
5747	COMSTOCK NO. 3	35.48	14.36	2815	
5748	LORENZO	35.05	14.19	2815	
5750	ORION NO. 4	49.05	19.86	2815	
5751	ORION	13.06	5.29	2815	
5752	COMSTOCK NO. 8	43.52	17.62	2815	
5754	COMSTOCK NO. 7	26.27	10.64	2815	
5755	COMSTOCK NO. 6	12.38	5.01	2815	
6037	TURRET FR.	3.43	1.39	5224	63783 E
6038	GOLD KING	21.77	8.81	5224	63783 E
6039	EAGLE	26.35	10.67	5224	63783 E
6040	WHITE STAR	32.83	13.29	5224	63783 E
6041	ANNE FR.	21.68	8.78	5224	63783 E
6044	DON C FR.	9.84	3.98	5224	
6045	ROBIN FR.	4.54	1.84	5224	63783 E
6048	MARIE FR.	31.99	12.95	5224	63783 E
6830	DIANE	49.05	19.86	5730	
6839	HEATHER FR.	14.78	5.98	5731	
6840	CAROL FR.	40.80	16.52	5731	
6945	LEE FR.	.18	.07	2285	
6946	AM	33.84	13.70	2282	
6947	BEEF FR.	44.73	18.11	2283	
6948	DEEP FR.	29.40	11.90	2284	
6954	AUDREY FR.	13.28	5.38	2320	
7428	J.B. FRACTION	2.22	.90	3129	
7429	JEAN FRACTION	8.25	3.34	3129	
7430	JEAN NO. 4 FR.	29.53	11.96	3129	

MINERAL TITLE - CANADA

BRALORNE

Date Revised: Mar 01/84
Prepared by : EA/

Province : B.C.
Mining Division: Lillooet
NTS : 92J/15W
Property : Bralorne (Tailings Area)
Location : 63 km west of Lillooet
165 km north of Vancouver

Operator: E & B

B. LOCATED MINERAL CLAIMS

CLAIM	UNITS	RECORD NO.	RECORD DATE	EXPIRY DATE	WORK REQUIRED
CORA FRACTION	1	1800(6)	08/06/81	08/06/85	$200.00
ACE FRACTION	1	1984(2)	01/02/82	01/02/94	200.00
(L. 7335 - Reverted Crown Grant)					

- Cash-in-lieu filed against the Cora Fraction on Apr. 07/82 (C/L #294)
- Assessment work filed (2 yrs.) on June 01/82. Only 1 year to apply.
- Cash-in-lieu filed against the Ace Fraction on January 21, 1983.

MINERAL TITLE - CANADA

BRALORNE

Date Revised: Nov 01/83
Prepared by : EA/PMM

Province : B.C.
Mining Division: Lillooet
NTS : 92J/15W
Property : Bralorne (Tailings Area)
Designated Area: Fraser-Bralorne
Location : 63 km west of Lillooet
165 km north of Vancouver

Operator: E & B

C. PLACER LEASES

PLACER LEASE	TAG NO.	RECORD DATE	DATE OF ISSUE	TERM OF LEASE	ASSESSMENT DUE	WORK REQUIRED
7234	P22354	10/07/81	10/11/81	10 years	10/11/86	$ 250.00
7235	P22355	10/07/81	10/11/81	10 years	10/11/86	250.00

Cash-in-lieu paid - Oct. 26/82

History

Pre 1980

The first occurrence of gold in the Bridge River area was recorded in 1863 when Chinese prospectors found placer gold deposits in the Bridge River. In 1896 the first lode claims were located in the Bralorne camp on sub-cropping quartz fissure veins. Subsequent discoveries continued until larger U.S. and Canadian interests began to acquire control of the fragmented mining properties during the 1920's.

In March, 1928 Pioneer Gold Mines of B.C. Ltd. was incorporated and began construction of a 100 ton per day cyanide plant to mill gold ore from the prolific Main Vein structure. In 1934 mill capacity was expanded to 400 T.P.D.

Between 1910 and 1928 the Lorne Amalgamated Mining Company developed the veins later used by Bralorne Mines for initial production. A newly re-financed company, Lorne Gold Mines Ltd., took control of the King Mine in 1929 and drove a low level adit to the King veins. This adit, is now the portal for Bralorne's main haulage level. Due to financial difficulties operations ceased is 1929.

In April 1931 Bralco Development Company acquired a 60% interest in the Lorne holdings and incorporated Bralorne Mines Ltd; mining of the King Vein started in 1932. The ore was proceeded by a 100 T.P.D. gravity flotation mill. Capacity was expanded to 300 T.P.D. in 1935. A new 600 T.P.D. cyanide mill was constructed in 1961 eliminating shipments of gold bearing sulphide concentrate to the Tacoma Smelter in Washington State.

In 1959, with reserves depleted and closure imminent, Pioneer Gold Mines Ltd. amalgamated with Bralorne Mines. By August 1960 mining from the Pioneer division was suspended. By 1971 Bralorne Mines found mining economic unprofitable and closed the operations.

A 1973-74 exploration program conducted by Bralorne Resouces Ltd. to re-evaluate the production possibilities at the Bralorne-Pioneer Mine proved inconclusive due to the introduction of royalties and super royalties on mining by the N.D.P. Government.

TABLE 4
TABLE OF PRODUCTION FROM BRALORNE MINE 1932 to 1971
(Including Pioneer Ore after Merger in 1959

Year		Milled Tons	Head (Gold-Oz. per ton)	Oz. Bullion Recovered
1932		32,657	.76	22,484
1933		54,283	.51	25,935
1934		98,664	.48	45,996
1935		145,113	.34	47,066
1936		167,264	.41	65,227
1937		170,686	.52	65,713
1938		180,526	.60	84,230
1939		184,922	.59	85,394
1940		191,412	.55	81,674
1941		191,970	.55	80,794
1942		171,095	.55	75,939
1943		118,462	.63	62,654
1944		109,751	.66	60,250
1945		105,283	.57	48,312
1946		64,534	.53	26,516
1947		133,047	.47	46,953
1948		148,119	.52	59,137
1949		178,995	.48	65,323
1950		185,074	.44	60,797
1951		168,194	.49	63,340
1952		175,005	.44	59,101
1953		185,168	.40	70,276
1954		181,494	.37	65,221
1955		166,831	.41	65,516
1956		131,662	.50	63,602
1957		141,192	.66	87,316
1958		145,558	.71	99,475
1959		142,122	.76	103,261
1960		153,482	.78	114,115
1961		154,040	.72	105,510
1962		149,998	.69	99,121
1963		152,601	.59	87,016
1964		153,080	.50	73,331
1965		115,731	.47	54,458
1966		105,813	.43	43,429
1967		97,332	.52	48,661
1968		100,660	.54	52,686
1969		94,396	.51	46,429
1970		76,545	.54	40,312
1971	Jan to March, Incl.	17,110	.57	9,275
		5,439,892	.53	2,561,845

1980-83 Work Program

In July 1980, E & B Explorations Inc. and partners, entered into an agreement with Bralorne Resources Limited of Calgary to acquire an interest in the Bralorne-Pioneer property through the expenditure of exploration funds directed towards preparation of engineering and feasibility studies. This program of diamond drilling, mine rehabilitation, shaft dewatering and geological sampling was carried out during 1980-83 at an aggregate cost of approximately $6.4 million.

A 16 hole surface diamond drill program totalling 16,465 feet was designed to test two main target areas. The primary targets were the up dip extensions of the 809 and 812 (Alhambra) Veins and possible vein structures between the King Vein and the 55 Vein within the hanging wall of the Empire Fault. A secondary target area, the hanging wall of the 51 Vein structure was also tested with 4 drill holes.

An underground diamond drilling program tested targets on the 800 Level in an area from the King curve through the Alhambra vein system to the hanging and footwall zones of the Empire Fault. These zones are located northeast of the main haulage drift. Drilling underground totalled 11,127 feet in 20 drill holes and required the slashing of six drilling stations. The longer underground holes were drilled with a C.M.S. Model 200 Electric Superdrill while the shorter holes utilized an air powered Boyles J.V.

Underground rehabilitation and drilling was undertaken for E & B Explorations by Canadian Mine Services. On 800 Level the Crown Shaft station was rebuilt, a 300 H.P. double drum hoist installed and electrical substations constructed. Attempts to clean up the 851 Drive East to a break-through with the 851B FW cross-cut were prevented by extensive caring from old shrinkage stopes.

BRALORNE GEOLOGY

Regional Geological Setting

The only producing gold bearing zones in the Bridge River area occur within the regional northwest striking Cadwallader Fault lens that cuts Permian to Jurassic sedimentary/volcanic rock units. These units lie between the main Coast Range Batholith and the smaller outlying Bendor plutons. Intruding this fault structure are small granitic to ultrabasic stocks and dykes. The Cadwallader Fault lens is an intricate fault system comprised of interlacing reverse, normal and strike-slip faults that form a structural lens approximately 1.25 miles wide and up to 3.1 miles long. The gold veins in the fault lens have been mined to a depth of over 1.1 miles. The persistance at depth of these veins is attributed to the deep seated crustal nature of the Cadwallader Fault system. The system is related to the continental Fraser Fault system.

Rock Units

Fergusson Series

The oldest rock units in the Bralorne mining camp are a Permian aged sequence of intercalated cherts and thinly banded argillites. Minor lenses of limestone, quartzite and andesitic volanics occur towards top the of the series. This relatively competent series of thinly bedded units is steeply dipping and has been highly sheared, folded and crumpled under the stresses of regional and local deformation.

Hurley-Noel Formations

Conformably overlying the Fergusson Series are a thick section of Triassic-Jurassic sedimentary/volcanic rocks of the Hurley-Noel Formations that are cut or bounded by the Cadwallader Fault. These units strike northwest, dip steeply south and are comprised of finely banded argillites, tuffs, limestones, conglomerates and a middle section of andesites. This volcanic member which lies above the lower Noel sedimentary unit is locally called the Pioneer greenstone and is found in transition with the Bralorne diorite in the eastern portion of the Cadwallader Fault lens.

Pioneer Formation

The Pioneer greenstones of Upper Triassic age are a volcanic unit approximately 1,000 feet thick consisting predominantly of moderately metamorphosed andesitic flows and pyroclastics. The sequence includes thin bedded amygdaloidal flows, tuffs, flow top breccias and fine grained intrusive dacites. The volcanic rocks have been altered to a pervasive regional greenschist facies metamorphism. Typical alteration minerals are epidote, chlorite, minor tremolite and carbonate. Flow top breccias occur more frequently near the top of the greenstone sequence in association with more massive, acidic, sometimes porphyritic flows. The greenstone is more competent than the sedimentary units of the Hurley-Noel Formations and often form a favorable host for much of the fissure and tension veins in the Bralorne gold belt.

Bralorne Diorite

The Bralorne diorite is dominantly a medium-grained augite-hornblende intrusive of probably Upper Jurassic age which occurs as an elongate stock north of the Cadwallader Shear zone. This large differentiated gabbroic to dioritic body is the principle host to most of the Bralorne vein systems. The rock ranges from a mottled granitoid coarsely crystalline diorite to a fine crystalline greenstone. By nature the diorite is both intrusive and gradational into the Pioneer greenstone implying either that the diorite formed as a result of granitization of the andesite or that the diorite was derived from the same differentiated magma.

