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PROSPECTING REPORT

on the

PAPOOSE PROPERTY

(Papoose 1 mineral claim)

Clinton Mining Division

NTS 92P\15W

LAT. 51' 55" N

LONG. 120' 48" W

BY

D. RIDLEY (owner)

and

D. DUNN

PIONEER METALS CORPORATION (operator)

DECEMBER, 1993

WORK APPROVAL NUMBER: PRG-1993-1000767-4-5680

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

23,269

SUB-RECORDER  
RECEIVED

JAN 31 1994

M.R. # \_\_\_\_\_ \$ \_\_\_\_\_  
VANCOUVER, B.C.

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(1)

SUMMARY  
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The Papoose property is situated approximately 58 kilometers northeast of 100 Mile House, B.C. The claims are underlain by mafic volcanics, volcanoclastic sediments and volcanic breccias that have been intruded by diorite, gabbro and feldspar porphyry plugs of Triassic-Cretaceous (?) age. Mineralization consists of gold, arsenic, and/or copper in quartz-carbonate vein breccias, hornfelsed shear zones and a narrow, sulphide-rich, shear-hosted vein.

The area of the Papoose claim was held for a number of years by Imperial Metals Corp., who performed extensive soil sampling prior to optioning the ground to Eastfield Resources Ltd., who performed detailed soil sampling, geophysical surveys and caterpillar trenching. Examination of available literature and the fact that many of the anomalous zones found during these previous work programs had been logged recently, it seemed plausible that more outcrop might be exposed. This led to the staking of the present property in April, 1993 by D. Ridley and A. Molnar. An option was signed in June, 1993, with Pioneer Metals Corp., and a work program was initiated.

During the 1993 work program samples of outcrop were found to contain up to 2.18 ounce/ton gold, 2.5% copper and greater than 1% arsenic. The highest gold value is from a 2 centimeter wide vein of massive pyrrhotite-arsenopyrite exposed along the access road in a new logging clearcut. The area surrounding this sample is covered by overburden or lake, therefore, its true extent is unknown. Several quartz-carbonate vein breccias carry anomalous gold, arsenic and copper values as well.

Further work is recommended for the Papoose property in the form of detailed geological mapping, ground magnetometer, VLF-EM and Induced Polarization surveys, followed by machine trenching and eventual diamond drilling. The most obvious target would be gold-rich epithermal veins similar to those in Jurassic rocks in the Toodoggone region of British Columbia. However, the geological environment points to the possibility of a base or precious metal-enriched skarn target as well. This is due to the abundance of mafic-intermediate plutonic rocks which intrude the carbonate-rich volcanoclastic sequence.

INTRODUCTION  
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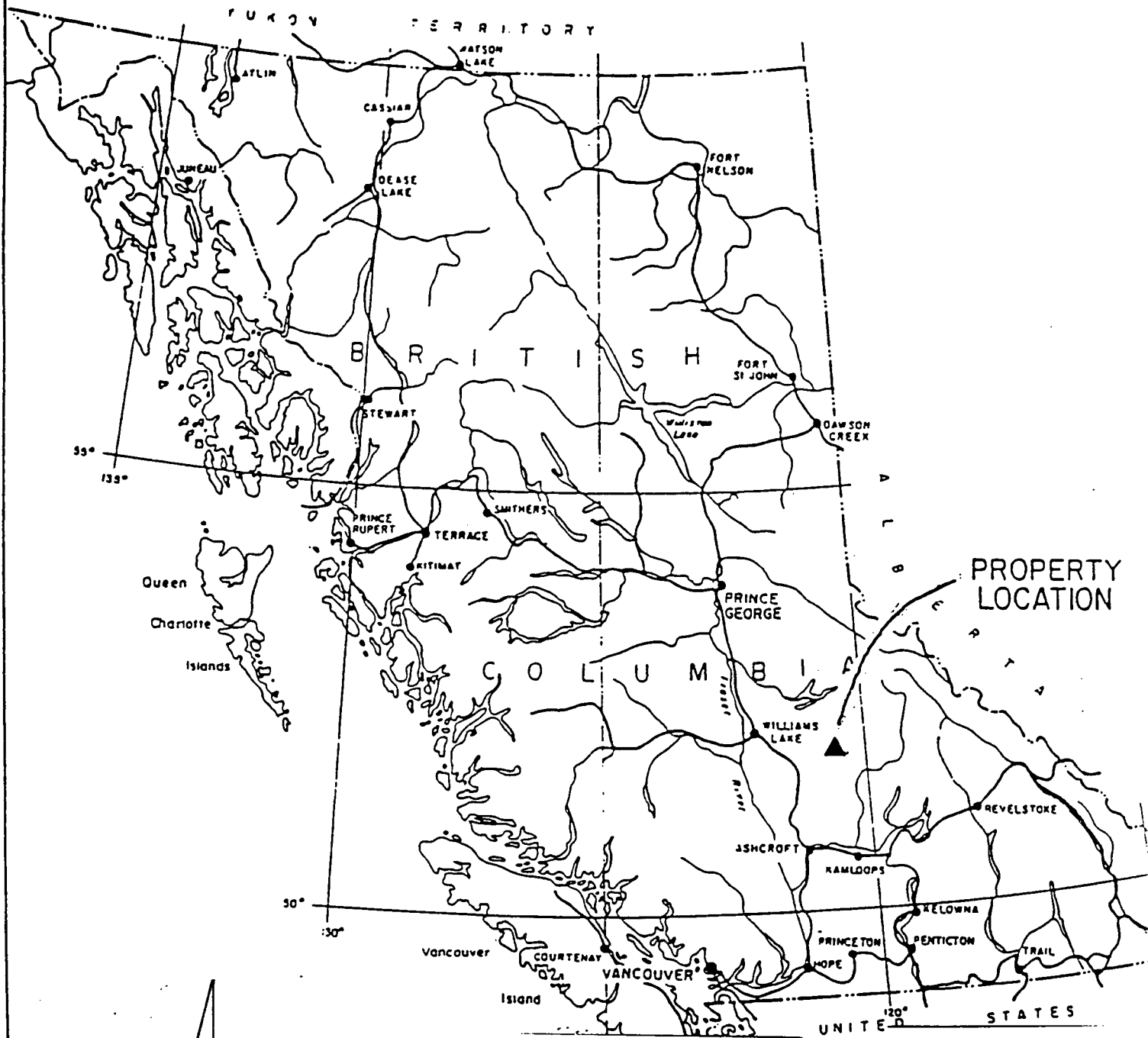
During 1993 the Papoose property was subjected to detailed prospecting of anomalous zones uncovered by various past operators with particular attention to areas which had been recently logged. These areas were found to contain more exposed outcrop than the densely forested portion of the claim. The discovery of a narrow (2 cm. wide) massive pyrrhotite-arsenopyrite shear-hosted vein, containing +2 ounce/ton gold, in the southeast corner of the property along a new forestry access road, illustrates the effectiveness of this method. In addition several other mineralized vein structures were located, generally near the previously defined anomalous areas but within or next to logging clearcuts.

LOCATION AND ACCESS  
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The Papoose property is located approximately 58 kilometers northeast of 100 Mile House, B.C., and is easily accessible by paved and gravel roads. Access from highway 97 is via the Canim Lake road to the Eagle Creek bridge thence the Hendrix Lake road for about five kilometers to its junction with the Lang Lake forestry access road. This road is followed northwesterly for approximately four kilometers to Succour Lake and the LCP is located above the road to the northeast. Several logging arterials provide access to the center and peripheries of the claim. The center of the claim is within two kilometers of a hydro transmission line (FIG. 2).

The claims are adjacent to the west side of the Interior Wet Belt bioclimatic zone and lie within the Quesnel Highlands physiographic region. Topography on the claim is fairly flat with elevations ranging from 3300-3600 feet. Several lakes, ponds, swamps and creeks provide ample water for exploration purposes.

Most of the property is covered by a dense second-growth forest consisting of pine, douglas fir, spruce, balsam, poplar and birch with local willow, alder, and swamp birch thickets. Three recent logging clearcuts in the southeast, central, and northeast portions of the property provide access and greater outcrop exposure than the forested areas.



PIONEER METALS CORP.	
PADOOSE CLAIMS	DEC. 1993
GENERAL LOCATION MAP	
CLINTON M.D. NTS. 92P/15W	
D. Ridley	FIG. 1

PROVINCE OF  
BRITISH COLUMBIA

MINISTRY OF  
ENERGY, MINES AND  
PETROLEUM RESOURCES

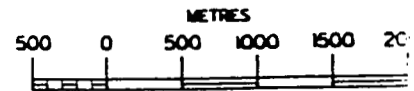
MINERAL TITLES REFERENC

MAP 092P15W

U.T.M. ZONE 10

LAST MAP UPDATE: 1993 AUG 05

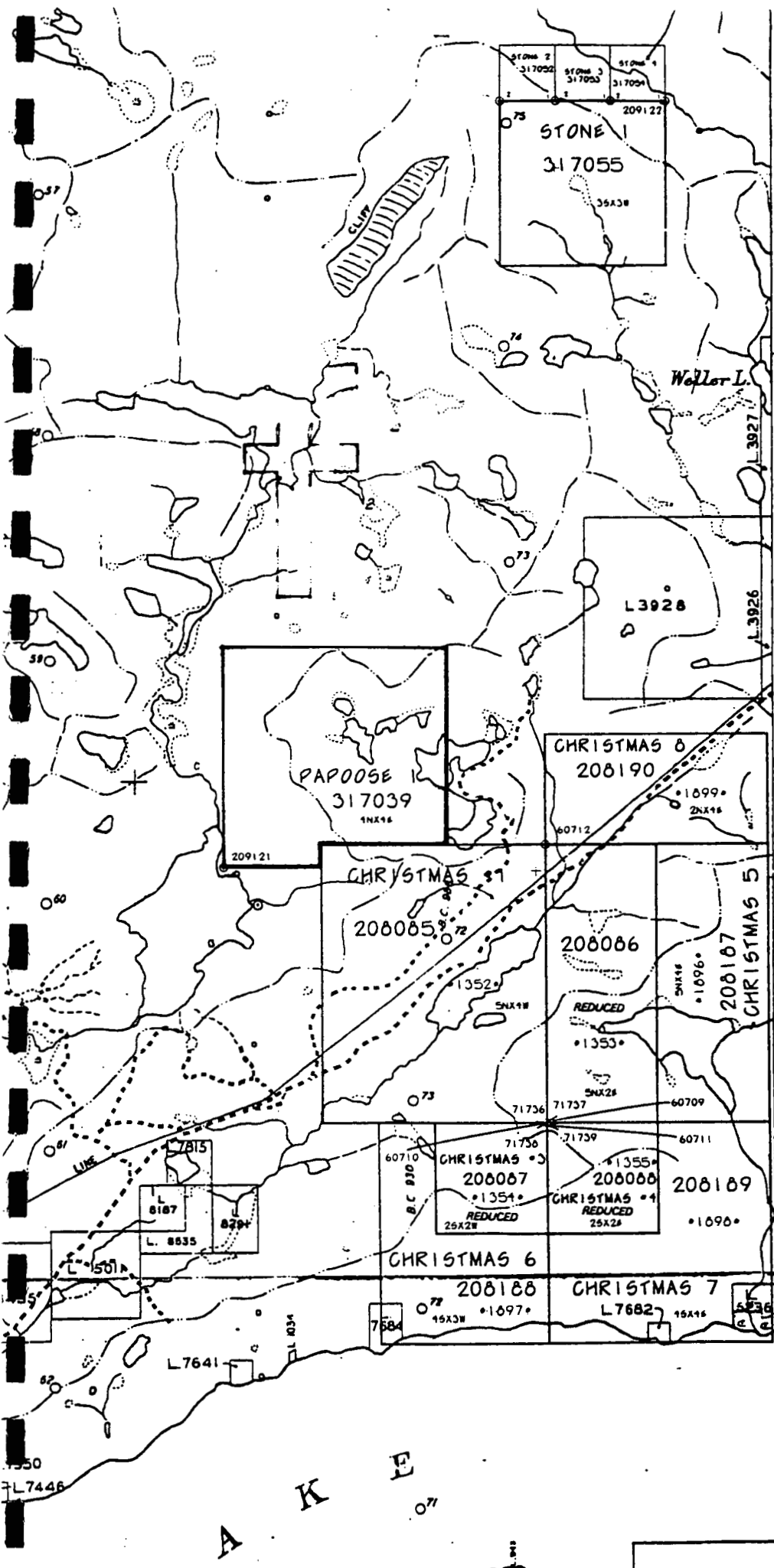
ORIGINAL PRODUCED AT 1:31680



ADMINISTRATIVE AREAS

MINING DIVISIONS: CARIBOO, CLINTON

LAND DISTRICTS:



PIONEER METALS CORP.	
PAPOOSE Claims	DEC. 1993
Claims Location Map	
Clinton m.d. NTS. 92P/15W	
D. Ridley	FIG. 2

500 0 500 1000 2000  
1:50,000 meters

CONDITIONAL AREAS \_\_\_\_\_

SUBJECT TO CONDITIONS RESERVE

SECTION 19 RECREATION AREAS

POST CLAIM AREAS

AREAS SUBJECT TO  
URANIUM / THORIUM  
REGULATIONS



CLAIM STATUS  
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The Papoose property currently consists of sixteen modified grid units situated in Clinton Mining Division. All are held by Dave Ridley of General Delivery, Eagle Creek, B.C., V0K1L0. The claims were staked in April, 1993 by D. Ridley and A. Molnar. In June 1993, an option was signed with Pioneer Metals Corp., which has corporate offices at 1770-401 West Georgia Street, Vancouver, B.C., V6B5A1. Pioneer has the right to earn a 100% interest in the property subject to a 2% NSR retained by Ridley. Pertinent claim data is listed below.

