ARIS SUMMARY SHEET

District Geologist, Kamloops — Off Confidential: 92.08.07

ASSESSMENT REPORT 21443 — MINING DIVISION: Similkameen

PROPERTY: Elk
LOCATION: LAT 49 50 00 LONG 120 19 00
UTM 10 5523335 692965
NTS 092H16W

CAMP: 012 Nicola Belt

CLAIM(S): Elk 1-2,Elk 62-64,Fergito Allendo 1-2,Gavin 1-5,Arp,Elk 9-16
Elk 20-21,Elk 55-56
OPERATOR(S): Fairfield Min.
AUTHOR(S): Jakubowski, W.
REPORT YEAR: 1991, 80 Pages
COMMODITIES
SEARCHED FOR: Gold,Silver
KEYWORDS: Triassic,Nicola Group,Andesitic volcanics,Sediments,Jurassic
Osprey Lake Batholith,Granites,Andesite dykes,Quartz veins,Gold
Silver
WORK
DONE: Drilling,Geochemical,Geophysical,Physical
DIAD 5427.0 m 62 hole(s);HQ
Map(s) - 23; Scale(s) - 1:1500,1:500,1:250
EMGR 50.0 km;VLF
Map(s) - 7; Scale(s) - 1:5000
LSUR 4.0 km
MAGG 50.0 km
Map(s) - 2; Scale(s) - 1:5000
ROAD 4.0 km
ROCK 1831 sample(s) ;AU
SOIL 1389 sample(s) ;AU
Map(s) - 2; Scale(s) - 1:10000,1:5000
TREN 607.0 m 7 trench(es)
Map(s) - 11; Scale(s) - 1:1000,1:2000,1:500,1:200
RELATED
REPORTS: 16644,18511,19489,19835
MINFILE: 092HNE111

1990

DRILLING, TRENCHING, GEOCHEMICAL & GEOPHYSICAL
REPORT on the ELK PROPERTY

Similkameen Mining Division, B.C.
Siwash Lake Area, British Columbia
NTS: 92H-16W; Lat. $49^0$50'N; Long. $120^0$19'W

MAY 1991 (BC Assessment Report)
VOLUME I: TEXT

This report consists of two volumes:

Volume I:	Text
Volume II:	Plates
Volume III:	Appendices

REPORT DISTRIBUTION

→Government :	2
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1990

DRILLING, TRENCHING, GEOCHEMICAL & GEOPHYSICAL REPORT

ON THE ELK PROPERTY

Similkameen Mining Division, B.C.
Siwash Lake Area, British Columbia
Latitude 49^{0}50'N; Longitude 120^{0}19'W.
NTS: 92H-16W

For

FAIRFIELD MINERALS LTD.
Vancouver, British Columbia

and

PLACER DOME INC.
Vancouver, British Columbia

W. Jakubowski, B.Sc.

CORDILLERAN ENGINEERING LTD.
1980-1055 W. Hastings St.
Vancouver, B.C. V6E 2E9

Date Submitted: May, 1991
Field Period: May 29 to November 2, 1990

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Appendix "D": Geophysical Report

1.0 SUMMARY AND CONCLUSIONS

The Elk property consists of 84 contiguous mineral claims comprising 523 units located 40 kilometres west of Peachland, B.C., in the Similkameen Mining Division (NTS: 92H-16W). Initial staking was undertaken in November 1986 (160 units) with additions in 1987 (60 units), 1988 (32 units) and 1989 (199 units). A block comprising 72 units was optioned from Mr. Donald Agur of Summerland, B.C. in October, 1988. Claim acquisition and subsequent work have been conducted by Cordilleran Engineering Ltd. for Fairfield Minerals Ltd. Placer Dome Inc. entered into an option agreement on the property in March, 1988. This report describes work done on the Elk South area (which includes Elk 4,6,8,10,12,14,16,18,31,32,33FR,35,55-64, Tepee, Nanci P2, Fergito Allendo 1,2, Arp and the Gavin 1-5 claims), and the Elk North area (which includes the Elk 1,2,7,9,11,13,15,17,20 and 32 claims).

The Elk claims cover forested gently rolling hills with fair to poor bedrock exposure. The property is accessible by paved highway, 50 kilometres from Westbank, B.C., or 50 kilometres from Merritt, B.C.

Work conducted on the property area in 1986, 1987, 1988 and 1989 consisted of geological mapping, prospecting, linecutting, soil sampling, geophysics, excavator trenching, diamond drilling and road construction. During the 1990 field season, soil sampling, geophysical surveys, trenching, trench reclamation, road construction and diamond drilling were undertaken.

The property is underlain by the Triassic Nicola Group volcano-sedimentary assemblage on the west and by granitic rocks of the Jurassic Osprey Lake Batholith on the east. Feldspar porphyry stocks of the Upper Cretaceous Otter Intrusions cut both of these groups. Andesite dykes intrude all of the above units and are interpreted to be of Tertiary Age.

Gold-silver mineralization on the Elk property is hosted by pyritiferous quartz veins and pyritiferous altered granite. The mineralized features generally trend northeasterly and are thought to be Late Cretaceous or Tertiary in age. To date, mineralization has been located in four areas of the Elk property: Siwash North, South Showing, North Showing and Siwash Lake.

Diamond drilling totalling 5168.34m in 58 holes was completed in the Siwash North area during 1990. The mineralized structure was tested to 247m down dip and along a strike length of 850m in 17 drill fences. Quartz veins which host the gold were intersected in all but three drill holes, two of which were stopped short of the projected zone location. Results include values up to 47.31 gm/tonne gold over a true width of 2.0m. Preliminary tonnage calculations using a 10gm cutoff over 2.0m width indicate a geological reserve of 4,600,000 grams (148,000 oz) gold at a grade of 21.72 gm/tonne Au (0.633 oz/ton). The zone remains open to depth and along strike.

Seven trenches and three stripped vein sections in the Siwash North zone traced the mineralized system hosted by granite and andesitic volcanics over a strike length of 750m. Panel sampling across the vein at roughly 5m intervals defined four high grade sections which averaged 11.66 gm/tonne Au along a strike length of 140m, 34.70 gm/tonne Au along a strike length of 115m, 8.06 gm/tonne Au along 135m and 9.39 gm/tonne Au along 80m, all across a 2.0m true width. Three of the sections are contiguous giving a combined length of 390 metres averaging 17.38 gm/tonne Au. Individual panel samples returned values up to 409.79 gm/tonne Au over a true width of .46m (11.952 oz/t Au over 1.51 ft).

Four holes totalling 259.08m were drilled in the Lake Zone, 800m to the south of Siwash North, to test the vertical continuity of a mineralized structure exposed by trenching. The zone was intersected in all four holes (SLD90-56 to -58) on two fences 145m apart to a depth of 78m down dip. Grades of up to 2.43 gm/tonne Au over a 2.0m true width were returned from sampling.

Six trenches and one stripped area totalling 604 linear metres were dug in the Siwash Lake area to test soil geochemical and geophysical anomalies. A mineralized quartz vein associated with an andesite dyke was exposed for 18m along strike and projects across 143m between two trenches. Chip sample results included values up to 6.55 gm/tonne gold over a 2.0m true width. Another mineralized structure was exposed in two trenches in the Siwash Lake South area with results from panel sampling of up to 8.88 gm/tonne gold over a true width of 0.41m.

A total of 1254 fill-in soil samples were collected in the Elk South area and 250 samples in the Siwash Lake area to help define anomalous gold trends outlined by coarse grid sampling and geophysics. A number of northwest and southwest trends were defined.

The results of exploration on the Elk Property are extremely encouraging. A drill indicated geological reserve of 148,000 oz. has been defined at Siwash North and additional drilling could substantially expand this resource. Promising targets are present in the Siwash Lake area and geophysical and geochemical anomalies in the Elk South area have similar signatures to those defined at Siwash North and Siwash Lake and have yet to be tested. Potential for the discovery of additional gold reserves remains strong in the South Showing and North Showing areas as indicated by results of earlier trenching programs. Excellent access to services is provided by the Okanagan Connector highway which passes two km north of the Siwash North mineralized structure. Continued aggressive exploration is definitely warranted to fully define the extent of this gold resource.

****

2.0 RECOMMENDATIONS

The following two phase exploration program is recommended:

PHASE I:

- Continued grid drilling in the Siwash North area to test the continuity of the gold bearing structure to a down dip depth of 475m. Approximately 9000m in 46 holes would be required to complete a 50m spaced grid over this area.
- Drill a total of 750m in 6 holes to determine the continuity of down dip mineralization in the South Showing area, on fences spaced at roughly 100m.
- Test the North Showing area quartz vein at depth by 200m of drilling in four holes.
- Geochemical soil sample at 50m spacings on 200m lines on the Elk 42, 44 and 45 claims. Detailed fill-in sampling on 50m by 50m grid around anomalous sample locations defined in the above areas and those outlined during previous programs. An estimated 1240 coarse grid and 1000 detailed grid samples should be collected.
- Overburden drill in the Agur Option area to better determine the sources of soil geochemical and geophysical anomalies prior to trenching.
- Excavate ten trenches totalling 2500m to test anomalous gold soil geochemical and geophysical trends in the Agur option area located approximately 800m south of the South Showing contingent on results from overburden sampling. One kilometre of road is required to access the trench locations.

PHASE II:

The second phase of the project is subject to the results of the phase I drilling and entails detailed drilling at 25m centers to better define areas with high grade vein intercepts. Step-out drill holes in the North and South Showing areas are recommended subject to results from the preliminary drilling.

Respectfully submitted

CORDILLERAN ENGINEERING LTD.

Wojtek Jakubowski, B.Sc.,
Geologist

WJ/z
May, 1991

3.0 INTRODUCTION

This report describes the results of a diamond drilling, trenching, soil geochemical and geophysical program conducted on the Elk property during the period May 29 to November 2, 1990. The work was carried out by Cordilleran Engineering Ltd. for Fairfield Minerals Ltd. and Placer Dome Inc.

3.1 LOCATION AND ACCESS (Figure 1)

The Elk property is located 40 kilometres west of Okanagan Lake in southern British Columbia approximately midway between Merritt and Summerland, at latitude $49^{0}50'$N and longitude $120^{0}19'$W (Figure 1). The claims cover heavily forested rolling terrain of the Trepanege Plateau highlands. Elevations range from 1300 to 1750 metres above sea level. Portions of the property have been recently logged, and future operations are planned for the northern and southwestern claims. Access to the property is excellent with the Okanagan Connector highway passing through the northern claims. Merritt and Kelowna are within one hour driving time from the camp location. Field operations in 1990 were based out of a tent camp centrally located on the property.

3.2 CLAIM DATA (Figure 2)

The Elk property consists of 48 two post claims, 28 four post claims and eight fractional claims comprising 523 units (Table 1). The claims are 100% owned by Fairfield Minerals Ltd. with the exception of the Agur Option block (72 units) which is subject to an additional cash payment and 1% NSR from production. This report describes information relating to work done on the Elk North block (assessment groups Elk 90B and Elk 90C) which consists of 200 units. Work done on the Elk South block (assessment group Elk 90A), consisting of 98 units outlined on Figure 2, is also described.

Table 1: Property Claim Status as at May 1, 1991

CLAIM	UNITS	RECORD NO.	EXPIRY DATE
ELK 1	20	2737	28 NOV 2000
ELK 2	20	2738	28 NOV 1999
ELK 3	2-post	2744	28 NOV 2000
ELK 4	2-post	2745	28 NOV 2000
ELK 5	2-post	2746	28 NOV 2000
ELK 6	2-post	2747	28 NOV 1996
ELK 7	2-post	2748	28 NOV 2000
ELK 8	2-post	2749	28 NOV 1996

Table 1 Claim Data as at May 1, 1990 Continued

CLAIM	UNITS	RECORD NO.	EXPIRY DATE
ELK 9	2-post	2750	28 NOV 2000
ELK 10	2-post	2751	28 NOV 1996
ELK 11	2-post	2752	28 NOV 2000
ELK 12	2-post	2753	28 NOV 1996
ELK 13	2-post	2754	28 NOV 2000
ELK 14	2-post	2755	28 NOV 1996
ELK 15	2-post	2756	28 NOV 2000
ELK 16	2-post	2757	28 NOV 1996
ELK 17	2-post	2758	28 NOV 2000
ELK 18	2-post	2759	28 NOV 1996
ELK 19	20	2739	28 NOV 1996
ELK 20	20	2740	28 NOV 1999
ELK 21	20	2741	28 NOV 2000
ELK 22	2-post	2760	28 NOV 1999
ELK 23	2-post	2761	28 NOV 1999
ELK 24	2-post	2762	28 NOV 1999
ELK 25	2-post	2763	28 NOV 1999
ELK 26	20	2742	28 NOV 1998
ELK 27	20	2743	28 NOV 1996
ELK 28	20	3033	24 SEP 2000
ELK 29	20	3034	24 SEP 1999
ELK 30	20	3035	24 SEP 1999
ELK 31	2-post	3164	17 AUG 2000
ELK 32	2-post	3165	17 AUG 1996
ELK 33 FR	1	3202	28 SEP 2000
ELK 34	2-post	3211	29 SEP 2000
ELK 35	2-post	3210	29 SEP 1996
ELK 36	12	3242	2 NOV 2000
ELK 37	15	3243	31 OCT 2000
ELK 38	16	3333	7 MAY 2000
ELK 39	16	3334	7 MAY 1993
ELK 40	12	3335	7 MAY 1993
ELK 41	20	3337	9 MAY 2000
ELK 42	12	3338	9 MAY 2000
ELK 43	16	3336	7 MAY 1998
ELK 44	20	3373	6 JUN 1998
ELK 45	20	3374	6 JUN 1999
ELK 46	16	3375	5 JUN 1999
ELK 47	20	3376	6 JUN 1999
ELK 48	2-post	3377	4 JUN 1999
ELK 49	2-post	3378	4 JUN 1999
ELK 50	2-post	3379	4 JUN 1999
ELK 51	2-post	3380	4 JUN 1999
ELK 52	2-post	3381	6 JUN 1999
ELK 53	2-post	3382	6 JUN 1999
ELK 54FR	1	3383	6 JUN 1999
ELK 55	2-post	3411	5 JULY 2000
ELK 56	2-post	3412	5 JULY 1996
ELK 57	2-post	3413	5 JULY 1996
ELK 58	2-post	3414	5 JULY 1996

Table 1 Claim Data as at May 1, 1990 Continued

	CLAIM	UNITS	RECORD NO.	EXPIRY DATE
	ELK 59	2-post	3415	5 JULY 1996
	ELK 60	2-post	3416	5 JULY 1996
	ELK 61	2-post	3417	5 JULY 1996
	ELK 62	2-post	3418	6 JULY 2000
	ELK 63	2-post	3419	6 JULY 2000
	ELK 64	2-post	3420	6 JULY 2000
	ELK 65FR	1	3421	6 JULY 2000
	ELK 66	2-post	3422	7 JULY 2000
	ELK 67FR	1	3423	7 JULY 2000
	ELK 68FR	1	3424	7 JULY 2000
	ELK 69	2-post	3425	7 JULY 2000
	ELK 70FR	1	3426	7 JULY 2000
	ELK 71	2-post	3427	7 JULY 1998
	ELK 72FR	1	3428	7 JULY 1998
	ELK 73FR	1	3749	20 AUG. 2000
(	ARP	20	719	13 SEP 1997
(	FERGITO ALLENDO 1	20	720	13 SEP 1996
Agur (	FERGITO ALLENDO 2	18	721	13 SEP 1996
Option (	NANCI P2	10	691	13 AUG 1996
(	TEEPEE	2	695	13 AUG 1996
(	SIWASH 50	2	1770	10 NOV 2000
	SNP 1	PLACER CLAIM	179	19 AUG. 1991
	SNP 2	PLACER CLAIM	180	19 AUG. 1991
	SNP 3	PLACER CLAIM	181	19 AUG. 1991
	SNP 4	PLACER CLAIM	182	19 AUG. 1991
	SNP 5	PLACER CLAIM	183	19 AUG. 1991
	SNP 6	PLACER CLAIM	184	19 AUG. 1991
	GAVIN 1	2-post	3523	26 SEP 1996
	GAVIN 2	2-post	3524	26 SEP 1996
	GAVIN 3	2-post	3525	26 SEP 1996
	GAVIN 4	2-post	3526	27 SEP 1996
	GAVIN 5	2-post	3527	27 SEP 1996

90 Claims 475 Units
+ 48 2-post Claims
+ 6 Placer Claims

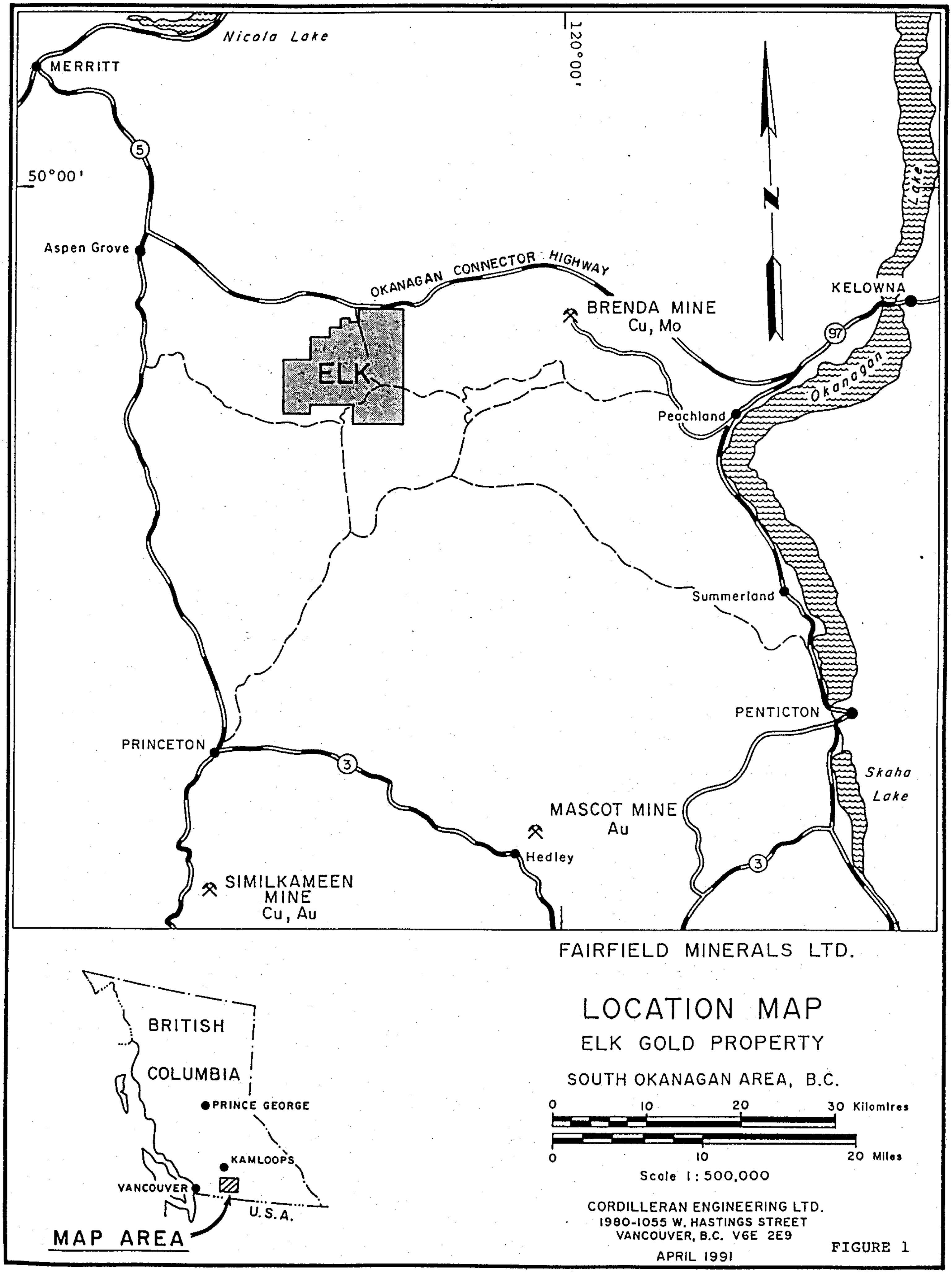
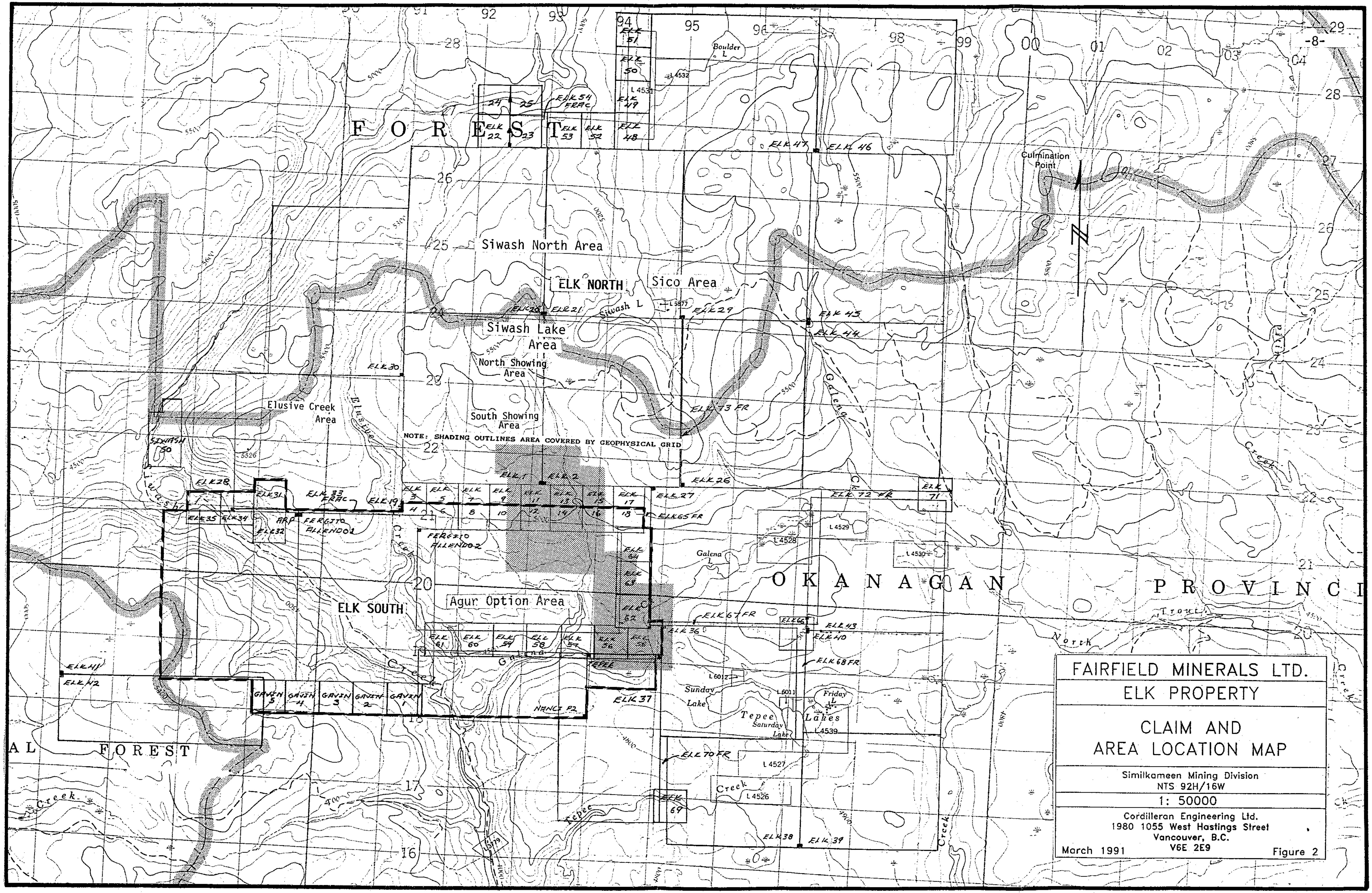

Nicola Lake
MERRITT
120°00'
5
50°00'
Aspen Grove
OKANAGAN CONNECTOR HIGHWAY
BRENDA MINE
Cu, Mo
Lake
KELOWNA
97
Okanagan
ELK
Peachland
Summerland
PENTICTON
PRINCETON
3
Skaha
Lake
MASCOT MINE
Au
Hedley
3
SIMILKAMEEN
MINE
Cu, Au
BRITISH
COLUMBIA
PRINCE GEORGE
KAMLOOPS
VANCOUVER
U.S.A.
MAP AREA
FAIRFIELD MINERALS LTD.
LOCATION MAP
ELK GOLD PROPERTY
SOUTH OKANAGAN AREA, B.C.
0 10 20 30 Kilomtres
0 10 20 Miles
Scale 1:500,000
CORDILLERAN ENGINEERING LTD.
1980-1055 W. HASTINGS STREET
VANCOUVER, B.C. V6E 2E9
APRIL 1991

FIGURE 1


FAIRFIELD MINERALS LTD.
ELK PROPERTY
CLAIM AND
AREA LOCATION MAP
Similkameen Mining Division
NTS 92H/16W
1: 50000
Cordilleran Engineering Ltd.
1980 1055 West Hastings Street
Vancouver, B.C.
V6E 2E9
March 1991
Figure 2
NOTE: SHADING OUTLINES AREA COVERED BY GEOPHYSICAL GRID
Siwash North Area
ELK NORTH
Sico Area
Siwash Lake Area
North Showing Area
South Showing Area
Elusive Creek Area
ELK SOUTH
Agur Option Area
Culmination Point
Boulder L
Siwash L
Galena L
Sunday Lake
Tepee Lakes
Saturday Lake
Friday L
F O R E S T
O K A N A G A N
P R O V I N C
AL FOREST

3.3 HISTORY

During the first half of the century the El Paso adit was driven into volcanic rocks in the area currently covered by the Elk 31 claim. Quartz vein-hosted lead-zinc-silver-gold mineralization was encountered. No production of ore was achieved.

Don Agur of Summerland, B.C. has prospected and trenched the north and west parts of the present Elk property area as well as a large region to the south along Siwash Creek during the last 40 years.

Phelps Dodge Corporation of Canada Ltd. carried out copper exploration during 1972 which included mapping and soil geochemistry in the area of he present Elk 19, 28, 31, 32, 34, 35, Siwash 50 and Arp claims.

Utah Mines Ltd. conducted mapping, geochemistry, IP geophysics and trenching to evaluate copper mineralization on the Siwash claim group which, in part, covered the present Siwash 50 and Elk 28 claims.

Brenda Mines Ltd. worked on the Siwash claim group and on what is now the southern part of the Elk property. A rigorous copper exploration program including mapping, soil geochemistry, geophysics, trenching and diamond drilling was undertaken between 1979 and 1981. Work was done on the area currently covered by the Elk 19, 28, 31 to 37, 41, 42, Arp, Fergito Allendo I, II, Nanci P2 and Tepee claims.

Exploration for molybdenum was undertaken by Cominco Ltd. during 1980 on what is now the Elk 26, 27, 29, 43 to 45, 71 and 72 claims. Work included geological mapping and soil geochemistry.

No significant discoveries resulted from the above programs.

The Elk 1 to 27 claims were staked in November 1986 by Cordilleran Engineering Ltd. for Fairfield Minerals Ltd. to cover new showings of gold-silver mineralization hosted in pyritic quartz veins cutting a granite batholith and andesite dykes. Preliminary hand trenching and soil sampling were conducted.

During 1987, widespread and detailed grid soil sampling programs were undertaken to define areas anomalous in gold. Nine trenches, totalling 1528m were excavated in two areas (North and South Showings) to test soil geochemical targets, exposed quartz veins and altered breccias hosted in granite. IP, magnetometer and VLF-EM geophysical surveys were carried out over the trenched areas. The Elk 28 to 30 claims were staked in September 1987 to acquire ground along projections of favourable geochemical trends.

The 1988 program included collection of 2283 soil samples on the claims acquired in 1987 and trenching in Siwash North and Elusive Creek areas. Four kilometres of road was constructed for access and eleven trenches totalling 2784 metres which exposed quartz-vein-hosted gold mineralization were mapped and sampled. The Elk 31 to 37 claims were staked to cover adjacent favourable areas.

During the 1989 field season, the Elk 38 to 73 claims were staked to cover projections of anomalous soil geochemical trends. Fifty line-km of VLF-EM and magnetometer surveys were carried out in the Siwash Lake and Siwash North areas and 3800 soil samples were collected on the new claims. A total of 56.25 km of baseline was cut to provide control for soil sampling and geophysical surveys. Trenches were excavated in the South Showing, Siwash North and Siwash Lake areas for a total of 2222 linear metres of bedrock exposure in 25 trenches and stripped areas. The high grade gold bearing quartz vein system in the Siwash North area was further delineated over a strike length of 750m. Twelve diamond drill holes totalling 752m tested the down dip continuity of this system.

3.4 1990 EXPLORATION PROGRAM

During 1990 a total of 5168.34m of HQ diamond drilling in 58 holes was carried out in the Siwash North area on a 50m grid spacing. The core was logged, photographed and one thousand and seventy one samples were sent to Acme Analytical Labs for gold assay and analysis.

Quartz vein hosted gold mineralization in the Siwash North area, previously revealed by trenching and stripping, was further exposed by seven trenches and three stripped areas totalling 544 linear metres. These were tested by 576 continuous chip or panel samples assayed for gold. The trenches and stripped areas were mapped at 1:100 scale and later compiled at 1:500.