In greenstone-diorite hybrid zones the diorite is breccia-like and is commonly composed of mixed sub-angular fragments of greenstone and dioritic blocks, or adjoining sub-angular blocks of diorite of varied texture and composition. Leucocratic diorite stringers or sets of narrow felspathic aplitic veinlets commonly separate the various types of breccia blocks. On 800 Level the breccia matrix is often dioritic and the hybird zone is frequently intruded by dykes or fingers of later soda rich granitic phases.

The hybrid intrusive zones like those of the diorite phases form competent hosts for vein systems unlike the more basic gabbroic-hornblendite types which are commonly schistose and serpertinized. The gabbro, hornblendite and diorite appear closely related genetically and spatially often forming gradational contacts.

Soda Granite

The large lens-like stock of sodic feldspar rich granite, probably of Upper Jurassic age, which cuts tangentially across the Bralorne intrusive series appears to be a late differentiate of the diorite magma. The typical soda granite consists of an equigranular, hypidiomorphic intergrowth of sodic plagioclase, quartz and lesser hornblende. Intrusion has been passive with tonques of granite penetrating into the adjacent andesites, diorites and hybrids. The contacts with the diorite may be gradational across a varied hybrid zone or sharply sheared and often hosting splintery quartz veining. The soda granite-greenstone contact, as noted in drill holes SB84-37 and SB84-25, is a zone of sodic dyking, quartz healed brecciation and sharp irregular contacts.

The Soda Granite stock trends and plunges steeply northwesterly hosting the 77 ore structure at the deepest levels of the mine. To the southeast the granite narrows and fingers out to a single narrow dyke sub-parallel to the Cadwallader Fault break. The Pioneer Main Vein is situated on the southeast nose of the soda granite while the 809, 812 and 813 Vein systems are hosted in diorite and hybridized diorite adjacent to and above the northern nose. In this latter area apophysis of soda granite interfinger with the diorite along with narrow, dyke-like aplitic soda rich structures. These dykes are often associated with vein systems and may have occupied pre-existing fissures structures. These structures later reopened to host the quartz veins. The albite rich masses which also occur as chill margins on narrow soda granite fingers have been locally termed "albitites".

Albitites

A possible late stage differentiate of the soda granite, albitites consist of a compact fine grained inequigranular sodic plagioclase interlocked with minor scattered phenocrysts of plagioclase occurring in a groundmass of sericite, clay, chlorite and carbonate. The albitites are brittle and commonly have sharp angular joint planes. When associated with vein structures these albitites are frequently offsets.

Structure and Tectonic History

Permian to Jurassic sedimentary/volcanic rock units are truncated by a sub-volcanic intrusive complex up faulted along regional northwest striking faults. This structural lens which is 1.25 miles wide and 3.1 miles in length is bounded on the southwest by the Cadwallader Fault - a principal

regional deep-seated crustal structure related to the continental Fraser Fault system - and on the northeast by the Fergusson Fault. The intrusives are brittle and fractured into a system of interwoven reverse, normal and strike-slip faults. It is within this lens that the Bralorne-Pioneer mining properties are situated.

The Cadwallader Fault strikes north 45° west and dips vertically to steeply to the southwest. The fault zone ranges from 50 to 980 feet in width and consists of gouge-covered shear planes that bound and interlace stickensidedand serpentinized volcanics and gabbroic intrusions of the differentiated intrusive complex. Displacement along the fault is unknown as it trends approximately parallel to the bounding Hurley-Noel sedimentary and volcanic rocks. The Fergusson Fault is a northwest striking, 60°-80° northeast dipping reverse structure that thrust Permian Fergusson sedimentary/volcanic rocks over the younger formations.

The relative age relationships of the bounding faults are unclear but assumed to be contemporaneous. The faults were active over a long period of geologic time thus creating a structural setting condusive to the emplacement of the diorite/greenstone bodies that host the gold-bearing quartz veins. The movement within the fault lens was never static during the hydrothermal activity responsible for the gold solutions as is evidenced by the multi-banded quartz veins containing high-grade gold values.

Structural offsets along the Cadwallader Shear and the Fergusson Overthrust are indeterminate since both follow the formational trends of hanging wall sediments. These fault systems appear to pre-date the vein-fault-fracture pattern within the Cadwallader fault lens since footwall branches of the Pioneer Main Vein cut the Cadwallader Shear. Post vein faults like the Empire Fault and the faults in the King workings offset both the Cadwallader and Fergusson fault structures.

Three distinct spatially related faults sets are observed within the intrusive fault lens. They are:

Set I

Set one consists of offsetting thrust and reverse faults with both vertical and horizontal movement components. This set strikes N to N 20° W and dips from 45 to 70 degrees west. Predominantly a post mineral fault set these faults like the No. 2 Fault and Empire Fault offset vein structures and are

usually unmineralized. The Empire Fault which cuts the Bralorne veins strikes N 20° W dips 54° W and has a reverse throw of 370 feet and a dexteral strike-slip of 240 feet.

Set II

Set two are fissure vein faults which strike N 75° W to S 15° W and dip from 55° north to vertical with localized dip reversals. The main veins in the upper workings occur within these reverse faults including the Pioneer Main Vein, 51, 55, 77 and 53 Vein structures. These structures extend across the intrusive complex from the Fergusson Fault to the Cadwallader Shear and are developed for over 5,000 feet in length.

Within these structures foot and hanging wall branch veins are common as well as elliptically shaped veins which loop in both the vertical and horizontal planar direction. The competency of the host rocks determine the vein character and orientation. On approaching less competent rock fissure veins tend to "horse-tail", curving to become sub-parallel to the bounding structures. In the soda granites' low albite interior the rock is brittle and well defined vein structures widen to become larger barren quartz-filled fracture zones. The Pioneer greenstone is relatively incompetent where massive but is a good host when composed of dacite flows and dacite porphyry dykes. Along strike and down dip fissue veins are broken into en echelon sigmoidal quartz lenses by minor small scale offsetting faults. These faulted segments which thicken with deflections in vein orientations usually host the major ore shoots.

Set III

Set III structures occur below 12 Level. They are tension fractures which "cross over" and cut the fissure vein structures of Set II. This set strike northeasterly with northwesterly dips and curve tangentially at intersection with fissure veins. Commonly wider and richer than fissure veins, tension veins like the 75 Vein and its faulted extension the 53 Vein, often have unsheared wall rock contacts. Tension structures include the very productive Pioneer 27 Vein and the 59 and 79 Veins.

Vein Mineralogy

Quartz forms more than 90% of the vein gangue with minor amounts of calcite, mariposite, talc and scheelite. The latter are locally restricted to fine bands parallel to the vein walls. Metallic sulphides, mostly pyrite, pyrrhoite, sphalerite and arsenopyrite comprise up to 3% of the vein. Free visible gold occurs in and adjacent to the fine black laminated ribbon-quartz structures. Minor elements occurring with the gold include arsenic, antimony, lead, zinc and titanium and occasional nickel and manganese.

Vein wall rock alteration consists primarly of carbonatization with alteration widths, in part, dependent upon the sulphide content of the vein. Iron carbonate and albite addition along the vein-shears often results in alteration of the wall rock to a platy quartz-sericite schist and or chlorite-carbonate-sericite schist.

1984 EXPLORATION PROGRAM

Diamond Drilling

Surface

Drilling commenced September 13 with two Longyear Super 38 rigs owned by Tonto Drilling Company. During the program a total of 23,033 feet of drilling was completed in 33 NQ diamond drill holes. The primary targets were ore shoots contained within the 51B FW that were partially developed by exploratory drifts on 400 and 800 Levels. Additional targets in the drilling area included the Taylor or 40 Vein, hanging and footwall splits of the 51B FW, the 77 (Coronation -Countless Vein) and the 52 Vein structures. Previously unknown vein structures carrying significant gold values across mineable widths were also intersected between the 51B FW and 77 Vein systems.

The surface drill hole plan shown in Figure 3 is included in Volume 1, Geological cross-sections illustrating drill hole orientations and vein intersections are also contained in Volume 3. Appendix 5 contains drill hole logs with assayed intervals and Appendix 6 includes assay laboratory reports. Table 1 is a summary of significant drill hole intersections.

Underground

Underground drilling was conducted throughout 800 Level using an air-powered Boyles BBU-2 and Boyles Model J.V. diamond drill; the former drilling BQ and the latter AQ sized core. Fifteen holes totalling 6624 feet were drilled from stations in the 809 Drive E, 812 Drive E, main haulage drift, Empire tail Drift, 51 Drive and 51 FW Drive South. The drilling had two objectives:

1) exploration in untested target areas
2) confirmation of updip or strike projections of known vein systems.

A brief summary of the underground drilling grouped by drilling station follows:

The core is stored in the old mill building.

812 Drift UB 84-21, 22, 23, 24 and 34

The intent of drilling five flat holes from sites in the Alhambra Drive East was to test the main 809 structure in advance of drifting. Drilling indicated the structure to be weak although significant mineralized intercepts were encountered in holes UB84-22 and 34 some 500 and 700 feet respectively ahead of the 809 Drift face. Figure 6.2 shows the above drilling locations.

809 Drift - UB84-30, 31 and 32

These three up holes were drilled westward towards a strong cross vein structure encountered during drifting. The holes were collared near the present face of the 809 Drift. The cross vein strikes N 22° W, dips 40° - 60° W and varies in width from 0.3 feet to 1.4 feet. Chip samples assayed from 0.08 oz gold/ton to 4.518 oz gold/ton. UB84-30 intersected this structure some 32 feet updip and cut 1.5 foot of vein grading 0.865 oz Au/ton. For hole locations see Figure 6.2.

Main Haulage Drift - UB84-28 and 29

Targeted on the updip extension of the 813 Vein system, the holes intersected a weakly mineralized poorly developed fissure vein. Indications are that the 813 structure is a localized narrow fissure vein adjacent to an albitite dyke. Figure 6.3 illustrates the location of the holes with respect to the 813 Drift.

Empire Shaft - UB84-25 and 33

Hole 84-25 drilled from the Empire Shaft area was designed to intersect the Fergusson Fault and test for veins in the hanging wall of the 51 Vein system. At 239 feet, a 2.5 foot bull quartz vein grading 0.269 oz Au/ton was intersected. A sub-parallel hole UB84-33 cut a similar structure at 182.4 feet which assayed 0.128 oz Au/ton over 2.5 feet. Additional drilling will determine if these veins are related. The location of these holes is shown on Figure 6.5

851 Drive East - UB84-26 and 27

These holes were drilled from the 851 Drive East to test the footwall area of the 51 Vein System. In hole UB84-26 the 51 FW vein was interesected between 239 and 241.5 and assayed 0.269 oz Au/ton. The vein intercept in hole UB84-27 consisted of a splintery quartz calcite structure adjacent to an albitite dyke.

The 1.9 feet of structure grades 1.648 oz Au/ton. Figure 6.4 shows the location of these holes.

851 FW Drive South - UB84-35

This flat hole was drilled from the face of the new 51 FW by-pass Drift to intersect the 51B FW structure at depth. The structure was intersected at 484.7-485.0 feet and graded 0.062 oz Au/ton. A small albitite dyke and related fissure vein which bounds the right rib of the 51 FW Drift was also cut by the drill hole and returned an averaged assay of 0.207 oz Au/ton between 3.4 feet and 4.9 feet.

Vein material from both underground and surface drill hole intersections was subdivided into smaller compositionally similar units and shipped whole to Vangeochem Lab. Ltd., 1521 Pemberton Avenue, North Vancouver, B.C. Adjacent altered wall rock was also sampled in intervals of two feet or less and shipped whole to Vangeochem Lab Ltd. At the laboratory the samples were crushed to minus 80 mesh, split into two 500 gram samples, pulverized and rolled. A one assay ton sample was split from each of the pulps and conventionally fire assayed for gold. The resulting buttons were digested and subjected to atomic - absorption analysis resulting in two assays for each sampled interval. Samples with wide discrepencies in assay values were re-run from the pulps. Core from the 1984 program is stored at the Bralorne mill site in the old warehouse building.

