

1996

### **GEOCHEMICAL AND TRENCHING REPORT**

#### ON THE CREST AND PEN CLAIM GROUPS

Nicola, Osoyoos and Similkameen Mining Divisions, B.C. NTS: 92H/16E & 82E/13W Lat. 49°50'N; Long 120°03'W

June, 1997 (BC 1996 ASSESSMENT)

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by

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#### 1.0 SUMMARY AND CONCLUSIONS

The Crest property, located 27 kilometres west of Peachland, B.C., was initially staked in 1989 and 1990 and comprised 43 claims (241 units) in the Similkameen and Nicola Mining Divisions. From 1993 to 1995, a total of 113 units were allowed to expire, and in September 1996 the CREST 11-22 and 25-30 claims lapsed, reducing the property to 110 units in 15 claims. The adjoining Pen property, immediately to the north and east, was staked in 1990 and 1991 and originally comprised 37 claims (310 units) in the Nicola, Osoyoos and Similkameen Mining Divisions. In 1994 and 1995, a total of 190 units lapsed, reducing the Pen group to 120 units in 28 remaining claims. Both groups are owned 100 percent by Fairfield Minerals Ltd. Ongoing exploration, conducted by Company personnel, is focusing on gold targets in granitic and adjacent volcanic-sedimentary rocks.

The Okanagan Connector Highway (97C) passes near the northern Pen claims and numerous logging roads traverse both properties providing excellent access. The claims cover the east and south sides of Pennask Mountain and a south-facing slope extending down to the Trout Creek valley. Topography throughout the area is generally moderate. The lower elevations are extensively covered by glacial till.

Previous work in the area included extensive exploration for copper-molybdenum in the late 1960's during mine development at the Brenda porphyry deposit 4 kilometres to the northeast. Nineteen kilometres to the west, on the Elk property, Fairfield has mined over 50,000 ounces of gold from a high-grade vein system in a similar geological setting to that on the Crest and Pen claims.

The southern and eastern parts of the claim groups are underlain by Jurassic granodiorite of the Pennask batholith, in contact to the north with a large pendant of Triassic Nicola Group volcanics and sediments. Diorite bodies are also present within the Nicola Group. Younger porphyritic intrusions are locally exposed, and some of these occur along a major northeast-trending structural feature in the southwestern Crest area. Several stream sediment and soil sample sites with high gold values straddle this lineament, and gold-bearing quartz-sulphide float has been found nearby. A considerable number of other quartz vein occurrences have been found in a variety of hostrock types. Grab samples from these showings have returned many significant gold values ranging up to 8.5 oz/ton. Observed quartz veins are generally narrow and irregular, with variable attitudes. Limonite and hematite are common vein constituents. Overall sulphide contents are generally low, but local concentrations of pyrite, pyrrhotite, chalcopyrite, molybdenite, arsenopyrite, galena, sphalerite and other minerals have been noted.

Reconnaissance and grid soil sampling undertaken from 1989 to 1995 provided 14,962 samples which identified numerous strong geochemical trends within broad zones of gold enrichment containing many sites with values greater than 50 ppb, up to a high of 1250 ppb Au. During 1996, some anomalous sites were resampled, and limited fill-in grid sampling was conducted on the CREST 9 and PEN 10 claims around existing anomalies. This work generated 37 samples, for a total to date of 14,999 on the Pen and Crest properties. The results confirmed some of the anomalies tested and further defined one of the existing gold trends.

Soil anomaly follow-up and prospecting in 1996 included the collection of 45 rock geochemical samples and 6 stream sediments which were tested for gold and a suite of 30 other elements. Seven of the rock samples yielded anomalous gold values of 120 to 2900 ppb, five of which represent new quartz vein occurrences exposed by recent logging activity.

A 1994 trenching program on the northeast PEN 10 claim near Brenda Lake was successful in locating a bedrock source for high grade gold-quartz float found there. Diorite-hosted veins up to 30 cm wide were exposed, from which chip samples returned gold assays up to 1.4 oz/ton. In 1995, five short diamond drill holes totalling 124.05 m (407 ft.) were completed in the trench area. Several veins up to 35 cm wide were intersected, but no significant gold values were returned.

Also in 1994, trenching on the northern CREST 10 claim revealed shear-hosted quartz vein mineralization and hornfels/skarn alteration zones in a siliceous porphyritic volcanic unit. At one location (Area A), contiguous samples yielded gold values averaging 0.145 oz/ton (~5 g/T) over a 4.0 m length. At the second location (Area B), a continuous chip sample from a similar zone returned 8840 ppb Au (0.258 oz/ton) across 1.0 m. Further trenching adjacent to Area B in 1995 identified additional but sparse gold mineralization, with assays up to 0.056 oz/ton (1.92 g/T). Trenching in 1996, north of areas A and B, encountered hornfels/skarn and carbonate altered volcanic rocks, in addition to shear zones and quartz vein mineralization grading up to 2960 ppb Au (0.086 oz/ton). The best averaged results from 1996 were 1687 ppb Au (0.049 oz/ton) over a length of 3.0 m from a shear zone 15 to 30 cm wide containing several quartz veins. Excavation totalling 939 m (3081 ft.) in 11 trenches has been completed to date on the CREST 10 claim. The overall results from this area are mildly encouraging, although bedrock sources for some of the strongest gold soil anomalies and best-grade float occurrences remain to be determined, and continuity of mineralization has not been established between any of the known occurrences.

Reconnaissance diamond drilling was carried out on the CREST 6 & 8 claims in 1995 to test a prominent northeast trending lineament and possibly associated gold geochemical anomalies described in a preceding paragraph. Three wide-spaced holes totalling 258.46m (848 ft.) were completed. No gold mineralization was encountered, however, the presence of deformed and hydrothermally altered rocks underlying the topographic depression was confirmed. Further exploration potential is envisaged along this structure and along other possible parallel zones to the north that may be the source(s) of these anomalies.

Cumulative exploration results from the Crest and Pen claim groups indicate moderate potential for discovery of an economic gold deposit. Targets include high grade veins and/or a larger tonnage, low grade gold porphyry - type deposit. Although the showings tested to date are of limited extent and overall low grade, a considerable number of gold geochemical anomalies and vein float occurrences remain to be sourced and evaluated. Thus, continued exploration is warranted.

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#### 2.0 RECOMMENDATIONS

Detailed prospecting of gold anomalies and new logging areas should be continued and reconnaissance samples collected from any altered or mineralized rocks. The rock samples should be analyzed for gold (AA) plus 30 elements (ICP). Those with anomalous values should be fire assayed for gold and silver.

More detailed geological examinations and mapping should be conducted within the central property area encompassing parts of the CREST 7-9 and PEN 14, 15, 24 - 27 claims, and all of the CREST 10, PEN 10 & 13 claims. This would help identify lithological and/or structural controls of gold mineralization.

The area described above should be surveyed by VLF-EM and magnetometer to locate possible structures which may have localized gold mineralization.

Localities with mineral occurrences, anomalous gold geochemistry, coincident geophysical signatures and shallow overburden depth (< 4m) should be trenced to bedrock with an excavator. Trenches should be cleaned, mapped and chip sampled. Samples should be tested for gold and silver, plus other selected elements based upon observed mineralogy. A minimum 100 metres of initial trenching is currently recommended for each of the following specific areas, on the basis of existing geochemical and prospecting information:

- Brenda Lake area, NE corner of the PEN 10 claim, between the main road and powerline rightof-way (1995 Drill Area); anomalous gold-in-soil trend from 8850E/9850N (55 ppb Au) to 9150E/9850N (430 ppb Au) to 9400E/9750N (81 ppb Au).
- PEN 3/7 common claim boundary, along existing road acces 1.3 km NNW of Brenda Lake; site and vicinity of PEN 91-R30 quartz float / 5950 ppb Au, 15.1 ppm Ag.
- 3) Northern PEN 3 claim, along same road access as site 2); quartz vein float and quartz-flooded argillite rubble at a rhyolite contact, P96-R9/2490 ppb Au, 4.7 ppm Ag.
- 4) Vicinity of the PEN 10/13 common claim boundary, near the Sunset Forestry Road, at the NW end of an 800-m long soil anomaly that extends from 8600E/7500N (56 ppb Au) to 8150E/8100N (320 ppb Au) and rock sample sites PEN94-R15, 15C/2430 and 1160 ppb Au.

Contingent upon favourable results from the above, further trenching followed by diamond drill testing would be required.

Respectfully submitted

FAIRFIELD MINERALS LTD.

E.A. Balon, P. Geo.

#### 3.0 INTRODUCTION

#### 3.1 Location and Physiography (Figures 1 and 2)

The Crest/Pen claim block is centered about 30 kilometres west-northwest of Peachland in south-central British Columbia (Figure 1), at latitude 49°50'N and longitude 120°03'W on NTS map 92H/16E. The Sunset Forest Service Road leads from the Okanagan Connector Highway (97C) to the Brenda Lake area of the Pen claims, and an extensive network of logging roads and power line trails provide good access to most parts of the properties. Alternate access is by way of the Brenda Mine road from Peachland, then west on the Headwater Lakes road and continuing west on Peachland Main logging road which crosses the southern Crest claims.

The current claims cover 5700 hectares to the south and east of Pennask Mountain, down to Trout Creek valley and Headwater Lakes. Pennask Creek flows northerly from the western Pen claims, and Peachland Creek flows east through a steep canyon into Peachland Lake. Several creeks run southerly across the Crest and southeastern Pen claims into Crescent Lake and Headwater Lakes. Elevations range from 1300 m to 1800 m above sea level and topography is generally moderate, with local steep slopes. Glacial till is widespread, particularly below 1500 m elevation, and varies in depth from less than 1 metre to over 10 metres. At higher elevations, bedrock exposure is locally abundant. Pine, fir and spruce form dense forests on lower slopes, but trees are interspersed with grassy meadows at higher elevations. Several large plots have been clear-cut logged within the last ten years and some older logged areas on the eastern claims have regrown very densely. Annual temperatures range from -20°C to +30°C and precipitation is low to moderate. The area is basically free of snow from mid June through October.

#### 3.2 Claim Data (Figure 2, Table 1)

The Crest property originally contained 209 units in 30 claims staked in 1989, and was expanded in 1990 to 241 units in 43 claims. During 1993 and 1994, the CREST 2, 3, 5 and 31 claims (80 units) were allowed to lapse and in 1995 the CREST 1, 4, and 40-43 claims (33 units) were canceled, leaving 128 units in 33 claims. In September 1996, the CREST 11-22 and 25-30 claims (18 units) lapsed, reducing the property to 110 units in 15 claims. The Pen group originally comprised 37 claims (310 units) staked in 1990 and 1991. In 1994 and 1995, the PEN 1, 2, 4-6, 8, 9, 11 and 12 claims (180 units) were allowed to lapse, and the PEN 3 claim was reduced from 20 units to 10, leaving 120 units in 28 claims.

The current status of all remaining Crest and Pen claims is indicated in Table 1 and their locations are shown on Figure 2. The claims, located in the Nicola, Osoyoos and Similkameen Mining Divisions, are 100 percent owned by Fairfield Minerals Ltd.

#### 3.3 History

Little prior exploration has been documented for the area covered by the Crest claims. One assessment report (No. 850) is available describing an induced polarization survey conducted in 1966. There is no history of gold exploration in the present claim area, however minor placer gold has been won from lower North Trout Creek about 3 km to the southwest (D. E. Agur, 1987, pers. comm.).

Intermittent prospecting and reconnaissance sampling were carried out by Fairfield in the Crest area from 1986 through 1989, and by Placer Dome Inc. during 1989. Significant gold analyses, as well as scattered high values in silver, lead, zinc, copper, arsenic and molybdenum were returned from stream sediment, soil and rock samples. These results prompted staking of the initial 30 Crest claims in 1989. Following acquisition, 661 soil samples were collected at 50 metre intervals on wide-spaced lines along roads traversing much of the claim group. Anomalous gold values up to 270 ppb were returned from sites on the southern and eastern claims. In 1990, the CREST 31-43 claims were added.

Much of the present Pen property area was extensively explored for copper and molybdenum during exploration and development of the Brenda deposit one kilometre to the east. Airborne magnetometer, soil geochemistry and IP survey results are documented in various 1966 to 1969 assessment reports. Open-pit production from 1970 through 1990 at the Brenda Mine totalled 177 million tonnes grading 0.17% Cu and 0.043% Mo with minor but significant silver and gold values.

Prospecting and reconnaissance sampling by Fairfield from 1986 to 1991 in the Brenda area revealed gold mineralization in three separate localities, hosted by quartz veins and/or sulphide skarn pods. Rock grab samples returned values up to 0.18 oz/ton Au and stream sediment samples gave anomalous values for Au, Ag, Cu, Zn, Mo and As. These results prompted staking of the original Pen group in 1990 and 1991.

From 1990 to 1995, extensive grid soil sampling (200m x 50m) was conducted on the combined claim block and fill-in (50m x 50m) sampling was completed around many anomalous sites. A total of 14,962 samples were collected (Crest: 7665, Pen: 7297) and all were analyzed for gold. Numerous elevated values up to 1250 ppb Au were returned and these results outlined several strong gold geochemical trends.

During 1990 and 1991, prospecting and reconnaissance rock sampling revealed numerous gold/silver-bearing quartz vein and stringer occurrences on the CREST 10 and PEN 13 claims. Samples of vein float material returned assays of up to 8.5 oz/ton Au and 35.7 oz/ton Ag. In 1994, initial trenching was undertaken to test some of these occurrences and coincident strong soil anomalies. Six trenches totalling 594 m in length were excavated in two areas. Extensive shearing with local quartz veining in silicified volcanics and hornfels/skarn alteration zones were encountered. Gold values of  $\geq$ 300 ppb were determined in 35 (15%) of the 230 trench bedrock samples collected. The best averaged results included 0.145 oz/ton Au (~5.0 g/T) over 4.0 m in Area A and 0.258 oz/ton Au (8.8 g/T) over 1.0 m in Area B. In 1995 prospecting was continued, and two trenches totalling 111 m were excavated in a northern extension of Area B to test additional soil anomalies and mineral occurrences. Several quartz veins and sheared intervals with alteration were exposed, and assays up to 0.056 oz/ton Au (1.9 g/T) were returned from bedrock chip samples. All trenches in Areas A and B were reclaimed and grass seeded.

From 1991 through 1995 prospecting around anomalous soil sites led to the discovery of additional mineral occurrences on the Pen property, predominantly vein-type, which yielded analyses up to 112,000 ppb Au (3.2 oz/ton) and 35,800 ppb Au (1.0 oz/ton). Trenching in 1994 at one of these showings, near Brenda Lake (PEN 10), uncovered gold-quartz veins from which a 65-cm continuous chip sample assayed 1.4 oz Au per ton. Five short holes totalling 124.05 m (407 ft.) were diamond drilled in 1995 as an initial test

for continuity and extent of mineralization. Four of the holes intersected quartz  $\pm$  calcite veins up to 35 cm wide, but no gold assays >0.02 oz/ton (0.65 g/T) were returned from core samples. Reclamation of all trench and drill sites was carried out.

Also in 1995, a prominent northeast trending structural feature with adjacent strong gold geochemical anomalies on the CREST 6 & 8 claims was tested by diamond drilling. Three widely spaced NQ size holes were drilled for a total of 258.46 m (848 ft.). No significant mineralization was encountered, although the presence of a quartz-feldspar porphyry dyke and deformed and hydrothermally altered rock was indicated beneath the topographic depression.

