GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL, DIAMOND DRILLING AND UNDERGROUND EXPLORATION REPORT

ON THE

STANDARD CREEK PROPERTY

OF

ARMENO RESOURCES INC.

AND

TRANS ATLANTIC RESOURCES INC.

PAT AND BUTTE CLAIM GROUPS

LILLOOET MINING DIVISION

NTS 92 J 10

LATITUDE 50°42'N, LONGITUDE 122°37'W

BY

Thomas H. Carpenter, B.Sc., F.G.A.C.

and

Larry R. Haynes, B.Sc., F.G.A.

Azimuth Geological Incorporated
February 1988
Vancouver, B.C.

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STANDARD CREEK PROPERTY
Geological, Geophysical, Geochemical,
Diamond Drilling and Underground Exploration Report
Lillooet Mining Division
NTS 92 J 10

SUMMARY

Armeno Resources Inc. and Trans Atlantic Resources Inc. hold a total of 171 mineral claims known as the Standard Creek Property, along the southern boundary of the Bridge River Gold Camp. The property lies along the southeast extension of a major gold bearing structure, the Cadwallader Break of the Bralorne Fault system. This fault system hosts the Bralorne/Pioneer mining complex, 13 kilometres to the northwest. Before the closure of the Bralorne/Pioneer operation in 1971 it was the largest gold mine in B.C., having produced up to 7.2 million tonnes grading 18 grams gold per tonne.

From August 1987 to February 1988, Armeno Resources Inc. funded a major exploration programme with a total budget of $3,029,300 on the Standard Creek Property. The Standard Creek Property consisting of 171 claims and claim units covering an area of approximately 25.5 square kilometres. Within the claims, are found eight areas of interest including the Standard, Royal, Chopper, Piebiter, Chalco/Lower Piebiter, Butte - I.X.L., Butte-X-Cal and Red Hawk. The programme included diamond drilling, underground exploration, geological mapping, geochemical rock and soil sampling and geophysical surveys. The work, which follows earlier investigations, covered all areas of the property with the exception of the Red Hawk Zone.

Results of this programme include the definition of two areas of primary interest, the Piebiter and Chopper zones, containing potentially economic gold-silver mineralization. Secondary targets include the Standard and Chalco areas.

In the Piebiter area gold mineralization appears to be concentrated at and near the contacts with ultramafic rocks locally anomalous in gold (to 0.012 oz/ton Au). Drilling in 1987/88 traced gold mineralization 300 metres southeast of 1986 drilling which encountered a near surface mineralized zone with a strike length of 600 metres and a maximum thickness of 15 metres.

In the Chopper Vein area possible chutes containing ore grade silver mineralization occur within a mineralized quartz vein extending 2 kilometres within the property. These chutes measure up to 5 metres in thickness.

Specific results include:

- the confirmation of anomalous gold values in soil (5,600 ppb) on the Piebiter grid.
- the intersection of a 9 metre wide zone of mineralization on the Piebiter grid averaging 0.065 oz/ton gold including a one metre section containing 0.17 oz/ton at a vertical depth of 28.0 metres and a 2 metre section containing 0.101 oz/ton gold at a vertical depth of approximately 40 metres.
- in the Chopper Vein hole C87-02 cut a 4.7 metre section (2.2 metres true width) averaging 7.43 oz/ton silver including a 2 metre zone with assays of 13.37 and 10.56 oz/ton Ag over one metre sample widths.

Additional work with an estimated budget of $1,300,000 is recommended, including:

- diamond drilling in the Piebiter area to extend mineralization along strike and to depth and for geological reserve calculation.
- diamond drilling of the wider, mineralized zones on the Chopper vein to test for continuity to depth.
- detailed geophysical surveys in the Standard Adit area to test for structure continuity along strike and for target definition.
- diamond drilling in the Standard area, if warranted, based on results of the geophysical programme.
- examination of the quartz veining immediately south of Royal Peak, a possible extension of the Chopper Vein, to test continuity along strike towards the Piebiter area.