Claim Name	Record No.	Date Staked	*Expiry Date*
Papoose 1	317039	Apr. 5, 1993	Apr. 5, 1997

\*Pending assessment report approval\*

PROPERTY HISTORY  
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The only previous claims to cover the current Papoose property are the Senicar claims, staked by Imperial Metals Ltd. in late 1983 after reconnaissance soil sampling returned anomalous arsenic and sporadically high copper and gold values. A small grid was sampled and limited geological mapping was done in 1984 (Morton J.W., 1984). Further reconnaissance sampling and mapping were conducted in 1985 and 1986. Results from these preliminary surveys, along with indications of favourable results being obtained on nearby properties, were sufficient evidence to justify a more thorough examination of the property in 1987. Two additional claims were added to the original two-claim property because of favourable exploration results obtained in 1987 (Saunders C.R., 1987). In June 1988, an Induced Polarization survey was followed by machine trenching the more accessible targets (Morton J.W., 1988).

The Christmas property of E and B Explorations Inc., adjoins the Papoose property to the south. Gold values to

(4)

6290 ppb with the majority in the 210-500 ppb range were obtained during rock sampling of a high sulphide hornfels zone in green andesites, tuffs and sediments of Jurassic (?) age adjacent to a partially un-roofed quartz diorite stock of Cretaceous (?) age. A large hornfels aureole extends outward 1-2 kilometers from the intrusive. Sulphide content (pyrite-pyrrhotite) is generally less than 1-2% with local zones of 2-10% which host the higher gold values (Ass. Rpt. #12183). Subsequent work identified several anomalous gold values in soil samples and the mineralized hornfels zones showed good Induced Polarization response. Although several drill targets were outlined, no further work has been completed on these claims.

In April 1993, the Papoose claim was staked by Andrew Molnar and Dave Ridley to cover the anomalous zones outlined by prior work on the Senicar 1 claim. In June 1993 the ground was optioned to Pioneer Metals Corp., and a work program was initiated. This work is the subject of the following report.

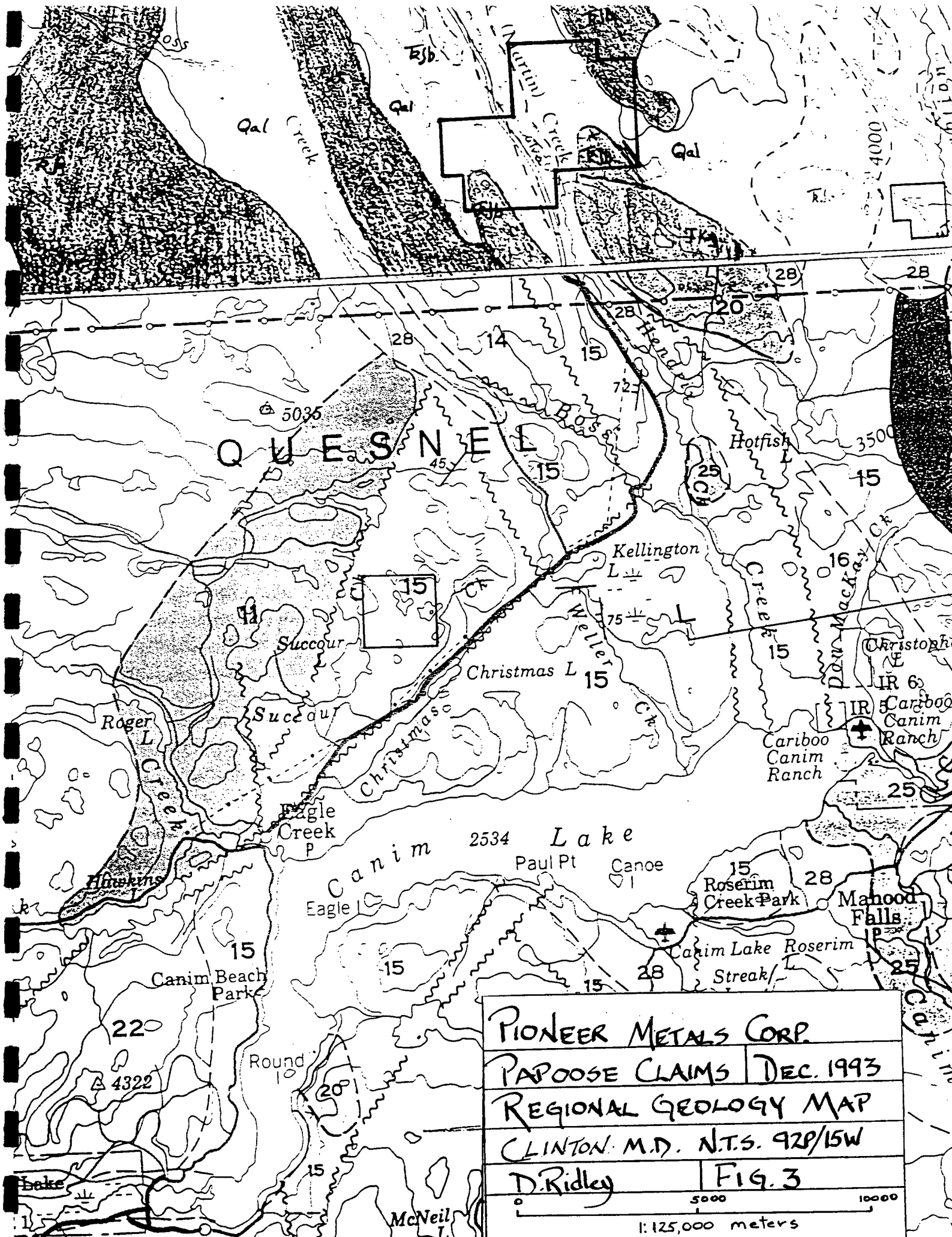
#### REGIONAL GEOLOGY

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The Papoose property lies in the Quesnel Trough, a subdivision of the Intermontane belt, which is composed of Triassic to Jurassic volcanic, volcanoclastic, and sedimentary rocks which are intruded by various plutons ranging in age from Triassic to Cretaceous.

The oldest rocks in the region comprise augite andesite-basaltic flows, breccias and agglomerate, tuff, argillite, phyllite, greywacke, and black to grey limestone of the Triassic Nicola Group which is intruded by the upper Triassic-Jurassic Takomkane batholith. The Takomkane batholith is a composite granodiorite intrusion with hornblende-biotite quartz diorite and granodiorite, hornblende diorite, monzonite, gabbro and hornblendite. Phases may be syenodiorite-diorite or quartz monzonite in composition and locally K-feldspar porphyritic, and quartz-rich (Blann, 1993).





Q U E S N E L

PIONEER METALS CORP.	
PAPOOSE CLAIMS	DEC. 1993
REGIONAL GEOLOGY MAP	
CLINTON, M.D., N.T.S. 92P/15W	
D. Ridley	FIG. 3
1:125,000 meters	

# LEGEND

## QUESNEL LAKE (93-A) MAP-AREA

- QUATERNARY**
- RECENT
- (29) **Rv** Alluvial basalt block flows; also related cinder cones; ultrabasic nodules common
- PLEISTOCENE AND RECENT**
- (28) **Qal** Glacial deposits, till, gravel, sand, silt; alluvium; few scattered unsorted outcrops
- Qv** Alluvial basalt flows and breccia; Q<sub>al</sub>-related volcanic cones including basalt flows, breccia and cinder; ultrabasic nodules common
- TERTIARY AND QUATERNARY**
- PLIOCENE AND/OR PLEISTOCENE**
- TQvc** Alluvial basalt volcanic cones; flows and cinder; TQ<sub>al</sub>-basaltic breccia, minor flows; ultrabasic nodules common
- TERTIARY**
- MIOCENE AND PLEISTOCENE**
- (25) **U<sub>1</sub>va** Plateau basalt; alluvial basalt, felsitic porphyry basalt, minor breccia, lapilliferous and sandstone also - areas underlain by plateau basalt; few scattered unsorted outcrops; also coarse felsitic porphyry, may be older intrusions
- U<sub>1</sub>s** Shale, sandstone (mainly Miocene)
- Eocene and (?) Oligocene**
- Im<sub>1</sub>v** Volcanic group (Im<sub>1</sub>t, and Im<sub>1</sub>s) Basaltic, andesitic, and dacitic breccia and flows, minor shale, sandstone and conglomerate; may include small areas of younger volcanics. Im<sub>1</sub>v - areas of few scattered unsorted outcrops of Im<sub>1</sub>t and Im<sub>1</sub>s, undivided
- Im<sub>1</sub>s** Shale, sandstone, tuff, conglomerate

## QUESNEL and OMINECA BELTS

### QUESNEL BELT

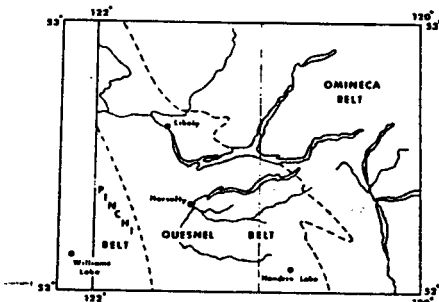
- CRETACEOUS AND (?) TERTIARY**
- KT<sub>s</sub>** Conglomerate, sandstone, shale
- JURASSIC AND CRETACEOUS**
- JK<sub>g</sub>** Granodiorite, quartz monzonite, quartz diorite
- JK<sub>ns</sub>** Nepheline syenite, syenite
- QUESNEL RIVER GROUP (u<sub>1</sub> to u<sub>1</sub>z)**
- JURASSIC**
- LINEA AND (?) MIDLE JURASSIC**
- PLEISTOCENE TO (?) BAJOXIAN**
- Im<sub>1</sub>s** Conglomerate (local granitic clasts), greenstone, shale
- TRIASSIC AND JURASSIC**
- UPPER TRIASSIC AND LOWER JURASSIC**
- I<sub>1</sub>j** Spinite, monzonite, diorite; sub-volcanic intrusive phases, probably mainly lower Jurassic
- NOPIAN TO SIRENURIAN**
- I<sub>1</sub>d** Purple or maroon, minor grey and green basaltic and felsitic breccia, minor flows, tuff, sandstone and limestone. Also: purple and maroon basalt with malicite phenocrysts
- NOPIAN AND (?) HETTINGIAN**
- I<sub>1</sub>c** Green and purple conglomerate and sandstone
- NOPIAN AND (?) YOUNGER**
- (16) **I<sub>1</sub>b** Augite porphyry basalt breccia, minor flows, tuff and tuffaceous argillite; local andesitic basalt
- (15) **I<sub>1</sub>a** Basaltic tuff and breccia, generally fine-grained; argillite, flows, chert
- TRIASSIC**
- UPPER TRIASSIC**
- SARINIAN AND (?) NORIAN**
- u<sub>1</sub>b** Basaltic and andesitic flows and breccia, minor argillite and limestone
- (10) **u<sub>1</sub>a<sub>1</sub>** Phyllite, argillite, slaty argillite, quartzite, schist, minor greenstone (sub-green schist to amphibolite (kyanite) facies of metamorphism)
- u<sub>1</sub>a<sub>2</sub>** Greenstone, augite-porphyr breccia, tuff breccia, tuff; possible dykes and sills (green schist facies of metamorphism)
- u<sub>1</sub>a<sub>3</sub>** Undivided u<sub>1</sub>a<sub>1</sub> and u<sub>1</sub>a<sub>2</sub> not separable at scale of mapping; may include dykes and sills and masses gradationally upward to S<sub>1</sub> (sub-green schist and green schist facies of metamorphism)