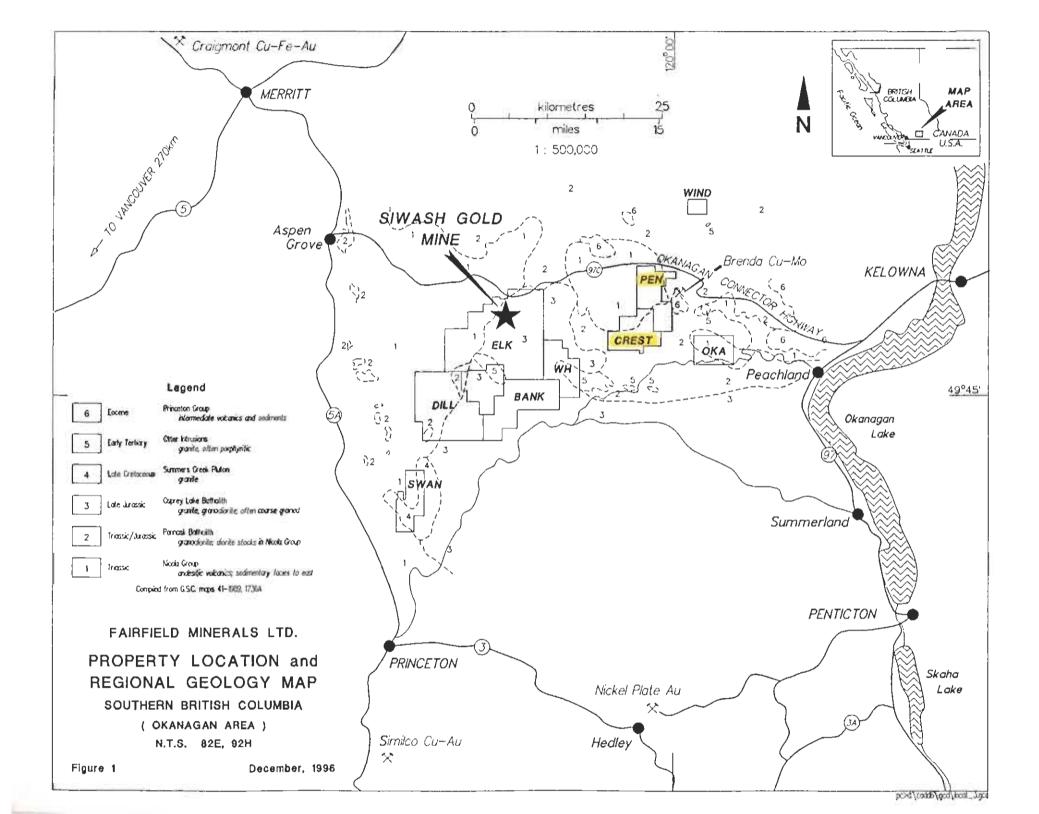
#### 3.4 1996 Exploration Program

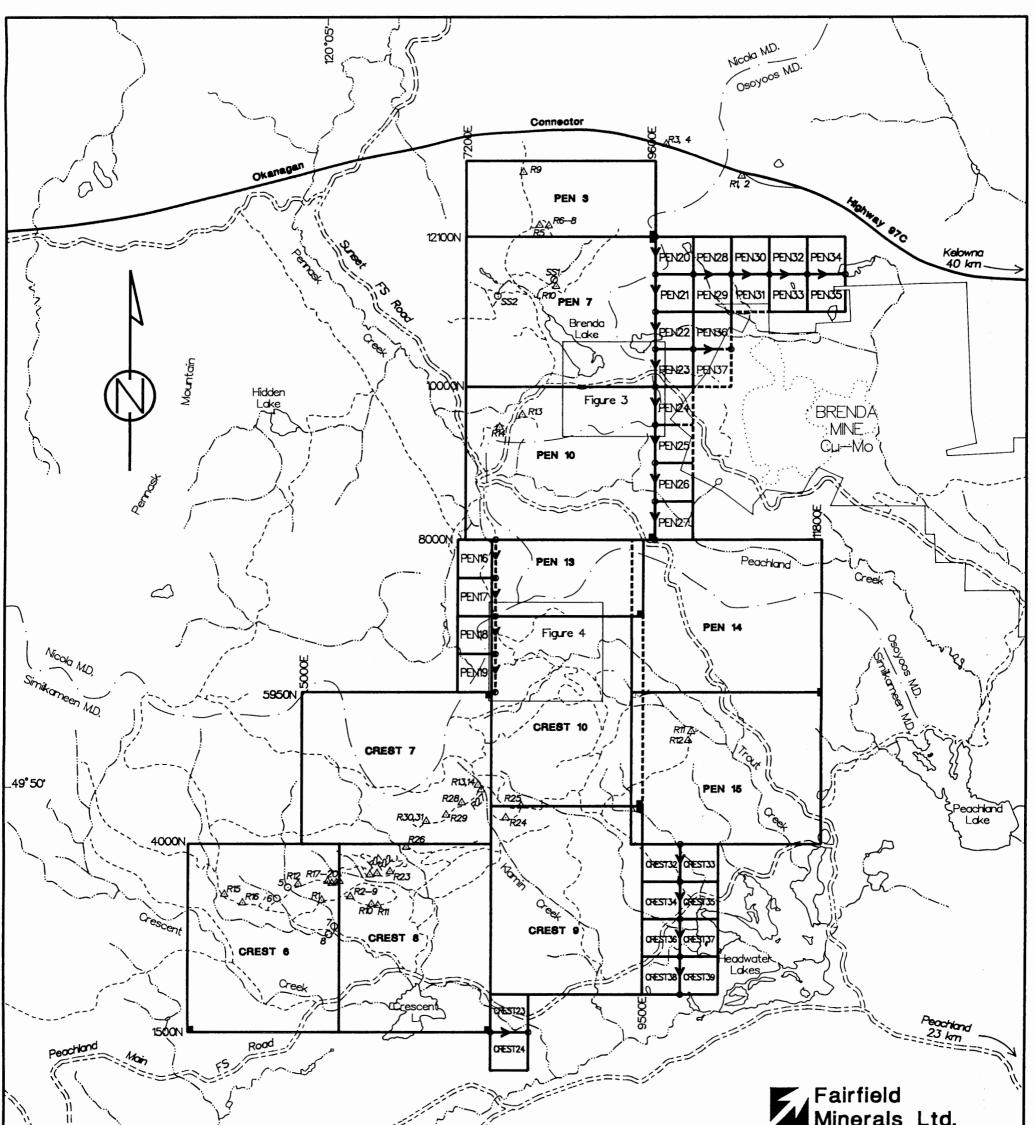
The 1996 program comprised 65 person-days of field work apportioned as to 6 for grid location and fill-in soil sampling, 16 for anomaly evaluation and prospecting, and 43 for trenching related activities including roadbuilding and reclamation.

Limited fill-in grid soil sampling, which entailed some hand augering in swampy terrain, was carried out on a portion of the PEN 10 claim near the 1994 trench and 1995 drill sites. Twenty-one samples from this (Brenda Lake) area were analyzed for gold by AA and for 30 elements by ICP. Nine closely spaced auger samples were collected in deep till around two existing anomalous sites on the CREST 9 claim; these were tested only for gold. Seven other existing anomalous Au-in-soil sites, on the CREST 7 and PEN 15 claims, were resampled and analyzed for gold and 30 elements.

Reconnaissance prospecting in areas of active and recent logging and follow-up of soil anomalies on various claims involved the collection of 45 rock samples (Crest: 31, Pen: 14) and 6 stream sediment samples (Crest: 4, Pen: 2). All of these were tested for gold plus 30 elements.

Eleven hundred metres of access road was constructed and three trenches totalling 234 m were excavated to further test gold occurrences and soil geochemical anomalies, mainly on the CREST 10 claim. The trenches and a 9 m segment of roadcut were cleaned, mapped and selectively sampled. Fifty basal soil samples and 100 bedrock samples were collected and analyzed for gold; 60 of the rock samples were also tested for Ag, As, Cu, Mo and Zn.





			0 1000 2000 m
	LEGEND	L'	FAIRFIELD MINERALS LTD.
	CEGEIND O	Stream Sediment sample site	1980 — 1055 West Hastings Street Vancouver, British Columbia V&E 2E9
CREST 9 Claim Boundary and Name	5	Somple Number prefixes omitted: L46- on CREST claims, P96- on PEN claims	CREST AND PEN PROPERTIES
Legal Corner Post for 4-Post Claims	Δ	Reconnaissance Rock sample site Sample Number prefixes omitted: C96– on CREST claims, P96– on PEN claims	Nicola, Osoyoos, and Similkameen M.D. NTS 92H/18 & 82E/13, 8C.
hitid and Find Posts and Location Line Direction for 2-Post Claims		Mining Division Boundary	COMPILATION MAP SCALE 1 : 50,000
5950N Grid Line Number	==	Access Roads, Trais	Drawn by DHR December, 1996 Figure 2

pc>d:\cadd8\gcd\outprops\general\cpcloim.gcd

Table 1

# CREST PROPERTY CLAIM STATUS

# NTS: 92/H - 16E Similkameen Mining Division, British Columbia

CLAIM	UNITS	TENURE NO.	EXPIRY DATE
CREST 6	20	249643	14 SEP 1997
CREST 7	20	249644	16 SEP 1999
CREST 8	20	249645	16 SEP 1999
CREST 9	20	249646	17 SEP 1999
CREST 10	20	249647	16 SEP 2000
CREST 23	2-post	249668	29 SEP 1997
CREST 24	2-post	249669	29 SEP 1997
CREST 32	2-post	249930	11 OCT 1999
CREST 33	2-post	249931	11 OCT 1999
CREST 34	2-post	249932	11 OCT 1999
CREST 35	2-post	249933	11 OCT 1999
CREST 36	2-post	249934	11 OCT 1999
CREST 37	2-post	249935	11 OCT 1999
CREST 38	2-post	249936	12 OCT 1999
CREST 39	2-post	249937	12 OCT 1999
15 CLAIMS	100 UNITS		
	+ 10 2-post CLAIMS		

# Table 1 (continued)

# PEN PROPERTY CLAIM STATUS

NTS: 92/H - 16E	
Nicola Mining Division, British Columbia	(Pen 3-7, 16-19)
Osoyoos Mining Division, British Columbia	(Pen 10, 20-37)
Similkameen Mining Division, British Columbia	(Pen 13-15)

CLAIM	UNITS	TENURE NO.	EXPIRY DATE
PEN 3	10	237579	1 SEPT 1997
PEN 7	20	237583	1 SEPT 1997
PEN 10	20	247305	1 SEPT 1998
PEN 13	8	249890	31 AUG 1999
PEN 14	20	249891	2 SEPT 1997
PEN 15	20	249892	2 SEPT 1999
PEN 16	2-post	237588	3 SEPT 1998
PEN 17	2-post	237589	3 SEPT 1998
PEN 18	2-post	237590	3 SEPT 1999
PEN 19	2-post	237591	3 SEPT 1999
PEN 20	2-post	305864	11 OCT 1997
PEN 21	2-post	305865	11 OCT 1997
PEN 22	2-post	305968	11 OCT 1997
PEN 23	2-post	305899	11 OCT 1997
PEN 24	2-post	305900	11 OCT 1997
PEN 25	2-post	305901	11 OCT 1997
PEN 26	2-post	305902	11 OCT 1997
PEN 27	2-post	305903	11 OCT 1997
PEN 28	2-post	305904	11 OCT 1997
PEN 29	2-post	305905	11 OCT 1997
PEN 30	2-post	305906	11 OCT 1997
PEN 31	2-post	305907	11 OCT 1997
PEN 32	2-post	305908	11 OCT 1997
PEN 33	2-post	305909	11 OCT 1997
PEN 34	2-post	305910	11 OCT 1997
PEN 35	2-post	305911	11 OCT 1997
PEN 36	2-post	305912	11 OCT 1997
PEN 37	2-post	305913	11 OCT 1997
28 CLAIMS	98 UNITS		

+ 22 2-post CLAIMS

#### 4.0 GEOLOGY

#### 4.1 Regional Geology (Figure 1)

Regional geology in the Crest/Pen property area is shown on the northeast part of GSC Map 41-1989, Hope, by J.W.H. Monger, 1989 and the northwest part of GSC Map 1736A, Penticton, by D.J. Templeman-Kluit, 1989 which are condensed on Figure 1.

The Crest and Pen claims are underlain by part of a large pendant consisting of volcanic and sedimentary rocks of the Late Triassic Nicola Group which has been intruded by plutonic rocks of the Early Jurassic Pennask and Late Jurassic Osprey Lake batholiths. Nicola Group lithologies consist primarily of andesitic to basaltic flows and tuffs with interspersed argillite, siltstone and impure limestone beds or lenses. A prominent unit of siliceous feldspar porphyry, informally termed the Peachland Creek Formation, hosts many of the important gold occurrences on the CREST 10 and PEN 13 claims, and may represent the lowermost part of the Nicola Group (Dawson and Ray, 1988). The intrusive units include white to grey, medium to fine grained Pennask granodiorite, and lesser, reddish coarse grained Osprey granite. A number of younger dykes and stocks (?) are present in various locations.

Quartz veining is locally abundant and most prevalent near the edges of the batholiths and in porphyry bodies. Porphyry style copper-molybdenum mineralization has been mined from Pennask intrusive rocks at the Brenda deposit near the Nicola pendant, east of the Pen claims.

#### 4.2 Property Geology and Mineralization

The geology of the Pennask Mountain area, which covers most of the claim groups, was mapped at 1:25,000 scale by G.L. Dawson and G.E. Ray of the B.C. Ministry of Energy, Mines & Petroleum Resources (BCMEMPR open file map 1988-7). No property-scale mapping has been conducted to date, however geological observations have been made by Fairfield personnel in and around the present property area during prospecting, detailed trench mapping and reconnaissance sampling since 1986.

Dawson and Ray (1988) subdivided the Nicola Group underlying most of the property into three northeast-striking, northwest-younging formations. The easternmost part, the Peachland Creek Formation, consists of basaltic to dacitic flows and tuffs and a siliceous feldspar porphyry unit. The central Stemwinder Mountain Formation consists predominantly of black argillite locally overlying thin sections of conglomerate, limestone and limy siltstone. The youngest rocks, to the west, are bedded to massive andesitic tuffs with minor interbedded argillite.

Large blocks of schistose rocks occur in the north-central Crest claims near the Nicola contact. These may be xenoliths of volcanic and sedimentary rocks which have been partially melted and recrystallized during intrusive events, or they may be screens of basement rocks which were brought up by the magma body. Small dykes and sills of unknown age and various compositions are locally exposed in several areas of both claim groups.

Jurassic intrusive rocks underlying the southeastern half and northeastern extremity of the current property area consist mainly of granodiorite with minor coarse reddish granite. Aplite dykes are also present and may represent a late stage of the intrusions. Locally, batholithic rocks are cut and altered by younger, porphyritic intrusions of probable Late Cretaceous or Early Tertiary Age (Otter Intrusions). Several of these guartz-feldspar porphyry dykes and stocks (?) are present in apparent alignment with a major northeastsouthwest topographic/structural lineament passing about one kilometre north of Crescent Lake. Along or near this feature, local zones of fracturing and shearing in the older granitic rocks are accompanied by rusty clay alteration and occasional guartz-carbonatesulphide veining. Several stream sediment and soil sample sites with very high gold values (up to 405 and 720 ppb respectively) straddle the lineament, and samples of guartz-sulphide vein float found near some of these sites on the CREST 6, 8 and 11 (lapsed) claims have yielded analyses up to 1680 ppb Au (0.049 oz/ton) and 87.0 ppm Ag (2.5 oz/ton). Observed sulphide mineralization is mainly pyrite with sparse occurrences of galena, sphalerite, chalcopyrite and possibly tetrahedrite. The lineament was tested by diamond drilling in 1995, but did not yield any significant values.

Near the northern Pen claims, extensive bedrock exposure in roadcuts along the Okanagan Connector Highway (97C) consists mostly of Nicola volcanic and sedimentary rocks in contact with granodiorite to the east. Both major units in this area are locally cut and altered by felsic dykes up to several metres wide. Local zones of strong fracturing are accompanied by clay alteration, disseminated sulphides and, in some places, quartz±sulphide veins or masses. A grab sample collected in 1990 from a narrow quartz vein cutting granodiorite in this area returned 6220 ppb (0.18 oz/ton) Au.

Near Brenda Lake, on the PEN 10 claim, several gold-quartz occurrences have been located within an area measuring about 450 metres in diameter. These are hosted in diorite and altered Nicola volcanics cut by feldspar porphyry dykes. Grab and chip samples from, or near, the main vein showings (Trench PE94-1) yielded gold values up to 35,800 ppb (1.0 oz/ton) and 1.40 oz/ton (48g/T), with associated anomalous bismuth and tungsten. Drilling at this locality in 1995 revealed several quartz veins from 1 cm to 35 cm in width, however, gold values of the intercepts were low. Approximately 150 metres to the southeast of Trench PE94-1, visible gold and bismuth mineralization are present in quartz float and outcrop. Selected grab samples from this occurrence have returned analyses up to 112,000 ppb Au (>3 oz/ton) and 2881 ppm Bi (PEN95-R2 & PEN94-R22).

Also on PEN 10, at the headwaters of Peachland Creek, narrow quartz veins cut black argillite outcrop. Selected vein chips of quartz with disseminated pyrite and galena returned values up to 4920 ppb Au (0.14 oz/ton) and 31.2 ppm Ag (0.91 oz/ton). Dark grey to black limestone is locally interbedded with the argillite, and this assemblage is intruded by small bodies of porphyritic granite. Farther to the north, at the PEN 3 southern claim boundary, significant gold-bearing limonitic and hematitic quartz float containing 5950 ppb Au (0.17 oz/ton) and 15.1 ppm Ag has been found in similar terrane (Sample PEN 91-R30).

On the CREST 10 and PEN 13 claims, the periphery of the large pendant of Nicola rocks is strongly silicified, with abundant disseminated pyrite and pyrrhotite and local calcsilicate hornfels or skarn development. Locally abundant quartz veins and stringers cut variably altered siliceous volcanics (upper Peachland Creek Formation). The quartz is glassy grey to opaque white or rosy with generally sparse disseminated pyrite and minor fine black grains, possibly specular hematite. Veins located to date appear to be irregular and discontinuous, with variable orientations. Some of the larger ones are pegmatitic, containing coarse intergrown micas and feldspar. Grab and chip samples from individual veins up to 10 cm wide and from altered rock with stringers or veinlets have returned several gold analyses greater that 1000 ppb, including 4280 ppb Au (0.12 oz/ton) and 8640 ppb (0.252 oz/ton Au, L44-R4, 1986). Also, a small sample of similar hematitic quartz chips in overburden yielded assays of 8.534 oz/ton Au and 35.72 oz/ton Ag (C90-R13, 1990).

The style and distribution of mineral showings found to date in the above area suggest the presence of a substantial mineralized system. Many significant gold grades have been returned from samples of sulphide-lean quartz veins. These occurrences contain hematite and/or strongly anomalous Bi±W±As±Mo coincident with high gold values. Such vein mineralogy and elemental associations are characteristics of gold porphyry-type deposits, as recently described in published literature (Hollister, 1992). As well, the overall geological environment at Crest and Pen is similar to that on Fairfield's Elk property 19 km to the west. At Elk, high-grade gold-quartz veins are hosted by the Osprey batholith and adjacent Nicola volcanic rocks. Although most of the known veins at Elk contain abundant sulphides (mainly pyrite), extensive ore sampling results also show a significant gold-bismuth correlation.

#### 5.0 GEOCHEMISTRY

#### 5.1 Introduction

Geochemical work on the Crest and Pen properties in 1996 consisted of limited fill-in grid soil sampling and resampling of some anomalous sites, reconnaissance rock sampling and minor stream sediment sampling. Totals of 37 soil and 45 rock and 6 stream sediment samples were collected. Additionally, 42 soil sample pulps (-80m fractions) from a 1993 survey area were retested by other analytical methods.

#### 5.2 Sampling/Analytical Procedures

Soil sample locations were established by compassing and chaining from the existing grid stations, and were similarly marked with grid-numbered waterproof Tyvek tags plus orange and blue flagging. Samples were collected from the "B" horizon with hand augers or mattocks and placed in Kraft paper bags marked with the appropriate grid coordinates. The soils were sent to Acme Analytical Laboratories Ltd. in Vancouver where they were dried, sieved and the -80 mesh fraction tested for gold content. Each sample was analyzed for gold by atomic absorption (AA) following aqua regia digestion and MIBK extraction from a 10-gram subsample. Selected samples, including all duplicates from previous anomalous sites, were also analyzed for 30 elements by ICP from 0.5-gram cuts. Forty-two soils collected in 1993 were rerun for gold by GFAA and tested for 34 additional elements by Ultratrace ICP analysis, on 15-gram splits.

Stream sediment samples were dried and sieved, and a 30-gram cut of the -80 mesh fraction was analyzed for gold using the same procedure as for soils. Stream sediments were also analyzed for the 30 element ICP suite.