Drifting

Four exploration drifts were advanced; three from headings situated in the Alhambra Vein area and one in the footwall of the 851 Drive. The drifting was intended to check significant assay values obtained from vein intercepts encountered during the 1980-81 drilling program. Since these intercepts were along the projected strike of partly developed vein systems, it was assumed the latter structures had continuity to the east. The Alhambra area drifting did encounter the better drill hole intercepts but found the vein structures to be irregular with unusual orientations and dips. The following is a summary of the four drift headings:

809 Drift

The 809 Drift was advanced 231 feet eastward from the face of the old 809 Drive East. The drift objective was to explore the eastward extension of the 809

Vein system and to investigate a vein intercept grading 0.164 oz Au/ton over 3.9 feet encountered in hole UB81-11. The new 809 Drift advanced through mixed hybrid phases of augite diorite cut by narrow northerly trending dykes of leucocratic granitic rock. The 809 Vein structure horse-tailed near the start of the new drift and the above vein intercept was found to be a soda granite hosted cross structure which varied in width from 0.3 feet to 1.4 feet. Two sampling slashes in the right and left ribs revealed the irregular nature of this structure although lateral continuity is inferred from intercepts in drill holes SB84-30 and 32. This drift was terminated in structureless hydrid phase diorite/greenstone. See Figure 6.2 for drift location.

812 Drift

The 812 Vein system includes the Alhambra Vein and its various footwall structures. Since the original Alhambra drift followed a footwall vein structure drifting was undertaken in the hanging wall to:

a) test the hanging wall for the presence of the main Alhambra structure

b) explore the structure intersected in hole UB84-22

c) provide a drilling station for the exploration of the King Vein footwall structures

d) advance drifting towards the hanging wall of the Empire Fault where several significant vein structures were intersected during the 1980-81 drilling programs.

The 426 foot advance in 812 Drive East encountered numerous small cross veins but no vein structures of note. The 10 feet of vein breecia which was intersected in hole UB84-22, between 105.5 feet and 115.5 feet and ran 0.08 oz Au/ton, was found to be a narrow cross structure. The advance was terminated in augite diorite devoid of significant alteration and structure. Geology and drilling are illustrated on Figure 6.2

813 Drift

The 813 Drift was driven eastward from the main 800 Level haulage way on a structure which intersected the haulage drift. The structure was also cut by two drill holes, UB81-15 (which assayed 0.515 oz Au/ton from 240.6 to 241.5) and E698.

The 813 Vein structure which parallels an albitite dyke, contained spotty high gold values but was truncated against a north striking fissure vein some 225 feet from the main cross cut. The remaining 66 feet of drifting exposed several narrow banded spotty mineralized bull quartz and albitite-quartz cross veins in a weakly altered augite diorite host. The 813 Drift and structures are shown on Figure 6.3.

851 FW Drift

The drift was advanced 86 feet on the 51 FW Vein. The purpose of the drift was to:

a) by-pass the caved workings on the 851 Vein and connect with the 851B FW Drive East and

b) explore albitite-quartz vein structures parallel to the 51 Vein and intersected in holes UB 84-26 and 27.

In Hole UB 84-27 a 1.9 foot intersection, between 136.5 and 138.4 which assayed 1.648 oz Au/ton, is thought to represent the 51B Vein system. A small structure in the albitite dyke that follows the right rib of the drift contains minor visible free gold. This structure was intersected and in hole UB84-35 and ran 0.207 oz Au/ton from 3.4 feet to 4.9 feet. The drift is incomplete and its position is illustrated on Figure 6.4.

Sampling

Every drift advance was sampled by the trainman taking grab samples from each car dumped during that shift. Five gallon pails, which were for marked for each shift and drift, were provided for this purpose.

The car samples were crushed to 1/4 inch, split into two pound samples, and shipped to Vancouver for conventional gold fire assay. The rejects are stored on the mine property.

As each drift progressed, geologists sampled any vein structures at the drift face. Chip samples were taken across the vein and 1 to 2 feet on the either side of the vein. If an advance was not sampled at the face the vein structure and the adjacent altered wall rocks were sampled in the back with multiple continuous chip samples. Assay results for the 813 Vein sampling are shown on Figure 6.6.

Petrology

Twenty-two core samples were selected from the 1984 drilling for petrographic analysis. The samples which were selected included those rock types where identification was uncertain or where rock type correlation was needed. Vancouver Petrographics Ltd. did the petrographic work. Their report is contained in Appendix 3.

Geophysics

A limited VLF Electromagnetic test survey was conducted by Interpretex Resources Ltd. This survey was carried out over an area known to contain subcropping fissure vein structures. Station readings were taken using a Geonics EM-16 VLF receiver at 50 foot intervals on lines 100 feet apart. In total 8800 feet of grid lines were surveyed over the Taylor, 51B FW and Countless-77 vein structures. The survey was successful in delineating portions of the vein systems as well as near surface fault features. The report is contained in Appendix 4.

Surveying

The initial ground control for the surface drilling program was established by L. Marshik (B.C.L.S.) using hubs set in 1980 by McWilliam-Whyte-Goble & Associates of Kamloops. Their survey is tied into the Bralorne grid system through the use of underground survey stations located in the 800 Level main haulage adit. Surface drill holes were surveyed using a Wild HeerbruggT1 Theodolite and a TOPCON GTS-2 E.D.M. Underground drill collars and drift advances were also tied to the Bralorne grid system. The coordinates for the 1984 drill holes appear in a drilling summary sheet prefacing the drilling logs in Appendix 3, Volume 2.

RESERVES

The 1984 drilling program was successful in locating gold bearing structures within and adjacent to the targeted 51B FW Vein system. Several new vein systems were discovered that have ore reserve potential and warrant further exploration. Within the 51B FW structure three high grade ore shoots were partially delineated. In addition several accompanying hanging wall and footwall vein splits of ore grade material have been partially tested. Drilling indicated the 77 Vein system to be continuous between the Coronation and Countless workings. Although reserve blocks are not included for this structure the drilling intersections indicate a strong potential for gold bearing shoots of mineable grades and widths.

The cross veins intersected by the underground drifting have the potential to produce small tonnages of high grade ore. The vertical extent of these structures has not been fully tested.

Ore reserves have been calcualted for the 51B Footwall Vein and for several significant adjacent structures. The tonnage obtained in the 1984 exploration program is as follows:

Proven	58,196 tons @ 0.35 oz Au/ton width 4.0 feet
Probable	57,325 tons @ 0.45 oz Au/ton width 4.8 feet
Sub-Total	115,521 tons @ 0.40 oz Au/ton width 4.3 feet
Possible	27,332 tons @ 0.46 oz Au/ton width 4.0 feet
TOTAL	142,853 tons @ 0.4115 oz Au/Ton width 4.25 feet

CONCLUSIONS

The delineation of significant reserves within the Taylor-51B FW structure increases the probability of locating gold-bearing quartz veins in the hanging and footwalls of this structure. The Taylor or 40 Vein appears to be a hanging wall split of the 51B FW and several high grade intersections were made as the vein approached the 51B FW. In the greenstone, the Taylor Vein contained mineable widths but low gold values (SB84-39 between 137 and 142.5 feet graded 0.056 oz Au/ton). Further drilling from underground is required to test these intersections.

A second hanging wall structure in the central part of the 51B FW contained high sulphide and gold values. Hole SB84-33 ran 8.310 oz Au/ton over 2.1 feet. This narrow but high grade shallow dipping vein can be further explored from the existing development drift on 400 Level. A similar structure which was intersected in hole SB84-47 at 427 feet increases in significance because of its close proximity to the ore reserves developed on the 51B FW Vein

A new vein located between the 51B FW and the Countless-77 Vein ran 0.20 oz Au/ton from 495.5-504.2 feet in hole SB84-21. This partially explored structure could contain potential new reserves and could be further explored when developing the 51B FW ore reserves.

The ore shoots within the Countless-77 Vein system and the hanging and footwall structures remain partially drill tested and represent targets for future exploration. A proposed drift collared at an approximate elevation of 4000 feet would provide access to these structures as well as to the Taylor-51B FW Veins.

The 1984 surface drilling program successfully delineated 142,853 tons of proven, probable and possible gold mineralization in ore shoots above the 800 Level. The existing 51 FW development on 400 to 800 Levels, if rehabilitated, would provide down dip access to these reserves. Additional ore reserves should exist within the hanging and footwall structures adjacent to the 77 and 51B FW vein systems. These can be further delineated during the vein development on the 51B FW.

The underground drifting was limited to the 809, 812 (Alhambra) 813 and the 851 Footwall Veins. Drift advancement was not extensive enough to reach the areas of stronger vein development in the Alhambra and 51 Footwall areas. The successful development of ore reserves in the Taylor-51B FW area indicates future exploration should be undertaken in this area.

An aggressive exploration program as proposed for 1985 should add significant tonnage to the gold reserves delineated in the 1984 program.

RECOMMENDATIONS

The increase in proven ore reserves above 800 Level in the 51B FW area confirms that this zone has the potential to sustain a mining operation exclusive of reserves previously calculated for Bralorne between the 800 and 2600 Levels. This area should continue to be the priority for exploration. The following is a list of prioritized targets: (All targeted areas are shown on Fig. 7).

1) Complete the evaluation of the drill indicated reserves. It is recommended that tracked drifting at approximately the 300 Level be done on the 51B FW Vein from section 12 + 00E to 30 + 00E. Access to this level can be obtained by a 800 foot trackless drift on approximately Section 27 + 00E. This drift would cross cut the 52, 77, 77 HW, 77- 51B FW mid-vein, 51B FW, and the Taylor Vein structures. Drilling stations on the proposed 300 Level 51B FW Drive would provide sites for the underground drill delineation of the other vein systems. Further surface drilling on the 77 and Taylor Veins would involve extensive site construction and would not provide as much information as underground drilling.

2) Drill the hanging wall of the Empire Fault from surface or from underground near the Empire Curve. The hanging wall of the Empire Fault, above 800 Level, could contain the offset equivalent of the 59 Vein as well as the eastward continuation of vein structures intersected in the 1980 drilling programs. Since the hanging wall is elevated 370 feet with respect to veins on 800 Level east of the Empire Fault, the productive 859 Vein should be found at approximately 600 Level west of the fault.

3) Drill east of the Empire Shaft area. The gold bearing veins intersected in two drill holes collared in the Empire Shaft area require two additional short drill holes to determine if a continuous tension vein structure exists. Should there be a defineable structure, the vertical extent could be explored by angled underground drilling.

4) Drill an updip hole from the end of the 812 Drive East to evaluate the King Vein footwall structures. Hole UB84-34 intersected a 2.3 foot vein structure grading 0.196 oz Au/ton in the footwall of the King Vein.

5) Conduct geophysical and geochemical surveys, geological mapping and surface drilling west of the Pioneer Main Vein. Pioneer surface drill hole S-538 was drilled southwesterly from the Cadwallader Fault through a greenstone section west of the Pioneer Main Vein. At 1088 feet the - 30° hole intersected a quartz structure 1.1 feet wide grading 1.26 oz Au/ton. This intercept indicates that mineralized quartz structures do occur southwest of the Cadwallader Fault zone in competent host rocks. The few drill holes collared in this area were exploring for vein systems parallel to the main vein and could have missed cross cutting tension veins sympathetic to the 27 Vein structure.

