

BCDP

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11/85

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

WATERLOO, HALEY AND DAYTON CLAIMS

LILLOOET MINING DIVISION

N.T.S. 92J/15W

(50°48'N, 122°46'W)

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,323

BY

J. A. TURNER, GEOLOGIST

NOVEMBER 10, 1984

CLAIMS OWNED BY: X-CALIBRE RESOURCES

WORK DONE BY: NEWMONT EXPLORATION OF CANADA LIMITED

WORK DONE BETWEEN: AUGUST 23 & 24, and SEPTEMBER 18, 1984

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APPENDIX 1: GEOCHEMICAL RESULTS (30 element ICP + AU)

1.0 INTRODUCTION

In 1984, Newmont carried out a limited reconnaissance program on the Waterloo group. The claims are located in rugged alpine terrane on the eastern margin of the Coast Mountains 180 km north of Vancouver. Newmont personnel, J. Turner, Project Geologist and C. Boyle, Geologist supervised a crew of four men to carry out soil and silt sampling and a geologic survey of the claims. Most of the work was done on parts of the Waterloo 1 & 2 and Haley claims. The total area surveyed is about 550 hectares and the total number of samples taken were 35 silt, 79 soils and 35 rock.

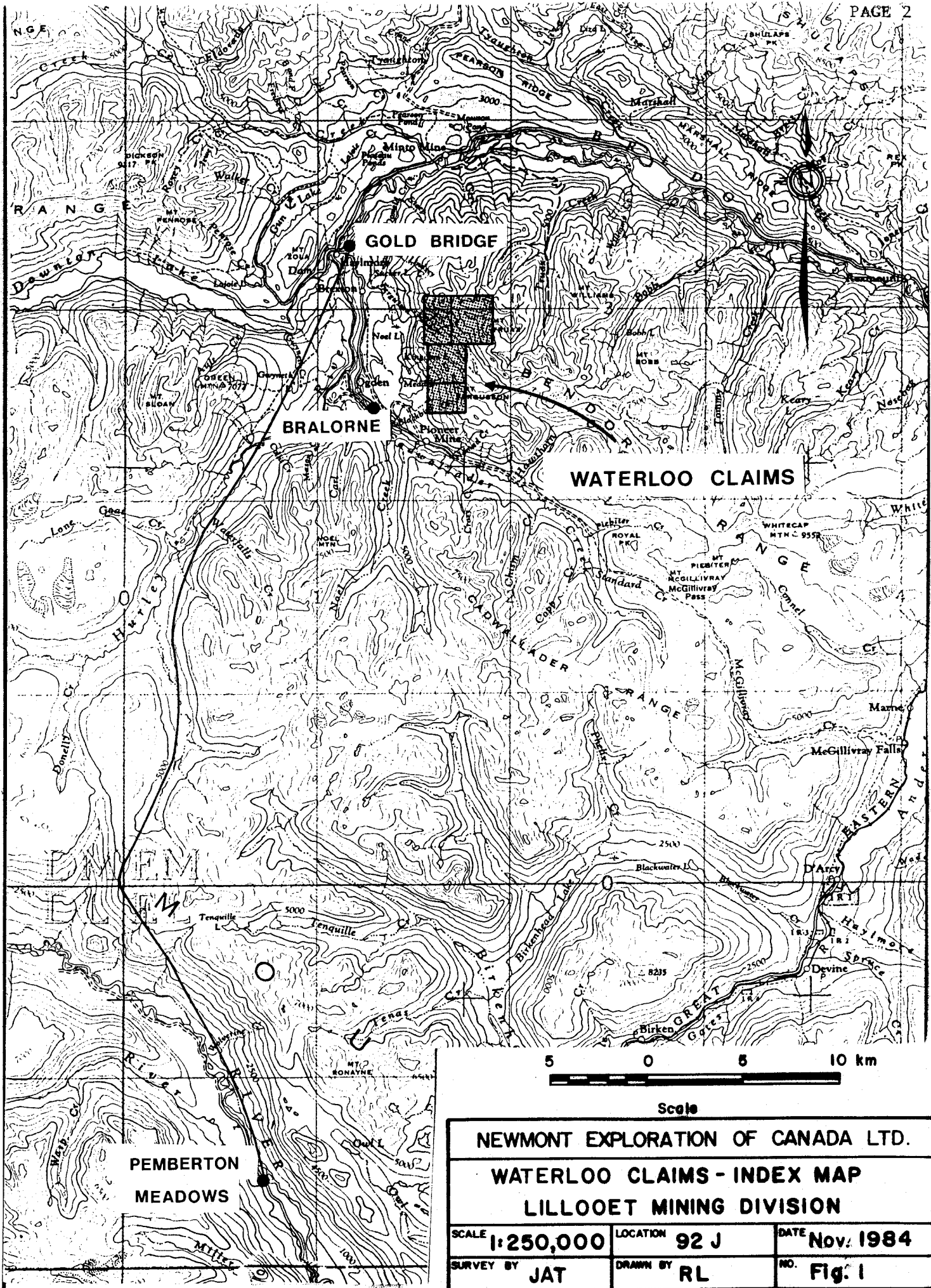
Silt samples were taken from Fergusson and Waterloo Creeks. Soil samples were taken along contour lines, along ridges and along outcrop - talus contacts. Rock chip samples were taken over selected areas over varying widths.

A 1:5,000 scale enlargement of a portion of the 1:50,000 scale topographic map sheet 92J/15 was used as a base map for this project. Aerial photographs no. B.C. -7787, 212-214, and B.C. - 7788; 040-042, provide a complete stereo coverage of the area.

2.0 PROPERTY DESCRIPTION

The claims covered in this report are recorded in the Lillooet Mining Division. They comprise 4 modified grid claims, 63 units total. They are owned by X-Calibre Resources.

CLAIM	UNITS	RECORD DATE	RECORD NO
Waterloo 1	16	Jan 26, 1983	2269
Waterloo 2	12	Jan 26, 1983	2270
Haley	15	Dec 2, 1983	2663
Dayton	20	Dec 2, 1983	2662