Rock sample sites were marked with numbered pink flagging and, wherever possible, grid-referenced to local soil stations. The rock samples had an average weight of 1 to 2 kilograms with chips ranging from 1 to 7 cm in diameter. They were shipped to Acme Analytical Laboratories Ltd. in Vancouver where they were each crushed to minus 3/16 inch then 250 grams split out and pulverized to minus 100 mesh. All were analyzed for gold from 30-gram subsamples, by the same method as that used for the soils. Additionally, 30-element ICP determinations were made from 0.5-gram subsamples.

#### 5.3 Soil and Stream Sediment Results

Certificates of analysis for all 1996 samples are contained in Section 11, and soil geochemical grid coordinates relative to claim boundaries are shown on Figure 2.

On the PEN 10 claim near Brenda Lake, previous soil sampling programs have identified a 600 -m long easterly trending belt of gold anomalies with values to 430 ppb Au. This geochemical trend is located about 200 m north of high grade gold occurrences explored by trenching and drilling in 1994/95. During 1996 additional fill-in sampling, including resampling of a few existing stations, was conducted in this area. Twenty-one soil samples were collected, 9 of which were obtained by hand auguring to recover suitable "B" or "C" horizon material in boggy ground. The results, together with cumulative earlier

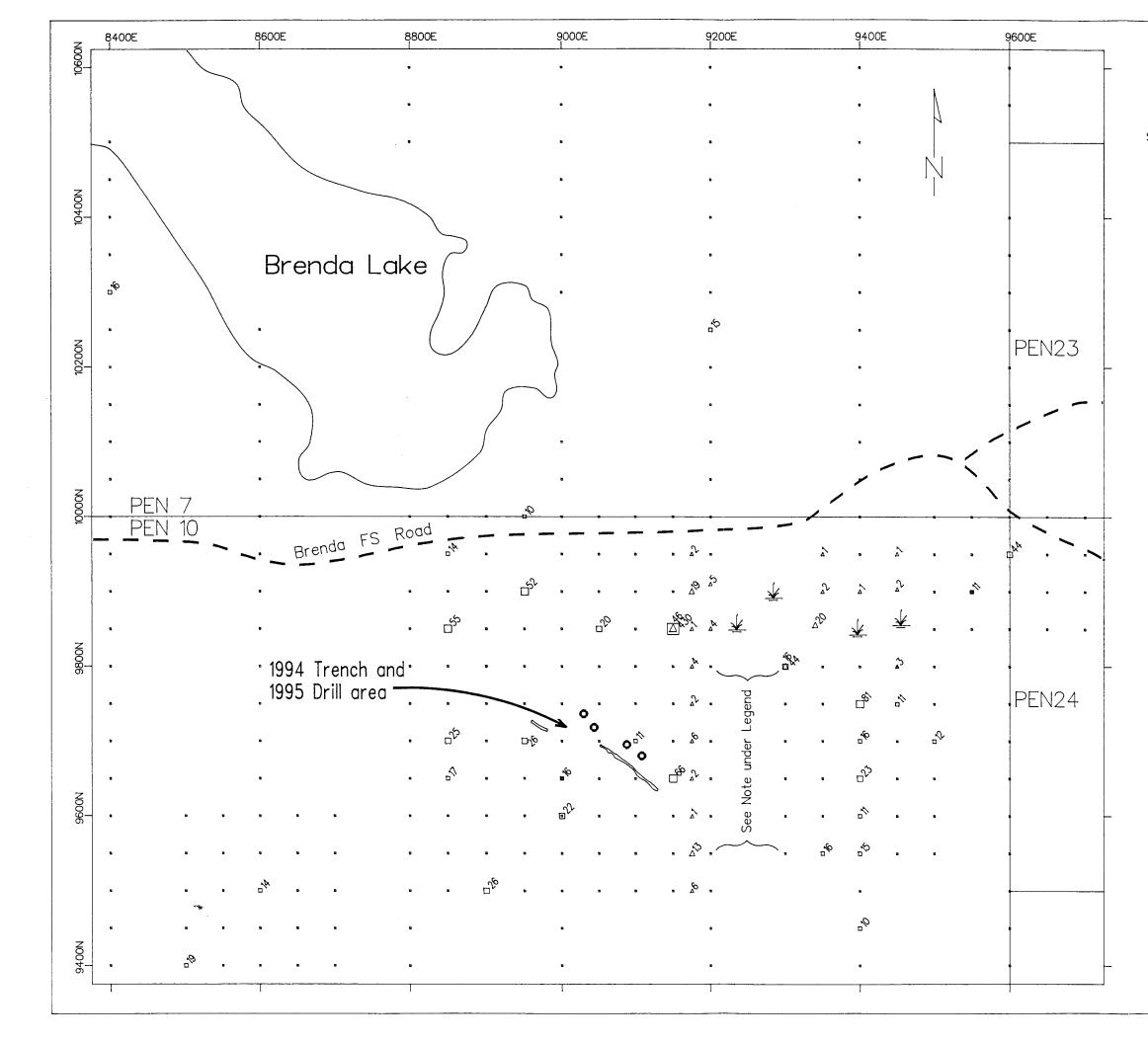
data, are presented on Figure 3. Increasing symbol sizes correspond to values <10,  $\geq$ 10,  $\geq$ 20,  $\geq$ 50, and  $\geq$  100 ppb Au. Values greater than 20 ppb Au are considered significant anomalies, whereas those below 10 ppb are background levels and are not posted. Resampling by auger at 9150E/9850N (430 ppb Au, 1995) and 9300E/9800N (44 ppb Au, 1994) confirmed these anomalies, with 1996 values of 46 and 16 ppb Au, respectively. Continuity of the overall gold trend was also confirmed by weakly anomalous results from 9340E/9855N (20 ppb Au) and 9175E/9900N (19ppb Au).

No anomalous Ag, Bi, or Cu values were determined from the 1996 Brenda Lake area soil samples, although moderately elevated levels of Pb (13 - 16 ppm in 3 samples) and Zn (100 - 131 ppm in 6 samples) were detected. Re-analysis of 42 samples from the adjoining 1993 grid to the southwest confirmed anomalous or threshold Au values ( $\geq$ 10 ppb) at four of eight stations, and generated anomalous Au results for two stations with previous background values. The 1996 Ultratrace ICP analyses and original (1993) ICP results reveal low to moderate correlations between elevated Au and Ag ± As ± Bi ± Zn.

Soil auger sampling was conducted at 10 and 15 m spacings north (up-ice) of two anomalous sites on the CREST 9 claim in an area of deep glacial till. An aggregate sample was collected from 3 to 6 auger probes within a 3m radius at each site, and an average depth was calculated as listed below. The presence of many cobbles and tree roots severely limited depth of penetration at most sites. No analyses greater than 9 ppb Au were returned, and the original anomalies were not confirmed.

Anomalous Site:	Northing of Auger Sample:	Avg. Auger Sample Depth:	ppb Au:
8800E/3500N (141 ppb Au)	3500N	0.675 m	2
	3515N	0.58 m	1
	3530N	0.60 m	9
	3540N	0.63 m	3
9000E/3500N (167 ppb Au)	3500N	0.64 m	3
	3510N	0.59 m	4
	3520N	0.33 m	2
	3530N	0.44 m	5
	3540N	0.48 m	3

Six stream sediment samples were collected from locations on the CREST 6 and PEN 7 claims (Figure2). Sample P96-SS1, from a short drainage adjacent to a newly discovered goldbearing quartz vein in argillite (P96-R10/833 ppm Pb, 1071 ppb Au), yielded anomalous Au -18ppb, As -180 ppm, Mo - 22 ppm and Zn - 548 ppm. The other five samples returned insignificant results with the exception of Ag - 2.6 ppm in L46 - 8 draining granodiorite terrane.



## LEGEND

SOIL SAN	IPLE SITES	
1996	1990 to 1995	
۵	9	LESS THAN 10 ppb Au
Δ	۵	GREATER THAN OR EQUAL TO 10 ppb Au
Δ		GREATER THAN OR EQUAL TO 20 ppb Au
$\bigtriangleup$		GREATER THAN OR EQUAL TO 50 ppb Au
$\bigtriangleup$		GREATER THAN OR EQUAL TO 100 ppb Au

Pre-1996 Values less than 10 ppb Au not posted



NOTES: Map Area keyed on Figure 2.

Grid as plotted is idealized; actual distance between Lines 9200E & 9300E from 9550N to 9800N is much shorter than shown.

0 100 200 m

FAIRFIELD MINERALS LTD. 1980 – 1055 West Hastings Street Vancouver, British Columbia V6E 2E9

**PEN PROPERTY** Nicola, Osoyoos, and Similkameen Mining Divisions NTS 92H/16E & 82E/13W, BC.

AU SOIL C	EOCH	EMISTRY
BRENDA	LAKE	AREA

# SCALE 1 : 5000

Drawn by DHR December, 1996

Figure 3

pc>dt\cadd6\gcd\soils\pen\bren5000.gcd

#### 5.4 Anomaly Evaluation and Prospecting

Six soil sample sites on the CREST 7 claim and one on the PEN 15 claim were resampled during anomaly evaluation and follow up as outlined below:

Anomalous Site:	Original Au analysis and year	1996 Au analysis
5150E/4250N	67 ppb (1994)	<1 ppb
5150E/4450N	5 ppb (1994)	3 ppb
5200E/4350N	82 ppb (1990)	2 ppb
6900E/4600N	61 ppb (1990)	2 ppb
7000E/4700N	121 ppb (1990)	62 ppb
7500E/4000N	540 ppb (1990)	5 ppb
9850E/5350N	1250 ppb (1995)	1 ppb

All of these duplicate sites are within areas of existing 50 x 50 m sampling density. The original analyses from the first 3 sites listed above identified an anomalous area which resampling completely failed to reproduce. The 1990 values from 6900E/4600N and 7000E/4700N are part of a larger trend of anomalous gold that was only partly confirmed. Resampling at 9850E/5350N, within a large area of gold anomalies, failed to confirm the original Au analysis, which is the highest value obtained to date from soil sampling programs on the Crest and Pen properties.

Prospecting was conducted around selected gold soil anomalies and along new logging roads on the CREST 6-9 and PEN 7, 10 & 13 claims. Further sampling was also done in several areas where gold occurrences had been found previously. Forty-five reconnaissance rock samples were collected; their locations are shown on Figure 2. Sample types and descriptions together with selected analytical results are given in Table 2, and complete analyses for all 30 elements tested are included in Section 11.

Thirty-one of the rock samples were collected on the Crest claims, mainly from narrow shear zones in Fe/Mn - clay - carbonate altered granodiorite. On the existing Pen claims and one adjacent area (former PEN 4), 14 samples were obtained principally from quartz vein occurrences in argillaceous rocks cut by rhyolite dykes. Seven samples comprising 2 from Crest and 5 from Pen returned anomalous gold results from 120 ppb up to 2,900 ppb (2.9g/T or .085 oz/t). Six of these contained quartz vein material, five of which represent new occurrences exposed by recent logging road construction. Coincident highs of other elements in the significant gold-bearing samples include one or more of Ag (62.9 ppm), As (630 ppm), Bi (1,534 ppm), Cu (926 ppm), Mo (57 ppm), Pb (833 ppm) and W (40 ppm). The three best grade samples, P96-R9/R10/R13 (2,490/1,071/2,900 ppb Au), are from argillite-hosted pyrite and galena-bearing quartz veins similar to several occurrences found during previous work in the area of the western PEN 3, 7, & 10 claims; these include L130-R1 (1986)/4920 ppb Au, P91-30 (1991)/5950 ppb Au, P94-R1, R17 (1994)/1530 and 1070 ppb Au.

\*\*\*\*

# RECONNAISSANCE ROCK SAMPLES (see Figure 2)

Sample	Claim		Analyses: Au-ppb, others-ppm (bracketed value denotes re-analysis)				
Number	Location	Type and Description	<u>A</u> u	Ag	Cu	Pb	Zn
C96-R1	Crest 6	Composite of 0.20m/0.30m & 0.75m channels, at 1.50m apart, across clay altd shear zone in grdr.	34	<0.3	91	24	117
C96-R2	Crest 8	0.95m channel across clayey shears and intervening carb altd grdr.	2	<0.3	36	27	202
C96-R3	Crest 8	0.70m channel across strongly carb (ankerite-siderite) altd grdr.	1	<0.3	32	105	1931
C96-R4	Crest 8	0.25m channel across clay altd shear zone in grdr.	<1	<0.3	30	16	157
C96-R5	Crest 8	Composite of 3x0.30m channels, at 1.00m spacing, across clayey shear and adjacent decomposed grdr.	2	<0.3	41	63	230
C96-R6	Crest 8	0.60m channel across clayey shears and intervening carb altd flsp porph dyke (?).	<1	<0.3	62	20	160
C96-R7	Crest 8	0.75m channel across shear zone in grdr; strong clay-carb altn.	<1	<0.3	23	97	1492
C96-R8	Crest 8	0.25m channel across shear zone; stongly carb altd grdr and/or flsp porph (?) w/2.5cm clear qz vn.	7	<0.3	32	7	152
C96-R9	Crest 8	0.35m channel across shear zone; clay-carb altd grdr or flsp porph (?).	5	<0.3	27	29	497
C96-R10	Crest 8	0.70m chip across silic volc inclusion between clayey shears/grdr contacts. Dissem py, pyh, trace Aspy	64 (78)	0.3 (<0.3)	210 (209)	9 (10)	320 (324)
C96-R11	Crest 8	0.30m channel across shear zone in grdr; strong clay altn.	2	<0.3	21	28	160
C96-R12	Crest 6	Grab, qz vn float; 8.5x12x18.5cm cobble semi-glassy to sugary-text qz w/sparse rusty specks	1	<0.3	4	4	11

Sample	Claim		Analyses: Au-ppb, others-ppm (bracketed value denotes re-analysis)				
Number	Location	Type and Description	Au	Ag	Cu	Pb	Zn
C96-R13	Crest 7	1.50m channel across shear zone; strongly clay altd, decomposed grdr.	3	<0.3	45	<3	99
C96-R14	Crest 7	Grab, qz vn float; angular pcs 4-5cm thick x 7cm long, opaque to semi- clear ribbon qz w/chlor + musc partings.	2	<0.3	2	<3	19
C96-R15	Crest 6	Selected grabs along ~ 25m section of rusty subcrop; calc-sil hnfls w/dissem py, pyh, trace cp.	30	0.3	219	3	55
C96-R16	Crest 6	0.30m chip across tabular float bldr qz-carb altd grdr w/sparse py-cp. (Qz-flooded section only 0.20m true width).	24	0.8	172	9	54
C96-R17	Crest 6	1.50m chip across pyritic calc-sil hnfls subcrop.	6	<0.3	85	10	39
C96-R18	Crest 6	7.5cm channel across clayey shear w/qz-carb vlt (?) in Fe-Mn altd grdr.	7	<0.3	37	80	206
C96-R19	Crest 6	Selected grabs of 1-2cm wide qz <u>+</u> carb vn along clayey shear in carb altd grdr; abund Fe-Mn oxides.	6	<0.3	306	13	301
C96-R20	Crest 6	Grab, 4cm qz-carb vn in grdr; fwall section of 0.50m wide shear zone.	1	<0.3	32	130	314
C96-R21	Crest 8	0.60m channel across shear zone in grdr; strong carb altn w/1-2cm vn.	4	<0.3	123	7	92
C96-R22	Crest 8	0.50m channel across shear zone in grdr; clay-carb altn and two <1cm vns coated w/Fe-Mn oxides.	1	<0.3	30	23	219
C96-R23	Crest 8	Selected grabs from two locns 5m apart; strongly qz-carb altd volc (?) & grdr w/dissem fine sulphides.	8	<0.3	57	30	353
C96-R24	Crest 9	Chips from grdr-hosted qz lens ~ 40x70cm area by up to 12cm thick; semi-clear qz w/no other vis min.	2	<0.3	6	3	8
C96-R25	Crest 9	Grabs from marble-wollastonite pod and nearby pyritic arg lstn rubble	6 (4)	<0.3 (<0.3)	22 (22)	4 (3)	236 (240)

Analyses:	Au-ppb,	others-ppm
		es re-analysis)

Sample Claim Location Number Type and Description Pb Au Ag Cu Zn C96-R26 175 < 0.3 Crest 8 Float grab; vn gz w/attached altd 38 17 26 grdr hostrock, sparse py. Serveral angular pcs, up to 5cm thick x 7cm long. < 0.3 <3 C96-R27 Crest 7 Float grab; rusty frac qz, single 7 8 8 angular fgmnt 6x8x10cm. C96-R28 8 < 0.3 52 Crest 7 0.80m channel across clayey 11 12 shear/qz-carb altn zone in grdr. 583 1.7 28 64 C96-R29 Crest 7 0.40m chip across strongly carb 926 altd grdr w/hnfls (?) inclusion; abund calcite vlts, dissem & frac py-cp. C96-R30 Crest 7 7 < 0.3 66 20 174 0.90m chip across silic, pyritic volc dyke (?) cutting grdr; several narrow clayey shears w/1-2cm calcite vns. < 0.3 101 128 C96-R31 Crest 7 0.60m chip contiguous w/R30 and 10 415 over similar lithology, to opposite grdr contact. P96-R1 Off existing Random chips over ~ 50m wide qz 13 < 0.3 10 3 9 property; altn zone (or dyke?) in grdr; Fe-Mn former PEN 4 stained, chalcedonic, drusy qz masses/breccia 62.9 333 P96-R2 Off existing Chips from several <1 - 5cm qz-py 120 106 14 vns in propylitic & potassic altd property; former PEN 4 grdr. P96-R3 Off existing 2.50m channel across clay altd 13 0.5 32 22 24 rhyolite dyke cutting arg, arg sltstn. property; former PEN 4 P96-R4 Random grabs along 30m section 14 1.6 31 21 26 Off existing 10E/20W from R3; bleached, (14) (1.6)(32)(19) (27)property; pyritic arg & arg sltstn outward former PEN 4 from rhyolite contacts. Selected chips from 0.65m wide 4 0.3 26 7 117 PEN 3 P96-R5 shear-bounded altn zone: silic, pyritic arg w/network of qz-py vlts.

