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COGEMA Canada Ltd.

Assessment Report

Geological and Geochemical Surveys

on the

TRUCK / PAYMASTER PROPERTY
(Bralorne Project)

Lillooet Mining Division
British Columbia

NTS 92J/10 and 15
50°44'N / 122°46'W

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,118

Karl Schimann
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December 1991
91-CND-66-07

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SUMMARY

Work performed on the Truck / Paymaster property in the Bridge River Mining Camp from May to August, 1991 consisted of mapping/prospecting and rock and stream geochemistry.

No mineralization nor any new targets were found.

No additional work is recommended.

LOCATION, ACCESS AND PHYSIOGRAPHY

The Truck/Paymaster Project is located 5 kilometres southeast of Bralorne. It is south of Cadwallader Creek at elevations ranging from 1,200 to 2,300 metres in an area of extremely steep, precipitous terrain. Access to these two claim blocks is by helicopter from Goldbridge, 14 kilometres to the northwest. The Bralorne ski hill road ends 0.5 kilometres north of the Truck claim, providing access to parts of this claim. Although very close to the claims, this road is of limited use unless extended to a higher elevation to provide easier access to central and higher sections of the claims (Figures 1 and 2).

LEGAL DESCRIPTION

The Truck/Paymaster property consists of four contiguous claims (42 units, 8 km^2), two of which were acquired by Cogema Canada Ltd. from X-Cal Resources Ltd. in 1990, and two of which were located by Cogema in June, 1991. The claims are shown on Figure 2 and listed on Table 1 hereafter.

Table 1

Claim Name	Record Number Old	Record Number New	No. of Units	Expiry Date (Dec. 15, 1991)
Truck 2	4366	229197	20	22 Feb. 1994
Paymaster 2	4365	229196	20	22 Feb. 1994
Pay 1	-	301604	1	3 June, 1994
Pay 3	-	301576	1	3 June, 1994

COGEMA Canada Ltee/Ltd.

BRALORNE PROJECT

LOCATION MAP

FIG. 1

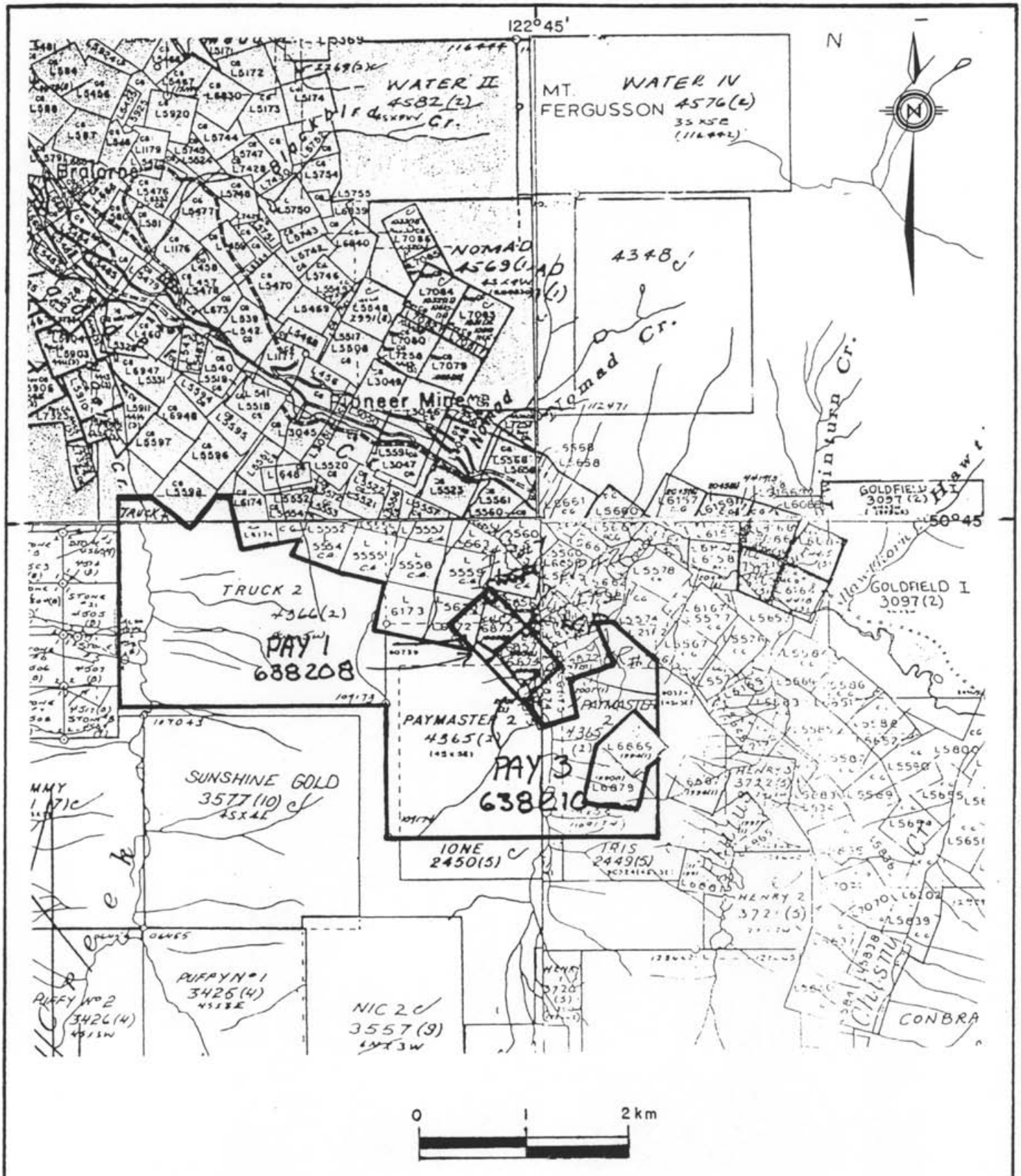

FIG. 2 TRUCK PAYMASTER PROPERTY CLAIM MAP

REGIONAL GEOLOGY

A good summary of the regional geology is given in Leitch (1990) and is reproduced in part hereunder.

The latest published geological map of the area (92J, 1:250,000) based on field mapping is by Woodsworth (1977). Table 2 gives the principal units based on recent mapping by Church (1987), Church et al. (1988), compilation of available data, and recent age dating.