WATERLOO CLAIMS



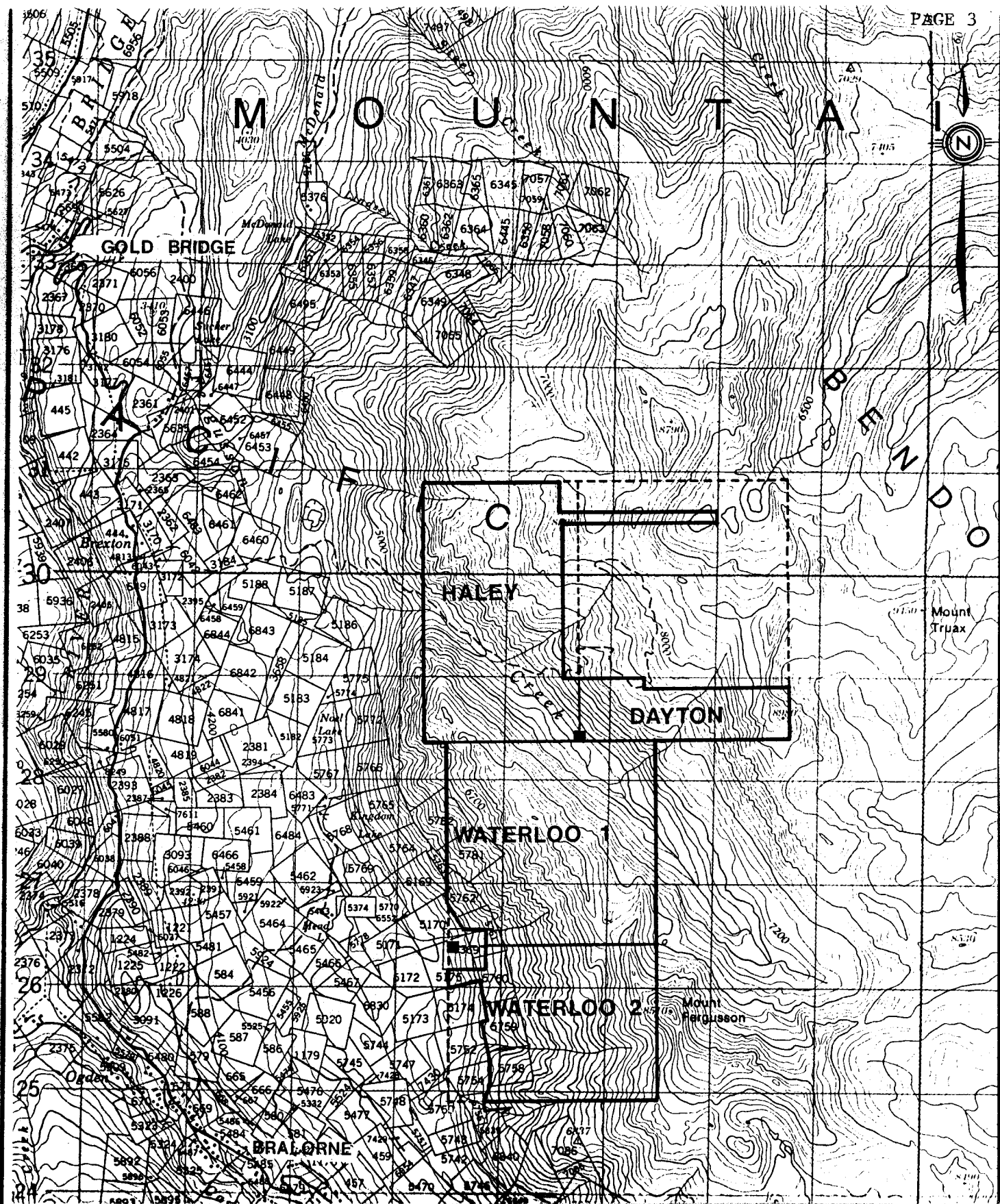
Scale

NEWMONT EXPLORATION OF CANADA LTD.

WATERLOO CLAIMS - INDEX MAP

LILLOOET MINING DIVISION

SCALE	1:250,000	LOCATION	92 J	DATE	Nov. 1984
SURVEY BY	JAT	DRAWN BY	RL	NO.	Fig. 1



Scale

NEWMONT EXPLORATION OF CANADA LTD.

WATERLOO CLAIMS - LOCATION MAP
LILLOET MINING DIVISION

SCALE	1:50,000	LOCATION	92J/15	DATE	Nov 1984
SURVEY BY	AT	DRAWN BY	RL	FIG.	Fig. 2

3.0 LOCATION AND ACCESS

The Waterloo claims are located along a north trending ridge of Fergusson Mountain on map sheet 92J/15W 10 km south of the village of Goldbridge in south western British Columbia, Fig 1 & 2. The central part of the claims are at latitude 50°48' and longitude 122°46'. Elevations on the claims range from 1554 metres (5100 feet), in Fergusson Creek Valley, to 2737 metres (8980 feet). Fergusson Peak is at 2593 metres (8510 feet).

Access is via cat trail up Fergusson Creek to the north edge of the claims or by hiking due east from Bralorne. Access during 1984 was via helicopter from Pemberton Meadows and by truck and foot travel from Goldbridge.

4.0 HISTORY

The earliest recorded work completed in the area of the Waterloo claims is described in the British Columbia Minister of Mines Annual Report for 1937. The ground was originally staked in 1934 by J. Marron, F. Joubin, and J. L Stewart as the Summit Claims and were incorporated into the Summit Gold Mining Syndicate. On Cairnes' map the Summit is shown as a different, more northerly showing than the Waterloo, of which little is known, but they may be the same.

The mineralization, near Summit No. 1, in the vein developed by open-cuts and an adit, consists of arsenopyrite and sphalerite with oxidized streaks and occasional pyrite, the gangue being composed of quartz. Gold assays in these veins were up to 0.4 oz/ton over narrow widths. In another showing a shear zone contains stibnite, fine arsenopyrite with chalcedonic quartz. Samples gave trace gold and silver with up to 8% antimony.

Later claims staked in the area were staked as the Sol , Chief and Boss claims. Work on these claims in 1980 consisted of road rehabilitation and some prospecting.

5.0 GEOLOGY

5.1 Regional Geology

The Goldbridge area lies on the eastern flank of the Coast Plutonic Complex at a point where the eastern most crystalline plutons have intruded a Mesozoic sequence of sediments and volcanics.

A variety of cherts and volcanics of the Middle Triassic Fergusson Group are overlain by a conformable sequence of clastic and volcanic rocks of the Upper Triassic Cadwallader Group.

The Fergusson Group rocks are warped into a broad northwest plunging antiform bounded on the south and west by the Coast Range intrusives and on the northeast by the Yalokom Fault Zone. The Bendor granodiorite plutons bound the southwest flank of the antiform.

In the area of the Bralorne mine the Jurassic intrusives are known as the Bralorne intrusives. This complex represents a magmatic differentiated suite from a ultra basic magma. The rocks gradually grade from a serpentine-peridotite through a gabbro, to diorite, to andesite, to soda-granite and finally to auriferous quartz veins.

According to Joubin (1948) the auriferous veins are principally in the greenstones, to a lesser extent the sediments and in all intrusive rock types except serpentine and gabbro.

They show a close spacial relationship to the soda-granite. Over half the production from Bralorne came from veins in diorite where the richest ore occurred near the serpentine.

The area is a major gold camp British Columbia, over 4.1 million ounces of gold and about 1 million ounces of silver were produced from the Bralorne-Pioneer mine (1914-1971) in the Cadwallader Creek valley. Just to the east of these mines, Fergusson Group rocks host numerous showings and old workings on gold bearing quartz veins and shear zones. Common mineral associations are arsenopyrite, stibnite, sphalerite and galena. The most significant producer from the Fergusson Group was the Minto Mine which produced 18,000 ounces gold and 98,000 ounces silver. Gold occurrences are known on the property, and also to the north at the Windy, Ranger, Kelvin and Olympic claims and to the east at Grey Rocks.

5.2 Property Geology

The Waterloo claims cover a section of the Fergusson Group rocks at the western extremity of the Bendor Intrusive. Only a small area of the claims was mapped and sampled. The work was concentrated on a ridge north of Fergusson Peak, near an old adit and some associated showings, and along Fergusson Creek. The area mapped is underlain by andesite and cherts, diorite and quartz diorite intrude as sills, dykes and, in part, batholiths (Bendor).

The structure is fairly simple with northwest trending, well foliated, steeply dipping rocks. Two major strike-slip faults are mapped; one along Fergusson Creek is a major contact with the Fergusson rocks and the Bendor intrusion. The other fault is mapped in a saddle area (Map 1) where epithermally altered

andesite occurs. Several minor faults or shears occur and can be mineralized as at Zone 1 & 2. Fractures are generally north-south but east-west shears are common.