Sample	Claim		Analyses: Au-ppb, others-ppm (bracketed value denotes re-analysis)				
Number	Location	Type and Description	Au	Ag	Cu	Pb	Zn
P96-R6	PEN 3	0.90m chip across rhyodacite (?) dyke w/variable py as dissems, frac coatings and in qz stringers.	20	0.4	45	<3	66
P96-R7	PEN 3	3.00m semi-cont chip across shattered, limonite-cemented rhyolite dyke.	9	<0.3	13	12	44
P96-R8	PEN 3	2.00m chip contiguous w/R7, in arg hwall contact/clay altn zone.	17	0.3	112	7	145
P96-R9	PEN 3	Selected chips from qz-flooded arg (rubble) near a rhyolite contact; dissem coarse py, minor PbS.	2490	4.7	21	284	94
P96-R10	PEN 7	0.20m channel across shattered qz vn & clayey wallrock altn, shear-hosted in graphitic shale/arg; opaque qz w/lim cavities.	1071	44.6	9	833	59
P96-R11	PEN 15	Grabs of qz vn float from two loc'ns ~ 25m apart; largest fgmnt 4x5x9cm, gy-white qz w/Mn-Fe oxides; other pcs include 3cm pink (hematitic) vn in silic volc.	48	0.3	37	14	17
P96-R12	PEN 15	Float grab; chips from 7x9x15cm cobble of silic, pyritic volc cut by several glassy qz vlts up to 0.5cm wide.	34 (44)	0.4 (0.4)	20 (20)	9 (9)	11 (10)
P96-R13	PEN 10	Grab, arg-hosted shattered qz vn ~ 30cm true width; opaque, It blue- gy to white qz w/abund rusty fracs & cavities, minor fresh py.	2900	16.9	42	27	88
P96-R14	PEN 10	Grab; scattered, rusty qz vn fgmnts along 15m exposure of arg/lstn cut by multiple yellow- orange clayey shears.	315	0.3	12	3	23

#### 6.0 ROADBUILDING AND TRENCHING

#### 6.1 Introduction

Trenching was undertaken on the northern CREST 10 claim to test gold soil geochemical anomalies and quartz vein occurrences located by previous exploration programs (Figure 4). Three trenches totalling 234 m in length were dug approximately 900 m north of the areas trenched in 1994 and 1995. Access to the trench area required construction of 1100 m of roadway, and a 9 m segment of new roadcut exposure was mapped and sampled as a fourth trench. Sporadic, low-grade gold mineralization was revealed in quartz veins, clay-rich shear zones and altered volcanic rocks.

#### 6.2 Roadbuilding

Eleven hundred metres of access road was constructed, at minimal single-lane width, from an existing powerline right-of-way trail to the 1996 trench sites. Hand falling of trees and construction of the road were undertaken by Mr. J. Creighton of Elkhart Lodge, B.C. A D6 Caterpillar tractor was used for road building and for skidding logs to landing areas where they were decked. Thirty hours of timber falling and 40 hours of bulldozer time were utilized. The road will be decommissioned and grass seeded after trench reclamation is completed.

#### 6.3 Trenching Operations

The three trenches were excavated by Wiltech Developments Inc., of Kelowna, BC, using a Hitachi EX200 excavator. Trench depths varied between 0.1 and 2.0 metres, averaging about 0.5 metres. Trench statistics are summarized in Table 3.

Two types of excavator buckets were used for trenching: a thirty-six inch toothed bucket for digging through overburden and a smooth-edge bucket for cleaning to bedrock. Hand shovels and a Sullair 180 CFM air compressor with canvas firehose were used to clean the remaining soil from trench floors. The trenches were surveyed using a Brunton compass and a 50-metre steel chain, and tied into the local soil geochemical grid and the CREST 10 / PEN 13 common claim boundary.

Soil samples were collected immediately above the bedrock surface at 5 metre spacings in Trenches CR96-1, -2 and -3. Two more closely spaced samples were taken in CR96-4, and a single soil sample (CR965-S1) was collected above a clay- and limonite-rich shear zone in argillite along the roadcut 70 m west of CR96-4. Soil samples were processed and analyzed as described in Section 5.2. Bedrock geology in the four trenches was mapped at 1:100 scale (Plates 1, 2 & 3). Ninety-nine continuous chip and panel samples plus one grab sample were collected from favourable structures, veins and areas of alteration. Some rock sampling was done with a Kango electric hammer, but most samples were collected manually. Rock samples weighed 3 to 11 kilograms and all were analyzed for gold as described in Section 5.2. A few were also tested for a 5-element suite of metals (Ag, As, Cu, Mo, Zn,) by ICP.

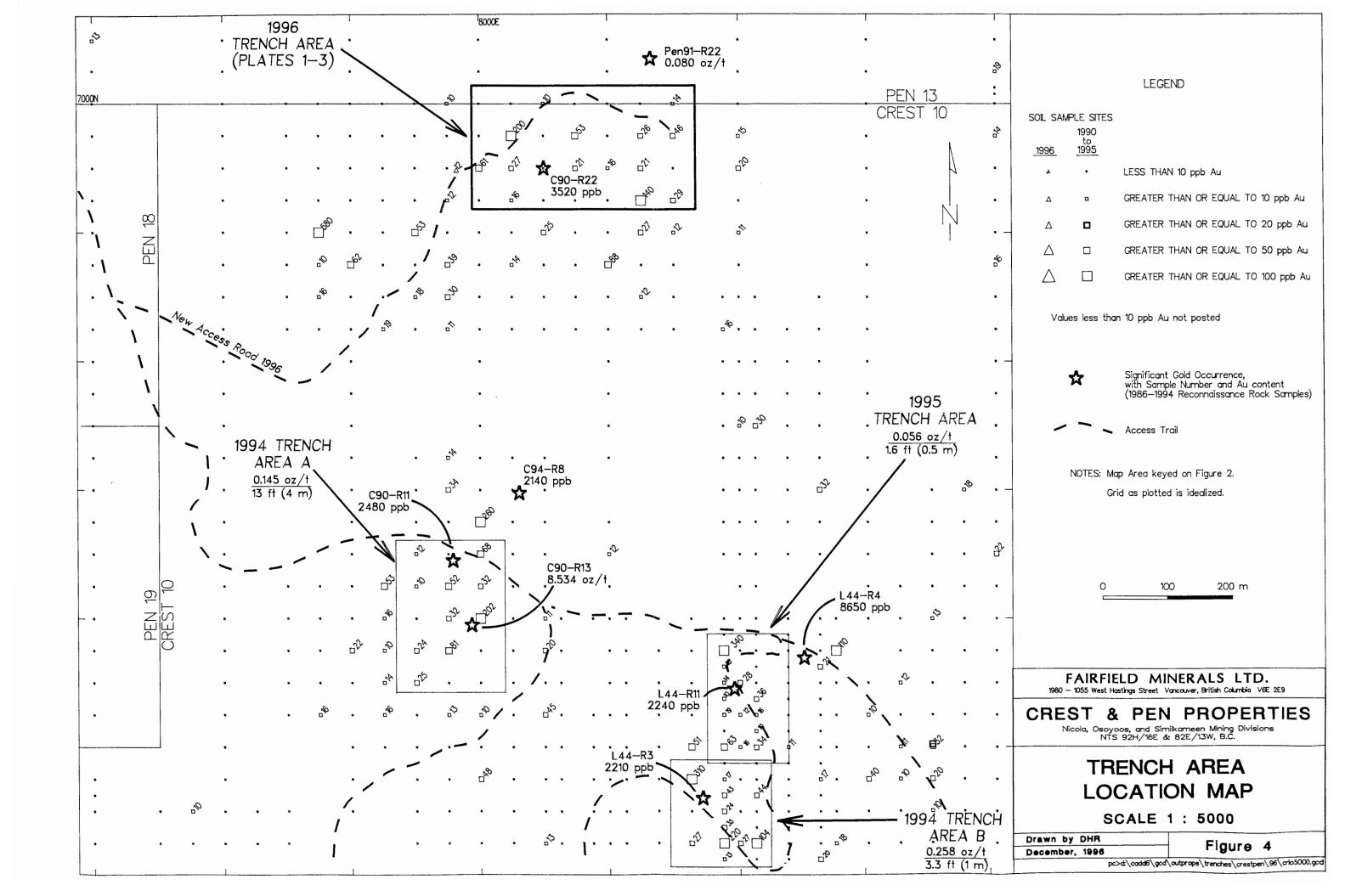


Table 3:

Trench Number	Length (m)	W Top	idth Bottom	Average Depth	Estimated Volume (m <sup>3</sup> )	Number of Samples
CR96-1	141	2.1	1.1	1.2	271	62 rock,
CR96-2	46	2.4	1.2	0.5	41	29 basal soil 14 rock,
CR96-3	47	2.2	1.1	0.5	39	9 basal soil 17 rock,
CR96-4	9	3.0		0.0 (Roadci	ut) 0	9 basal soil 7 rock, 2 basal soil

#### TRENCH SUMMARY

#### 6.4 Trench Results

Fresh to moderately silicified or hornfelsed porphyritic volcanic rocks underlie most of the trenched area, with localized carbonate, argillic, and hornfels/skarn-type alteration. A strongly carbonatized lamprophyre dyke, a small body of granodiorite and a felsic porphyritic dyke were also noted. Multiple quartz veins, 1 mm to 14 cm wide, were exposed. Totals of 100 bedrock and 50 basal soil samples were collected. Sample locations are plotted on the trench plan maps (Plates 1-3), and complete analyses are included in Section 11. Fifteen of the rock samples returned geohemically significant gold results from 100 ppb up to 2960 ppb (0.086 oz/ton) which are also tabled on Plates 1-3. Basal soil samples generally yielded greater gold values than those of corresponding-area "B" horizon grid samples, with 37 (74%) returning analyses over 20 ppb Au, up to a high of 382 ppb Au (Ref. Figure 4). Bedrock sources for some of the high basal soil gold values are not apparent.

<u>Trench CR96-1</u> (141 metres, North to South) is predominantly underlain by hornfelsed grey silicic porphyritic volcanic rocks with local moderate to strong carbonate alteration (Plate 1). Narrow quartz veins are common but not abundant. Several brittle to ductile shears, some with abundant clay alteration, cut the bedrock.

At 16 m, a panel sample (CR961-4P) incorporating sheared and strongly carbonate altered volcanic rocks with minor disseminated pyrite and a narrow quartz stringer with iron oxide boxwork structure returned an elevated level of arsenic (112 ppm), but very low gold (5 ppb).

Sample CR961-6P, from a segment of weakly developed skarn/hornfels at 17 m, indicated an anomalous gold content of 145 ppb. Sampling and analysis of other zones of similar alteration generally produced low gold values.

A 3-cm white to glassy quartz vein with minor muscovite and 5 to 10% fine grained pyrite boxworks was exposed at 22 m. This was the largest vein encountered in Trench CR96-1. A panel sample (CR961-8P) of the vein and carbonate altered wallrock returned only a marginally anomalous gold value of 103 ppb.

Another anomalous gold value of 206 ppb (sample CR96-17) was obtained from a segment of strongly hornfelsed volcanics near 30 m. The basal soil from this area returned 132 ppb Au.

A high basal soil gold content of 156 ppb at 45 m corresponds with the presence of several irregular quartz sweats and a hematitic vein which yielded Au values below 25 ppb (samples CR961-22P, -23P).

Very weakly altered medium grained granodiorite was exposed from 59 m to 62 m. No significant alteration or mineralization was detected within this unit or at its margins.

Sample CR961-33P incorporated several pyrite-bearing veinlets and pyrite fracture linings between 66.5 m and 67.5 m, and returned an anomalous analysis of 161 ppb Au.

Between two basal soil sample sites that yielded values of 101 and 94 ppb Au (70 - 75m), sample CR961-38 returned an analysis of 229 ppb Au from pyrite-bearing hornfels altered rock.

Variably altered and sheared volcanic rocks with clay and limonite were only partially exposed from 83 m to 93 m. Between 93 m and 95 m, a strongly carbonate altered lamprophyre dyke and less intensely altered feldspar porphyry were noted. Gold levels were elevated in basal soils taken at 90 m and 95 m (110 and 104 ppb), but the only anomalous rock sample was from the lamprophyre dyke, (CR961-50P, 124 ppb Au).

In the southern third of Trench CR96-1, several shear zones and a number of steeply dipping ESE-striking quartz veinlets were sampled, but no significant gold analyses were returned.

<u>Trench CR96-2</u> (46 m North to South) uncovered predominantly weakly hornfelsed and silicified feldspar porphyritic volcanic rocks with several quartz veins (Plate 2).

Several clusters or sets of quartz veinlets are present between 3 m and 7 m. The most common vein orientations are ESE-striking, with steep dips to N or S. Sampling from this area did not produce any significant gold results.

A very high basal soil value of 382 ppb Au at 10 m reflects the presence of a slightly hematitic quartz vein up to 10 cm wide at 11 m, which returned a highly significant analysis of 1360 ppb Au from a sample of vein material and silicified wallrock (CR962-4P). This vein appears to be truncated to the east by a closely fractured band or brittle shear zone. To the west it continues as two branches, each up to 2 cm wide in an area of partial bedrock exposure.

A discontinuous curviplanar hematitic quartz vein having a maximum thickness of 12 cm was exposed at 22 m. A panel sample across the full exposure of this vein gave an analysis of 470 ppb Au, although there is no clear geochemical expression in basal soils.

Several minor zones of sheared and/or fractured, weakly carbonate altered volcanic rocks were mapped between 30 m and 35 m. No significant gold analyses were obtained from this trench segment.

<u>Trench CR96-3</u> (47 m North to South) is underlain principally by fresh to moderately hornfelsed feldspar porphyry with several quartz veins (Plate 2).

In close association with a significant basal soil anomaly of 142 ppb Au at 5 m, a panel sample (CR963-1P) taken over a 1 cm wide band of clay alteration with abundant iron oxides returned an analysis of 267 ppb Au.

Sampling and analysis of 2 narrow pink hematitic quartz veins at 7 m and 10 m gave no significant results.

At 27 m, a 14-cm wide glassy to white quartz vein with no sulphide minerals was uncovered. A panel sample of vein material and adjacent wallrock yielded only a moderately anomalous value of 253 ppb Au (CR96-12P). This vein was the widest explosed by the trenching program, but it had no clear reflection in basal soil sample results.

A felsic dyke with feldspar phenocrysts and chloritized hornblende was mapped from 36.5 m to 39.5 m. Sampling across the dyke contacts gave no significant results.

<u>Trench CR96-4</u> (9 m Roadcut) exposed sheared andesitic volcanic rock with discontinuous or structurally disrupted quartz veins containing the strongest gold mineralization found during the 1996 trenching program.

An ESE-trending shear gave analyses of 1120, 146 and 100 ppb Au from panel samples CR964-1P, -4P and -5P respectively, and samples containing vein material within the shear zone returned values of 980 and 2960 ppb Au (samples CR964-2 & -3, respectively). The average of samples 1, 2 and 3 gives **1687 ppb Au (0.049 oz/ton)** over a continuous length of **3.0 m**.

A NNE-trending zone of shearing with clay and carbonate alteration in the eastern part of the exposure was not found to contain significant gold.

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# 7.0 PERSONNEL & CONTRACTORS

Personnel:	Time Period - 1996	Days Worked & Description
E.A. Balon, Prospector North Vancouver, BC	June 23 - Oct. 2	15 - Field Supervision, grid layouts, anomaly evaluation and prospecting, trench cleaning.
J. Graham, Technician Vancouver, BC	July 22 - Oct. 6	10 - Trench cleaning, sampling and surveying; soil gridwork.
W. Jakubowski, Geologist Vancouver, BC	Sept. 3 - Oct. 6	10.5 - Trench maping and supervision.
K. Lloyd, Geologist Mirfield, England	Sept. 3 - Oct. 6	8 - Trench cleaning, sampling and surveying.
D. Ritcey, Geologist Vancouver, BC	June 29 - Oct. 2	10 - Trench mapping and sampling , soil anomaly evaluation and prospecting.
J.D. Rowe, Geologist North Vancouver, BC	June 30 - Oct. 2	11.5 - Field supervision, road and trench layout, prospecting.
Contractors:		
Jack Creighton Elkhart Lodge, BC	August 6 - 9	4 days logging and roadbuilding
Wiltech Developments Inc. Kelowna, BC	August 23 - 27	2.5 days trench excavation

\*\*\*\*

#### 8.0 STATEMENT OF COSTS

#### **CREST AND PEN PROPERTIES**

SALARIES & BENEFITS		\$ 22,350
ROAD CONSTRUCTION		5,200
EXCAVATOR TRENCHING		4,000
GEOCHEMICAL ANALYSIS, AS	SSAYS & FREIGHT	5,400
FOOD & ACCOMMODATION		2,500
VEHICLE RENTAL AND SUPP	LIES	. <u>1,050</u>

# TOTAL EXPENDITURES :

# <u>\$ 40,500</u>

(To end of 1996 field programs;

i.e. including costs beyond the August 30, 1996 filing date of Statement of Work.)

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SCIE

#### 9.0 REFERENCES

#### Balon, E.A .:

1992: 1991 Regional Exploration, Southern British Columbia, Okanagan Area. (Cordilleran Engineering Ltd., unpublished report).

1994: 1993 Geochemical Report (Assessment) on the Pen Property.

#### Balon, E.A. and Conroy, P.W .:

1995: 1994 Geochemical and Trenching Report (Assessment) on the Crest Property.

1995: 1994 Geochemical and Trenching Report (Assessment) on the Pen Property.

#### Balon, E.A., Conroy, P.W., and Ritcey, D.H.

1996: 1995 Geochemical, Trenching & Diamond Drilling Report (Assessment) on the Crest Property.

#### Balon E.A. and Ritcey, D.H .:

1996: 1995 Geochemical and Diamond Drilling Report (Assessment) on the Pen Property.

#### B.C. Ministry of Energy Mines and Petroleum Resources:

Minfile 92H/NE, 82E/NW.

#### Cormier, J.R.

1991: 1990 Geochemical Report on the CREST 1-43 Mineral Claims

#### Dawson, G.L. and Ray, G.E .:

1988: Geology of the Pennask Mountain Area, 92H/16, B.C. Ministry of Energy, Mines and Petroleum Resources Open File Map 1988-7, Scale 1:25,000.