Diamond drilling in the Siwash Lake area consisted of 259.08m of HQ core in four drill holes (SLD90-56 to 59). The core was treated as above and 60 samples were collected. All core is stored on site.

Six trenches and one stripped area totalling 607 linear metres of bedrock exposure were excavated in the Siwash Lake area to test the continuity and grade of mineralization exposed by wide spaced trenching in 1989 and to test anomalous soil geochemistry. The trenches were mapped as above and 121 continuous chip or panel samples were collected and analyzed for gold.

Soil sampling on the Elk North block was concentrated in the Siwash Lake area where 250 fill-in samples were collected around anomalous coarse grid stations. One thousand two hundred and fifty-four grid samples were collected on Elk South block. Magnetometer and VLF-EM surveys were carried out on Elk South over the Agur Option area on flagged lines 100m apart for a total of 50 line km.

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4.0 GEOLOGY

4.1 REGIONAL GEOLOGY (Figure 3)

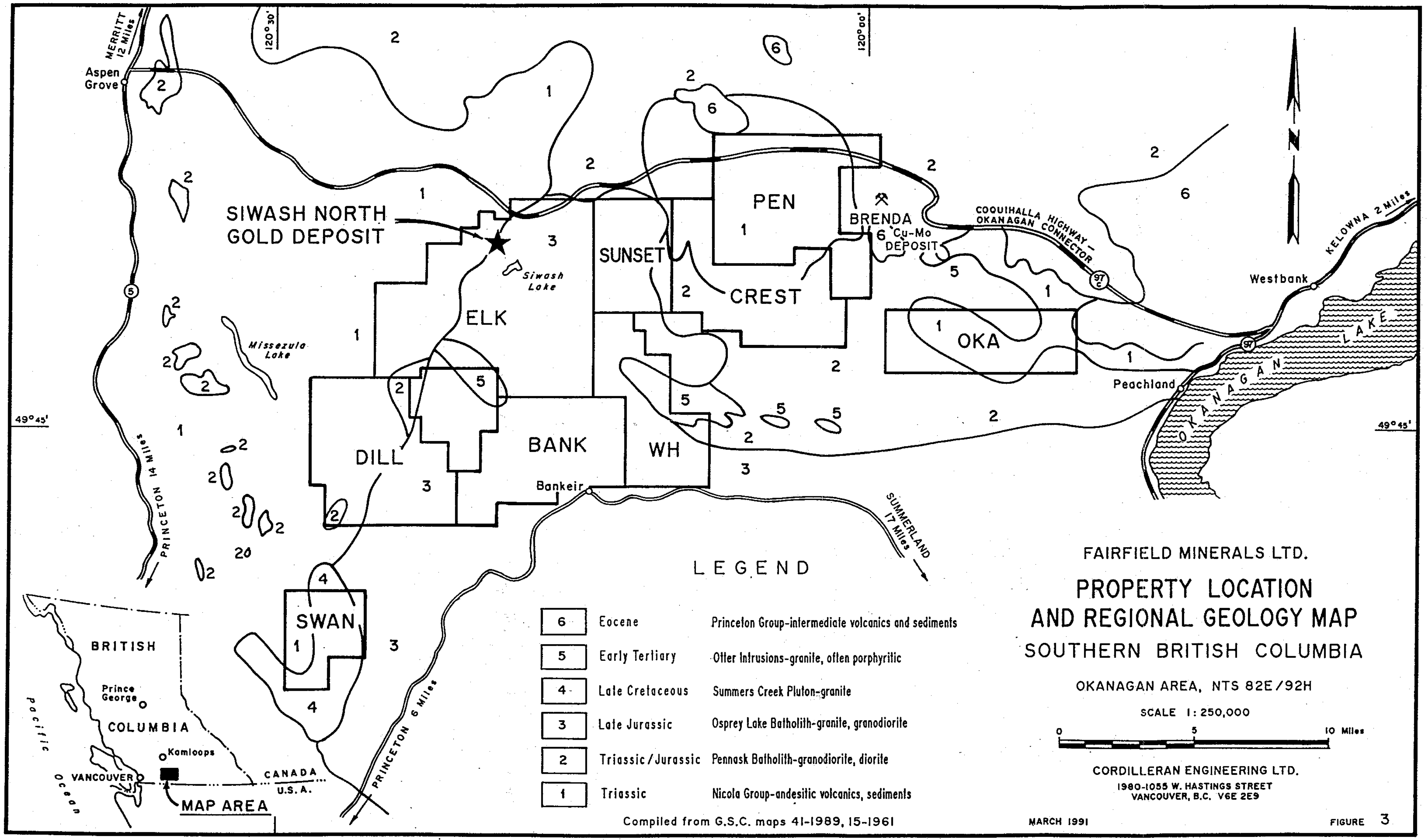
The Elk property is located in the Intermontane tectonic belt of south central B.C. Hope Geological Map 41-1989 by J.W.H.Monger (1989) shows the area to be underlain by Upper Triassic volcanics and sediments of the Nicola Group and by Jurassic granites and granodiorites of the Osprey Lake Batholith. The contact between these units trends northeasterly across the property. Early Tertiary feldspar porphyry stocks and dykes of the Otter Intrusions occur throughout the claims and a large body to the south is spatially associated with many known showings of copper, lead, zinc and silver.

4.2 PROPERTY GEOLOGY

The western claims area is underlain by steeply west-dipping andesitic to basaltic flows, agglomerates, tuffs and minor siltstone and limestone units of the Upper Triassic Nicola Group. The eastern half of the property is underlain by Jurassic granitic rocks of the Osprey Lake Batholith. The contact between these two assemblages trends approximately north-northeast. Upper Cretaceous to Tertiary feldspar porphyry and quartz-feldspar porphyry stocks and dykes of the Otter Intrusions cut both of the above. Breccias containing rounded volcanic, dioritic and granitic fragments in a granitic matrix crosscut Nicola Group rocks, Osprey Lake and Otter Intrusions. Andesite dykes are the youngest units mapped, post dating all of the above. Mineralization appears to be spatially associated with these (Tertiary?) andesite dykes which are locally cut by quartz veins.

The Nicola Group lithologies mapped on the Elk property consist of dark greyish green, massive basaltic andesite; some porphyrytic containing pyroxene and/or amphibole phenocrysts; some containing 0.5 mm laminae of sand-sized black grains; pale grey-green siliceous laminated tuff; and brownish-green to pale green agglomerates containing fragments from 5 to 50 cm in size. Nicola Group rocks are occasionally silicified, carbonatized or epidote altered. Iron oxide staining and finely disseminated pyrite are common.

The Osprey Lake granitic rocks on the Elk property are pinkish grey, medium- to coarse-grained, equigranular, and contain quartz, orthoclase, plagioclase and biotite. Petrographic analyses indicate the composition varies from quartz monzonite to granodiorite. Pink, sugary textured aplite dykes cut the quartz monzonite and were probably a late phase of the intrusive event. Quartz diorite related to the batholith is far less common and occurs as stocks. It is pale grey, generally medium to fine grained and contains visible quartz, plagioclase, biotite and amphiboles. Dykes of quartz monzonite and hornblende-biotite quartz monzonite have also been mapped. They are medium greenish-grey, medium grained and contain feldspar and occasionally hornblende


FAIRFIELD MINERALS LTD.
PROPERTY LOCATION
AND REGIONAL GEOLOGY MAP
SOUTHERN BRITISH COLUMBIA
OKANAGAN AREA, NTS 82E/92H
SCALE 1:250,000
0 5 10 Miles
CORDILLERAN ENGINEERING LTD.
1980-1055 W. HASTINGS STREET
VANCOUVER, B.C. V6E 2E9
MARCH 1991
FIGURE 3
LEGEND
6 Eocene Princeton Group-intermediate volcanics and sediments
5 Early Tertiary Otter Intrusions-granite, often porphyritic
4 Late Cretaceous Summers Creek Pluton-granite
3 Late Jurassic Osprey Lake Batholith-granite, granodiorite
2 Triassic/Jurassic Pennask Batholith-granodiorite, diorite
1 Triassic Nicola Group-andesitic volcanics, sediments
Compiled from G.S.C. maps 41-1989, 15-1961
SIWASH NORTH GOLD DEPOSIT
Siwash Lake
Missezula Lake
ELK
DILL
BANK
WH
SUNSET
CREST
PEN
OKA
SWAN
BRENDA Cu-Mo DEPOSIT
Bankeir
Aspen Grove
MERRITT 12 Miles
PRINCETON 14 Miles
PRINCETON 6 Miles
SUMMERLAND 17 Miles
KELOWNA 2 Miles
COQUIHALLA HIGHWAY - OKANAGAN CONNECTOR
Westbank
Peachland
OKANAGAN LAKE
120°30'
120°00'
49°45'
49°45'
N
BRITISH COLUMBIA
Prince George
Kamloops
VANCOUVER
Pacific Ocean
CANADA
U.S.A.
MAP AREA

phenocrysts. Alteration assemblages include weak to strong propylitic, argillic, phyllic and silicic, noted predominantly in the trenched areas where these recessively weathering features have been exposed.

The Otter Intrusions comprise quartz-feldspar porphyry, feldspar porphyry and quartz-biotite-feldspar porphyry dykes and stocks. Quartz-feldspar porphyry is extensively clay altered and contains feldspar phenocrysts up to five cm, averaging about five mm. The altered groundmass is beige in colour and extremely friable. Feldspar porphyry rocks range from medium grey to red and contain feldspar phenocrysts 2 to 5 mm in size that vary in quantity from 3 to 40 percent. Petrographic examination of the red, medium packed feldspar porphyry indicated that it is syenitic in composition. Quartz-biotite-feldspar porphyry is greyish beige and is typified by small biotite grains with equal quantities of fine quartz and feldspar phenocrysts.

The breccias noted on the property have granitic matrices and contain rounded to sub-rounded granite, diorite and andesite clasts varying in size from 5 to 25 cm. The elongate breccia bodies vary in width from 5 to 30 metres and trend northeasterly. These zones may be portions of major fault structures, but displacement, if any, is not readily apparent.

Andesite dykes are dark greyish-green, fine grained and vary in thickness from 30 cm to 5 metres. They are commonly muscovite altered and brown weathering. Strong orange and blue clay alteration has also been noted in these rocks.

4.3 STRUCTURAL GEOLOGY

Nicola Group rocks on the west side of the property dip approximately 60 degrees to the west forming the east limb of a syncline mapped by Rice. The syncline trends roughly north-south and its axis passes about five km west of the claims.

The Elk property topography reflects several linear structures, the most prominent being the north to northeast trending features occupied by Siwash Creek, Elusive Creek and a parallel creek 2.5 kilometres to the east. Subtle east-northeast trends are evident on aerial photographs and are commonly associated with mineralization.

Structural deformation in the area appears to be minimal.

4.4 MINERALIZATION

Gold mineralization on the Elk property is hosted primarily by quartz veins and stringers in altered granitic and, less frequently, volcanic rocks. Cross-cutting relationships indicate that the veins are Tertiary in age; they may be related to Tertiary Otter intrusive events.

In the Siwash North area, gold occurs in veins measuring 5cm to 70cm thick, hosted by a zone of strongly sericitic- to phyllic-altered granitic and, in the west, volcanic rocks. In general, the mineralized zone trends ENE with southerly dips from 20^{o} to 80^{o} (from east to west), and appears to be related to minor shearing. In the eastern parts of the area, up to four sub-parallel zones occur. Three of these zones are consistent enough to be labelled the A, B and C zones. Mineralization in the west has been identified in one or locally two zones (the B and C zones).

At surface, supergene alteration has leached out most of the sulfides with some pyrite and chalcopyrite remaining. Mineralization occurs primarily as native gold, occasionally as spectacular aggregates of coarse flakes, in frothy quartz (strong pyrite boxwork) or in fractures in the vein. Electrum was noted in one area as very coarse-grained flakes associated with strong manganese staining. Gold was seen rarely in boxworks in phyllic alteration.

In drill core, mineralization has not been affected by supergene processes. Gold is strongly associated with pyrite and with a blue-grey mineral. Photomicrographs show the gold commonly in contact with this mineral, which may be an Au-Bi alloy (maldonite?) or a Cu-Bi-Sb sulfosalt. Au-Cu, Au-Bi, and Cu-Bi relationships have been shown by statistical determinations (refer to section 5.4 Statistical Analysis). Metallic minerals in the core include pyrite, chalcopyrite, sphalerite, galena, tetrahedrite, maldonite(?), pyrrhotite, and native gold (in order of decreasing abundance).

Gangue mineralogy consists primarily of quartz and altered wall-rock fragments. Ankerite is commonly present, with lesser amounts of calcite. Minor barite is also present. Fluorite was noted in one vein as very small (<1mm) zoned purple cubes scattered in the quartz.

The distribution of the gold mineralization is shown on plates 35 and 36 - Siwash North Area Plane of the Vein with Reserve Polygons for zones B and C. The B zone is the most continuous and forms the bulk of the high grade mineralized intercepts. Five shoots were indicated by drill intersections with grades better than 10.0 gm/tonne Au (0.292 oz/ton) over a true width of 2.0m in the B zone. Hole SND90-69, located at the southwest corner of the drill grid intersected significant mineralization indicating potential for a shoot to the west and south. A south trending shoot is defined by surface mineralization and holes SND89-1, 2, SND90-14, 65 and 66. This system is open to the south and accounts for approximately one third of the total reserve calculated. A discontinuous shoot defined by holes SND90-27, 29, 33 and 61 plunges to the south and then angles to the southeast. A lower grade intercept in hole SND90-28 causes the break in the trend. A southeast plunging shoot is indicated by holes SND89-8 and SND90-37 that may be open down dip. High grade intercepts in holes SND89-7, SND90-44 and 48 outline a northeast oriented shoot open to the south and east.

One shoot defined in the C zone is outlined by holes SND90-50 and 72 below lower grade B zone intercepts. It trends northeast and is open to the south and east.

In the northern Siwash Lake area, mineralization occurs mainly in quartz stringers and veins up to 35cm thick, hosted by strongly argillic- to phyllic-altered granitic rocks, closely associated with an andesite dyke. The zone trends EW and dips about 50° to the south. At surface and in drill core, the gold is associated with pyrite, chalcopyrite, and locally high concentrations of galena and sphalerite. Tetrahedrite and maldonite(?) are also locally present. Silver values are much higher than in Siwash North, probably associated with the greater galena content of the veins. The gangue mineralogy is similar to Siwash North.

Mineralization in the southern Siwash Lake area is similar to that in the north, but trends approximately NE dipping about 55^{o} to the south.

In the South Showing area, mineralization occurs mainly in quartz stringers in altered granitic rocks, in association with a breccia or with intensely argillized andesite dykes. Gold is rarely visible, and is associated with pyrite and base-metal sulfides. The highest grade sample interval is from a zone of quartz stringers paralleling the breccia, with weak sericitic alteration.

4.4.1 Alteration

On the Elk property stronger alteration generally accompanies higher grade gold mineralization.

Seven main types of alteration were recognized throughout the Elk property: Propylitic, argillic, sericitic, K-spar stable phyllic, phyllic, advanced argillic and silicic. Locally, potassic alteration, skarnification, and silicification were noted, but were relatively minor and did not appear to be related to mineralization. The following descriptions refer to granitic rocks except as noted.

propylitic:
Generally light green with biotite and hornblende altered to chlorite and plagioclase is saussuritized. In volcanics, colour is generally olive-green, and rock is soft.

argillic:
Rock is bleached, with plagioclase white and clay-altered; K-spar is slightly altered. Volcanics are bleached to light green or grey.

sericitic:
Typically pale green with a micaceous sheen, with plagioclase altered to sericite; trace disseminated pyrite may be present. Often associated with quartz veins, and appears to be the lowest grade alteration associated with gold mineralization. Not recognized in volcanics.

K-spar stable phyllic:
Light pink, green, or yellowish with K-spar fresh and pink and blocky. Plagioclase and mafic minerals are altered to fine-grained quartz-sericite-pyrite. Often occurs with veins and associated with gold mineralization. Not recognized in volcanics.

phyllic:
Generally grey, fine-grained quartz-sericite-pyrite alteration. Usually associated with veins often gradational to quartz and often auriferous.

advanced argillic:

Most or all of feldspar is destroyed, quartz is "free-floating"; often sheared, white in colour. Volcanics are white or blue coloured. Often associated with quartz veins.

silicic:

Quartz veining or replacement. Hard with moderate conchoidal fracture. Textures may be blurred.

There is a strong symmetrical zoning of alteration around the quartz veins:

VEIN - ADVANCED ARGILLIC - PHYLLIC - K-SPAR STABLE PHYLLIC - ARGILLIC - PROPYLITIC

Secondary bands and zones of alteration may be present, and any of the alterations may be missing.

At surface, the alteration may produce a striking "rainbow" effect with the rock colour grading from white (vein) through grey, yellow, orange, rust, brown, and green (propylitic). In drill core, the effect is less striking and extensive, but the general pattern is still present.

4.4.2 Genetic Considerations

Gold mineralization on the Elk property appears to be related to Tertiary tectonic and intrusive events as inferred from crosscutting relationships.

Throughout the property, quartz veins were mapped cutting Tertiary(?) andesite dykes which have intruded Tertiary Otter intrusions, Jurassic Osprey Lake Batholith and Triassic Nicola volcanics. In the Siwash North area one quartz vein was found crosscut by an andesite dyke. Cataclastic textures in the quartz veins mapped in the Siwash North and North Showing areas suggest reactivation of the structures hosting the veins. Late stage Otter intrusive activity may have acted as the "heat pump" for the mineralizing fluids. Petrographic analysis indicates that the deposition of gold mineralization was a late-stage event in the hydrothermal system, with native gold and associated sulphide minerals filling fractures in pyrite.

During the mineralizing events, hydrothermal fluids permeated fractures in the host rock, depositing quartz and sulphides in the fractures and causing alteration of the wall rocks. These fluids probably had temperatures of about 300^0C during the initial stages of mineralization as indicated by sulphide and alteration mineralogy (Panteleyev, 1986).

Briefly, the genetic model for the deposits is thought to be as follows:

1) Deposition of the Nicola volcanics.
2) Emplacement of the Osprey Lake Batholith.
3) Emplacement of the Otter syenitic intrusions.

4) Fracturing possibly during the Osprey Lake and/or Otter intrusive events.

5) Intrusion of andesite dykes.
6) Precipitation of quartz veins with pyrite, base metal sulphides and late stage gold mineralization, and associated hydrothermal alteration.
7) Erosion to present level.

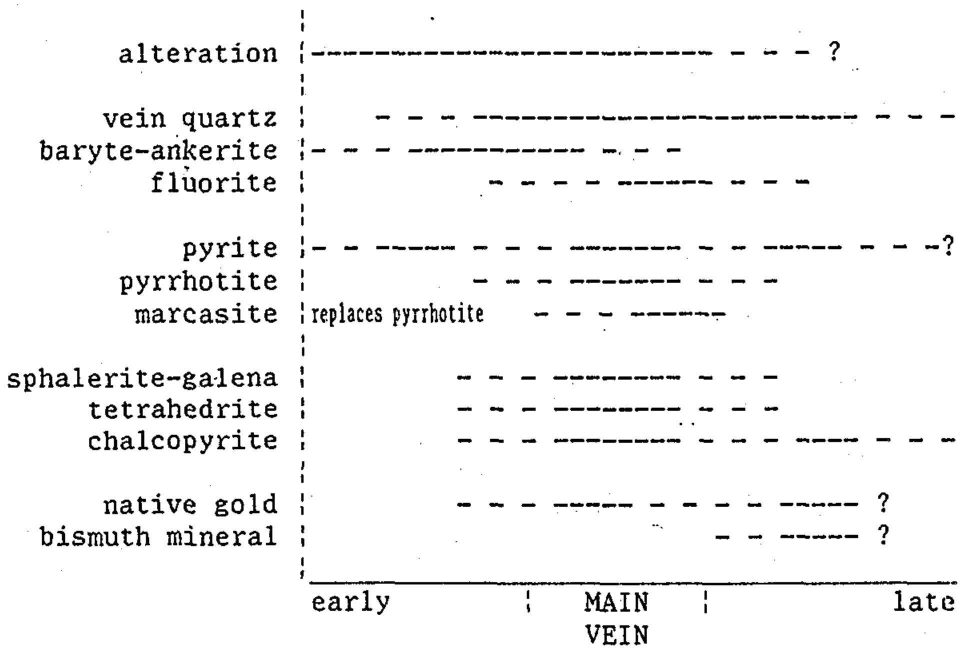


Figure 4: Paragenetic diagram showing relative timing of alteration, veining, and deposition of sulphide phases. Information is from observations at surface, in drill core, and from photomicrography.

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5.0 GEOCHEMISTRY

5.1 INTRODUCTION

During 1990, 1254 grid soil samples were collected from the Elk South block and 250 fill-in soil samples were taken from the Siwash Lake area. One hundred and fourteen continuous chip and panel samples were collected from trenches in the Siwash North, Siwash Lake and Sico areas and all were analyzed or assayed for gold. Diamond drilling on the Elk claims consisted of 58 holes in the Siwash North area from which 1071 core samples were collected and four holes in the Siwash Lake area yielding 60 samples. Core samples were assayed or analyzed for gold.

During the period 1986 to 1989, the Elk property was tested with 10,372 soil samples collected at 50 metre stations on 200 metre line intervals. Fill-in grids at 25m and 50m by 50m spacings, established around samples which contained greater than 50 ppb Au, added another 6310 for a total of 16,682 soil samples.

Table 2 **1990 SOIL AND ROCK SAMPLE DISTRIBUTION**

Location	No. of Soil Samples	No. of Rock Samples
Grids	1504	
Trenches	160	714
Drill holes		1131
Reconnaissance		6

The analytical results from soil, rock and core samples are in Appendix "A".

5.2 SOIL GEOCHEMISTRY

Control for soil sampling was provided by east-west cut baselines picketed at 25m intervals. Sample lines were oriented north-south using compass and hip chain, and sample stations at 25 or 50m intervals were marked with grid-numbered flagging tape. Samples were collected from the "B" soil horizon and placed in kraft paper bags numbered with grid coordinates.

Trench floor soil samples were collected every five metres at the soil-rock interface along the length of the trenches. Samples were placed in kraft paper bags and labelled with a station number denoting the location in the trench. Samples were partially dried in camp and shipped to Acme Analytical Laboratories in Vancouver for gold analysis. At the lab, soils were dried and sieved to obtain 10 grams of minus 80 mesh size fraction. This portion was then ignited to 600 degrees Celsius and digested with hot aqua regia. Gold was extracted by MIBK (methyl isobutyl ketone) and the solution analyzed for gold by graphite furnace atomic absorption.

5.2.1 Soil Geochemistry Results

Soil Sample gold results from the Elk South block are plotted on Plate 1. Fill-in sampling at 50m intervals on 50m lines confirmed a geochemically anomalous northeast trend between grid coordinates 400W and 600E which includes values up to 680 ppb Au. A group of anomalous values between coordinates 3000E and 4000E further defined a broad northwest trend which projects to two similar trends 1 km to the northwest outlined by 1989 sampling. Results include values up to 480 ppb Au. Coarse grid sampling at 50m intervals on 200m lines to the south of 3200S, between 600W and 2400E, produced no clear trends but included seven values greater than 35 ppb.

Fill-in sampling at 25m stations in the Siwash Lake area (Plate 2) confirmed a 600m east-northeast anomalous trend between 2200E and 2800E. The trend splits into two lobes, a northeast and an east part at 2500E. Results included values up to 540ppb Au.

5.3 ROCK GEOCHEMISTRY

Panel and continuous rock chip samples (714 total) were collected from trenches in the Siwash North, Siwash Lake and Sico areas during 1990. The panel samples were 0.5 metre wide and both the panel and continuous chip samples were taken over intervals averaging one metre in length using sledge and cold chisel. Panel samples were obtained by chipping five parallel lines of chips along the length of the outlined area to a depth of two to four centimetres, depending on the hardness of the rock. Panel samples of strongly altered or soft rock were chipped to a 2cm depth over the entire area of the sample. Continuous chip samples consisted of a single line along the sample interval. Aluminum tags with the sample number inscribed were nailed to the rock at all four corners of the panel samples and at both ends of the continuous chip samples. Panel samples (15 to 20 kg) and continuous rock chip samples (2 to 5 kg) were placed in numbered plastic sample bags and shipped to Acme Analytical Laboratories, Vancouver, for gold analysis. Sample preparation and analysis methods varied. Samples that were expected to have significant gold content were crushed to -3/16" and then coarse pulverized to -1/16". In the case of large trench samples, 5kg of the sample was split out and then coarse pulverized. One kg of the -1/16" material was pulverized to 99% finer than -100 mesh and sieved on a -100 mesh screen. The result of one fire assay of 1 Assay Ton (1 AT) of the -100 mesh material and the weighted result of the fire assay of the entire coarse fraction were combined for an average gold value. ICP analysis for 30 elements was also carried out on a 0.50 gm sample of -100 mesh material. This technique was referred to as the Sieve and Assay method. Selected higher grade intercepts were resampled from the reject, assayed for gold by the same method and also check assayed for silver.

Samples adjacent to those analyzed by the Sieve and Assay method were crushed and coarse pulverized as above, then 250 gm of the sample was split out, pulverized to -100 mesh and 1 AT assayed for gold by standard fire assay techniques.

Samples of apparent lower grade were crushed to -3/16", 250 gm of sample split out and pulverized to -100 mesh. A 20 gm sample of the -100 mesh material was analyzed for Au by MIBK extraction and atomic absorption.

A total of 1131 core samples were shipped to Acme for gold assay and analysis. Samples to be assayed by the Sieve and Assay method were logged, detail photographed and shipped unsplit to maximize sample size. All other core samples were split and half shipped to the lab.

Six rock samples were collected from various locations on the property while prospecting for the sources of soil geochemical anomalies. These are listed below.

Table 3 **1990 RECONNAISSANCE ROCK SAMPLES**

Sample Number	Local Area Name	Grid Location (Coordinates)	Sample Type/Description	Au (ppb) oz/t	Ag (ppm) oz/t
E90-R1	Galena Lk. (Upper Slash)	~800S/4050E	Outcrop grab; strongly phyllic-alt'd grnt.	(6)	(0.1)
E90-R2	Sico Tr	2785N/3730E	Bedrock grab; 6 cm qz vn w/ser, py along contact alt'd grnt + and dyke.	.004	.01
E90-R3	Gravel Pit (S. Part)	4235N/3465E	Float grab; qz vn frags to 8x10cm; drusy w/abund lim, local py-gn-sp.	.021	1.16
E90-R4	Gravel Pit (S. part)	4175N/3465E	Float grab; qz vn pcs to 10x12cm; drusy, rusty w/ remnant py-sp.	.020	1.80
E90-R5	Gravel Pit (S. Part)	4255N-4300N/ ~3480E	Float grabs; qz vn frags over 45m; drusy, abund lim, local coarse py, minor gn-sp-cp.	.015	0.81
E90-R6	Boulder Lk. (S.side Hwy.)	5350N/4010E ~4030E	Float grab; qz vn(s) w/ minor py, lim.	.049	1.93

Note: Analyses/Assays extracted from Prospecting Project - Acme Files #90-2837 and #90-3518.

5.4 STATISTICAL ANALYSIS

Thirty-element ICP analysis was performed on 342 samples of drill core from the 1990 program. The samples were divided into two data sets, one for Siwash North and one for Siwash Lake. Single-element and multi-element regression analyses were performed on each data set to test for significant mineralogical and elemental relationships, and to compare similarities and differences between the two areas. Each pair of significant correlations was fitted to three models (linear, quadratic, and cubic) to find the most significant correlation. Some pairs are related logarithmically, others normally.

Scatter diagrams for the highest correlations (Figures 5 to 18) show local outlier effects, with higher values of one element giving an artificially high correlation coefficient (r), especially for Siwash Lake area data. However, neither data set was edited, and in general, good variation in values was noted.

Siwash North Area

The data for Siwash North contains 319 samples, giving significant correlation coefficients of 0.150 at a 99% confidence level. The base correlation coef ficient was set at 0.450 to emphasize the strongest correlations. R-values varied from 0.451 to 0.980 and are summarized in the following table:

Table 4: **Siwash North Correlation Matrix**

	Au	Bi	Cu	Ag	Sb	Fe	As	Cd	Pb
Bi	0.808								
Cu	0.663	0.500							
Ag	0.863	0.739	0.754						
Sb	0.505	0.451	0.459	0.515					
Fe	---	0.474	0.529	0.748	---				
As	---	---	0.541	0.550	---	---			
Cd	---	---	0.456	0.489	0.480	---	0.510		
Pb	---	---	0.460	0.568	0.556	---	0.531	0.683	
Zn	---	---	---	0.654	0.492	---	---	0.980	0.654

--- = not significant
N = 319
df = 315 - 318
rcrit = 0.450

Two overlapping mineralogical groupings are apparent. The first is Au-Ag associated with Cu-Bi-Sb, likely represented by native gold, chalcopyrite, tetrahedrite, and other sulfosalts. Gold appears to be confined to this group. The second grouping consists of Ag with Cu-Pb-Zn-Sb-As, possibly galena, sphalerite, and Pb-Zn sulfosalts.