5.2.1 Lithology

Andesite

The andesites are fine grained, dark green, soft, calcareous and well foliated. Minor light coloured limestone lenses occur throughout the section.

Chert

The cherts are fine grained, light brown, hard and well bedded and fractured. Most exposures contain beds of quartzite and argillite. Minor calc-silicate horizons occur locally.

Diorite

The diorites are medium to course grained, light (quartz diorite) to dark (gabbro) and hard with some soft weathered sections. Diorite is mapped east of the Fergusson Fault.

5.2.2 Mineralization and Alteration

There are several types of mineralization found in the area mapped. They will be discussed separately.

1. Arsenopyrite, Sphalerite, Bornite and Pyrite in Andesite Fig 3, Plate 1.

This zone, approximately 1.3 metres wide, occurs in a shear zone in andesite. The zone is located on top of a east-west trending ridge, it strikes about 071° and dips 61° to the north.

On either side of the ridge talus obscures any mineralization. A trench on the top of the ridge and an adit, now caved, on the north facing slope are the only evidence of any previous work (1934). Similar but smaller (10 cm) mineralization occurs, as a vein, about 25 m to the southwest on the same ridge.

Strong arsenopyrite + sphalerite only occurs on the edge of the shear whereas disseminated arsenopyrite + sphalerite occurs in the central limy part, Fig 3 and Plate 1. The immediate hanging wall and footwall are brecciated andesite, probably the result of shearing.

Section of Shear Zone 1

hanging wall	brecciated andesite
outer edges	30% arsenopyrite
	15 - 20% sphalerite
	1 - 3% bornite
	5% pyrite
central part	disseminated sphalerite + arsenopyrite
footwall	brecciated andesite

2. Stibnite + boulangerite in Chert and quartzite

This zone was found by prospecting southwest of zone 1. There are no indications of previous work. The mineralization occurs as veins on the southwest side of Fergusson ridge and strikes at 050° with dips at 50° to the northwest. At least 3 veins 10-15 cm wide contain semi-massive stibnite-boulangerite with chalcedony and stibniconite (oxidized stibnite). The well preserved crystals are cocks comb textured. The veins, about 3 metres apart, appear to be epithermal and not related to type 1 mineralization.

3. Disseminated pyrrhotite after pyrite occur in all units and impart a rusty gossanous appearance of the map-area.

Most rocks in the map-area are, in part, hornfelsed and are fine grained. The cherts form quartzites. This type of alteration is prevalent near the diorite on Fergusson Peak. In the Saddle Area epidote + calcite + chalcedony alteration occurs in the andesite and is coincident with a northeast fault zone.

6.0 GEOCHEMISTRY

Geochemical sampling was limited to: contour soil sampling, silt sampling of Fergusson Creek and selected rock chip sampling.

Soil sampling was done at 50 metre stations with some at 10 metre stations, silt sampling was done at 200 metre stations and rock chip sampling was done over varying widths.

Soil samples were collected from a weakly developed B horizon, and, in part, C horizon, over areas of gentle slope and from 'talus fines' over areas of very steep slope. Samples were collected from pits, at 20-25 cm depth, dug by a mattock on a hip chain and contour line grid. Silt samples were collected from fine wet sands in Fergusson Cr. or from fine dry sands in Waterloo Cr. using a stainless steel trowel.

6.1 Analytical

The samples were placed in numbered Kraft paper or plastic bags and sent to Acme Analytical Labs in Vancouver where they are dried sieved to -35 mesh, pulverized and analysed for 30 elements by the Inductively Coupled Plasma (I.C.P.) technique. In this

method a 0.5 gm sample is digested with 3 ml of 3:1:3 nitric acid to hydrochloric acid to water at 90° for 1 hour and the sample is diluted with water to 10 ml and then analysed in the I.C.P. unit.

For Au, a 10 gm sample that has been ignited overnight at 600° is digested with hot dilute aqua regia, and the clear solution obtained is extracted with Methyl Isobutyl Ketone (MIBK). Au is determined in the MIBK extract by atomic absorption, using a background correction (detection limit = 5 ppb). For rocks gold is determined by a separate fire assay.

6.2 Results and Interpretation

Results, quoted in parts per million (ppm) for Ag and in parts per billion (ppb) for Au, are plotted on map 2 at a scale of 1:5,000. Field notes taken by personnel record the nature and colour of soil sampled, depth of sample, slope, vegetation and any outcrop encountered in order that the data could be interpreted accordingly. Threshold values were arbitrarily chosen for Au and Ag at 25 ppb and 0.7 ppm respectively.

Analyses for elements other than gold and silver are given in Appendix 1 and their location is obtained by referring to the sample numbers on Map 2. As this prospect is being explored for its gold-silver potential, the other elements are only considered as possible indicators.

6.2.1 Soil Samples

The results were generally low for both Ag and Au. The values overall ranged from 5-1410 ppb Au and from 0.1 - 0.7 ppm Ag. Eight samples are considered anomalous for Au (25 ppb) and only four samples over 100 ppb will be discussed.

SAMPLE 37619: 360 ppb Au, 0.3 ppm Ag.

The sample was taken on a west facing slope of Fergusson Mountain and is coincident with well bedded cherts and hornfels. The sample was taken from talus at the 7100 foot contour. Talus fines taken nearby showed low gold.

SAMPLE 37749: 160 ppb Au, 0.1 ppm Ag

The sample was taken from the 'Saddle Area' at the 7200 foot contour. Four samples taken nearby at 50 metre stations revealed slightly higher than background gold (10-30 ppb).

SAMPLE 37784: 1410 ppb Au, 0.1 ppm Ag

This sample was also taken on the west facing slope of Fergusson Peak at the 5800 foot contour. Silt samples taken from nearby Waterloo Creek showed only background values for both Au and Ag.

SAMPLE 37854: 155 ppb Au, 0.1 ppm Ag

The sample was taken from the 5800 foot contour on the west slope of Mount Fergusson. Soil samples taken nearby revealed low values for both Au and Ag.

The ICP analysis have indicated that a number of elements i.e. Cu, As, Sb, Ni, Mn have elevated values. Samples taken from Fergusson Ridge and the West Slope near Zone 2 mineralization reveal several high values for Cu (143-204 ppm) and for As (38-22067 ppm). Since arsenic is considered an indicator for gold these samples should be considered for follow-up work.

6.2.2 Silt Samples

The results were generally low for both Ag and Au. The values overall ranged from 5-25 ppb for Au and from 0.1 - 0.3 ppm for Ag. Most samples, however, showed elevated values for Cu and As. Fergusson Creek results are the more anomalous in Cu and As of the two creeks.