#### Hollister, V.F.:

1992: On a Proposed Plutonic Porphyry Gold Deposit Model; in Nonrenewable Resources, pp.293-302, Oxford University Press 0961-1444/92.

#### Jakubowski, W.J.:

1992: 1991 Drilling and Trenching (Assessment) Report on the Elk Property.

#### Monger, J.W.H .:

1989: Geology, Hope, British Columbia, GSC Map 41-1989, scale 1:250,000.

Rice, H.M.A .:

1947: Geology and Mineral Deposits of the Princeton Map-Area B.C. GSC Memoir 243

Rowe, J.D. and Balon, E.A.:

- 1990: 1988 and 1989 Regional Exploration, Southern British Columbia; Okanagan, Princeton and Osoyoos Areas (Cordilleran Engineering Ltd., unpublished report).
- 1991: 1990 Regional Exploration, Southern British Columbia, Okanagan Area (Cordilleran Engineering Ltd. unpublished report).

Rowe, J.D.:

- 1990: 1989 Geochemical Report (Assessment) on the CREST 1-30 Mineral Claims
- 1992: 1991 Geochemical Report (Assessment) on the Pen Property.
- 1993: 1992 Prospecting Report (Assessment) on the Pen Property.

#### Tempelman-Kluit, D.J.:

1989: Geology, Penticton, British Columbia, GSC Map 1736A, Scale 1:250,000

\*\*\*\*

#### 10.0 STATEMENT OF QUALIFICATIONS

I, Edward A. Balon, of North Vancouver, British Columbia hereby certify that:

1. I am a prospector and geological/mining technician residing at 501 - 250 West First Street, and employed by Fairfield Minerals Ltd. of 1420 - 700 West Georgia Street, Vancouver, British Columbia V7Y 1B6.

2. I have received a Diploma in Mining Engineering Technology (integrated Geology, Mining and Metallurgy) from Northern College - Haileybury School of Mines, Ontario in 1970.

3. I have attended several Continuing Education Courses in Geoscience since 1970, including Exploration Geochemistry at the University of British Columbia, Vancouver, B. C. in 1984/85.

4. I am a member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, registration number 20265.

5. I have practiced my profession for twenty-seven years in British Columbia, Yukon and Northwest Territories.

6. I am the author of part of this report and supervisor of most of the field work conducted on the Crest and Pen claim groups during the period June 23 to October 6, 1996.

FAIRFIELD MINERALS LTD. E. A. Balon, P. Oeo

June, 1997 Vancouver, B.C.

#### STATEMENT OF QUALIFICATIONS

I, David Ritcey, of Vancouver, British Columbia hereby certify that:

1. I am a geologist residing at 205 - 230 West Tenth Avenue, and employed by Fairfield Minerals Ltd. of 1420 - 700 West Georgia Street, Vancouver, British Columbia V7Y 1B6.

2. I have received a B.A. Degree in Geology from Dalhousie University, Halifax N.S. in 1989, and an M.Sc. Degree in Earth Sciences from Memorial University of Newfoundland, St. John's, Newfoundland in 1994.

3. I have practiced my profession for four years in the Northwest Territories, Alberta, British Columbia, and Yukon Territory.

4. I am the author of part of this report and performed part of the field work conducted on the Crest and Pen claim groups during the period June 23 to October 6, 1996.

FAIRFIELD MINERALS LTD.

Dmit Muty

David Ritcey, B.A., M.Sc.

June, 1997 Vancouver, B.C.

## **11.0 ANALYSIS & ASSAY CERTIFICATES**

by

Acme Analytical laboratories Ltd. Vancouver, B.C.

Note:

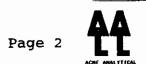
File #93-2770 included; (1993 Brenda Lake Area fill-in grid soil sample results, for comparison with the 1996 reanalyses as per File #96-3147).

ACME ANALY	TICA	LL	BOR	ATOR	IES	LTD	•	8	52 1	3. HJ	ASTI	NGS	ST.	VAN	1COU1	/ER	BC	V6A	186	5	PH	ONE (	(604	) 253	-31	58	FAX (	604	) 253	-17	16
££			F	air	fie	1 <u>d</u>			<u>ls</u>	Ltd	. P	ROJ	ECT	CR	EST	#1	F	FIC ile	#	96-	253 Balor		Pa	ge	1					4/	
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C96-R1	5	91	24	117	<.3	10	17	1658	4.45	6	<5	<2	7	36	<.2	<2	5	90	.62	.061	27	9	.93	215	.07	<3	2.02	.01	.39	<2	34
C96-R2	· 9	36	27	202	<.3	5	23	1691	6.84	69	<5	<2	6	15	.3	3	6	110		-092	21	3	.17	82	.01	<3	.71	.01	<b>_1</b> 0	<2	2
C96-R3	22	32	105	1931	<.3	5	24	2062	7.16	10	6	<2	5	21	3.1	2	4	122	.76	.104	26	3	.31	91	.01	<3	1.00	.01	. 15	<2	1
C96-R4	: 17	30	16	157	<.3	3	20	1361	5.53	5	<5	<2	7	18	.2	<2	5	84		.093	25	3	.30	100	-01	<3	.88	.01	. 18	<2	<1
C96-R5	19	41	63	230	<.3	7	21	2148	6.44	9	6	<2	5	30	.5	<2	6	124	-88	.074	24	5	.93	226	.11	<3	2.09	_01	.63	<2	2
C96-R6	7	62	20	160	<.3	8	31	1396	6.53	38	<5	<2	2	18	<.2	<2	5	122	.56	.105	17	3	.38	160	.05	<3	1.24	.02	.34	<2	<1
C96-R7	4	23	97	1492	<.3	3	19	1446	6.16	29	<5	<2	6	18	13.5	3	8	103	.63	.104	21	5	.29	91	.01	<3	1.06	.01	.20	<2	<1
C96-R8	8	32	7	152	<.3	8	19	1940	6.02	10	<5	<2	4	13	.2	<2	4	80	.44	.084	16	4	.20	151	<.01	<3	.81	.01	.20	<2	7
C96-R9	8	27	29	497	<.3	8	21	1843	6.23	20	<5	<2	4	14	1.1	2	3	81	.49	.096	19	3	.21	107	.01	<3	.90	.01	. 15	<2	5
C96-R10	7	210	9	320	.3	19	24	1060	3.71	42	<5	<2	2	40	1.6	2	<2	89	1.35	.095	8	12	.47	208	-11	<3	1.48	.10	.25	<2	64
RE C96-R10	7	209	10	324	<.3	19	26	1073	3.74	44	<5	<2	2	40	2.0	<2	<2	91	1.35	.096	8	12	.47	212	.11	<3	1.48	-09	.26	2	78
C96-R11	9	21	28	160	<.3	3	12	1120	4.29	<2	<5	<2	6	26	<.2	<2	3	119	.63	.104	23	4	.42	71	.03	<3	1.25	.02	. 13	<2	2
C96-R12	1	4	4	11	<.3	4	1	81	.33	<2	<5	<2	<2	2	<.2	<2	<2	4	.03	.003	1	10	.02	26	<.01	<3	.06	.01	.01	2	1
C96-R13	3	45	-3	99	<.3	12	30	2273	6.11	55	<5	<2	2	29	<.2	<2	4	72	.89	.101	20	5	.42	75	<.01	<3	1.35	.01	.17	<2	3
C96-R14	2	2	<3	19	<.3	7	4		1.25	<2	<5	<2	<2	4	<.2	<2	<2	14		<.001	1	8	.56		<.01	<3		<.01	.01	2	2
STANDARD C2/AU-R	20	61	43	135	6.5	79	38	1208	4.08	42	24	9	36	53	20.3	15	24	74	.55	.089	44	66	1.03	209	.09	31	2.06	.06	.15	17	520

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB - SAMPLE TYPE: P1 ROCK P2 STREAM SED. AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(30 gm) Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

ACHE ANNE YTECA

**Fairfield Minerals Ltd.** PROJECT CREST #1 FILE # 96-2532



ACHE ANALYTECAL																															
SAMPLE#	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	۷	Ca	Ρ	La	Cr	Mg	Ba	Tí	В	AL	Na	κ	W	Au*
	ppm	%	ppm	%	%	ppm	ppm	%	ppm	×	ppm	%	%	%	ppm	ppb															
L46-5	1	31	ব	90	<.3	16	10	710	2.58	3	<5	<2	<2	30	.3	<2	<2	76	.50	.070	12	20	.42	132	.11	7	1.21	.02	.13	<2	2
L46-6	2	65	-3	115	<.3	30	7	325	1.52	<2	<5	<2	<2	48	1.5	<2	2	52	.96 .	051	13	18	41	207	.10	5	1.29	.02	.15	<2	3
RE L46-6	2	66	4	116	.3	34	7	330	1.54	3	<5	<2	<2	49	1.4	<2	<2	53	1.00 .	052	- 14	18	.42	206	.10	11	1.32	.03	.16	<2	2

Sample type: STREAM SED., Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns. (10 gm)

ACME ANALYTICAL	LABORATORIES LTD. 852	E. HASTINGS ST. VANCOUVER BC V6A	1R6 PHONE (604) 253-3158	FAX (604) 253-1716
<b>£</b> £	Fairfield Minerals	EOCHEMICAL ANALYSIS CERTIFIC: Ltd. PROJECT CREST #2 File W. Hastings S, Vancouver BC V6E 2E9 Submitted	# 96-2635 Page 1	<b>£</b> £
SAMPLE#		Fe As U Au Th Sr Cd Sb Bri V Ca % ppm ppm ppm ppm ppm ppm ppm ppm ppm %		

C96-R15 C96-R16 C96-R17 C96-R18 C96-R19	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
C96-R20 C96-R21 C96-R22 C96-R23 C96-R24	3 32 130 314 <.3	
C96-R25 RE C96-R25 C96-R26 C96-R27 C96-R28	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	
C96-R29 C96-R30 C96-R31 STANDARD C2/AU-R	<1 926 28 64 1.7 30 42 360 8.89 24 <5 <2 3 31 .3 <2 74 88 1.26 .072 7 23 .33 31 .10 10 1.25 .04 .13 40 583 29 66 20 174 <.3 42 15 571 3.70 4 5 <2 3 73 .2 2 3 237 1.87 .120 13 29 .60 241 .16 3 2.53 .10 .16 <2 7 4 101 128 415 <.3 28 25 929 5.59 27 <5 <2 4 50 <.2 <2 <2 279 1.11 .135 14 92 .76 190 .16 4 2.07 .07 .22 <2 10 20 58 38 142 6.4 74 37 1194 3.90 39 18 8 38 52 19.5 18 18 74 .53 .097 42 67 1.04 209 .08 32 2.01 .06 .14 12 517	

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB - SAMPLE TYPE: P1 ROCK P2 STREAM SED. P3 TO P4 SOIL AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED. (30 gm) Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

ALA ALTHE ANAL VITICAL					Fa	airf	iel	đŀ	line	als	: Li	tđ.	PRO	)JE(	CT C	CRES	T #	2	FIL	.E #	<sup>4</sup> 96	-26	35				P	age	2	ACM	AMAL YTICAL
SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn	A ppr	g Ni m ppm	Co ppm	Mı ppi	n Fe nn %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W P\$Pm	Au* ppb
L46-7 L46-8	1	23 25	<3 6	81 66	<.3 2.0	3 12 6 13	7 6	50) 43	3 2.08 0 2.38	4	<5 <5	<2 8	<2 <2	25 25	<.2 .3	<2 <2	2 <2	63 77			9 9	16 23	.42 .41	125 118	.13 .11	<3 <3	1.14	.02 .02	.14 .11	2 <2	1
						<u>Sampl</u>	<u>e typ</u>	e: S	TREAM_S	ÉD	(10	gт)																			

Total address   Total a	SAMPLE# Mo Cu Pb Zn Ag Ni Co Mn Fe As U Au Th Sr Cd Sb Bi V Ca P La Cr Mg Ba Ti B Al Na K W Au <sup>A</sup> 5150E 4250N (D) 3 41 5 176 .3 26 14 834 2.98 7 <5 <2 2 26 .2 <2 7 95 .34 .041 10 19 .57 138 .22 <3 2.11 .03 .11 <2 <1 .2 <2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 1.03 .11 <2 2 2 5 2 <t< th=""></t<>
5150E 4450N (D) 2 37 4 122 <.3 16 9 356 3.07 <2 <5 <2 <2 2 99 .18 .052 5 22 .54 119 .19 4 2.32 .03 .11 <2 3   5200E 4350N (D) 1 43 <3 122 <.3 22 12 287 3.18 4 <5 <2 <2 16 .20 .048 5 22 .58 129 .21 <3 1.88 .02 .11 <2 2   6900E 4600N (D) 2 31 <3 132 <.3 16 12 683 3.17 12 <5 <2 <2 16 .4 <2 <2 109 .25 .073 8 20 .60 118 .19 <3 2.59 .02 .15 <2 .2 .07 2 <2 85 .26 .078 6 22 .46 141 .15 <3 2.21 .02 .09 <2 .28 <th>5150E 4450N (D) 2 37 4 122 &lt;.3 16 9 356 3.07 &lt;2 &lt;5 &lt;2 &lt;2 2 99 .18 .052 5 22 .54 119 .19 4 2.32 .03 .11 &lt;2 3   5200E 4350N (D) 1 43 &lt;3 122 &lt;.3 22 12 287 3.18 4 &lt;5 &lt;2 &lt;2 16 .20 .048 5 22 .58 129 .21 &lt;3 1.88 .02 .11 &lt;2 2 6900E 4600N (D) 2 31 &lt;3 132 &lt;.3 16 12 683 3.17 12 &lt;5 &lt;2 &lt;2 16 .4 &lt;2 &lt;2 109 .25 .073 8 20 .60 118 .19 &lt;3 2.59 .02 .15 &lt;2 2 20 .7 2 &lt;2 85 .26 .078 6 22 .46 141 .15 &lt;3 2.21 .02 .09 &lt;2</th>	5150E 4450N (D) 2 37 4 122 <.3 16 9 356 3.07 <2 <5 <2 <2 2 99 .18 .052 5 22 .54 119 .19 4 2.32 .03 .11 <2 3   5200E 4350N (D) 1 43 <3 122 <.3 22 12 287 3.18 4 <5 <2 <2 16 .20 .048 5 22 .58 129 .21 <3 1.88 .02 .11 <2 2 6900E 4600N (D) 2 31 <3 132 <.3 16 12 683 3.17 12 <5 <2 <2 16 .4 <2 <2 109 .25 .073 8 20 .60 118 .19 <3 2.59 .02 .15 <2 2 20 .7 2 <2 85 .26 .078 6 22 .46 141 .15 <3 2.21 .02 .09 <2
Sample type: SOIL. (10 gm)	Sample type: SOIL. (10 gm)

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**.**'.

SAMPLE#	Au* ppb	
8800E 3500N-0.675m 8800E 3515N-0.58m 8800E 3530N-0.60m 8800E 3540N-0.63m 9000E 3500N-0.64m	2 1 9 3 3	
9000E 3510N-0.59m 9000E 3520N-0.33m 9000E 3530N-0.44m 9000E 3540N-0.48m	4 2 5 3	

<u>Sample type: SOIL. (10 gm</u>)

						_											CEH														
TT						<u>Fai</u>	<u>rfi</u>	eld									<u>PEN</u> E 2E9				# 9		2831	-							
								190		w	. nas	ic mys	·	ancou				500		u by.											
SAMPLE#	Mo	Cu	Pb	Zn	Aq	Ni	Co	Mn	Fe	As	U	Au	Th	Sг	Cd	Sb	Bi	٧	Ca	P	La	Сr	Mg	Ba	Ti	В	AL	Na	κ	¥	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppn	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb
>96-R1	9	10	3	9	<.3	23	2	143 1	.27	2	<5	<2	<2	16	<.2	<2	2	7	.01	.004	1	415	.01	28	<.01	3	. 19	.01	.08	<2	13
P96-R2	57	333	106	14	62.9	24	7	148 6	5.86	13	<5	<2	<2	24	<.2	2	1534	28	.10	.020	3	396	.24	16	.02	<3	.43	.04	. 14	<2	120
96-R3	10	32	22	24	.5	22	<1	8 1	.45	23	<5	<2	20	21	<.2	<2	3	42	.02	.048	19	9	.03	720	<.01	4	1.81	.05	.08	<2	13
P96-R4	22	31	21	26	1.6	16	1	58 1	.27	43	<5	<2	4	11	<.2	<2	5	47	.08	.038	12	125	.08	161	.01	5	.88	.05	.21	<2	14
		32	19		1.6		-	57 1		43	<5	-			<.2		,	47	~~	.037	11	128	~~	450	.01		.88	D4	.20	<2	

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H2D AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: ROCK AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED (30 gm).

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

ACME ANALYTICAL LABORATORIES LTD.

