

RECEIVED

NOV 21 1997

Gold Commissioner's Office
VANCOUVER, B.C.

REPORT ON
1997 GEOCHEMICAL AND GEOLOGICAL PROGRAM
ON THE
GRACE 1 & 2 CLAIMS

LIARD MINING DIVISION
NTS 104 G/3W
LATITUDE: 57° 19'
LONGITUDE: 131° 27'

Owner/Operator
Pioneer Metals Corporation
#1220 - 609 Granville Street
Vancouver, B.C.
V7Y 1G5

Authors
Rodney R. Hill
and
Syd J. Visser

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

November 14, 1997

25,235

TABLE OF CONTENTS

INTRODUCTION	2
LIST OF CLAIMS	2
PROPERTY HISTORY	2
LOCATION, ACCESS AND GEOGRAPHY	6
REGIONAL GEOLOGY	7
PROPERTY GEOLOGY	7
1997 PROGRAM	10
SUMMARY	11
CONCLUSIONS	14
RECOMMENDATIONS	14
BIBLIOGRAPHY	15

APPENDICES

APPENDIX 1: STATEMENTS OF QUALIFICATIONS
APPENDIX 2: STATEMENT OF COSTS
APPENDIX 3: ANALYTICAL RESULTS
APPENDIX 4: PETROGRAPHIC ANALYSIS
APPENDIX 5: ROCK SAMPLE DESCRIPTIONS
APPENDIX 6: STATEMENT OF WORK

LIST OF FIGURES

FIGURE 1: GENERAL LOCATION MAP	3
FIGURE 2: CLAIM MAP	4
FIGURE 3: REGIONAL MINERAL OCCURRENCE MAP	5
FIGURE 4: REGIONAL GEOLOGY	8
FIGURE 5: PHOTO OF MINERALIZED ZONE	12
FIGURE 6: PHOTO OF WEST ONE FAULT	12
FIGURE 7: PHOTO OF MINERALIZED ZONE	13

MAPS

COMPILATION MAP

IN POCKET

INTRODUCTION

The authors were commissioned by Stephen H. Sorensen, President of Pioneer Metals Corporation, to follow-up on a recommendation from the 1993 work program. The recommendation was to explore the West One Fault for shear-hosted mineralization in the southwest quadrant of the Grace 2 claim.

The Grace claims are located immediately west of Galore Creek (see Figure 1), in the Liard Mining Division, (NTS 104G/3W) of north-western British Columbia, Canada. Galore Creek is a north flowing tributary of the Scud River, which itself is a west flowing tributary of the Stikine River.

LIST OF CLAIMS

The Grace claims consists of two claims of 20 units each as follows:

Claim Name	Record Number	Tenure Number	No. of Units	Record	Expiry
Grace 1	6260	224192	20	25/8/89	25/8/1999*
Grace 2	6261	224193	20	24/8/89	24/8/1999*

* Subject to approval of this report.

(Group No. 3004735)

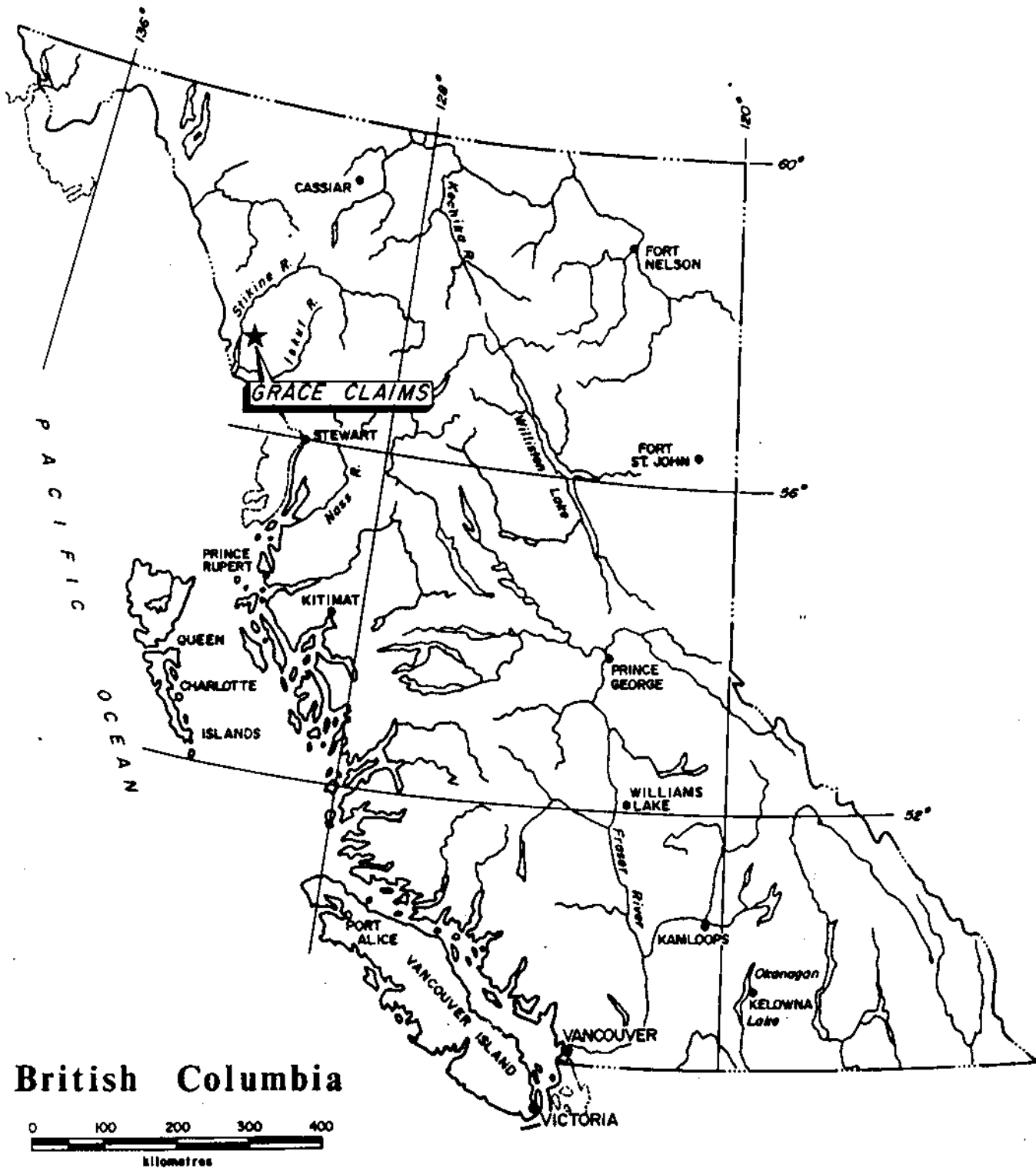
These claims are owned 100% by Pioneer Metals Corporation, who were the operators of the 1997 program.

These claims overlap previously staked claims and only control approximately 36 units (see Figure 2). The location of the Grace 2 L.C.P. was verified in 1991 (Kasper, B.J. 1991). Detailed surveys do not exist for the Kennecott/Hudson Bay claims immediately to the south of the Grace Claims. An accurate survey tying the Kennecott/Hudson Bay claims to the Grace claims is warranted and should be performed, as a secondary target on the Grace claims straddles the claims boundary.