6.2.3 Rock Chip Samples

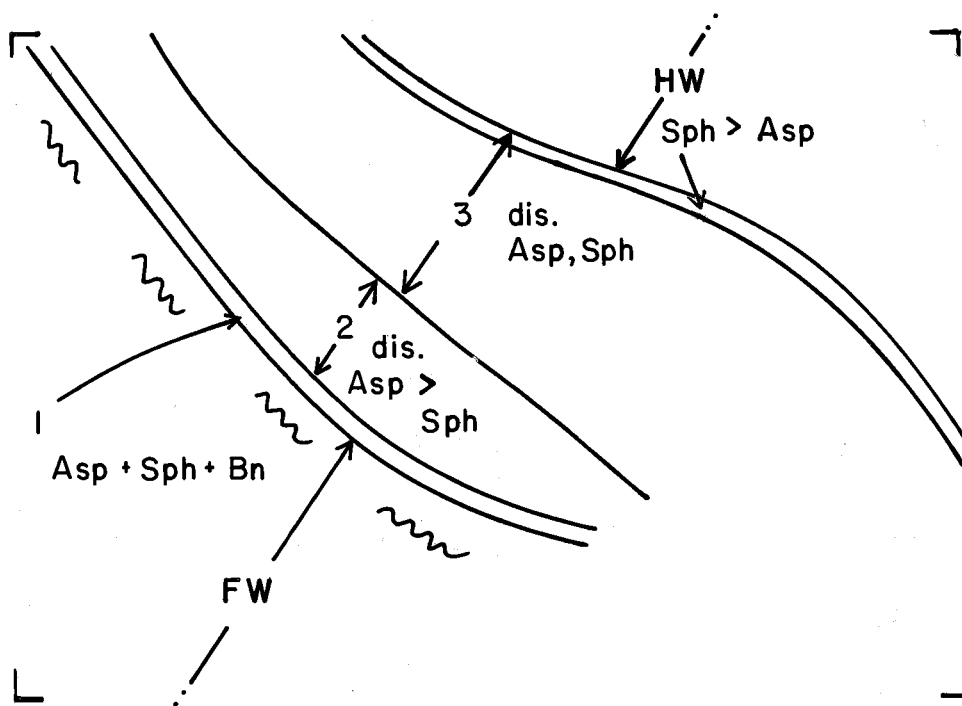
Most of the results from rock chips were low, but two areas of interest occur corresponding to types 1 & 2 mineralization.

TYPE 1: Three rock chips over this zone reveal high values for Cu, Pb, Zn, Ag, Fe, Sb and Au. The average of the three samples across 1.3 metres is 10 gm/tonne Au and 12.7 gm/tonne Ag. The immediate footwall and the hanging wall of this zone revealed somewhat lower values. These results are shown on Fig. 3. A similar but much smaller vein, located nearby ran 11 gm/tonne Au and 45.4 gm/tonne Ag over 10 cm.

TYPE 2: Three rock chip samples taken over this zone reveal low values in both gold and silver. The highest result was 0.6 ppm Ag and 14 ppb Au over 1 metre.

6.3 Discussion

Except for the high values found in Zone 1, the overall geochemical results were low with some 'spotty highs'. The ICP analysis, however, has revealed that a number of elements show a correlation to precious metal values; particularly those for rock chips. In studying the results Mn, As, Cu, Ni, Sr and Fe are consistently elevated in areas where faulting or shearing may be good indicators for gold.



TYPE I MINERALIZATION

Sample No.	Width	Rock Geochem. Ag(ppm), Au(ppb)	
FW 4867	2 m	0.5	305
1. 4866	0.06 m	35.4	28200
2. 4864	0.5 m	3.6	9060
3. 4865	0.8 m	11.0	8700
HW 4868	2 m	0.4	95

Average for 1, 2 & 3 over 1.36m = 9.956 gm/ton Au .
 = 12.724 gm/ton Ag .

Hammer for scale

Asp - Arsenopyrite
 Bn - Bornite
 Sph - Sphalerite

NEWMONT EXPLORATION OF CANADA LTD.

ZONE I

WATERLOO CLAIMS

SCALE	LOCATION 92J/15	DATE Nov. 1984
SURVEY BY JAT	DRAWN BY RL	NO. Fig. 3



PLATE 1: Zone 1 Mineralization

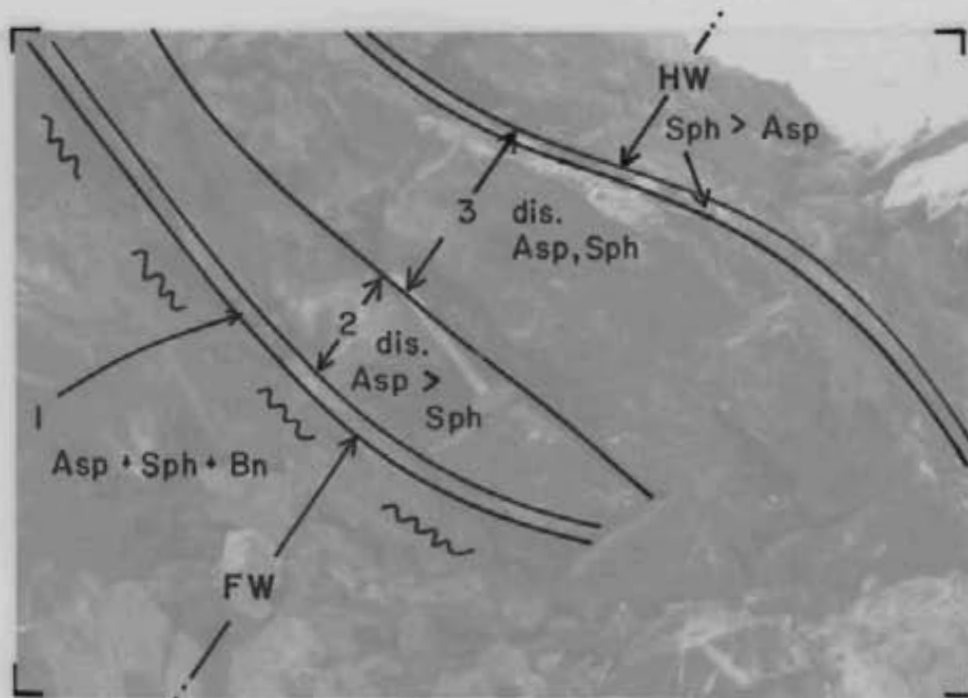


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**ZONE I
 WATERLOO CLAIMS**

SCALE	LOCATION 92J/15	DATE Nov. 1984
SURVEY BY JAT	DRAWN BY RL	NO. Fig. 3

7.0 CONCLUSIONS

There is a good possibility of extending the mineralization found at zone 1 with cat trenching and prospecting. In the saddle area the possibility exists for epithermal mineralization but more work including trenching and prospecting is needed.

8.0 REFERENCES

BARR, D. A. (1979): Gold in the Canadian Cordillera; paper presented at the annual general meeting, CIMM Montreal, April 25, 1979.

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JOUBIN, F. R.(1947): Bralorne and Pioneer Mines; in Structural and Canadian Ore Deposits, CIM Jubilee Volume, p. 168-177.

LOGAN, J. M. (1980): Preliminary Report on the Windy 1 Mineral Claim; prepared for Tamarind Holding Company, November 1980.

_____ (1980): Preliminary Report of the SOL 1114, Buck 1113, Buck 11 1116, Chief 1115, Helena 1104, Boss 1112 and Deka 1102 Mineral Claims; prepared for Solitare Resources Corporation, November 1980.

MCCANN, W. S. (1922): Geology and Mineral Deposits of the Bridge River Map-Area, British Columbia; Geol. Surv. Canada, Mem. 130.

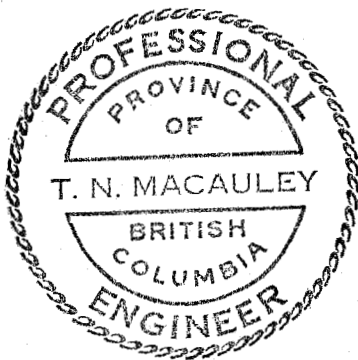
WOODWORTH, G. J. et al (1977): Geology Pemberton (92J) Map-Area; Geol. Surv. Canada, Open File 482.