1.0 INTRODUCTION

The Standard Creek Property covers a major gold-silver prospect southeast of Bralorne, B.C. From August 6, 1987 to February 7, 1988, field work entailing diamond drilling, underground exploration, geological mapping, geophysical surveys and geochemical rock and soil sampling was carried out over the property.

Field work was contracted out to Azimuth Geological. The programme was carried out by a nine person crew under the direction of Thomas Carpenter. Results of the programme are discussed in the following report.

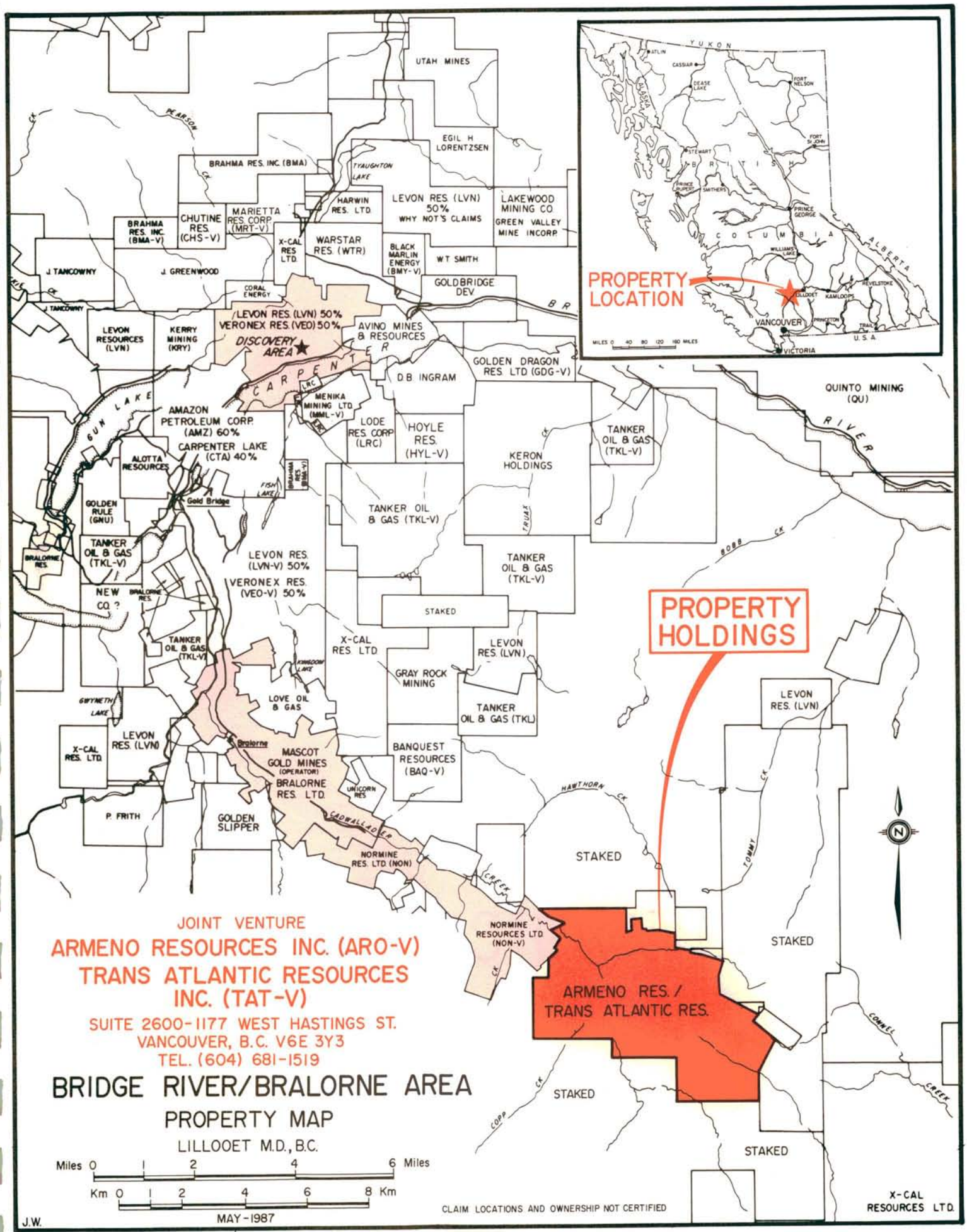
1.1 Location and Access

The property is located in the Lillooet Mining District, B.C., approximately 13 kilometres southeast of Bralorne, B.C. The claims cover approximately 25.5 km^2, centering on latitude 50°42'N and longitude 122°37'W.