6) Drill the down dip extension of the 51B FW ore shoots from the 1651 Vein. This would determine the vertical extent of this vein system. The 51B FW structure appears to be bottoming out on 800 Level. Historically the Bralorne veins were lean from 800 Level to 1400 Level based on drift development and level production records. Below 14 Level the 77, 73, 75, 53 and 52 Veins become more productive while the 51 and its faulted off equivalent the 55 Vein die out.

It is recommended that the above work be carried out in a three phase exploration program 1985

Phase One

Will include geophysical and geochemical surveys, and geological mapping in designated surface areas. Underground work will entail the rehabilitation of the Empire Shaft between Levels 300 and 400. This will provide access to the 451B FW Vein and associated hanging walls veins and allow geological mapping and sampling to be undertaken. In addition, mapping, resampling and data re-evaluation in several locations on the 800 Level is required. Expenditures for Phase One are estimated at $200,000 CDN.

Phase Two

Will consists of surface and underground diamond drilling in the areas described above. Estimated expenditures are $200,000 CDN.

Phase Three

Consists of exploration drifting to and along the 51B FW structure with provisions for underground diamond drilling. Total estimated expenditure for the three phase program is $1,750,000 CDN.

Respectfully Submitted,

John R. Bellamy, Senior Geologist

Rodney Arnold, Project Geologist

REFERENCES

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STEVENSON, J.S. (1947): "Geology and Mineral Deposits of the Bridge River Map Area": Unpublished thesis.

WEEKS, J.P. and JAMES, D.H. (1961): "Bridge River Mineral Area", British Columbia, Victoria Branch, C.I.M.M., Sept. 29, 1961.

APPENDIX 1

STATEMENT OF COSTS

BRALORNE PROJECT

July 1, 1984 - December 31, 1984

PERSONNEL

Field Operations $ 250,842.55 *

Bralorne Mine Support staff includes:
- Mine Superintendent
- 2 Mechanics
- 2 Electricians
- 1 First Aid Attendent
- 1 Carpenter
- 2 General Maintenance Laborers
- 3 Project Geologists
- 2 Samplers
- 1 Surveyor (part-time)

PROJECT MANAGEMENT $ 94,377.29

Project Supervised on-site by:
- Senior Geologist - J. Bellamy
- Chief Mine Engineer - D.W. Flynn
- Project Engineer - B. Kynoch

General Project Supervision by:
- Vice President of Operations - P.F. Saxton
- Exploration Manager - L.W. Saleken

ACCOMMODATION AND TRAVEL $ 9,342.82

CAMP

Construction, Rental & Maintenance $ 92,714.58
- 42 man camp rented from National Caterers @ $5,150.00/month**
- septic system construction
- camp construction & maintenance

CATERING $ 37,878.90

- O'Neill Railway Catering Services Ltd.

COMMUNICATIONS $ 5,433.02

- B.C. Telephone
- Rapifax of Canada Ltd.

CONTRACTORS

Mining
Tonto Mine Development Ltd. $ 444,332.49
- 1034 feet of drifting @ 370.00/ft
- Slashing of drilling stations
- Enlarging existing drifts for drift advancement

Drilling
Tonto Drill Company $ 437,124.34
- 23,033 feet NQ @ $19.00/ft

F. Boisvenu Diamond Drilling Ltd. $ 95,732.35
- 6624 feet AQ/BQ @ $14.45/ft

Drill site Construction & Support $ 17,490.18
- Access roads and drilling sites constructed by Echo Logging

CONSULTANTS

Engineering $ 935.00
- Gam-x Inspections

Geological $ 7,108.76
- DeLeen Consulting Ltd.

DRAFTING $ 5,233.18

- Duplicating and Blueprinting

EQUIPMENT

Rental $ 36,016.33
- 3-750 C.F.M. Ingersoll-Rand Compressors @ $6,255.00/month for 4 months
- Powder Magazines
  - Ace Explosives
  - Sardis Explosives

Compressor Maintenance & Installation $ 11,726.03

Equipment Maintenance $ 7,164.32

FUEL $ 57,461.74

- Diesel & Gasoline - B.W. Ferguson Ltd.
- Propane - Cigas Products Ltd.

GEOPHYSICS $ 1,237.50

- Interpretex Resources Ltd.
  8800 feet of grid lines surveyed

HYDRO $ 61,716.57

LABORATORY ANALYSIS $ 28,439.48

- Vangeochem Lab Limited
  2,534 gold Fire Assays @ $10.75 ea.
- Vancouver Petrographic
  22 Thin Sections

SAFETY AND FIRST AID $ 1,779.35

SHIPPING $ 2,847.14

SUPPLIES

Field Office $ 1,392.94

Geological $ 9,985.37
- Coreboxes, sample bags, etc.

Surface Infrastructure $ 72,030.73

- Water Supply Maintenance	- Braymont Utilities Ltd.
- Electrical Maintenance	- B.C. Hydro
- Trestle Timber	- Gold Bridge Mines Ltd.
- Shop Electrical	- Smith-Cameron Industries
	- Van Horne Electric Ltd.
	- Union Electric Supply
	- Beaver Electric Machinery

Underground Mining & Electrical $ 80,686.10

- Explosives	- Ace Explosives
- Pump Maintenance	- Ingersoll-Rand
- Hoist Maintenance	- Wirerope Industries Ltd.
	- Coast Testing
- Ventilation	- Nelmaco
- Locomotive Maintenance	- Nelmaco
- Timber	- Gold Bridge Mills Ltd.

SURVEYING $ 6,495.05

Surface

- E.D.M. Topcon Rental	- Norman Wade Co. Ltd.
- Drill Hole Orientation	- Sperry-Sun of Canada

VEHICLE MAINTENANCE & OPERATIONS	9,407.27 *
TOTAL	$1,886,931.38**

* Includes accrued expenditures from the 1984 work period which were paid in January 1985.

** Only major items within each category are shown with specific unit costs breakdowns.

NOTE: The above Cost Summary does not reflect the total monies expended on the Bralorne Project but only those expenditures acceptable for assessment work credits under the Mineral Act Regulations administered by the Ministry of Energy, Mines and Petroleum Resources of British Columbia.

APPENDIX 2

STATEMENT OF QUALIFICATIONS

Core loggers:

Tindall, grad. geol. 1980, Queens.

Griesback, grad geol. 1982?

APPENDIX 2 - STATEMENT OF QUALIFICATIONS

I, Rodney William Arnold, B.Sc. Geology, of 41751 Yarrow Central Road, Yarrow, B.C., V0X 2A0 state as follows:

1. That I graduated from the University of Calgary in 1974 with a Bachelor of Science Degree in Geology.

2. That I have prospected and actively pursued geology prior to my graduation and have practiced my profession since 1976 as follows:

1984-1985	Project Geologist E & B Explorations Inc. Vancouver, British Columbia
1983	Project Geologist Scope Explorations Services Ltd. Merritt, British Columbia
1981-1983	Mine Geologist Polaris Mine for Cominco Ltd. Vancouver, British Columbia
1979-1981	Project Geologist Westmin Resources Ltd. Vancouver, British Columbia
1978-1979	Geologist Invex Resources Ltd. Vancouver, British Columbia
1973-1978	Geologist & Physical Scientist Geological Survey of Canada (Summer Employment & Winter Works Programs)

3. That I am presently employed as a Project Geologist with E & B Explorations Inc., 1440 - 800 West Pender Street, Vancouver, B.C. V6C 2V6.

Dated at Vancouver, British Columbia)
this ____ day of January, 1985)
)
)
)
)
R. W. Arnold, B.Sc.,)

APPENDIX 2 - STATEMENT OF QUALIFICATIONS

I, John R. Bellamy, B.Sc., of 207-1898 Balsam Street, Vancouver, B.C., state as follows:

1. That I graduated from the University of Calgary in 1970 with a Bachelor of Science Degree in Geology.

2. That I have prospected and actively pursued geology prior to my graduation and have practiced my profession since 1970 as follows:

1981-1985	Senior Geologist E & B Explorations Inc. Vancouver, British Columbia
1978-1981	Chief Geologist Bethlehem Copper Corporation Vancouver, British Columbia
1971-1978	Project Geologist Bethlehem Copper Corporation Vancouver, British Columbia
1970-1971	Junior Geologist Cominco Ltd. Vancouver, British Columbia
1968-1968	Prospecting and Geological Surveys Summer Student Employment

3. That I am presently employed as a Senior Geologist with E & B Explorations Inc., 1440 - 800 West Pender Street, Vancouver, B.C. V6C 2V6.

Dated at Vancouver, British Columbia)
this 31 day of January, 1985)
)
)
)
)
J. Bellamy)
J. R. Bellamy, B.Sc., F.G.A.C.)

APPENDIX 3

PETROGRAPHY REPORT

Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY, B.C.
VOX 1JO

PHONE (604) 888-1323

Invoice 4970

Report for: J. Bellamy,
Mascot Gold Mines Ltd.,
1440 - 800 West Pender Street,
Vancouver, B.C.,
V6C 2V6.

December 27, 1984

Samples: 4133 to 4154 inclusive; Bralorne Project.

Summary:

A) ANDESITE and DACITE (PIONEER GREENSTONE).

4134, 4135, 4139, 4143, 4152 (dacite);
4136, 4137, 4150, 4154 (andesite);
4133 (completely altered - epidote,quartz).

These rocks are a series of volcanic flows and subvolcanic dykes ranging in composition from dacite to andesite; textures are similar in some cases and the only difference between dacite and andesite is in the amount of quartz (greater than 10% for a dacite). Porphyritic varieties contain plagioclase or hornblende phencorysts in a plagioclase-quartz groundmass. Two dacites are amygdaloidal (quartz). All the volcanic rocks have been altered to some extent and this alteration appears to be a pervasive regional greenschist facies metamorphism; typical minerals are chlorite and epidote with tremolite occuring in a few samples. Locally, especially in shears, alteration has been very intense. Patchy carbonate alteration occurs in most samples and is a later alteration. It sometimes occurs in stringers and veins, with quartz in places.

4139 and 4150 are similar rocks containing large hornblende phenocrysts. The groundmass is similar in texture to 4152 but finer in grain size. 4152 is similar to 4134 but the grains of plagioclase are more rounded in the latter sample. 4152 and 4134 are probabaly dykes.

4137 is a porphyritic andesite containing many plagioclase phenocrysts. The groundmass of this rock is similar to 4136 and 4154. Samples 4135 and 4143 have a similar fabric also but are full of small quartz amygdales. These rocks are probabaly flows.

(continued)

Summary (cont.)

B) QUARTZ-DIORITE (SODA GRANITE):

4142, 4146 (typical); 4148 (sheared,typical);
4147 (leucocratic); 4140 (fractured, leucocratic);
4149, 4151 (siliceous phase or quartz vein, sheared);
4138 (contact with greenstone).

The typical quartz diorite consists of an equigranular, hypidiomorphic intergrowth of sodic plagioclase, quartz and lesser hornblende. The leucocratic variety contains no hornblende. At the contact the quartz and plagioclase are more intimately intergrown, sometimes coarsely graphic, but otherwise it is similar. Intrusion has been passive, tongues of the diorite penetrating into the adjacent andesite.

4149 and 4151 are siliceous rock which have a similar fabric to the quartz diorite but have been highly sheared and altered. Plagioclase, if any has been completely destroyed. I think they may be quartz veins asssociated with the diorite.

Alteration during and after shearing and brecciation has resulted in the development of sericite from plagioclase and introduction of calcite. Epidote and chlorite occur in some of the diorites.