J. A. TURNER

STATEMENT OF QUALIFICATIONS

I, James A. Turner, residing at 14149 17 A Avenue, Surrey British Columbia, state that:


1. I have graduated from the University of British Columbia with a B.Sc. degree in physics with geology in 1973 and further academic work in geological sciences in 1976.
2. I have been employed by Newmont Exploration of Canada Limited, Vancouver, British Columbia as a Project Geologist since 1980.
3. I am a member of the Geological Association of Canada (Cordilleran Section).
4. I supervised the exploration project at the **WATERLOO** property during 1984.





J. A. Turner, B.Sc.

I, Terrence N. Macauley, do hereby certify that the work described in this report was done under my direction.



T. N. Macauley, P.Eng.

STATEMENT OF COSTS

1. PERSONNEL

Project Geologist	Aug. 24-25, 1984		
	Nov. 5-9, 13-15, 1984		
	10 days @ \$125.00		\$ 1,250.00
Project Geologist	Sept. 13,14,17,18, 1984		
	4 days @ \$137.50		\$ 550.00
Senior Assistant (Geologist)	Aug. 24-25, Sept 13,14,17,18		
	Nov. 5-9, 13-15, 1984		
	14 days @ \$97.50		\$ 1,365.00
Junior Assistants			
1.	Aug 24-25, 1984	2 days @ \$72.50	\$ 145.00
2.	Aug 24-25, 1984	2 days @ \$82.50	\$ 165.00
3.	Sept 13,14,17,18, 1984	4 days @ \$80.00	\$ 320.00
4.	Sept 13,14,17,18, 1984	4 days @ \$80.00	\$ 320.00
			<hr/>
			\$ 4,115.00

2. TRANSPORTATION

Truck rental 4 days @ \$43.34		\$ 173.36
Fuel at \$15.00/day		\$ 60.00
Helicopter (500D) 2.7 hr @ \$474.71 inc. fuel		\$ 1,281.72
		<hr/>
		\$ 1,514.08

3. FOOD, ACCOMMODATION, CAMP COSTS

(a) Fly camp 8 man days @ \$45		\$ 360.00
(b) Hotel 16 man days @ \$33.19		\$ 531.04
		<hr/>
		\$ 891.04

4. ASSAYS

114 Soils & Silts for 30-element

ICP + AU @ \$11.85 \$ 1,350.90

35 Rocks for 30-element

ICP +AU @ \$14.25 \$ 498.75

Sampling supplies and shipping \$ 200.00

\$ 2,049.65

5. REPORT TYPING, MAP REPRODUCTIONS

\$ 150.00

\$400
SUBTOTAL

\$8,720.77

6. X-Calibre Costs

- Project Manager @ 5 days for \$200 per day

1,000.00

- Labour - 3 days @ \$120 per day

360.00

- Transportation - 4 days @ \$40 per day

160.00

\$ 1,520.00

TOTAL

\$10,241.54

Sample No. Mo Cu Pb Zn Ag Ni Co Mn Fe As U Au Th Sr Cd Sb Bi V Ca P La Cr Mg Ba Ti B Al Na K W Au
 all values in ppm unless otherwise indicated % % % % % ppb

F.C.
Silt

37739	24	106	7	45	.3	12	8	293	2.44	93	5	ND	10	71	1	9	3	50	.32	.11	15	32	.70	167	.11	5	1.03	.01	.30	2	5
37740	11	100	7	81	.1	86	20	405	3.21	167	5	ND	5	49	1	2	2	69	.41	.11	11	83	1.16	233	.17	3	1.53	.04	.42	2	25
37741	10	95	7	78	.2	81	20	386	3.11	158	5	ND	4	46	1	2	2	68	.39	.10	12	82	1.10	221	.16	5	1.44	.04	.39	2	5
37742	11	86	6	67	.1	64	17	350	2.79	141	5	ND	5	48	1	2	2	59	.34	.10	12	60	.92	196	.14	6	1.21	.03	.34	2	10
37743	8	81	27	76	.3	22	9	408	2.78	178	5	ND	6	96	1	23	2	61	.36	.13	17	44	.66	166	.12	4	1.01	.02	.28	2	5
37744	6	82	7	69	.1	67	18	354	2.74	139	5	ND	4	43	1	2	2	57	.35	.10	12	60	.84	184	.13	3	1.15	.03	.31	2	5
37745	7	60	10	51	.1	43	12	270	2.41	106	5	ND	5	31	1	6	2	54	.33	.12	13	52	.58	132	.10	5	.81	.02	.23	2	5
37746	4	131	31	83	.2	234	37	493	4.47	159	5	ND	2	148	1	2	2	67	.58	.08	9	193	2.03	247	.09	3	3.53	.08	.12	2	10
37747	4	95	19	83	.2	150	24	635	3.71	121	5	ND	2	148	1	2	2	65	.67	.15	9	156	1.73	244	.07	6	3.39	.06	.14	2	30
37748	3	94	17	81	.1	137	21	612	3.81	98	5	ND	2	155	1	2	2	71	.56	.11	9	154	1.86	301	.11	5	3.46	.07	.17	2	15
37749	3	85	15	94	.1	131	21	687	3.75	98	5	ND	2	128	1	2	2	71	.55	.15	9	148	1.75	248	.11	2	3.19	.07	.15	2	160
37750	2	50	9	51	.1	66	12	360	2.69	54	5	ND	2	80	1	2	2	59	.36	.10	10	80	.98	184	.10	6	2.18	.05	.07	2	10
37751	3	41	13	58	.1	52	10	442	2.61	44	5	ND	2	47	1	2	2	60	.25	.10	10	66	.80	210	.10	3	1.94	.04	.07	2	5
37752	3	85	14	74	.1	104	17	391	3.39	84	5	ND	2	78	1	2	2	67	.37	.13	11	122	1.60	279	.12	6	3.00	.06	.15	2	5
37753	4	87	14	87	.1	118	17	294	3.41	94	5	ND	2	94	1	2	2	70	.50	.11	12	149	1.90	250	.11	5	3.36	.07	.10	2	5
37754	6	127	18	97	.2	166	24	383	4.53	129	5	ND	2	135	1	2	2	82	.56	.15	11	191	2.18	295	.14	2	3.81	.07	.23	2	5
37755	5	57	10	59	.1	73	12	382	2.98	71	5	ND	2	66	1	2	2	59	.30	.10	9	89	1.03	237	.10	2	2.29	.04	.09	2	5
37756	3	42	11	81	.1	53	11	525	2.77	59	5	ND	2	53	1	2	2	61	.34	.11	9	70	.86	248	.10	2	1.99	.04	.09	2	5
37757	3	47	16	107	.1	68	13	770	3.20	106	5	ND	2	65	1	2	2	68	.58	.13	10	101	1.17	204	.09	3	2.26	.04	.13	2	5
37758	4	51	12	95	.1	66	12	696	3.16	87	5	ND	2	48	1	2	2	66	.29	.11	11	89	1.17	263	.11	4	2.43	.04	.14	2	5
37759	5	74	14	102	.1	108	17	660	3.85	138	5	ND	4	71	1	2	2	82	.38	.11	14	142	1.82	383	.13	4	3.16	.05	.36	2	5
37760	6	67	11	86	.1	86	14	483	3.79	130	5	ND	4	59	1	2	2	79	.30	.10	16	107	1.44	383	.13	7	2.96	.04	.28	2	5