Siwash Lake Area

The data from drilling in the Siwash Lake area includes 23 samples, which give a significant correlation value of 0.525 at a 99% level of confidence. The base correlation coefficient was set at 0.667 to emphasize the strongest correlations. The results of the regression analysis are summarized in the following table:

Table 5: **Siwash Lake Correlation Matrix**

	Au	Bi	Cu	Ag	Fe	As	Pb	Sb	Cd
Bi	0.847								
Cu	0.804	0.909							
Ag	0.908	0.894	0.887						
Fe	0.738	0.828	0.930	0.723					
As	0.672	---	0.678	0.825	---				
Pb	0.733	---	0.671	0.913	---	0.739			
Sb	---	---	0.878	0.870	---	0.826	0.687		
Cd	---	---	---	0.717	---	0.815	0.831	0.881	
Zn	---	---	---	0.940	---	0.949	0.785	---	0.981

--- = not significant
N = 23
df = 19 - 22
rcrit = 0.667

With the small number of samples, the results are inconclusive. However, two overlapping mineralogical groupings are indicated. The first is Au-Ag with Cu-Fe-Bi and As-Pb, probably native gold, pyrite, chalcopyrite, galena, and a Cu-Bi(-As) sulfosalt indicated by a very high Cu-Bi correlation (Figure 15). The second group is Cu-Ag with Pb-Zn-As, likely galena and sphalerite. Antimony shows low variability in this area with most values at or near the detection limit (2ppm, Figure 18), and appears to be a minor component of mineralization.

Conclusions

Comparison of the two populations indicates they are similar with a few significant differences. Two main mineralogical groupings exist in both areas, Au-Bi-Cu-Ag and Ag-Pb-Zn-As. The Au-Sb association is absent in the Siwash Lake area but moderate in Siwash North. There appears to be little or no base-metal association with gold in the Siwash North area, but is possible in the Siwash Lake area, as indicated by the strong Au-Pb correlation (Figure 16). Multi-element analysis of the Siwash North data set confirms the Au-Ag-Cu-Bi-Sb grouping, and gives the following generalized formula for predicting Au content using the other four elements:

$$Au=0.5x[e(0.081x\ln Cu+1.051x\ln Ag-1.494)+(0.240xSb+0.819xBi-0.634)]$$

The scatter diagram (Figure 19) shows this to be a good estimate of gold values, with a highly significant correlation coefficient of 0.841. A similar analysis was done for Siwash Lake area data, but due to the limited number of values no significant formula was derived.

Gold assays from both data sets were compared to check for major variations between total gold assay (including metallics) and -100 mesh Au fire assay. For both data sets, there was very low variation with correlation coefficients of 0.989 for Siwash North and 0.997 for Siwash Lake.

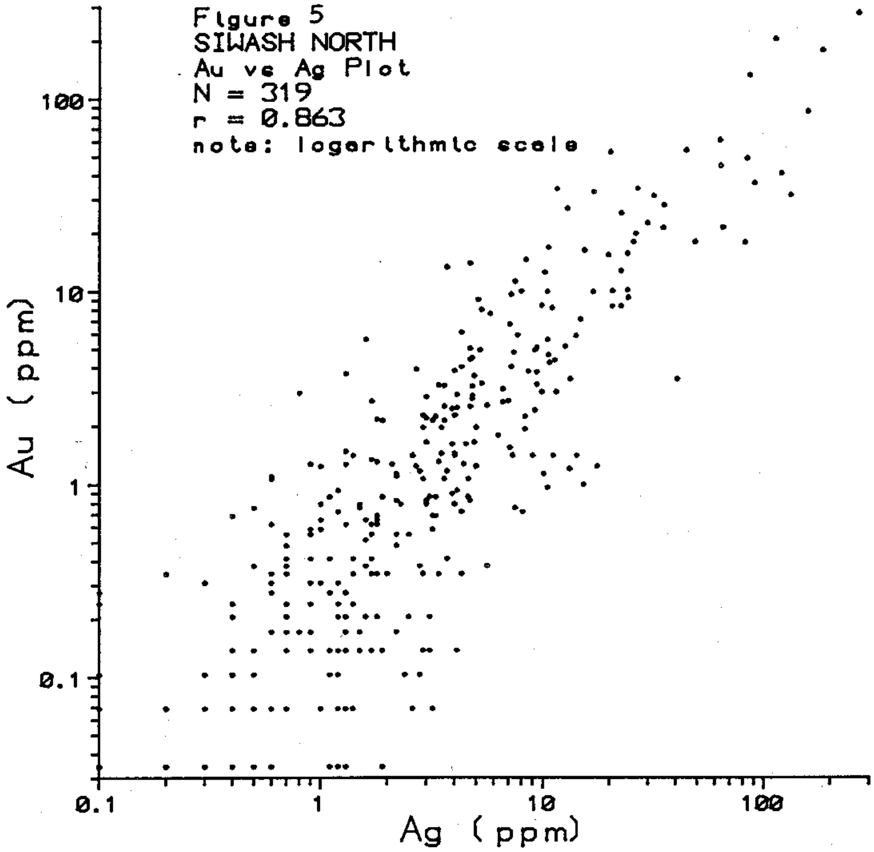


Figure 5
SIWASH NORTH
Au vs Ag Plot
N = 319
r = 0.863
note: logarithmic scale
100
10
1
0.1
Au (ppm)
0.1
1
10
100
Ag (ppm)

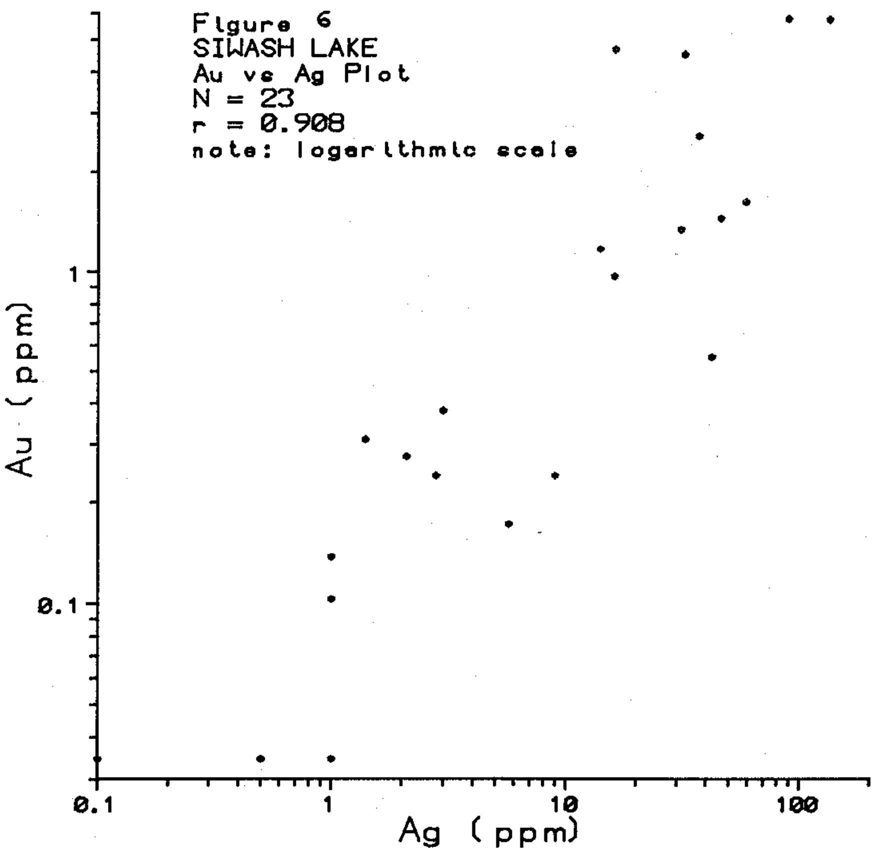


Figure 6
SIWASH LAKE
Au vs Ag Plot
N = 23
r = 0.908
note: logarithmic scale
1
0.1
Au (ppm)
0.1
1
10
100
Ag (ppm)

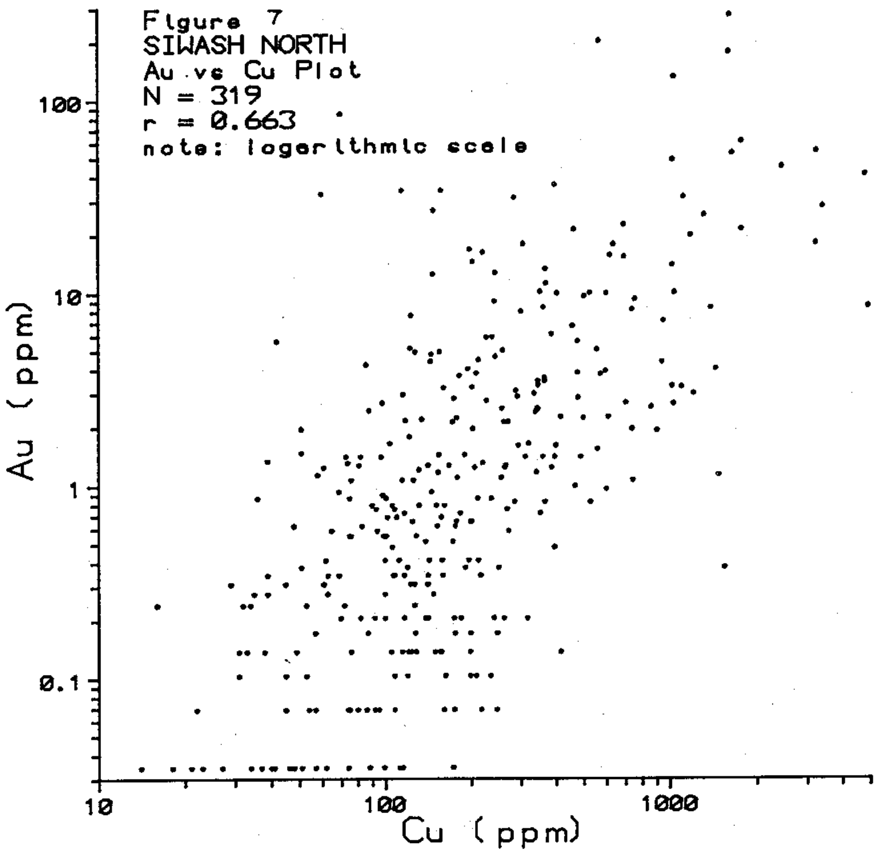


Figure 7
SIWASH NORTH
Au vs Cu Plot
N = 319
r = 0.663
note: logarithmic scale
Au (ppm)
Cu (ppm)
100
10
1
0.1
10
100
1000

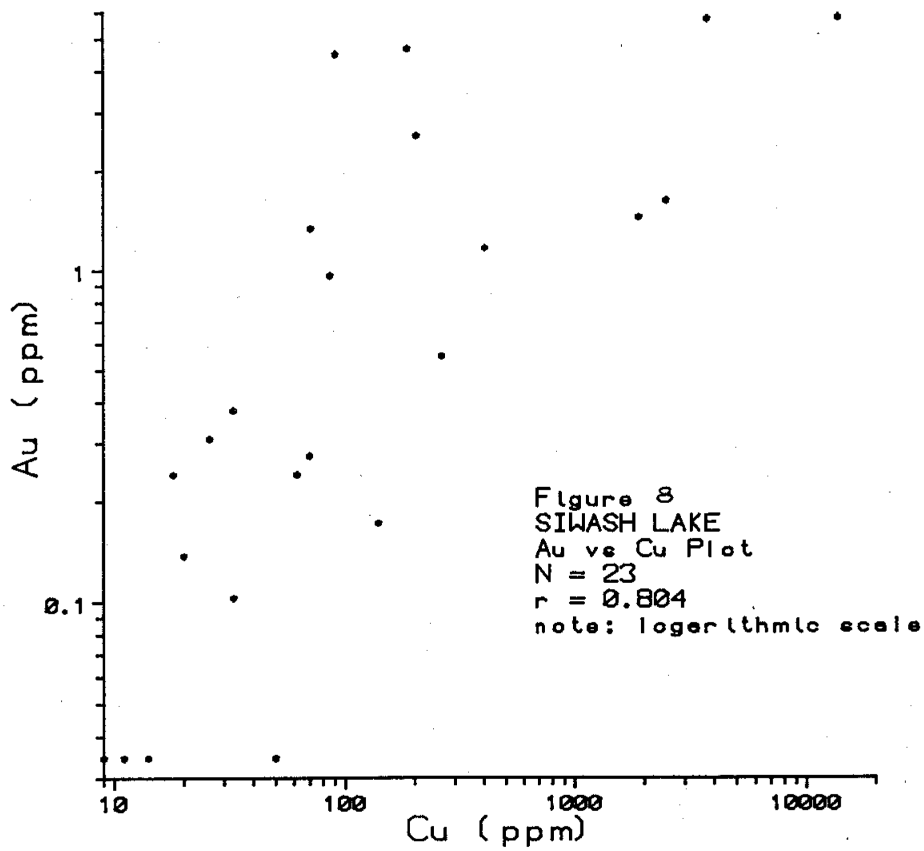


Figure 8
SIWASH LAKE
Au vs Cu Plot
N = 23
r = 0.804
note: logarithmic scale
Au (ppm)
Cu (ppm)
1
0.1
10
100
1000
10000

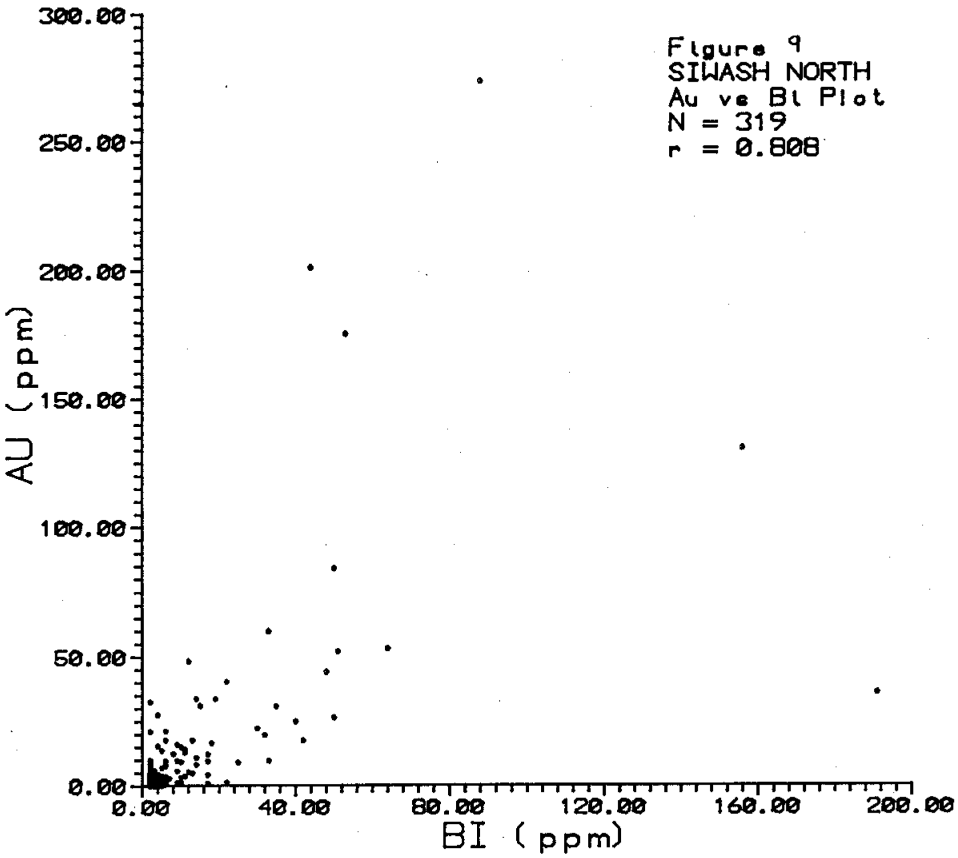
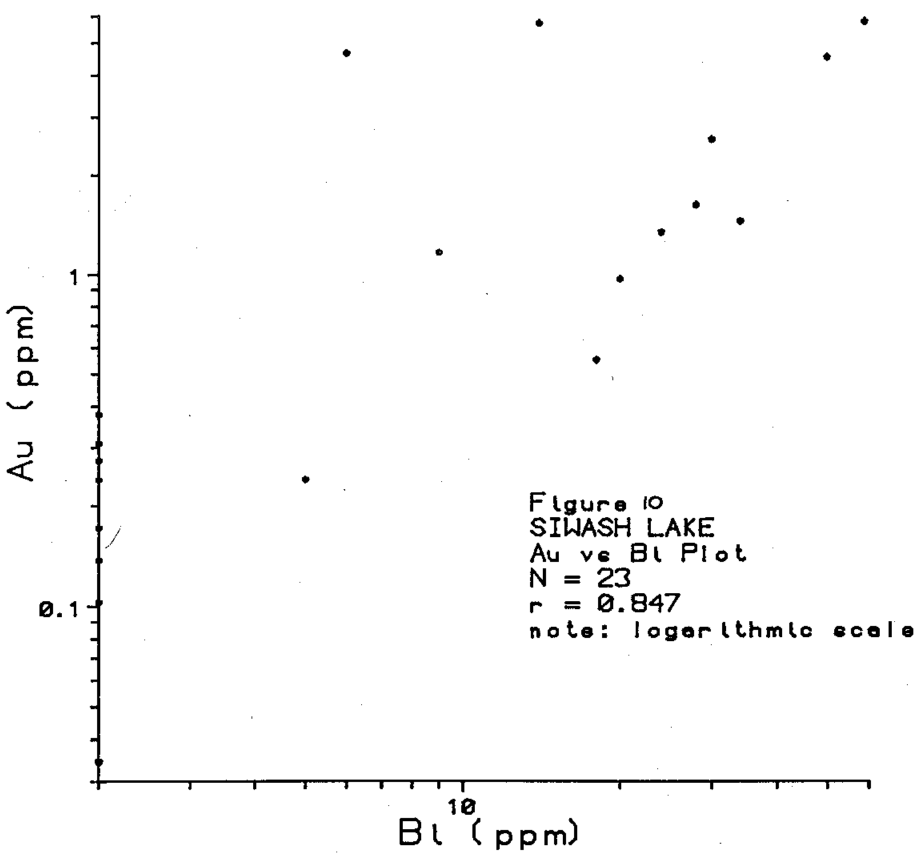


Figure 9
SIWASH NORTH
Au vs Bi Plot
N = 319
r = 0.808
300.00
250.00
200.00
150.00
100.00
50.00
0.00
AU (ppm)
0.00
40.00
80.00
120.00
160.00
200.00
BI (ppm)


1
0.1
Au (ppm)
10
Bi (ppm)
Figure 10
SIWASH LAKE
Au vs Bi Plot
N = 23
r = 0.847
note: logarithmic scale

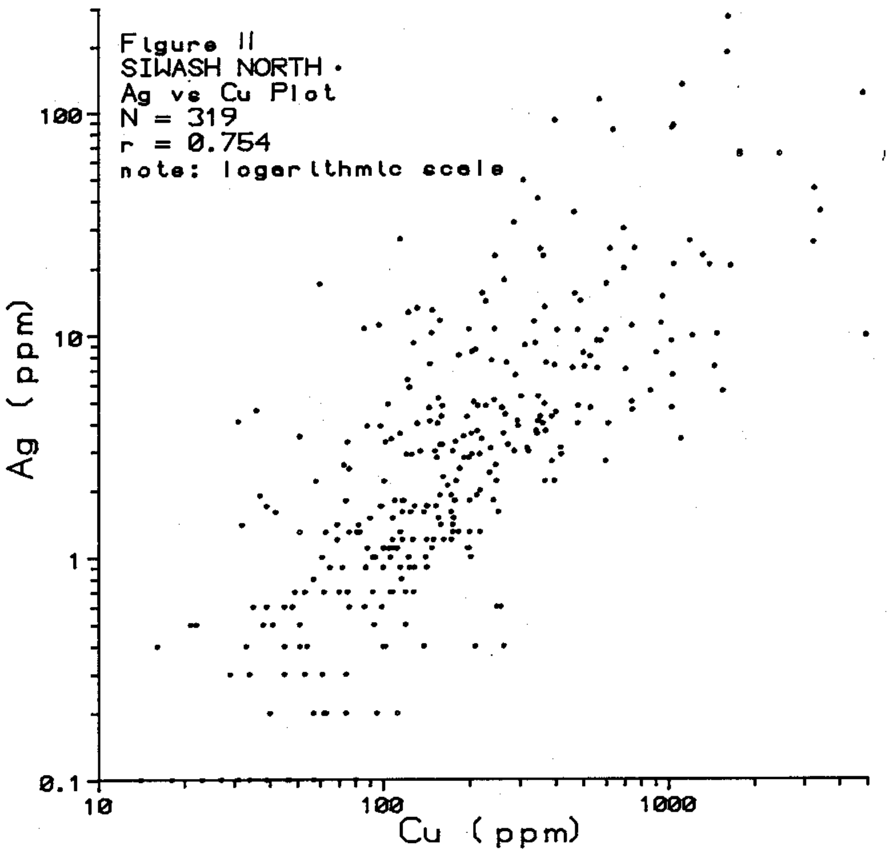


Figure 11
SIWASH NORTH
Ag vs Cu Plot
N = 319
r = 0.754
note: logarithmic scale
Ag (ppm)
Cu (ppm)
100
10
1
0.1
10
100
1000

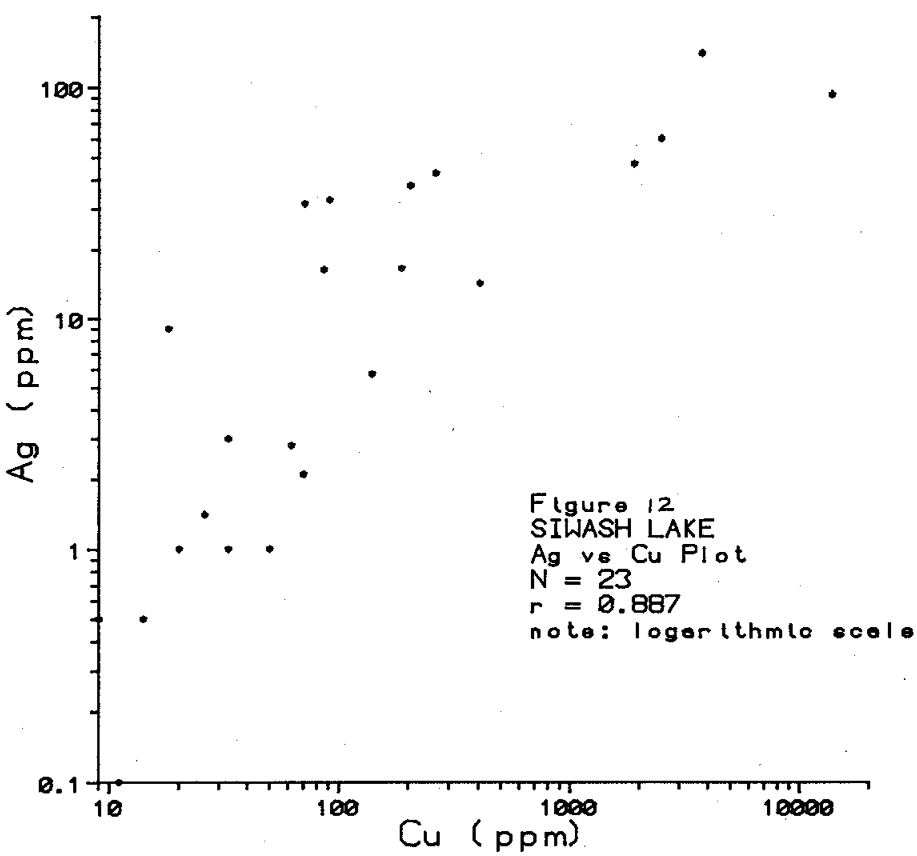


Figure 12
SIWASH LAKE
Ag vs Cu Plot
N = 23
r = 0.887
note: logarithmic scale
Ag (ppm)
Cu (ppm)
100
10
1
0.1
10
100
1000
10000

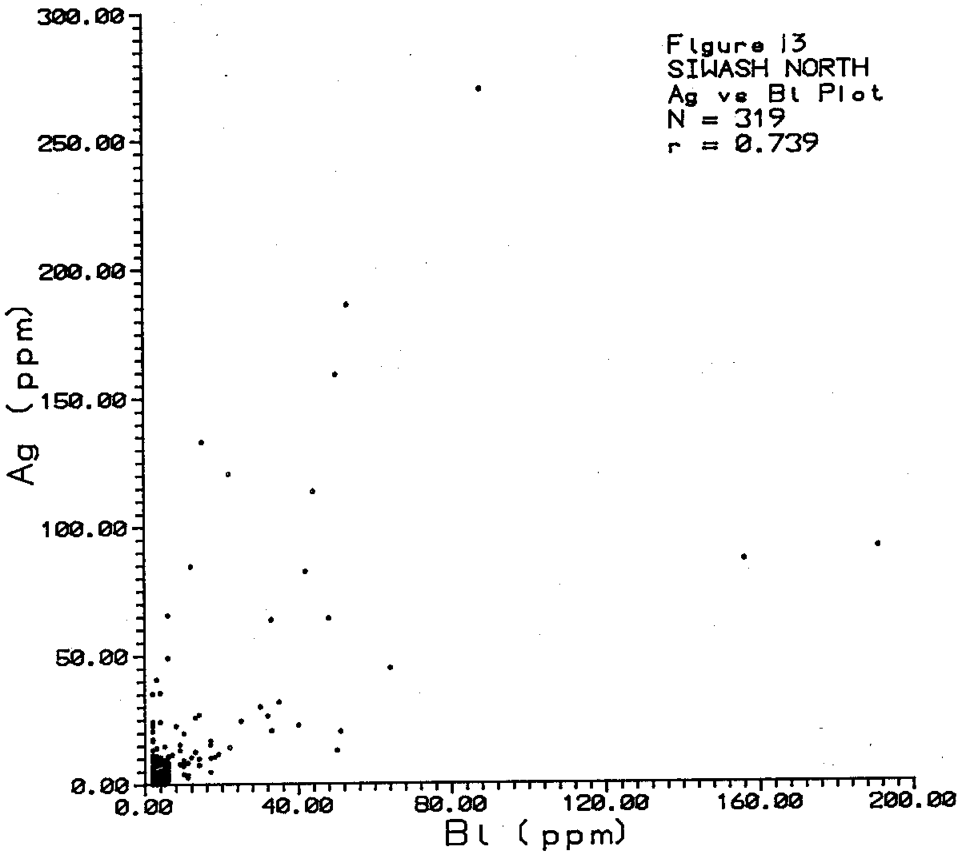


Figure 13
SIWASH NORTH
Ag vs Bi Plot
N = 319
r = 0.739
Ag (ppm)
Bi (ppm)
300.00
250.00
200.00
150.00
100.00
50.00
0.00
0.00
40.00
80.00
120.00
160.00
200.00