C) APLITE: 4145 and 4153.

These rocks are virtually identical and consist of a compact, granular, sugary mass of fine rounded quartz grains with small patches of sericite and carbonate intergrown with it. These may have been plagioclase. Fine sericite and small carbonate patches are disseminated along a weak foliation.

D) ALBITITE: 4141 and 4144.

These rocks are virtually identical and consist of a compact mass of fine interlocking sodic plagioclase grains with scattered plagioclase phenocrysts. Small amounts of fine sericite and carbonate are disseminated within the plagioclase.

A. L. Littlejohn, M.Sc.

4133: EPIDOTE - QUARTZ ROCK (ALTERED VOLACANIC)

DRILL HOLE SB84-17 Box 11 @ 298'

This isample is a medium grained rock consisting mainly of epidote and lesser quartz. It appears to be an altered volcanic; there are small patches of fine grained tremolite and thin tremolite grains occur in the quartz which are probabaly derived from volcanci material. Minerals are:

epidote	84%	
quartz	12	
tremolite	4	
Fe-Ti oxide	minor	
chlorite	trace	
opaque	trace	(pyrite)
carbonate	trace	

Epidote forms rounded grains 0.1 to 0.5mm in size and prismatic grains up to 1.5mm in length. The more rounded grains occur in large massive patches while the more primatic ones occurs in patches intergrown with quartz grains 0.2 to 0.5mm in size. Splays of prismatic grains occur. A somewhat coarse spherultic texture has devloped due to the differing habits of the epidote grains. A cluster of subcubic pyrite grains up to 1,5mm in size is intergrown with the epidote.

Tremolite forms ragged flakes grains less than 0.1mm in size which occur in small streaky patches amongst the epidote. In places fine chlorite is intergrown with the tremolite. Extremley fine Fe-Ti oxides are scattered within the tremolitic patches and also occur in the epidote and quartz in places. Extremely thin tremolite, up to 0.1mm in length, occurs in much of the quartz, making the quartz grains rather cloudy. The tremolite may pass across quartz grain boundaries. Small ragged patches of very fine carbonate sometimes occur in the tremolitic patches.

4134: ALTERED (EPIDOTE) DACITE.
DRILL HOLE SB 84-17
BOX 19 @ 426'

This is a fine grained massive subvolcanic rock consisting mainly of an intergrowth of plagioclase and quartz with fine chlorite disseminated between them. Small patches of epidote are disseminated throughout the rock. Minerals are:

plagioclase	55%
quartz	15
chlorite	12
epidote	18
Fe-Ti oxide	minor

Plagioclase forms a mass of feathery interlocking laths and irregularly shaped grains about 0.2mmm in size. Occasional subhedral grains up to 0.6mm in size occur amongst the laths. Extremely fine chlorite forms a thin, interconnected intergranular film between the plagioclase grains and also occur as fine specks within it. Small patches of chlorite have sometimes developed. Extremely fine Fe-Ti oxides are disseminated throughout the rock and occur with the chlorite.

Quartz forms rounded grains 0.1 to 0.3mm in size which are intergrown with the plagioclase. Small aggregates are quite common and there are also several subrounded patches of relatively coarse quartz. One of these is 3mm in size.

Epidote forms extremely fine grains occuring in diffuse cloudy patches up to 0.3mm in size which are disseminated throughout the rock within the plagioclase. Very fine stringers are also present. Well formed, rounded to subprismatic epidote grains 0.1 to 0.4mm in size also occur and these have usually developed around and partly within the quartz. Clusters are common around the quartz aggregates and the large quartz aggregates are intergrown with relatively coarse epidote. Chlorite also occurs replacing the edges of these.

4135: ALTERED (TREMOLITE, CHLORITE) AMYGDALOIDAL DACITE.
DRILL HOLE SB84-17 BOX 26 @ 561'

This is a fine grained volcanic rock originally consistiing of a felted mass of fine plagioclase laths quite crowded with small amygdales filled with quartz. Fine tremolite and chlorite are forming from the plagioclase. There is a shear zone about 4mm wide which consits of a mixtre of chlorite and epidote. Minerals are:

plagioclase	15%
tremolite	20
quartz	15
chlorite	45
epidote	5
Fe-Ti oxides	minor
carbonate	trace

Plagioclase originally formed a felted mass of thin laths 0.1 to 0.5mm in length. Much of this has been altered to a mixture of very fine chlorite and tremolite. The tremolite forms extremely fine feathery grains which are replacing the laths. Chlorite forms a mass of extremely fine flakes occuring between the plagioclase laths and also replacing them. Small, partly interconnected patches of slightly coarser chlorite occur. Extremely fine Fe-Ti oxides are disseminated within the altered plagicolase, often occuring in thin whispy streaks

Small amounts of fine quartz were intergrown with the plagioclase but most of it occurs in rounded amygdales 0.3 to 1.5mm in size. In these the quartz forms shapeless interlocking grains less than 0.1mm in size. There are also several in which the quartz is coarser (u ,p to 0.5mm) and subidiomorphic or rounded. Clusters of rounded chlorite aggregates are replacing the edges of the quartz amygdales. In some there are subprismatic epidote grains intergrown with the quartz. Occasionally most of the amygdale consists of epidote.

There is a shear zone a few millimeters wide which consists of a streaky mass of fine chlorite with large patches of massive epidote within it. All the plagioclase has been destroyed. Shearing has also affected some of the amygdales, breaking them up. There is a vein-like patch of coarse quartz which has been broken up by shearing and in this fine carbonate has developed between the quartz grains, as well as chlorite.

4136: SHEARED, ALTERED (CHLORITE, EPIDOTE, TREMOLITE, CARBONATE) ANDESITE.
DRILL HOLE SB84-25 BOX 12 @ 283'

This sample was originally an andesite consisting of a mass of fine plagioclase laths. Shearing and intense alteration resulted in the developmemt of chlorite,epidote and tremolite from the plagioclase. Calcite has been introduced along the shears and pyrrhotite is sometimes associated with it. Only small patches retain the original texture. Minerals are:

chlorite	52%	
epidote	20	
tremolite	7	
plagioclase	8	
carbonate	5	
quartz	4	
opaque	2	(mainly pyrrhotite)
Fe-Ti oxide	2	

The original rock appears to have consisted of a mass of thin plagioclase laths 0.1 to 0.3mm in size. Small amounts of quartz are intergrown with it. There are also small subrounded patches of slightly coarser quartz. These may have been amygdales (?) or quartz aggregates.

Shearing and alteration has resulted in the development of a fine network of chlorite around and within the plagioclase. There are many narrow shear zones where a streaky mass of very fine chlorite has developed. Thin whisps of Fe-Ti oxide occur in the chlorite streaks and very fine ragged grains are disseminated throughout the rock. The original fabric of the volcanic rock is retained in elongated patches amongst the mass of chlorite and in these, fine ragged tremolite is often forming from the plagioclase. Ragged tremolite grains up to 0.2mm in length have developed within the quartzitic patches.

Epidote forms extremely fine grains which are intimately intergrown with the chlorite, sometimes occuring in a fine network within the masses of chlorite flakes. Much of the epidote, though, forms rounded grains 0.05 to 0.2mm in size which tend to be concentrated in massive patches 0.5 to 3.0mm in size and also occur scattered throughout the rock.

Calcite forms ragged shapeless grains 0.3 to 0.8mm in size which occur in vein-like patches of several grains, often within the shear zones. Fine stringers also occur. It is intimately intergrown with chlorite in places. The carbonate is also intergrown with clusters of irregularly shaped opaque grains 0.2 to 1.0mm in size. These appear to be mainly pyrrhotite, judging from the hand specimen. Some of this occurs sandwiched between epidote grains in some of the large patches.

4137: PORPHYRITIC (PLAGIOCLASE) ANDESITE.
DRILL HOLE SB84-25 BOX 19 @ 403'

This is a fine to medium graine inequigranular volcanic rock consisting mainly of plagioclase phenocrysts scattered about a fine plagioclase - chlorite groundmass. Minerals are:

plagioclase groundmass	53%
plagioclase phenocrysts	25
chlorite	15
epidote	3
carbonate	3
Fe-Ti oxide	1
opaque (Fe-sulphide or oxide)	minor
quartz	minor

Plagioclase phenocrysts are euhedral and vary in size from 0.5 to 1.5mm. Clusters and aggregates of a few are common. The phencorysts are scatetred within a groumdmass consisting of a mass of ragged plagioclase laths about 0.1mm in length. Flow around the phenocrysts occurs. Fine quartz grains are sometimes intergrown with the groundmass plagicolase, often occuring in small aggregates.

Chlorite forms extremely fine flakes which occur in a thin network around and within the groundmass plagioclase. Fine chlorite occurs as specks and along cleavages in the phenocrysts. Small subrounded patches of fine chlorite occur amongst the mass of fine plagioclase. Extremely fine Fe-Ti oxides are disseminated throughout the groundmass and are sometimes concentrated in the chloritic patches where it is associated with epidote. The epidote forms rounded grains less than 0.05mm in size occuring in clusters and small aggregates within the chloritic patches or in the quartz.

Calcite forms very fine grains which are scattered about the groundmass and also occur in the phenocrysts. Ragged patches up to 1mm in size occur in the groundmass. Thin discontinuous stringers of calcite occur.

Opaques forms ragged grains less than 0.1mm in size which are scattered, in small aggregates and clusters, about the groundmass. It is often associated with the carbonate.

4138: QUARTZ-DIORITE - PORPHYRITIC ANDESITE CONTACT.

DRILL HOLE SB84-25 BOX 19 @ 411'

This sample consists of porphyritic andesite with a tongue of quartz - diorite which has penetrated into the volcanic rock. The immediate contact is sharp. The andesite has been baked. Intrusion has been quite passive. The quartz diorite is somewhat fractured and brecciated in places and carbonate has developed within these zones. Veinlets of carbonate cut through the andesite but it is not deformed, being less brittle than the intrusive. Minerals are:

Volcanic		Intrusive	
plagioclase groundmass	36%	plagioclase	50%
plagioclase phenocrysts	20	quartz	34
amorphous	32	epidote	8
Fe-Ti oxide	4	chlorite	3
chlorite	3	carbonate	5
carbonate	5	opaque	minor
opaque	trace	Fe-Ti oxide	trace
		sphene	trace

The andesite consists of euhedral plagioclase phenocrysts 0.5 to 2.5mm in size which occur within a groundmass consisting of a felted mass of thin plagioclase laths about 0.1mm in length mixed with a fine amorphous material, which probabaly developed during baking. Ragged grains of Fe-Ti oxide are disseminated throughout the groundmass. Small clusters, sometimes with opaque grains, often occur but these are usually associated with chloritic patches which have been introduced later.

Post-intrusive alteration in the andesite consists of the development of patches and veinlets of chlorite and calcite. Veinlets are 0.05 to 0.4mm in width and are usually discontinuous but the wider ones pass, with breaks, into the intrusive. Most are either carbonate or calcite but the two mineral are intergrown with places. Patches are ragged and vary in size from 0.2 to 1.0mm. The chlorite patches are sometimes speckled with calcite and they sometimes contain clusters of small opaque grains as well as Fe-Ti oxides. The plagioclase phenocrysts contain ragged patches of calcite and are speckled with fine chlorite flakes. Several phenocrysts are almost completely replaced by calcite.

The quartz-diorite consists of an intergrowth of plagioclase and quartz grains 1 to 3mm in size. The quartz is somewhat rounded and the plagioclase tends to form subhedral or shapeless grains sandwiched between the quartz. Coarse graphic quartz-plagioclase intergrowths occur in places. A large chlorite flake occuring between the quartz and plagioclase was probabaly hornblende.