The principal stratigraphic assemblages of the Bralorne area have traditionally been called the Bridge River (Fergusson) and Cadwallader groups, although the former should properly be called the Bridge River Complex. The Bridge River Complex contains the oldest known rocks of the map-area and has generally been assigned a Permo-Triassic age on the basis of its similar lithology to the Cache Creek Group and correlation to the Hozameen Group. The Permian age is supported by recent dating of the Bralorne diorite (284 $\pm$ 20 Ma by K-Ar on hornblende and 270 $\pm$ 5 Ma by U-Pb on zircons) which appears to intrude the Bridge River Complex. However, fossil evidence suggests a Triassic to Jurassic age.

The Bridge River Complex consists of great thicknesses (1000m or more) of ribbon chert and argillite with very minor discontinuous limestone lenses, and large volumes of basalt, some pillowed.

The Cadwallader Group, previously considered to be Upper Triassic (pre-Norian, or pre-225 Ma) age on the basis of conodonts recovered from limestone of the upper sedimentary part of the section, is also apparently intruded by the Bralorne diorite and thus may be at least partly Permian in age. Traditionally, the Cadwallader Group, as defined originally in the Bralorne area, has been subdivided into three formations: the lowermost sedimentary Noel Formation, the Pioneer Formation greenstones, and the upper Hurley Formation sediments. However, the distinction between the two sedimentary formations is often difficult to make

TABLE 2. Generalized stratigraphic section listing geological units in the Bridge River area, showing equivalents in usage at the Bralorne mine and updated names from this study

Unit[1]	Age	Regional name[2]	Mine name	Name and description (this study[3])
	T	Plateau lavas		
10	T	Eocene volcanics	Lamprophyre dykes	Kersantite
	T	Rexmount porphyry		
	K-T	Coast plutonics	Bendor dykes	Dacitic porphyry
9	LK	Felsic dykes	Green hornblende porphyry dykes	Basaltic andesite porphyry
8	LK	Felsic dykes	Albitite dykes	Sodic dacite porphyry
8a			Grey plagioclase porphyry dykes	Sodic dacite porphyry
	K	Taylor Creek Group		
	J-K	Relay Mountain Group		
	J	Jurassic shale		
	Tr	Tyaughton Group		
7			Bralorne soda granite	Albite tonalite or trondhjemite
6	P	Bralorne intrusions	Bralorne diorite	Hornblende quartz diorite
6a			Mafic diorite	Hornblendite
5	?P-J	Shulaps Ultramafic Complex	President ultramafics	Dunite, peridotite and pyroxenite
4			Hurley sediments	Turbidites, wackes and argillites
3	?P-Tr	Cadwallader Group	Pioneer greenstone	Aquagene breccias, basaltic andesite
			Noel argillites	
2	?P-J	Bridge River Complex	Bridge River Group	Ribbon chert and argillite
1				Pillow basalts

[1] Unit is as defined in the Bralorne mine area (this study).
[2] Regional name is taken from Schiarizza *et al.*, 1989.
[3] Prefix "meta-" is understood in all rocks older than Tertiary.

FROM LEITCH 1989

and the Cadwallader may be best divided into a lower volcanic unit (Pioneer Formation) and overlying sedimentary package (Hurley Formation). The contact is generally considered to be conformable.

The Pioneer Formation has commonly been called "greenstone", but abundant volcanic textures are preserved in less altered areas within the Bralorne block. On the basis of their uniform colour index and chemical analyses, the rocks appear to be basalts and basaltic andesites. Although the contact with the overlying sedimentary package was not mapped in detail, in the Bralorne block the volcanics seem to grade upward into finely interbedded green volcanic wackes and dark argillites of the Hurley Formation. Elsewhere a boulder and pebble conglomerate, sometimes containing limestone olistoliths, is often found at the base of the Hurley where it rests conformably on the Pioneer volcanics.

Triassic to Lower Jurassic sediments of the Tyaughton, Relay Mountain, and Taylor Creek Groups and Upper Jurassic to Tertiary volcanics and sediments occur mainly to the north of Carpenter Lake, outside of the main area of interest, but small patches of Tertiary volcanics occur along the north-west shore of Anderson Lake.

A recent volcanic ash deposit (2400y B.P.) covers much of the area and may reach 1.5 metres thick; it is thinner or absent on steep slopes.

Igneous rocks within the Bralorne block include Upper Paleozoic ultramafics and Bralorne intrusives, Mesozoic Coast Plutonic rocks. Tertiary Bendor intrusives, and dykes of Cretaceous-Tertiary age. Ultramafic rocks are common in the Bridge River camp, forming narrow serpentinized bodies that were probably emplaced as thrust slices of oceanic, upper mantle material. With the pillow basalts and radiolarian ribboned cherts of the Bridge River Complex, they form the trinity of a typical ophiolite package. The Shulaps ultramafic complex, which lies 30 km to the northeast of Bralorne, is a much larger mass but may be of similar origin. The ultramafics in the Bralorne area range from dunite to pyroxenite, but peridotites are most common. They are usually partly to completely serpentinized, or altered

to talc-antigorite-tremolite-carbonate. In the Bralorne mine area they are intruded by the diorite and so must be Permian or older.

The Bralorne intrusive suite includes the so-called "augite diorite" and "soda granite", which commonly occur together. Usually the contact between the two is highly complex, forming such an intimate mixture that it may be properly termed a variety of migmatite called agmatite. Although their isotopic dates are indistinguishable (270 $\pm$ 5 Ma by U-Pb on zircons), sharp contact relations and chill margins near Goldbridge demonstrate that the soda granite is the younger phase. These intrusives are exposed at intervals over a 40 km strike length in a northwest trending belt parallel to and often confined by the ultramafic rocks. This belt stretches from Anderson Lake across the Bridge River valley to the lower reaches of Gun Creek.

Several workers in the Bralorne area have remarked on the unusual contact relationships of the diorite with the Pioneer volcanics. The diorite is not chilled against the volcanics, implying intrusion before significant cooling of the volcanic pile. These relations suggest that the Pioneer volcanics may be simply an extrusive expression of contemporaneous dioritic intrusions.