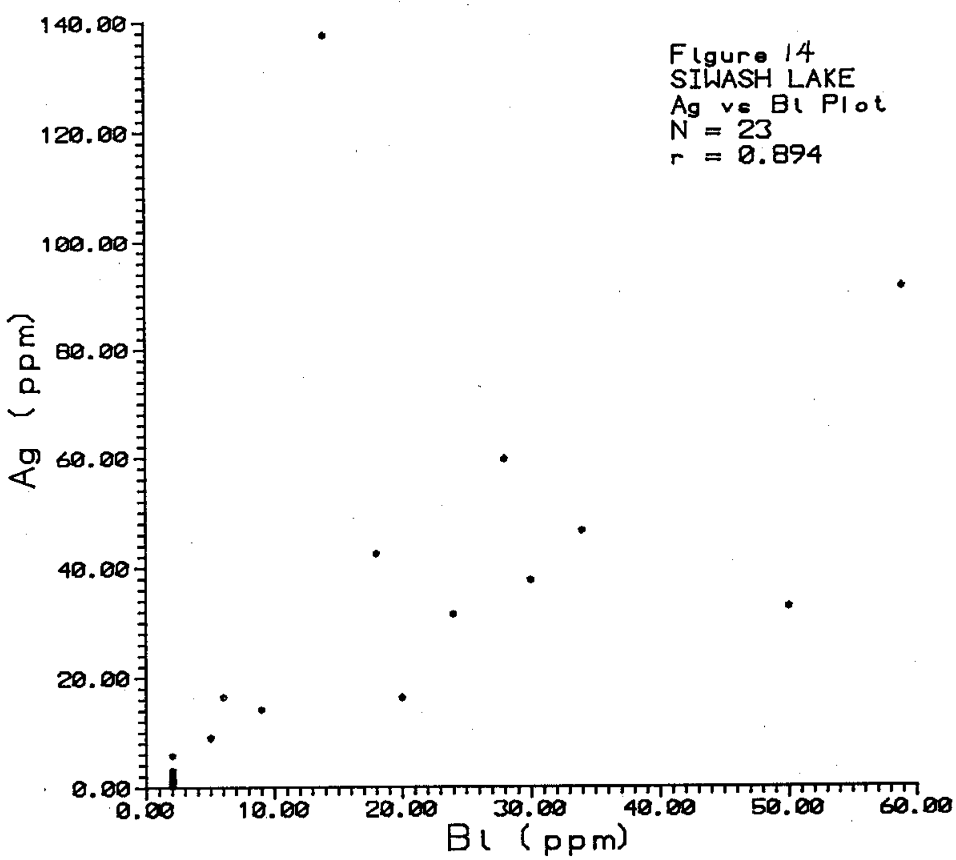
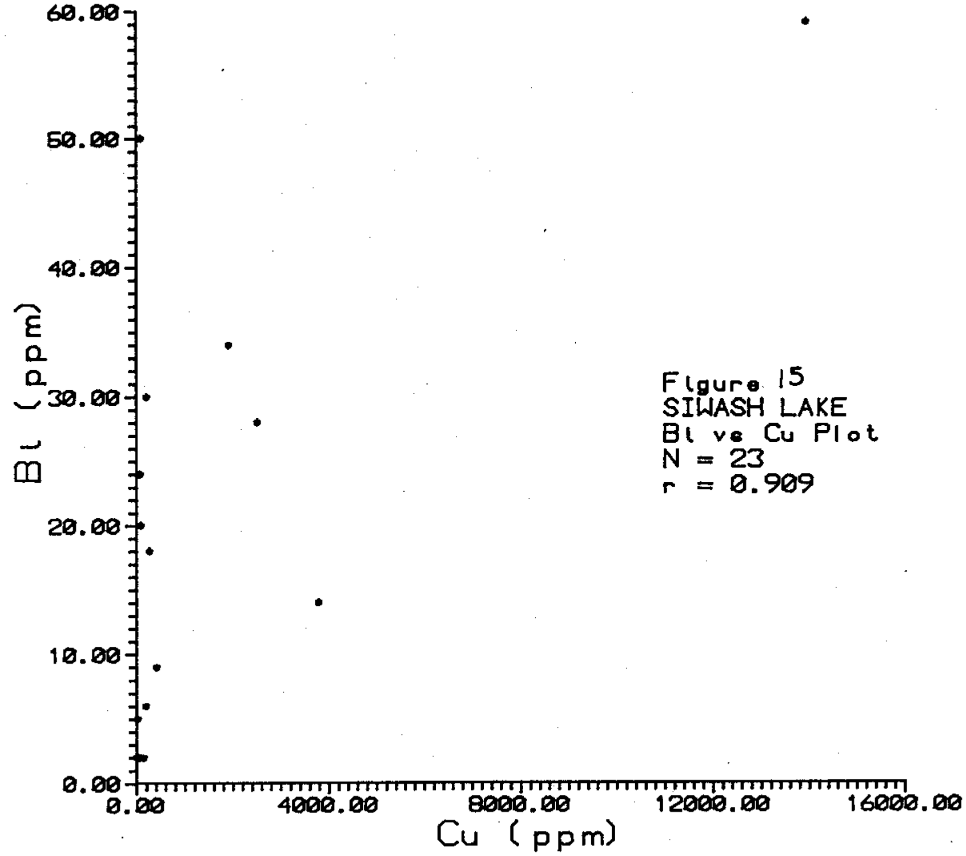
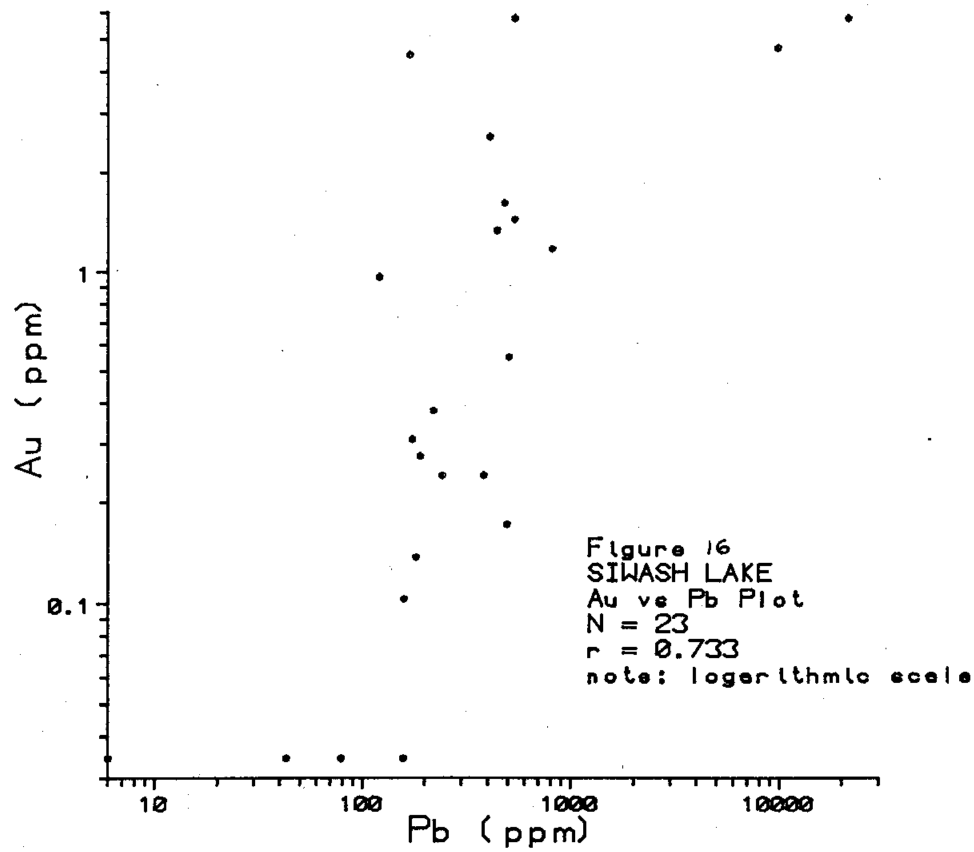


Figure 14
SIWASH LAKE
Ag vs Bi Plot
N = 23
r = 0.894
Ag (ppm)
Bi (ppm)
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
0.00
10.00
20.00
30.00
40.00
50.00
60.00


60.00
50.00
40.00
30.00
20.00
10.00
0.00
Bi (ppm)
0.00
4000.00
8000.00
12000.00
16000.00
Cu (ppm)
Figure 15
SIWASH LAKE
Bi vs Cu Plot
N = 23
r = 0.909


1
0.1
Au (ppm)
10
100
1000
10000
Pb (ppm)
Figure 16
SIWASH LAKE
Au vs Pb Plot
N = 23
r = 0.733
note: logarithmic scale

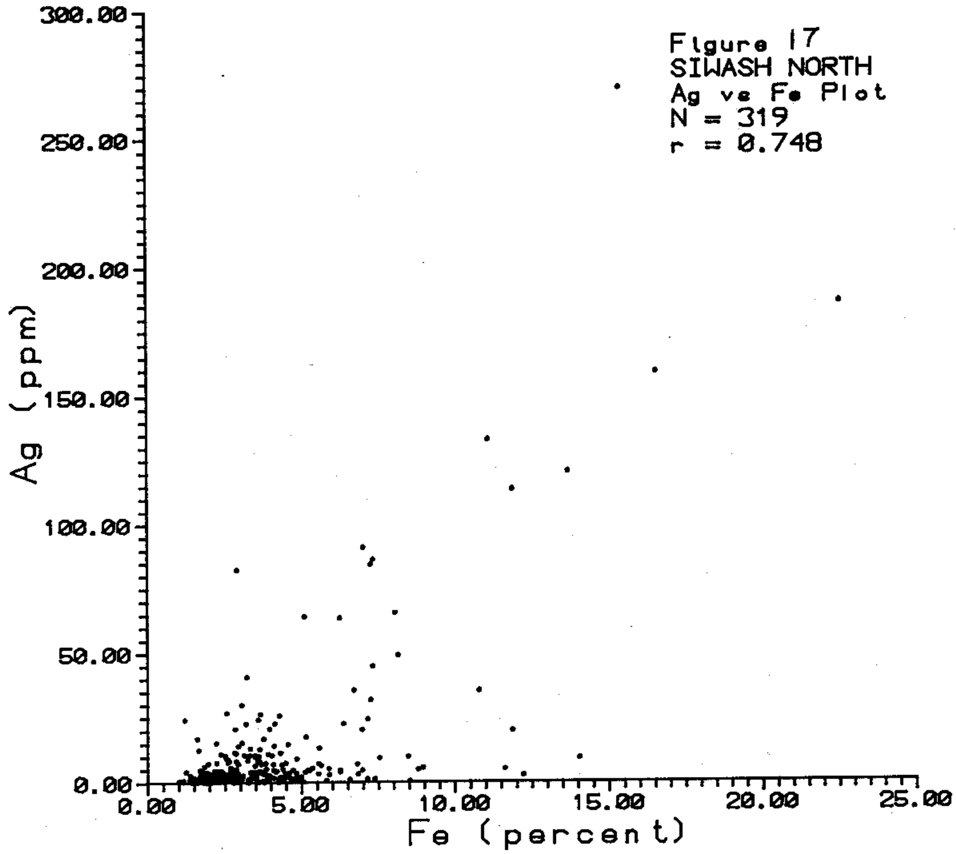


Figure 17
SIWASH NORTH
Ag vs Fe Plot
N = 319
r = 0.748
Ag (ppm)
300.00
250.00
200.00
150.00
100.00
50.00
0.00
0.00
5.00
10.00
15.00
20.00
25.00
Fe (percent)

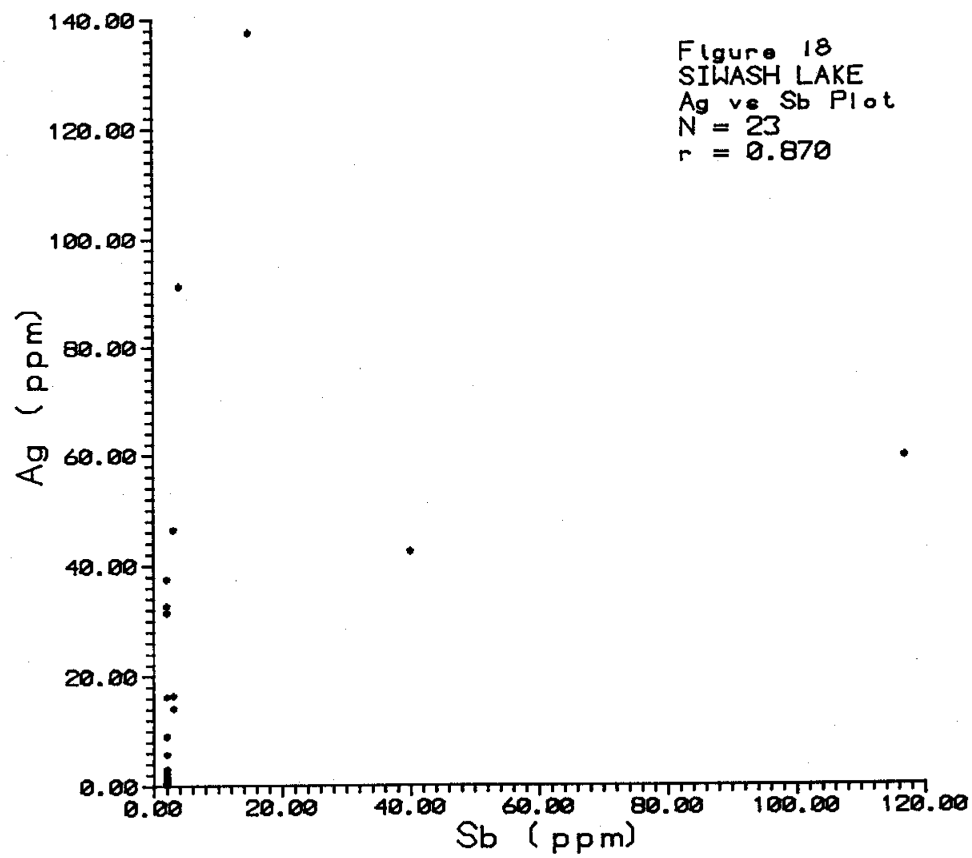


Figure 18
SIWASH LAKE
Ag vs Sb Plot
N = 23
r = 0.870
Ag (ppm)
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
0.00
20.00
40.00
60.00
80.00
100.00
120.00
Sb (ppm)

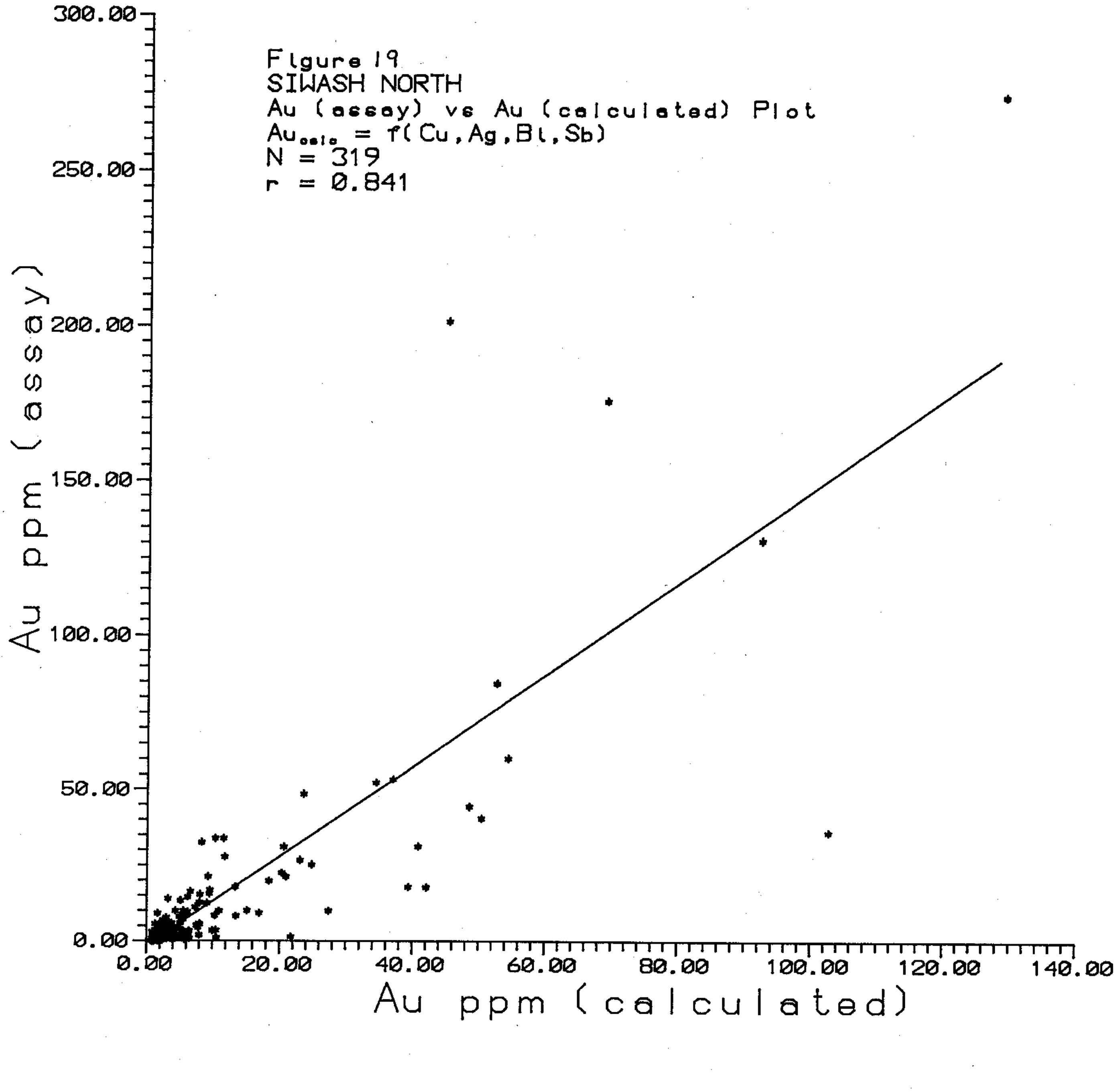


Figure 19
SIWASH NORTH
Au (assay) vs Au (calculated) Plot
Au calc = f(Cu, Ag, Bi, Sb)
N = 319
r = 0.841
Au ppm (assay)
Au ppm (calculated)
300.00
250.00
200.00
150.00
100.00
50.00
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00

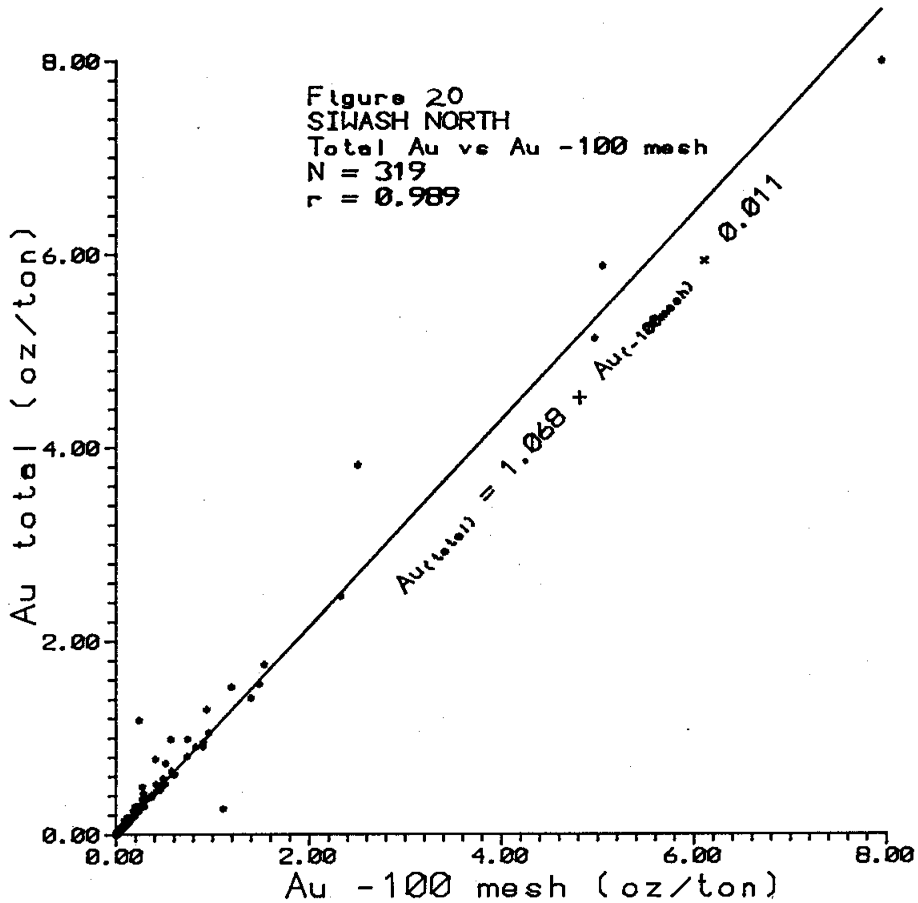


Figure 20
SIWASH NORTH
Total Au vs Au -100 mesh
N = 319
r = 0.989
Au(total) = 1.068 × Au(-100mesh) + 0.011
Au total (oz/ton)
Au -100 mesh (oz/ton)
0.00
2.00
4.00
6.00
8.00

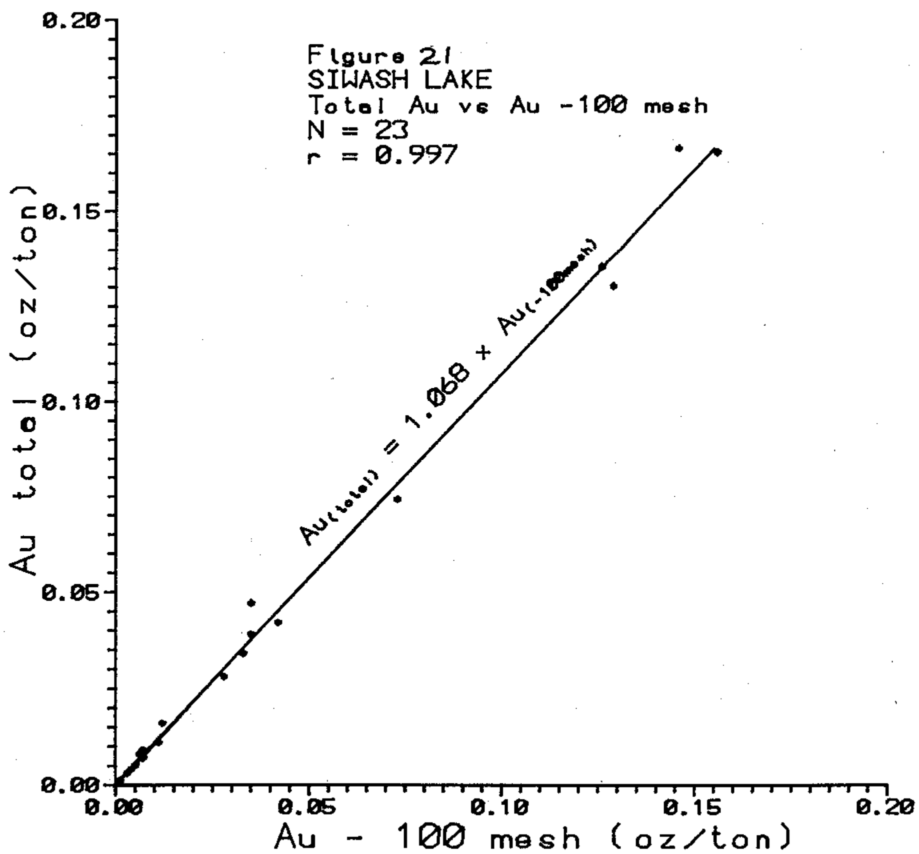


Figure 21
SIWASH LAKE
Total Au vs Au -100 mesh
N = 23
r = 0.997
Au(total) = 1.068 × Au(-100mesh)
Au total (oz/ton)
Au - 100 mesh (oz/ton)
0.00
0.05
0.10
0.15
0.20

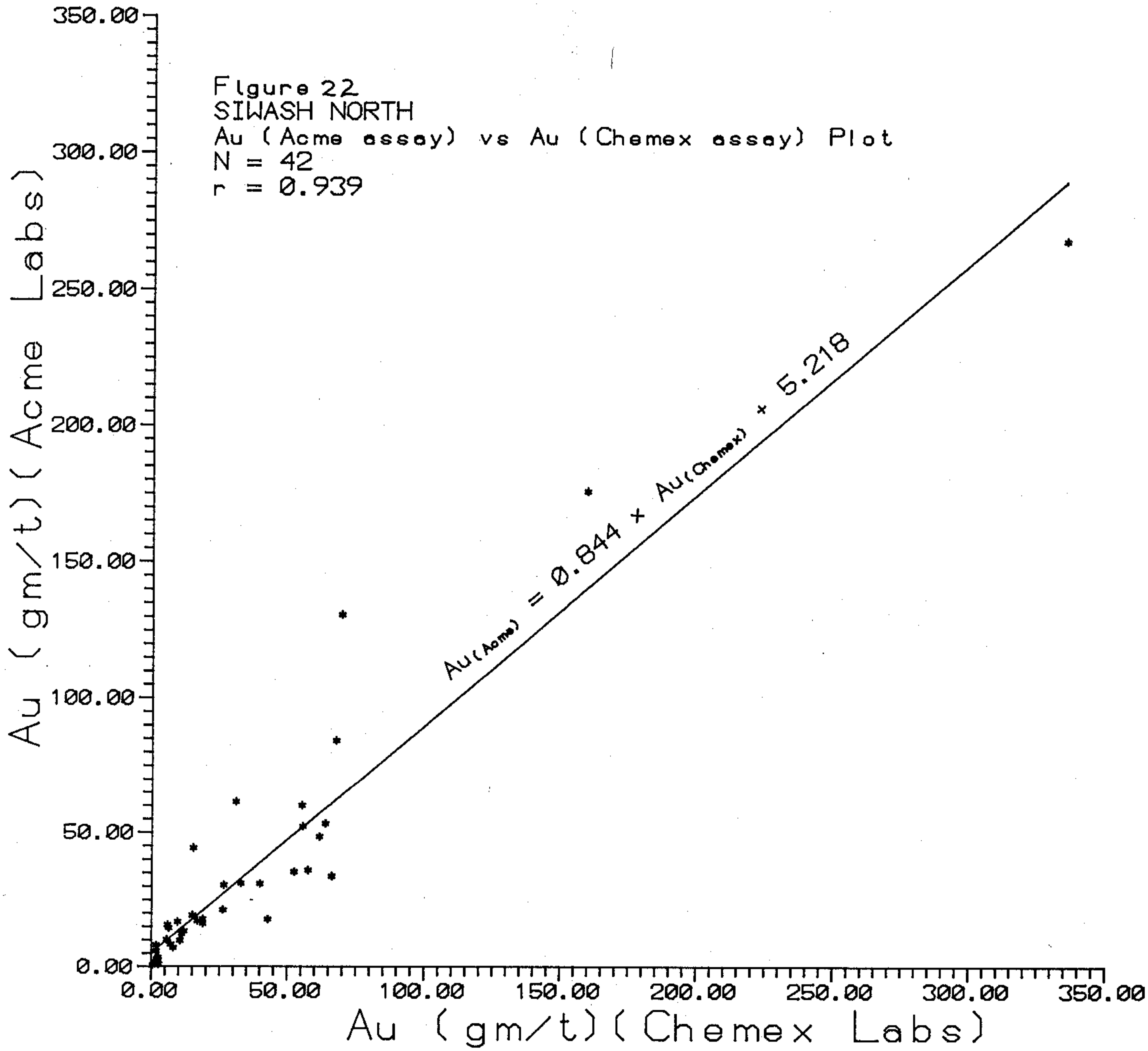


Figure 22
SIWASH NORTH
Au (Acme assay) vs Au (Chemex assay) Plot
N = 42
r = 0.939
Au(Acme) = 0.844 × Au(Chemex) + 5.218
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
Au (gm/t)(Acme Labs)
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
Au (gm/t)(Chemex Labs)

5.5 *METHODS OF AVERAGE GRADE CALCULATION*

A variety of approaches were used to determine the gold contents of trench rock and drill core samples (Table 6). All the analytical data was compiled, and is presented in Appendix "B". True widths were calculated perpendicular to the gold bearing structure. Results from duplicate sample methods were averaged and the values prioritized by analytical method (see "Priority", Table 6). When a sample is treated by two methods of the same priority the values are averaged and the result is promoted to a higher priority. In the cases where different methods of analysis were used, the results from the highest priority technique were chosen for calculating weighted averages of the standard 2.0 metre width. A desired true sample width could be chosen to bring a specific average interval to 2.0 metres. The "From To" column of the data compilation was used to indicate the samples to be included in the weighted average calculation. The "1" indicates the desired samples and the "2" indicates the last desired sample to be included.

Truncated versions of the relevant data from the main spreadsheet can be found with the Diamond Drill Hole Logs in Appendix "C". These include the "From" and "To" drill hole depths of the samples and only the analytical methods used for drill core analysis. (Priorities 1, 2, 3 and 4, Table 6).

Table 6 **METHODS OF SAMPLE ANALYSES**

Priority		Method Name	Particle Size (mesh)	Lab Sample Weight (gm)	Extraction Method	Quantitative Method		Reported Units
1 (Avg)	2	Sieve & Assay (1.0 AT)	-100/+100	29	Fire Assay	Weight/ICP		oz/t
					"	"	"	oz/t
	2	Rerun S+A	-100/+100	variable	"	"	"	oz/t
3	4	FA (1.0 AT)	-100	29	"	"	"	oz/t
(Avg)	4	Rerun F.A.	-100	14.5	"	"	"	oz/t
	5	MIBK/AA	-100	10	Aqua regia + solvent	AAS		ppb

****

6.0 EXCAVATOR TRENCHING

6.1 INTRODUCTION

Trenching was undertaken in the Siwash North and Siwash Lake areas to confirm the continuity and grade of gold bearing structures exposed by trenching in 1988 and 1989. Anomalous gold soil geochemical and VLF-EM targets were tested by trenching in the Siwash Lake and Sico areas. Significant results from trenches and stripped areas are listed in Table 8.

In Siwash North (Plates 3 to 5) seven trenches and three stripped areas were excavated to more clearly define the grade and continuity of mineralization. Two existing trenches were widened to further expose gold bearing quartz veins. The vein system trends approximately 080^{0}, dips south and is hosted by Osprey Lake intrusives and Nicola volcanics. The vein structure has been exposed by 22 trenches and four stripped areas over a strike length of 760m. Panel samples were collected at five metre intervals within the four stripped areas, which represents 588m of strike length. Averaging of panel samples across true widths of 2.0m returned 34.70 gm/tonne Au over a strike length of 115m and 11.66 gm/tonne Au over a 140m strike length.

The Siwash Lake area (Plates 10-12), 1100m south of the Siwash North zone, contains numerous gold soil geochemical anomalies up to 1210 ppb. Two of these anomalies were tested by trenching (SL89-1, SL89-2) in 1989, exposing granitic rocks cut by alteration zones and quartz stringers. An argillically altered pyritic andesite dyke with quartz veining in trench SL89-1 returned values up to 12.69 gm/tonne Au over a true width of 0.86m. This mineralized zone was further exposed in 1990 for 17 m along strike and panel sampled at five metre intervals returning values up to 30.69 gm/tonne Au over a true width of 0.34m. Trench SL89-2 was extended 100m to the south and exposed the mineralized zone 150m along strike which assayed 40.39 gm/tonne Au from a grab sample. Five more trenches were excavated to the south to test soil geochemical anomalies and coincident VLF-EM or magnetic trends. Locally altered granitic rocks containing quartz stringers, andesite dykes and sparse feldspar porphyries of the Otter intrusions were exposed. Significant results were returned from quartz vein samples in trenches SL90-4 and SL90-5, including values up to 34.46 gm/tonne Au from a grab sample.

The Sico area is located northeast of Siwash Lake on the road leading to the Coquihalla Connector highway. One trench and eight test pits were dug to determine the sources of anomalous soil goechemistry and mineralized quartz float. No significant results were returned.

6.2 TRENCH OPERATIONS

Fifteen trenches and four stripped areas were excavated in three target areas (Siwash North, Siwash Lake and Sico areas) utilizing a Caterpillar 215 LC excavator. Bedrock was attained in all of the excavated areas although irregular rock surfaces, flooding and deep overburden sometimes slowed progress. Depth of trenches varied from 0.5 to 3.5 metres and averaged 1.5 metres. The rate of trenching averaged 6.3 metres per hour. Trench statistics are summarized in Table 7.