Soil

37761	8	87	13	115	.1	109	19	770	4.54	96	5	ND	8	87	1	3	2	108	.43	.08	8	202	2.50	426	.16	2	3.73	.05	.84	2	5
37762	3	117	5	70	.1	183	23	449	3.92	71	5	ND	3	117	1	2	2	79	.60	.10	8	208	2.38	252	.14	2	3.52	.09	.35	2	15
37763	2	137	12	88	.1	182	27	566	4.10	172	5	ND	2	83	1	2	3	84	.58	.09	6	200	2.47	249	.14	2	3.85	.08	.25	2	5
37764	2	96	18	84	.3	137	21	613	6.72	641	5	ND	2	179	1	3	2	79	.79	.11	4	142	2.11	249	.10	2	4.54	.10	.43	2	50
37765	1	107	9	76	.1	278	35	308	4.67	121	5	ND	2	157	1	2	2	102	1.34	.12	4	292	3.73	260	.18	2	4.92	.21	.43	2	5
37766	1	123	7	78	.1	276	39	511	4.83	64	5	ND	2	145	1	2	2	110	1.40	.10	4	319	3.79	289	.18	2	4.82	.20	.46	2	5
37767	2	114	10	81	.1	200	31	471	4.61	65	5	ND	2	151	1	2	2	114	1.36	.13	6	255	3.63	240	.19	2	4.94	.22	.44	2	5

W.C.
Silt

37777	11	116	7	72	.1	83	15	537	3.82	85	5	ND	2	43	1	4	3	48	.23	.08	8	82	1.02	216	.10	9	1.37	.04	.36	2	5
37778	10	108	7	72	.1	79	13	478	3.75	88	5	ND	2	38	1	5	2	44	.22	.08	8	83	.93	195	.08	6	1.23	.04	.33	2	5
37779	11	111	7	72	.1	81	14	517	3.77	84	5	ND	2	40	1	2	3	46	.22	.08	8	81	.98	209	.09	7	1.32	.04	.35	2	5
37780	11	120	11	75	.1	85	16	571	3.93	89	5	ND	3	42	1	4	2	49	.23	.08	9	82	1.02	221	.10	9	1.41	.04	.37	2	5
37781	10	121	9	77	.1	89	16	611	3.96	102	5	ND	3	46	1	5	2	47	.24	.08	9	88	1.01	232	.09	6	1.42	.04	.36	2	5
37782	13	126	11	79	.1	102	18	696	4.04	78	5	ND	2	48	1	2	2	56	.25	.08	9	95	1.24	254	.12	7	1.54	.04	.44	2	5
37783	13	149	8	65	.1	60	14	601	4.12	72	5	ND	2	60	1	2	2	66	.26	.09	9	49	1.08	259	.15	7	1.77	.05	.50	2	5
37784	15	246	6	91	.1	77	21	441	4.90	154	5	ND	2	59	1	2	2	74	.17	.08	9	75	1.29	304	.16	7	2.44	.04	.50	4	1410
37785	9	125	8	102	.1	75	12	365	4.28	105	5	ND	2	35	1	2	3	68	.08	.09	11	102	1.28	246	.14	8	2.15	.03	.38	3	5
37786	6	68	10	97	.3	64	6	207	3.37	42	5	ND	4	33	1	2	2	55	.22	.07	13	93	1.23	251	.12	7	1.93	.01	.53	2	5

Soil

37787	1	9	5	34	.1	13	2	97	1.29	4	5	ND	2	8	1	2	2	31	.05	.07	5	20	.21	73	.08	3	.73	.01	.04	2	5
37788	1	11	5	63	.1	25	4	297	1.93	5	5	ND	2	18	1	2	2	47	.32	.09	7	34	.85	120	.28	3	1.40	.03	.14	2	5
37789	4	126	8	186	.1	432	39	599	5.02	54	5	ND	3	53	1	2	6	101	.28	.16	8	483	4.08	378	.24	7	4.07	.02	.44	2	5
37790	1	58	9	220	.1	99	19	823	3.91	12	7	ND	2	36	1	2	5	83	.50	.16	11	84	2.24	381	.35	8	3.71	.07	.19	2	5
37791	5	63	9	204	.1	185	21	853	3.85	33	6	ND	2	35	1	2	4	78	.36	.06	11	263	2.44	325	.16	6	2.68	.02	.49	3	5

Sample No. Mo Cu Pb Zn Ag Ni Co Mn Fe As U Au Th Sr Cd Sb Bi V Ca P La Cr Mg Ba Ti B Al Na K W Au
 all values in ppm unless otherwise indicated % % % % % fpb