**I<sub>1</sub>g** TAKOMAKE BATHOLITH: granodiorite, quartz monzonite, quartz diorite

### OMINECA BELT

- JURASSIC (?), CRETACEOUS AND/OR TERTIARY**
- KT<sub>g</sub>** Muscovite - biotite granite and quartz monzonite
- JURASSIC AND (?) CRETACEOUS**
- (20) **JK<sub>g</sub>** Granodiorite, quartz monzonite, quartz diorite, minor diorite
- PALEOZOIC OR MESOZOIC**
- PM<sub>ub</sub>** Serpentine, peridotite; may be pre PPA<sub>a</sub>
- REFORM COMPLEX (PM<sub>ub</sub>, PM<sub>g</sub> and PM<sub>a</sub>)**  
(may be equivalent to PM<sub>ub</sub> and PPA<sub>a</sub>)
- PM<sub>ra</sub>** Amphibolite
- PM<sub>rga</sub>** Gabbro, norite
- PM<sub>rub</sub>** Serpentine, pyroxenite, peridotite
- PENNSYLVANIAN, (?) PERMIAN AND (?) YOUNGER**
- (2) **PPA<sub>a</sub>** SILE MOUNTAIN GROUP (PPA<sub>a</sub> and DM<sub>o</sub>)  
MUTER FORMATION: pillow basalt, breccia, chert, greenite, minor limestone, PPA<sub>a</sub>, amphibolite, probably equivalent to PPA<sub>a</sub>

(1) **HPSM** SNOWSHOE FORMATION: may include HPS<sub>u</sub> undivided: phyllite, schist and gneiss in amphibolite facies of metamorphism; HPS<sub>g</sub>: marble (shown in solid black where this); HPS<sub>u</sub>: gneissose granitoid layers of uncertain origin



- Glacier
- Geological contact (defined, approximate or assumed, covered)
- Contact of Snowy Metamorphic Complex (coincides with sillimanite isograd)
- Fault (defined, approximate or assumed, covered by water)
- Bedding (horizontal, inclined, vertical, overturned; dips not indicated)
- Foliation: cleavage, schistosity, gneissosity (inclined, vertical)
- Synclinal axis (fold upright, overturned)
- Antiformal axis (fold upright, overturned)
- Fossil locality
- Mine

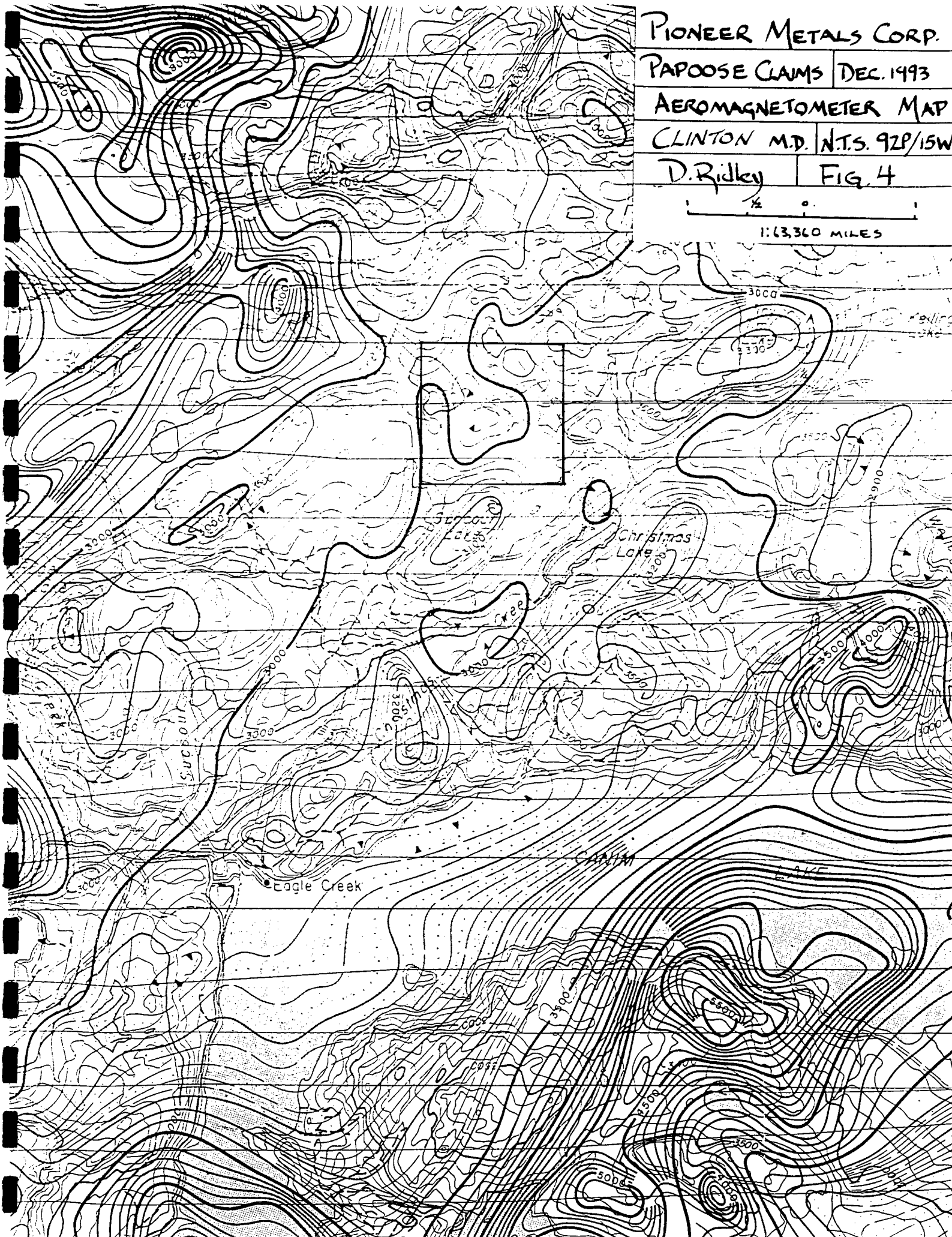
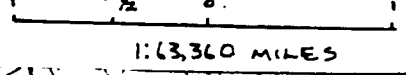
PIONEER METALS CORP.

PAPOOSE CLAIMS DEC. 1993

AEROMAGNETOMETER MAP

CLINTON M.D. N.T.S. 92P/15W

D. Ridley FIG. 4



(5)

A large magnetic high shown on Figure 4, stretching from Roger Lake in the south to north of Iron Lake and roughly outlined by the 3500 gamma contour, was found to be underlain by magnetite-rich hornblendite, pyroxenite, gabbro and diorite. It is not clear whether this represents a border phase of Takomkane batholith or a younger intrusion within it.

The Papoose claim is underlain by andesitic arenite, siltstone, grit, breccia and tuff, local granite-bearing conglomerate, greywacke, minor argillite and flows of Jurassic age (FIG. 4). Jurassic rocks are in apparent fault contact with all other rocks in the area. Jurassic and older rocks are intruded by several satellite stocks and smaller bodies, consisting of biotite-quartz monzonite and granodiorite of Cretaceous age.

South of Canim Lake, dacite, trachyte, basalt, andesite, rhyolite, and related breccias of the Eocene to Oligocene Skull Hill Formation form the higher hills found here. Miocene and or Pliocene plateau lava, olivine basalt, basaltic andesite, and related ash and breccia beds of the Chilcotin Group are found in the lower lying areas, east of Canim Lake and form extensive exposures on the Fraser Plateau immediately west of the property.

#### 1993 WORK PROGRAM

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The 1993 work program consisted of detailed prospecting and rock sampling anomalous zones defined by previous operators (Saunders, 1987), and reconnaissance prospecting traverses around the perimeter of the property. In addition, several anomalous soil sample sites were examined, re-sampled and rock samples were obtained from fragments in the holes. Most of the old 1987 grid was found to be intact except for the areas within the newer clearcuts.

(6)

The work was conducted by D. and C. Ridley under the supervision of D. Dunn, geologist for Pioneer Metals Corporation. The work was done between August 16, October 15, 20, 26-29, Nov. 12, 1993. The program resulted in the collection of 64 rock and ten soil samples.

#### ----- PROSPECTING AND ROCK\SOIL SAMPLING -----

Outcrop on the Papoose property is best exposed in areas of recent logging clearcuts, otherwise, hilltops and slopes provide relatively good exposures covered by a medium-thin mantle of overburden. On many of the ridgetops, a thick mantle of moss and lichens with little or no soil, mask underlying bedrock. Past operators had defined two main anomalous zones on the property (see Bibliography). These areas are near the approximate center of the present property and to the southeast. Recent logging activities in these areas resulted in more extensive outcrop exposures than were available to previous operators and a detailed prospecting program was carried out by Pioneer Metals Corp. in 1993.

Catherine Ridley discovered a shear-hosted, narrow (2 cm. wide), massive pyrrhotite-arsenopyrite vein during prospecting of a new logging road near the southeast corner of the property (FIG. 5). A chip sample across 60 cm. returned 1.32 grams\ton gold, 8985 ppm arsenic, and 210 ppm copper (PAP93 CR26). Subsequent re-sampling returned 74.9 grams\ton gold, 20.6 ppm silver, >1% arsenic, 1835 ppm copper, >1000 ppm cadmium, 235 ppm antimony from the narrow vein only, and 730 ppb gold, 5665 ppm arsenic, and 177 ppm copper from a chip sample one meter wide across the shear zone (PAP93 DR30, 31). Samples from the shear zone without the vein returned 130-190 ppb gold, 1290-1855 ppm arsenic, and 100-158 ppm copper (PAP93 DR32, 33).

The shear zone lies along the contact between diorite on the west and feldspar porphyry to the east. The zone trends 210', dipping near vertical, and is covered by overburden to the south, while the northern extension lies beneath the road-bed and under a lake.

(7)

A sample across a 60 cm. wide, hornfelsed, "listwanitic", carbonate altered dyke, outcropping along the road to the east, returned 5 ppb gold, 742 ppm copper, and <5 ppm arsenic (PAP93 CR31). A float sample from the same area, consisting of carbonate-altered diorite, returned 5 ppb gold, 835 ppm copper, and 495 ppm arsenic (PAP93 CR28). These samples were taken just off the southeast corner of the property (FIG. 5). A four unit claim, the Papoose 2, has been staked to cover these showings.

Several rock samples were taken from the new clearcut within the southeastern confines of the property (FIG. 5). These include a float sample in the access road-bed of quartz-carbonate vein material carrying up to 3% pyrite and minor arsenopyrite which returned 220 ppb gold, 1.2 ppm silver, 75 ppm copper and 2586 ppm arsenic (PAP93 DR9).