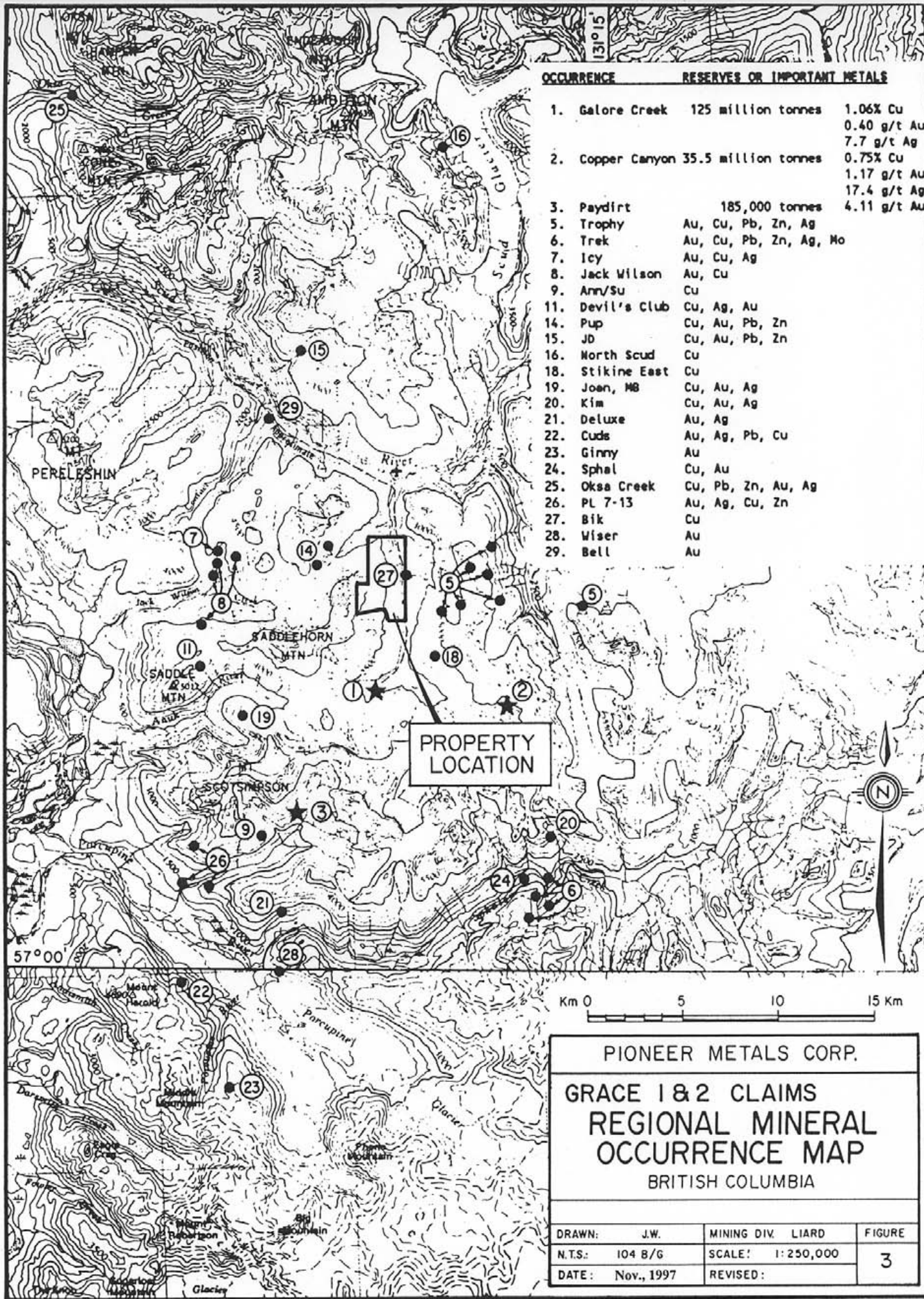
PROPERTY HISTORY

The first recorded work in the area was in 1955, when Hudson's Bay Exploration and Development Company Limited staked the headwaters of Galore Creek to cover the "Central Zone" porphyry deposit and other satellite deposits (see Figure 3). Subsequent work has outlined a drill indicated reserve of 125 million tonnes grading 1.06% copper and 400 ppb gold (Allen *et al*, 1976).

The Grace claims lie immediately north of the Kennecott/Hudson Bay property. The first recorded work on this area was in 1964, when the area was staked as the "Stikine North Group" for the Scud Venture, an Asarco/Silver Standard joint venture. Geological mapping and a magnetometer survey was carried out that year and an I.P. Survey and 5000 feet of drilling were recommended (Gale, R.E. 1964). An I.P. Survey was carried out in 1965 and a minimum of 1200 feet of drilling was recommended (Falconer, R.D. 1965). Also in 1965, a diamond drill hole was drilled but no log has been located for that drill hole. Efforts will be



PIONEER METALS CORP.		
GRACE 182 CLAIMS		
General Location Map		
BRITISH COLUMBIA		
Drawn:	Mining Division: Liard	Figure:
N.T.S.: 1046/3W	Scale: as shown	1
Date: Nov., 1997	Revised:	



OCCURRENCE	RESERVES OR IMPORTANT METALS
1. Galore Creek	125 million tonnes 1.06% Cu 0.40 g/t Au 7.7 g/t Ag
2. Copper Canyon	35.5 million tonnes 0.75% Cu 1.17 g/t Au 17.4 g/t Ag
3. Paydirt	185,000 tonnes 4.11 g/t Au
5. Trophy	Au, Cu, Pb, Zn, Ag
6. Trek	Au, Cu, Pb, Zn, Ag, Mo
7. Icy	Au, Cu, Ag
8. Jack Wilson	Au, Cu
9. Ann/Su	Cu
11. Devil's Club	Cu, Ag, Au
14. Pup	Cu, Au, Pb, Zn
15. JD	Cu, Au, Pb, Zn
16. Worth Scud	Cu
18. Stikine East	Cu
19. Joan, MB	Cu, Au, Ag
20. Kim	Cu, Au, Ag
21. Deluxe	Au, Ag
22. Cuds	Au, Ag, Pb, Cu
23. Ginny	Au
24. Sphal	Cu, Au
25. Oksa Creek	Cu, Pb, Zn, Au, Ag
26. PL 7-13	Au, Ag, Cu, Zn
27. Bik	Cu
28. Wiser	Au
29. Bell	Au

PROPERTY LOCATION



PIONEER METALS CORP.
 GRACE 1 & 2 CLAIMS
 REGIONAL MINERAL
 OCCURRENCE MAP
 BRITISH COLUMBIA

DRAWN:	J.W.	MINING DIV. LIARD	FIGURE
N.T.S.:	104 B/G	SCALE: 1:250,000	3
DATE:	Nov., 1997	REVISED:	

made to verify the drill data for this hole. The hole has been described as having intersected the Central Fault Zone and was weakly mineralized in pyrite and chalcopyrite (Dunn, W. St. C., 1992 personal communication).

No further work was carried out on this area at that time, and the claims were allowed to lapse in the 1980's. Pioneer Metals Corporation staked the Grace 1 & 2 claims in 1987 and carried out limited geological mapping and stream sediment sampling (Blusson, 1988). Those claims then lapsed in 1989 and were restaked by Pioneer the same year. Pioneer constructed cat roads for drill access in 1989 and carried out an airborne geophysical survey (Blusson, 1990). A limited geological mapping and geochemical soil sampling program was carried out in 1991 (Kasper, B.J., 1991). Another limited program of trenching and geochemical soil sampling was carried out in 1992 (Dunn, D. St. C., 1992). A program of line cutting, geological sampling and prospecting was carried out in 1993 (Dunn, D. St. C., 1993).

LOCATION, ACCESS AND GEOGRAPHY

The Grace claim group is located within the Coast Range Mountains approximately 170 kilometres northwest of Stewart and 90 kilometres south of Telegraph Creek in northwestern British Columbia. It lies within the Liard Mining Division, centered at 57° 11' North latitude and 131° 28' West longitude.

Access to the property was achieved by helicopter from the Bob Quinn strip on the Iskut River. Fixed wing access is possible on to the Galore Creek air strip, located 3 km south of the Grace claims. Cat roads connect the strip to a barge landing on the Stikine River at the mouth of the Scud River. This road would require substantial repair work to be passable.

On the Alaskan side of the border, Wrangell lies approximately 100 km. to the southwest, and provides a full range of services and supplies, including a commercial airport. The Stikine River has been navigated by 100-ton barges upriver as Telegraph Creek, allowing economical transportation of heavy machinery and fuel to the Scud River airstrip located 24 km. to the northwest of the claim group.

The Grace claims cover the western flank of the Galore Creek drainage, extending south from Galore Pup Creek. Topography is rugged, typical of mountainous and glaciated terrain, with elevations ranging from 550 metres in the Galore Creek valley to over 2000 metres on the western edge of the Grace 2 claim.

Lower slopes are covered by a mature forest of hemlock, spruce and balsam fir with a dense undergrowth of devil's club, alder and huckleberry. Above treeline, which occurs at approximately 1200 metres, the creek beds and slopes are covered by dense slide alder and willow growth. The steeper slopes are covered in short heather and other alpine vegetation.

The property lies in the wet belt of the Coast Range Mountains, with annual precipitation between 190 and 380 centimetres (Kerr, 1948). Except during July, August and September, precipitation at higher elevations falls mainly as snow,

with accumulations reaching three metres or more. Both summer and winter temperatures are moderate, ranging from -5°C in the winter to 20°C in the summer months.

REGIONAL GEOLOGY

Government geologists have carried out at least six regional mapping projects covering the Grace Claims and have progressively improved geologic understanding of the Galore Creek area (See Figure 4). These projects were as follows: Kerr (1948), Operation Stikine (GSC, 1957), Souther (1972), Brown and Gunning (1989 a,b,) Logan and Koyanagi (1989), and Logan et al (1989).

The Grace Claims lie near the western margin of the Intermontane Belt approximately 20 km. from its contact with the Coast Plutonic complex.

Stratigraphy in the area ranges from Permian to Triassic. Permian? crinodal limestone forms the base of the sequence, conformably overlain by metamorphosed sediments and volcanics, then a thick section of Permian bioclastic limestone. These rocks are unconformably overlain by Upper Triassic Hazelton Group island arc volcanics and sediments.