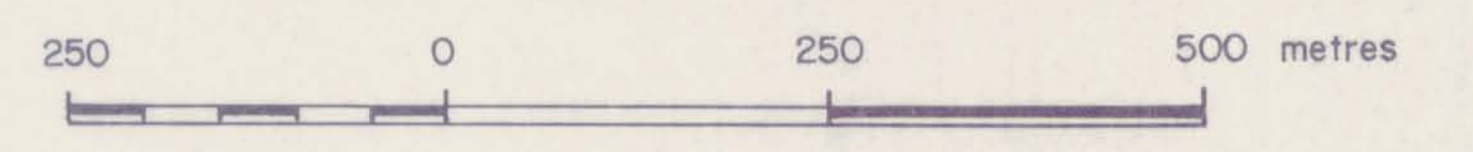
Rock

Sample No.	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au	fpb
R-00140	4	29	7	19	.1	444	25	134	2.05	34	5	ND	2	73	1	3	3	36	.50	.04	2	368	2.40	109	.02	5	1.77	.09	.05	2	5	
R-00141	1	47	8	55	.1	14	5	534	3.96	17	5	ND	2	20	1	2	2	100	.31	.10	3	27	1.20	238	.12	2	2.01	.10	.80	2	11	
R-00142	1	32	5	61	.1	6	7	432	3.76	4	5	ND	2	41	1	2	2	82	.66	.05	2	7	.86	93	.09	3	1.63	.21	.46	2	1	
R-04726	3	146	5	239	.2	41	13	413	2.69	72	5	ND	2	56	4	2	2	81	.75	.05	8	42	1.16	175	.13	5	2.37	.07	.77	2	13	
R-04727	11	57	11	67	.3	112	9	470	2.71	52	5	ND	3	43	1	2	2	106	.23	.04	6	376	2.46	356	.09	2	3.03	.10	.92	2	1	
R-04728	2	35	5	64	.1	60	17	288	3.63	29	5	ND	2	117	1	2	2	85	1.12	.31	11	50	1.92	777	.27	4	2.98	.19	1.54	2	1	
R-04729	2	13	3	51	.1	11	9	505	3.32	342	5	ND	2	22	1	2	2	91	.32	.06	6	7	.89	280	.13	3	1.60	.09	.60	2	28	
R-04730	1	6	6	50	.4	9	5	502	3.32	9	5	ND	2	71	1	2	2	46	1.88	.05	3	3	1.01	87	.09	5	4.37	.39	.77	2	105	
R-04731	1	119	8	43	.2	124	23	204	3.53	20	5	ND	2	176	1	2	2	108	1.98	.04	3	236	1.73	108	.16	5	4.47	.46	1.18	2	14	
R-04732	1	182	16	25	.4	179	34	200	4.25	2	5	ND	2	362	1	2	2	44	4.16	.03	3	126	.80	50	.09	8	6.31	.48	.48	2	4	
R-04851	4	96	14	28	.2	320	27	151	3.22	16	5	ND	2	137	1	6	2	30	1.25	.10	4	141	1.04	134	.12	31	2.09	.25	.27	2	7	
R-04852	4	79	18	43	.7	432	23	145	2.68	14	5	ND	2	96	1	7	2	32	1.49	.09	4	228	1.59	104	.07	33	2.04	.27	.19	2	16	
R-04853	2	168	14	41	4.8	330	29	176	3.93	9	5	ND	2	79	1	19	2	40	1.16	.12	3	227	1.79	117	.10	39	2.51	.22	.35	2	49	
R-04854	3	114	5	26	.1	153	19	149	3.42	4	5	ND	2	133	1	2	2	34	1.40	.11	4	86	.65	126	.19	36	2.00	.28	.24	2	3	
R-04855	4	69	5	24	.1	295	22	145	2.64	10	5	ND	2	59	1	2	2	25	.78	.10	4	180	1.14	117	.07	34	1.52	.14	.25	2	8	
R-04856	15	109	6	19	.1	8	3	168	2.31	11	5	ND	2	96	1	2	2	34	1.14	.08	2	15	.77	106	.05	35	2.25	.36	.27	2	3	
R-04857	9	137	33	19	.5	4	4	176	2.61	142	5	ND	2	96	1	20	3	29	1.22	.08	2	6	.72	78	.08	41	2.37	.32	.22	2	51	
R-04858	14	100	5	24	.1	5	3	236	2.73	5	5	ND	2	62	1	2	2	29	.80	.09	3	6	.66	64	.08	34	1.62	.21	.29	2	6	
R-04859	10	92	9	23	.1	6	4	234	2.69	7	5	ND	2	46	1	2	2	30	.74	.09	3	5	.62	40	.07	9	1.44	.17	.14	2	4	
R-04860	5	39	6	28	.1	279	14	190	1.81	25	5	ND	2	61	1	4	2	33	1.07	.06	3	208	1.42	182	.07	4	2.54	.19	.56	2	12	
R-04861	3	76	7	41	.1	115	15	224	3.42	4	5	ND	2	99	1	2	2	65	.96	.07	3	150	1.78	116	.15	4	2.59	.24	.95	2	4	
R-04862	7	50	4	22	.1	338	18	110	1.87	12	5	ND	2	88	1	2	2	45	1.31	.05	4	336	1.39	200	.06	3	2.78	.25	.32	2	3	
R-04863	3	46	4	27	.2	16	2	397	1.67	3	7	ND	3	5	1	2	2	44	.04	.02	11	36	.95	231	.06	4	1.12	.02	.46	2	1	
R-04864	3	63	177	8850	3.6	53	8	1426	3.83	28909	5	4	2	82	107	11	5	22	8.34	.03	3	47	.32	41	.03	45	.87	.11	.16	2	9060	
R-04865	2	45	1019	3673	11.0	54	8	1085	4.11	31572	5	7	2	105	38	36	19	15	9.07	.02	2	33	.34	38	.02	5	.76	.09	.10	2	8700	
R-04866	6	34	3570	18677	35.4	13	1	1172	16.27	23339	5	18	2	38	241	97	51	4	2.36	.01	2	4	.06	10	.01	6	.25	.03	.01	2	28200	
R-04867	1	48	49	234	.5	96	21	161	1.49	1401	5	ND	2	84	3	2	2	29	1.59	.07	3	64	1.08	83	.06	3	1.76	.21	.19	2	305	
R-04868	2	111	15	106	.4	136	23	232	2.35	383	5	ND	2	78	1	2	2	43	1.83	.06	3	106	1.32	151	.09	5	2.78	.27	.56	2	95	
R-04869	2	910	1034	7294	45.4	21	18	50	23.16	23302	5	7	2	16	93	273	146	4	.05	.01	6	4	.09	8	.01	2	.14	.01	.05	2	11000	
R-04870	1	16	3	47	.5	20	2	35	.35	629	5	ND	2	1	1	6040	8	2	.04	.01	2	2	.05	3	.01	2	.03	.01	.01	2	20	
R-04871	1	97	7	42	.3	8	3	336	3.00	419	5	ND	2	5	1	534	2	24	.10	.05	9	22	.59	127	.04	5	.93	.02	.32	2	12	
R-04872	1	53	1	42	.6	31	4	390	1.11	1488	5	ND	2	13	1	6142	2	6	.63	.02	3	4	.22	19	.01	8	.18	.01	.08	2	14	
R-04873	1	73	4	40	.3	38	5	408	2.16	267	5	ND	2	38	1	269	2	19	.92	.06	7	21	.65	105	.03	7	.83	.03	.26	2	8	
R-04874	2	58	6	38	.2	70	7	490	1.96	1151	5	ND	2	103	1	6111	2	57	2.32	.03	4	49	1.17	94	.04	5	1.46	.13	.30	11	8	
R-04875	3	52	10	80	.1	104	13	430	4.07	13711	5	ND	2	124	1	205	2	43	3.00	.12	10	84	1.36	71	.02	11	.92	.04	.38	2	24	
RE R-04866 5X	2	9	897	4759	10.3	3	1	282	4.58	24815	5	9	2	9	62	31	11	2	.56	.01	7	1	.02	4	.01	3	.05	.01	.01	2	-	
RE R-04870 51	1	8	4	18	.2	8	1	10	.08	472	5	ND	2	2	1	6066	3	2	.06	.01	2	1	.01	2	.01	2	.01	.01	.01	2	-	

13,323

LEGEND

- 1 DIORITE
- 2 ANDESITE
- 3 CHERT
- OUTCROP
- GEOLOGIC CONTACT
- BEDDING, FOLIATION, ADIT, TRENCH
- FAULT, SHEAR ZONE
- CLAIM BOUNDARY
- CREEK
- LCP & TAG NO. ;
LOCATED, NOT LOCATED
- HALEY(2663) CLAIM(RECORD NO.)



SCALE

CONTOUR INTERVAL = 100 ft.