A one meter wide quartz-carbonate vein containing minor pyrite, chalcopyrite, and arsenopyrite outcropping on the north edge of the clearcut returned 360 ppb gold, 22.8 ppm silver, 1031 ppm copper, and <1% arsenic (PAP93 DR14). A grab sample from poorly exposed vein wallrocks, consisting of chlorite-altered highly sheared and fractured andesite with no visible sulphides returned 25 ppb gold, 0.4 ppm silver, 270 ppm copper, and 1690 ppm arsenic (PAP93 DR15). Earlier work by Torrez Resources Ltd. indicated an arsenic soil anomaly approximately 200 meters in diameter, with an oval magnetometer high at the south end and a linear magnetometer low along its western flank. The area is underlain by generally poorly exposed outcrops of volcanoclastic sediments and volcanic breccia intruded by porphyritic diorite, hornblendite, and gabbro (Saunders, 1987). A limited I.P. survey revealed the presence of a chargeability high of +15 milliseconds roughly co-incident with the previous arsenic soil anomalies (Morton, 1988). While trenching was carried out on the Senicar property at this time, none was attempted in the area of any of the samples thus far discussed.

Three rock samples were taken from a bulldozer trench

near Line 7N:15+50E on the old "TR" grid. The zone comprises a volcanic breccia with quartz and/or quartz-carbonate stockwork-style veinlets carrying local pyrite, chalcopyrite, and arsenopyrite. Diorite-gabbro dykes cut the volcanic breccia unit. A sample exposed in the floor of the trench consisting of a 15 cm. wide quartz vein with up to 20% pyrite and minor arsenopyrite returned 280 ppb gold, 2.5 ppm silver, 489 ppm copper, 3783 ppm arsenic (PAP93 DR4). The vein trends 120/70N and was not traced beyond the confines of the trench.

Several rock and selected soil samples were obtained from the old "S" grid near the center of the Papoose property (FIG. 5). Several vein breccias containing variable amounts of pyrite, chalcopyrite, and arsenopyrite were found within the new clear cut. This area was covered with a thin mantle of overburden and moss during the previous work programs.

A sample from the north edge of the clearcut consisting of a one meter wide shear zone with a quartz-carbonate stockwork carrying up to 1% chalcopyrite and minor pyrite-arsenopyrite returned 50 ppb gold, 1559 ppm copper, and 1020 ppm arsenic (PAP93 DR24). The shear trends 214\80W. A grab sample from a poorly exposed chlorite-rich quartz-carbonate vein about 150 meters south of DR24 contains local chalcopyrite to 5% and returned 665 ppb gold, 24.8 ppm silver, 2.5% copper, and 20 ppm arsenic (PAP93 DR20). An outcrop of skarn-altered mafic volcanics occurs between the two vein exposures. The outcrop is quartz-carbonate-epidote altered and carries small irregular patches of red garnet (Morton, 1984). A quartz-carbonate-chlorite altered diorite subcropping ten meters southwest of this outcrop returned 5 ppb gold, 1220 ppm copper, and 15 ppm arsenic (PAP93 DR18).

Several selected soil sample sites were visited on the old "S" grid and subsequently re-sampled. Rock fragments from the soil holes together with outcrop, subcrop or angular float was sampled to determine the source of the soil anomalies. The bulk of the soil samples returned values consistent with previous results thus substantiating the earlier values.

(9)

A soil sample from L11N;1+75E returned 125 ppb gold, 1795 ppm arsenic and 431 ppm copper. A grab sample of rock fragments within the hole returned 100 ppb gold, 1770 ppm arsenic, and 192 ppm copper (PAP93 DR22). Two soil samples from Line 9N returned values between 25-320 ppb gold, 385-490 ppm arsenic, and 34-160 ppm copper. No anomalous values were obtained from a single rock sample (PAP93 DR21). One sample from Line 8N;4+25E returned 355 ppb gold, 1115 ppm arsenic, and 74 ppm copper. This site had previously returned 1290 ppb gold and 372 ppm arsenic (Saunders, 1987). A grab sample from rock fragments in the hole was essentially non-anomalous (PAP93 DR23). Three soil samples from the eastern edge of the "S" grid returned 10-45 ppb gold, 35-1000 ppm arsenic, and 26-672 ppm copper (L7N;6+25E, 6+50E, and L6N;6+25E).

A soil sample from Line 5N;3+25E returned 30 ppb gold, 790 ppm arsenic, and 1788 ppm copper. This sample was approximately 50 meters northeast of a piece of angular float which returned 35 ppb gold, 5.6 ppm silver, 80 ppm arsenic, and 3701 ppm copper (PAP93 DR25). The soil sample is further situated about 50 meters downslope from a small oval-shaped I.P. chargeability high of 10-15 milliseconds (Morton, 1988). Two soil samples taken from within the I.P. anomaly at Line 3N;3E and 3+25E returned 5-15 ppb gold, 95-215 ppm arsenic, and 122-138 ppm copper.

#### CONCLUSIONS

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Based on a compilation of past data and results from the 1993 work program it can be concluded that the Papoose property has good potential to host gold-bearing epithermal vein type mineralization similar to that in Jurassic volcanics in the Toodoggone region of north-central British Columbia. Precious and/or base metal-bearing skarn mineralization may be a secondary target. This is based on the following points:

- 1) A generally favorable geological setting consisting of



volcanic flows, breccias and volcaniclastic units which are intruded by acidic to basic plugs and stocks. The volcanic breccia forms a favourable path for mineralizing fluids and many of the gold and arsenic anomalous soil results are clustered around or within it (Saunders, 1987).

2) The abundance and variety of mineralized structures ranging from quartz and/or carbonate breccia veins, shear-hosted stockwork quartz-carbonate veinlets, and narrow sulphide-rich shear hosted veins, as well as, minor disseminated sulphides in hornfelsed wallrocks near small intrusions. While individual mineralized veins appear small and discontinuous the structures with which they are associated may provide targets of substantial size.

3) Prospecting of new clearcuts has been successful in discovering several significant mineralized showings which correlate well to past soil sampling of the area. The northeast corner of the "S" grid contains several highly anomalous gold-arsenic-copper soil results. This area has not been logged and is blanketed by a thin layer of till and moss covered bedrock.

4) Skarn altered outcrops of limey volcaniclastic rocks were found in the eastern portion of the "S" grid. The volcaniclastic unit is cut by diorite-gabbro plugs, stocks, and dykes, which may provide a suitable environment for skarn-type mineralization.

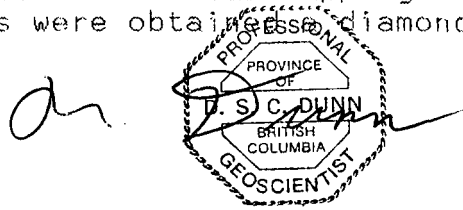
#### RECOMMENDATIONS

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Further work on the Papoose property should be directed to locating definitive backhoe trenching and subsequent drill targets. A program of detailed geological mapping, with particular emphasis on the mineralized zones and overall structure of the area, and additional rock sampling should be carried out. A lake sediment sampling survey would

(11)

be the only means of checking for a northern extension of the significant gold-bearing zone along the access road near the southeast boundary of the property. The previous grids should be re-established through the recent clearcuts and all stations within the areas of interest should be re-marked to provide adequate ground control. Backhoe trenching would be carried out in the anomalous areas once the initial mapping was completed. If significant results were obtained, a diamond drill program would be initiated.



FINANCIAL STATEMENT

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PERSONEL

D. Ridley, prospector; 8D @ \$200\day ..... \$ 1600.00  
C. Ridley, prospector; 7D @ \$125\day ..... \$ 875.00  
D. Dunn, geologist; 1D @ \$250\day ..... \$ 250.00

TRAVEL

Truck Rental; 8D @ \$40\day ..... \$ 320.00  
Gas; ..... \$ 83.00

GST PAYABLE

7% on contracting and vehicle rental ..... \$ 213.15

FOOD AND ACCOMODATION

Minac Lodge, Canim Lake; 1D @ \$50\day ..... \$ 50.00

SAMPLE ANALYSIS

i) Rocks; 64 @ \$16 each ..... \$ 1024.00  
ii) Soils; 10 @ \$15 each ..... \$ 150.00

SHIPPING ..... \$ 35.00

FIELD SUPPLIES ..... \$ 25.00

PHOTOCOPYING ..... \$ 33.00

FAX ..... \$ 10.00

REPORT PREPARATION ..... \$ 600.00

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TOTAL EXPENDITURES FOR 1993 WORK PROGRAM .....

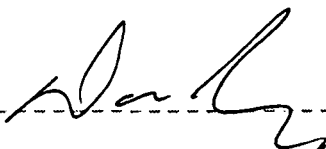


STATEMENT OF QUALIFICATIONS  
-----

I, David Wayne Ridley, of General Delivery, Eagle Creek, B.C.,  
VOKILO, do hereby certify:

- 1) That I completed the "Mineral Exploration for Pros-  
pectors" course, hosted by the BC Ministry of Mines at  
Mesachie Lake, B.C. in 1984.
- 2) That I completed the short course entitled "Petrology  
for Prospectors" held in Smithers, B.C., and hosted by  
the Smithers Exploration Group, in 1990.
- 3) That I have prospected independently since 1982 and have  
been employed as a prospector by various exploration  
companies in B.C., Alaska, and Yukon Territory since  
1984.
- 4) That I conducted the work set out in this report while  
under the supervision of D. Dunn.
- 5) That I currently own an interest in the subject  
property.

Dated at Eagle Creek, B.C.,            December 27, 1993

-----  
  
David Wayne Ridley

(13A)

I, David St. Clair Dunn, with a business address of 2348 Palmerston Avenue, West Vancouver, B.C. V7V 2W1, declare that;

1. I am a professional Geoscientist registered under the Professional Engineers and Geoscientists Act of the Province of British Columbia.
2. I am a Fellow of the Geological Association of Canada.
3. I am a Fellow of the Association of Exploration Geochemists.
4. I have practiced my profession as a prospector and geologist for more than 20 years in Canada, U.S.A. and Australia.
5. I supervised the work program on the Papoose Property described in this report.
6. I am Exploration Manager for Pioneer Metals Corporation.

  
David St. Clair Dunn, F. Geo.



The seal is a circular emblem with a dashed border. The text 'PROFESSIONAL' is at the top, 'PROVINCE OF' is in the middle, and 'BRITISH COLUMBIA' and 'GEOSCIENTIST' are at the bottom.

BIBLIOGRAPHY

Campbell R.B., Tipper H.W., 1971; Geology of Bonaparte Lake Area, 92P; GSC Memoir 363.

GSC Geophysics Paper 5231; Canim Lake, 92P\15; Aeromagnetic Survey, 1968; Map #5231G.

Morton J.W., 1984; Reconnaissance Geochemical Survey of the Senicar claims; Ass. Rpt #12650.

1984; Soil Geochemistry on the Senicar claims; Ass. Rpt. #13230.

1985; Soil Geochemistry-Detailed Grid on the Senicar claims; Ass. Rpt. #14040.

1988; Trenching and I.P. survey on the Senicar claims; Ass. Rpt. #17590.

Saunders C.R., 1987; Geological-Geochemical-Geophysical Report on the Senicar property; Ass. Rpt. #16199.