852 E. HASTINGS ST. VANCOUVER BC V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716

### GEOCHEMICAL ANALYSIS CERTIFICATE



Fairfield Minerals Ltd. PROJECT PEN #2File # 96-31401980 - 1055 W. Hastings S, Vancouver BC V6E 2E9Submitted by: E.A. Balon

		:													-	5 25			: .*				<u></u>		·					
SAMPLE#	oM Mag	Cu ppm	Pb ppm	Zn ppm	Ag ppm	N i PDM	o] maa	Mn Maq	Fe As % ppm		Au mqq	Th pom	ר תפס	b3 mag	d2 mag	Bi ppm	V mqq	Ca %	P %	٤a ppm	Cr ppm	Mg %	Ba ppm	īi %	6 ppm	Al %	Na %	K %	W maq	Au*
	ppin	pp.	pp	PPm	ppin	Ppm	ppin			ppin	PPI	ppii	- ppm	PP20	PPI	- ppin	ppm.			-	PP		ppii						ppin	
9150E 9850N(A)	3	28	13	85	<.3	8	7	356 3.		<5	<2	<2	25	<.2	2	<2	91	.40		8	26	• 68	161	. 14	-	1.96	.03	.09	<2	46
9175E 9950N	2	16	5	77	<.3	7	_	328 2.		-	<2	<2	13	.2	<2	<2	66		.066	5	21	.27	75	.14		2.35		.04	<2	2
9175E 9900N(A)	3	21	13	78	-4	7		994 2.	-	<5	<2	<2	22	.4	<2	2	41		.039	11	20	.39	126	.11		2.21	.03	.07	<2	19
9175E 9850N(A)	2	22	5	90	<.3	10		241 2.		<5	<2	<2	40	.3	<2	3	63	.31		10	23	.40	161	.12		2.36	.02	.04	<2	1
9175E 9800N	1	15	3	59	<.3	8	4	191 2.	00 <2	<5	<2	<2	21	.3	<b>&lt;</b> 2	<2	55	.25	.026	(	16	.31	102	.12	11	1.52	-02	.04	<2	4
9175E 9750N	2	19	6	52	<.3	7	5	418 1.	91 <2	<5	<2	<2	20	.6	<2	<2	49	.27	.032	9	14	.31	103	. 11	<3	1.65	.03	.03	<2	2
9175E 9700N	3	18	5	73	<.3	8	5	496 2.	32 <2	<5	<2	<2	21	.3	2	2	64	.31	.033	10	17	,45	95	. 14	<3	2.12	.03	.04	<2	6
9175E 9650N	3	22	4	78	<.3	9	6	562 2.	52 5	<5	<2	<2	20	.2	3	<2	65	.32	.038	9	19	.50	116	.14	3	2.18	.02	. 05	<2	2
9175E 9600N	3	22	<3	50	<.3	7	3	162 2.	32 8	<5	<2	<2	13	.2	<2	<2	65	.13	.040	7	19	.36	75	.13	<3	2.26	.02	.05	<2	1
9175E 9550N	1	18	7	50	<.3	6	1	154 2.	38 5	<5	<2	<2	11	<.2	<2	<2	64	.12	.048	5	16	.33	67	. 14	<3	1.89	.02	.05	<2	13
9175E 9500N	2	14	9	52	<.3	7	2	135 2.	13 <2	<5	<2	<2	13	<.2	<2	2	58	. 14	.039	7	17	.29	75	.13	<3	1.80	.02	.04	<2	6
9200E 9910N(A)	2	67	16	127	.5	16	9	317 2.	62 7	<5	<2	2	30	.8	4	<2	90	.26	.048	17	40	.80	213	.16	<3	2.87	.02	.34	<2	5
9200E 9850N(A)	2	27	<3	80	<.3	15	8	303 3.	80 4	<5	<2	<2	19	<.2	2	<2	71	.27	.041	16	32	1.01	248	. 18	<3	2.69	.02	.29	<2	4
9300E 9800N(A)	4	39	<3	73	.3	15	8	570 3.	01 5	<5	<2	<2	24	<.2	2	<2	77	.29	.039	24	25	.53	163	.12	-	3.53	.02	.06	<2	16
9340E 9855N(A)	1	22	<3	82	<.3	12	5	280 2.	54 <2	<5	<2	<2	16	.3	<2	<2	64	.29	.033	11	33	1.14	137	. 18	<3	2.20	.02	.57	<2	20
RE 9340E 9855N(A)	1	25	<3	83	<.3	11	5	281 2.	57 <2	<5	<2	<2	17	<.2	2	2	65	.30	.035	11	35	1.16	145	.18	<3	2.22	. 02	.58	<2	2
9350E 9950N	3	24	6	116	.3	13	4	223 2.	61 19	<5	<2	<2	Z2	.3	2	<2	88	.10	.090	7	28	.27	85	.11	<3	2.59	.02	.05	<2	1
935DE 9900N(A)	3	30	5	127	<.3	17	6	390 2.	80 15	<5	<2	5	32	.2	<2	<2	92	.18	.060	10	31	.38	117	.11	<3	2.72	.02	.05	<2	2
9400E 9900N(A)	3	34	9	122	<.3	17	7	279 2.	23 8	<5	<2	2	50	.5	<2	<2	94	.25	.024	13	33	.49	176	.14	<3	1.90	.02	.04	<2	1
9450E 9950N	4	27	9	131	<.3	18	6	242 2.	65 14	<5	<2	2	30	.2	<2	<2	80	- 11	.078	9	26	.32	119	. 11	<3	2.50	.01	.05	<2	1
9450E 9905N(A)	3	24	<3	100	<.3	15	5	266 2.	57 8	<5	<2	<2	30	<.2	<2	<2	70	.17	.066	8	25	.33	102	.12	3	2.81	.02	.04	<2	2
9450E 9800N(A)	2	23	5	69	<.3	8	6	744 3.	79 <2	<5	<2	<2	20	<.2	3	<2	68	.29	.043	16	23	.56	100	.14	<3	2.39	.02	.10	<2	3
9850E 5350N(D)	1	22	3	234	<.3	22	6	264 2.	78 3	<5	<2	<2	26	.4	<2	<2	78	.25	.065	6	20	.36	100	. 15	3	1.86	.02	.06	<2	1
STANDARD C2/AU-S	20	58	35	146	6.1	76	35	1190 4.	07 36	22	7	34	51	19.4	18	18	74	.54	.103	40	69	1.00	208	.08	26	1.99	.07	. 14	11	48

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HN03-H20 AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. - SAMPLE TYPE: SOIL AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED. Samples beginning <u>(RE)</u> are Reruns and <u>(RE)</u> are Reject Reruns.

DATE RECEIVED: JUL 25 1996 DATE REPORT MAILED:  $\mu$ 

Hng 3/46

ACME ANA	LYTICA	L L	ABOR	ATO	RIES	LTD	•	8	52 E	с. н	ASTI	NGS	ST.	VAN	ເດດກ	ÆR	BC	V6A	IRE	5	PH	ONE	(604	)253	-31	58	FAX	(604	)253	3-173	16
<b>22</b>				Fa	irf	iel		<u>ine</u> 0 - 10	ral	s L	td.	PR	OJE	CT	PEN	<i>#</i> 3	F		#	96- 96-			Pa	ge	1				1	<b>A</b> 4	
SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb	Bi ppm	۷ مربوم	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B	Al %	Na %	K %	W maja	
P96-R5	11	26	7	117	.3	39	3	282	2.20	80	<5	<2	2	68	.3	<2	<2	85	.44	.072	4	236	. 98	66	.08	<3	1.88	.11	.54	<2	4
P96-R6	3	45	<3	66	.4	46	12	443	3.24	71	<5	<2	2	93	.7	<2	2	95	.69	.082	4	197	1.75	72	.15	<3	3.22	.17	.52	<2	20
P96-R7	5	13	12	44	<.3	6	1	69	1.88	416	<5	<2	5	52	-4	5	<2	31	.06	.063	21	45		60	.01	<3	.62	.05	.28	<2	9
P96- R8	3	112	7	145	.3	19	<1	460	4.86	1841	<5	<2	2	124	2.3	11	<2	163	.46	.130	7	45	1.87	337	.09	<3	4.56		1.13	<2	17
P96-R9	8	21	284	94	4.7	18	2	65	.96	630	<5	2	<2	9	2.2	2	<2	10		.004	1	222	.03	55	<.01	<3	.19	.02	.09	-	2490
P96-R10	16	9	833	59	44.6	13	1	55	.80	53	<5	<2	<2	180	1.2	6	2	70	.04	.033	9	224	.07	62	<.01	<3	.30	.01	. 11	2	1071
P96-R11	9	37	14	17	.3	12	4	389	.95	12	<5	<2	<2	6	.5	13	2	4	.03	.008	3	199	.03	26	.01	<3	.14	.02	.05	<2	48
P96-R12	5	20	9	11	.4	10	2	127	1.23	10	<5	<2	2	6	.3	<2	<2	2		.013	7	139	.03	-	<.01	<3	.27	.04	. 12	<2	34
RE P96-R12	: 5	20	9	10	.4	11	2	107	1.25	9	<5	<2	2	6	.7	<2	<2	2		.013	7	147	.03		<.01	<3	.26	.04	.11	<2	44
P96-R13	6	42	27	88	16.9	15	2	128	.64	10	<5	3	<2	5	1.7	<2	2	7		.001	1	212			<_01	<3		<.01	.04	_	2900
P96-R14	5	12	3	23	.3	15	4	528	1.66	8	<5	<2	<2	11	.5	<2	<2	21	.11	.014	2	239	.22	39	.03	<3	.45	.02	.05	<2	315
STANDARD C2/AU-	R 21	58	40	141	6.4	75	37	1193	3.97	38	18	8	36	52	20.2	15	17	74		.098	41	67	1.02	206	.08	_	2.01	.06	. 14	12	462

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: P1 ROCK P2 STREAM SED. AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(30 gm) Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns,

DATE RECEIVED: JUL 26 1996 DATE REPORT MAILED:

aug 6/96 SIGNED BY A Ally ... D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



Fairfield Minerals Ltd. PROJECT PEN #3 FILE # 96-3146

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<b>44</b>
ACHE ANALYTICAL

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SAMPLE#	Mo	Cu	Рb	Zn	Ag	Nî	Co	Mn	Fe	As	υ	Au	Th	Şr	Cď	Sb	Bi	v	Ca	P	La	Cr	Mg	Ва	Ti	В	Al	Na	к	W	Au*	
	ppm	%	ppm	ppm	ppm	bbu	ppm	ppm	р <b>р</b> п	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb	5							
P96-S\$1	22	31	8	548	.4	49	38	2240 3	3.81	180	5	<2	<2	121	4.1	2	<2	160	.47	. 133	14	30	.36	153	.03	<3	2.00	.02	.08	<2	18	
P96-SS2	2	7	3	41	.3	6	3	376	1.05	7	<5	<2	<2	40	.3	2	<2	24	.69	.113	5	9	.15	86	.03	3	.97	.02	.03	<2	<1	
RE P96-SS1	21	29	7	501	.4	44	36	2050 3	3.56	165	5	<2	<2	116	3.7	3	2	149	.44	.122	13	29	.33	137	.03	<3	1.81	.01	.07	<2	2 -	.

Sample type: STREAM SED.. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

- not reproduced

CME ANALYTICAL	LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6 PHONE(604)253-3158 FAX(604)253-	-17
A	GEOCHEMICAL EXTRACTION-ANALYSIS CERTIFICATE	
	Fairfield Minerals Ltd. PROJECT PEN #4(T) File # 96-3147 Page 1	<b>F</b> ^/
	1980 - 1055 W. Hastings S, Vancouver BC V6E 2E9 Submitted by: E.A. Balon	<b>I</b>
SAMPLE -	Mo Cu Pb Zn Ag Ni Co Mn Fe. As U Th Sr Cd Sb Bi V Ca. P La Cr Mg Ba Ti B. Al Na. K. W. Tl Hg Se Te Ga A	
	pom ppm ppm ppm ppm ppm ppm % ppm ppm ppm	ddo
P L8850E 9750N	1.9 18.0 10.1 51.8 156 9 4 247 2.55 5.4 <5 1 15 .22 .2 .3 71 .16 .036 7 19 .38 82 .14 3 1.95 .01 .04 <2 <.2 94 .3 <.2 8.0	1
P L8850E 9700N	2.1 23.5 12.5 65.2 187 10 4 245 2.46 3.3 <5 <1 16 .31 <.2 .3 71 .21 .053 7 19 .57 86 .15 <2 2.03 .02 .04 <2 <.2 65 <.3 <.2 9.2	33
P L8850E 9650N	2.0 20.2 12.6 50.2 49 7 2 195 2.36 5.2 <5 <1 11 .22 <.2 .3 62 .10 .069 5 16 .34 73 .13 <2 2.25 .01 .05 <2 <.2 88 .3 <.2 7.2	
P L8850E 9600N	1.9 15.0 10.4 55.8 161 8 2 171 2.54 3.1 <5 1 11 .24 <.2 .2 65 .12 .068 4 17 .30 74 .15 <2 2.34 .01 .04 <2 <.2 105 .3 <.2 8.8	
P L8850E 9550N	1.8 13.1 9.0 40.4 177 8 2 152 2.15 5.2 <5 <1 14 .29 <.2 .2 62 .13 .027 6 18 .22 77 .12 <2 1.84 .01 .03 <2 <.2 74 <.3 <.2 6.5	<1
P L8850E 9500N	1.5 21.8 7.4 29.1 307 6 2 272 1.27 1.4 <5 <1 23 .42 <.2 .1 32 .50 .092 16 12 .20 76 .08 <2 2.22 .02 .03 <2 <.2 83 .6 <.2 7.3	2
P L8900E 9750N	2.2 30.4 10.9 114.8 337 16 6 302 2.88 168.5 <5 1 21 .71 .4 .2 72 .29 .044 16 26 .60 75 .14 <2 3.54 .01 .05 <2 <.2 87 .7 <.2 7.2	9
P L8900E 9700N	1.9 15.8 7.5 59.1 120 8 2 205 2.72 38.1 <5 <1 11 .19 <.2 .3 67 .11 .037 5 15 .39 59 .14 <2 1.74 .01 .04 <2 <.2 50 <.3 <.2 9.1	
P L8900E 9650N	1.8 16.3 8.3 38.8 123 6 2 161 1.93 5.2 <5 <1 12 .17 <.2 .2 52 .11 .044 6 15 .30 66 .09 <2 1.67 .01 .04 <2 <.2 69 <.3 <.2 8.5	
P L8900E 9600N	1.7 16.7 8.5 48.1 120 12 2 254 2.41 10.1 <5 1 13 .17 .3 .2 66 .12 .066 5 20 .29 85 .13 <2 2.28 .01 .04 <2 <.2 45 .3 <.2 7.0	<1
P L8900E 9550N	2.3 16.1 11.6 48.1 91 9 2 215 2.40 14.8 <5 1 12 .20 <.2 .2 61 .13 .042 5 16 .28 80 .14 <2 1.94 .01 .04 <2 <.2 53 <.3 <.2 8.0	6
P L8900E 9500N	1.4 19.5 10.5 56.0 326 6 5 244 1.97 5.2 <5 <1 17 .34 <.2 .3 46 .30 .024 7 11 .23 63 .13 <2 1.21 .01 .03 <2 <.2 46 .3 <.2 7.4 1	
RE P L8900E 9500N	1.4 20.0 10.6 56.7 245 5 6 254 2.04 4.5 <5 <1 17 .33 <.2 .2 47 .31 .025 7 11 .24 63 .13 <2 1.25 .01 .03 <2 <.2 47 <.3 <.2 7.4	22
P L8950E 9750N	3.3 30.1 9.4 152.9 215 12 4 201 2.60 629.5 <5 <1 15 1.16 <.2 .1 64 .18 .048 14 24 .46 76 .13 <2 3.08 .01 .04 <2 <.2 64 .4 <.2 8.2	4
P L8950E 9700N	2.0 19.0 9.8 87.4 137 12 3 250 2.61 69.2 <5 <1 17 .37 <.2 .2 69 .23 .036 8 22 .36 78 .12 <2 2.22 .01 .05 <2 <.2 41 <.3 <.2 7.0	3
P L8950E 9650N	2.7 22.2 9.7 98.5 180 18 6 469 2.74 17.5 <5 <1 25 .30 .4 .2 85 .29 .038 10 27 .44 129 .13 <2 2.75 .01 .07 <2 .2 43 .4 <.2 8.1	2
P L8950E 9600N	1.9 15.8 7.6 58.7 185 12 5 252 2.27 13.2 <5 <1 17 .36 <.2 .1 66 .14 .062 7 22 .28 102 .11 <2 1.95 .01 .04 <2 <.2 51 <.3 <.2 6.3	2
P L8950E 9550N	1.8 19.5 7.0 69.8 210 14 4 219 3.02 11.4 <5 1 26 .29 <.2 .2 81 .27 .032 7 26 .43 147 .14 <2 2.34 .02 .06 <2 <.2 52 .3 <.2 7.8	4
P L8950E 9500N	2.2 12.5 9.4 45.5 154 6 2 269 2.47 5.0 <5 <1 11 .22 <.2 .2 61 .13 .036 4 13 .30 84 .14 <2 1.67 .01 .04 <2 <.2 52 <.3 <.2 8.8	4
P L9000E 9750N	2.6 19.9 8.2 83.2 179 8 6 721 2.41 285.3 <5 <1 24 .74 <.2 .2 54 .39 .042 11 16 .48 84 .11 <2 1.75 .02 .04 <2 <.2 43 .3 <.2 8.2	1
P L9000E 9700N	1.6 19.9 6.2 56.0 136 13 4 283 2.63 148.6 <5 <1 24 .35 <.2 .1 66 .29 .027 10 24 .47 98 .13 <2 1.76 .01 .05 <2 <.2 37 <.3 <.2 6.4	4
P L9000E 9650N	2.0 19.2 7.7 82.7 14: 13 4 297 2.85 165.1 <5 1 19 .40 .2 .2 71 .22 .058 7 23 .41 99 .13 <2 2.56 .01 .06 <2 <.2 50 <.3 <.2 7.2	4
P L9000E 9600N	1.5 36.3 7.4 125.3 365 11 14 934 3.55 27.2 <5 <1 32 .95 <.2 1.0 76 .63 .062 11 23 .80 135 .17 <2 3.01 .03 .04 <2 <.2 56 <.3 .4 9.6	27
P L9000E 9550N	1.4 20.8 7.2 66.3 154 12 4 361 2.40 8.2 <5 <1 26 .33 <.2 .2 66 .34 .035 9 24 .51 155 .14 <2 2.01 .01 .07 <2 <.2 39 <.3 <.2 6.1	5
P L9000E 9500N	2.4 22.2 9.0 56.4 35 <sup>2</sup> 9 3 759 1.77 7.5 <5 <1 27 .63 <.2 .1 48 .42 .075 18 18 .30 117 .09 <2 2.28 .03 .03 <2 <.2 84 .9 <.2 5.7	4
P L9050E 9750N	1.6 14.1 7.1 58.1 216 9 4 229 2.37 34.1 <5 <1 15 .30 <.2 .2 65 .16 .043 6 20 .29 79 .12 <2 2.03 .01 .04 <2 <.2 47 .3 <.2 6.6	4
P L9050E 9700N	1.6 23.5 7.0 95.3 202 12 8 868 2.96 30.5 <5 <1 23 .65 <.2 .5 77 .36 .037 10 25 .73 128 .16 <2 2.37 .01 .09 <2 <.2 29 <.3 <.2 7.9	
P L9050E 9650N	1.4 21.4 7.0 77.2 251 10 7 384 2.76 30.8 <5 <1 24 .56 <.2 .3 71 .41 .032 10 23 .65 105 .17 <2 2.20 .02 .04 <2 <.2 45 <.3 <.2 8.1	
P L9050E 9600N	1.6 18.3 7.3 59.8 336 9 5 229 2.41 10.4 <5 1 15 .34 <.2 .2 65 .17 .047 7 20 .35 92 .14 <2 2.40 .01 .04 <2 <.2 58 .3 <.2 7.1	1
P L9050E 9550N	1.5 11.4 7.5 54.5 37 9 4 554 2.30 5.2 <5 <1 17 .17 <.2 .1 64 .23 .046 6 16 .35 94 .14 <2 1.74 .01 .04 <2 <.2 41 <.3 <.2 6.6	<1
P L9050E 9500N	1.3 10.8 6.6 47.3 <30 8 3 204 2.55 2.3 <5 1 13 .07 <.2 .2 70 .15 .028 6 15 .68 73 .20 <2 2.01 .01 .05 <2 <.2 40 <.3 <.2 9.2	8
P L9100E 9750N	1.7 28.7 7.3 68.5 402 10 6 329 2.41 20.9 <5 1 20 .44 .2 .3 63 .29 .044 12 17 .46 94 .15 <2 2.38 .02 .04 <2 <.2 48 <.3 <.2 8.5	
P L9100E 9700N	1.3 25.7 5.9 92.8 148 13 8 301 3.37 21.1 <5 1 28 .35 <.2 .3 95 .34 .040 8 24 .76 224 .20 <2 3.13 .01 .10 <2 <.2 25 <.3 <.2 8.4	
P L9100E 9650N	2.1 27.1 7.5 67.4 478 11 7 348 2.68 17.7 <5 <1 19 .27 .2 .5 74 .27 .038 8 22 .51 114 .17 <2 2.25 .01 .05 <2 <.2 51 .4 .2 8.5	
STANDARD D2/HG-500/AU-	U-S 25.2 127.7 99.7 272.9 1868 36 15 1109 4.32 75.6 23 17 56 2.33 8.3 22.0 82 .69 .106 20 59 1.21 262 .17 26 2.38 .05 .74 18 2.6 465 .7 2.1 6.8	