Two types of quick detachable buckets were used on the machine: a thirty-six inch toothed bucket for digging through overburden and a sixty inch smooth edge bucket for cleaning soil from the bedrock surface. A Sullair 180 CFM air compressor and hose were used to clean remaining soil from trench floors and a Honda pump to dewater and wash sections of trenches.

Each trench was mapped in detail at 1:100 scale and the geology was compiled at 1:500 scale (Plates 3, 4, 8, 10). The stripped areas were also mapped at 1:100 and compiled at 1:200 and 1:500. Panel samples, 0.50m wide by generally 1.0m long, and 1.0m continuous rock chip samples were collected across altered or favourable looking sections of trench floors and walls. True widths of the chip and panel samples were measured using a Jacob's staff and confirmed on a stereo net. Significant gold results are plotted on the trench plan maps (Plates 2-10) and a complete list of samples, true widths and weighted averages are included in Appendix "B". Soil samples were collected from the overburden - rock interface along the trenches at five metre intervals and, where applicable, results are graphed on the trench plans.

The trenches were surveyed using a Brunton compass, 50m steel chain and clinometer. The surveys were tied into the 3000N cut line in the Siwash North and Siwash Lake areas. Survey control points were established in the Siwash North area by Steven Rowe using a Wild transit/EDM and tied into the 3000N, 2350E cut line station.

Siwash North trenches SN88-4,5,6, SN89-1,2,3,4,5,6,7,9,10,11, SN90-4,5,6,7,8,9, 10, Siwash Lake trenches SL89-1,2, SL90-2,3,6,7 and Sico Area trench SI90-1 and the gravel pit area test pits were backfilled and seeded. Trenches SN90-2, SL89-1,4,5 were only partially backfilled and seeded to leave the mineralized zones open for resampling.

Table 7 **1990 TRENCH SUMMARY**

Trench Number	Length (m)	Width (m) Top	Width (m) Bottom	Average Depth	Estimated Volume (m^3)	Number of Samples: Analysis Soils	Number of Samples: Analysis Rock	Number of Samples: Assay Rock
SIWASH NORTH AREA:								
Trenches								
SN90-4	55	5	3	1.5	371		36	11
-5	55	2	1.5	.7	67	10		3
-6	48	2	1.5	.7	59	10	4	6
-7	30	2	1.5	1.5	79	5	10	
-8	47	2.5	1.5	1.5	141	10	6	5
-9	52	2.0	1.5	1.0	91	9	3	
-10	42	1.5	1.5	.5	32		1	6
	329							
Stripped Areas								
SN90-1	50	11	7	1.5	675		21	64
-2	100	9	6	1.0	750		59	85
-3	55	9	6	1.5	619		44	66
88-4 EXT	11	9	6	1.5	124		11	
89-8 EXT	13	10	14	1.5	234		17	6
	229							
SIWASH LAKE AREA:								
Trenches								
SL90-2	100	2.0	1.5	1.5	262	12	3	5
-3	62	1.5	1.0	1.0	78	12	9	
-4	80	2.0	1.5	1.5	180	16	15	11
-5	200	2.0	1.5	1.5	450	38	11	19
-6	95	2.0	1.5	1.5	214	18	8	
-7	50	2.0	1.5	1.5	113	10	3	
	587							
Stripped Area								
SL90-1	17	7	10	1.5	217	1	9	13
SICO AREA:								
SC90-1	68	1.5	1.0	1.0	85	13	17	1
8 Test Pits	3	4	1	3.5	112	16		

6.3 TRENCH RESULTS

Table 8: **SUMMARY OF SIGNIFICANT TRENCH AND STRIPPED AREA ANALYTICAL RESULTS**

Trench Stripped Area	Sample Number(s)	Total Samples	True Width m	Au gm/tonne
SN8912	129P-131P	(3)	2.0	6.21
SN8912	184P-186P	(3)	2.0	1.30
SN8912	139P-141P	(3)	2.0	6.03
SN8912	187P-189P	(3)	2.0	3.63
SN891	14P, 15P, 16, 21P-23P, 24	(7)	2.0	11.28
SN8912	175P-177P, 178P-180P, 88P-90P + Bulk Sample	(10)	2.0	18.27
SN8912	94P-97P	(4)	2.0	3.02
SN8912	191P, 192P	(2)	2.0	8.67
SN8912	83P-86P	(4)	2.0	10.87
SN8912	196P, 197P	(2)	2.0	5.25
SN8912	125P-127P	(3)	2.0	4.01
SN8912	62P-65P	(4)	2.0	2.98
SN8912	208, 209P, 210P	(3)	2.0	3.87
SN8912	50P-53P	(4)	2.0	5.01
SN892	1, 2P, 3P, 4, 32P-36P	(9)	2.0	14.88
SN8912	119P-121P	(3)	2.0	19.44
SN8912	115P-117P	(3)	2.0	17.69
SN8912	14P-16P, 17P, 18P, 21P-23P, 25P, 26P	(10)	2.0	22.25
SN8912	107P-109P	(3)	2.0	16.63
SN8912	6P-12P	(7)	2.0	24.34
SN8912	104P-106P	(3)	2.0	7.37
SN8912	211P, 212P	(2)	2.0	6.31
SN8912	214P-216P	(3)	2.0	40.63
SN8912	181P-183P	(3)	2.0	14.09
SN8912	1P-4P	(4)	2.0	7.54
SN8912	101P-103P	(3)	2.0	21.22
SN893	1, 2P, 3P,6-8P,10P-12P,13	(10)	2.0	43.54
SN901	4, 5, 6P, 7P	(4)	2.0	44.98
SN901	13, 14P-16P	(4)	2.0	56.09
SN901	23P-26P	(4)	2.0	33.22
SN901	32, 33P-36P	(5)	2.0	29.97
SN901	44, 45P-47P	(4)	2.0	38.16
SN901	51P-54P	(4)	2.0	51.81
SN901	61, 62P-64P	(4)	2.0	41.73
SN901	71P-74P	(4)	2.0	31.20
SN901	82P-84P	(3)	2.0	24.34
SN894	1P-3P, 5P-7P, 9P-11P	(9)	2.0	51.94
SN8913	35P-38P	(4)	2.0	16.05
SN8913	63P-65P	(3)	2.0	6.00

Table 8: Summary of Significant Trench and Stripped Area Analytical Results Cont'd

Trench Stripped Area	Sample Number(s)	Total Samples	True Width m	Au gm/tonne
SN8913	39P-43P	(5)	2.0	32.47
SN8913	66P-68P	(3)	2.0	28.25
SN8913	44P-47P	(4)	2.0	20.33
SN8913	69P-71P	(3)	2.0	31.37
SN8913	48P-51P	(4)	2.0	28.01
SN8913	72P-75P	(4)	2.0	35.21
SN8913	52P-55P	(4)	2.0	36.99
SN8913	76P-79P	(4)	2.0	46.94
SN8913	56P-59P	(4)	2.0	34.94
SN8913	80P-82P	(3	2.0	26.47
SN8913	60P-62P	(3)	2.0	8.19
SN895	39P-41P,43P-45P,47P,48P	(8)	2.0	26.71
SN8913	85P-88P	(4)	2.0	6.93
SN8913	3P-6P	(4)	2.0	19.85
SN8913	94P-97P	(4)	2.0	7.37
SN8913	15P-17P	(3)	2.0	10.25
SN8913	104P-106P	(3)	2.0	12.44
SN883	1P-3P	(3)	2.0	6.00
SN8913	107P-109P	(3)	2.0	1.23
SN8913	28P-32P	(5)	2.0	3.12
SN8913	110P-112P	(3)	2.0	0.65
SN896	38P	(1)	2.0	1.13
SN902	2, 3P, 4P, 5	(4)	2.0	6.31
SN902	8P, 9P, 10	(3)	2.0	7.92
SN902	12, 13P, 14P, 15	(4)	2.0	5.52
SN902	18P, 19P, 20	(3)	2.0	3.53
SN902	22P-24P, 25	(4)	2.0	0.72
SN902	26, 27P-30P	(5)	2.0	8.26
SN902	32, 33P, 34P, 35	(4)	2.0	7.13
SN902	37, 38P, 39P, 40	(4)	2.0	6.79
SN902	43P-46P	(4)	2.0	7.34
SN902	48, 49P-51P	(4)	2.0	4.94
SN902	55P-57P, 58	(4)	2.0	4.01
SN902	59, 60P-64P	(6)	2.0	8.78
SN903	67P-69P, 70	(4)	2.0	10.29
SN903	62, 63, 64P, 65P	(4)	2.0	6.31
SN903	59, 60P, 61P	(3)	2.0	34.29
SN903	53, 54P-57P, 58	(6)	2.0	2.47
SN903	48, 49, 50P, 52P, 52	(5)	2.0	2.19
SN903	43, 44, 45P, 46P, 47	(5)	2.0	5.42
SN903	39, 40, 41P, 42P	(4)	2.0	13.89
SN903	34P, 35P, 36	(3)	2.0	10.05
SN903	22, 23P, 24P	(3)	2.0	25.68
SN903	16P-20P	(5)	2.0	3.91
SN903	12P-14P	(3)	2.0	5.42
SN903	8, 9P-11P	(4)	2.0	2.13
SN903	4, 5P-7P	(4)	2.0	4.11
SN903	1P-3P	(3)	2.0	5.35

Table 8: Summary of Significant Trench and Stripped Area Analytical Results Cont'd

Trench Stripped Area	Sample Number(s)	Total Samples	True Width m	Au gm/tonne
SN90-4	40P	(1)	0.53	1.92
SN90-5	2P	(1)	0.47	1.95
SN90-6	6P	(1)	0.77	4.22
SN90-7	8	(1)	0.87	1.71
SN90-9	2P	(1)	0.51	1.02
SN89-8	203-205P	(3)	2.0	0.99
	211P-214P	(4)	2.0	1.41
SIWASH LAKE AREA				
SL90-1	104P	(1)	0.56	2.50
	107	(1)	0.74	2.02
	109P-111P	(3)	2.0	3.50
	114P-116P	(3)	2.0	5.14
	118P-121P	(4)	2.0	6.55
SL90-2	106		GRAB SAMPLE	59.93
SL90-4	10P	(1)	0.37	4.11
	14-17P	(4)	2.0	2.54
	23		GRAB SAMPLE	34.46
SL90-5	14P	(1)	0.33	9.26
	26P	(1)	0.23	1.02

6.3.1 Siwash North Area

MAP AREA "A"

Trench SN89-12 (Plate 6) was mapped and sampled during the 1989 field season and a full description is included in Cordilleran 1989 report. Further sampling was carried out during the 1990 field season to achieve a 5m sample interval. Quartz veins hosted by phyllic and argillic altered granitic and andesitic rock follow a shear for the full stripped length of 165m. Gold mineralization averages 11.66gm/tonne Au over a true width of 2.0m along a strike length of 140m and continues to the east into stripped area B. New sample locations and minor survey corrections are included on the 1:200 plan.

MAP AREA "B"

Trench SN90-1 (Plate 7) A 50m gap between stripped areas SN89-12 and SN89-13 was excavated to produce a continuous surface exposure of the mineralized quartz vein. The trench is underlain by moderately propylitic altered granodiorite with phyllic and sericitic alteration forming an envelope around two east-striking quartz veins. An andesite dyke up to 1.0m thick trends roughly parallel to the quartz vein on the north side of the stripped area. The south quartz vein is continuous along the length of the stripped area, varies in thickness from 5 to 25cm and trends 075/30S. It varies from grey to orange in colour and contains up to 20% pyritic boxworks locally giving it a frothy appearance. Visible gold was recognized at several locations along the length of the trench. A 5 to 30 cm envelope of strong to moderate phyllic alteration encloses the quartz vein and locally contains up to 10% pyritic boxworks. The andesite dyke, located roughly five metres north of the quartz vein, trends 080/65S and is occasionally cut by discontinuous quartz veins up to 10cm in thickness. The dyke curves to the north at the east end of the stripped area to connect to a dyke exposed in trench SN89-4. Sample strings were taken at five metre intervals across the quartz veins and andesite dyke. Results from nine cuts across the southern quartz vein over the 50m strike length averaged 38.43gm/tonne Au over a true width of 2.0m. Results from the north vein associated with the andesite dyke include values up to 19.47 gm/tonne Au across a true width of 0.49m.

Trench SN89-13, located immediately to the east of SN90-1 was excavated, mapped and sampled in 1989. It exposed a continuous 10 to 25 cm wide quartz vein hosted in moderately propylitic altered granodiorite. The gradational northeast trending contact between granodiorite and quartz monzonite crosses the east end of the stripped area. The vein splits into two at roughly 2210E with the southern vein carrying the better grades and having a greater thickness . Samples were collected from this trench in 1990 to fill-in the sample spacing to 5.0m. The gold grade averaged from 24 sample cuts is 18.62 gm/tonne Au along a strike length of 125m over a true width of 2.0m. Fill-in samples and survey corrections are plotted on Plate 7.

MAP AREA "C"

Trench SN90-2 (Plate 8). An area 85m long and up to 5m wide was excavated to expose the eastern projection of the gold bearing structure defined in stripped area SN89-13. The trench is underlain by weakly propylitic altered quartz monzonite that displays moderate sericitic and phyllic alteration associated with the quartz vein. Between 2265E and 2325E, the mineralized structure trends approximately 090/30S and contains a fairly continuous 10cm wide quartz vein enveloped by moderate phyllic alteration. Minor quartz stringers splay off the main vein in a northeasterly direction and decrease in width with distance. The quartz vein is white and contains between 5% and 15% pyritic boxworks with traces of visible gold, both of which decrease to the east. The grade of mineralization ranges from 5.0 to 8.5 gm/tonne Au over a true width of 2.0m throughout this area. Shearing is evident in the mineralized structure at 2290E and continues to the east end of the trench. East of 2325E the character of the vein changes, becoming more discontinuous and varying from stringers to elongated pods up to 40cm in width. Splays off the main vein had significant thickness and two cross trenches were excavated to the north from the main body of the trench to expose the projected offshoots. Quartz veins up to 15cm trending from 065/20S to 070/35S and displaced by northwest trending shears were uncovered by the cross trenches. Sampling returned generally low grades with some higher values up to 17.49 gm/tonne Au over a true width of 0.17m. Alteration around the quartz veins is moderate sericitic and the veins are commonly fractured with only minor boxwork development. Visible gold was noted in a quartz pod at 2340E.

Excessive groundwater prevented excavation to bedrock between 2325E and 2385E.

Trench SN90-3 (Plate 8) was excavated to test the continuity along strike of the mineralized zone intersected by trenches SN89-7 and SN88-6. This stripped area is approximately 100m long, averages 5m in width and trends east-northeast. The trench is underlain by weakly propylitic altered quartz monzonite cut by a northeast trending quartz vein with a phyllic-sericitic alteration envelope. An andesite dyke, 75cm wide, trending roughly parallel to the quartz vein was exposed 9m to the north of the vein at the northeast corner of the stripped area. The mineralized structure contains a 5 to 20 cm wide quartz vein that trends 050/40S and is continuous for the entire length of the exposure. The quartz vein is white, contains up to 20% pyritic boxworks and local visible gold and galena, all decreasing to the east. The alteration envelope changes from moderate phyllic in the west through strong to moderate argillic to the east as vein thickness decreases. Fourteen panel sample cuts were taken across the structure between 2390E and 2445E returning an average of 9.39 gm/tonne Au over a 2.0m true width along a strike length of 72m. Gold values dropped to an average of 0.42 gm/tonne Au over a true width of 2.0m between 2445E and 2465E where the alteration changes to argillic and the thickness of the vein decreases to 5cm. A footwall and/or hanging wall shear runs along the quartz vein for most of its exposed length. Extensive cross shearing at 2420E caused a 4m displacement of the vein to the north.

Trench SN90-4 (64m) was excavated to test the continuity of mineralization between stripped area SN90-3 and trench SN89-8, 40m to the east. Quartz monzonite intruded by a propyliticaly altered andesite dyke and four quartz stringers were exposed. The quartz monzonite is weakly propylitic to strongly sericitic altered with the stronger alterations occurring around quartz stringers. The stringers vary in thickness from 1 to 3 cm, trend generally 025/50SE and contain only minor boxworks and sulfides. No significant results were returned from samples of the quartz veins. The andesite dyke is displaced seven metres to the north along a cross shear in a similar fashion to the quartz vein in trench SN90-3. No deformation was noted in the andesite implying that the dyke inhabited two cross-cutting structures that existed prior to the dyke event. A quartz stringer trending 025/50SE was noted at 3575N along the structure that cross-cuts the dyke.

Trench SN89-8 was widened to 12m between 3490N and 3502N to further expose a series of quartz veins uncovered by 1989 trenching. The stripped area is underlain by weakly propylitic to moderately sericitic altered quartz monzonite. Five discontinuous quartz veins varying in thickness from 2 to 20cm trend 040/45SE along a zone 4m in width. Significant values were returned from two samples, the best being 4.08gm/tonne Au over a true width of 0.45m. Alteration around the quartz veins is moderate sericitic. A one metre wide argillically altered zone crosses the stripped area at 060 degrees and contains discontinuous lens-shaped quartz pods. This feature is reflected by a coincident VLF-EM conductor.

Trench SN90-5 (52m) is located 25m east of trench SN89-8. It was dug to test the continuity of mineralization between trenches SN89-8 and SN89-10. Alteration of the underlying quartz monzonite varies from weak propylitic to strong sericitic. A series of quartz stringers up to 3cm wide across a 1.5m zone was mapped at 3512N. The veins trend roughly 025/40E and contain no significant sulfides although minor pyrite was noted in the sericitic alteration envelope. Sampling returned no significant results. A weakly propylitic altered andesite dyke trending 048/52S was exposed at 3517N.

Trench SN90-6 (50m) was excavated to test the grade and continuity of mineralization between trenches SN90-5 and SN89-10. The trench is underlain by weakly propylitic to moderately sericitic altered quartz monzonite. Four northeast trending quartz stringers up to 5cm thick were unearthed between 3428N and 3437N. They are contained in halos of argillic and sericitic alteration. No sulfides were noted in the quartz veins. A panel sample across a quartz vein at 3529N returned a value of 4.22 gm/tonne Au over a true width of 0.77m. The andesite dyke crosses to the south side of the mineralized zone between trenches SN90-5 and SN90-6 and is located at 3427N, 2m south of a quartz vein.

Trench SN88-4 was widened to 8m over a length of 15m at 3615N to determine the source of an 8990 ppb Au trench floor soil sample anomaly. Alteration of the quartz monzonite varied from weak propylitic to extreme argillic and is probably related to a strong vertical shear trending 076^0. Two sample strings collected across the stripped area gave no significant results. No sulfides were noted. Quartz vein float containing 10% pyrite was found during the excavation of the stripped area but the sources of the vein material and soil anomaly were not located. This zone was drill tested by DDH SND90-51 which confirmed the vertical dip of the structure to a depth of 19 metres and returned a value of 4.35 gm/tonne Au over a true width of 0.35m.

Trench SN90-7 (30m) was excavated 20m to the east of the widened section of SN88-4 to test for the source of the same anomaly described above. Excavation exposed weakly propylitic and weakly sericitic altered quartz monzonite. Minor east and northeast trending shears accompanied more intense alteration. No quartz veins or sulfides were noted and sampling returned no significant values.

Trench SN90-8 (48m) was located 50m northeast of stripped area SN89-14. It was excavated to test the projection of mineralized quartz veins from the stripped area. The quartz monzonite underlying the trench varies from fresh to moderately argillic to weakly sericitic altered. A quartz vein 1cm wide crosses the trench at 3606N trending 071/82N. No sulfides were seen and assay results were poor. Trench floor soil sampling returned a value of 3350 ppb Au at 3614N over an alteration zone which produced an assay of 0.55 gm/tonne Au over a true width of 0.48m.

Trench SN90-9 (50m) was dug 35m east of trench SN90-8 on the eastern edge of the clear cut area. It exposed quartz monzonite with local weak argillic alteration around a quartz stringer. The 1 cm quartz vein trends 132/90 and contains no visible sulfides. Sampling returned no significant assays and trench floor soil samples indicated no other anomalous zones.

Trench SN90-10 (45m) was excavated to trace quartz veins uncovered during the preparation of a drill pad. Weakly propylitic and moderately sericitic altered quartz monzonite underlies the trench. Several discontinuous quartz veins up to 5cm wide represent the zone which trends 022/26SE. Pyrite, up to 10%, was noted within the veins, however no significant assays were returned. A 50cm andesite dyke trending 091/51S was exposed at 3530N.

6.3.2 <u>Siwash Lake Area</u>

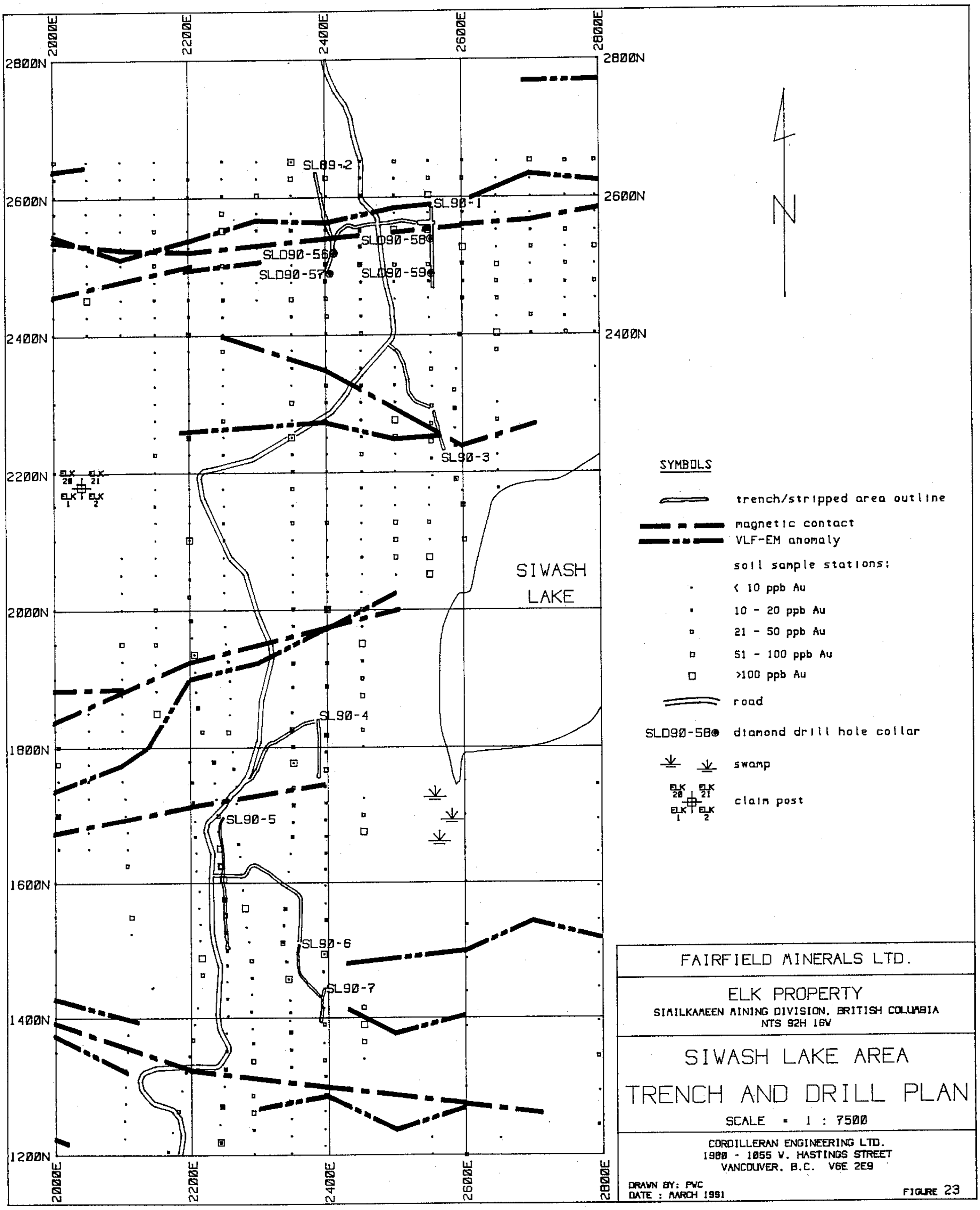
The relative locations of the Siwash Lake trenches are shown on Plate 10. All trenches are oriented approximately north-south. Detailed geology and sample locations are shown on Plates 11 and 12 and significant analytical results are given in Table 8.

Trench SL90-1 is a small stripped area measuring 17m by 6m located adjacent to the north end of trench SL89-1. It was excavated to further expose a sheared, east trending quartz vein. Samples collected from this vein in 1989 returned values up to 12.69 gm /tonne Au over a true width of 0.86m. The trench is underlain by moderately propylitic to strongly argillic altered quartz monzonite. The quartz vein, up to 15 cm wide, trends 087/57S and contains minor disseminated pyrite. An argillic alteration envelope encloses the vein. It has an extremely sheared hanging wall which locally contains up to 15% pyrite and 5% of a blue-grey metallic mineral suspected to be maldonite. Four sample strings were collected across the mineralized zone and averaged 4.00gm/tonne Au along a strike length of 17m and a true width of 2.0m. Grades increased to the west. A locally sheared, propylitically altered andesite dyke was mapped 2.0m to the north parallelling the vein.

Trench SL90-2 (89m),the southern extension of trench SL89-2, was excavated to expose the projected location of the quartz vein found in trench SL90-1. The trench is underlain by locally phyllic altered quartz monzonite. Two quartz veins were found, one at 2536N and the other at 2547N. Overburden above the northern vein was too deep to allow mapping and sampling but three samples were collected from material brought to surface by the excavator. A sample of quartz vein containing approximately 15% combined pyrite, chalcopyrite and galena returned a value of 59.93 gm/tonne gold. The size of the quartz fragments indicate that the vein is approximately 15 cm in thickness. The southern vein is 3cm wide, trends 066/45S and contains no visible sulfides. No significant results were returned from samples taken across this vein. Two trench floor soil samples produced anomalous results and both were located immediately south of the northern vein.

Trench SL90-3 (57m) was excavated to test the source of coincident magnetometer, VLF-EM and geochemical anomalies. It is underlain by locally weakly argillic altered quartz monzonite. A small quartz pod was noted at the southern contact of a 30cm andesite dyke at 2271N though no significant results were returned from sampling. The andesite dyke trends 110 degrees. Results from trench floor soil sampling indicated no anomalies.

Trench SL90-4 (82m), underlain by weakly propylitic to strongly argillic altered quartz monzonite, tested anomalous soil geochemistry. Six quartz stringers, from 1 to 3 cm in width, were exposed in two zones trending 056/55S. Both zones returned significant gold assays including values up to 8.88 gm/tonne Au over a true width of 0.42m. Pyrite, galena and sphalerite were recognized in the southern quartz veins but no sulfides were noted in the northern group. Strong argillic alteration halos envelope the quartz veins. A float sample traceable to the southern veins returned an assay of 34.46 gm/tonne Au. Two trench floor soil sample anomalies were defined, both were displaced to the south of the bedrock mineralization.


2000E
2200E
2400E
2600E
2800E
2800N
2600N
2400N
2200N
2000N
1800N
1600N
1400N
1200N
N
SL89-2
SL90-1
SLD90-56
SLD90-57
SLD90-58
SLD90-59
SL90-3
SL90-4
SL90-5
SL90-6
SL90-7
ELK 20
ELK 21
ELK 1
ELK 2
SIWASH
LAKE
SYMBOLS
trench/stripped area outline
magnetic contact
VLF-EM anomaly
soil sample stations:
< 10 ppb Au
10 - 20 ppb Au
21 - 50 ppb Au
51 - 100 ppb Au
>100 ppb Au
road
SLD90-58 diamond drill hole collar
swamp
claim post
FAIRFIELD MINERALS LTD.
ELK PROPERTY
SIMILKAMEEN MINING DIVISION, BRITISH COLUMBIA
NTS 92H 16W
SIWASH LAKE AREA
TRENCH AND DRILL PLAN
SCALE = 1 : 7500
CORDILLERAN ENGINEERING LTD.
1980 - 1055 W. HASTINGS STREET
VANCOUVER, B.C. V6E 2E9
DRAWN BY: PWC
DATE : MARCH 1991
FIGURE 23

Trench SL90-5 (198m) was excavated to test the sources of soil geochemical and geophysical anomalies. The trench is underlain by locally altered quartz monzonite intruded by three Otter intrusive feldspar porphyry plugs or dykes varying in width from 1.5m to 18m. Alteration facies vary from weak propylitic to strong phyllic. A quartz vein 20cm wide, located at 1649N, trends 048/56S and returned a value of 9.25 gm/tonne Au over a true width of 0.33m. Up to 5% pyrite was mapped in the surrounding moderate phyllic alteration zone. The projection of this vein 190m along strike coincides with the southern quartz vein package noted in trench SL90-4. Three more quartz stringers were recorded in this trench but sampling returned no significant results. Trench floor soil sampling defined six anomalous areas. The 20cm quartz vein described above coincided with a broad lower order anomaly. The other anomalies related to quartz stringers and feldspar porphyry contacts. The highest value, 5200 ppb Au, was taken at the southern end of the trench from a fluvial sediment and probably does not reflect an exposed bedrock feature.