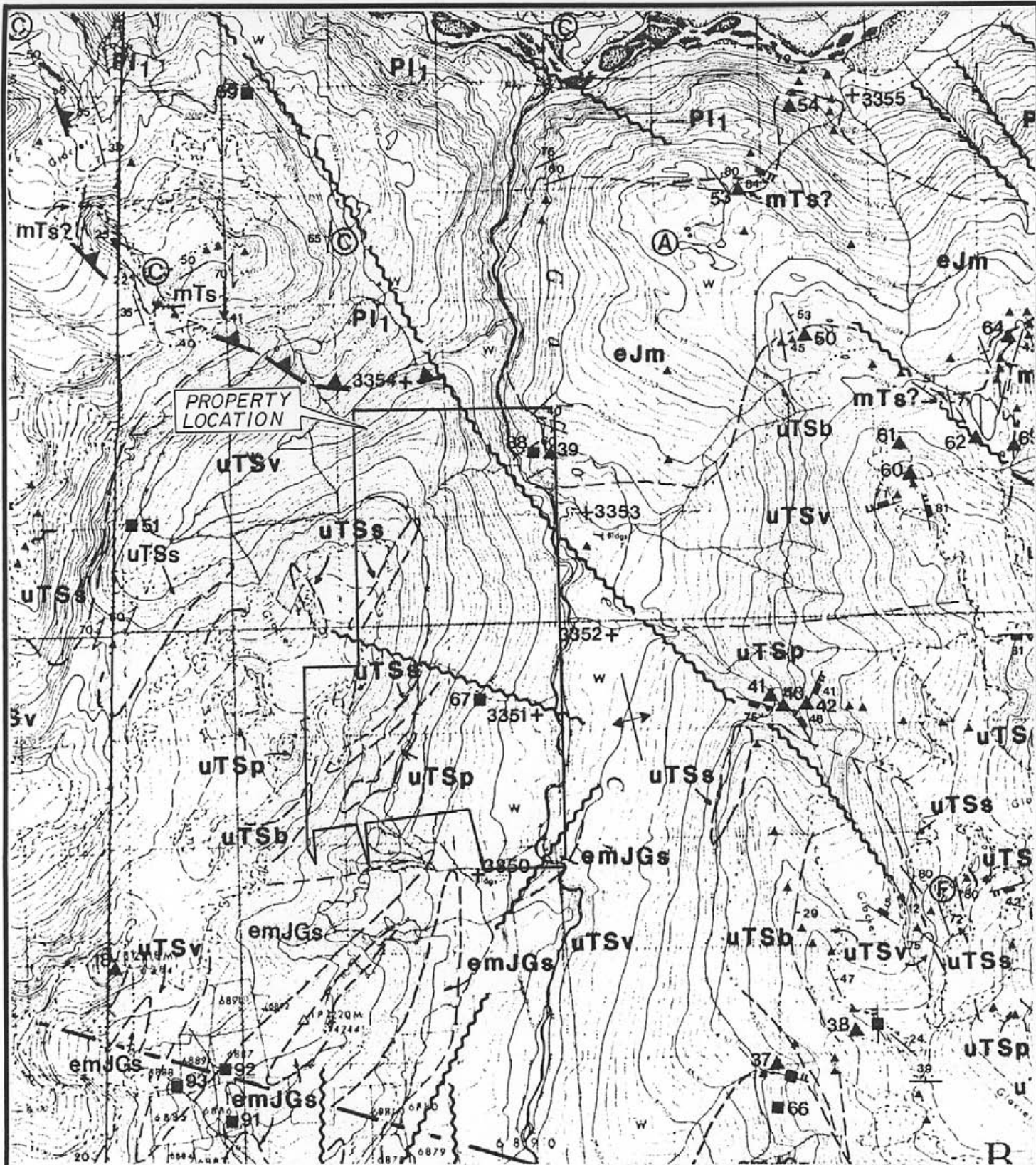
The whole package has been intruded by Jurassic to Tertiary granodiorite to quartz diorite stocks related to the Coast Plutonic Complex. Stocks of orthoclase porphyry syenite of Late Triassic to Early Jurassic age also intrude the layered rocks. These latter intrusions are thought to be coeval with the Stuhini Volcanics, part of the Hazelton Group. The Central Zone of the Galore Creek copper-gold porphyry is hosted by this orthoclase porphyry syenite and Stuhini Volcanics.

The Galore Creek deposit might mark the edifice of an eroded volcanic centre with numerous sub-volcanic plutons of syenitic composition (Kasper, B.J., 1991). Gale mapped a broad, north trending anticline in the layered rocks on the Grace Claims and attributed this to doming caused by the syenite intrusion. These concepts are compatible and support the hypothesis that a buried syenite stock with related porphyry mineralization might be present on the Grace Claims.

PROPERTY GEOLOGY

The Grace Claims were mapped by Gale in 1964 with further details added in the southern Grace 2 by Kasper in 1991 (see Compilation Map).

The most common rock underlying the Grace Claims are andesitic and basaltic volcanics of the Upper Triassic Stuhini Group. These comprise pyroxene porphyry flows, fragmentals, and feldspar crystal tuffs. Interbedded sedimentary rocks consisting of calcareous argillite and conglomerate outcrop in the western part of the Grace 2 claim. All of the outcrop which was observed during the 1997 was comprised of these basalts. Similar rocks outcrop on the east side of the Galore Creek valley and bedding attitudes led Gale to conclude that "...the major structure in the area is a northerly trending anticline, whose axis lies close to Galore Creek." (Gale, R.E., 1964).



From OPEN FILE 1989-8
by Logan, Koyanagi, Rhys

SEE FOLLOWING PAGE FOR LEGEND

PIONEER METALS CORP.

GRACE 1&2 CLAIMS

Regional Geology

BRITISH COLUMBIA

Drawn	Mining Division Liard	Figure
N.T.S.	Scale 1: 50 000	4
Date Nov., 1997	Revised	

LEGEND

LAYERED ROCKS

QUATERNARY

Qal UNCONSOLIDATED GLACIAL TILL AND POORLY SORTED ALLUVIUM

UPPER TRIASSIC

STUBBI GROUP (WHERE UNDIVIDED DENOTED AS uTSv)

uTSs SILTSTONE, SANDSTONE, CONGLOMERATE, MINOR LIMESTONE CONTAINS *Monotis*

uTSI WELL-BEDDED GREEN AND MAROON LAPILLIFLASH TUFFS AND EPICLASTICS

uTSp PYROXENE-PORPHYRY FLOWS AND FRAGMENTALS

uTSb INTERMEDIATE TO MAFIC FRAGMENTALS, BRECCIA, TUFF, LAHAR

MIDDLE TO UPPER TRIASSIC

n-uTSv MASSIVE ANDESITE FLOWS AND TUFFS, AMYGDALOIDAL BASALT

MIDDLE TRIASSIC

mTs CARBONACEOUS SILTY SHALE WITH ELLIPTICAL CONCRETIONS, SILICEOUS AND LIMY SILTSTONES CONTAINING *Halebia*

STIKINE ASSEMBLAGE

PERMIAN

PI1 LIGHT GREY MASSIVE TO THICKLY-BEDDED BUFF, BIOCLASTIC CALCARENITE

PI2 DARK GREY TO BUFF THIN BEDDED, BIOCLASTIC LIMESTONE, CHERT INTERBEDS, ARGILLACEOUS NEAR BASE

INTRUSIVE ROCKS

EARLY TO MIDDLE JURASSIC

GALDRE CREEK INTRUSIONS

emJGs SYENITE, ORTHOCLASE PORPHYRITIC MONZONITE

EARLY JURASSIC

eJm MEDIUM-GRAINED, HORNBLende, BIOTITE GRANODIORITE TO MONZONITE

Geological contact (defined, approximate, assumed).....	-----
Unconformable contact (defined, assumed)	-----
Bedding (horizontal, inclined, overturned).....	X / 57 / 48
Foliation	Z 22
Fault (observed, inferred).....	-----
Thrust or high angle reverse fault (defined, assumed).....	-----
Anticline (direction of plunge indicated).....	52
Syncline (direction of plunge indicated).....	51
Minor fold axis. (S, Z, and M symmetry), lineation	↑↑↑
Joint.....	78
Dyke.....	32
Vein.....	29
Limit of geologic mapping (limit of permanent snow and ice).....
Macro Fossil locality (indeterminate, positive identification).....	f F
Micro fossil locality.....	C
Isotopic age determination site.....	A
Assay sample site.....	14 ▲
MINFILE location.....	26 ■
Regional Geochem Survey sample site.....	+ 1224
Massive outcrop visited.....	▲

Two other rock types outcrop on the Grace Claims: a Porphyry Breccia, which contains porphyritic syenite but is probably part of the Stuhini Volcanics and Syenite Porphyry dykes and sills. These latter rocks are off-shoots of the Galore Creek orthoclase porphyry syenite. According to Kasper (1991), "...at least two varieties of syenite have been recognized: a pinkish red, equigranular medium-grained syenite and a gray orthoclase porphyry syenite." Thin section work from the 1997 program on a similar dyke suggests that the pinkish-red equigranular medium-grained syenite may have a composition closer to monzonite. Stronger copper mineralization is associated with gray orthoclase porphyry syenite. This unit has been further subdivided in the Galore Creek deposit into an orthoclase megacryst porphyry variety, with 2 to 3 cm. phenocrysts and finer-grained porphyry, with 1 to 1.5 cm. orthoclase phenocrysts. Although both varieties of orthoclase porphyry are mineralized, the bulk of the higher-grade mineralization is thought to be associated with the finer-grained version. (Enns, S., 1992, personal communication). Northerly trending dykes of both the gray and pink syenite to monzonite outcrop on Ursus Creek and continue to the north (see Compilation Map).

Within the basalt, alteration in the western areas is primarily propylitic. Propylitic alteration consisting of epidote-calcite-chlorite-pyrite, varies with proximity to zones of mineralization. Towards areas of sulphide mineralization, strong propylitic alteration inhibits the identification of original rock types. Propylitic alteration is observable in the syenite-monzonite dyke. Here the dominant alteration mineral is carbonate.

1997 PROGRAM

The 1997 program was designed to delineate the nature of the downslope geochemical anomalies which were thought to be associated with shear-hosted mineralization on the West One Fault.

Difficulties were encountered while attempting to pass the gorges associated with Ursus Creek. Therefore, the area of most interest for shear-hosted mineralization remains untested. However, significant information has been obtained so as to infer the nature of the anomalous geochemical values downslope of the 'West One Fault'.

Geological mapping, rock sampling, and soil sampling were conducted along 3 separate lines. During the course of the program, 38 soil samples and 20 rock samples were taken. Twelve of the rock samples were cut for thin section of which 4 were observed by Harris Exploration Services. The remaining 8 rock samples were delivered to Eco-Tech Laboratories in Kamloops, B.C. where they were crushed to >64% passing 10 mesh. A nominal 250 gram sub sample was obtained by splitting through a riffle splitter. The sub sample was pulverized in a ring and puck pulverizer to > 94% passing 140 mesh. These samples were then analyzed geochemically for gold and 30-element via ICP. One sample was analyzed for copper by atomic absorption.