APPENDIX "A"

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Rock Description Sheets

# ROCK SAMPLE SHEET

① of ④⑤

Sampler D. Ridley  
Date June-July /93

Property PAPOOSE

NTS \_\_\_\_\_

SAMPLE NO.	Sample Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS				
		Rock Type	Alteration	Mineralization		Au	Ag	Cu	As	Sb
PAP 93 DR1	1m	hornblende breccia	epidote	up to 10% magnetite trace pyrrhotite	zone trends 040/50E + can be traced over 100 m strike length.	3	<.1	43	5	42
PAP 93 DR2	1m	siliceous breccia	silica carbonate	up to 5% pyrite	poorly exposed o/c in old trench: feldspar porphyry dyke o/c above sample:	4	.2	22	2	42
PAP 93 DR3	1m	"	qtz-carb stockwork	minor py-po-cpy rare malachite	10 m W of DR-2:	4	.6	289	63	42
PAP 93 DR4	G	qtz vein	limonite malachite	up to 20% pyrite minor arseno-pyrite	vein $\approx$ 10-15 cm wide: poorly exposed: foliation of wallrx 120/70N:	280	2.5	489	<del>27</del> 83	7
PAP 93 DR5	G	mafic volcanic	carb blobst veinlets $\pm$ qtz	disem py to 2%	above + south of end of lake and $\approx$ 100 m W of claimline: subcrop?: seems to be close to contact with volcanics + argillaceous sed.	<5	<.2	38	15	20
PAP 93 DR6	F	qtz vein	carb veinlets chlorite	up to 1% py+cpy	subangular float: S side of clearcut, S of lake west of DR5 knoll: qtz vein cut by non-mineralized calcite veinlets:	<5	2.8	652	15	10
PAP 93 DR7	G	blk-grey sediments	limonite	1-3% disem py trace cpy	$\approx$ 45 m E of DR6: outcrop nearby is porphyritic augite basalt: sample across rubble zone 1m wide probably subcrop.	<5	<.2	48	5	15
PAP 93 DR8	G	qtz-carb breccia	ankerite qtz	no visible sulphides	in clearcut just S of road: grab across 50cm of rubble (subcrop?): float train trends 050° for $\approx$ 75 m.	<5	<.2	31	40	15
PAP 93 DR9	F	?	qtz carbonate	up to 3% py trace cpy	along road in clearcut: large boulder may be subcrop?: unclear what rock-type was before alteration + mineralization.	220	1.2	75	<del>25</del> 8	35
PAP 93 DR10	G	breccia	listwanite (qtz-carb-mariposite)	minor py	N of road: on strike with DR B+9: grab across 1 m exposure (subcrop rubble?)	<5	<.2	49	30	40
PAP 93 DR11	2m	mafic volcanic	stockwork style qtz-carb veinlets	minor py	along road $\approx$ 10 m E of DR9: poorly exposed outcrop. can't get attitudes.	<5	<.2	83	15	25
PAP 93 DR12	1m	fault breccia	" chloritic	trace py	trends 176/80W: along road E of claims @ lake.	5	<.2	76	<5	10
PAP 93 DR13	1.8m	mafic volcanic	chlorite	trace py	wallrx @ DR12:	10	<.2	115	<5	25
PAP 93 DR14	1m	qtz-carb vein	chlorite qtz-carb.	minor py-cpy malachite trace aspy?	N side of clearcut just in trees + $\approx$ 100 m from DR 9: poorly exposed appears to trend 310/90 (dip unclear) may be an old trench??	360	22.8	1031	<del>70000</del>	25
PAP 93 DR15	G	andesite	chlorite highly sheared	no visible sulphides	wallrx @ DR 14: poorly exposed.	25	.4	270	1690	30

C-CHIP G-GRAB F-FINAT



# ROCK SAMPLE SHEET

② of ⑤

Sampler D. Ridley

Date Oct. 1993

Property Papoose

NTS 92P/15

SAMPLE NO.	Sample Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS				
		Rock Type	Alteration	Mineralization		Au	Ag	Cu	As	Sb
PAP93 DR 16	F	augite porphyry	epidote	minor pyrite magnetite	near N boundary on W side, clearcut + approx 75m W of small swamp: rock type fits with observed o/c tho' none was altered.	5	<2	170	15	25
PAP93 DR 17	G	impure limestone?	limonite	up to 10% pyrrhotite	just S of claim boundary ≈ 200m S of DR 16: limy-rich bed??; poorly exposed subcrop:	5	<2	13	<5	15
PAP93 DR 18	G	diorite?	qtz-carb-chlorite	local cpy to 5% malachite	near old report sample # CP50: in clearcut 3100m S of N edge + 75m W of E edge.	5	<2	1220	15	35
PAP93 DR 19	2m	altered mafic volcanic	qtz-carb-epidote	trace pyrite	⊙ old sample CP50: grab from o/c.	5	<2	217	<5	25
PAP93 DR 20	G	qtz-carb vein	carb-chlorite	local cpy to 2%	≈ 30m on bearing 330° to DR 19: poorly exposed: wallrx chlorite-carb altered mafic volcanic.	665	24.8	710000	20	20
PAP93 DR 21	F	volcanic breccia	carb stockwork	up to 3% py-po trace aspy?	"S" grid: L9N: 1105E	5	<2	351	<5	20
PAP93 DR 22	F	mafic volcanic	" "	trace pyrite	in soil hole ⊙ "S" grid L11N: 1175E	100	<2	192	1770	20
PAP93 DR 23	G	diorite?	Mn-Fe oxide chlorite	" "	in soil hole (subcrop??) ⊙ "S" grid L8N: 4125E	5	<2	35	5	25
PAP93 DR 24	1m	shear zone	qtz-carb stock work	cpy to 1%: plus pyrite	edge of Clearcut: "S" grid L6N: 5100E (T Grid: BL10E?) zone trends 214/00W	50	.4	1559	1020	20
PAP93 DR 25	F	altered mafic volcanic	carbonate chlorite	up to 1% cpy-py	5m S. of "S" Grid: L4N: 3150E: angular float: possibly an old hand trench??	35	5.6	3701	80	25
PAP93 DR 26	G subcrop	"	carbonate epidote	trace cpy	L7N: 4165E ("S" grid): original rock type uncertain due to alteration.	5	<2	147	<5	25
PAP93 DR 27	"	skarn	qtz-carb-epidote-Mn-Fe-stain	trace py: cpy	⊙ BL10E: 4195N ("S" grid): ≈ 10m E of DR 18	10	<2	32	175	20
PAP93 DR 28	G	shear zone	chlorite carbonate	minor py-po-cpy	⊙ L10N: 11450E (3N: 6450E: "S" grid?): cat trench from previous work program (87/88?): needs more detailed sampling.	5	<2	433	60	25
PAP93 DR 29	G	augite porphyry	carbonate quartz limonite	pyrrhotite to 3%	"T" Grid L8N: 16450E: Trench 2: grab of trench material:	5	<2	35	<5	20
PAP93 DR 30	2 centi-metres	massive sulphide vein	limonite sulphides	pyrrhotite-arsenopy-chalcopryrite-pyrite	⊙ CR26: grab from best mineralized 2cm wide vein: in sheared+altered diorite "HIGH GRADE GRAB" zone trends 2109/90	218 oz/ton	20.6	1035	>1%	235

C-CHIP G-GRAB F-FLOAT

↑ NB Cd greater than 1000ppm

# ROCK SAMPLE SHEET

③ of ④⑤

Sampler C.J. RIDLEY  
Date OCT. 15-

Property PAPDOSE CLAIMS

NTS 92P/15

SAMPLE NO.	Sample Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS			
		Rock Type	Alteration	Mineralization		Au	Ag	As	Cu
PAP 93 CR1	grab sub- float	diorite		Py: Pyrrhotite ?Aspy	± 200m. S.W. of S. end of lake; up from rd. area has been scraped off during logging: possible strike 286°/vertical dip	20	<2	<5	77
PAP 93 CR2	grab oc.	porphyritic diorite		Pyrite → 1%	± 20m. W. of CR1	10	<2	<5	104
PAP 93 CR3	grab oc.	Qtz. vein	calcite	CPY → 1% trace mal, Py?Aspy	± 100 m. N.E. of CR2 - on small ridge - high grade grab - 270°/almost vertical dip	60	3.0	120	1728
PAP 93 CR4	grab oc.	volcanic	calcite	sporadic CPY Py → 1%	- wallrock of Qtz. vein in CR3 & old trench - slightly sheared & fractured - 270°/almost vertical dip	10	<2	305	268
PAP 93 CR5	grab float	Qtz. vein	carbonate		- possibly from area of CR3+4 - 5m. width - breccia appear. to rock - volcanic clasts	20	<2	20	47
PAP 93 CR6	grab	volcanic	chlorite carbonate	minor Py; CR1 trace malachite	- NW boundary of claim - slightly magnetic	95	<2	<5	454
PAP 93 CR7	grab	volcanic	propylitic	sporadic mal + CPY trace Py	- ± 75 m. N.E. of CR6 - trend on fracture 124°/vertical dip - severe fracturing	5	<2	<5	382
PAP 93 CR8	grab oc	volcanic		sporadic Py + Pyrrhotite	- ± 10 m. N.E. of CR7 - shattered - strike 152°/46° NE	5	<2	<5	107
PAP 93 CR9	grab oc	diorite	epidote	magnetite Py	- ± 25m. due S. of S' Grid L6N: 5+25E - E/W trend - slicken sides present	25	<2	<5	186
PAP 93 CR10	50 cm.	mafic volcanic	chlorite carbonate	sporadic CPY	- oc for DR20 - calcite veining - 320°/slight E. dip	15	<2	20	321
PAP 93 CR11	grab oc	mafic volcanic	propylitic	sporadic CPY	- ± 200 m. S.W. of CR1 - flat lying oc	5	<2	50	419
PAP 93 CR12	float	diorite	carbonate	Pyrrhotite Pyrite	- ± 10 m. NW of L6N: 10+75E	5	<2	<5	26
PAP 93 CR13	float	diorite	chlorite carbonate	1-2% Pyrite	- oc on rd ± 100m. S.W. of L6N: 12+50E	5	<2	<5	152
PAP 93 CR14	grab oc	diorite	carbonate	1-2% Pyrite	- ± 10m. S.E. of L6N: 12E - calcite veining - 304°/60° S.E.	5	<2	<5	30
PAP 93 CR15	float	mafic volcanic		1% Pyrite trace CPY	① S' Grid L7N: 6+50E - from soil hole	5	<2	<5	85

C-CHIP G-GRAB F-FLOAT

(40 of 5)

**ROCK SAMPLE SHEET**

Sampler CJ RIDLEY

Date Oct/93

Property PAPOOSE CLAIMS

NTS 92P/15

SAMPLE NO.	Sample Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS			
		Rock Type	Alteration	Mineralization		Au	Ag	As	Cu
PAP 93 CR16	float	mafic volcanic		1% Pyrite Pyrrh trace	10m. S.E. of L6N: 5+7SE - subcrop	5	<.2	<.5	64
PAP 93 CR17	.5m	feldspar porphyry		trace CR1 & mal. sporadic Py & magnetite	@ L5N: 4+12E - 164°/84°E	10	<.2	<.5	274
PAP 93 CR18	float	tuff	propylitic	trace CR1, mal. & Py	L5+85N: 5E - shearing & fracturing - calcite veining	5	1.4	20	1451
PAP 93 CR19	float	mafic volcanic	chlorite carbonate	1% CR1 malachite Pyrite	- 15m. S.E. of DR 20	5	<.2	<.5	2386
PAP 93 CR20	float	mafic volcanic	chlorite carbonate	CR1 & mal. Py	25m N of CR 20 - subcrop - calcite veining	10	1.2	15	669
PAP 93 CR21	90 cm.	volcanic breccia	carbonate	1% Pyrite CR1	± 200m. S.W. of rd & S.W. end of bay in lake - trend 236°	5	<.2	<.5	33
PAP 93 CR22	1.5m	mafic volcanic	carbonate chlorite epidote	Py + Pyrrh	86m. ESE of claim line - small local shears	5	<.2	<.5	69
PAP 93 CR23	3m	"	"	"	adjacent to but N of CR22 slightly magnetic	5	<.2	<.5	73
PAP 93 CR24	40cm.	"	carbonate very heavy	Py 1% Pyrrh → 2%	1m. point on CR22 - shear zone (local)	5	<.2	50	39
PAP 93 CR25	45 cm.	gabbro dyke	chlorite carbonate epidote	magnetite Pyrite	74 m. ESE of claim line on rd by lake 226° slight dip W. calcite veining	5	<.2	<.5	187
PAP 93 CR26	60 cm.	diorite	"	Pyrite AsPy	67 m. ESE of claim line: same bc as CR25 0320/ <del>0320</del> 02°N - shear zone	995	<.2	8985	210
PAP 93 CR27	2m. oc	volcanic	carbonate	Pyrite AsPy	- 50 m. S.W. of bay in lake - 186°/70°E - shearing & fracturing	5	<.2	45	116
PAP 93 CR28	float	diorite	carbonate	trace CR1 & Py	- 75m. E. of CR27 - subcrop - calcite veins	5	.6	495	835
PAP 93 CR29	grab oc	volcanic	limonite	1% Pyrite ± AsPy	@ CR28 226° slight N. dip	10	1.2	70	88
PAP 93 CR31	60cm.	feldspar porphyry	1/stronite	Py → 1% trace AsPy	- ± 10m. S. of CR22 - ironfelds - gr. mica present				