Access to the property is by 20 kilometres of gravel logging road exiting southeast from Gold Bridge, B.C. Approximately 110 kilometres of good gravel road connect Gold Bridge with Transprovincial Highway 12 at Lillooet, B.C.

1.2 Property and Claim Status

The Standard Creek property currently consists of 171 claims and claim units identified in Table A. The accompanying maps on pages 3 and 4 show the relative location of these claims.



JOINT VENTURE

ARMENO RESOURCES INC. (ARO-V)
TRANS ATLANTIC RESOURCES INC. (TAT-V)

SUITE 2600-1177 WEST HASTINGS ST.
VANCOUVER, B.C. V6E 3Y3
TEL. (604) 681-1519

BRIDGE RIVER/BRALORNE AREA

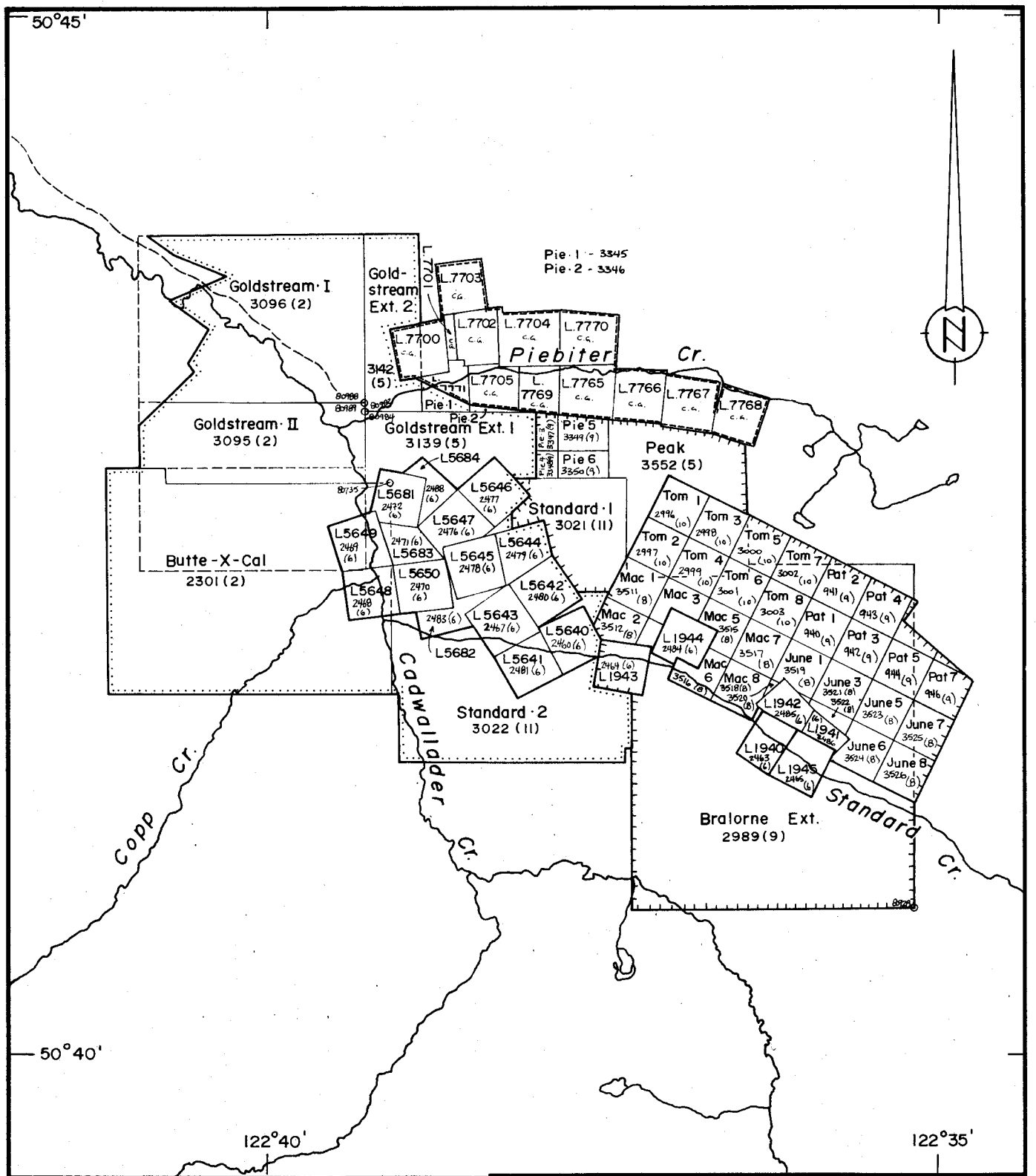
PROPERTY MAP

LILLOOET M.D., B.C.

CLAIM LOCATIONS AND OWNERSHIP NOT CERTIFIED

X-CAL RESOURCES LTD.

J.W. MAY-1987



Butte Group

Pat Group

Ungrouped

N.T.S. 92-J/10

0 0.5 1 2 3 kilometres

ARMENO RESOURCES INC.
TRANS ATLANTIC RESOURCES INC.

STANDARD CREEK PROPERTY

CLAIM MAP

Azimuth Geological Incorporated	By: L.R.H.	Figure: C·1000
	Scale: 1:50,000	
	Date: Nov. 1987	

TABLE A

Claim Status - Pat Group

Claim Name	Owner	Record No.	Lot No.	Type	Year Staked	Expiry Date*
Lion 1	T	2463	1940	Reverted Crown Grant	1983	June 13/96