Soil samples consisted of talus fines as the soil horizons were very poorly developed. Where vegetation cover was present, the soil was removed to expose the talus fines and then sampled. These samples were delivered to Eco-

Tech Laboratories in Kamloops, B.C. where they were dried at 50° C, sieved to minus 80 mesh and the split was analysed for gold and 30 elements via ICP. Not enough samples were taken to calculate anomalous levels using statistical methods. Anomalous levels were set at 100 ppb Au and 500 ppm Cu based on the levels as set by Taylor (1991). At these levels, 14 of 38 samples were anomalous in gold and 9 anomalous in copper.

Figure 6 is a photograph facing north along the West One Fault. It clearly illustrates a lithology change across the fault. Also evident in this photo is the steep westerly dip of the fault. Prolific and intense regions of gossanous material are observable west of the fault. Figures 5 and 7 are photographs which indicate that the ground remains gossanous along the southern boundary through to the western boundary of the Grace 2 claim.

SUMMARY

The Grace Claims, 100% owned by Pioneer Metals Corporation, are located immediately north of Kennecott/Hudson Bay Galore Creek copper-gold porphyry deposit. The Central Zone on the Kennecott/Hudson Bay property hosts a drill-indicated reserve of 125 million tonnes grading 1.06% copper and 400 ppb gold (Allen et al, 1976). The Central Fault Zone associated with the Central Zone has been traced north across the Grace Claims (Gale, R.E. 1964). The exploration targets on the Grace Claims are porphyry-style mineralization, similar to the Galore Creek deposit, and shear-hosted precious metals mineralization peripheral to that deposit. Past work on the property has included geological mapping, geochemical sampling, an I.P. survey, a magnetometer survey and one diamond drill hole. This work has provided considerable encouragement, particularly the I.P. survey (see Compilation Map). This survey outlined a 1.6 km. by 1.0 km. I.P. chargeability-high flanking the Central Fault Zone and straddling the Grace 1 and Grace 2 claim boundary (Falconer, R.D. 1965). Twelve of thirteen silt samples taken between the I.P. anomaly and the Central Fault Zone returned anomalous values in copper (>91 ppm copper), (Lammle, C.A.R. 1965). A rock chip sample taken from this area assayed 0.23% Cu over 6.1 metres (Gale, R.E. 1964).

Outcrops in the area between the I.P. anomaly and the Central Fault Zone are limited to parts of some creek beds.

The 1997 program was designed to map the West One Fault to localize the source of down-slope anomalies. Thirty-eight soil samples were taken, of which 14 were greater than 100 ppb gold with a high of 680 ppb. Nine were greater than 500 ppm copper with a high of 1175 ppm.

Photographs of the West One Fault indicate a vertical lithology change from west to east. Mineralization from the West One Fault through to the western claim boundary indicate porphyritic style mineralization.



Figure 5. Mineralized Zone, looking north from 1997 base camp.

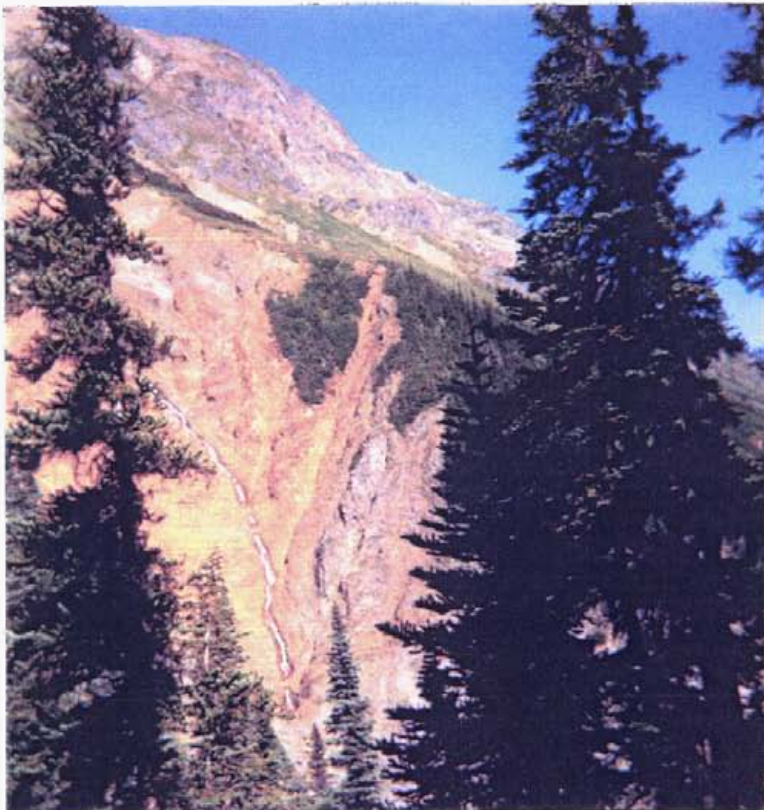


Figure 6.

The West One Fault, looking north from the south side of Ursus Creek. Note colour variation from left to right.



Figure 7. Mineralized Zone, looking southeast to 1997 base camp.

CONCLUSIONS

Observations of the West One Fault do not support the hypothesis that this structure hosts a shear-hosted gold deposit. Rather, vertical movements along the fault have exposed a gold-rich mineralized zone to the west of the West One Fault. Historic work by Equity Engineering Ltd. and Mingold Resources Inc. have indicated grab samples of 13.58 gm/tonne and 18.77 gm/tonne, respectively. Those samples were taken west of the West One Fault, distal from any shearing event associated with the fault.

The Grace Claims have excellent potential to host copper-gold porphyry mineralization similar to the Galore Creek deposit. The most prospective area lies in the north-east quadrant of the Grace 2 claim and the south-east quadrant of the Grace 1 claim between the IP anomaly outlined by Falconer and the Central Fault Zone as mapped by Gale. Deep overburden and very dense underbrush make drilling the most effective way to test the area. Another prospective area lies in the south-west quadrant of the Grace 2 claim where porphyritic mineralization and alteration were observed.

RECOMMENDATIONS

A property boundary survey should be carried out between the Grace 2 claim and the northern claims which are currently held by Kennecott/Hudson Bay.

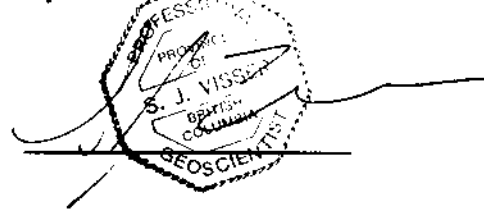
The land survey should be carried out prior to a detailed helicopter-assisted geochemical sampling program in the south-west quadrant of the Grace 2 claim. This program would be necessary to delineate prospective drill targets on this portion of the property as the terrain is too steep for conventional ground geophysical methods.

A minimum of two thousand three hundred metres of diamond drilling would be necessary to adequately test the area of interest as identified from the 1965 I.P. survey. Four drill set ups at 300 metre intervals, roughly along the 700 metre elevation contour, with a 150 metre vertical hole and two opposing 210 metre - 45° holes, drilled at 120° and 300° respectively, should be completed. The first drill set-up should be located at UTM co-ordinates 352400m E, 6339500m N with the remaining set-ups at 300 metre intervals to the north-east (see Compilation Map).

Rodney R. Hill



Syd J. Visser P. Geo.



BIBLIOGRAPHY

- Barr, D.A. (1961): Report on Geology of G.C. Claim Group, for Kennco Explorations. B.C. Geological Assessment Report # 372.
- Brown, D.A. and Gunning, M.H. (1989a): Geology of the Scud River area, North Western British Columbia, (104 G/5, 6), in Geological Fieldwork 1988; British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Paper 1989-1, pp. 251-267.
- Brown, D.A. and Gunning, M.H. (1989b): Geology of the Scud River area, North Western British Columbia (map); British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Open File 1989-7
- Dunn, D. St. C. (1992): Report on 1992 Trenching/Geochemical Program on the Grace 1 & 2 Claims, for Pioneer Metals Corporation. B.C. Assessment Report.
- Dunn, D. St. C. (1993): Report on 1993 Linecutting/Geochemical Program on the Grace 1 & 2 Claims, for Pioneer Metals Corporation. B.C. Assessment Report.
- Falconer, R.D. (1965a): Geophysical Report (Magnetometer Survey) on Mineral Claims BIK 227-269 (inclusive) and BIK 1-3 (FR) (inclusive); British Columbia Ministry of Energy, Mines, and Petroleum Resources Assessment Report #692
- Falconer, R.D. (1965b): Geophysical Report (Induced Polarization Survey) on Mineral Claims BIK 227-269 (inclusive) and BIK 1-3 (FR) (inclusive); British Columbia Ministry of Energy, Mines, and Petroleum Resources Assessment Report #688
- Gale, R.E. (1964): Stikine North Group, Geological Survey of Canada (1957): Stikine River Area, Cassiar District, British Columbia: Geological Survey of Canada Map 9-1957
- Geological Survey of Canada (1988): National Geochemical Reconnaissance, Sumdum-Telegraph Creek, British Columbia (NTS 104F/G); GSC Open File 1646.
- Jones, Brian K., (1991): Application of Metal Zoning to Gold Exploration in Porphyry Copper Systems. Journal of Geochemical Exploration, Vol. 43 - No. 2 pp 127-155.
- Kasper, B.J. (1991): 1991 Geological And Geochemical Report on the Grace 1 - 2 Claims and Rim 1 Claims, for Pioneer Metals Corporation. B.C. Assessment Report.
- Kerr, F.A. (1948): Taku River map-area, British Columbia; Geological Survey of Canada, Memoir 248, pp 84.
- Logan, J.M., and Koyanagi, V.M. (1989): Geology and Mineral Deposits of the Galore Creek Area, Northwestern B.C., 104 G/3,4, in Geological Fieldwork 1988; British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Paper 1989-1, pp.269-284.
- Logan, J.M., and Koyanagi, V.M., and Rhys, D. (1989): Geology and Mineral Occurrences of the Galore Creek Area, British Columbia Ministry of Energy, Mines, and Petroleum Resources, Geological Survey Branch, Open File 1989-8.