There are a large number of minor intrusives throughout the Bridge River camp, which are mainly dykes of various ages. However, in the light of recent mapping and isotopic dating in the Bralorne area, it is now clear that one group of dykes is early Late Cretaceous in age. These dykes are closely associated with mineralization at Bralorne, and have traditionally been called "albitite". Dates obtained range from 91.4 $\pm$ 1.4 Ma by U-Pb on zircons from the highly altered, and therefore pre-mineral albitite dykes, to 85.7 $\pm$ 3 Ma by K-Ar on fresh hornblende in a late intra- to post-mineral green hornblende porphyry dyke. Other dykes, locally called feldspar porphyries, are present at the Minto and Congress properties. They give Early Tertiary whole-rock K-Ar ages of 67 to 69 $\pm$ 2 Ma, approximately in the middle of the range for Coast Plutonic activity. An Eocene magmatic event is also evident from lamprophyre dykes that cross-cut mineralized veins at Bralorne and are 43.5 $\pm$ 1.5 Ma by K-Ar on biotite, because this coincides with similar dates of about 45 Ma on the Rexmount

porphyry, the Beece Creek and Lorna Lake plutons, and dates as young as 42 Ma for plutons south of the Bendor pluton.

The eastern boundary of the Coast Plutonic Complex granitic rocks lies only 2 km to 5 km west of the Bralorne deposit. The age range for these intrusions spans the interval from early Late Cretaceous (80 Ma) to Lower Tertiary (59 Ma), with the youngest ages coming from isolated stocks such as the Bendor pluton, which occur as a swarm parallel to the margin of the Coast Plutonic Complex, some 2 km to 3 km to the east of Bralorne.

Many vein gold deposits of the Archean Superior Province in the Canadian Shield are found within a mafic volcano - clastic sedimentary - ultramafic rock assemblage, thought to have formed mainly on a oceanic, accreting plate margin. A similar setting is found in the Bridge River camp, where two main lithologic assemblages can be distinguished: one dominantly oceanic and the other dominantly island arc. The former is represented by the Permian to Jurassic Bridge River Complex which comprises basalts and associated clastic sedimentary rocks with thick accumulations of ribbon chert, and minor limestone. Alpine-type ultramafic rocks in lensoid to very elongated bodies are spatially associated with the stratified rocks and are thought to form part of the assemblage. The ultramafic rocks may mark the sites of major crustal shortening that were later focuses for major transcurrent movements. Such major crustal structures are also associated with many of the large mining camps of the Superior Province or the Yilgarn Block in Australia.

The island arc assemblage, represented by the Cadwallader Group of ?Permo-Triassic age, is composed of a basaltic andesite pile with minor felsic volcanics and an overlying volcaniclastic sedimentary sequence, again with minor limestone.

The Bridge River and Cadwallader terranes containing these two assemblages form small lozenge-like fault-bounded slices sutured between the Insular super-terrane on the west and the Intermontane super-terrane on the east.

The two major faults closely bounding the major ore-producing Bralorne-Pioneer block are marked in large part along their length by narrow sinuous serpentine bodies. These could represent the sites of former major crustal shortening that have been reactivated by later transcurrent faulting, so the emplacement of the ultramafics could have been as solid bodies. Movement on the faults may have been of the same sense as the Fraser fault system, i.e. right lateral.

Although the majority of the Bridge River Camp production comes from the Bralorne-Pioneer mine, there is a host of other prospects and occurrences which can be classified into four main groups:

- mesothermal ribboned Au quartz-veins: Bralorne-Pioneer
- transitional to epithermal Ag-Au-Sb-Ag veins: Congress, Minto
- epithermal Sb-Hg veins: Tyaughton, Yalakom area
- epithermal Au-Ag veins: Blackdome (north of the Yalakom fault and outside the Bridge River Group per se)

These occurrences form a chemical and thermal zonation, away from the Coast Plutonic Complex (Figures 3 and 4). Reserves have been published for a number of these occurrences:

	Tonnes	g/t Au
Bralorne-Pioneer	965,000	9.3
Congress	450,000	10.0
Reliance	454,000	6.0
Lucky Jem	112,000	20.6
Wayside	148,000	3.6
Mary Mac	60,000	7.4