Trenches SL90-6 (93.5m) and SL90-7 (49m) were located to expose the sources of geophysical and soil geochemical anomalies. They uncovered quartz monzonite intruded by east-trending feldspar porphyry and andesite dykes. Alteration facies ranged from weak propylitic to moderate argillic and the strongest were associated with shear zones. No significant rock chip sample results were returned. Trench floor soil sampling resulted in one anomalous value (620 ppb Au) located six metres south of an argillic altered shear zone.

6.3.3 Sico Area

Trench SI90-1 (68m) trends 148 degrees and is located 500m northeast of Siwash Lake. It uncovered weakly propylitic to moderately sericitic altered quartz monzonite intruded by two narrow (12cm and 30cm) andesite dykes. A 10cm quartz vein trending 080/90 was mapped at 2771N enveloped by a zone of weak sericitic alteration. Another quartz vein, 2cm in width, was noted at 2782N adjacent to the andesite dykes trending 070/65N. No siginficant results were returned from chip sampling and no anomalies were defined by trench floor soil sampling.

6.3.4 Gravel Pit

Eight test pits were dug in the gravel pit located approximately 1.5km north of trench SI90-1 between grid coordinates 3490E, 4160N and 3530E, 4440N to depths ranging from 1.8m to 4.0m. Soil samples were collected from the bottoms of the pits and from midpoints of the pit walls to determine whether the surface soil anomalies reflected the underlying bedrock features. Surface material consists of sandy glacio-fluvial till whereas material at depth is boulder-clay till. No significant values were returned from sampling suggesting that the anomalous values on surface were transported from another location. All pits were backfilled.

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7.0 DIAMOND DRILLING

7.1 INTRODUCTION

Diamond drilling was carried out on the Elk 20 and 21 claims in the Siwash North and Siwash Lake areas between June 13 and October 30, 1990. A total of 5427.42 metres of HQ core was drilled in 62 holes, 58 in the Siwash North area and four in the Siwash Lake area. In Siwash North the holes were drilled on 17 north-south fences at roughly 50m centers to test the mineralized quartz vein structure over 850m of strike and 247m down dip. In Siwash Lake the holes were drilled on two fences 145m apart to test a mineralized quartz vein structure that had been exposed by trenching. Leclerc Diamond Drilling, of Beaverdell B.C., performed the drilling using a skid mounted Longyear 38 drill, obtaining an average recovery of 95.73% at an average drill rate of 3.0 metres per hour.

In the Siwash North area the targeted zones were intersected in all but three holes, two of which were stopped short. The mineralized structures vary in character and thickness from a sulfide-bearing vein up to 70 cm wide to a group of veins hosted in phyllic-argillic altered granite or andesite. Locally, three subparallel zones (A,B,C) were defined. Each zone consists of one or more veins within an elevation range of 5 to 10m that can be correlated as a group to the adjacent drill hole. The main mineralized zone (B) is consistent, with only minor exceptions, across the entire drill grid. The A and C zones were defined to the east of section 2340E and the C zone was also intersected in sections 1985E and 2040E. Results from assaying included values up to 47.31 gm/tonne Au over a true width of 2.0m.

The Siwash Lake area drill target is a quartz vein hosted by phyllic-argillic altered quartz monzonite. This zone trends E-W, and dips about 50°S, and is closely associated with an andesite dyke with similar trend. Quartz veins vary in thickness from 5cm to 34cm and contain variable amounts of sulfide. Assay results from drill core included gold values up to 2.43 gm/tonne Au over a true width of 2.0m.

7.2 DRILLING OPERATIONS

Drill sites were located south of the mineralized exposures in north-south fences to test the down dip continuity and character of quartz vein and shear hosted mineralization uncovered by trenching. Drill sites were cleared by K-Way Contracting and the logs were transported to the Weyerhaeuser mill in Merritt. The sites were levelled using a Caterpillar D6 bulldozer and 215LC excavator. Water was pumped to the drill sites from Siwash Lake and from an east flowing creek located at approximately 3000N. All used drill fluids were contained in sumps dug at each site. The drill was moved between sites by a Caterpillar D5 bulldozer. The core was washed, footage blocks were converted to metres and recoveries were calculated. All the core was photographed at

TABLE 9 ELK PROPERTY DIAMOND DRILL SUMMARY RECORD

MAY 1991

Note: All inclined holes drilled at 0 degrees azimuth.
SND10, 11, 12 - NQ, balance HQ

HOLE NO.	EASTING	NORTHING	ELEV'N	SECTION	DIP	OB	CLAIM	% RECOV	START	FINISH	DEPTH	TOTAL	
SND89-1	2,140.89	3,380.73	1,658.30	2140E	-45	1.22	ELK21	95.70	OCT 11	OCT 13	70.41	70.41	
SND89-2	2,140.83	3,379.25	1,658.26	2140E	-90	1.22	ELK21	95.20	OCT 13	OCT 14	34.90	105.31	1989
SND89-3	2,139.46	3,331.23	1,657.36	2140E	-90	1.22	ELK21	98.90	OCT 14	OCT 15	61.57	166.88	PROGRAM
SND89-4	1,982.67	3,346.58	1,653.95	1990E	-45	3.66	ELK20	98.20	OCT 15	OCT 17	44.50	211.38	
SND89-5	1,984.40	3,310.33	1,655.69	1990E	-67	3.05	ELK20	96.10	OCT 17	OCT 20	80.77	292.15	DEEPENED
SND89-6	2,641.24	3,507.46	1,644.03	2640E	-51	2.44	ELK21	93.20	OCT 20	OCT 21	62.79	354.94	
SND89-7	2,644.73	3,450.84	1,649.18	2640E	-67	.30	ELK21	97.50	OCT 21	OCT 24	87.17	442.11	
SND89-8	2,403.54	3,393.55	1,629.56	2405E	-45	.30	ELK21	94.90	OCT 24	OCT 25	38.40	480.51	
SND89-9	2,403.65	3,391.80	1,629.59	2405E	-90	3.35	ELK21	96.80	OCT 25	OCT 26	46.02	526.53	
SND89-10	2,404.98	3,349.11	1,629.84	2405E	-90	3.35	ELK21	91.90	OCT 26	OCT 28	50.60	577.13	
SND89-11	2,138.14	3,280.36	1,660.99	2140E	-90	3.05	ELK21	98.20	OCT 29	OCT 30	74.98	652.11	
SND89-12	2,138.53	3,224.76	1,657.93	2140E	-90	2.75	ELK21	98.00	OCT 30	NOV 1	100.28	752.39	752.39
SND90-13	2,091.88	3,389.37	1,664.08	2090E	-45	1.22	ELK21	96.75	JUN 13	JUN 15	65.53	65.53	
SND90-14	2,089.64	3,355.16	1,663.15	2090E	-90	2.44	ELK21	100.00	JUN 15	JUN 17	57.00	122.53	
SND90-15	2,090.42	3,309.31	1,662.19	2090E	-90	.61	ELK21	98.98	JUN 17	JUN 19	89.00	211.53	
SND90-16	2,039.44	3,359.96	1,657.80	2040E	-45	3.96	ELK21	99.00	JUN 19	JUN 21	61.26	272.79	
SND90-17	2,039.50	3,358.25	1,657.85	2040E	-90	2.44	ELK21	100.00	JUN 22	JUN 23	53.64	326.43	
SND90-18	2,039.82	3,320.16	1,659.93	2040E	-90	2.44	ELK21	95.75	JUN 23	JUN 25	84.43	410.86	
SND90-19	1,939.90	3,333.15	1,657.78	1940E	-45	1.22	ELK20	94.05	JUN 25	JUN 25	53.03	463.89	
SND90-20	1,939.85	3,331.10	1,657.87	1940E	-90	1.52	ELK20	96.49	JUN 30	JUN 30	85.95	549.84	
SND90-21	2,190.58	3,376.23	1,650.85	2190E	-45	1.22	ELK21	95.92	JUL 1	JUL 1	74.98	624.82	
SND90-22	2,190.13	3,342.03	1,653.80	2190E	-80	2.13	ELK21	92.37	JUL 3	JUL 3	61.57	686.39	
SND90-23	2,190.90	3,295.63	1,657.04	2190E	-60	1.83	ELK21	95.87	JUL 6	JUL 6	82.91	769.30	
SND90-24	2,239.76	3,356.33	1,649.93	2240E	-45	1.52	ELK21	93.14	JUL 6	JUL 8	76.20	845.50	
SND90-25	2,239.65	3,355.31	1,650.02	2240E	-90	1.22	ELK21	95.52	JUL 8	JUL 9	47.85	893.35	
SND90-26	2,238.46	3,310.01	1,652.83	2240E	-90	.61	ELK21	94.41	JUL 9	JUL 11	73.76	967.11	
SND90-27	2,290.56	3,341.82	1,649.57	2290E	-45	2.44	ELK21	93.93	JUL 11	JUL 13	55.47	1,022.58	
SND90-28	2,290.85	3,313.38	1,654.89	2290E	-80	-	ELK21	95.42	JUL 13	JUL 15	75.29	1,097.87	
SND90-29	2,291.71	3,270.09	1,651.39	2290E	-77	1.83	ELK21	94.97	JUL 16	JUL 18	92.05	1,189.92	
SND90-30	2,339.61	3,350.51	1,636.43	2340E	-55	2.44	ELK21	92.30	JUL 18	JUL 23	46.33	1,236.25	
SND90-31	2,339.13	3,339.95	1,638.64	2340E	-90	.61	ELK21	94.16	JUL 23	JUL 25	57.00	1,293.25	
SND90-32	2,339.24	3,290.36	1,644.54	2340E	-90	2.44	ELK21	95.04	JUL 25	JUL 27	96.26	1,389.51	
SND90-33	2,338.06	3,244.36	1,645.72	2340E	-80	3.66	ELK21	95.66	JUL 28	JUL 31	122.15	1,511.66	
SND90-34	2,403.04	3,316.62	1,632.60	2405E	-60	3.66	ELK21	93.84	JUL 31	AUG 2	70.71	1,582.37	
SND90-35	2,439.56	3,429.47	1,634.98	2440E	-45	3.66	ELK21	88.05	AUG 3	AUG 3	32.61	1,614.98	
SND90-36	2,439.72	3,417.33	1,634.69	2440E	-90	3.05	ELK21	89.49	AUG 4	AUG 4	46.33	1,661.31	
SND90-37	2,439.86	3,370.71	1,631.65	2440E	-90	3.05	ELK21	94.87	AUG 5	AUG 6	57.00	1,718.31	
SND90-38	2,441.18	3,320.60	1,631.27	2440E	-85	3.05	ELK21	92.87	AUG 6	AUG 8	85.95	1,804.26	
SND90-39	2,489.05	3,443.10	1,641.81	2490E	-45	6.71	ELK21	96.62	AUG 9	AUG 10	46.18	1,850.44	
SND90-40	2,490.95	3,398.44	1,641.68	2490E	-65	2.44	ELK21	93.38	AUG 10	AUG 12	58.52	1,908.96	
SND90-41	2,490.37	3,353.31	1,637.22	2490E	-75	3.66	ELK21	95.44	AUG 12	AUG 14	66.14	1,975.10	
SND90-42	2,541.92	3,481.86	1,646.98	2540E	-46	3.05	ELK21	95.07	AUG 15	AUG 16	50.29	2,025.39	
SND90-43	2,540.13	3,464.29	1,647.95	2540E	-80	3.66	ELK21	90.34	AUG 16	AUG 19	53.95	2,079.34	
SND90-44	2,540.38	3,416.04	1,648.27	2540E	-85	1.90	ELK21	92.60	AUG 19	AUG 21	73.76	2,153.10	
SND90-45	2,541.32	3,364.85	1,647.45	2540E	-80	1.52	ELK21	95.30	AUG 22	AUG 24	90.53	2,243.63	
SND90-46	2,588.40	3,565.92	1,638.99	2590E	-45	2.74	ELK21	95.28	AUG 24	AUG 26	73.76	2,317.39	
SND90-47	2,590.27	3,490.56	1,647.99	2590E	-50	1.22	ELK21	97.61	AUG 26	AUG 28	53.95	2,371.34	
SND90-48	2,590.02	3,453.55	1,650.34	2590E	-75	.61	ELK21	94.56	AUG 28	AUG 31	87.48	2,458.82	
SND90-49	2,590.58	3,420.44	1,651.82	2590E	-90	.61	ELK21	94.43	AUG 31	SEPT 2	90.53	2,549.35	
SND90-50	2,645.02	3,407.95	1,650.28	2640E	-67	.61	ELK21	94.43	SEPT 2	SEPT 5	105.60	2,654.95	
SND90-51	2,691.38	3,608.34	1,629.32	2690E	-45	2.74	ELK21	92.00	SEPT 5	SEPT 7	58.22	2,713.17	PHASE 1
SND90-52	2,690.22	3,498.07	1,646.36	2690E	-45	1.52	ELK21	97.26	SEPT 7	SEPT 9	85.34	2,798.51	1990
SND90-53	2,690.55	3,467.93	1,647.19	2690E	-72	1.52	ELK21	96.41	SEPT 9	SEPT 11	79.86	2,878.37	
SND90-54	2,742.09	3,538.29	1,638.64	2740E	-60	1.52	ELK21	94.74	SEPT 11	SEPT 14	60.05	2,938.42	
SND90-55	2,741.69	3,514.78	1,640.34	2740E	-90	1.83	ELK21	94.17	SEPT 14	SEPT 16	82.91	3,021.33	
SND89-5	DEEPEN			1990E	-67	-	ELK20	94.49	SEPT 16	SEPT 17	29.57	3,050.90	3,050.90
SLD90-56	2,412.12	2,519.13	1,649.16	2410E	-65	1.22	ELK21	96.06	SEPT 17	SEPT 19	54.56	3,105.46	
SLD90-57	2,405.94	2,489.36	1,649.83	2410E	-76	2.80	ELK21	95.38	SEPT 19	SEPT 21	85.95	3,191.41	
SLD90-58	2,553.88	2,538.90	1,629.64	2560E	-65	1.22	ELK21	94.70	SEPT 21	SEPT 22	43.28	3,234.69	PHASE 2
SLD90-59	2,554.68	2,489.39	1,630.99	2560E	-72	1.22	ELK21	95.06	SEPT 23	SEPT 24	75.29	3,309.98	1990
SND90-60	2,038.52	3,296.25	1,662.03	2040E	-65	-	ELK21	95.99	SEPT 25	SEPT 27	112.78	3,422.76	

TABLE 9 ELK PROPERTY DIAMOND DRILL SUMMARY RECORD

MAY 1991

Note: All inclined holes drilled at 0 degrees azimuth.
SND10, 11, 12 - NQ, balance HQ

HOLE NO.	EASTING	NORTHING	ELEV'N	SECTION	DIP	OB	CLAIM	% RECOV	START	FINISH	DEPTH	TOTAL	
SND90-61	2,344.19	3,150.87	1,645.45	2340E	-63	1.83	ELK21	96.44	SEPT 28	OCT 3	180.44	3,603.20	
SND90-62	2,290.66	3,192.90	1,654.21	2290E	-65	1.83	ELK21	99.24	OCT 3	OCT 6D	167.64	3,770.84	
SND90-63	2,239.42	3,238.84	1,655.20	2240E	-65	.61	ELK21	98.07	OCT 6N	OCT 8D	142.34	3,913.18	
SND90-64	2,185.61	3,252.62	1,660.64	2190E	-65	1.22	ELK21	98.48	OCT 8D	OCT 10D	119.48	4,032.66	
SND90-65	2,135.99	3,262.24	1,660.61	2140E	-65	1.22	ELK21	99.39	OCT 10D	OCT 11N	127.10	4,159.76	
SND90-66	2,089.93	3,281.39	1,661.97	2090E	-65	1.83	ELK21	98.83	OCT 11N	OCT 13D	107.29	4,267.05	
SND90-67	2,037.30	3,253.57	1,662.39	2040E	-65	.61	ELK20	99.41	OCT 13D	OCT 15N	149.96	4,417.01	
SND90-68	1,984.74	3,270.46	1,658.91	1990E	-65	1.22	ELK20	99.15	OCT 15N	OCT 17N	153.31	4,570.32	
SND90-69	1,939.47	3,251.75	1,657.74	1940E	-65	1.22	ELK20	99.87	OCT 17N	OCT 20D	142.34	4,712.66	
SND90-70	2,402.62	3,266.41	1,635.75	2405E	-65	1.22	ELK21	97.98	OCT 20D	OCT 21D	99.67	4,812.33	
SND90-71	2,403.42	3,215.64	1,635.15	2405E	-65	1.83	ELK21	98.52	OCT 21D	OCT 23D	145.39	4,957.72	
SND90-72	2,590.49	3,349.35	1,646.94	2590E	-65	1.22	ELK21	97.36	OCT 23D	OCT 24N	110.34	5,068.06	
SND90-73	2,639.51	3,346.48	1,648.12	2640E	-65	3.66	ELK21	99.10	OCT 24N	OCT 26D	136.25	5,204.31	
SND90-74	2,337.12	3,146.17	1,645.76	2340E	-75	3.66	ELK21	99.20	OCT 26D	OCT 30D	223.11	5,427.42	2,376.52

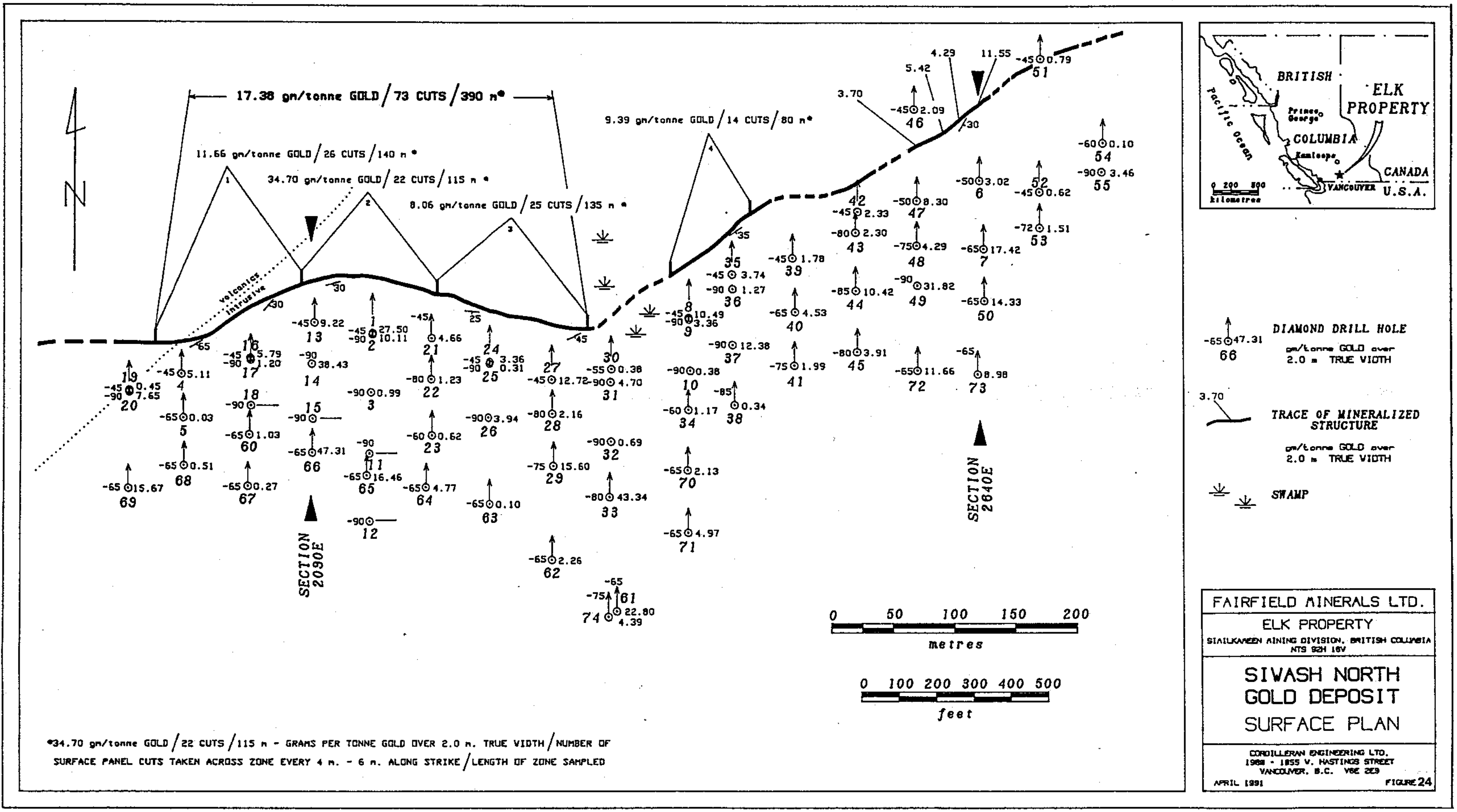
four boxes to the photograph and the mineralized sections were detail photographed at five photographs per core box. The geology and sample intervals were recorded on graphic drill logs and then input onto a computer using the Placer-Dome Inc. modified Geolog software package. Samples comprising entire core were collected from quartz veins and all other samples were split using a Longyear core splitter. Samples were shipped to Acme Analytical Laboratories in Vancouver and assayed or analyzed for gold. Samples that were visually estimated to contain significant gold values were assayed using metallics separation technique as described in the Geochemistry section 5.3, adjacent samples were fire assayed for gold and all other samples were analyzed for gold using MIBK extraction. Acid tests were taken to measure the variation in dip of the angled holes up to hole SND90-55 and all subsequent downhole orientations were measured using a Sperry-Sun single shot camera. On completion of a hole, casing was removed (except holes SND89-7, SND90-15) and a labelled, squared log was inserted into the collar to mark the location. Survey control points were established across the drill grid by Steven Rowe and the locations of all the drill holes were surveyed relative to these points by compass and steel chain. On completion of the drill program all the hole collars were surveyed by Steven Rowe. Drill hole locations, dips, depths, etc. are summarized in Table 9.

7.3 DIAMOND DRILLING RESULTS

Summary logs of the drill holes are included in Appendix "C" and drill hole locations are shown on Figure 24. The subsurface geology and sample locations for the Siwash North area are plotted on north-south drill sections 1985E to 2740E and east-west sections 3300N and 3400N (Plates 13 to 32). Siwash Lake area drill hole geology and sample locations are displayed on sections 2410E and 2555E (Plates 33, 34). Significant assay results from both areas are listed in Table 10. Vein thicknesses in the descriptions below are the intersected widths. True widths of samples are given in Table 10.

7.3.1. Siwash North Area

Section 1940E (Plate 14)is located south of the west end of trench SN89-12, and includes drill holes SND90-19, -20, and -69. Andesitic volcanics comprise most of the section. Granodiorite overlies the volcanics to the south with the contact dipping about 50^{o}S. Numerous dykes of aplite and granite intrude the volcanics. Alteration is primarily weak propylitic with bands of potassic, sericitic, and phyllic. One roughly planar zone of mineralization was intersected. It consists of a quartz vein, 5cm to 67cm wide in a phyllic-altered envelope of variable width. Significant results were returned from sampling in holes SND90-20 and 69 with the grade increasing down dip. The vein and alteration zone occurs in andesite at or near the contact of a granite dyke, and dips at 50^{o}S to 55^{o}S from surface exposure to its deepest intercept at 130m downdip in hole SND90-69. The vein contains up to 25% pyrite with minor chalcopyrite and traces of tetrahedrite.



17.38 gm/tonne GOLD / 73 CUTS / 390 m*
11.66 gm/tonne GOLD / 26 CUTS / 140 m *
34.70 gm/tonne GOLD / 22 CUTS / 115 m *
8.06 gm/tonne GOLD / 25 CUTS / 135 m *
9.39 gm/tonne GOLD / 14 CUTS / 80 m*
volcanics
intrusive
SECTION 2090E
SECTION 2840E
BRITISH COLUMBIA
ELK PROPERTY
Pacific Ocean
Prince George
Kamloops
VANCOUVER
CANADA
U.S.A.
Kilometres
DIAMOND DRILL HOLE
gm/tonne GOLD over 2.0 m TRUE WIDTH
TRACE OF MINERALIZED STRUCTURE
gm/tonne GOLD over 2.0 m TRUE WIDTH
SWAMP
0 50 100 150 200
metres
0 100 200 300 400 500
feet
*34.70 gm/tonne GOLD / 22 CUTS / 115 m - GRAMS PER TONNE GOLD OVER 2.0 m. TRUE WIDTH / NUMBER OF SURFACE PANEL CUTS TAKEN ACROSS ZONE EVERY 4 m. - 6 m. ALONG STRIKE / LENGTH OF ZONE SAMPLED
FAIRFIELD MINERALS LTD.
ELK PROPERTY
SIMILKAMEEN MINING DIVISION, BRITISH COLUMBIA
NTS 92H 16V
SIVASH NORTH GOLD DEPOSIT
SURFACE PLAN
CORDILLERAN ENGINEERING LTD.
1980 - 1055 W. HASTINGS STREET
VANCOUVER, B.C. V6E 2E9
APRIL 1991
FIGURE 24

Table 10: **DIAMOND DRILL HOLE - SIGNIFICANT ASSAYS**

List of Abbreviations:

qv - quartz vein
py - pyrite
cpy - chalcopyrite
aspy - arsenopyrite
sph - sphalerite
gal - galena
tet - tetrahedrite
VG - visible gold
Ksp - K-feldspar
TW - true width
t - tons
tr - trace
stgr - stringer
w/ - with
alt'n - alteration

DDH	Sample	Depth		Au Assay		True Width		Au Weighted Average		
								gm/tonne	oz/ton	
No.	Number	metres	feet	gm/tonne	oz/ton	metres	feet	2.0m TW	6.6' TW	Comments and Geology
										SIWASH NORTH
Section 1940E										
20	10	74.70	245.1	31.17	0.909	0.23	0.75			sheared qv; 10% py, tr cpy; zone B
	11	75.20	246.7	21.22	0.619	0.38	1.25	7.65	0.223	73cm qv, sheared; 10% py, 5% cpy, tr tet; zone B
69	13	125.50	411.75	84.24	2.457	0.37	1.2	15.67	0.457	qv with 25% py, tr cpy; zone B
Section 1985E										
4	3	35.16	115.4	9.19	0.268	0.92	3.0	5.11	0.149	16cm qv w/ 15% py, tr cpy; zone B
68	4	35.90	117.8	4.22	0.123	0.38	1.25	0.82	0.024	phyllic alt'n;15%py,tr sph in stgr
	15	142.80	468.5	2.40	0.070	0.38	1.25	0.51	0.015	15cm qv; 15% py, 1% cpy; zone B
Section 2040E										
16	8	24.64	80.8	17.79	0.519	0.65	2.1	5.79	0.169	25cm qv; 15% py, 5% cpy; about 1% tet; zone B
	14	30.00	98.4	8.33	0.243	0.49	1.6	2.06	0.060	7cm qv w/ 20% py, 1% cpy, tr tet; zone C
17	3	33.05	108.4	2.54	0.074	0.53	1.7			22cm qv; 1% py; zone B
	5	34.51	113.2	2.98	0.087	0.34	1.1	1.20	0.035	15cm qv; 15% py; zone B
	10	40.75	133.7	2.23	0.065	0.33	1.1			phyllic alt'n, 5% py
	11	41.08	134.8	2.50	0.073	0.63	2.1			phyllic alt'n, 5% py
18	2	15.00	49.2	4.90	0.143	0.32	1.0	0.79	0.023	phyllic alt'n;10%py,tr cpy in stgr
60	10	83.63	274.4	3.09	0.090	0.55	1.8	1.03	0.030	20 cm qv, 10% py, tr cpy; zone B
	21	103.40	339.2	2.67	0.078	0.41	1.3	0.58	0.017	phyllic alt'n; 10% py in 2cm qv; zone C?
Section 2090E										
13	2	18.40	60.4	2.13	0.062	0.47	1.5			2cm qv, 2% py, in phyllic alt'n
	4	19.70	64.6	6.69	0.195	0.47	1.5	5.76	0.168	2 x 2cm qv, 3% py,in phyllic alt'n
	5	20.20	66.3	13.85	0.404	0.57	1.9			4cm qv; 4% py, 3% cpy; in phyllic alt'n; Zone A.
	16	29.00	95.1	27.67	0.807	0.66	2.2	9.22	0.269	24cm qv; 4% py, 5% cpy, tr tet; zone B
	24	43.80	143.7	21.15	0.617	0.47	1.5	5.01	0.146	gouge with 20% py; zone C?