NB. sample CR30 not taken

C-CHIP G-GRAB F-FLOAT

# ROCK SAMPLE SHEET

⑤ of ⑤

Sampler D+C Ridley

Date Nov. 1993

Property Papoose

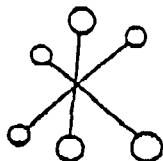
NTS 92P/15

SAMPLE NO.	Sample Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS				
		Rock Type	Alteration	Mineralization		Au	Ag	Cu	As	Sb
PAP 93 DR 31	1m	shear zone	chlorite	minor + py vein DR30	1m wide chip sample across CR26-DR30: includes the mineralized vein as proportionate chip.	730	<2	177	565	35
PAP 93 DR 32	1.1m	feldspar porphyry	"	minor pyrite-pyrrhotite trace aspy	chip across wallrx DR30 to East (not including vein)	190	<2	158	185	35
PAP 93 DR 33	1m	diorite	"	"	chip across wallrx DR30 to West (not including vein)	130	<2	100	128	30
-----										
PAP 93 CR 32	float	feldspar porphyry	listwanite	Py ≈ 1%	3m. N of CR 31: hornfelsed .. calcite veining present	5	<2	48	45	30

C-CHIP G-GRAB F-FLOAT

APPENDIX "B"

Laboratory Procedures



**ECO-TECH LABORATORIES LTD.**

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

**GEOCHEMICAL LABORATORY METHODS**

**SAMPLE PREPARATION (STANDARD)**

1. Soil or Sediment: Samples are dried and then sieved through 80 mesh nylon sieves.
2. Rock, Core: Samples dried (if necessary), crushed, riffled to pulp size and pulverized to approximately -140 mesh.
3. Heavy Mineral Separation: Samples are screened to -20 mesh, washed and separated in Tetrabromothane. (SQ 2.96)

**METHODS OF ANALYSIS**

All methods have either certified or in-house standards carried through entire procedure to ensure validity of results.

1. Multi-Element Cd, Cr, Co, Cu, Fe (acid soluble), Pb, Mn, Ni, Ag, Zn, Mo

Digestion

Hot aqua-regia

Finish

Atomic Absorption, background correction applied where appropriate

- A) Multi-Element ICP

Digestion

Hot aqua-regia

Finish

ICP

2. Antimony

Digestion

Hot aqua regia

Finish

Hydride generation - A.A.S.

3. Arsenic

Digestion

Hot aqua regia

Finish

Hydride generation - A.A.S.

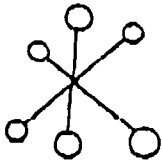
4. Barium

Digestion

Lithium Metaborate Fusion

Finish

I.C.P.

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ASSAYING - ENVIRONMENTAL TESTING

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**13. Tin**Digestion

Ammonium Iodide Fusion

Finish

Hydride generation - A.A.S.

**14. Tungsten**Digestion

Potassium Bisulphate Fusion

Finish

Colorimetric or I.C.P.

**15. Gold**Digestion

- a) Fire Assay Preconcentration followed by Aqua Regia

Finish

Atomic Absorption

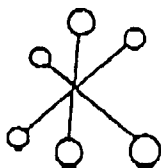
- b) 10g sample is roasted at 600°C then digested with hot Aqua Regia. The gold is extracted by MIBK and determined by A.A.

**16. Platinum, Palladium, Rhodium**Digestion

Fire Assay Preconcentration followed by Aqua Regia

Finish

Graphite Furnace - A.A.S.

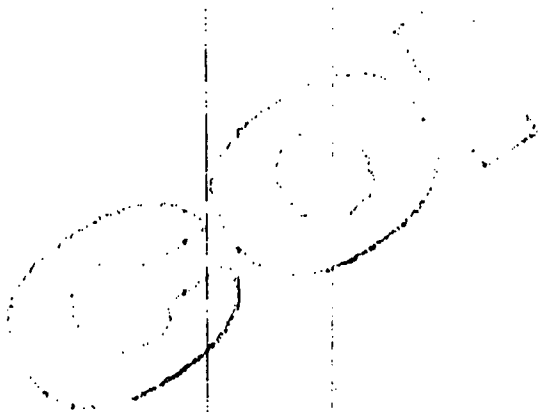
**ECO-TECH LABORATORIES LTD.**

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

LABORATORY METHOD ASSAYS

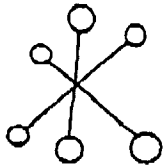
- Gold - Conventional fire assay with A.A. finish
- Gold "Metallics" - A 300g re-split is taken from the rejects and pulverized in a ring and puck pulverizer. The entire split is screened to -140mesh. The entire +140 mesh oversize is assayed separately. Two replicate assays are performed on the -140 mesh fraction.
- Ag Pb Sb Zn - Aqua regia digestion, A.A. finish
- As - Aqua regia digestion, ICP finish





APPENDIX "B"

-----  
Laboratory Procedures



## ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

### GEOCHEMICAL LABORATORY METHODS

#### SAMPLE PREPARATION (STANDARD)

1. **Soil or Sediment:** Samples are dried and then sieved through 80 mesh nylon sieves.
2. **Rock, Core:** Samples dried (if necessary), crushed, riffled to pulp size and pulverized to approximately -140 mesh.
3. **Heavy Mineral Separation:** Samples are screened to -20 mesh, washed and separated in Tetrabromothane. (SQ 2.96)

#### METHODS OF ANALYSIS

All methods have either certified or in-house standards carried through entire procedure to ensure validity of results.

1. **Multi-Element** Cd, Cr, Co, Cu, Fe (acid soluble), Pb, Mn, Ni, Ag, Zn, Mo

##### Digestion

Hot aqua-regia

##### Finish

Atomic Absorption, background correction applied where appropriate

- A) **Multi-Element ICP**

##### Digestion

Hot aqua-regia

##### Finish

ICP

2. **Antimony**

##### Digestion

Hot aqua regia

##### Finish

Hydride generation - A.A.S.

3. **Arsenic**

##### Digestion

Hot aqua regia

##### Finish

Hydride generation - A.A.S.

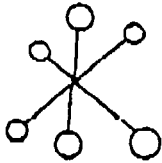
4. **Barium**

##### Digestion

Lithium Metaborate Fusion

##### Finish

I.C.P.

**ECO-TECH LABORATORIES LTD.**

ASSAYING • ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 673-5700 Fax 673-4557

**13. Tin**Digestion

Ammonium Iodide Fusion

Finish

Hydride generation - A.A.S.

**14. Tungsten**Digestion

Potassium Bisulphate Fusion

Finish

Colorimetric or I.C.P.

**15. Gold**Digestion

- a) Fire Assay Preconcentration followed by Aqua Regia

Finish

Atomic Absorption

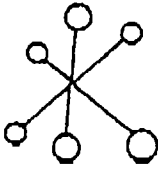
- b) 10g sample is roasted at 600°C then digested with hot Aqua Regia. The gold is extracted by MIBK and determined by A.A.

**16. Platinum, Palladium, Rhodium**Digestion

Fire Assay Preconcentration followed by Aqua Regia

Finish

Graphite Furnace - A.A.S.

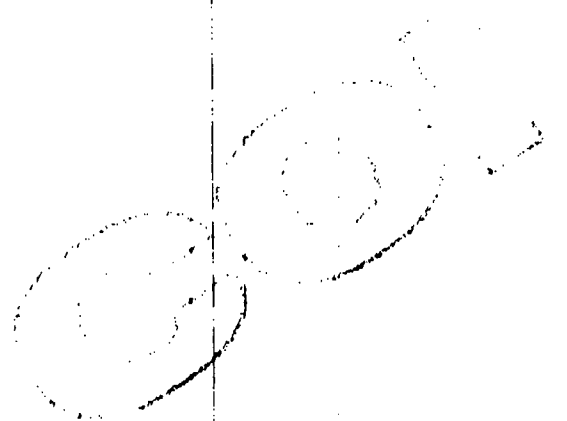
**ECO-TECH LABORATORIES LTD.**

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (804) 573-5700 Fax 573-4557

LABORATORY METHOD ASSAYS

- Gold - Conventional fire assay with A.A. finish
- Gold "Metallics" - A 300g re-split is taken from the rejects and pulverized in a ring and puck pulverizer. The entire split is screened to -140mesh. The entire +140 mesh oversize is assayed separately. Two replicate assays are performed on the -140 mesh fraction.
- Ag Pb Sb Zn - Aqua regia digestion, A.A. finish
- As - Aqua regia digestion, ICP finish



APPENDIX "C"

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Sample Analysis Certificates

ECO-TECH LABORATORIES LTD.  
 10041 EAST TRANS CANADA HWY.  
 KAMLOOPS, B.C. V2C 2J3  
 PHONE - 604-573-5700  
 FAX - 604-573-4557

PIONEER METALS CORPORATION ETK 93-457  
 1770-401 W. GEORGIA STREET  
 VANCOUVER, B.C.  
 V6B 5A1

ATTENTION: DAVID DUNN

NOVEMBER 9, 1993

10 SOIL SAMPLES RECEIVED NOVEMBER 4, 1993

SHIPMENT #: 14  
 PROJECT #: CANIM LAKE

VALUES IN PPM UNLESS OTHERWISE REPORTED

ET#	DESCRIPTION	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	- PAPS L3N 3E:	5	<.2	3.32	95	6	140	10	.33	1	30	49	122	3.84	.06	<10	.80	637	<1	.01	41	880	24	25	<20	14	.16	<10	95	<10	10	102
2	- PAPS L3N:3+25E	15	<.2	3.37	215	6	145	5	.32	2	32	55	138	4.15	.09	<10	.81	373	<1	.02	39	1380	22	10	<20	15	.17	<10	104	<10	9	114
3	- PAPS L5N:3+25E	30	.8	3.02	790	8	140	<5	1.18	11	22	48	1788	3.10	.10	10	.44	1493	<1	.02	112	420	22	10	<20	42	.13	<10	57	<10	32	78
4	- PAPS L6N:6+25E	40	<.2	3.84	1000	6	185	<5	.41	14	38	48	672	4.19	.09	<10	.70	651	<1	.01	80	1720	24	5	<20	23	.13	<10	85	<10	8	176
5	- PAPS L7N:6+25E	10	<.2	1.04	35	6	130	5	.17	<1	10	20	26	1.60	.03	<10	.29	788	<1	.01	11	1710	12	<5	<20	12	.10	<10	41	<10	5	70
6	- PAPS L7N:6+50E	45	<.2	4.18	170	8	175	10	.49	1	38	170	212	7.52	.13	<10	2.68	688	<1	.01	50	1070	16	20	<20	19	.27	<10	209	<10	13	137
7	- PAPS L8N:4+25E	355	1.2	3.95	1115	8	215	15	1.07	15	137	50	74	6.89	.12	<10	1.07	1145	<1	.01	48	5430	24	15	<20	46	.14	<10	140	<10	7	273
8	- PAPS L9N:2+25E	25	<.2	2.76	490	8	190	5	.40	8	100	51	160	3.04	.09	<10	.76	647	<1	.02	48	880	26	15	<20	22	.15	<10	69	30	9	417
9	- PAPS L9N:1+75E	320	<.2	1.83	385	10	185	10	.77	6	20	11	34	2.82	.09	<10	.45	1353	<1	.01	11	1560	20	10	<20	46	.14	<10	72	<10	8	190
10	- PAPS L11N:1+75E	125	<.2	2.75	1795	8	180	<5	.44	26	53	44	431	6.02	.10	<10	.81	480	<1	.01	51	1360	20	15	<20	25	.12	<10	87	<10	5	330