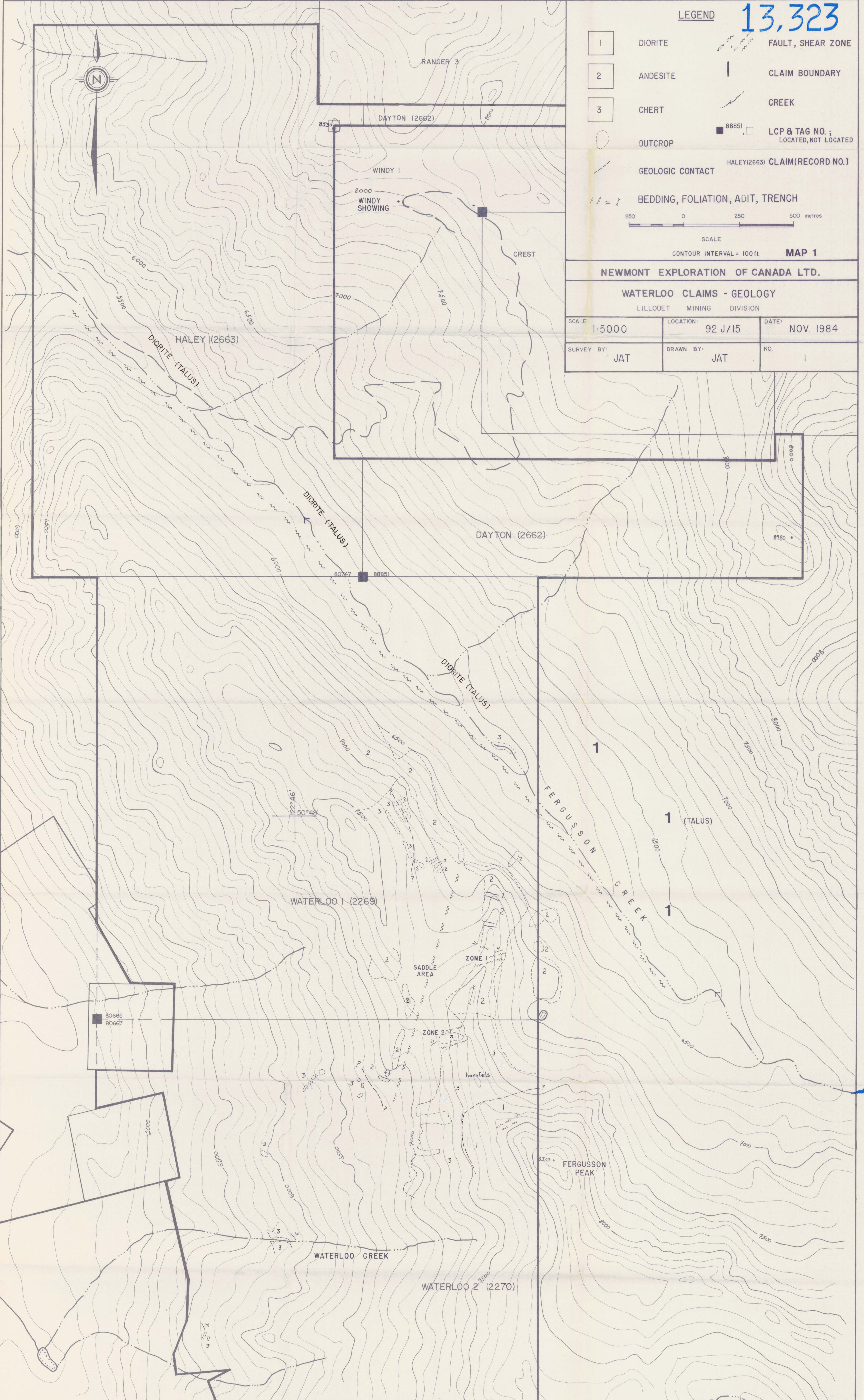
MAP 1

NEWMONT EXPLORATION OF CANADA LTD.

WATERLOO CLAIMS - GEOLOGY

LILLOOET MINING DIVISION

SCALE: 1:5000	LOCATION: 92 J/15	DATE: NOV. 1984
SURVEY BY: JAT	DRAWN BY: JAT	NO. 1

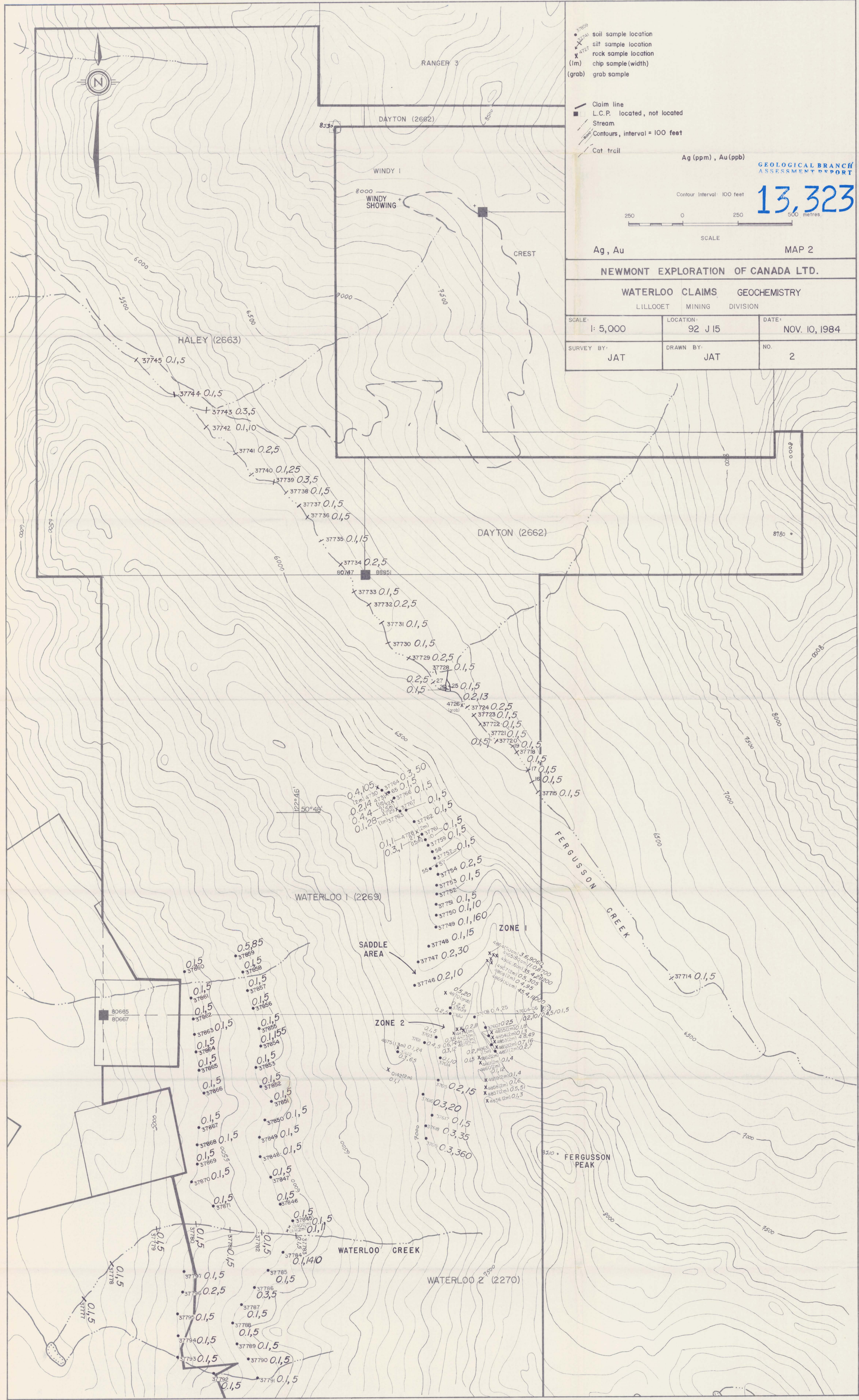


80665
80667

12°46'
50°48'

hornfels

850
FERGUSSON
PEAK



● soil sample location
 ✕ silt sample location
 ✕ rock sample location
 (lm) chip sample (width)
 (grab) grab sample

--- Claim line
 ■ L.C.P. located, not located
 — Stream
 --- Contours, interval = 100 feet
 --- Cat trail

Ag (ppm), Au (ppb)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

Contour Interval: 100 feet

13,323



Ag, Au

MAP 2

NEWMONT EXPLORATION OF CANADA LTD.

WATERLOO CLAIMS GEOCHEMISTRY
LILLOOET MINING DIVISION

SCALE: 1: 5,000	LOCATION: 92 J 15	DATE: NOV. 10, 1984
SURVEY BY: JAT	DRAWN BY: JAT	NO. 2