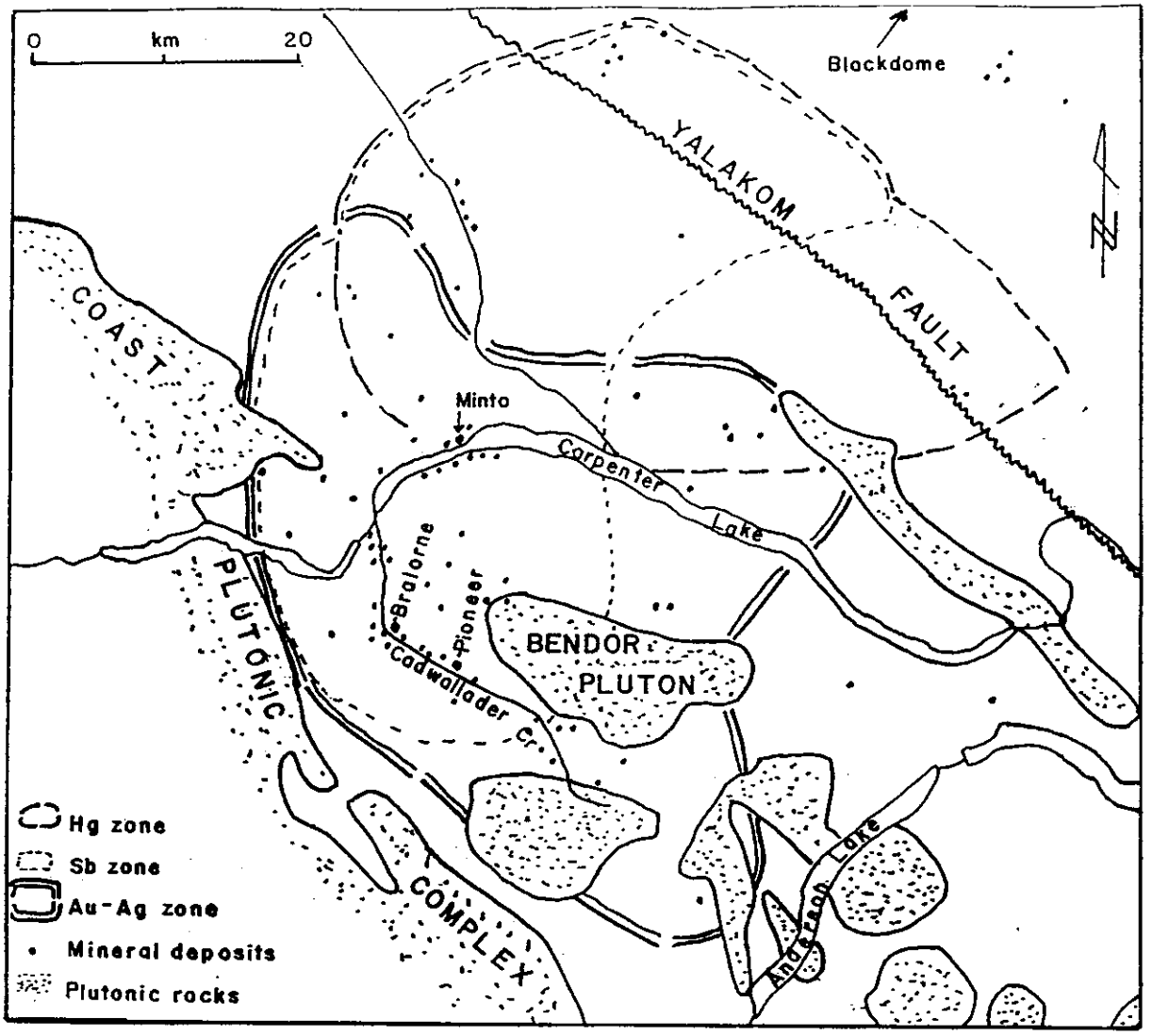

FIG. 3 Generalized metal zoning pattern in Bridge River area (G.J. Woodsworth, D.E. Pearson, A.J. Sinclair, 1975)

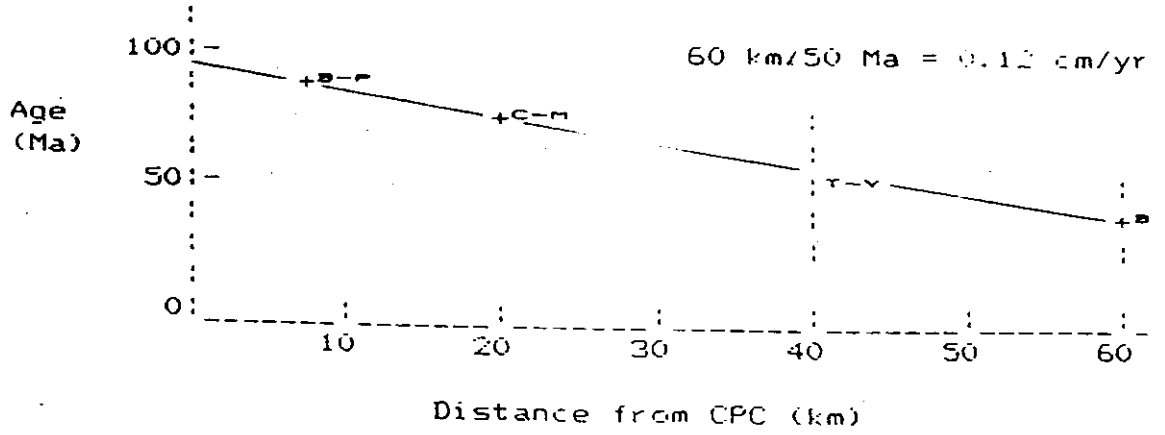

FIG. 4 Deposit age versus distance from the Coast Plutonic Complex. B-P = Bralorne-Pioneer, C-M = Congress-Minto, T-Y = Tyaughton-Yalakom, B = Blackdome.

EXPLORATION HISTORY

The first claims in the area were staked by Frank Kirkwood in 1930 on a showing of quartz veins located on the precipitous sides of Crazy Creek. By 1932, prospecting and trenching had traced a six-foot albitite dyke for 300 metres uphill. This north striking, vertically dipping body has stringer quartz veins running parallel to it which contain values in gold.

In 1934, Paymaster Gold Mines Ltd., Vancouver, B.C., acquired 27 claims covering the area between Crazy and Plutus Creek (Cairnes, 1937). Most of the work performed consisted of prospecting and trenching, although one short adit was driven 180 metres above and 340 metres southeast of the camp located at 1,510 metres a.s.l. by Crazy Creek. The showing area has since been crown granted.

In 1983, X-Cal Resources Ltd. did a preliminary investigation consisting of mapping and prospecting; seven rock samples were analyzed.

In 1985, Hudson Bay Exploration and Development Co. Ltd. carried out geological mapping and collected 22 silt, 500 soil, 35 rock, and two heavy mineral samples.

1991 WORK

Prospecting was carried out up hill from the Paymaster showing to locate quartz veins such as described at that showing and on the ridge west of there, across Crazy Creek where earlier work reported a geochemical anomaly (Lancaster, 1986).

Systematic moss-mat sampling covered the whole property; silt samples replaced moss-mats where these were unobtainable.

Statistics

Rocks	12	samples
Moss-mats	29	samples
Silts	1	sample

RESULTS

Geology

Approximately one-third of this property is underlain by moderately serpentinized ultramafic rocks. These rocks have been emplaced by large scale faulting as evidenced by the intensely sheared and serpentinized contact zones. Much of the remainder of the Paymaster claim is underlain by Pioneer greenstone and Bralorne Intrusive. All of these rocks are resistant to weathering, therefore these areas contain considerable outcrop that has been intensely prospected in the past with negative results. A small package of recessive weathering Noel sediments form a wedge between the ultramafics and Pioneer rocks.

The remainder of the Truck claim is underlain by Bridge River Group. These rocks form extremely steep, precipitous cliffs along Noel Creek.

BRALORNE PROJECT

Moss Samples. **Table 3**

Summary Statistics

	Au_ppb	Ag_ppm	Cu_ppm	Pb_ppm	Zn_ppm	As_ppm	Sb_ppm	Ni_ppm	Mn_ppm	Mg_pct
Number	446	446	446	446	446	446	446	446	446	446
Mean	66.971	0.234	66.51	9.33	100.07	73.02	4.64	252.62	885.65	2.2596
Std Dev	203.300	0.363	43.62	12.71	30.85	103.08	17.73	222.88	706.59	1.8662
Variance	41330.9	0.1	1903	161	952	10626	314	49675	499267	3.48
Maximum	2430.0	7.0	417	205	225	662	352	1702	11578	15.57
Minimum	0.2	0.1	9	2	19	2	2	14	76	0.18
Range	2429.8	6.9	408	203	206	660	350	1688	11502	15.39
Coef Var	303.5659	154.7517	65.5886	136.2098	30.8349	141.1619	382.0627	88.2271	79.7815	82.5895
Std Err	9.6265	0.0172	2.0656	0.6017	1.4610	4.8811	0.8397	10.5536	33.4579	0.0884
Median	10.80	0.20	57.5	6.0	96.0	36.5	2.0	182.0	765.5	1.760
Mode	4.0	0.1	35	2	84	7	2	36	491	0.73
Variance	41330.875	0.131	1902.91	161.49	952.02	10626.10	314.44	49674.73	499267.40	3.4827
Skewness	6.2223	14.8228	3.2225	9.1052	0.9732	2.9632	17.1624	1.8364	8.6494	2.4299
Kurtosis	51.0686	269.4417	17.2219	126.9461	1.5388	10.2789	328.0744	4.9198	117.6945	8.5589