Souther, J.G. (1972): Telegraph Creek Map Area, British Columbia: Geological Survey of Canada, Paper 71-44.

Taylor, K.J. (1989): Report on Soil, Silt, and Rock Geochemical Sampling, Trenching and VLF-EM Surveying on the Galore Creek Group Claims, for Mingold Resources Inc. B.C. Geological Assessment Report # 19,397.

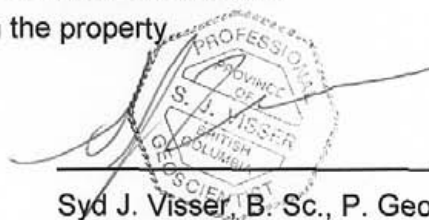
APPENDIX 1

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Syd J. Visser of 11762 - 94th Avenue, Delta, British Columbia, hereby certify that,

- 1) I am a graduate from the University of British Columbia, 1981, where I obtained a B. Sc. (hon.) Degree in Geology and Geophysics.
- 2) I am a graduate from Haileybury School of Mines, 1971.
- 3) I have been engaged in mining exploration since 1968.
- 4) I am a professional Geoscientist registered in British Columbia.
- 5) I have no interest, directly or indirectly, in the property



Syd J. Visser, B. Sc., P. Geo
Geophysicist/Geologist

I, Rodney R. Hill of 21489 - 78th Avenue, Langley, British Columbia, hereby certify that,

- 1) I have completed fifth year studies in geology/geophysics from Memorial University of Newfoundland.
- 2) I have been engaged in mining exploration since 1992.
- 3) I have no interest, directly or indirectly, in the property.

Rodney R. Hill

APPENDIX 2

STATEMENT OF COSTS

1997 Galore Creek Exploration Program

Statement of Costs (Exclusive of G.S.T. & P.S.T.)

P.M.C. Crew

Geologist (R.Hill): 8 days at \$250 per day	\$2000.00
Geological Technician (R. Ewen): 8 days at \$200 per day	1600.00

Transportation

Truck: (B.C. Lic. FFG-538) 8 days at \$75.00 day	600.00
Gas and Oil	385.60
Freight	85.00
Helicopter: 7.3 Hours at \$895.00/hr.	6533.50

Food, Lodging, Expediting

Field Supplies	543.43
Food, lodging	1027.38
Radio rental & Schedule	325.00

Assay Costs

38 soil samples assayed for Au, + 30 element ICP	606.10
8 rock samples	162.00
15 thin sections	177.00
4 petrographic reports	360.00
1 mineralogical report	50.00

Report Preparation

Writing, maps, printing	1850.29
-------------------------	---------

TOTAL.....\$16,305.30

APPENDIX 3

ANALYTICAL RESULTS

20-Oct-97

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

ICP CERTIFICATE OF ANALYSIS AK 97-903R

PIONEER METALS CORPORATION
P.O. Box 10364, Pacific Centre
VANCOUVER, BC
V7Y 1G5

Phone: 604-573-5700
Fax : 604-573-4557

ATTENTION: WARREN STANYER

No. of samples received: 38
Sample type: SOIL
PROJECT #: Galore Creek 1997
SHIPMENT #: NONE GIVEN
Samples submitted by: WARREN STANYER

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	B	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	K %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	BL 0+00N	150	<0.2	2.89	10	5	120	<5	0.89	<1	73	200	557	9.63	4.30	<10	3.24	1350	26	0.02	103	980	36	10	<20	29	0.22	<10	207	<10	<1	73
2	BL 0+10N	145	<0.2	3.23	20	5	130	<5	0.84	<1	77	212	626	>10	5.66	<10	3.58	1562	25	0.01	117	990	24	10	<20	21	0.23	<10	215	<10	<1	69
3	BL 0+20N	95	<0.2	3.27	10	7	150	<5	0.81	<1	78	224	654	>10	5.90	<10	3.72	1790	31	0.01	116	940	30	<5	<20	21	0.25	<10	222	<10	<1	82
4	BL 0+30N	155	<0.2	3.06	<5	4	145	<5	0.74	1	76	219	860	>10	5.02	<10	3.49	1932	47	0.01	92	970	74	<5	<20	22	0.22	<10	226	<10	<1	101
5	BL 0+40N	215	<0.2	2.68	5	<5	105	<5	0.41	<1	95	183	697	>10	4.04	<10	2.62	1725	101	0.02	54	1180	40	<5	<20	20	0.26	<10	204	<10	<1	73
6	BL 0+50N	75	<0.2	3.55	<5	<5	110	<5	0.28	1	111	151	836	>10	5.35	<10	3.34	2153	93	0.02	43	1680	78	<5	<20	15	0.32	<10	256	<10	<1	109
7	BL 0+60N	145	<0.2	3.02	<5	3	125	<5	0.43	<1	78	235	649	>10	5.30	<10	3.10	1633	53	0.02	59	1090	40	<5	<20	18	0.28	<10	226	<10	<1	80
8	BL 0+70N	140	0.2	2.12	5	3	85	<5	0.32	<1	35	68	223	>10	4.15	<10	2.08	891	44	0.02	15	1260	22	<5	<20	20	0.29	<10	196	<10	<1	44
9	BL 0+80N	680	<0.2	2.00	5	7	60	<5	0.09	<1	148	81	223	>10	4.72	<10	2.73	2646	14	0.02	5	1000	18	<5	<20	7	0.28	<10	231	<10	<1	72
10	BL 0+90N	245	0.8	1.75	<5	2	95	<5	0.34	<1	26	93	281	>10	4.56	<10	1.74	640	57	0.02	15	810	32	<5	<20	29	0.35	<10	208	10	<1	43
11	BL 1+00N	105	<0.2	2.93	<5	1	100	<5	0.53	<1	67	212	589	>10	5.11	<10	2.78	1256	82	0.02	40	1020	8	<5	<20	18	0.30	<10	202	<10	<1	54
12	BL 1+10N	70	<0.2	2.44	<5	<5	75	<5	1.09	2	61	97	1175	>10	3.03	<10	3.54	1099	65	0.01	42	1340	424	10	<20	57	0.24	<10	177	<10	<1	202
13	97+20	<5	<0.2	2.44	10	10	30	<5	0.21	<1	20	238	47	5.17	0.18	<10	1.55	268	1	0.04	131	620	24	<5	<20	5	0.08	<10	113	10	2	41
14	97+21	<5	<0.2	2.49	<5	7	35	5	0.18	<1	19	219	51	4.97	0.08	<10	1.49	260	2	0.02	132	650	8	<5	<20	4	0.08	<10	105	<10	7	34
15	97+22	35	<0.2	1.85	5	5	30	5	0.13	<1	7	63	26	2.65	0.14	<10	0.47	203	<1	0.03	26	640	10	<5	<20	8	0.08	<10	67	<10	12	34
16	97+23	<5	<0.2	2.45	20	5	55	<5	0.13	<1	12	64	60	4.33	0.15	<10	0.64	373	6	0.01	40	1140	14	<5	<20	5	0.03	<10	70	<10	19	93
17	97+24	<5	<0.2	1.91	30	5	105	<5	0.67	<1	16	48	70	3.72	0.23	<10	0.68	1230	4	0.04	42	1140	22	10	<20	22	0.05	<10	71	<10	34	113
18	97+25	5	<0.2	2.09	30	5	90	<5	0.27	<1	29	81	97	4.95	0.19	<10	0.94	1671	6	0.02	74	1060	24	10	<20	9	0.05	<10	103	<10	32	166
19	97+26	50	<0.2	2.06	25	6	120	<5	0.65	2	22	56	75	4.70	0.25	<10	0.88	1609	5	0.02	46	1610	20	5	<20	19	0.05	<10	93	<10	36	122
20	97+27	45	<0.2	2.06	15	8	90	<5	0.61	<1	24	101	105	4.42	0.29	<10	1.46	1108	<1	0.03	118	1800	16	10	<20	23	0.10	<10	105	<10	50	84
21	97+28	60	0.2	2.12	30	7	175	<5	0.45	<1	26	46	131	6.04	0.23	<10	1.07	1710	5	0.02	40	1380	38	5	<20	16	0.06	<10	101	<10	42	136
22	97+29	215	0.6	1.61	15	6	195	<5	0.21	<1	11	29	47	4.09	0.32	<10	0.42	1141	4	0.08	17	1210	34	<5	<20	7	0.07	<10	50	<10	35	63
23	97+30	175	1.2	2.40	20	6	120	<5	0.27	1	21	42	69	5.26	0.20	<10	0.83	2257	5	0.02	26	1140	84	<5	<20	18	0.04	<10	99	<10	16	179
24	97+31	70	<0.2	2.12	10	6	110	<5	0.37	1	27	104	59	5.64	0.19	<10	0.91	1791	4	0.02	64	1000	80	<5	<20	14	0.06	<10	129	<10	15	97
25	97+36	5	<0.2	2.17	30	6	85	<5	0.14	<1	13	64	84	5.39	0.23	<10	0.71	370	6	0.04	43	860	24	<5	<20	7	0.06	<10	88	<10	26	97

PIONEER METALS CORPORATION

ICP CERTIFICATE OF ANALYSIS AK 97-903

ECO-TECH LABORATORIES LTD.