ICP - 15 GRAM SAMPLE IS DIGESTED WITH 90 ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 100 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K GA AND AL. SOLUTION ANALYSED DIRECTLY BY ICP. MO CU PB ZN AG AS AU CD SB BI TL HG SE TE AND GA ARE EXTRACTED WITH MIBK-ALIQUAT 336 AND ANALYSED BY ICP. ELEVATED DETECTION LIMITS FOR SAMPLES CONTAIN CU,PB,ZN,AS>1500 PPM,Fe>20%. - SAMPLE TYPE: SOIL PULP AU+ - AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED. <u>Samples beginning 'RE' are Refuns and 'RRE' are Reject Refuns.</u>

DATE RECEIVED: JUL 26 1996 DATE REPORT MAILED:

aug 6/96



Fairfield Minerals Ltd. PROJECT PEN #4(T) FILE # 96-3147



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SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	14n	Fe	As	U	Th	Sr	Cď	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B /	1 1	a	к	W	Тl	Hg	Se	Te	Ga	Au+
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	γ <u></u>	ppm	p pm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	% p	pm p	pm.	ррЬ	ppm	ppm	ppm	ррЬ
L9100E 9600N	1.8	19.0	7.3	58.5	172	10	5	282 2	2.73	11.0	<5	1	17	.21	<.2	.2	68	. 23	.027	8	21	. 62	98	. 16	2 2.2	24 .0	2.0	)4	<2 <	:.2	59	<.3	<.2	9.3	3
- L9100E 9550N	1.2	10.9	7.9	40.1	159	6	3	227 2	2.23	3.4	<5	<1	10	.13	<.2	.1	59	.09	.040	4	15	. 27	62	.10	<2 1.4	17.0	1.0	3	<2 <	:.2	53	<.3	<.2	8.6	2
D L9100E 9500N	1.5	17.3	10.0	43.6	64	10	2	165 2	2.51	6.3	<5	1	12	.14	.2	.1	73	.10	.051	6	21	. 40	76	.14	<2 2.4	io .c	1.0	)5	<2 <	:.2	55	<.3	<.2	9.0	1
> L9150E 9750N	1.9	18.9	á.O	37.5	191	7	5	266 2	2.46	10.9	<5	<1	18	. 33	<.2	.2	59	.25	.034	10	19	.45	101	. 12	<2 1.9	96.0	1.0	)3	<2 <	<.2	54	<.3	<.2	8.8	2
D L9150E 9700N	2.3	15.9	7.4	45.6	217	5	5	357 2	2.42	8.6	<5	<1	15	. 22	<.2	.1	61	.20	.030	9	15	. 38	68	. 16	<2 2.0	. 10	2.0	)4	<2 <	:.2	52	<.3	<.2	9.3	5
D L9150E 9650N	2.6	17.2	7.4	62.0	270	8	7	522 2	2.55	10.3	<5	<1	16	.27	<.2	.2	66	.25	.034	8	20	.50	105	.15	<2 2.1	15.0	1.0	)4	<2 <	<.2	46	<.3	<.2	8.3	5
D L9150E 9600N	2.9	17.0	6.7	65.3	252	9	5	295	3.07	11.8	<5	1	14	. 19	<.2	.2	71	. 17	.039	7	21	.59	92	.16	4 2.4	46 .0	1.	5	<2 <	:.2	62	<.3	<.2	9.7	2
L9150E 9550N	1.7	14.8	8.3	39.0	113	7	з	203 2	2.30	6.2	<5	<1	11	.21	<.2	.2	60	. 10	.048	6	16	. 32	68	. 12	<2 1.9	97.0	1.0	94	<2 <	4.2	64	<.3	<.2	8.5	13
P L9150E 9500N	1.8	16.0	9.4	34.4	96	7	3	137 2	2.28	4.8	<5	<1	11	.13	<.2	.1	62	. 10	.055	6	16	.26	66	.13	<2 1.9	93.0	1.	)4	<2 <	<.2	56	<.3	<.2	9.0	8
STD D2/HG-500/AU-S	25.3	126.5	105.4	273.9	1909	33	14	1079 4	4.33	76.6	20	18	55	2.23	9.2	21.6	72	.75	. 105	20	60	1.24	261	.17	29 2.3	34 .0	6 .	74	14 2	2.4	478	.5	1.8	7.4	47

Sample type: SOIL PULP.

**£**£

# PROJECT PEN #4 FILE # 93-2770



ACHE AMALYTICAL								CHE ANALYTICAL
	SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Bi ppm	Au* ppb	
	P L8850E 9750N P L8850E 9700N P L8850E 9650N P L8850E 9600N P L8850E 9600N P L8850E 9550N	20 25 21 19 16	9 8 11 9 7	53 62 55 58 45	.1 .2 <.1 .1 <.1	2 <2 <2 <2 <2 <2	4 25 17 2 1	
	P L8850E 9500N P L8900E 9750N P L8900E 9700N P L8900E 9650N P L8900E 9600N	26 35 21 21 21	3 9 7 7 10	34 117 67 44 53	.1 .2 <.1 .1 <.1	<2 <2 <2 2 2	6 9 2 1 2	
	P L8900E 9550N P L8900E 9500N P L8950E 9750N P L8950E 9700N P L8950E 9650N	18 23 32 21 26	10 11 7 8 9	52 61 148 92 100	<.1 .2 .1 .2	3 <2 <2 <2 <2 2	2 26 4 26 3	
	P L8950E 9600N P L8950E 9550N P L8950E 9500N P L9000E 9750N P L9000E 9700N	20 20 17 20 25	6 7 9 8 4	70 69 53 88 63	.1 .2 .1 .1 .3	<2 <2 2 <2 <2	3 2 5 3 3	
	P L9000E 9650N P L9000E 9600N P L9000E 9550N P L9000E 9500N P L9050E 9750N	23 39 26 23 16	5 6 5 6 3	87 120 73 55 59	.1 .4 <.1 .3 .2	<2 <2 2 <2 <2	16 22 2 3 3	
	P L9050E 9700N P L9050E 9650N P L9050E 9600N P L9050E 9550N P L9050E 9550N P L9050E 9500N	27 23 23 16 15	5 6 4 4	101 76 64 58 49	.2 .1 .3 .1 <.1	<2 <2 2 <2 <2	1 2 5 8 2	
	RE P L9050E 9500N P L9100E 9750N P L9100E 9700N P L9100E 9650N P L9100E 9600N	14 32 34 30 24	7 5 7 8 5	50 71 95 72 60	<.1 .4 .1 .3 .2	<2 2 <2 <2 <2	2 7 11 7 5	
	P L9100E 9550N P L9100E 9500N P L9150E 9750N P L9150E 9700N RE P L9150E 9700N	13 17 20 17 18	5 8 6 8	43 46 41 53 53	.2 .1 .2 .2 .2	<2 <2 <2 <2 <2	3 3 5 5 6	
	P L9150E 9650N P L9150E 9600N P L9150E 9550N P L9150E 9500N STANDARD C/AU-S	18 18 16 18 56	7 5 9 10 37	64 62 41 36 128	.3 .1 .1 6.8	<2 <2 <2 <2 18	66 6 5 6 51	

ACME	ANALYTICAL	LABORATORIES	LTD.	852 E	. HASTINGS ST.	VANCOUVER	BC V6A	1R6	PHON	2(604)253	-3158	FAX(604)2:	53-1716
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GEOCHEMICAL ANALYSIS CERTIFICATE



Fairfield Minerals Ltd. PROJECT CREST/CR96-1 File # 96-4398 Page 1 1980 - 1055 W. Hastings S, Vancouver BC V6E 2E9 Submitted by: W. Jakubowski

SAMPLE#	Mo ppm	Cu ppm	Zn ppm	Ag ppm	As ppm	Au* ppb	SAMPLE lb	
CR961-1P	1	16	59	<.3	<2	2	13	
CR961-2P	3	13	62	<.3	<2	59	22	
CR961-3P	22	41	120	.7	64	10	21	
CR961-4P	10	37	129	.3	112	5	19	
CR961-7P	2	19	72	<.3	13	10	22	
CR961-20G	1	20	65	<.3	<2	5	7	
RE CR961-20G	1	20	62	<.3	<2	4	-	
STANDARD C2/AU-R	19	55	125	6.9	37	450	-	

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-HZO AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB - SAMPLE TYPE: P1 ROCK P2 TO P3 SOIL AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(30 gm) Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 12 1996 DATE REPORT MAILED: Sept 19/96 SIGNED BY. 





Page 2

SAMPLE#   Au* ppb     CR961-0S CR961-10S CR961-10S CR961-20S   31 CR961-20S CR961-20S     CR961-20S   17     CR961-20S   17     CR961-30S   132 CR961-30S     CR961-20S   17     CR961-20S   17     CR961-20S   17     CR961-20S   17     CR961-20S   17     CR961-20S   132     CR961-30S   132     CR961-30S   69     CR961-60S   65     CR961-60S   65     CR961-60S   65     CR961-90S   101     CR961-90S   110     CR961-90S   110     CR961-100S   47     CR961-100S   18     CR961-110S   18     RE CR961-110S   18     CR961-120S   10     CR961-120S   14     CR961-120S   14     CR961-130S   14     CR961-130S   14     CR961-130S   14     CR961-130S		
$\begin{array}{c} CR961-25S & 71 \\ CR961-30S & 132 \\ CR961-35S & 55 \\ CR961-40S & 69 \\ CR961-40S & 69 \\ CR961-50S & 63 \\ CR961-50S & 65 \\ CR961-60S & 52 \\ CR961-60S & 52 \\ CR961-60S & 51 \\ CR961-80S & 71 \\ CR961-80S & 71 \\ CR961-80S & 100 \\ CR961-80S & 100 \\ CR961-80S & 100 \\ CR961-10S & 104 \\ CR961-10S & 18 \\ RE & CR961-10S & 18 \\ RE & CR961-10S & 18 \\ RE & CR961-10S & 16 \\ CR962-10S & 16 \\ CR962-10S$	SAMPLE#	Au* ppb
$\begin{array}{c} CR 961 - 30S \\ CR 961 - 40S \\ CR 961 - 45S \\ CR 961 - 5S \\ CR 961 - 5S \\ CR 961 - 5S \\ CR 961 - 60S \\ CR 961 - 85S \\ 40 \\ CR 961 - 80S \\ 110 \\ CR 961 - 80S \\ 110 \\ CR 961 - 80S \\ 110 \\ CR 961 - 105S \\ 104 \\ CR 961 - 105S \\ 18 \\ CR 961 \\ 18 \\ $	CR961-55 CR961-10 CR961-15	31 56 55 56 55 13 55 40 55 17
$\begin{array}{c} CR961-70S & 101 \\ CR961-75S & 94 \\ CR961-80S & 71 \\ CR961-85S & 40 \\ CR961-90S & 110 \\ CR961-90S & 104 \\ \hline \\ CR961-10S & 21 \\ CR961-10S & 21 \\ CR961-10S & 18 \\ CR961-110S & 18 \\ CR961-110S & 18 \\ CR961-110S & 18 \\ RE CR961-105S & 16 \\ \hline \\ CR961-12SS & 78 \\ CR961-13S & 14 \\ CR961-13S & 14 \\ CR961-13S & 45 \\ CR961-13S & 45 \\ CR961-140S & 54 \\ \hline \\ CR962-5S & 62 \\ CR962-10S & 382 \\ CR962-10S & 382 \\ CR962-20S & 60 \\ \hline \end{array}$	CR961-30 CR961-35 CR961-40	S 132 S 55
$\begin{array}{ccccc} & CR961-85S & 40 \\ CR961-90S & 110 \\ CR961-95S & 104 \\ \\ CR961-100S & 21 \\ CR961-105S & 21 \\ CR961-110S & 18 \\ CR961-115S & 8 \\ RE & CR961-105S & 16 \\ \\ \\ CR961-125S & 78 \\ CR961-125S & 78 \\ CR961-130S & 14 \\ CR961-135S & 45 \\ CR961-135S & 45 \\ CR961-140S & 54 \\ \\ \\ \\ CR962-5S & 62 \\ CR962-5S & 62 \\ CR962-10S & 382 \\ CR962-15S & 65 \\ CR962-20S & 65 \\ \\ \\ \end{array}$	CR961-60 CR961-65	S 69 S 63 S 65 S 52 S 101
$\begin{array}{cccc} CR961-105S & 21 \\ CR961-110S & 18 \\ CR961-115S & 8 \\ RE & CR961-105S & 16 \\ \hline \\ CR961-120S & 20 \\ CR961-125S & 78 \\ CR961-130S & 14 \\ CR961-130S & 14 \\ CR961-135S & 45 \\ CR961-140S & 54 \\ \hline \\ CR962-5S & 62 \\ CR962-10S & 382 \\ CR962-15S & 65 \\ CR962-20S & 60 \\ \hline \end{array}$	CR961-75 CR961-80 CR961-85 CR961-90 CR961-95	S 94 S 71 S 40 S 110 S 104
CR961-140S 54 CR962-5S 62 CR962-10S 382 CR962-15S 65 CR962-20S 60	CR961-10 CR961-11	5S 21 .0S 18
CR962-15S 65 CR962-20S 60	CR961-12 CR961-12 CR961-13 CR961-13 CR961-13 CR961-14	0S 20 5S 78 0S 14 5S 45 0S 54
CR962-258 31	CR962-10 CR962-15	S   65 S   60
STANDARD AU-S 60	STANDARI	AU-S 60

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



# Fairfield Minerals Ltd. PROJECT CREST/CR96-1 FILE # 96-4398



SAMPLE#	Au* ppb
CR962-30S CR962-35S CR962-40S CR962-45S CR963-5S	35 15 53 24 142
CR963-10S CR963-15S CR963-20S CR963-25S CR963-30S	19 78 52 44 19
CR963-35S CR963-40S CR963-45S RE CR964-1S CR964-1S	30 15 39 19 14
CR964-2S CR965-1S STANDARD AU-S	12 12 50

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

#### ACME ANALYTICAL LABORATORIES LTD.

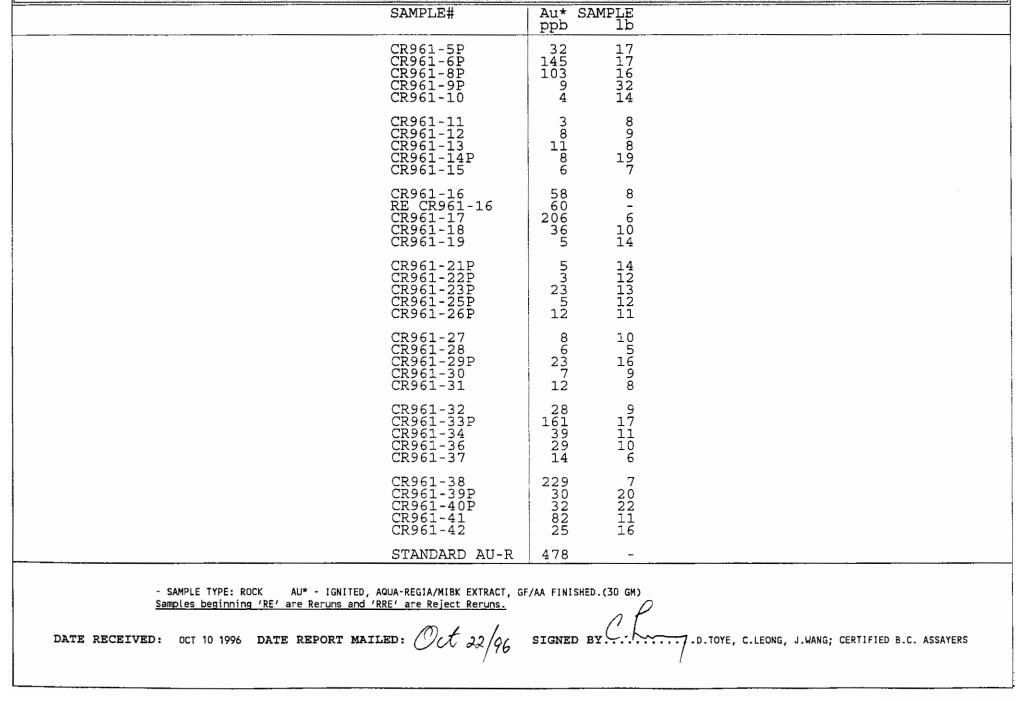
#### 852 E. HASTINGS ST. VANCOUVER BC V6A 1R6

#### PHONE (604) 253-3158 FAX (604) 253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE



### Fairfield Minerals Ltd. PROJECT CREST/CR96-2 File # 96-5238 Page 1 1980 - 1055 W. Hastings S, Vancouver BC V6E 2E9 Submitted by: K. Lloyd