Silt Samples

Summary Statistics

	Au_ppb	Ag_ppm	Cu_ppm	Pb_ppm	Zn_ppm	As_ppm	Sb_ppm	Ni_ppm	Mn_ppm	Mg_pct
Number	94	94	94	94	94	94	94	94	94	94
Mean	38.596	0.204	77.00	7.30	105.22	97.07	5.50	246.06	843.19	2.3726
Std Dev	88.990	0.187	110.33	6.35	39.19	107.21	8.43	205.09	479.41	1.8539
Variance	7919.3	0.0	12172	40	1535	11495	71	42062	229838	3.44
Maximum	719.5	1.6	1083	35	249	527	44	927	3100	11.44
Minimum	0.9	0.1	18	2	39	4	2	20	331	0.45
Range	718.6	1.5	1065	33	210	523	42	907	2769	10.99
Coef Var	230.5703	91.6390	143.2793	87.0310	37.2401	110.4457	153.2317	83.3480	56.8571	78.1396
Std Err	9.1787	0.0193	11.3792	0.6551	4.0417	11.0583	0.8693	21.1533	49.4478	0.1912
Median	11.35	0.20	60.5	5.0	95.5	53.0	2.0	195.5	740.5	1.845
Mode	1.4	0.1	61	2	88	27	2	49	609	1.03
Variance	7919.281	0.035	12171.61	40.34	1535.49	11494.97	71.03	42061.59	229837.83	3.4370
Skewness	5.5581	4.7278	8.0915	1.6924	1.1052	1.7156	2.7708	1.7153	2.7210	2.6718
Kurtosis	36.3204	30.6915	70.5944	3.3009	1.1439	2.7600	7.4414	2.8309	8.8057	9.1598

Soil Samples

Summary Statistics

	Au_ppb	Ag_ppm	Cu_ppm	Pb_ppm	Zn_ppm	As_ppm	Sb_ppm	Ni_ppm	Mn_ppm	Mg_pct
Number	264	264	264	264	264	264	264	264	264	264
Mean	21.676	0.169	86.58	4.43	98.21	19.46	8.04	294.61	633.94	2.1586
Std Dev	62.424	0.158	97.73	3.18	54.31	41.10	93.78	254.93	599.74	1.8243
Variance	3896.8	0.0	9551	10	2950	1689	8795	64991	359689	3.33
Maximum	450.0	1.3	743	23	526	374	1526	2185	6478	16.73
Minimum	0.2	0.1	7	2	27	2	2	9	131	0.18
Range	449.8	1.2	736	21	499	372	1524	2176	6347	16.55
Coef Var	287.9860	93.1443	112.8805	71.9106	55.3023	211.1765	1166.2164	86.5326	94.6054	84.5135
Std Err	3.8419	0.0097	6.0150	0.1960	3.3428	2.5295	5.7720	15.6901	36.9115	0.1123
Median	4.30	0.10	56.0	3.0	86.0	9.0	2.0	245.0	449.5	1.800
Mode	2.1	0.1	56	2	78	2	2	135	322	0.81
Variance	3896.785	0.025	9551.44	10.14	2949.96	1689.16	8795.29	64991.12	359689.29	3.3281
Skewness	4.5718	4.1375	3.9784	2.1419	3.0814	5.1732	16.0618	3.3158	4.8061	4.2892
Kurtosis	21.7613	20.7015	18.7456	6.7247	16.5350	30.9891	256.9769	17.0665	35.4110	27.3889

BRALORNE PROJECT

(Table 4)
Percentiles.

ELEMENT	50%ile	80%ile	90%ile	95%ile	98%ile
Soils					
Au_ppb		12	40	103	250
As_ppm	8	16	36	57	147
Moss:					
Au_ppb		45	135	340	515
As_ppm	35	95	180	270	395
Silts:					
Au_ppb	15	38	85	155	200
As_ppm	58	160	265	325	360

Geochemistry

Procedure

The following sample types were collected: rocks, moss-mats and silts in streams, and soils.

Soil samples were taken below the Bridge River Ash, a Recent white pumiceous horizon which blankets the area and varies in thickness from a few centimetres to one metre or more; the horizon collected would be equivalent to a B horizon.

All samples were analyzed by Acme Analytical Laboratories Ltd. in Vancouver. Sample preparation included for:

- rocks - crushing and pulverizing 250 g to -100 mesh
- moss-mats, silts, soils - drying and sieving to -150 mesh

Two types of analyses were carried out on all samples:

- Au by wet extraction and atomic absorption (A.A.): a 50-gram sample is ignited at 600°C, digested with hot aqua regia, extracted by MIBK (methyl isobutyl ketone), and analyzed by graphitic furnace A.A.
- multi-elements by wet extraction and inductively coupled plasma spectometry (ICP): a 0.5-gram sample is digested with 3 ml 3-1-2 HCl-HNO_3-H_2O at 95°C for one hour and is diluted to 10 ml with water. This extraction may be incomplete for certain mineral forms of Mn, Fe, Sn, Ca, P, La, Cr, Mg, Ba, Ti, B, W, Na, K, Al.

The detection limits are:

- Au (A.A.): 0.3 ppb

- Multi-element:
  - Ag: 0.1 ppm
  - Cd, Co, Cr, Cu, Mo, Mn, Ni, Sr, Zn, W: 1 ppm
  - As, Au, B, Ba, Bi, La, Pb, Sb, Th, V: 2 ppm
  - U: 5 ppm
  - Al, Ca, Fe, K, Mg, Na, Ti: 0.01%
  - P: 0.001%

In the tables of Appendix I, Au by A.A. is shown in ppb at the beginning of the table, just after the weight ("grams") of the -150 fraction which is given for moss-mats, silts, and soils to control the amount of sample available for analysis. Au by ICP is given in ppm (with a 2 ppm detection limit).

In these tables, the results given as "detection limit" should read "at or below the detection limit".

A 50-gram aliquot was used for Au by A.A. to improve the detection limit together with a finer fraction than usual (-150 mesh) to decrease the nugget effect, i.e., improve the representativity of soil or stream samples. Going from 10 grams of -80 mesh to 50 grams of -150 mesh material decreases the potential nugget effect by a factor of 25.