Et.#	Tag #	Au(ppb)	Ag	Al %	As	B	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	K %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	TI %	U	V	W	Y	Zn
26	97+37	<5	<0.2	3.00	<5	8	45	<5	0.26	<1	27	230	68	5.34	0.08	<10	1.99	573	<1	0.02	199	910	4	20	<20	5	0.09	<10	122	<10	16	42
27	97+38	175	<0.2	2.18	20	6	110	<5	0.19	<1	28	99	107	5.47	0.15	<10	0.98	1164	4	0.02	85	1190	24	10	<20	8	0.05	<10	104	<10	49	133
28	97+50	70	<0.2	3.43	10	7	70	<5	0.36	<1	36	344	177	6.85	4.28	<10	3.29	1064	<1	0.02	146	1310	28	10	<20	13	0.30	<10	170	<10	23	74
29	97+51	5	<0.2	4.40	<5	10	385	<5	0.75	1	41	546	243	7.86	9.63	<10	5.44	2268	3	0.02	285	1800	44	<5	<20	31	0.40	<10	214	<10	63	105
30	97+52	50	<0.2	3.05	<5	10	45	5	0.28	<1	26	279	84	5.77	2.45	<10	2.68	575	<1	0.02	110	960	18	10	<20	11	0.26	<10	150	<10	20	53
31	97+53	55	<0.2	3.14	<5	7	65	<5	0.33	<1	36	346	113	6.21	5.11	<10	3.33	896	<1	0.01	138	1320	26	20	<20	9	0.25	<10	183	<10	22	54
32	97+54	100	<0.2	1.49	<5	7	30	<5	0.12	<1	8	87	45	2.43	0.26	<10	0.63	142	1	0.04	24	640	24	5	<20	10	0.12	<10	65	<10	22	19
33	97+55	55	<0.2	1.90	<5	7	30	<5	0.15	<1	14	116	108	3.91	0.46	<10	1.25	357	8	0.04	53	1030	34	15	<20	8	0.11	<10	98	10	7	40
34	97+56	20	<0.2	2.79	<5	9	40	5	0.18	<1	24	164	74	6.19	0.97	<10	2.08	538	2	0.02	65	430	14	10	<20	9	0.17	<10	151	<10	<1	63
35	97+57	20	<0.2	3.06	15	5	35	<5	0.09	<1	12	52	98	4.95	0.17	<10	0.30	539	20	0.01	10	1080	18	<5	<20	4	0.07	<10	79	<10	16	34
36	97+58	175	1.2	1.97	<5	4	175	<5	0.19	<1	31	45	208	7.52	0.36	<10	0.79	2687	39	0.03	28	1160	68	<5	<20	13	0.08	<10	99	<10	8	90
37	97+59	50	<0.2	2.13	15	7	50	<5	0.25	<1	22	50	103	5.30	0.37	<10	1.10	959	11	0.03	18	530	16	15	<20	13	0.16	<10	134	<10	12	54
38	97+60	60	<0.2	2.17	<5	7	45	<5	0.18	<1	18	118	102	5.55	0.39	<10	1.01	744	8	0.03	57	600	18	<5	<20	13	0.15	<10	131	<10	21	28

QC/DATA:


Repeat:

1	BL 0+00N	100	<0.2	2.98	20	5	120	<5	0.89	<1	74	200	580	9.59	4.45	<10	3.34	1391	28	0.02	104	1030	40	10	<20	26	0.22	<10	211	10	<1	75
10	BL 0+90N	260	0.8	1.74	10	2	95	<5	0.33	<1	25	93	279	>10	4.45	<10	1.72	640	58	0.02	16	790	30	<5	<20	29	0.35	<10	206	10	<1	44
19	97+26	-	<0.2	2.14	15	6	125	<5	0.69	2	23	57	77	4.83	0.24	<10	0.90	1682	5	0.02	47	1670	22	10	<20	21	0.05	<10	95	<10	38	128
20	97+27	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	97+50	85	<0.2	3.39	<5	12	70	<5	0.35	<1	35	336	176	6.70	4.29	<10	3.25	1054	<1	0.02	140	1270	24	10	<20	14	0.29	<10	168	<10	22	71
36	97+58	180	1.2	2.01	5	2	170	<5	0.20	<1	32	46	212	7.77	0.34	<10	0.81	2737	40	0.03	29	1230	72	5	<20	10	0.08	<10	102	<10	11	92

Standard:

GEO'97	145	1.2	1.76	65	8	165	<5	1.79	<1	19	60	87	4.06	1.51	<10	0.96	682	<1	0.02	25	680	16	5	<20	59	0.11	<10	77	<10	10	68
GEO'97	145	1.2	1.88	65	9	160	<5	1.82	<1	18	62	82	3.94	1.41	<10	0.98	659	<1	0.02	25	670	16	5	<20	55	0.11	<10	75	<10	10	69

df/903
XLS/97Pioneer


ECO-TECH LABORATORIES LTD.
 Frank J. Pezzotti, A.Sc.T.
 B.C. Certified Assayer

20-Oct-97

ECO-TECH LABORATORIES LTD.
10041 East Trans Canada Highway
KAMLOOPS, B.C.
V2C 6T4

Phone: 604-573-5700
Fax : 604-573-4557

ICP CERTIFICATE OF ANALYSIS AK 97-902

PIONEER METALS CORPORATION
P.O. Box 10364, Pacific Centre
VANCOUVER, BC
V7Y 1G5


ATTENTION: WARREN STANYER

No. of samples received: 8
Sample type: core
PROJECT #: Galore Creek 1997
SHIPMENT #: none given
Samples submitted by: Warren Stanyer

Values in ppm unless otherwise reported

Et #.	Tag #	Au(ppb)	Ag	Al %	As	B	Ba	Bi	Ca %	Cd	Co	Cr	Cu	Fe %	K %	La	Mg %	Mn	Mo	Na %	Ni	P	Pb	Sb	Sn	Sr	Ti %	U	V	W	Y	Zn
1	9702	5	<0.2	2.30	<5	8	85	<5	1.45	<1	19	30	135	6.64	4.82	<10	2.16	826	<1	0.04	9	1800	<2	15	<20	48	0.22	<10	166	<10	3	54
2	9704	120	2.6	0.51	<5	16	105	<5	1.12	2	310	90	3607	>10	0.26	<10	<0.01	772	20	<0.01	37	60	4	<5	<20	<1	0.04	<10	83	<10	<1	13
3	9706	60	1.0	0.49	<5	10	140	<5	1.49	3	255	53	4350	>10	0.10	<10	<0.01	504	28	<0.01	17	<10	4	<5	<20	<1	0.02	<10	68	<10	<1	19
4	9708	10	24.8	0.32	15	4	55	<5	5.04	4	21	186	946	4.30	0.66	<10	0.86	834	10	0.02	13	640	4970	525	<20	77	<0.01	<10	32	<10	<1	128
5	9713	45	5.4	0.14	20	8	100	<5	6.37	<1	13	127	>10000	4.46	0.30	<10	0.57	1242	6	0.02	15	<10	24	85	<20	80	0.01	<10	15	<10	2	38
6	9716	20	3.0	0.55	<5	9	80	<5	9.12	3	143	130	1919	>10	1.19	<10	2.70	1763	17	0.02	104	710	30	<5	<20	227	0.01	<10	112	<10	<1	93
7	9732	275	<0.2	5.95	5	13	80	10	4.03	<1	51	168	141	9.09	0.33	<10	3.37	967	<1	0.44	70	440	36	5	<20	280	0.28	<10	198	<10	29	56
8	9735	5	<0.2	2.55	<5	9	55	15	2.20	<1	18	67	68	5.44	0.26	<10	1.49	1378	<1	0.04	2	1390	22	20	<20	96	0.20	<10	81	<10	22	138
QC/DATA:																																
Resplit:																																
R/S 1	9702	5	<0.2	2.39	<5	12	85	5	1.52	<1	20	31	147	7.25	5.00	<10	2.21	893	<1	0.05	10	1910	2	10	<20	49	0.25	<10	177	<10	5	60
Repeat:																																
1	9702	5	<0.2	2.33	5	11	75	5	1.58	<1	22	33	138	7.11	4.88	<10	2.18	877	<1	0.04	11	1910	4	20	<20	44	0.23	<10	173	<10	5	60
Standard:																																
GEO'97		130	1.6	1.92	65	12	175	<5	1.98	<1	22	68	89	4.10	1.46	<10	0.99	727	<1	0.02	22	790	20	5	<20	65	0.14	<10	85	<10	8	82

df/888
XLS/97Pioneer


ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer



ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 6T4 Phone (250) 573-5700
Fax (250) 573-4557

CERTIFICATE OF ASSAY AK 97-902

PIONEER METALS CORPORATION
P.O. Box 10364, Pacific Centre
VANCOUVER, BC
V7Y 1G5

20-Oct-97

ATTENTION: WARREN STANYER

No. of samples received: 8
Sample type: CORE
PROJECT #: GALORE CREEK
SHIPMENT #: NONE GIVEN
Samples submitted by: WARREN STANYER


ET #.	Tag #	Cu (%)
5	9713	1.02

QC DATA:

Standard:

Mpla 1.44

XLS/97Pioneer


ECO-TECH LABORATORIES LTD.
Frank J. Pezzotti, A.Sc.T.
B.C. Certified Assayer

APPENDIX 4

PETROGRAPHIC ANALYSIS

Harris
EXPLORATION
SERVICES

MINERALOGY AND GEOCHEMISTRY

534 ELLIS STREET, NORTH VANCOUVER, B.C., CANADA V7H 2G6

TELEPHONE (604) 929-5867

Report for: Pioneer Metals Corp.,
P.O. Box 10364, Pacific Centre,
1220 - 609 Granville St.,
VANCOUVER, B.C.
V7Y 1G5

Report 97-180

November 4, 1997

PETROGRAPHIC EXAMINATION OF SAMPLES FROM THE
GALORE CREEK AREA, B.C.