QC/DATA:

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Repeat #:

2	- PAPS L3N:3+25E	15	<.2	3.52	220	8	150	5	.34	3	35	58	142	4.25	.10	<10	.84	390	<1	.02	42	1420	24	10	<20	15	.19	<10	108	<10	10	120
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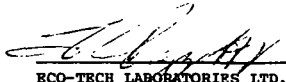
NOTE: < = LESS THAN

Fax #: 669-1240

cc: David Ridley

Fax #: 397-2958

CALL : 397-2771 for pick-up

  
 ECO-TECH LABORATORIES LTD.  
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 B.C. Certified Assayer

ECO-TECH LABORATORIES LTD.  
 10041 EAST TRANS CANADA HWY.  
 KAMLOOPS, B.C. V2C 2J3  
 PHONE - 604-573-5700  
 FAX - 604-573-4557

PIONEER METALS CORPORATION ETK 93-344  
 1770-401 W. GEORGIA STREET  
 VANCOUVER, B.C.  
 V6B 5A1

ATTENTION: DAVID DUNN

SEPTEMBER 21, 1993

9 ROCK SAMPLES RECEIVED SEPTEMBER 2, 1993  
 PROJECT #: CANIM LAKE  
 SHIPMENT #: 8

VALUES IN PPM UNLESS OTHERWISE REPORTED

BT#	DESCRIPTION	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	- STRAW 93: DR 26	<5	<.2	.63	50	2	45	25	.79	<1	28	72	38	6.17	.20	<10	.73	303	1	.04	26	250	2	20	<20	18	.20	<10	278	<10	12	29
2	- STRAW 93: 127431	30	<.2	.78	15	2	100	<5	3.17	<1	35	10	958	7.32	.33	<10	1.58	774	<1	.02	10	340	2	25	<20	127	.12	<10	274	<10	8	49
3	- PAP 93: DR 5	<5	<.2	2.86	15	2	70	10	3.21	<1	9	22	38	5.08	.16	<10	2.23	675	2	<.01	11	750	8	20	<20	37	.03	<10	55	<10	10	76
4	- PAP 93: DR 6	<5	2.8	1.41	15	2	35	<5	2.44	<1	11	91	652	3.28	.08	<10	.83	586	4	.01	21	970	8	10	<20	30	.06	<10	77	<10	8	150
5	- PAP 93: DR 7	<5	<.2	1.90	5	2	25	25	8.17	<1	27	46	48	4.82	.02	<10	1.81	829	1	.02	15	410	4	15	<20	52	.28	<10	136	<10	25	32
6	- PAP 93: DR 8	<5	<.2	.25	40	2	80	5	7.46	<1	9	64	31	4.52	.11	<10	1.71	1961	3	<.01	9	640	<2	15	<20	232	<.01	<10	26	<10	5	31
7	- PAP 93: DR 9	220	1.2	.05	2586	2	35	15	12.32	36	10	26	75	8.16	.01	<10	3.91	9453	1	<.01	4	30	<2	35	<20	290	<.01	<10	5	<10	8	19
8	- PAP 93: DR 10	<5	<.2	.48	30	6	105	15	3.66	<1	53	361	49	5.56	.20	<10	8.30	1256	<1	<.01	387	780	2	40	<20	158	<.01	<10	58	<10	2	50
9	- PAP 93: DR 11	<5	<.2	3.11	15	2	45	10	6.17	<1	36	353	83	5.29	.08	<10	4.83	1489	<1	<.01	97	730	10	25	<20	173	.06	<10	142	<10	9	49

QC/DATA:

Repeat #:

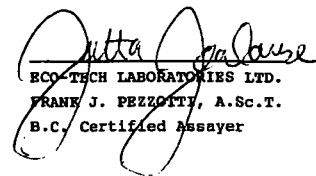
8	- PAP 93: DR 10		<.2	.49	30	6	100	5	3.45	<1	50	345	48	5.26	.20	<10	7.74	1163	<1	<.01	367	740	<2	35	<20	150	<.01	<10	56	<10	2	48
	STANDARD 1991:		1.2	1.89	65	2	125	10	1.73	<1	20	66	80	3.84	.40	<10	.97	710	<1	.02	25	660	26	15	<20	61	.11	<10	80	<10	13	74

NOTE: < = LESS THAN

Fax #: 669-1240

cc: David Ridley  
 Fax #: 397-2958  
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SC93/Pioneer Metals

  
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PIONEER METALS CORPORATION ETK 93-455  
 1770-401 W. GEORGIA STREET  
 VANCOUVER, B.C.  
 V6B 5A1

ATTENTION: DAVID DUNN

NOVEMBER 12, 1993  
 PAGE 1

58 ROCK SAMPLES RECEIVED NOVEMBER 4, 1993  
 SHIPMENT #: 14  
 PROJECT #: CANIM LAKE

VALUES IN PPM UNLESS OTHERWISE REPORTED

ET#	DESCRIPTION	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	- PAP 93:CR - 1	20	<.2	2.71	<5	6	80	15	.54	<1	25	81	77	5.91	.20	<10	2.21	849	3	.05	9	710	26	25	<20	22	.19	<10	122	<10	15	117
2	- PAP 93:CR - 2	10	<.2	2.31	<5	8	125	10	2.36	<1	23	68	104	4.22	.15	<10	1.61	892	2	.11	11	1200	18	20	<20	115	.21	<10	124	<10	16	66
3	- PAP 93:CR - 3	60	3.0	1.70	120	6	50	<5	5.69	1	10	64	1728	3.51	.09	<10	1.22	1179	3	.01	4	220	8	20	<20	142	.08	<10	50	<10	8	83
4	- PAP 93:CR - 4	10	<.2	2.84	305	6	60	<5	.63	3	18	53	258	5.60	.11	<10	2.28	916	1	.03	2	370	22	25	<20	9	.21	<10	92	<10	14	53
5	- PAP 93:CR - 5	20	<.2	.49	20	6	10	<5	9.22	<1	3	42	47	.90	.01	<10	.34	1380	2	<.01	2	50	2	5	<20	241	.01	<10	16	<10	5	14
6	- PAP 93:CR - 6	95	<.2	2.59	<5	6	55	<5	5.80	<1	14	100	454	4.48	.05	<10	2.44	1068	<1	.02	12	1280	10	25	<20	45	.13	<10	230	<10	12	41
7	- PAP 93:CR - 7	5	<.2	2.48	<5	8	65	<5	4.47	<1	18	32	382	4.91	.09	<10	1.92	960	1	.02	6	2080	12	20	<20	61	.17	<10	168	<10	15	53
8	- PAP 93:CR 8	5	<.2	2.83	<5	8	110	10	2.48	<1	25	53	107	4.84	.27	<10	2.03	634	2	.06	12	1050	30	20	<20	59	.22	<10	153	<10	14	93
9	- PAP 93:CR 9	25	<.2	2.38	<5	8	125	5	2.23	<1	32	77	186	6.51	.10	<10	2.10	1054	2	.02	16	1350	14	25	<20	81	.19	<10	195	<10	12	85
10	- PAP 93:CR 10	15	<.2	3.09	20	8	65	<5	2.79	<1	40	193	321	5.54	.04	<10	3.14	1171	2	.03	43	860	18	25	20	42	.16	<10	159	<10	9	59
11	- PAP 93:CR 11	5	<.2	2.36	50	8	70	<5	3.99	<1	31	246	419	4.21	.10	<10	2.32	1057	4	.02	47	920	16	25	<20	58	.10	<10	105	<10	7	70
12	- PAP 93:CR 12	5	<.2	3.02	<5	8	85	20	1.17	<1	19	75	26	5.30	.07	<10	2.17	481	4	.07	3	750	22	20	<20	80	.25	<10	100	<10	27	97
13	- PAP 93:CR 13	5	<.2	3.15	<5	4	85	5	6.85	<1	32	104	152	5.77	.05	<10	3.21	1368	<1	.01	43	920	10	25	<20	177	.10	<10	238	<10	10	72
14	- PAP 93:CR 14	5	<.2	3.98	<5	8	75	20	2.75	<1	34	75	30	5.11	.08	<10	2.93	679	<1	.07	25	340	22	30	<20	61	.26	<10	111	<10	20	58
15	- PAP 93:CR 15	5	<.2	3.07	<5	10	135	20	4.73	<1	25	161	85	5.96	.88	<10	3.10	674	1	.02	25	2310	12	25	<20	51	.18	<10	217	<10	12	27
16	- PAP 93:CR 16	5	<.2	2.76	<5	8	75	20	1.59	<1	31	52	64	5.01	.28	<10	1.50	393	1	.12	9	410	22	20	<20	52	.25	<10	113	<10	17	31
17	- PAP 93:CR 17	10	<.2	1.93	<5	18	85	<5	1.52	<1	21	30	274	4.54	.16	<10	1.16	728	2	.04	6	2340	8	20	<20	45	.20	<10	134	<10	22	54
18	- PAP 93:CR 18	5	1.4	2.70	20	8	65	<5	3.57	<1	16	79	1451	5.29	.05	<10	2.44	849	1	.02	14	1810	6	25	<20	59	.14	<10	209	<10	12	228
19	- PAP 93:CR 19	5	<.2	2.41	<5	6	180	<5	4.42	<1	16	93	2386	4.55	.98	<10	2.75	481	<1	.02	40	970	6	30	<20	48	.24	<10	175	<10	20	25
20	- PAP 93:CR 20	10	1.2	3.04	15	6	35	<5	9.94	<1	22	67	669	4.95	.03	<10	2.82	1672	<1	.01	27	610	4	30	<20	73	.09	<10	191	<10	15	44
21	- PAP 93:CR 21	5	<.2	2.55	<5	6	85	20	.87	<1	14	61	33	4.73	.09	<10	1.93	616	3	.02	3	560	14	25	<20	19	.25	<10	64	<10	30	36
22	- PAP 93:CR 22	5	<.2	3.34	<5	6	70	15	.99	<1	28	65	69	6.35	.07	<10	2.68	1023	<1	.03	15	680	14	35	<20	21	.24	<10	210	<10	18	111
23	- PAP 93:CR 23	5	<.2	2.93	<5	8	60	20	1.14	<1	26	50	73	6.07	.05	<10	2.05	856	1	.02	7	440	16	25	<20	25	.20	<10	180	<10	16	142
24	- PAP 93:CR 24	5	<.2	2.91	50	8	45	15	1.46	<1	23	88	39	5.00	.06	<10	2.23	736	1	.07	16	470	12	25	<20	37	.19	<10	137	<10	15	45
25	- PAP 93:CR 25	5	<.2	1.99	<5	8	55	<5	1.79	<1	24	214	187	3.89	.09	<10	2.31	540	<1	.03	78	1540	10	20	<20	45	.18	<10	134	<10	15	55