In the case of stream samples, it also increases somewhat the background level.

Results

Only one sample is anomalous in Au (441M with 241 ppb) in the extreme northwest corner of the property. This sample is on a very steep stream draining Bridge River Group sediments. Re-examination of the site suggests potential for a placer effect enhancing the Au content of the sample.

Some samples along Crazy Creek are high in As.

Mineralization

During prospecting, several samples of bull quartz veins and carbonated or pyritic shears were collected in the Paymaster showing area; none are anomalous in au but several are anomalous in As and one in Cu (398R, 399R, 592R, 597R, 598R). On the west side of Crazy Creek in the "soil anomaly area", several samples of mafic volcanic rocks and sediments were collected; none is anomalous.

CONCLUSIONS AND RECOMMENDATIONS

The Truck/Paymaster property is situated in the vicinity of the Cadwallader fault but west of it outside of the Bralorne-Pioneer "mine lens". Sub-vertical structures sub-parallel to the Cadwallader fault appear to cut across the property but no mineralization seems to be introduced by them. The stream sediment geochemistry results are negative. No further work is recommended on this property.

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APPENDIX I

GEOCHEMICAL RESULTS

BRALORNE PROJECT TRUCK-PAYMASTER PROPERTY
ROCK SAMPLES

GRID	Samp	Grams	Auppb	Agppm	Cuppm	Pbppm	Znppm	Moppm	Asppm	Sbppm	Nippm	Crppm	Bappm	Mnppm	Fepct	Capct	Mgpct	Alpct	Kpct	Napct	Uppm	Thppm	Auppm	Coppm	Cdppm	Bippm	Wppm	Vppm	Ppct	Tipct	B_ppm	Srppm	Lappm
4	139R		5.0	0.3	70	11	93	1	5	2	15	33	113	567	5.58	0.37	1.42	2.42	0.23	0.11	5	3	2	7	0.2	2	1.00	87	.072	0.28	4.00	37	7
4	140R		5.0	0.1	35	8	74	1	4	2	19	23	68	494	3.63	0.23	1.22	1.82	0.15	0.10	5	1	2	8	0.2	2	1.00	43	.058	0.09	4.00	19	7
4	141R		8.0	0.1	22	7	57	2	5	2	18	17	75	494	2.56	1.52	0.75	1.33	0.15	0.07	9	1	2	7	0.2	2	1.00	21	.031	0.03	4.00	69	3
4	142R		2.0	0.2	27	9	70	3	12	2	31	16	117	420	2.47	0.15	0.58	1.33	0.25	0.05	5	3	2	10	0.2	2	1.00	17	.041	0.03	4.00	10	7
4	397R		1.0	0.1	130	2	12	1	4	2	60	36	6	224	2.06	8.91	0.42	0.99	0.02	0.01	5	1	2	21	0.5	2	1.00	21	.020	0.12	2.00	25	2
4	398R		1.0	0.1	40	2	78	1	708	2	104	147	19	1120	4.50	5.76	1.79	0.55	0.10	0.03	5	1	2	30	1.0	2	1.00	108	.020	0.01	5.00	114	2
4	399R		6.0	0.1	18	2	12	1	457	6	10	9	29	384	1.32	1.31	0.05	0.13	0.08	0.01	5	1	2	3	0.2	2	1.00	9	.012	0.01	4.00	7	2
4	592R		130.0	0.1	15	6	119	1	949	2	1528	347	3	650	4.13	0.04	18.90	0.21	0.01	0.01	5	1	2	68	2.2	2	1.00	10	.004	0.01	12.00	1	2
4	597R		13.0	0.5	1496	2	80	3	290	10	42	46	2	394	3.50	0.75	1.75	1.82	0.01	0.01	5	1	2	19	1.2	3	1.00	46	.020	0.14	2.00	28	2
4	598R		8.0	0.1	54	3	36	1	318	271	29	15	12	977	3.12	5.89	1.89	0.25	0.03	0.01	5	1	2	9	0.5	2	1.00	38	.011	0.01	3.00	63	2
4	599R		1.0	0.1	21	2	52	1	77	12	26	23	14	1329	4.47	15.20	2.97	0.48	0.03	0.01	5	1	2	12	1.4	2	1.00	44	.017	0.01	6.00	165	3
4	803R		5.0	0.3	104	6	18	1	47	5	112	42	25	125	0.61	4.20	0.42	1.11	0.03	0.06	5	1	2	5	0.3	2	1.00	27	.070	0.29	4.00	58	6

BRALORNE PROJECT TRUCK-PAYMASTER PROPERTY
MOSS-MAT SAMPLES (-150 MESH)