Table 10: DIAMOND DRILL HOLE - SIGNIFICANT ASSAYS Continued

DDH	Sample	Depth		Au Assay		True Width		Au Weighted Average		
No.	Number	metres	feet	gm/tonne	oz/ton	metres	feet	gm/tonne 2.0m TW	oz/ton 6.6' TW	Comments and Geology
Section 2090E continued										
14	16	44.70	146.7	201.19	5.868	0.38	1.25	38.43	1.121	10cm qv;30% py,1% cpy,tr sph,tet
										30cm qv;5-10%py,tr cpy,tet; zone B
15	7	18.10	59.4	3.22	0.094	0.21	0.7			7cm qv; 15% py, 2% cpy, sph, gal
66	2	27.05	88.7	4.01	0.117	0.43	1.4	0.89	0.026	phyllic alt'n; 5-10% py, 2% sph, tr cpy in stgrs
	8	36.40	119.4	2.74	0.080	0.43	1.4			phyllic alt'n; 10% py, 1% cpy in stgr
	12	96.60	316.9	3.46	0.101	0.43	1.4			intense phyllic alt'n;10% py
	13	97.10	318.6	273.40	7.974	0.34	1.1	47.31	1.380	qv; 15% py, 5% cpy, <1% VG, tr gal tet; zone B
Section 2140E										
1	3	30.09	98.7	189.70	5.533	0.27	0.9			qv; 15% py, 1% cpy, tr VG
	4	30.38	99.7	6.72	0.196	0.46	1.5	27.50	0.802	6cm qv; 20% py, 1% cpy, 5% tet, zone B
	13	41.00	134.5	10.46	0.305	0.50	1.6			phyllic alt'n w/narrow qv; 10% py
	9	58.44	191.7	18.31	0.534	0.86	2.8	7.95	0.232	15cm qv; 3% py, tr tet, cpy
										3cm qv; 30% py, tr cpy; zone C?
2	3	27.54	90.3	27.67	0.807	0.73	2.4	10.11	0.295	22cm qv; 20% py, tr cpy, tet; zone B
3	2	38.46	126.2	2.09	0.061	0.50	1.6			16cm qv; 15% py, tr cpy
	9	44.65	146.5	2.47	0.072	0.61	2.0	0.99	0.029	18cm qv; 1% py; zone B
11	2	40.71	133.6	2.43	0.071	0.28	0.9			phyllic alt'n; 2 cm qv with 5% py tr cpy
65	14	112.80	370.1	48.38	1.411	0.68	2.2	16.46	0.480	30cm qv; 2% py, 3% ea.cpy,gal,sph
										10% py in alt'n; zone B
12	8	83.88	275.2	7.44	0.217	0.39	1.3	1.34	0.039	phyllic alt'n; 2 cm qv w/ 20% py, 5% sph, 1% tet
Section 2190E										
21	6	23.85	78.2	13.23	0.386	0.63	2.1	4.66	0.136	phyllic alt'n; 2 cm qv w/ 5% py, tr tet; zone B
22	12	34.70	113.8	2.13	0.062	0.49	1.6	1.23	0.036	13cm sheared qv; 15-20% py, tr sph, tet; zone B
23	1	36.22	118.8	3.15	0.092	0.49	1.6			2 cm qv; 5% py
64	11	106.45	349.2	15.57	0.454	0.61	2.0	4.77	0.139	qv; 5% py, 5% gal, tr cpy, aspy; zone B
Section 2240E										
24	4	28.10	92.2	2.74	0.080	0.45	1.5			intense sericitic alt'n, 10% py;
	5	28.60	93.8	7.10	0.207	0.77	2.5	3.36	0.098	14cm qv w/ 5% py, tr cpy; int. arg.alt'n w/ 15% py; zone B
	10	34.80	114.2	3.29	0.096	0.54	1.8	0.93	0.027	8cm qv; 25% py, tr cpy
26	6	63.60	208.7	17.69	0.516	0.43	1.4	3.94	0.115	qv; 1% py, 5% gal, 2% cpy, tr tet zone B

Table 10: DIAMOND DRILL HOLE - SIGNIFICANT ASSAYS Continued

DDH No.	Sample Number	Depth metres	Depth feet	Au Assay gm/tonne	Au Assay oz/ton	True Width metres	True Width feet	Au Weighted Average gm/tonne 2.0m TW	Au Weighted Average oz/ton 6.6' TW	Comments and Geology
Section 2290E										
27	5	33.75	110.7	3.22	0.094	0.47	1.5			phyllic alt'n, 10% py, 15% cpy
										in narrow qv
	8	36.15	118.6	53.31	1.555	0.47	1.5	12.72	0.371	14cm sheared qv; 25% py, 5% cpy,
										5% gal; zone B
	15	41.50	136.2	2.85	0.083	0.47	1.5	0.82	0.024	phyllic alt'n; 5cm qv w/ 10-25%
										py, tr cpy
	21	46.00	150.9	2.33	0.068	0.47	1.5	0.58	0.017	19cm qv, 30% py, tr sph, gal
28	17	65.00	213.2	4.90	0.143	0.77	2.5	2.16	0.063	phyllic alt'n, numerous stgrs;
										10% py
29										sheared qv; 10% py, 5% ea cpy,
	7	81.25	266.6	60.07	1.752	0.44	1.4			gal, sph, tr VG
	8	81.75	268.2	8.30	0.242	0.44	1.4	15.60	0.455	2x12cm qv's; 5% py,tr cpy; zone B
	9	82.25	269.8	2.47	0.072	0.44	1.4			int. phyllic alt'n; 5-10% py, tr
										cpy
62	7	147.00	482.3	10.05	0.293	0.44	1.4	2.26	0.066	15cm sheared qv; 3-15% py, tr cpy
										sph; zone B
Section 2340E										
31	14	43.60	143.0	16.15	0.471	0.40	1.3			19cm qv; 5% py, tr cpy
	16	44.60	146.3	2.64	0.077	0.64	2.1	4.70	0.137	phyllic alt'n; tr-5% py; zone B
	18	46.25	151.7	3.19	0.093	0.84	2.75			phyllic alt'n; 2-5% py
	19	47.30	155.2	3.77	0.110	0.84	2.75	2.98	0.087	phyllic alt'n; 2-5% py
33	5	109.90	360.6	175.55	5.117	0.49	1.6	43.34	1.264	qv; 30% py, 2% cpy, 1% gal,
										tr sph, aspy; zone B
61	17	163.70	537.1	7.95	0.232	0.95	3.1			intense phyllic alt'n, 5-10% py,
	18	164.70	540.4	61.41	1.791	0.62	2.0	22.80	0.665	tr cpy. 21cm qv, 30% py, 5%
										cpy, tr sph, gal; zone B
	26	172.65	566.4	5.79	0.169	0.47	1.5	1.47	0.043	phyllic alt'n, narrow qv w/ 10%
										py, 2% sph, tr cpy, gal
74	13	186.30	611.2	12.34	0.360	0.71	2.3	4.39	0.128	21cm qv; 3% py, 10% cpy,tr sph,
										VG; zone B
Section 2405E										
8	16	22.60	74.1	40.25	1.174	0.52	1.7	10.49	0.306	sheared qv; ≥50% py, tr cpy,
										tet,gal,sph; zone B
9	12	16.20	53.1	7.34	0.214	0.42	1.4	1.85	0.054	sericitic alt'n,narrow qv's; 5%py
	21	23.30	76.4	11.90	0.347	0.32	1.0			gouge, 10% py
	23	24.50	80.4	6.17	0.180	0.46	1.5	3.36	0.098	phylic alt'n; 3cm + 1cm qv w/
										2% py; zone B
	32	30.40	99.7	2.26	0.066	0.65	2.1			phyllic alt'n, 10% py
10	11	33.75	110.7	2.54	0.074	0.28	0.9	0.38	0.011	phyllic alt'n, narrow qv; 5% py
										zone C?

Table 10: DIAMOND DRILL HOLE - SIGNIFICANT ASSAYS Continued

DDH	Sample	Depth		Au Assay		True Width		Au Weighted Average		
								gm/tonne	oz/ton	
No.	Number	metres	feet	gm/tonne	oz/ton	metres	feet	2.0m TW	6.6' TW	Comments and Geology
Section 2405E continued										
34	5	45.55	149.4	3.60	0.105	0.68	2.2	1.23	0.036	phyllic alt'n,narrow qv's; 10% py tr cpy, gal, sph; zone B
	12	50.65	166.2	2.67	0.078	0.63	2.1	1.17	0.034	phyllic alt'n, numerous stgrs, to 30% py, tr cpy, sph, zone C
70	2	75.70	248.4	2.19	0.064	0.59	1.9	1.13	0.033	sheared qv,2-5% py,tr cpy;zone B
	10	90.75	297.7	5.01	0.146	0.64	2.1	2.13	0.062	phyllic alt'n; 3-5% py, tr cpy, sph, zone C
71	22	137.10	449.8	19.17	0.559	0.49	1.6	4.97	0.145	6cm qv, 10% py, 1% cpy, tr aspy, tet; zone C
	24	138.10	453.1	2.26	0.066	0.73	2.4			4cm qv; 5-10% py, 1% cpy, tr tet, bornite, gal
Section 2440E										
35	10	16.00	52.5	15.26	0.445	0.46	1.5	3.74	0.109	sheared qv; 35% py,tr cpy; zone B
36	3	8.95	29.4	11.14	0.325	0.44	1.4	2.64	0.077	phyllic alt'n,narrow stgrs; 10% py, tr cpy; zone A
	13	22.50	73.8	5.04	0.147	0.44	1.4	1.27	0.037	int. phyllic alt'n; gouge w/ about 50% py; zone B
37	13	32.80	107.6	3.46	0.101	0.94	3.1			sericitic alt'n; tr py
	14	33.80	110.9	2.85	0.083	0.94	3.1	3.12	0.091	aplite
	15	34.80	114.2	2.88	0.084	0.47	1.5			phyllic alt'n, 10% py; zone A bornite, gal
	24	44.50	146.0	52.22	1.523	0.47	1.5	12.38	0.361	17cm qv, 20% py, 5% cpy, tr sph, gal; zone B
38	3	18.75	61.5	3.81	0.111	0.85	2.8	1.65	0.048	3x4cm to 10cm qv's; to 10% py, 2% cpy, tr sph,gal,tet; zone A?
	8	34.25	112.4	3.70	0.108	0.47	1.5	0.89	0.026	phyllic alt'n; 10% py, tr cpy in stgr; zone B?
Section 2490E										
39	19	34.90	114.5	7.58	0.221	0.46	1.5	1.78	0.052	7cm qv,10% py,tr cpy,sph; zone C
40	9	36.45	119.6	17.83	0.520	0.49	1.6	4.53	0.132	phyllic alt'n, narrow qv's w/2-3% py, tr cpy, sph; zone B
	20	43.60	143.0	4.01	0.117	0.59	1.9	1.30	0.038	phyllic alt'n; 10% py, 1% cpy stgr; zone B?
	23	46.60	152.9	3.26	0.095	0.49	1.6	1.58	0.046	phyllic alt'n; 10% py, tr cpy, sph; zone C
41	20	44.15	144.8	4.46	0.130	0.50	1.6	1.13	0.033	phyllic alt'n, 3cm qv; 10-15% py, tr cpy
	24	47.80	156.8	3.91	0.114	1.00	3.3	1.99	0.058	phyllic alt'n, narrow stgrs; 10% py, tr cpy, sph; zone B
Section 2540E										
42	3	15.60	51.2	2.13	0.062	0.80	2.6	0.93	0.027	phyllic alt'n; 3cm qv w/ 10% py, tr tet; zone A
	9	29.50	96.8	9.84	0.287	0.47	1.5	2.23	0.065	phyllic alt'n, 10% py; 3cm qv, 25% py, 1% cpy; low recovery; zone B
	14	33.80	110.9	4.63	0.135	0.47	1.5	1.17	0.034	2cm qv w/ 20% py, 1% cpy, tr sph

Table 10: DIAMOND DRILL HOLE – SIGNIFICANT ASSAYS Continued

DDH	Sample	Depth		Au Assay		True Width		Au Weighted Average		
								gm/tonne	oz/ton	
No.	Number	metres	feet	gm/tonne	oz/ton	metres	feet	2.0m TW	6.6' TW	Comments and Geology
Section 2540E continued										
43	5	22.20	72.8	2.23	0.065	0.80	2.6	1.20	0.035	phyllic alt'n, 2cm qv w/ 10% py
										zone A
	16	37.90	124.3	95.3	0.278	0.48	1.6	2.30	0.067	phyllic alt'n, 1cm qv, tr py
	19	45.51	149.3	3.29	0.096	0.56	1.8	0.96	0.028	phyllic alt'n, 2% py; zone C
44	16	48.60	159.4	44.26	1.291	0.47	1.5	10.42	0.304	16cm qv, 10% py, 1% cpy, tr gal;
										zone C
	22	60.60	198.8	36.00	1.050	0.47	1.5	8.74	0.255	10cm qv; 50% py, 2% cpy, tr gal
										zone C
45	5	64.20	210.6	9.87	0.288	0.49	1.6	2.50	0.073	7cm qv w/ 10% py, 2% cpy, tr gal;
										zone B
	20	76.40	250.7	10.59	0.309	0.49	1.6			11cm qv, 10% py, 2% cpy, tr gal
	22	77.55	254.4	2.98	0.087	0.88	2.9	3.91	0.114	phyllic alt'n, 5% py; 5cm qv w/
										20% py, tr cpy; zone C
Section 2590E										
46	3	9.60	31.5	4.77	0.139	0.33	1.1			phyllic alt'n, 5% py; zone C?
	6	13.00	42.7	4.39	0.128	0.33	1.1	1.75	0.051	5cm qv, 5% py, tr sph
	12	60.75	199.3	12.65	0.369	0.32	1.0	2.09	0.061	10cm qv,5% py,1% cpy,tr gal,aspy
47	2	15.70	51.5	2.95	0.086	0.49	1.6			phyllic alt'n; 3cm qv w/ 5% py,
										tr cpy, aspy
	7	25.50	83.7	5.14	0.150	0.49	1.6	1.30	0.038	4cm qv, 5% py, tr cpy, zone B
	10	32.90	107.9	6.07	0.177	0.49	1.6	1.51	0.044	phyllic alt'n; 2cm qv w/ 5% py,
										tr cpy
	14	40.50	132.9	33.77	0.985	0.49	1.6	8.30	0.242	phyllic altered andesite dyke,
										10% py, tr cpy; zone C
	17	45.15	148.1	5.86	0.171	0.49	1.6	1.47	0.043	phyllic alt'n, narrow stgrs
48	11	49.30	161.7	2.50	0.073	0.49	1.6			phyllic alt'n,narrow stgrs;
										zone B
	14	56.20	184.4	5.59	0.163	0.49	1.6	1.41	0.041	5cm qv w/ 5% py, tr cpy, gal
	17	66.70	218.8	14.43	0.421	0.49	1.6	3.67	0.107	3cm qv w/ 5% py, tr cpy, gal;
										zone C
	20	72.50	237.9	16.77	0.489	0.49	1.6	4.29	0.125	Ksp-stable phyllic alt'n
49	7	54.50	178.8	130.60	3.809	0.48	1.6	31.82	0.928	9cm qv; 15% py, 1% cpy, tr sph
										zone B
	14	77.50	254.2	2.16	0.063	0.48	1.6	0.82	0.024	sericitic alt'n; 3cm qv w/ 5%
										cpy; zone C
72	4	73.15	240.0	9.74	0.284	0.49	1.6	2.50	0.073	21cm qv, 20% py, 1% cpy, tr tet,
										gal, VG; zone B
	8	94.70	310.7	17.11	0.499	0.49	1.6			4cm + 7cm qv's, 10% py, 2%cpy,
	9	95.20	312.3	30.48	0.889	0.49	1.6	11.66	0.340	tr sph, gal. 8cm qv, 10% py,
										1% cpy, zone C
Section 2640E										
6	4	24.51	80.4	9.15	0.267	0.41				Ksp-stable phyllic alt'n, 3cm qv;
							1.3	2.40	0.070	10% py, tr cpy
	5	24.96	81.9	2.43	0.071	0.40	1.3			Sericitic alt'n 25% py, zone A

Table 10: DIAMOND DRILL HOLE - SIGNIFICANT ASSAYS Continued

DDH No.	Sample Number	Depth metres	Depth feet	Au Assay gm/tonne	Au Assay oz/ton	True Width metres	True Width feet	Au Weighted Average gm/tonne 2.0m TW	Au Weighted Average oz/ton 6.6' TW	Comments and Geology
Section 2640E Continued										
	13	30.30	99.4	15.50	0.452	0.36	1.2	2.81	0.082	6cm qv, 30% py, 5% cpy, tr tet zone B?
	23	35.33	115.9	15.60	0.455	0.28	0.9	2.23	0.065	Ksp-stable, phyllic alt'n; tr VG om stgr
	28	39.33	129.0	21.29	0.621	0.28	0.9	3.02	0.088	Ksp-stable phyllic alt'n; 10% py in stgr; zone c?
7	23	56.35	184.9	77.35	2.256	0.45	1.5	17.42	0.508	Ksp-stable phyllic alt'n; stgr w/ 15% py; zone B?
	38	72.98	239.4	5.90	0.172	0.54	1.8	1.82	0.053	sericitic alt'n
	41	75.15	246.6	2.26	0.066	0.54	1.8			sericitc alt'n
	43	76.50	251.0	7.30	0.213	0.40	1.3	2.19	0.064	Ksp-stable phyllic alt'n; 5% py zone C
	56	84.50	277.2	2.50	0.073	0.30	1.0			sericitic alt'n; 10% py, tr py, cpy in stgr
50	3	54.85	180.0	8.13	0.237	0.49	1.6			Ksp-stable phyllic alt'n; to 15% py in stgrs
	5	56.15	184.2	12.45	0.363	0.49	1.6			4cm qv; 20% py, tr cpy
	7	57.65	189.1	22.42	0.654	0.59	1.9	9.29	0.271	14cm qv; 5% py, tr cpy, gal, aspy zone A
	8	58.25	191.1	5.25	0.153	0.98	3.2			Ksp-stable phyllic alt'n; 1% py
	16	96.80	317.6	26.64	0.777	0.49	1.6			phyllic alt'n; 20% py, tr cpy
	19	98.30	322.5	30.99	0.904	0.49	1.6	14.33	0.418	6cm qv; 35% py, 1% cpy; zone C
73	9	76.55	251.1	5.55	0.162	0.50	1.6	2.13	0.062	8cm qv; 15% py, tr cpy; zone A
	16	113.50	372.4	2.98	0.087	0.80	2.6			3cm + 4cm qvs; 5-20% py, tr cpy
	19	117.65	386.0	35.45	1.034	0.50	1.6	8.98	0.262	6cm qv;10% py,tr cpy,sph; zone C
Section 2690E										
51	3	27.30	89.6	4.35	0.127	0.35	1.1	0.79	0.023	sheared qv; 35% py, 2% cpy, tr py
52	11	46.80	153.5	2.43	0.071	0.42	1.4	0.62	0.018	phyllic alt'n; 10% py in narrow qv; zone B
53	20	46.60	152.9	5.83	0.170	0.49	1.6	1.51	0.044	sericitic alt'n; 15% py, tr cpy in 3cm qv; zone B
Section 2740E										
55	4	39.20	128.6	4.39	0.128	0.48	1.6			Ksp-stable phyllic alt'n, 2% py
	5	39.70	130.2	9.91	0.289	0.48	1.6	3.46	0.101	3cm qv w/ 15% py, 2% cpy; zone B
S I W A S H L A K E										
Section 2410E										
56	11	35.20	115.51	5.69	0.166	0.46	1.5	2.43	0.071	11cm qv, about 75% py, tr cpy, tr gal. Ag 97.7 gm/t
	14	37.30	122.4	5.66	0.165	0.46	1.5			32 cm qv, 20% py, 5% cpy, 20% gal 10% sph. Ag 141.9 gm/t
57	8	67.40	221.1	2.54	0.074	0.58	1.9	1.47	0.043	35cm qv, 10% py, 5% cpy, 5% sph, 2% gal. Ag 47.0 gm/t
	10	69.55	228.2	4.63	0.135	0.41	1.3			16cm qv; 15% py, tr cpy; Ag 42.4 gm/t
Section 2555E										
59	16	65.40	214.6	4.46	0.130	0.44	1.4	1.13	0.033	6cm qv + 9Cm gouge; 30% py, 5% cpy. Ag 32.6 g/t

Section 1985E (Plate(15) includes drill holes SND89-4,-5, SND90-68 and is located behind trench SN89-1. Andesitic volcanics occupy most of the section, overlain by granite and granodiorite to the south, with the contact dipping at 30°S and steepening to 65°S downdip. The granite appears to be a "border phase" between granodiorite to the south and the volcanics to the north. Aplite and smaller granite dykes are fairly common. Alteration is mainly weak propylitic, with numerous bands of sericitic to phyllic alteration. One discontinuous zone of mineralization was intersected dipping 67°S. The mineralized zone consists of a 12cm wide quartz vein in hole SND89-4 and an 11cm vein in hole SND90-68, both in a sericitic alteration envelope. The mineralized structure was not intersected in hole SND89-5, but its projection passes through an andesite dyke which may have cut it off. Sulfide minerals noted in the quartz vein include pyrite (to 15%) and up to 1% chalcopyrite. Weak to moderate grade gold values were returned from sampling. At the 1540m elevation the quartz vein is located approximately 30 metres north of the main mineralized structures intersected in sections 1940E, 2040E, and 2090E at the same elevation. However, the vein is located only seven metres to the north of the second zone(C) intersected in section 2040E. This suggests that the main vein is pinched out on this section or is displaced along a north south structure located immediately to the east or west of this section.

Section 2040E (Plate 16) is located to the south of trench SN89-12 (east of SN89-2), and includes holes SND90-16, -17, -18, -60, and -67. The section is comprised of granodiorite underlain by andesitic volcanics, with the contact dipping about 60°S in the north and 20°N in the south, forming a downward bulge below hole SND90-60. Dykes of aplite, granite, and quartz monzonite are common. Alteration is mainly weak propylitic with numerous sericitic to phyllic bands. Two zones of mineralization were intersected. Hole SND90-18 was stopped short of the zones. The main mineralized zone (B) consists of a 6 to 18cm quartz vein with a strong to intense phyllic alteration envelope. The zone dips about 35°S from surface through hole SND90-17, flexing downward to 60°S through the deepest intercept in hole SND90-67 at about 140m down-dip. A second zone (C), consisting of strong phyllic alteration with a 2cm to 5cm wide quartz vein was intersected in holes SND90-16 and SND90-60. This zone appears to dip approximately 60°S and lies up to 19m below the main zone. Hole SND90-17 appears to have been stopped prior to intersecting this zone. Mineralization in the zones is mainly pyrite (10% to 20%) with minor chalcopyrite and tetrahedrite. Sampling of both zones returned low to moderate gold grades.

Section 2090E (Plate 17) was drilled behind trench SN90-1 (east of SN89-3) and includes holes SND90-13, -14, -15, and -66. Granodiorite occupies most of the section, intruded by a 1m andesite dyke that dips from surface at about 80°S intersecting hole SND90-13. Alteration is mainly weak? to moderate propylitic, with bands and zones of potassic, sericitic, and phyllic. Three zones of mineralization were encountered; hole SND90-15 was stopped before encountering mineralization. The main mineralized zone (B) is made up of a 19cm to 28cm quartz vein in a strong to intense sericitic to phyllic alteration envelope. The zone dips about 30°S from surface through hole SND90-14, flexing downward to 65°S through hole SND90-66, with its deepest down-dip intercept at about 136m. Sampling of the structure returned moderate to high grade results. A zone consisting of narrow bands of strong phyllic alteration with several 1cm to 4cm quartz veins was intersected in hole SND90-13 about 17m uphole from the main zone. This structure, possibly a western extension of zone A, dips about 40°S and does not correlate with any structure at surface or down-dip. Sampling returned moderate gold grades. The third mineralized zone (C), made up of strong phyllic alteration with narrow quartz veins and/or pyrite-rich gouge, occurs at surface in contact with an andesite dyke and dips 70°S through hole SND90-13, uphole of the dyke. Moderate grade gold values were returned from sampling. The mineralogy of the zones is mostly pyrite (to 30%) with up to 5% chalcopyrite and traces of sphalerite, galena, and tetrahedrite. The vein intercepts in hole SND90-66 contained numerous blebs of coarse-grained gold in association with tetrahedrite(?).

Section 2140E (Plate 18) was drilled along and behind trench SN89-4 and includes holes SND89-1, -2, -3, -11,-12, and SND90-65. Granodiorite makes up most of the section, overlain by quartz monzonite in gradational contact to the south and underlain by andesite to the north. Both contacts dip to the south at about 35°. A 1m andesite dyke mapped in trench SN90-2 dips at about 75°S from the surface and probably intersects hole SND89-1 in the volcanics, as it was not recognized. Two zones of mineralization were intersected. Holes SND89-11 and -12 were stopped before the zones were encountered. The main mineralized structure (B) is composed of 15cm to 24cm quartz vein with a moderate to strong phyllic alteration envelope. The zone dips from surface through hole SND89-3 at 20°S, warping downwards to 70°S in hole SND90-65, about 158m down-dip. Gold values returned from sampling vary from low to high. The second zone (C), intersected in hole SND89-1 and at surface, consists of moderate phyllic alteration with 3cm to 12cm quartz veins. At surface, the zone is in contact with an andesite dyke but not in the drill hole. The zone dips about 60°S from surface. Sampling returned high grade gold results. Zone mineralogy consists mainly of pyrite (5% to 25%) with varying amounts of chalcopyrite. Traces of tetrahedrite, sphalerite, and galena are common. Visible gold was encountered in hole SND89-1.

Section 2190E (Plate 19), including holes SND90-21, -22, -23, and -64, was drilled behind trench SN89-13. Granodiorite comprises most of the section, overlain by quartz monzonite, with the contact at about 60°S in the north flattening to about 25°S. An andesite dyke dips from surface through hole SND90-21 at 70°S. One zone of mineralization was intersected. The mineralization is made up of a 9cm to 31cm quartz vein in moderate to intense phyllic alteration. The vein contains 5% to 25% pyrite, up to 5% galena, and minor amounts of chalcopyrite, sphalerite, tetrahedrite, and arsenopyrite. The mineralized zone dips about 20°S from surface through hole SND90-22, steepening to 65°S through hole SND90-24, for a traced down-dip extent of about 150m. Low to moderate gold grades were returned from sampling.

Section 2240E (Plate 20) was drilled behind trench SN89-13 (east of trench SN88-3), and is comprised of holes SND90-24, -25, -26, and -63. Quartz monzonite overlies granodiorite with the contact dipping between 10°S and

30^{o}S. A few narrow aplite dykes are present. Significant mineralization was intersected in hole SND90-26. Poor recovery across the mineralized zone in hole 63 may be in part responsible for the low gold values. The mineralized zone consists of a 6cm to 24cm quartz vein with a phyllic altered envelope in holes SND90-24,-25,-26, and an 86cm band of strong phyllic alteration in hole SND90-63. Minerals present are pyrite to 20%, with up to 5% galena, 2% chalcopyrite, and traces of tetrahedrite. The zone dips about 20^{o}S from surface through hole SND90-25, and steepens to 55^{o}S. The zone has a tested down-dip extent of about 142m. Low to moderate gold grades were returned from sampling.

Section 2290E (Plate 21) was located behind trench SN90-2 and includes holes SND90-27, -28, -29, and -62. The section is composed of quartz monzonite, grading at depth to granodiorite. Some narrow aplite dykes were encountered. Two mineralized zones were intersected. The main structure (zone B) is a 13cm to 23cm quartz vein, commonly sheared, in a moderate to intense phyllic alteration envelope. The vein contains up to 25% pyrite, up to 5% chalcopyrite, and traces of sphalerite and galena. Visible gold was noted in hole SND90-29. The zone dips about 30^{o}S from surface through hole SND90-29, flexing to 60^{o}S through hole 62, and has been tested down-dip to about 193m. Low to moderate gold results were returned from sampling. The second zone (C) extends from surface through holes 27 and 28 and dipping at about 30^{o}S. This zone consists of phyllic alteration with numerous quartz stringers and narrow veins that contain up to 20% pyrite and minor chalcopyrite. It appears to be a splay off zone B. Sampling returned low grade gold values.

Section 2340E (Plate 22) includes holes SND90-30, -31, -32, -34, -61, and -74, and was situated behind trench SN90-2. The section is composed of quartz monzonite. It is cut by an andesite dyke dipping 80^{o}S at the extreme southern end of the section. An aplite dyke dipping approximately 20^{o}S was intersected in all holes except SND90-30. It steepens to 60^{o}S between holes -61 and -74 possibly due to a structural displacement. Two mineralized zones were intersected. Zone B is comprised of an 11cm to 47cm quartz vein within a moderate to intense phyllic alteration envelope of variable width. Pyrite is the dominant sulfide (up to 30%), with varying amounts of chalcopyrite and traces of sphalerite, galena, and tetrahedrite. Visible gold was noted in hole SND90-74. The zone dips about 35^{o}S from surface through hole SND90-33, and bends downward to 50^{o}S through holes SND90-61 and -74, with a known down-dip extent of 247m. Low to high grade gold assays were returned from sampling. A minor zone (C), intersected in hole SND90-61, may be a local splay off zone B. The zone consists of two quartz stringers contained in a 1.0m envelope of strong phyllic alteration. Weak gold values were returned from sampling.

Section 2405E (Plate 23) was drilled along and behind trench SN89-7 and contains holes SND89-8, -9, and -10, SND90-34, -70, and -71. Quartz monzonite with minor, narrow aplite dykes comprises most of the section. Two mineralized structures were intersected. A four-metre wide andesite dyke, dipping 60^{o}N and bounded on both sides by shear zones, was intersected in hole SND89-10. The dyke was also exposed on surface in a sump north of hole SND90-34. This dyke is associated with a major NNW-trending structure which forms a swampy depression extending from between trenches SN90-2 and -3, south through Siwash Lake, a distance of about 1.4km. At least 10m of dip-slip displacement of the mineralized zones is apparent along this structure. The upper zone (B) appears to dip 20°S from surface through hole SND89-9 and steepens to about 40°S through hole SND90-71 intersecting the NNW shear zone north of hole SND89-10. The zone is made up of phyllic or K-spar stable phyllic alteration with 4cm to 27cm quartz veins. The veins contain up to 10% pyrite and traces of chalcopyrite, sphalerite, and galena. Weak gold values were returned from sampling. The lower zone (C) is composed of phyllic alteration bands of variable width with quartz veins from 1cm to 45cm. The veins contain from 1% to about 25% pyrite, with approximately 50% pyrite noted in hole SND89-8. Up to 5% chalcopyrite and traces of tetrahedrite, galena, and sphalerite are also present. The alteration commonly contains 10% pyrite. This zone appears to splay off zone B near hole SND89-10 and dips from hole SND90-34 through hole SND90-70 at about 40°S, steepening to 60°S through hole SND90-71. Sampling returned weak to moderate gold values.