Introduction:

4 thin sections with accompanying off-cuts, numbered 9701, 9715, 9717 and 9733, were submitted by Rod Hill.

Summary:

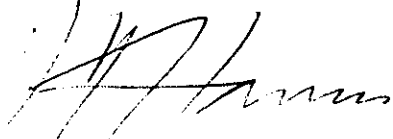
Sample 9701 is a microgabbro, composed dominantly of an aggregate of plagioclase and pyroxene with an interstitial phase rich in fine-grained green biotite. The plagioclase shows mild to moderate pervasive sericitization and epidotization. The rock is cut by a hairline veinlet of carbonate.

Sample 9715 is a syenite of intrusive aspect, consisting essentially of vari-sized prismatic grains (up to 8 mm) of fresh orthoclase set in a finer granular matrix of the same mineral. Accessory plagioclase is totally altered to sericite and carbonate, and there are clusters of Fe-stained carbonate which may represent altered mafics.

Sample 9717 is a strongly altered rock which may have originated as a monzonite. It consists of remnants of a granular aggregate of feldspars in a heterogenous, strongly carbonated matrix. Felted chloritic material, occurring as pseudomorphs and dispersed flecks, presumably represents an original mafic component. The rock contains rather abundant pyrite as sub-prismatic segregations and irregular clusters of small grains. The whole assemblage is cross-cut by prominent veinlets of carbonate.

Sample 9733 is an aphanitic basalt, consisting of a fine-grained meshwork of plagioclase and intergrown clinopyroxene, and exhibiting a classic sub-ophitic texture. Both major constituents are fresh. There is a minor interstitial phase of felted chlorite and small segregations of carbonate which may be amygdules.

J.F. Harris Ph.D.



Estimated mode

Plagioclase	47
K-feldspar	5
Sericite	5
Clinopyroxene	20
Biotite	14
Epidote	5
Chlorite	trace
Carbonate	1
Spheue	3
Apatite	trace
Opauques	trace

The off-cut of this sample is a non-foliated rock exhibiting a rather ill-defined porphyritic texture.

Thin section examination shows that it is a quartz-free igneous rock composed essentially of feldspar and pyroxene.

The feldspar (dominantly plagioclase plus minor K-spar) and accessory pyroxene occur as an aggregate of randomly-oriented, stumpy/prismatic, subhedral-euhedral grains, 0.1 - 1.0 mm in size. The plagioclase is typically turbid and mildly to moderately dusted with minute flecks of sericite and minor epidote. The pyroxene (a colourless, clino variety) is generally fresh, but occasionally shows mild alteration to epidote, chlorite or carbonate.

The more or less close-packed, vari-sized plagioclase and pyroxene grains are set in a minor matrix/interstitial phase which consists dominantly of minutely felted green biotite, but can sometimes be seen to include a proportion of micron-sized plagioclase, spheue and epidote.

Epidote is a fairly widespread minor constituent, occurring principally as sporadic, small, micro-granular clumps, sometimes with associated spheue or opaques.

The opaques include traces of sulfides (probably pyrite or pyrrhotite).

The sectioned area is traversed by a hairline veinlet of carbonate 0.1 - 0.2 mm in thickness.

This rock appears to be mildly autobrecciated.

The plagioclase is poorly twinned, and its composition is not optically determinable. The association with pyroxene, and the absence of quartz, suggests a rock of mafic composition. The texture is consistent with minor (sub-volcanic) character.

Estimated mode

K-feldspar	83
Plagioclase	1
Sericite	8
Chlorite	trace
Carbonate	5
Limonite	2
Opaques	1

The off-cut of this sample displays a prominently porphyritic texture. Phenocrysts of K-feldspar (yellow-stained) up to 8 mm or so in size are set in a finer, speckled matrix (also of strongly potassic composition).

In thin section the rock is found to consist dominantly of fresh K-feldspar (orthoclase), as vari-sized prismatic euhedra set in a fine-grained matrix of the same mineral. The latter has a dominant grain size range of 0.1 - 0.3 mm.

A minor proportion of plagioclase, as small grains to 0.2 mm, occurs scattered through the matrix and as inclusions within K-spar phenocrysts. The plagioclase is almost totally altered to felted sericite and/or carbonate.

Carbonate also occurs independently, as sporadic pockets and disseminated tiny granules - commonly more or less strongly impregnated by limonite. This carbonate may represent the alteration of original mafic accessories.

Rare traces of chlorite are the only recognizable mafic silicate. Minor opaques, as sparsely disseminated grains 0.1 - 0.4 mm in size, appear to be Fe oxides.

The sectioned area is traversed by an irregular, discontinuous veinlet, about 1 mm in thickness, composed of carbonate and limonite.

This is a rather leucocratic, coarse-grained, quartz-free rock of probable intrusive character.

Estimated mode

Plagioclase	20
K-feldspar	10
Serpentine?)	10
Chlorite)	
Carbonate	45
Opagues	15

This sample contains a substantial component of sulfides - probably mainly pyrite. It would have been better prepared as a polished, rather than standard, thin section so as to permit the reflected light observations necessary to identify the sulfide phases and establish their textural relationships with the silicate host.

The sectioned portion (see off-cut) includes prominent veinlets and diffuse permeations of carbonate.

In thin section the rock appears to have originally been of feldspar-rich composition, but its details are now largely obscured by the strong carbonate alteration. Remnants of the protolithic feldspar (plagioclase plus some K-spar) occur sporadically as patches of equigranular anhedral aggregates of grain size 0.1 - 0.2 mm. There is some indication that these represent the groundmass to a porphyritic rock of probable monzonitic character, in that the slide includes occasional coarser feldspar grains to 1.0 mm, and other larger prismatic forms (presumed pseudomorphs) composed largely of fine-grained carbonate, or of polygranular aggregates of a chloritic or serpentinitic mineral of uncertain identity (presumably representing the alteration of original mafic phenocrysts).

Carbonate pervades the rock more or less densely as small flecks and equant grains 20 - 100 microns in size - partly coalescent to vari-sized patches, within which small remnants of feldspar and/or the chlorite-serpentinic component may be recognizable.

The rock is also cut by more or less sharply defined veinlets of carbonate, 0.25 - 2.5 mm in thickness.

The carbonate is unreactive to dilute acid, and is probably dolomite or ankerite.

The distribution of the pyrite is unusual. It occurs as more or less discrete clumps, up to 1 cm or so in size, which sometimes have prismatic outlines suggestive of replacement of original silicate phenocrysts. Other clumps are more irregular and are composed of semi-coalescent clusters of smaller grains which seem to be in intergranular relation to the granular feldspars of the presumed groundmass. In one area the pyrite clearly moulds around a prominent, angular pseudomorph of the chlorite/serpentine material (see off-cut). The pyrite concentrations are cross-cut by the carbonate veinlets, but their relation to the pervasive carbonate is unclear.

SAMPLE 9733

BASALT

Estimated mode

Plagioclase	46
Sericite	1
Pyroxene	35
Chlorite	6
Carbonate	4
Zeolite	trace
Opagues	8

This sample is a dark aphanitic rock. Etching of the off-cut reveals a minutely decussate fabric, with scattered, tiny, dark grains.

In thin section the rock is recognizable as a homogenous, fresh, holocrystalline basalt, exhibiting classic sub-ophitic texture.

The dominant constituent is plagioclase, as a meshwork of slender, lath-like grains, 0.1 - 0.5 mm in length. These are typically fresh. Rare, slightly coarser plagioclase grains (up to 0.8 mm) sometimes show partial sericitization.

The other major constituent is a brownish clino-pyroxene, as subhedral grains similar in size to the plagioclase. The larger pyroxene grains tend to incorporate plagioclase laths in typical ophitic manner, but the smaller ones occur interstitial to the plagioclase meshwork. The pyroxene appears completely unaltered.

Accessories include chlorite, as a sporadic, minutely felted interstitial constituent; opaques (probably mainly magnetite) as evenly disseminated, equant/subhedral individuals, 10 - 70 microns in size; and carbonate, as a minor interstitial component but, more abundantly, as individual sub-prismatic grains, 0.2 - 0.5 mm in size, which are probably small amygdules (the dark "phenocrysts" in the off-cut. These occasionally incorporate traces of intergrown zeolite or a brassy sulfide (pyrite or pyrrhotite):

APPENDIX 5

ROCK SAMPLE DESCRIPTION

PIONEER METALS CORPORATION

ROCK SAMPLING SHEET

Sampler R Hill
Date Aug 97

Project Galore Creek
Property Grace

NTS Location _____

SAMPLE NUMBER	LOCATION	NORTHING	EASTING	SAMPLE TYPE	SAMPLE WIDTH	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS			
						Rock Type	Alteration	Mineralization		Ag	Au	Cu	
9701	48m NE of	6337870	350725	chip		basalt	chl-epi	-	two samples taken				
9702	same as	9701		"		"	"		one for TS, one for assay				
9703	63m NE of	6337890	350725	"		"	chl- ^{ser} epi	5% py					
9704	80m NE of	6337890	350725	"		massive sulphide	mag	80% py, po	9704 & 9705 are duplicate samples				
9705	70m NE of	6337890	350725	"		mas. sulph.	mag	80% py, B					
9706	85m NE of	6337890	350725	"		"	"	70% py, po					
9707	110m NE of	6337890	350725	"		basalt	epi-chl	20% sulphide					
9708		6337660	350580	talus flow		brecciated	qtz vein carb. Fe	5% py, cp					
9709		6337860	350425	chip		basalt	epi-chl	-					
9710		6337890	350425	"		porphy. basalt	epi-chl	2% py					
9711		6337940	350425	"		basalt	chl	-					
9712		6338040	350425	"		basalt	epi-chl	5% diss. py	adjacent to breccia zone				
9713		6338060	350425	"		qtz vein	Fe-carb	15% cp, py					

APPENDIX 6

STATEMENT OF WORK



Mineral Tenure Act

STATEMENT OF WORK - CASH PAYMENT - RENTAL
Sections 25, 26, 27 & 45

Indicate type of title MINERAL CLAIMS
(Mineral or Placer) (Claim(s) or Lease(s))

Mining Division LIARD

OFFICE USE ONLY
EVENT NO. 3109300

RECEIVED
13 AUG 20 1997
Gold Commissioner's Office
VANCOUVER, B.C.