GRID	Samp	Grams	Auppb	Agppm	Cuppm	Pbppm	Znppm	Moppm	Asppm	Sbppm	Nippm	Crppm	Bappm	Mnppm	Fepct	Capct	Mgpct	Alpct	Kpct	Napct	Uppm	Thppm	Auppm	Coppm	Cdppm	Bippm	Wppm	Vppm	Ppct	Tipct	B_ppm	Srppm	Lappm
4	441M	5	240.8	0.2	76	4	88	2	14	2	227	227	39	444	1.70	3.82	1.06	0.97	0.10	0.02	5	1	2	12	0.7	2	1.00	29	.120	0.05	77.00	102	6
4	442M	10	13.2	0.2	106	6	152	4	12	2	262	262	53	805	3.30	1.71	1.80	1.67	0.11	0.02	5	1	2	27	0.7	2	1.00	41	.134	0.09	41.00	62	13
4	591M	25	27.2	0.2	128	3	158	2	186	2	477	465	83	3574	7.33	0.64	4.37	4.15	0.15	0.01	5	1	2	74	1.5	2	1.00	91	.095	0.12	6.00	29	9
4	593M	47	4.6	0.1	24	6	42	1	29	2	1702	225	50	753	4.65	0.15	15.57	0.49	0.04	0.01	5	1	2	79	0.3	2	1.00	17	.037	0.03	11.00	10	2
4	594M	18	24.3	0.3	97	4	130	1	145	2	726	332	64	2539	6.30	0.58	6.96	2.90	0.15	0.01	5	2	2	62	1.5	2	1.00	67	.088	0.08	7.00	26	7
4	595M	30	9.4	0.2	45	6	86	1	30	2	718	348	64	748	3.98	0.35	6.14	1.56	0.08	0.03	5	1	2	43	0.2	2	1.00	34	.077	0.08	18.00	23	8
4	596M	29	27.6	0.1	84	5	116	1	104	2	850	342	54	1895	5.94	0.52	8.01	2.32	0.13	0.01	5	1	2	61	0.6	2	1.00	56	.077	0.07	6.00	24	6
4	600M	19	16.6	0.1	32	4	73	1	13	2	676	533	42	581	2.37	0.59	4.47	0.87	0.26	0.02	5	1	2	32	0.2	2	1.00	29	.137	0.05	24.00	24	4
4	601M	44	29.2	0.1	27	7	68	1	7	2	707	349	49	597	3.51	0.32	6.37	1.35	0.09	0.02	5	1	2	38	0.2	2	1.00	35	.069	0.10	8.00	18	6
4	602M	20	12.1	0.1	34	7	86	1	8	2	681	515	92	756	3.09	0.39	4.48	1.68	0.12	0.03	5	1	2	27	0.2	2	1.00	40	.084	0.12	9.00	23	9
4	603M	57	6.3	0.1	27	7	60	1	7	2	760	318	43	509	3.71	0.25	7.15	1.17	0.07	0.02	5	1	2	39	0.2	2	1.00	35	.055	0.10	6.00	16	5
4	604M	39	9.0	0.1	21	3	73	1	5	2	673	310	50	510	3.25	0.34	4.70	1.63	0.10	0.03	5	2	2	28	0.2	2	1.00	42	.058	0.16	7.00	19	6
4	605M	92	4.8	0.1	28	9	64	1	6	2	962	308	42	558	4.18	0.22	9.05	1.10	0.06	0.02	5	1	2	49	0.2	2	1.00	31	.047	0.09	7.00	15	5
4	606M	35	43.6	0.1	31	9	65	1	9	2	668	358	53	424	3.07	0.26	6.16	1.55	0.11	0.02	5	1	2	30	0.2	2	1.00	35	.068	0.10	7.00	16	5
4	607M	24	15.7	0.1	34	8	81	1	8	2	633	391	94	502	2.91	0.30	5.17	1.58	0.15	0.03	5	1	2	25	0.2	2	1.00	39	.065	0.11	7.00	22	7
4	608M	27	9.8	0.1	30	10	75	1	8	2	592	366	92	566	2.66	0.27	4.17	1.49	0.10	0.03	5	1	2	26	0.3	2	1.00	35	.075	0.08	6.00	22	7
4	744M	41	17.1	0.1	35	23	81	1	11	2	739	362	60	607	3.70	0.21	5.98	1.38	0.09	0.02	5	1	2	43	0.2	2	1.00	38	.056	0.10	11.00	18	4
4	745M	10	3.6	0.1	22	13	68	1	4	2	615	234	73	526	2.46	0.29	4.48	1.15	0.19	0.02	5	1	2	28	0.2	2	1.00	24	.132	0.07	12.00	21	4
4	746M	15	4.6	0.1	30	5	84	1	7	2	606	241	83	583	2.76	0.36	3.98	1.44	0.18	0.03	5	1	2	27	0.4	3	1.00	33	.123	0.11	14.00	24	7
4	747M	45	4.0	0.1	20	2	66	1	13	2	763	564	41	462	3.98	0.24	9.19	1.23	0.05	0.02	8	1	2	45	0.2	5	1.00	37	.038	0.12	12.00	16	3
4	748M	15	9.4	0.1	20	4	69	1	19	2	750	350	51	594	3.49	0.27	6.52	1.18	0.13	0.02	5	1	2	39	0.2	2	1.00	32	.063	0.10	13.00	16	5
4	749M	3	0.7	0.1	44	6	81	1	11	2	700	253	69	637	2.75	0.42	4.38	1.29	0.29	0.02	5	1	2	30	0.2	2	1.00	21	.181	0.04	35.00	35	12
4	750M	22	4.4	0.1	39	6	79	1	25	2	761	303	52	656	3.37	0.34	5.93	1.27	0.10	0.02	5	1	2	40	0.2	2	1.00	26	.088	0.06	13.00	20	7
4	800M	50	29.0	0.1	113	9	114	1	98	2	129	387	80	1303	6.17	0.68	3.95	4.28	0.44	0.01	5	1	2	41	0.6	2	1.00	134	.029	0.28	6.00	17	3
4	801M	17	9.0	0.1	43	7	83	1	11	2	546	420	73	533	2.96	0.46	3.96	1.41	0.18	0.02	5	1	2	30	0.3	2	1.00	41	.085	0.12	14.00	28	5
4	802M	5	34.5	0.1	16	14	61	1	8	2	302	444	39	301	1.60	1.01	3.17	0.57	0.11	0.02	5	1	2	19	0.2	2	1.00	23	.094	0.03	47.00	47	2
4	804M	58	8.0	0.1	24	3	62	1	4	2	902	286	40	482	3.89	0.29	7.75	1.11	0.09	0.02	5	1	2	47	0.2	2	1.00	31	.044	0.11	7.00	18	4
4	805M	15	10.7	0.1	20	10	62	1	5	2	515	261	35	337	2.30	0.31	4.95	1.17	0.23	0.02	5	1	2	23	0.2	2	1.00	23	.090	0.06	14.00	14	3
4	806M	11	8.1	0.1	20	8	70	1	2	2	652	292	32	385	2.65	0.26	6.57	0.96	0.27	0.02	5	1	2	29	0.2	2	1.00	24	.076	0.06	13.00	12	3

BRALORNE PROJECT TRUCK-PAYMASTER PROPERTY

SILT SAMPLES (-150 MESH)

GRID	Samp	Grams	Auppb	Agppm	Cuppm	Pbppm	Znppm	Moppm	Asppm	Sbppm	Nippm	Crppm	Bappm	Mnppm	Fepct	Capct	Mgpct	Alpct	Kpct	Napct	Uppm	Thppm	Auppm	Coppm	Cdppm	Bippm	Wppm	Vppm	Ppct	Tipct	B_ppm	Srppm	Lappm
4	443S	25	2.2	0.1	65	3	125	2	16	2	204	225	49	905	2.86	1.84	1.76	1.53	0.10	0.01	5	1	2	26	0.8	2	1.00	37	.139	0.05	21.00	70	9