The diorite has been fractured and brecciated and there are narrow zones and patches of fine granulated quartz and plagioclase. Calcite and chlorite veinelts and patches have formed in these, and through the larger grains. Fine calcite is disseminated between the larger grains. Fine Fe-Ti oxide is associated with the chlorite and clusters of shapeless opaque grains up to 0.2mm in size also occur. A small sphene grain occurs in one patch. Much of the granulated material has been replaced by ragegd diffuse patches of fine epidote. In places small aggregates of well formed grains are present amongst the fine epidote.

4139: PORPHYRITIC (HORNBLENDE) DACITE.

DRILL HOLE SB84-25 BOX 30 @ 606'

This sample is a medium grained inequigranular volcanic rock consiting of large hornblende phenocrysts within a medium grained plagioclase - quartz groundmass. Minor epidote and carbonate alteration has occured. Minerals are:

plagioclase	43%
quartz	12
hornblende phenocrysts	12
epidote	16
chlorite	8
carbonate	5
biotite	2
Fe-Ti oxide	2
opaque	minor

Hornblende phenocrysts are subidiomorphic and vary in size from 1.0 to 3.0mm. Small amounts of fine chlorite occurs in small patches and stringers within them. A few of the hornblende phenocrysts have been completely altered to a mass of very fine carbonate. Subrounded opaque grains (Fe-oxide?) 0.1 to 0.3mm in size are sometimes associated with the hornblende.

The groumdmass consists mainly of an intergrowth of plagioclase and quartz. The plagioclase forms squat laths 0.1 to 0.5mm in size and the quartz forms subrounded grains 0.05 to 0.3mm in size occuring between the plagioclase. Very fine chlorite forms a thin network around the quartz and plagioclase grains. Ragged biotite flakes less than 0.05mm in size are sometimes associated with the chlorite. Biotite also occurs in some of the hornblende phenocrysts. It probabaly formed by thermal metamorphism due to proximity to the "soda granite".

Epidote forms extremely fine grains occuring in diffuse, cloudy patches 0.1 to 1.0mm in size which have replaced the plagioclase. Pseudomorphic replacement has sometimes occured. Extremely fine Fe-Ti oxides are often mixed with the fine epidote. Epidote also forms subrounded grains less than 0.05mm in size which occur in small patches between plagioclase and quartz grains.

As well as replacing hornblende, calcite forms ragged grains less than 0.05mm in size which are disseminated throughout the rock within and between the plagioclase grains. Small patches and thin discontinuous stringers are present. Fine chlorite is sometimes intergrown with the calcite stringers. Quartz is intergrown with relatively coarse calcite in one patch about 1mm in size.

4140: FRACTURED LEUCOCRATIC QUARTZ-DIORITE.

DRILL HOLE SB84-25 BOX 35 @ 687'

The sample is a medium grained, originally equigranular rock consisting of an intergrowth of plagioclase and quartz. Deformation has resulted in development of a closely spaced network of fine granulated and recrystallied quartz and plagioclase grains within and between the original grains. Veinlets of carbonate have formed within the granulated quartz and feldspar. Minerals are:

plagioclase	55%	
quartz	38	
calcite	5	
opaque	2	(mainly pyrite)
epidote	minor	
chlorite	trace	
sericite	trace	

The undeformed rock consisted of a hypidiomorphic-granular intergrowth of subhedral plagioclase and rounded quartz grains varying in size from 1 to 4mm. Dark minerals were absent. Deformation has resulted in granulation of the quartz and feldspar and a network of fine grains has formed around and sometimes within them. The granulated grains vary in size from 0.01 to 0.1mm and are angular to rounded. There is narrow zone around between the larger grains; small patches occur at intersections where grain size and angularity is very variable. Thin fractures within the coarse grains are common. The quartz is strained and twinning in the feldspar is bent. There does not appear to be a strong shear component to the deformation.

A network of fine calcite veinlets and stringers has formed within the granulated quartz and feldspar around the original grains. Many of the fine fractures within the larger grains are filled with carbonate. Sometimes fine sericite is intergrown with the calcite. Veinlets very in width from 0.05 to 0.03 with coarser vein-like patches at intersections.

Epidote forms very fine grains which occur in thin diffuse stringers and cloudy patches within the large plagioclase. Thin discontinuous veinlets occur in the network of granulated quartz and feldspar. The epidote is associated with opaque grains (mainly pyrite judging from the hand specimen). These form rounded to subcubic grains 0.05 to 0.1mm in size which are scattered within the granulated material. Ragged patches up to 1mm in size occur within plagioclase where it is intergown with epidote. The carbonate tends to occur around the opaques indicating that it was introduced later. Epidote is also associated with chlorite which forms ragged flakes up to 0.1mm in size occuring in small patches within the granulated quartz and feldspar.

4141: PORPHYRITIC ALBITITE.

DRILL HOLE SB84-25 BOX 38 @ 737'

This rock is a fine grained inequigranular rock consisting mainly of a mass of fine plagioclase with euhedral plagioclase phenocrysts scattered about it. The plagioclase has a low RI and appears to be albitic but lack of suitable twinning makes optical confirmation uncertain. Minerals are:

plagioclase	76%
phenocrysts	8
clay (+ sericite)	10
carbonate	4
chlorite	2
opaque (hematite)	minor
quartz	trace
apatite	trace
Fe-Ti oxide	trace
zircon	trace

Plagioclase phenocrysts are euhedral and range in size from 0.5 to 2.5mm. Clusters of a few grains are common. Rare zircons are included within them. Carbonate alteration has affected the phenocrysts but is less common in the groundmass. The carbonate forms ragged patches within the grains and in a few places almost all the plagioclase has been replaced. It is sometimes intergrown with chlorite.

The groundmass consists of a mass of subhedral or shapeless interlocking grains 0.02 to 0.08mm in size. A few tabular grains of apatite are intergrown with the plagioclase. There is a small patch of fine quartz within the groundmass near a cluster of phenocrysts. Disseminated between the grains are small ragged aggregates of an extremely fine clay (perhaps illite). Fine flakes of sericite have sometimes developed within these. Extremely fine grains of Fe-Ti oxide are scattered about the groundmass. Aggregates up to 0.3mm in size occur within the chlorite in the altered phenocrysts.

In the groundmass chlorite and carbonate occur in thin sinuous stringers up to 0.3mm in width. They occur in separate stringers but small amounts of carbonate sometimes occcur in the chloritic ones. A few fine ragged grains of carboante are scattered about the groundmass. Near the phenocrysts there are patches up to 2mm in size which consist of a dendritic network of opaque material (hematite ?) between the plagioclase grains. These are associated with the chlorite stringers.

4142: QUARTZ - DIORITE (MODERATELY ALTERED).

DRILL HOLE SB84-28 BOX 16 @ 334'

This sample is a medium grained, more or less equigranular intrusive rock consisting of a hypidiomorphic-granular intergrowth of plagioclase and quartz with lesser amounts of hornblende. Moderate alteration along fractures has resulted in the development of chlorite and epidote. Minor amounts of quartz and carbonate are associated with these. The fracturing is associated with mild brecciation and granulation. Minerals are:

plagioclase	56%
quartz	10
hornblende	9
epidote	16
chlorite	7
quartz vein	2
calcite	minor
opaque	trace

Plagioclase forms subhedral laths 0.5 to 2.5mm in size which is intergrown with subrounded to shapeless quartz grains 0.2 to 1.0mm in size. Quartz tends to occur in small aggregates amongst the plagioclase. Shapeless to subidiomorphic hornblende grains 0.2 to 1.5mm in size are sandwiched between the quartz and plagioclase. They also tend to occur in clusters.

Several fractures (or breccia zones) about 2mm wide cut through the rock and alteration has occured along these. There are also many thinner discontinuous fractures and patches of alteration. The main alteration mineral is epidote which forms rounded to subprismatic grains 0.05 to 0.3mm in size and small diffuse patches of extremely fine grains. The latter material occurs between and within the plagioclase grains and surrounds aggregates of the well formed epidote. The wide breccia zones are filled with small rounded epidote and fine diffuse patches spread outwards from them. Fine quartz has been introduced along with the epidote and forms the core to the wide breccia zones. Quartz is also intergrown with epidote in some of the interstitial patches. A few very thin stringers of quartz alone are present.

Epidote is also associated with chlorite which forms very fine flakes occuring in shapeless patches up to 2mm in size between the plagioclase and quartz grains. Much of the chlorite has replaced hornblende. Small chlorite flakes are scattered between, and sometimes within, the plagioclase. Well formed prismatic epidote grains occur within the chloritic patches. Highly irregularly shaped aggregates of opaque material (pyrite ?) up to 0.8mm in size are sometimes intergrown with the epidote and chlorite.

Traces of carbonate have been introduced after the main alteration. It occurs in very thin discontinuous veinlets which cut across the epidote and chlorite.

4143: ALTERED (CHLORITE, CARBONATE) AMYGDALOIDAL DACITE.
DRILL HOLE SB84-28 BOX 20 @ 403'

This sample is a fine grained volcanic rock originally consisting of a mass of plagioclase grains with rounded quartz amygdales scattered throughout it. Intense alteration has resulted in the rplacement of much of the plagioclase and quartz by fine chlorite and carbonate. Thin shears in which the original fabric has been totally obscured are present. Minerals are:

plagioclase	10%
quartz	10
chlorite	40
carbonate	40
opaque (pyrite?)	trace
Fe-Ti oxides	trace

Plagioclase originally formed a mass of subrounded grains about 0.1mm in size. Scattered throughout this are rounded quartz amygdales 0.3 to 1.2mm in size. The quartz in these forms subrounded interlocking rounded grains 0.1 to 0.3mm in size. Some fine quartz is intergrown with the plagioclase.

Alteration has been quite intense and has resulted in the formation of very fine chlorite which has replaced much of the plagioclase. A fine patchy interconnected network of chlorite flakes up to 0.1mm in size occurs amongst the partially replaced plagioclase grains which are very cloudy with incipient alteration. The quartz is also being replaced and chlorite is concentrated between the grains. In places there are thin shears which consist of a streaky mass of extremely fine chlorite. Extremely fine Fe-Ti oxides are disseminated throughout the chlorite.

Carbonate alteration has been superimposed upon the chloritic alteration. The carbonate forms very fine ragged grains and small patches which occur closely spaced within the mass of chlorite and altered plagioclase. In places large massive patches of fine carbonate occur. Thin stringers and veinlets are quite common. Within the carbonate patches are clusters of subcubic opaque grains (pyrite ?) about 0.05mm in size. A few larger ones are scattered throughout the rock.

4144: PORPHYRITIC ALBITITE.
DRILL HOLE SB84-33 BOX 9 @ 218'

This is a fine grained inequigranular rock consisting mainly of a fine plagioclase groundmass with sccattered euhedral plagioclase phenocrysts. The feldspar has low Ri and appears to be albitic but lack of suitable twinning make optical confirmation uncertain. Minerals are:

plagioclase	74%
phenocrysts	10
clay (+ sericite)	9
carbonate	7
Fe-Ti oxide	minor
sericite	minor
chlorite	trace
apatite	trace
zircon	trace
opaque (sulphide ?)	trace

Plagioclase phenocrysts are euhedral and vary in size from 0.5 to 2.5mm. Clusters of a few are common; sometimes these are elongated. The groundmass consists of a mass of shapeless to subhedral interlocking grains 0.02 to 0.8mm in size. Some of the more euhedral grains are thin and more elongated. Disseminated between the plagioclase grains throughout the rock are fine patches of extremely fine clay (perhaps illite). Fine flakes of sericite have sometimes developed within this and in the phenocrysts. There are aslo a few thin sinuous veinlets of sericite. Apatite forms prismatic grains up to 0.2mm in size which are intergrown with the plagioclase. Aggregates of a few grains occur. A few small zircon grains occur in the phenocrysts.