Gold Commissioner Approval of [Signature]
Physical Work : _____

PLEASE PRINT CLEARLY

WARREN STANVER
602-1330 PENDERELL ST
VANCOUVER, B.C. V6E 1L9
(Name) (Address)
(Postal Code) (Telephone)
Client Number _____

Agent for PIONEER METALS CORPORATION
P.O. BOX 10364 PACIFIC CENTRE
#1220-609 GRANVILLE ST.
VANCOUVER, B.C. V7Y 1G5
(Names of all recorded holders) (Address)
(Postal Code) (Telephone)
Client Number 138222

If recording work, complete the following. If only paying cash in lieu of lease rental, turn to reverse and complete columns G to J and Q to T.

The recorded holder has performed, or caused to be performed, the work detailed below on the GRACE 1 & GRACE 2 Claim(s).
Tenure No.(s) 224192, 224193 WORK PERMIT No. SMI-97-0100860-258
Work was done from AUG. 11, 19 97 to AUG. 18, 19 97

TYPE OF WORK

PHYSICAL: Work such as trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails. Details as required under section 13, Part C, of the Regulations, including the map and cost statement must be given on or attached to this statement.

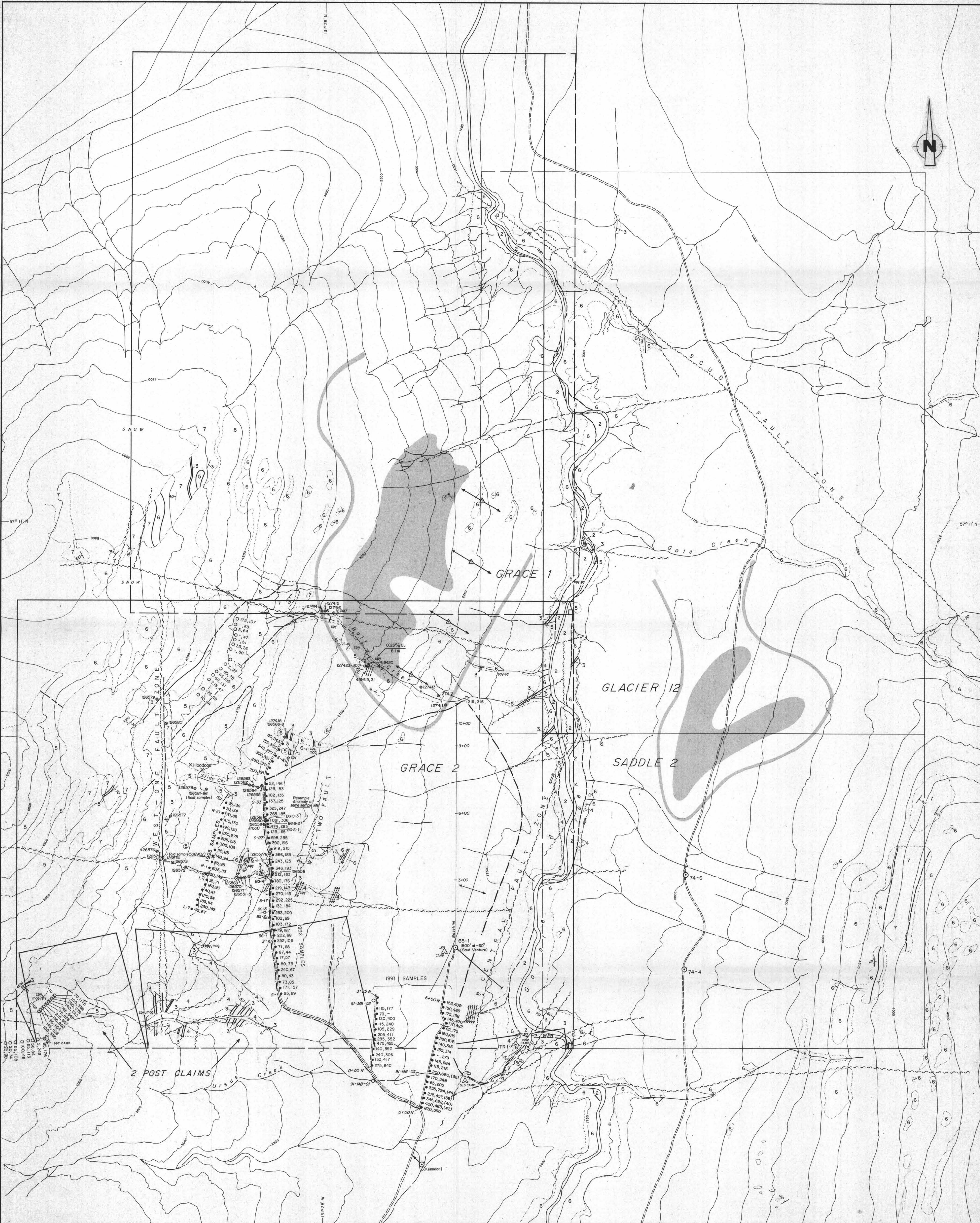
PROSPECTING: Details as required under section 9, Part C, of the Regulations must be submitted in a technical report. Prospecting work can only be claimed once by the same owner of the ground, and only during the first three years of ownership.

GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL, DRILLING: Details must be submitted in a technical report conforming to sections 5 through 8 (as appropriate), Part C, of the Regulations.

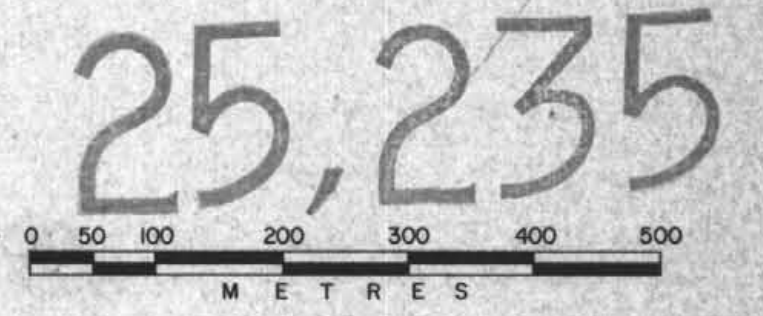
PORTABLE ASSESSMENT CREDIT (PAC) WITHDRAWAL: A maximum of 30% of the approved value of geological, geophysical, geochemical and/or drilling work on this statement may be withdrawn from the owner's or operator's PAC account and added to the work value on this statement as required under section 12, Part C, of the Regulations

NOTE: Where required, the assessment report must be received within ninety days of the earliest due anniversary date on this statement.

TYPE OF WORK (Specify Physical (include details), Prospecting, Geological, etc.)	VALUE OF WORK		
	Physical	Prospecting	Geological, etc.
<u>GEOLOGICAL</u>			<u>8000.00</u>
<u>GEOCHEMICAL</u>			<u>8000.00</u>
<u>(REPORT TO FOLLOW)</u>			
TOTALS	A	+ B	+ C <u>16,000</u> = <u>D 16,000.00</u>
PAC WITHDRAWAL - Maximum 30% of Value in Box C Only from account(s) of <u>PIONEER METALS CORPORATION WS</u>			<u>E 4,800.00 WS</u>
		TOTAL	F <u>11,200.00 WS</u>



- 2 Stream gravels
 - 3 Syenite porphyry
 - 4 Porphyry breccia
 - 5 Augite porphyry basalt
 - 6 Andesitic volcanic rock
 - 7 Sedimentary rock
- copper occurrence
 chalcopryite
 pyrite
 magnetite
- Creek
 - Contour (250 ft interval)
 - Col road
 - Outcrop
 - Geological contact (defined, inferred)
 - Fault
 - Fissility
 - Bedding
 - Fold axis
 - Claim post and boundary
 - Diamond drill hole
 - Soil sample - Au ppb, Cu ppm, (PB ppm)
 - Stream sediment sample - Au ppb, Cu ppm
 - I.P. Anomaly
 - 1992 traverse
 - △ Proposed DDH
 - Rock sample site and id.
 - Silt sample site and id.
 - Soil sample (1997) - Au (ppb), Cu (ppm)



PIONEER METALS CORP.
GRACE 1 & 2 CLAIMS
Compilation Map

BRITISH COLUMBIA
(after Cole, K.E., Falconer, R.D. & Kasper, B.J.)

Drawn:	Mining Division	Liord	Map
N.T.S.:	1046/3W	Scale:	1:6,000
Date:	Oct., 1992	Revised:	1993 / Nov. 1997