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ALME ANALYTILAL				 ACME ANALYTICAL
	SAMPLE#	Au* S. ppb	AMPLE lb	
	CR961-43 CR961-44 CR961-45 CR961-46P CR961-47	12 18 49 47 16	10 12 11 15 12	
	CR961-48 CR961-49P CR961-50P CR961-51P CR961-52P	34 82 124 20 7	7 18 26 21 22	
	CR961-53 CR961-54 CR961-55 CR961-56 CR961-57	84 11 6 2 <1	13 9 12 7 13	
	CR961-59 RE CR961-59 CR961-60 CR961-61 CR961-61 CR961-62	94 76 69 7 5	9 - 9 9 9	
	CR961-63 CR961-64P CR961-65 CR962-1P CR962-2	2 <1 9 10 3	10 17 12 16 11	
	CR962-3 CR962-4P CR962-5a CR962-5b CR962-6P	48 1360 96 24 470	11 16 9 22	
	CR962-7 CR962-8 CR962-9P CR962-10 CR962-11	89 14 22 7 20	9 7 16 10 7	
	STANDARD AU-R	487	-	

Sample type: ROCK. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

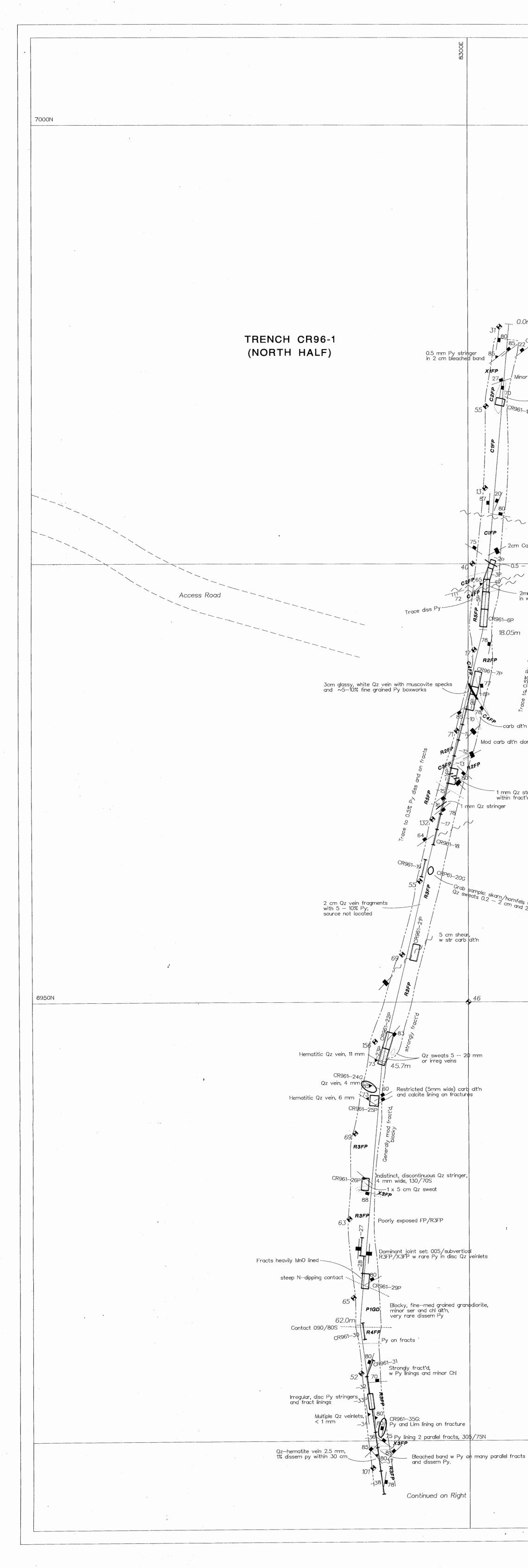




Page 3

SAMPLE#	Au* ppb	SAMPLE lb	
CR962-12 CR962-13 CR963-1P CR963-2 CR963-3	11 28 267 49 27	8 8 17 6 8	
CR963-4P CR963-5 CR963-6 CR963-7 CR963-8P	32 13 13 9 17	15 6 8 9 18	
CR963-9 CR963-10P CR963-11 CR963-12P CR963-13	38 20 60 253 68	9 18 8 17 10	
CR963-14 RE CR963-14 CR963-15P CR963-16 CR963-17	31 36 39 10 24	10 21 11 10	
CR964-1P CR964-2P CR964-3P CR964-4P CR964-5P	1120 980 2960 146 100	25 23 24 22 21	
CR964-6P CR964-7 STANDARD AU-R	79 62 460	21 19 -	

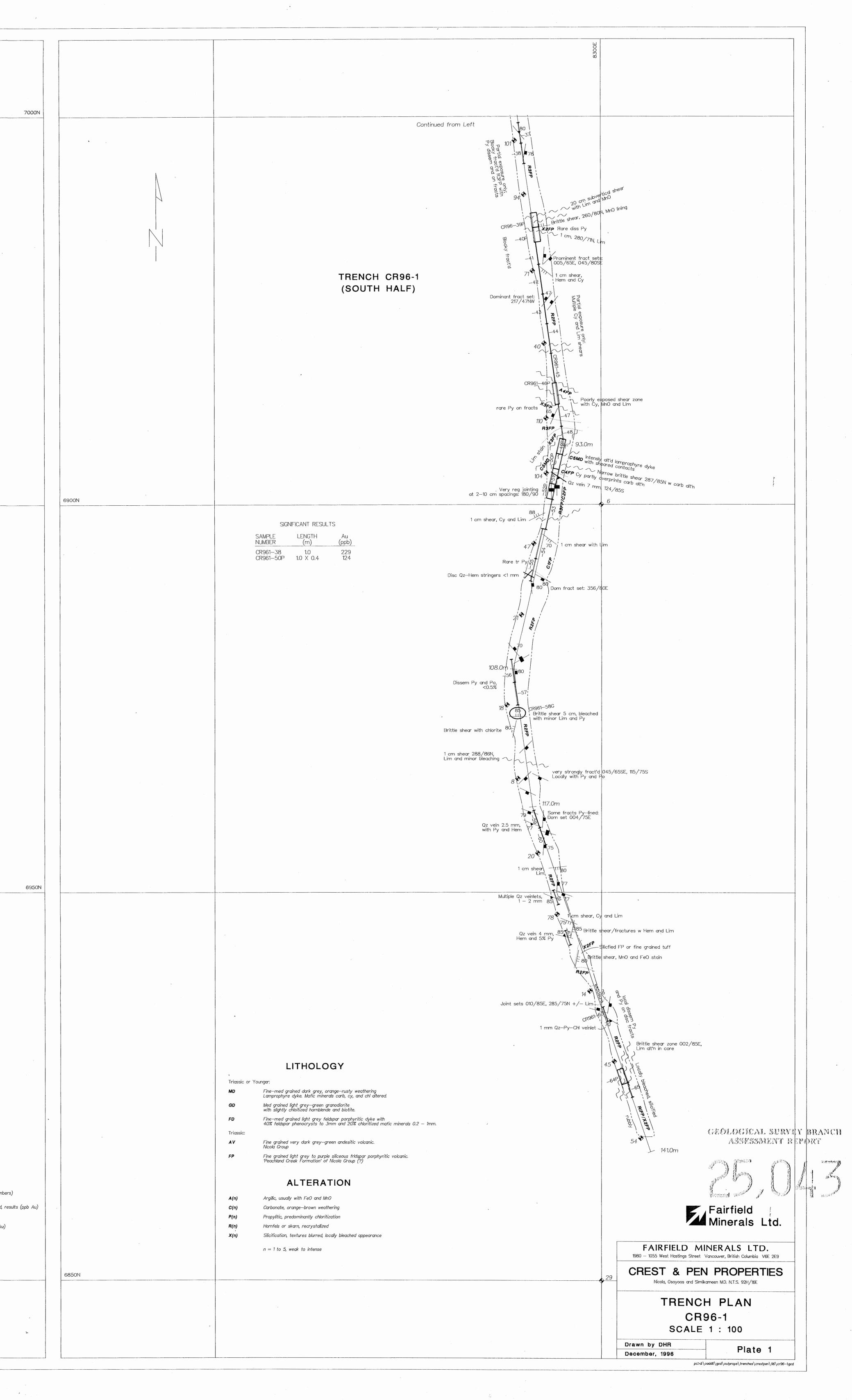
Sample type: ROCK. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

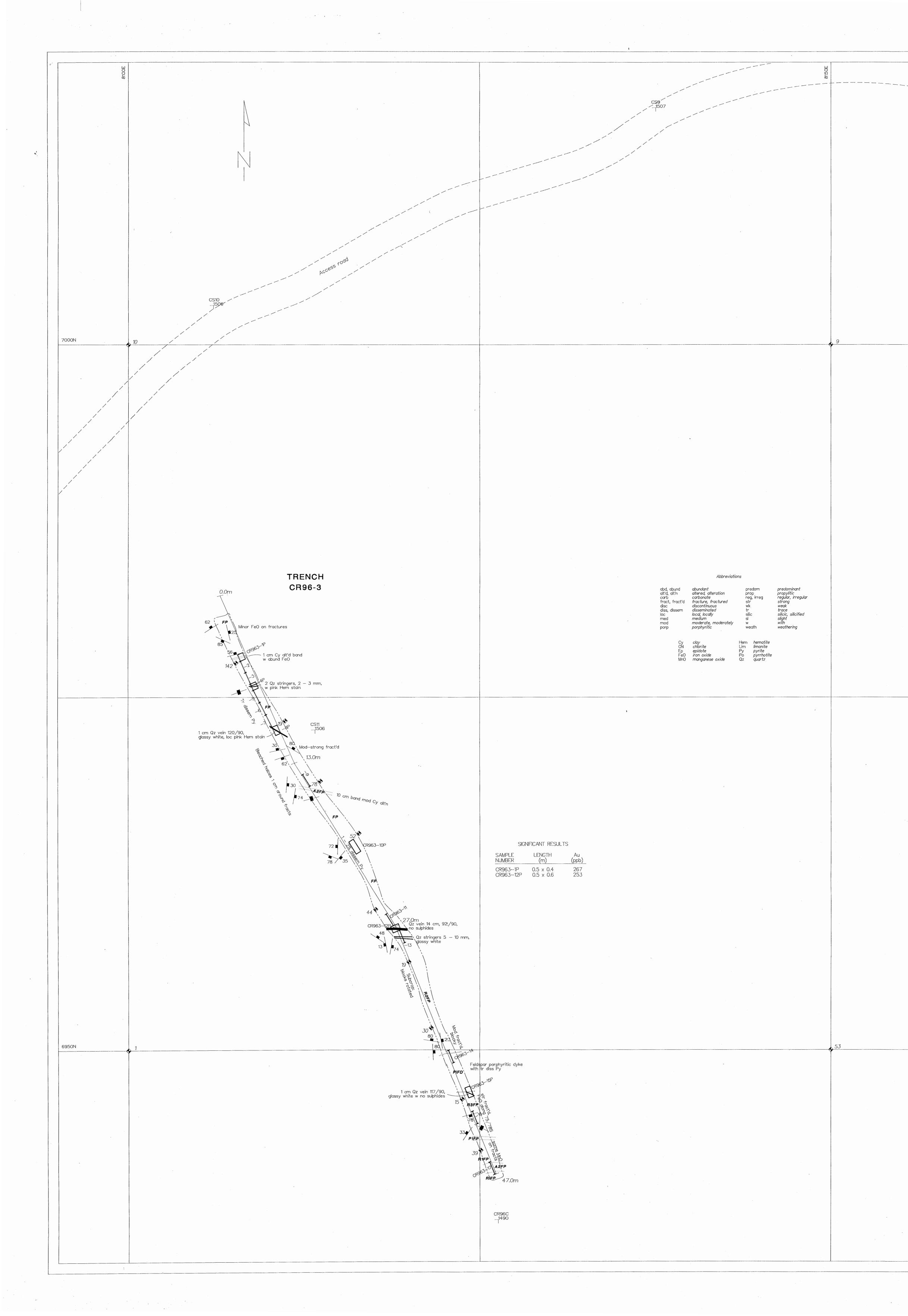


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		8300E 7000N <sup>CS1</sup> <sup>14</sup> 1496
-		
D.Om 122 Son jugate fracture set		
◆ inor Carb alt'n on fracts		
—— C2FP, Mod fract'd, Tr Py 51—1P		
*	SIGNIFICANT RESULTS	
	SAMPLE: LENGTH Au Ag As Cu Zn NUMBER (m) (ppb) (all above in ppm)	
	CR961-4P 0.7 x 0.35 5 0.3 112 37 129   CR961-6P 1.0 x 0.4 145 - - - - -   CR961-8P 0.5 x 0.4 103 - - - - -   CR961-17 1.0 206 - - - - -   CR961-33P 1.0 x 0.3 161 - - - -	
∕~ 4cm shear w Carb alt'd gouge		
Carb alt'd band around fract — 1 cm disc Qz stringer, med grey, no sulphides		
✓ 2mm Qz stringers → 20% FeO stained boxworks 223/65N in weak shear 75/72S		
racts.		
Trace ta 0.5% Py diss and an fracts		CS2 -1494
66 to 0.5%		
o F alt'n overprints R5FP skarn/hornfels		
along vertical fracts.		
CS3 1494 		
,	, Abbreviations	
els with nd 2% diss Py	abd, abundabundantpredompredominantalt'd, alt'naltered, alterationproppropyliticcarbcarbonatereg, irregregular, irregularfract, fract'dfracture, fracturedstrstrongdiscdiscontinuouswkweakdiss, dissemdisseminatedtrtraceloclocal, locallysilicsilicic, silicifiedmedmediumslslightmodmoderate, moderatelywwithporpporphyriticweathweathering	
	Cy clay Hem hematite Chl chlorite Lim limonite Ep epidote Py pyrite FeO iron oxide Po pyrrhotite MnO manganese oxide Qz quartz	
· · · · · · · · · · · · · · · · · · ·		
		LEGEND
		Trench outline Lithological Contact
		Alteration Boundary
		50 Fracture attitude (inclined, vertical) 50 Shear attitude
		50 Vein attitude Quartz Vein
		Panel Sample
	14	Continuous channel sample Grab sample (CR961 prefix omitted from most sample number
		9150W 340 Soil sample station, coordinates where surveyed, re 6050N 71 Basal trench soil sample location, results (ppb Au)
	· · · · · · · · · · · · · · · · · · ·	CS3 
		NOTE: Grid is based on line 7000N baseline soil stations
ots 225/85NW,		
•		





		TRENCH CR96-2
		— 0.0m
	CS7 1510 Fracture	
	1510 Fracture	sets 115/75S, 358/75E Blocky R2FP with rare Ep alt'n of feldspar
	Multiple 0 115/80, 060/10, 035/9	z veins 1 7 mm: E180 1 cm shear with Cy and Lim
	10/80, 000/10, 033/9	
		5 mm Qz vein 762 790 7 308/84, 184/82
	Multiple Oz	Closely fract'd band or brittle shear:
		veins 1 – 4 mm 0 86 84 84
	,	lem stained
	Q2	Vein 2 cm ~90 80 11.0m ×2FP
	R1FP/XIFP	CR962-4P(83) Closely fract'd band X2F
		Qz vein to 10 cm, approx 114/90 RIFP Multiple Qz veins 1 – 6
	Intermittent outcrop	65 <b>F</b> (6 3)
·		88 70 T
		an that the set
		10 cm st with Her
	SIGNIFICANT RESULTS	
	SAMPLE LENGTH Au NUMBER (m) (ppb)	12 cm Qz vein, Rusty Hem stain
	CR9624P 1.0 x 0.4 1360 CR9626P 1.0 x 0.4 470	Very 23.0
		X4FP Tr
	~	31 <b>*</b> 72 rare
		Tr diss
		FP
		35 (2962-
		FP 45
		58
		45
	,	64 70 ×2 CR962-12
		25 FP 25 -13 silicit x3-
• •		53 <b>*1</b> FP
		FP
	LEGEND	X2FP
	Trench outline	24 🕈
	Lithological Contact	( 46.0n
	Alteration Boundary	
	$\sim \sim \sim$ Shears ,	-
	✓ Fracture attitude (inclined, vertical)	
	50 Shear attitude	
	50 Vein attitude	
	Quartz Vein	
	Panel Sample Continuous channel sample	
	0 Grab sample (CR961 prefix omitted from most sample numbers)	
	9150W Soil sample station, coordinates where surveyed, results (ppb Au) Non-surveyed locations are idealized 71 Basal trench soil sample location, results (ppb Au)	
	CS3	
	NOTE: Grid is based on line 7000N baseline soil stations	
		· · ·
		•
	LITHOLOGY Triassic or Younger:	
	MD Fine-med grained dark grey, orange-rusty weathering Lamprophyre dyke. Mafic minerals carb, cy, and chl altered.	
	<b>GD</b> Med grained light greygreen granodiorite with slightly chloritized hornblende and biotite.	• · ·
	<b>FD</b> Fine-med grained light grey feldspar porphyritic dyke with 40% feldspar phenocrysts to 3mm and 20% chloritized mafic minerals 0.2 – 1mm. Triassic:	
	AV Fine grained very dark grey—green andesitic volcanic. Nicola Group	
	FP Fine grained light grey to purple siliceous frldspar porphyritic volcanic. 'Peachland Creek Formation' of Nicola Group (?)	
	ALTERATION	
	A(n) Argillic, usually with FeO and MnO	•

A(n)Argillic, usually with FeO and MnOC(n)Carbonate, orange-brown weatheringP(n)Propylitic, predominantly chloritizationR(n)Hornfels or skarn, recrystallizedX(n)Silicification, textures blurred, locally bleached appearancen = 1 to 5, weak to intense

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