APPENDIX II

ROCK SAMPLE DESCRIPTION

ROCK SAMPLE DESCRIPTIONS

No.	Location	Description
BR139R	BC7769/232	Basic volcanic with mm veinlets of quartz and some pyrite; float, grab.
BR140R	BC7769/232	Basic volcanic with mm veinlets of quartz and some pyrite; float, grab.
BR141R	BC7769/232	Basic volcanic with mm veinlets of quartz and some pyrite; float, grab (very selective sample).
BR142R	BC7769/232	Argillite with 2-3 cm irregular quartz (± calcite) vein/segregation.
BR397R	Paymaster Ridge elev. 2150	5 cm, vuggy quartz vein in bleached intrusive; no visible sulphides; 137/75NE.
BR398R	Drainage east of Paymaster Adit elev. 1890	40 cm wide shear in volcanic rock, with weak quartz stockwork; no visible sulphides; 175/90.
BR399R	Drainage east of Paymaster Adit elev. 1780	Float bull quartz; no visible sulphides, host rock is argillite phyllite.
BR592R	Base of talus below Alpine Lake elev. 1710	Grab - representative sample over 0.5 m area in large boulder >2 m dia.; pale green chert with occasional graphitic stringers 1 to 2 mm roughly subparallel, ± disseminated magnetite.
BR597R	Base of talus below Paymaster adit elev. 1545 m	Representative grab from 2 m boulder float at base of talus slope; malachite/azurite stain on some surfaces; sulphides along microfractures in minor amounts py 1%, cpy 1%, ± po.
BR598R	Near/at the Paymaster adit elev. 1630 m	Representative grab from bull white quartz-carbonate vein (15 cm); vein quartz is extremely vuggy; hydrothermal activity indicated, trace sulphide; attitude of vein 095/40S.

No.	Location	Description
BR599R	2 m from above sample 598R	Chip (20 cm) - across quartz-carbonate shear zone; sample composed of >50% carbonate; extremely rusty/limonitic stained; runs parallel to vein described in 598R.
BR803R	Extension drainage elev. 2010	Albitite dyke = 0.5 m with patches of stibnite(?); 008/28SW.

APPENDIX III

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

TRUCK / PAYMASTER PROPERTY

Geological and Geochemical Surveys

May to August 1991

Personnel		
K. Schimann	1.5 days @ $411	$ 616
W. Robb	4.5 days @ $144	648
A. Sostad	1.5 days @ $115	173
C. Church	2.5 days @ $161	402
		1,839
Helicopter rental	2.7 hrs. @ $722	1,949
Truck rental	7.0 days @ $60	420
Field equipment and supplies		306
Accommodation and food		255
Telephone and shipping		21
Geochemical analyses	30 soil/stream samples @ $13.50	405
	12 rock samples @ $14.50	174
Data processing and report preparation		500
		$ 5,869

APPENDIX IV

STATEMENT OF QUALIFICATIONS

APPENDIX IV

STATEMENT OF QUALIFICATIONS

I, **Karl Schimann**, residing at 5442 Columbia Street, Vancouver, B.C., hereby state that:

1. I am the senior author of the report *Geological and Geochemical Surveys on the Truck-Paymaster Property, Lillooet Mining Division.*

2. I have worked on the property from May to August 1991 for COGEMA Canada Ltd. and supervised the work described in this report.

3. I graduated from the Université de Montréal with a B.Sc. in Geology in 1968.

4. I graduated from the University of Alberta with a Ph.D. in Geology in 1978.

5. I have worked in mineral exploration since 1976.

Karl Schimann
District Geologist

13 14 15 16 517000mE 122°45' 18 19 20

23 22 21 19 18 17

50°45'

5620000mN

Nomad

McKinley Ck

President Ck

Extension Creek

Twinty Creek

Crazy Creek

Pluto Creek

Plutus Creek

Sunshine Mountain

4400

4300

4200

4100

7000

lv(s)

2v

2s

A

B

PAYMASTER B.C. MINFILE SHOWING (092 NE 070)

LEGEND

STRATIFIED ROCKS

Tertiary (Eocene?)	7v	Volcanics: porphyritic dacite and volcanic breccia
	7s	Sediments: conglomerate, sandstone, siltstone
Upper Cretaceous	6v	Volcanics: andesitic breccia, tuffs, and flows
	6s	Polymictic and volcanogenic conglomerate, minor sandstone and shale
Lower Cretaceous	5	Taylor Creek Group: conglomerate, sandstone, shale
Middle Jurassic to Lower Cretaceous	4	Relay Mountain Group: grey to green sandstone and shale
Upper Triassic	3	Tyaughton Group: conglomerate, sandstone, limestone, shale
		Cadwallader Group:
	2s	Hurley Formation: sandstone, conglomerate, shale
	2v	Pioneer Formation: green to purple pillowed, massive and brecciated greenstone
Permian to Jurassic		Bridge River Complex:
	1s	Chert, argillite, limestone
	1v	Grey-green to brown massive and pillowed metabasalt and greenschist

INTRUSIVES

Tertiary	P	Porphyry
	D	Granodiorite to quartz diorite
Cretaceous to Tertiary	G	Coast Plutonic Complex and outlying stocks: granodiorite to granite
Triassic	B	Bralorne Intrusive: augite, diorite, gabbro (Bg: soda granite)
Permian to Jurassic (?)	A	Shulaps Ultramafic Complex: serpentinite mélange

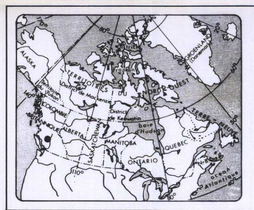
SYMBOLS

- Geological Contact
- Fault
- Area of Outcrops
- ∘595M Moss Mat Sample Location
- ∘567S Silt Sample Location
- x397R Rock Sample Location

ANOMALIES

	ROCKS	SOILS	MOSS MATS	SILTS	
x999R	300–1000	40–100	100–300	80–150	ppb Au
x999R	1000	100	300	150	ppb Au

15 Gold ppb.



30'	123°	30'	122°	30'	
0/3	0/2	0/1	P/4		15'
J/14	J/15	J/16	I/13		51°00'
J/11	J/10	J/9	I/12		45'
J/6	J/7	J/8	I/5		30'
					15'

INDEX TO ADJOINING N.T.S. SHEETS

COGEMA Canada Ltée/Ltd.

Scale 1: 10,000

Meters 0 200 400 600 800 1000 1200 Mètres

Feet 0 1000 2000 3000 4000 Pieds

BRALORNE PROJECT B.C.

TRUCK PAYMASTER PROPERTY

GEOLOGY AND SAMPLE LOCATION

GEOLOGICAL BRANCH
ASSESSMENT REPORT
MAP
22,118

Interpretation by: K. Schimann	Date Nov, 1991
Drafted by: W. Robb	Report no. 91-CND-66-07
Base map:	Annex no.
Revise by:	MAP NO. 1