PAGE 2

ET#	DESCRIPTION	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	- PAP 93:CR	26	995	<.2	4.03	8985	6	90	5	1.29	135	35	231	210	8.36	.07	<10	3.74	1189	<1	.02	79	1460	14	35	<20	34	.08	<10	218	<10	6	98
27	- PAP 93:CR	27	5	<.2	3.70	45	6	70	5	2.33	<1	31	97	116	6.86	.08	<10	3.20	1643	<1	.01	37	1110	12	30	<20	55	.03	<10	198	<10	6	77
28	- PAP 93:CR	28	5	.6	2.24	495	4	55	<5	3.81	6	19	92	835	4.73	.08	<10	1.91	1060	<1	.01	22	470	4	30	<20	80	<.01	<10	103	<10	3	56
29	- PAP 93:CR	29	10	1.2	2.50	70	8	80	10	8.40	1	28	197	88	5.15	.06	<10	3.51	1452	<1	.02	59	800	6	30	20	278	.03	<10	122	<10	7	68
30	- PAP 93:DR	12	5	<.2	1.24	<5	6	60	<5	8.39	<1	10	40	76	3.15	.16	<10	.69	2128	2	<.01	6	980	4	10	<20	153	<.01	<10	44	<10	8	36
31	- PAP 93:DR	13	10	<.2	3.01	<5	8	95	5	2.69	<1	21	26	115	5.71	.19	<10	2.09	1572	<1	.02	6	1600	10	25	<20	63	.01	<10	107	<10	5	57
32	- PAP 93:DR	14	360	22.8	.64	>10000	8	45	<5	.46	219	11	175	1031	5.34	.06	<10	.41	302	10	.01	7	140	18	25	<20	14	.02	<10	21	<10	<1	36
33	- PAP 93:DR	15	25	.4	3.08	1690	8	100	<5	.99	24	27	71	270	6.09	.13	<10	2.56	1044	1	.04	25	660	16	30	<20	36	.09	<10	114	<10	7	71
34	- PAP 93:DR	16	5	<.2	2.01	15	10	55	<5	2.39	<1	27	227	170	3.74	.01	<10	1.96	558	1	.04	64	820	10	25	<20	259	.16	<10	126	<10	11	47
35	- PAP 93:DR	17	5	<.2	1.07	<5	8	25	10	>15	<1	9	14	13	2.09	.03	<10	.85	1947	<1	.02	4	310	<2	15	<20	217	.10	<10	37	<10	13	16
36	- PAP 93:DR	18	5	<.2	4.45	15	8	175	<5	6.03	<1	13	668	1220	5.99	.85	<10	6.21	1187	<1	<.01	128	990	10	35	<20	87	.07	<10	203	<10	5	28
37	- PAP 93:DR	19	5	<.2	3.54	<5	8	205	5	4.21	<1	29	43	217	5.07	.46	<10	2.50	695	<1	.11	16	850	16	25	<20	96	.23	<10	150	<10	16	32
38	- PAP 93:DR	20	665	24.8	.36	20	6	35	<5	>15	<1	32	20	>10000	2.72	.01	<10	.36	1724	<1	<.01	26	<10	<2	20	<20	90	<.01	<10	20	<10	30	88
39	- PAP 93:DR	21	5	<.2	1.93	<5	8	120	<5	1.83	<1	31	44	351	4.04	.31	<10	1.38	339	2	.08	32	980	12	20	<20	33	.22	<10	106	<10	15	38
40	- PAP 93:DR	22	100	<.2	1.56	1770	6	110	<5	1.30	26	21	80	192	4.11	.13	<10	1.30	542	1	.04	16	1740	12	20	<20	44	.11	<10	89	<10	10	54
41	- PAP 93:DR	23	5	<.2	2.80	5	8	110	25	1.18	<1	28	36	35	6.28	.10	<10	2.54	928	<1	.04	15	1140	16	25	<20	28	.26	<10	221	<10	19	50
42	- PAP 93:DR	24	50	.4	1.58	1020	6	50	<5	6.22	15	34	52	1559	2.61	.22	<10	1.46	1170	2	<.01	24	860	6	20	<20	75	.02	<10	67	<10	7	13
43	- PAP 93:DR	25	35	5.6	2.59	80	6	40	<5	4.22	<1	27	74	3701	4.80	.01	<10	2.53	896	<1	.01	29	870	14	25	<20	46	.05	<10	161	<10	5	40
44	- PAP 93:DR	26	5	<.2	2.81	<5	6	60	5	3.65	<1	20	69	147	5.36	.06	<10	2.81	1112	<1	.02	23	800	12	25	<20	43	.13	<10	157	<10	10	47
45	- PAP 93:DR	27	10	<.2	1.54	175	6	40	<5	10.27	2	29	227	32	2.57	.17	<10	2.14	2027	<1	<.01	99	790	2	20	<20	154	<.01	<10	70	<10	4	13
46	- PAP 93:DR	28	5	<.2	2.47	60	4	35	<5	4.90	<1	22	60	433	4.58	.09	<10	2.17	830	<1	.01	28	690	10	25	<20	70	<.01	<10	119	<10	3	16
47	- PAP 93:DR	29	5	<.2	1.69	<5	6	50	15	1.39	<1	15	50	35	3.74	.03	<10	1.36	556	2	.02	3	510	14	20	<20	29	.21	<10	84	<10	22	37
48	- PRO 93:CR	1	5	<.2	1.71	<5	8	60	<5	1.67	<1	19	68	180	3.50	.08	<10	.87	329	7	.05	18	900	20	5	<20	29	.15	<10	73	<10	12	37
49	- PRO 93:CR	2	5	<.2	2.00	10	8	40	10	2.08	<1	26	50	70	4.66	.05	<10	1.59	728	<1	.02	16	590	26	20	<20	44	.15	<10	116	<10	12	109
50	- PRO 93:CR	3	5	<.2	2.52	10	6	50	15	1.61	<1	19	69	62	4.60	.06	<10	1.32	619	3	.04	18	860	24	20	<20	24	.23	<10	101	<10	24	64

PAGE 3

ET#	DESCRIPTION	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
51	PRO 93:CR 4	10	<.2	2.75	10	8	45	10	1.93	<1	20	62	67	4.17	.05	<10	1.34	692	3	.03	14	730	32	20	<20	25	.18	<10	95	<10	19	86
52	PRO 93:CR 5	5	<.2	3.04	60	8	50	10	2.50	<1	19	76	76	5.29	.03	<10	1.11	556	4	.01	23	780	30	25	<20	19	.14	<10	87	<10	16	66
53	PRO 93:CR 6	5	<.2	1.97	5	10	60	5	7.02	<1	24	118	60	3.86	.07	<10	1.99	831	1	.02	29	990	14	25	<20	122	.07	<10	104	<10	10	83
54	PRO 93:CR 7	5	<.2	1.73	25	12	35	5	7.05	8	11	59	62	2.68	.08	<10	1.04	959	19	<.01	28	760	180	15	<20	94	.10	<10	170	<10	13	592
55	PRO 93:CR 8	5	<.2	1.50	5	8	105	5	2.31	<1	14	53	15	2.34	.05	<10	.63	657	9	.01	9	580	10	5	<20	39	.13	<10	77	<10	13	111
56	PRO 93:CR 9	5	<.2	1.65	<5	4	40	5	1.37	<1	18	37	47	2.95	.06	<10	.94	462	1	.04	18	920	10	5	<20	31	.13	<10	87	<10	10	33
57	PRO 93:CR 10	5	<.2	2.12	10	4	40	10	1.54	<1	16	30	21	4.27	.04	<10	1.00	450	2	.01	4	600	10	15	<20	7	.16	<10	90	<10	13	55
58	PRO 93:CR 11	5	<.2	2.35	<5	4	310	5	3.70	<1	31	336	25	4.51	.03	<10	3.88	1036	<1	.01	130	720	4	25	<20	173	.01	<10	106	<10	3	45

QC/DATA:	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	
Repeat #:																															
3 - PAP 93:CR-3	2.8	1.64	110	6	45	<5	5.50	1	9	62	1670	3.40	.08	<10	1.18	1141	3	.01	4	220	10	15	<20	140	.07	<10	48	<10	8	82	
19 - PAP 93:CR 19	<.2	2.60	<5	8	200	<5	4.79	<1	18	102	2491	4.96	1.09	<10	2.88	524	<1	.02	44	1120	16	30	<20	56	.27	<10	189	<10	20	27	
56 - PRO 93:CR 9	<.2	1.62	<5	4	40	<5	1.36	<1	18	37	46	2.91	.06	<10	.93	456	1	.04	19	910	10	10	<20	32	.12	<10	86	<10	10	33	
STANDARD 1991:	1.2	1.93	70	8	160	5	1.86	<1	21	64	86	3.98	.39	<10	1.02	724	<1	.02	30	700	14	5	<20	75	.13	<10	82	<10	12	79	
STANDARD 1991:	1.2	1.87	65	8	165	5	1.75	<1	20	66	88	3.86	.40	<10	1.00	695	<1	.02	29	660	16	5	<20	74	.12	<10	79	<10	11	75	

NOTE: < = LESS THAN


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cc: David Ridley

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PIONEER METALS CORPORATION ETK 93-479  
 1770-401 W. GEORGIA STREET  
 VANCOUVER, B.C.  
 V6B 5A1

ATTENTION: DAVID DUNN

DECEMBER 1, 1993

6 ROCK SAMPLES RECEIVED NOVEMBER 19, 1993  
 PROJECT #: CANIM LAKE  
 SHIPMENT #: 19

VALUES IN PPM UNLESS OTHERWISE REPORTED

ET#	DESCRIPTION	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	- PAP 93: CR 31	5	<.2	1.69	<5	8	90	<5	3.20	<1	30	182	742	4.89	.12	<10	2.01	1015	<1	.03	91	1650	<2	30	80	98	.07	<10	158	<10	11	119
2	- PAP 93: CR 32	5	<.2	2.13	<5	6	45	10	4.05	<1	22	36	48	5.14	.07	<10	1.52	1333	<1	.03	12	700	<2	30	<20	54	.04	<10	142	<10	10	62
3	- PAP 93: DR 30	>1000	20.6	.43	>10000	8	75	<5	.19	>1000	162	1	1835	>15	.05	<10	.04	239	<1	<.01	25	<10	<2	235	<20	27	<.01	20	1	<10	<1	82
4	- PAP 93: DR 31	730	<.2	3.47	5665	6	75	10	1.08	75	57	163	177	7.22	.07	<10	3.23	1380	<1	.02	55	1270	<2	35	<20	28	.09	<10	191	<10	7	79
5	- PAP 93: DR 32	190	<.2	3.08	1855	6	115	5	1.57	21	34	220	158	5.33	.18	<10	3.45	997	<1	.04	89	1610	2	35	100	50	.12	<10	188	<10	11	72
6	- PAP 93: DR 33	130	<.2	2.45	1290	4	85	5	1.55	14	30	123	100	4.67	.15	<10	2.31	909	<1	.03	31	1180	<2	30	<20	37	.12	<10	130	<10	7	51

QC/DATA:


STANDARD 1991: .8 1.96 70 10 175 10 1.91 <1 22 68 93 4.00 .42 <10 1.07 765 <1 .01 28 720 18 25 <20 62 .12 <10 83 <10 11 86

NOTE: < = LESS THAN  
 > = GREATER THAN

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10041 E. Trans Canada Hwy., R.R. #2, Kamloops, B.C. V2C 2J3 Phone (604) 573-5700  
Fax (604) 573-4557

DECEMBER 1, 1993

CERTIFICATE OF ASSAY ETK 93-479  
=====

PIONEER METALS CORPORATION  
17770-401 W. GEORGIA STREET  
VANCOUVER, B.C.  
V6B 5A1

ATTENTION: DAVID DUNN  
-----

SAMPLE IDENTIFICATION: 6 ROCK samples received NOVEMBER 19, 1993

----- PROJECT #: CANIM LAKE

SHIPMENT #: 19

ET#	Description	Au (g/t)	Au (oz/t)
3	- PAP 93: DR 30	74.90	2.184


Fax @: 669-1240

cc: David Ridley

Fax @: 397-2958

Call @: 397-2771 to pick up

SC93/Pioneer#4

  
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Fax (604) 573-4557

NOVEMBER 12, 1993

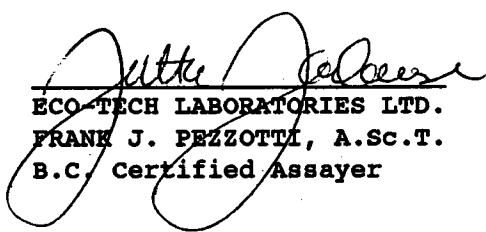
**CERTIFICATE OF ASSAY ETK 93-455**  
=====

PIONEER METALS CORPORATION  
17770-401 W. GEORGIA STREET  
VANCOUVER, B.C.  
V6B 5A1

ATTENTION: DAVID DUNN  
-----

SAMPLE IDENTIFICATION: 58 ROCK SAMPLES received NOVEMBER 4, 1993  
----- PROJECT #: CANIM LAKE  
SHIPMENT #: 14

ET#	Description	Au (g/t)	Au (oz/t)
26 -	PAP 93:CR 26	1.32	.038

  
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