Pervasive carbonate alteration hass affected the rock. The carbonate forms small ragged grains and aggregates up to 0.5mm in size which are disseminated throughout the groundmass and also occur in the phencorysts. Several of the phenocrysts are completely altered. In these the carbonate is sometimes intergrown with small patches of fine chlorite. Fe-Ti oxide is also associated with the carbonate. Very fine grains are scattered about the groundmass but most occurs in aggregates intergrown with or close to carbonate patches. The aggregates may be tabular and up to 0.5mm in size. Small opaque grains are also present in some of the carbonate patches.

4145: ALTERED (CALCITE, SERICITE) QUARTZITIC APLITE.
DRILL HOLE SB84-41 BOX 2 @ 97'

This is a fine grained, equigranular, fairly massive rock with a compact sugary texture. It consists largely of quartz; plagioclase may have been present but if so, sericite has replaced it. There is a weak foliation, developed during mild shearing, due to the alignment of fine sericite flakes disseminated between the quartz grains. Calcite is associated with the sericite. Minerals are:

quartz	73%
sericite	17
calcite	10
opaque	trace (pyrite ?)
Fe-Ti oxide	trace

Quartz forms a mass of rounded grains about 0.1mm in size. There is a fine intergranular film of extremely fine sericite around each of the quartz grains, replacing the edges of the quartz grains. Small patches of sericite about the same size as the quartz are intergrown with the quartz. Some of this may have been plagioclase ? Sericite also forms thin ragged flakes up to 0.05mm in length which occur between the quartz grains and have a parallel alignment. Scattered about the rock are small elongated patches of sericite which are aligned parallel to the disseminated flakes. Extremely fine Fe-Ti oxides are associated with the sericitic patches, occuring in small aggregates.

Calcite forms very fine grains which are intimately mixed with the intergranular sericite. Ragged rounded, occasionally tabular, grains about 0.1mm in size occur amongst the quartz. These may also have been plagioclase ?Some of the sericite patches contain relatively coarse calcite. The carbonate is sometimes associated with subcubic opaque grains (pyrite ?) about 0.2mm in size. Smaller grains sometimes occur in the sericite patches.

4146: QUARTZ - DIORITE.

DRILL HOLE SB84-41 BOX 7 @ 180'

The sample is a medium grained equigranular intrusive rock with a hypidiomorphic-granular texture. It consists mainly of an intergrowth of plagioclase, quartz and hornblende. Minor deuteric (??) alteration has occured resulting in the formation of epidote and chlorite. Minerals are:

plagioclase	52%
quartz	30
hornblende	16
chlorite	1
epidote	1
opaques	minor
sericite	trace
carbonate	trace

Plagioclase forms subhedral grains varying in size from 1 to 3mm. Quartz forms subrounded grains 0.5 to 2.5mm in size which tend to occur in aggregates of a few grains amongst the mass of plagioclase. Hornblende forms bladed grains 0.5 to 2.0mm in size which occur in aggregates of a few grains between the quartz and plagioclase. Subcubic opaque grains (Fe-oxide) about 0.1mm in size cluster around the hornblende aggregates.

Alteration has been mild and consists of the development of ragged patches of fine chlorite, up to 0.5mm in size, around and within the hornblende. Patches also occur between or partly within plagioclase grains. The plagioclase is somewhat cloudy and small diffuse patches of extremely fine epidote have developed. In places clusters of subrounded epidote grains up to 0.1mm in size occur in the plagioclase. Very thin discontinuous epidote veinlets also occur. Subprismatic epidote grains up to 0.2mm in size occur in clusters associated with some of the chloritic patches. A few grains of plagioclase are speckled with very fine sericite and calcite.

4147: LEUCOCRATIC QUARTZ - DIORITE.

DRILL HOLE SB84-41 BOX 18 @ 372'

This is a medium grained, equigranular leucocratic intrusive rock consisting mainly of a hypidiomorphic-granular intergrowth of plagioclase and quartz. Weak to moderate alteration has occured along a network of widely spaced fractures and veinlets containing epidote with minor carbonate, chlorite and quartz. Some chlorite may have been derived from hornblende. Minerals are:

plagioclase	50%
quartz	45
epidote	4
chlorite	1
carbonate	minor
quartz vein	minor
sphene	trace
opaque	trace
sericite	trace

Plagioclase forms subhedral laths 1 to 3.5mm in size which are intergrown with subrounded to shapeless quartz grains of similar size. The quartz tends to be slightly smaller and occurs in aggregates of a few grains. It is moderately strained. Plagioclase is rather cloudy and speckled with fine sericite and occasional carbonate. There may have been minor hornblende between the plagioclase and quartz but it has all been altered to chlorite and epidote.

Chlorite forms flakes about 0.1mm in size which occur in small clusters between the plagioclase and quartz grains. It is usually intergrown with subprismatic epidote grains 0.1 to 0.3mm in size. In the larger patches (up to 1.5mm) there are often ragged aggregates of opaque grains (Fe-oxide ?) within the chlorite.

Much of the epidote occurs as fracture fillings and veinlets 0.05 to 0.5mm in width. A few of the fracture fillings contain fine quartz and carbonate intergrown with the epidote. Small grains of epidote and a few flakes of chlorite are scattered between the plagioclase and quartz grains and also occur within the plagiclase. Rare subidiomorphic sphene grains about 0.05mm in size occur are associated with these. Very fine discontinuous stringers of calcite are sometimes associated with sericite.

4148: SHEARED, ALTERED (CALCITE, SERICITE) QUARTZ-DIORITE.
DRILL HOLE SB84-43 BOX 5 @ 160'

This sample is a fine to medium grained inequigranular rock with a moderately developed cataclastic foliation. It apparently consisted of an intergrowth of quartz, plagioclase and hornblende but shearing and alteration has been so intense that only remnant fragments of the quartz remain. The plagiolcase and hornblende (and also some of the quartz) have been replaced by very fine calcite and sericite. The hornblende (about 15% in the original rock) can be recognised by a crude amphibole outline of slightly coarser and darker (in spots) carbonate amongst the finer material. Minerals are:

calcite	50%
sericite	25
quartz	14
plagioclase	10
chlorite	1
opaque	trace

The original rock consisted of a hypidiomorphic-granular intergrowth of quartz, plagioclase and hornblende with grain size varying from 1 to 3mm. Deformation and alteration has been intense so that only indistinct outlines of the original plagioclase and hornblende grains remain. Calcite and sericite form an intimate intergrowth of very fine grains less than 0.05mm in size which have replaced the plagioclase. In places there are fine diffuse relicts of the plagioclase amongst the calcite and sericite. The hornblende has been completely replaced by slightly coarser calcite. Small dark lensoid spots are crowded within the coarser calcite; in places they mimic the amphibole cleavage traces. These are perhaps Fe-rich patches of carbonate derived from the amphibole. Small streaky patches of fine chlorite occur near the altered amphiboles.

Quartz occurs in small rounded or lensoid grains and aggregates throughout the mass of calcite and sericite. These vary in size from 0.1 to 3.0mm in size. The smaller grains and aggregates are broken pieces of larger grains in which a fine network of calcite and sericite has formed. In many places much of the quartz has been replaced and only indistinct remnants remain. The larger grains are highly strained and are speckled with extremely fine carbonate and sericite.

4149: BRECCIATED, ALTERED (SERICITE, EPIDOTE) QUARTZ VEIN.
DRILL HOLE SB84-45 BOX 12 @ 255'

This is a quartzitic rock which has been sheared and brecciated, resulting in the development of a patchy network of fine recrystallised quartz around fairly coarse angular to subrounded quartz grains and aggregates. Sericite is intimately mixed with the fine quartz and is concentrated in streaky patches. Patches of epidote have also formed within the fine quartz and sericite and appears to have formed after the brecciation. It is associated with minor pyrite. Minerals are:

quartz	50%
fine quartz	25
sericite	18
epidote	7
opaque	minor (mainly pyrite)
carbonate	trace
chlorite	trace

Quartz grains and aggregates are rounded to angular and vary greatly in size from 0.2 to 2.0mm. In places they are crowded together; elsewhere they are scattered about streaky patches of fine grained material. The quartz is highly strained and narrow zones within and between grains consist of fine recrystallised quartz. In places there is a marginal patch of recrystallised quartz and a few grains small grains consist entirely of this; the outline of the original grain remaining within the even finer surrounding material.

The matrix within which these quartz grains occur consists of a mass of shapeless interlocking quartz about 0.05mm in size. It is intimately mixed with extremely fine sericite and streaky patches of sericite may completely replace it. Small cloudy patches of sericite sometimes occur within the large quartz grains and there is often a thin intergranular film of sericite between the quartz in the aggregates.

Epidote forms rounded to subprimatic grains up to 0.2mm in size but mostly less than 0.05mm. It occurs in shapeless diffuse patches up to 2mm in size which are superimposed upon the fine quartz and sericite. The larger grains are scattered within the fine quartz and sericite or occur within the core of the diffuse patches. Some of the cloudy, diffuse patches of epidote are intimately mixed with very fine carbonate. Very thin discontinuous stringers of carbonate occur within the sericite and fine quartz and these cut across the streaky masses of sericite and sometimes through the large quartz grains.

Opaque grains (mainly pyrite) are rounded to cubic and about 1mm in size; clusters of smaller ones also occur. They occur within the fine quartz and sericite. There is usually a thin zone of carbonate around them; fine grains may occur in the carbonate stringers. Chlorite also occurs around the pyrite and carbonate and forms flakes about 0.1mm in size. A few small patches of chlorite occur within the streaks of sericite.

4150: PORPHYRITIC (HORNBLENDE) ANDESITE.

DRILL HOLE SB84-45 BOX 17 @ 355'

This sample is a fine to medium grained inequigranular volcanic (subvolcanic ?) rock consisting of large hornblende phenocrysts scattered about a fine plagioclase - epidote groundmass. Minerals are:

plagioclase	52%
hornblende phenocrysts	16
epidote	12
chlorite	5
quartz	5
Fe-Ti oxide	minor
carbonate	minor
tremolite	trace
opaque	trace

Hornblende phenocrysts are subidiomorphic and vary in size from 0.5 to 4.5mm; most are less than 2.5mm. They are scattered about a groundmass which consists mainly of a mass of shapeless to lath-like interlocking plagioclase grains 0.05 to 0.3mm in size. Small quartz grains are intergrown with the plagioclase. The plagioclase is cloudy with extremely fine chlorite which forms a fine intergranular film between the plagioclase grains and specks within them. A few fine ragged tremolite grains also occur between the plagioclase grains. Very thin tremolite stringers occur in the groundmass.

Epidote has also developed within the groundmass and forms rounded grains and aggregates 0.05 to 0.3mm in size which are disseminated throughout the rock. Small grains occur in the hornblende. Extremely fine Fe-Ti oxide grains are also disseminated throughout the mass of plagioclase and are often associated with the epidote.

There is a patch a few millimeters in size which consists of quartz intergrown with epidote and chlorite. This may be an amygdale. Small opaque grains (Fe-sulphide or oxide) occur in this intergrowth and a few ragged grains are scattered about the groundmass.