Section 2440E (Plate 24), including holes SND90-35, -36, -37 and -38, was drilled to the south of trench SN90-3. This drill fence is underlain by quartz monzonite. An andesite dyke, dipping about 55°N and bounded by shears, was intersected in hole SND90-38 and correlates with the structure described on the previous section. Alteration is mainly moderate propylitic with numerous sericitic to phyllic alteration bands. Zones A and B were intersected. Zone A consists of a phyllic alteration band including 3cm quartz veins with up to about 10% pyrite. The zone projects to surface to the south of hole SND90-35 and dips about 32°S through hole 37. An andesite dyke and adjacent shear zones were intersected in hole 38 at the projected location of this zone. Sampling returned low to moderate gold values. Zone B lies about 15m below zone A, and dips from surface through hole SND90-37 at about 28°S. It also projects to the andesite dyke-shear zone intersected in in hole SND90-38. The zone consists of phyllic alteration with a quartz vein measuring from 5cm to 27cm and containing up to 20% pyrite, 5% chalcopyrite, and traces of sphalerite and galena. Low to high gold assays were returned from sampling. Two mineralized zones were intersected near the top of hole SND90-38 which resembles zones A and B in style and relative position. The two zones may be displacement by an unknown fault located to the north of hole 38.

Section 2490E (Plate 25) was drilled along and behind trench SN90-4, and includes holes SND90-39, -40, and -41. The section is comprised of quartz monzonite with rare, narrow aplite dykes. Alteration varies from mainly weak propylitic to sericitic and phyllic. Two main zones and one minor zone of mineralization were intersected. The upper zone (B) consists of bands of phyllic alteration from 34cm to 1.19m wide with 3cm quartz veins, containing 15% pyrite and traces of chalcopyrite, pyrrhotite, and sphalerite. The zone dips approximately 20°S from surface through hole SND90-41 with a tested down-dip extent of about 137m. Sampling returned low to moderate gold grades. A minor zone was intersected in holes SND90-39 and -40, consisting of gouge and strong phyllic alteration with up to 10% pyrite. It lies from 5m to 8m below zone B and dips about 25°S. Low gold values were returned from sampling. The lower zone (C) is similar to zone B and lies about 12m below it. Phyllic alteration and quartz veins to 9cm wide form this zone which dips from surface through hole SND90-41 at about 20°S. Low to moderate gold values were returned from sampling.

Section 2540E (Plate 26), *including* holes SND90-42, -43, -44, and -45, was drilled to the south of trench SN90-5. The section is underlain by quartz monzonite with a narrow andesite dyke dipping 55°S from surface through hole SND90-42. Alteration is weak propylitic, with numerous bands of sericitic, K-spar stable phyllic, and, less commonly, phyllic alteration. Four zones of mineralization were intersected. Zone A, the uppermost, dips from surface (?) through hole SND90-44 at about 17°S and was not intersected in hole SND90-45. It consists of strong sericitic to phyllic alteration with 2cm to 4cm quartz veins containing about 10% pyrite, up to 1% chalcopyrite, and traces of galena and sphalerite. Sampling returned low gold values. Zone B lies 8m to 10m below zone A and dips 15°S through holes SND90-42 and -43, steepening to 20°S through holes SND90-44 and -45. It consists of a 21cm to 70cm band of strong phyllic alteration with 1cm to 15cm quartz veins. The zone commonly contains up to 10% pyrite, with 1% chalcopyrite and traces of galena and sphalerite associated with the veins. Sampling returned low to high gold assays. A minor zone of limited extent is possibly a splay off zone B, located 6m below it in holes SND90-42 and -43. It dips 20°S and is made up of narrow zones of moderate phyllic alteration with 2cm quartz veins, hosted by sericitic alteration. The veins contain up to 20% pyrite with traces of chalcopyrite, sphalerite, and galena. Low to moderate gold values were returned from sampling. Zone C consists of strong sericitic to phyllic alteration with 2cm to 10cm quartz veins containing up to 10% pyrite with commonly 2% chalcopyrite and traces of galena and sphalerite. The vein in hole SND90-44 contains approximately 50% pyrite. This zone lies about 14m below zone B and dips 15°S through holes SND90-42 and -43, steepening to 20°S through holes SND90-44 and -45. Sampling returned low to moderate gold values.

Section 2590E (Plate 27) was drilled behind trench SN89-14 and includes holes SND90-46 (about 30m north of the trench),-47,-48,-49, and -72. The section is underlain by quartz monzonite with weak to moderate propylitic alteration. Bands of sericitic to phyllic alteration are common. Two andesite dykes were also intersected, the northern dipping from surface through hole SND90-46 at 50°S, the southern dipping 60°S through holes SND90-46 and -47. Zones B and C , with subsidiary stringers, and a northern zone were encountered. The uppermost zone (B) consists of moderate to strong phyllic alteration with quartz veins from 1cm to 27cm containing from 5% to 20% pyrite, up to 2% chalcopyrite, traces of galena, sphalerite, tetrahedrite and, in hole SND90-72, visible gold. The zone dips from surface through hole SND90-47 at 30°S, apparently flattening to 15°S through hole SND90-49, and steepening back to 30°S. Sampling returned low to high gold grades. About 10m below zone B and dipping 30°S through holes SND90-47 and -48 is a discontinuous zone made up of moderate sericitic to phyllic alteration with 2cm to 5cm quartz veins, commonly containing 5% pyrite and traces of chalcopyrite and galena. Sampling returned low gold values. Zone C lies about 20m below zone B, with a similar structural trend. It consists of strong sericitic to intense phyllic altered quartz monzonite *and, in hole SND90-47,* an andesite dyke. Veins up to 8cm contain from 5% to 15% pyrite and traces of chalcopyrite,sphalerite and galena.

Low to high gold grades were returned from sampling. Seven metres below zone C lies another subsidiary zone which dips 15°S through hole SND90-46, then follows the same trend as zone "B", ending between holes SND90-48 and -49. The zone is comprised of K-spar stable phyllic to strong phyllic alteration with narrow quartz stringers and veins up to 4cm, containing up to 15% pyrite and traces of chalcopyrite, galena, and possibly covellite, which returned low to moderate gold values. The northern zone was only tested and intersected in hole SND90-46 and appears to relate to a different structure than the previous zones. It consists of intense phyllic alteration with a 10cm quartz vein containing 5% pyrite, 1% chalcopyrite, and traces of galena and arsenopyrite. The structure appears to dip about 55°S. Moderate gold values were returned from sampling.

<u>Section 2640E</u> (Plate 28) was drilled behind trench SN89-14 and includes holes SND89-6, -7, SND90-50 and -73. The section is underlain by quartz monzonite. An andesite dyke, dipping about 50°S, was intersected in holes SND89-6 and -7. Alteration varies from weak to moderate propylitic to strong sericitic, with a few bands of potassic, phyllic, and K-spar stable phyllic. Zones A, B, and C were intersected. Zone A consists of K-spar stable phyllic to phyllic alteration with 3cm to 13cm quartz veins, containing 5% to 20% pyrite and traces of chalcopyrite, galena, and arsenopyrite. The zone dips 20°S from surface through hole SND89-6, flattening to 15°S through hole SND89-7, and steepening to 25°S through hole SND90-73. Low to moderate gold values were returned from sampling. Zone B lies 5m to 7m below the previous and is of limited extent, dipping from surface through holes SND89-6 and -7 at an average of 25°S. It was not intersected in holes SND90-50 and -73 and its intercept in hole SND89-6 is of questionable location. This zone consists of K-spar stable phyllic alteration with quartz veins from 1cm to 6cm, which contain up to 30% pyrite, 5% chalcopyrite and traces of tetrahedrite. Sampling returned moderate to high gold assays. A subsidiary mineralized zone lies from 6m to 11m below zone "B". Sericitic to K-spar stable phyllic alteration with narrow stringers containing up to 10% pyrite and traces of tetrahedrite, form the zone. Visible gold was noted in hole SND89-6. This structure dips at 25°S from surface through hole SND89-6, steepening to 40°S through hole SND89-7, apparently merging with zone C in hole SND90-50. As previous, the intercept in hole SND89-6 is of questionable location. Moderate gold values were returned. Zone C consists of K-spar stable phyllic, sericitic, and phyllic alteration with quartz veins up to 6cm, containing up to 35% pyrite, trace to 1% chalcopyrite, and traces of sphalerite. The zone is situated 5m to 7m below the previous, and dips at 30°S from surface through hole SND89-7, flattening to 20°S. The intercept in hole SND89-6 is of questionable location. Sampling returned moderate to high gold assays.

<u>Section 2690E</u> (Plate 29), drilled along and behind trench SN90-8, includes holes SND90-51, -52, and -53. Quartz monzonite comprises most of the section, with an andesite dyke dipping 37°S through holes SND90-52 and -53. Alteration is weak and grades from propylitic to phyllic. Two zones of alteration were encountered. The first zone, intersected only in hole SND90-51, may be the northern zone of mineralization intersected in hole SND90-46 on section 2590E. It consists of a sheared quartz vein with pyrite up to 35% and 5% chalcopyrite in moderate phyllic alteration. The zone appears to dip about 30°S. Low gold values were returned. The main zone (B) dips 15°S from surface through hole SND90-53. It consists of moderate sericitic to phyllic alteration with narrow quartz veins and stringers, typically containing about 10% pyrite and traces of chalcopyrite. Low values were returned from sampling.

Section 2740E (Plate 30) includes holes SND90-54 and -55, and was drilled along and behind trench SN90-9. Quartz monzonite underlies most of the section, with an andesite dyke dipping about 60°S through hole SND90-55. Alteration is generally weak propylitic, with some weak to moderate sericitic to phyllic bands. One zone of mineralization was intersected, consisting of a narrow band of sericitic to phyllic alteration with narrow quartz veins. The zone dips from surface about 30°S, flattening to 15°S through the drill holes. Sampling returned low to moderate gold grades.

7.3.2 Siwash Lake Area

Section 2410E (Plate 33) was drilled along trench SL89-2 and includes holes SLD90-56 and -57. The section is composed of quartz monzonite, with two parallel andesite dykes dipping from surface through hole SLD90-56 at 45°S. Alteration is mainly propylitic with numerous phyllic bands. An adularia(?)-sericite rich alteration was also identified, and is noted as intense phyllic. One mineralized zone was intersected consisting of two 10cm to 28cm parallel quartz veins in strong phyllic alteration. The veins contain up to 75% pyrite, 10% chalcopyrite, 40% galena, and 10% sphalerite. Some of the alteration contains about 15% chalcopyrite in addition to pyrite. The zone dips at about 55°S from surface through hole SLD90-57, and is closely associated with the andesite dykes. Sampling returned low to moderate gold values.

Section 2555E (Plate 34)includes holes SLD90-58 and -59, and was drilled along and behind trench SL89-1. The section is underlain by quartz monzonite with an andesite dyke dipping about 47°S from surface through both holes. Moderate propylitic alteration is common, with a few narrow bands of moderate sericitic to phyllic. One zone of mineralization was encountered, consisting of strong to intense sericitic alteration locally containing a 7cm quartz vein with 30% pyrite, 5% chalcopyrite, and traces of galena and sphalerite. The zone dips about 50°S and is closely associated with the andesite dyke. Sampling returned low gold grades.

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8.0 RESERVE CALCULATIONS

A preliminary geological reserve has been calculated for the Siwash North Area based on results from 64 (exclude 11,12,15,18,46,51) diamond drill holes with vein intersections spaced at approximately 50 metre centres. The reserve was calculated as follows:

(1) Sections in the plane of the vein were produced for the B and C veins (Plates 35 and 36) by rotating each drill intercept to the horizontal along the north-south plane of its respective drill section. The surface exposure of the vein was used as the origin and all intercepts were rotated to that elevation.

(2) Using a cutoff grade of 10 grams per tonne gold over a 2.0 metre true width, polygons were drawn around those drill intercepts above the cutoff grade on the plane of the vein sections. On the edges of the drill grid, polygons were extended 25 metres outward from the drill hole pierce point. The B vein is the most continuous and contains the bulk of the high grade intersections. Fifteen intercepts in the B vein and two in the C vein were used for the reserve calculations. Surface sample results were not used. The area of each polygon was calculated by matrix reduction, then multiplied by 2.0 metres true width to obtain the volume and multiplied by a specific gravity of 2.65 tonnes/cubic metre (AGI, 1965) to give a metric tonnage for the block.

(3) The block was assigned the uncut, calculated two metre weighted average gold and silver values from the drill hole intersection.

Table 3 details results of the reserve calculation by block and vein. The total drill indicted geological reserve to a down dip extent of approximately 250 metres is:

211,884 tonnes at an average grade of 21.72 gm/t Au and 22.01 gm/t Ag.
[233,558 tons at an average grade of 0.633 opt Au and 0.64 opt Ag].

This calculation is referred to as a "geological" reserve because no allowance has been made for specific mining methods and a universal dilution factor to a 2.0 metre true width has been applied. Cutting of assay values has not been undertaken because there is no accumulated experience relating drill intersection values to bulk sample values for this deposit at this time. The reserve is open to expansion by further drilling at depth and along strike.

Table 11: **SIWASH NORTH RESERVE BLOCKS - GOLD + SILVER CONTENT**

Cutoff grade: 10.0 gm/t Au;
True width: 2.0 m;
Specific gravity: 2.65 t/m^3

Block	Hole	Vein	Area (m^3)	Tonnes	Au Grade (gm/t)	Grams Au	Ag Grade (gm/t)	Grams Ag
A	69	B	2,398.21	12,710.51	15.67	199,173.74	29.78	378,519.08
B	14	B	2,738.68	14,515.00	38.43	557,811.60	21.98	319,039.79
C	66	B	2,428.47	12,870.89	47.31	608,921.85	46.64	600,298.36
D	1	B	1,893.75	10,036.88	27.50	276,014.06	11.22	112,613.74
E	2	B	1,999.71	10,598.46	10.11	107,150.46	17.71	187,698.78
F	65	B	2,596.51	13,761.50	16.46	226,514.34	28.70	394,955.14
G	27	B	2,287.76	12,125.13	12.72	154,231.63	10.62	128,768.86
H	29	B	2,511.83	13,312.70	15.60	207,678.10	19.43	258,665.74
I	33	B	2,611.33	13,840.05	43.34	599,827.72	48.41	669,996.77
J	61	B	2,983.73	15,813.77	22.80	360,553.93	39.84	630,020.56
K	8	B	1,662.00	8,808.60	10.49	92,402.21	11.71	103,148.71
L	37	B	2,101.52	11,138.06	12.38	137,889.13	5.52	61,482.07
M	44	B	2,446.08	12,964.22	10.42	135,087.21	15.09	195,630.14
N	49	B	2,366.65	12,543.25	31.82	399,126.06	22.70	284,731.66
O	7	B	2,484.68	13,168.80	17.42	229,400.57	5.41	71,243.23
P	72	C	2,084.45	11,047.59	11.66	128,814.84	9.31	102,853.02
Q	50	C	2,382.71	12,628.36	14.33	180,964.44	12.94	163,411.02
		Total:		211,884 tonnes		4,601,562 gm		4,663,077 gm
		Grade:			21.72	gm/t Au	22.01	gm/t Ag
		Imperial:		233,558 tons	0.633 opt Au	147,941 ounces	0.642 opt Ag	149,919 ounces

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9.0 GEOPHYSICS

Ground magnetometer and VLF-EM surveys were carried out on the Elk 1, 2, 9-16, 27, 37, 55-57, 62-64, Fergito Allendo II and Tepee claims (Figure 2) between the 18th of September and the 1st of October 1990, by SJV Consultants Ltd. Readings were taken at 12.5m intervals on cut or flagged lines 100m apart for a total of 50km. The survey covered the South Showing and Agur Option areas between grid coordinates 1200E to 4000E and 3000S to 200N. The purpose was to define conductors and to determine their relationships to gold soil geochemical anomalies.

The overall magnetic gradient increases from the southwest to the northeast with linear zones of low magnetic susceptibility trending northeast. VLF-EM conductors form distinct northeast and southeast trending axes, some continuous over 2.0km. The southeast conductors are more continuous than those trending northeast suggesting a series of northeast structural features displaced by younger southeast faults. A strong northeast trending VLF conductor coincides with a linear magnetic low feature between grid coordinates 1500E, 1100S and 2900E, 200S. Three weak southeast trending VLF conductors located between 1600E, 500S and 3400E, 1800S cut intermittent magnetic lows and the large mag low centered at 2800E, 1600S. This magnetic low may reflect an intrusive body with low mafic content or an area of alteration in which magnetic minerals have been depleted. Generally, gold soil geochemical anomalies are located on the flanks of coincident magnetic lows and VLF-EM conductors.

The VLF-EM conductors often reflect argillic alteration zones located along shears, geological contacts and dykes. Gold mineralization has been found associated with shears and andesite dykes. The linear magnetic lows may also reflect alteration zones in which magnetic minerals have been depleted. In light of the above, coincident conductors, magnetic lows and geochemical anomalies provide high priority trench or drill targets.

The geophysical report by SJV Consultants Ltd. can be found in Appendix "D."

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10.0 LOGGING

Logging was carried out in the Siwash North, Siwash Lake and South Showing areas on the Elk 1, 2, 20, and 21 claims in preparation for trenching, stripping, drilling and road construction. The work was carried out in two phases by K-Way Contracting of Merritt B.C. All the logs were shipped to the Weyerhaeuser Canada mill in Merritt.

In the first phase, trees were removed from Siwash North drill sites SND90-27 to SND90-55 between June 19 and June 22, 1990. The work was done under a licence to cut granted to Fairfield Minerals Ltd. and 153 tonnes of wood were removed.

K-Way Contracting also performed the second phase of logging in the Siwash North, Siwash Lake and South Showing areas between September 20 and December 4, 1990. Sites for holes SND90-61 through SND90-74 and sites for proposed 1991 holes were logged in the Siwash North area. Logging in the Siwash Lake area was carried out over an area 50m to the east of trench SL89-1 and 100m to the west of trench SL89-2 in preparation for drilling, trenching and stripping proposed for 1991. In the South Showing area, logging in preparation for approximately 1.2 km of trenching was partially completed before extreme weather conditions curtailed operations. A total of 2903 tonnes of wood was removed to the Weyerhaeuser mill during this phase of logging.

Logs were felled, decked, trimmed of all branches and cut to lengths specified by the mill. The logs were then sorted and transported to Merritt via the Okanagan Connector highway. Slash piles made during the first phase of logging in 1990 and in 1989 were burned between October 20 and 28, 1990.

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11.0 ROAD CONSTRUCTION

Approximately 4 km of rough drill site and trench access roads were constructed in the Siwash North, Siwash Lake and South Showing areas. The access road connecting the Siwash North area to the Okanagan Connector highway was upgraded by the installation of eight culverts. All work was done on the Elk 1, 2, 20 and 21 claims between June 6 and October 30, 1990 by Wiltech Developments of Kelowna and Bob Tarney of Merritt, B.C. Equipment used included a Caterpillar D6D bulldozer, 215LC excavator and a 1400E grader.

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12.0 RECLAMATION

An extensive reclamation program was carried out in the Siwash North and Siwash Lake areas during the 1990 field season. All open cross trenches excavated in the Siwash North area were backfilled and landscaped with the exception of the sections which exposed significant mineralization. In these cases the banks of the trenches or stripped areas were landscaped to match the local topography. Backfilled trenches are indicated by shading on Plate 3. The entire Siwash North logged area was helicopter seeded with ESSF grass mix and fertilized as specified by the Ministry of Forests. In the Siwash Lake area, trenches SL90-3,-6,-7 were completely backfilled and the remaining trenches were partially backfilled leaving open the sections which exposed interesting mineralization. The backfilled areas were hand seeded with ESSF mix grass seed and also fertilized. Slash piles from logging were burned in both areas. Equipment used included a Caterpillar D6D bulldozer, Caterpillar 215LC excavator and a Bell 206 helicopter.

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13.0 REFERENCES

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1964: AGI Data Sheets, p.24

CORDILLERAN ENGINEERING LTD.:
1989: Geochemical, Trenching & Drilling Report on the Elk Property, North Area, Similkameen Mining Division, B.C. Assessment report submitted to B.C. Ministry of Energy, Mines and Petroleum Resources, April, 1989

MONGER, J.W.H.:
1989: Geology, Hope, British Columbia; Geological Survey of Canada, Map 41-1989, sheet 1, scale 1:250,000

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1986: Ore Deposits #10. A Canadian Cordilleran Model for Epithermal Gold Silver Deposits; Geoscience Canada, Vol. 13, No. 12, pp. 101-111.

RICE, H.M.A.:
1947: Geology and Mineral Deposits of the Princeton Map Area, British Columbia; G.S.C., Memoir 243.

14.0 STATEMENT OF COSTS

SALARIES (Field)

M. Brinkerink	Cook	149 days @	$130.00/d x 1.12*.....	21,694	
M. Clarke	Fld. Assist	14 days @	75.00/d x 1.12	1,176	
P. Conroy	Geologist	137 days @	125.00/d x 1.12	19,180	
J. Cormier	Geologist	7 days @	125.00/d x 1.12	980	
S. Crawford	Fld. Assist	42 days @	87.85/d x 1.12	4,132	
D. DeGraaf	Fld. Assist	67 days @	76.11/d x 1.12	5,711	
B. Johnson	Bullcook	30 days @	80.00/d x 1.12	2,688	
B. Knight	Geologist	114 days @	103.42/d x 1.12	13,204	
M. Lazaroff	Fld. Assist	74 days @	83.78/d x 1.12	6,943	
J. Northrup	Fld. Assist	100 days @	78.00/d x 1.12	8,736	
C. Ouellette	Fld. Assist	102.5 days	97.61/d x 1.12	11,205	
J. Richardson	Bullcook	62.5 days	76.00/d x 1.12	5,320	
M. Steiner	Fld. Assist	35 days *	99.14/d x 1.12	3,886	
M. Stollery	Fld. Assist	4 days *	60.00/d x 1.12	268	
J. Tindle	Fld. Assist	1 days *	110.00/d x 1.12	123	$105,246

*Benefits Factor

ENGINEERING FEES (Field)

W. Jakubowski	139.5 days @ $450/day	62,775	
J. Rowe	39.5 days @ 450/day	17,775	
J. Stollery	23 days @ 600/day	13,800	
E. Balon	25.5 days @ 350/day	8,925	103,275

TRANSPORTATION

Truck Rental	....	9,538	
Fuel	....	4,424	13,962

CAMP SUPPORT

Groceries	....	29,680	
Propane	....	1,826	
Camp equipment rental	....	30,470	
Radio telephone	....	3,077	
Personnel travel	....	3,727	
Hardware, field gear	....	19,580	88,360

TRENCHING

Caterpillar 215LC Excavator and operator			
	312.5 hrs @ $90.00/hr	28,125	
Caterpillar D6D Tractor and Operator			
	40.0 hrs @ $90.00/hr	3,600	
Mobilization/Demobilization	....	1,640	33,365

DIAMOND DRILLING

Leclerc Diamond Drilling	17,808 feet	330,560	
Caterpillar 215LC Excavator and operator			
	65.5 hrs @ $90.00/hr.............	5,895	
Caterpillar D6D Tractor and Operator			
	68.0 hrs @ $90.00/hr.............	6,120	342,575
		Balance Forward	$686,783

Balance Forward				$686,783
RECLAMATION				
Caterpillar 215LC Excavator and operator	176.0 hrs @ $90.00/hr		15,840	
Caterpillar D6D Tractor and Operator	94.0 hrs @ $90.00/hr		8,460	
Helicopter Seeding			4,146	28,446
ROAD CONSTRUCTION				
Caterpillar 215LC Excavator & operator	83.5 hrs @ $90.00/hr		7,515	
Caterpillar D6D Tractor & Operator	38.5 hrs @ $90.00/hr		3,465	
Caterpillar 1400E Grader & Operator	19.0 hrs @ $79.00/hr		1,501	
Culverts			1,278	13,759
LOGGING				
Skidder, Loader and Faller				4,458
GEOCHEMICAL ANALYSIS				
160 Trench Soil Samples	MIBK Au	@ $4.55	728	
305 Trench Rock Samples	MIBK Au	@ 8.10	2,470	
221 Trench Rock Samples	FA Au	@ 11.70	2,585	
174 Trench Rock Samples	FA Native Au Sep	@ 21.60	3,758	
354 Drill Rock Samples	MIBK Au	@ 8.10	2,867	
432 Drill Rock Samples	FA Au	@ 11.70	5,054	
345 Drill Rock Samples	FA Native Au Sep	@ 21.60	7,452	
1504 Grid Soil Samples	MIBK Au	@ 4.55	6,843	31,757
GEOPHYSICS				
Magnetometer VLF-EM Survey	15 mandays			8,243
LIABILITY AND ACCIDENT INSURANCE				1,563
FREIGHT, EXPRESS AND DELIVERY				5,364
OFFICE SUPPLIES, PRINTING, PHOTOGRAPHY				5,617
DRAFTING, COMPUTER PLOTTING				7,092
MAPS, PUBLICATIONS, AIRPHOTOS				35
TELEPHONE, POSTAGE				7,533
			TOTAL EXPENDITURES	**$800,650**

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15.0 LIST OF PERSONNEL & CONTRATORS

PERSONNEL:	Position	Field Dates Worked
M. Brinkerink Vancouver, B.C.	Cook	May 29 - Nov 2, 1990
M. Clarke Vancouver, B.C.	Field Assistant	June 4 - Aug. 25, 1990
P. Conroy Vancouver, B.C.	Geologist	June 6 - Oct. 31, 1990
J. Cormier Vancouver, B.C.	Geologist	June 4 - July 22, 1990
S. Crawford North Vancouver, B.C	Field Assistant	June 4 - Sep. 16, 1990
D. DeGraaf Vancouver, B.C.	Field Assistant	June 6 - Aug. 25 1990
W. Jakubowski Vancouver,B.C.	Geologist/Supervisor	May 29 - Nov. 2, 1990
B. Johnson Vancouver, B.C.	Bullcook	Oct. 4 - Nov. 2 1990
B. Knight Vancouver, B.C.	Geologist	June 4 - Oct. 31 1990
M. Lazaroff North Vancouver, B.C.	Field Assistant	June 4 - Oct. 31 1990
J. Northrup Powell River	Field Assistant	June 4 - Oct. 18, 1990
C. Ouellette Mahone Bay, N.S	Field Assistant/ Camp Maintenance	May 29 - Nov. 2, 1990
J. Richardson Delta, B.C.	Bullcook/ Field Assistant	June 6 - Aug. 25, 1990
M. Steiner Coquitlam, B.C	Field Assistant	June 4 - Sep. 29, 1990
M. Stollery North Vancouver, B.C.	Field Assistant	July 9 - July 12, 1990
J. Tindle Whistler, B.C.	Field Assistant	Oct 5, 1990

CONTRACTORS	Position	Dates Worked
Wiltech Developments Ltd. Kelowna, B.C.	Excavator Trenching Road Construction	2 men: June 6 - Nov 1, 1990
Leclerc Drilling Ltd Beaverdell, B.C.	Diamond Drilling	4 men: June 12 - Oct 31, 1990
K Way Contracting Merritt, B.C.	Logging	4 men: June 19 - June 22, 1990
Bob Tarney Merritt, B.C.	Road Grading	1 man: Aug 28 - Aug 29, 1990
Steve Rowe Penticton, B.C.	Surveying	1 man: Aug 29 - Oct 30, 1990
SJV Consultants Delta, B.C.	Geophysics	1 man: Sept 18 - Oct 1, 1990

16.0 WRITER'S CERTIFICATE

I, Wojtek Jakubowski of Vancouver, British Columbia, hereby certify that:

1. I am a geologist residing at #17 1435 West 10th Avenue and employed by Cordilleran Engineering Ltd. of 1980 - 1055 West Hastings Street, Vancouver, B.C.

2. I received a B.Sc. degree in Geological Sciences from McGill University, Montreal, Quebec in 1979.

3. I have practiced my profession for 11 years in Quebec, Northwest Territories, Yukon Territory and British Columbia.

4. I am the author of this report and the supervisor of the field work conducted on the Elk claim group by Cordilleran Engineering Ltd. during the period May 29 to November 2, 1990.

CORDILLERAN ENGINEERING LTD.

W. Jakubowski

Wojtek Jakubowski, B.Sc.,
Geologist

WJ/z
May, 1991
Vancouver, B.C.

16.0 WRITER'S CERTIFICATE

I, Paul Conroy of Vancouver, British Columbia, hereby certify that:

1. I am a geologist residing at 3587 East 45th Avenue and employed by Cordilleran Engineering Ltd. of 1980 - 1055 West Hastings Street, Vancouver, B.C.

2. I received a B.Sc. degree in Geological Sciences from the University of British Columbia, Vancouver in 1982.

3. I have practiced my profession for 10 years in Northwest Territories, Yukon Territory and British Columbia.

4. I am a co-author of this report and was a member of the field crew on the Elk property during the period June 6 to October 31, 1990.

CORDILLERAN ENGINEERING LTD.

Paul Conroy, B.Sc.,
Geologist

PC/z
May, 1991
Vancouver, B.C.