Rare carbonate forms ragged grains less than 0.1mm in size which are scattered about the rock within the plagioclase groundmass.

4151: BRECCIATED, ALTERED (CALCITE, SERICITE) QUARTZ VEIN.
DRILL HOLE BOX 20 @ 410'

This sample originally consisted almost entirely of quartz. It has been highly brecciated and there is a network of fine graunulated grains around the original ones. Small patches are common. The fine quartz has been replaced by a mixture of calcite and sericite. Minerals are:

quartz	70%	
calcite	16	
sericite	12	
opaque	2	(pyrite ?)
Fe-Ti oxide	minor	
chlorite	trace	
zircon	trace	

Originally quartz formed an aggregate of subrounded interlocking grains up to 2mm in size. Rare small zircons occur within the quartz. Brecciation has resulted in granulation of the quartz so that there is a thin closely spaced network of very fine grains surrounding the original ones; many have been broken down into a mass of grains less than 0.1mm in size with a small remnant core within it. The unbrecciated quartz is quite highly strained and is usually fractured.

The fine granulated quartz has been largely replaced by a fine intimate intergrowth of sericite and calcite. These occur also in fine fractures within the larger quartz grains. The carbonate often coarsens up to small patches and veinlets of grains up to 0.4mm in size. Rounded to irregularly shaped opaque grains (pyrite ?) occur in small clusters within the calcite. Fe-Ti oxide forms extremely fine grains which occur in small aggregates within the sericitic parts. Occasional small patches of fine chlorite are associated with the Fe-Ti oxide aggregates.

4152: ALTERED (CARBONATE) DACITE.

DRILL HOLE SB84-47 BOX 22 @ 426'

This is a medium grained inequigranular massive subvolcanic rock consisting mainly of an intergrowth of plagioclase and quartz. Chlorite occurs between the quartz and plagioclase and replaces the plagioclase. Calcite has pervaded the rock and occurs with the chlorite; fine veinlets also occur. There is also a wide quartz vein which was introduced prior to the carbonate. Excluding the quartz vein, minerals are:

plagioclase	58%
quartz	12
chlorite	20
carbonate	9
Fe-Ti oxide	1
opaque	minor

Plagioclase forms a mass of euhedral laths 0.3 to 1.5mm in size. Interstitial subangular to subrounded quartz grains 0.2 to 0.6mm in size occur between the plagioclase grains. Small plagioclase grains are partly included in the quartz. Aggregates of two or three quartz grains occur.

Chlorite forms fine flakes which occur in an interconnected patchy network between and within the plagioclase grains. Some plagicolase grains are almost completely replaced by chlorite. The relatively unaltered grains are speckled with fine chlorite. Calcite forms ragged grains up to 0.1mm in size which are disseminated throughout the rock within the patches of chlorite and also in the plagioclase. Small patches of carbonate concnetration sometimes ocur. There are also a very thin discontinuous stringers of calcite and there is a vein of coarse calcite about 1.5mm wide.

Fe-Ti oxide forms extremely fine grains which occur in ragged rounded aggregates within the chlorite and are disseminated throughout the rock. The aggregates often have a small core of an indeterminate material. The Fe-Ti oxides are sometimes associated with small clusters of fine ragged opaque grains (pyrite ?) which occur around and partly within quartz (and chlorite).

The quartz vein is about 4mm wide and consists of an intergrowth of subrounded to shapeless grains 0.2 to 2.0mm in size. Small patches of calcite are intergrown with the quartz and several very fine carboante stringers cut through it.

4153: ALTERED (CALCITE, SERICITE) QUARTZITIC APLITE.
DRILL HOLE SB84-48 BOX 13 @ 280'

This sample is a fine grained, more or less equigranular, fairly massive rock which consists mainly of quartz; plagioclase may have been present intergrown with the quartz but if so, it has all altered to sericite and calcite. There is a weak foliation developed during mild shearing and is due to the alignment of fine sericite flakes disseminated between the quartz grains. Small streaky carbonate patches are scattered about the rock and are parallel to the sericite. Minerals are:

quartz	72%
sericite	14
calcite	14
opaque	trace (pyrite ?)
Fe-Ti oxide	trace

Quartz forms a mass of rounded grains 0.05 to 0.1mm in size. There is a thin intergranular film if very fine sericite around the quartz grains. Patches of sericite, about the same size as the quartz are intergrown with the quartz; some of these may have been plagicolase. The edges of the quartz grains are being replaced by the sericite. Very thin ragged flakes of sericite up to 0.1mm in length are disseminated between the quartz grains throughout the rock and have a parallel alignment. Extremely fine grains of Fe-Ti oxide occur scattered within the sericite.

Small amouts of very fine calcite are intimately mixed with the sericite throughout the rock and small ragged grains are intregrown with the quartz. Much of the calcite occurs in elongated patches 0.3 to 1.0mm in size which are aligned parallel to the disseminated sericite flakes. Fine sericite is mixed with the calcite in many of these. Rounded to shapeless opaque grains up to 0.1mm in size occur within the calcite patches.

4154: ANDESITE WITH CALCITE-QUARTZ VEINLETS.

DRILL HOLE SB84-49 BOX 13 @ 260'

This sample is a fine grained volcanic rock consisting mainly of a mass of lath-like plagioclase grains. Alteration has been moderate and very fine chlorite occurs in a network around the plagioclase; fine epidote occurs in patches. Several carbonate-quartz veins cut through the rock. Excluding the veins, minerals are:

plagioclase	45%	
chlorite	28	
epidote	17	
quartz	6	
carbonate	4	
sericite	trace	
Fe-Ti oxides	minor	
opaque	trace	(pyrite ?)

Plagioclase forms a mass of thin laths and subrounded grains about 0.1mm in size. Intergrown with the plagioclase are small grains of quartz. There is a vague flow texture in places. Rare plagioclase phenocrysts about 1.0mm in size are scattered about the mass of fine laths. Chlorite forms extremely fine flakes which occur in a fine network around and partly within the plagioclase laths. Epidote forms extremely fine grains which replace the plagioclase in diffuse, cloudy patches up to 0.5mm in size. These occur fairly evenly distributed throughout the rock. Occasionally a small cluster of rounded grains up to 0.05mm in size occurs amongst the finer epidote or within the plagioclase. Very fine Fe-Ti oxides are disseminated throughout the rock and are often associated with the cloudy epidote patches.

Carbonate has been introduced along veins up to 2mm wide. In these the carbonate is intergrown with subidiomorphic quartz grains up to 0.4mm in size. Ragged patches of calcite up to 1mm in size occur throughout the mass of plagioclase and chlorite. Fine stringers of the carbonate and thin discontinuous vein-like patches of calcite and chlorite are quite common. Fine sericite is sometimes intergrown with the carbonate in the stringers. Subcubic opaque grains (pyrite ?) up to 0.1mm in size occur in clusters within the carbonate patches or are scattered about the mass of plagioclase and chlorite.

APPENDIX 4

GEOPHYSICAL REPORT

FIELD REPORT ON

VLF ELECTROMAGNETIC TEST SURVEYS

AND

PERSONAL OBSERVATIONS

AT THE

BRALORNE MINE AREA

BRALORNE, BRITISH COLUMBIA

FOR

MASCOT GOLD MINES LIMITED

BY

INTERPRETEX RESOURCES LTD.

September 24, 1984

Vancouver, B.C.
E.R. Rockel

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LIST OF FIGURES

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1. SUMMARY

VLF EM anomalies may reflect the "51B Foot Wall" and "77" vein systems near surface. Veins, according to the geophysical results, appear to vary in width, complexity and the amount of gouge and water content.

The VLF EM test survey apparently indicates that the VLF method is useful for tracing mineralized veins containing moisture and fault gouge. This should be confirmed by drilling or trenching. If the VLF method is proved useful, then a comprehensive survey program is recommended to direct exploration for near surface vein systems.

2. INTRODUCTION AND OBJECTIVES

On September 19, 20 and 21, 1984, the writer visited the Bralorne Mine property owned by Mascot Gold Mines Limited, to conduct test VLF EM surveys across selected geological features and to observe the geology of the target mineralization.

A Geonics EM-16 VLF receiver was used for the test. The Annapolis, Maryland transmitting station was used for all readings. All readings were taken facing northerly at 50 foot intervals.

The objectives were to determine if the VLF EM method could provide data which could be useful in tracing gold mineralized quartz veins.

3. DISCUSSION AND CONCLUSIONS

Three 700 foot lines, spaced 100 feet apart, were surveyed in the region of the Taylor Vein and were positioned in order to cross the surface projection of the vein (Figures #1 and #2). Results indicated weak conductivity on all three lines trending northwesterly approximately 300 feet south of drill hole 84-18. This trend is believed to represent a narrow fault and vein containing minor amounts of fault gouge. Profiles on Line 35+00 E (approx. 300S) indicate a possible region of multiple fractures possibly wet and containing gouge. Other anomalies probably represent local wet fractures possibly with minor veins.

Nine lines (Figures #1, #3 and #4) were surveyed to cover the surface projection of the "51 B Foot Wall" vein and the extensions of the "Countless" and "77" veins.

VLF EM anomalies on Lines 21+00 E , 22+00 E, 23+00 E and 24+00 E in the vicinity of 200S and 300S appear to correlate approximately with the 51B Foot Wall Vein surface projection. Reconnaissance type line and station locations for the test survey plus vein irregularities,

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may account for the strike irregularity. The conductor related to 51B FW dies out towards the east after Line 24+00 E. This may indicate less gouge in a tighter and drier fault zone near the surface. The change in strength and character of anomalies from line to line suggests an equivalent change in the width and amount of fault gouge or moist breccia in the vein systems.

VLF EM anomalies on Lines 23+00 E, 24+00 E, 26+00 E, 28+00 E and 29+00 E, around 500S to 575S may reflect the extension of the "77" vein eastward. The variation in strength and character of VLF EM anomalies, here again, suggests variations in the width and amount of conductive material within the vein systems.

Anomalies between station 600S and 700S on Lines 24+00 E, 25+00 E and 26+00 E may represent a westward extension of the Countless Vein or a southward faulted portion of the above "77" zone. The possibility exists that the "Countless" and "77" veins are the same system. An explanation for their mis-alignment could be north-south shifting by faulting of the same vein suggesting two separate veins. Further speculation is not in the scope of this report.

VLF EM anomalies near 100S on Lines 23+00 E, 24+00 E, 26+00 E, 27+00 E and 28+00 E may represent narrow near surface faults. Sufficient data are not available to the north on Lines 26+00 E through 28+00 E to properly interpret the respective anomalies.

4. GENERAL CONCLUSIONS AND RECOMMENDATIONS

The existence of fault gouge and percolating water in fault vein systems plus (as reported to the writer) the positive relationship between gold content and amount of gouge present, suggests that the VLF EM method is appropriate for tracing mineralized vein systems on surface. Test results apparently support the usefulness of the method for tracing the veins and determining the amount of conductive material within the vein.

The above conclusions should be confirmed by surface exploration or drilling before any futher geophysical work is performed. If the VLF EM method is proved to be useful then a comprehensive VLF EM and magnetic survey program should be planned for the property in order to direct near surface drill or trenching exploration for mineralized quartz veins.

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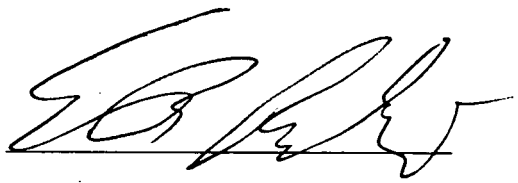
Respectfully Submitted



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