Lion 7	T	2464	1943	Reverted Crown Grant	1983	June 13/96
Bulldog 7	T	2465	1945	Reverted Crown Grant	1983	June 13/96
Trail 2	T	2484	1944	Reverted Crown Grant	1983	June 14/96
Unicorn 4	T	2486	1941	Reverted Crown Grant	1983	June 14/96
Unicorn 6	T	2485	1942	Reverted Crown Grant	1983	June 14/96
Bralorne Ext.	T	2989		Modified Grid: 20 Units	1984	Sept. 13/96
Standard 1	T	3021		Modified Grid: 4 Units	1984	Nov. 19/96
Pie 3	T	3347		2-Post: 1 Unit	1985	Sept. 17/95
Pie 4	T	3348		2-Post: 1 Unit	1985	Sept. 17/95
Pie 5	T	3349		2-Post: 1 Unit	1985	Sept. 17/95
Pie 6	T	3350		2-Post: 1 Unit	1985	Sept. 17/95
Tom 1-8	A	2996 - 3003		2-Post: 8 Units	1984	Oct. 11/93
Pat 1-8	A	940 - 947		2-Post: 8 Units	1979	Sept. 4/93
Mac 1-8	A	3511 - 3518		2-Post: 8 Units	1986	Aug. 6/88
June 1-8	A	3519 - 3526		2-Post: 8 Units	1986	Aug. 6/88
Peak	A	3552		Modified Grid: 9 Units	1986	Sept. 4/93

Claim Status - Butte Group

Claim Name	Owner	Record No.	Lot No.	Type	Year Staked	Expiry Date*
Royal	T	2481	5641	Reverted Crown Grant	1983	June 14/97
Royal 1	T	2466	5640	Reverted Crown Grant	1983	June 13/97
Royal 2	T	2467	5643	Reverted Crown Grant	1983	June 13/97
Royal 3	T	2480	5642	Reverted Crown Grant	1983	June 14/97
Royal 4	T	2478	5645	Reverted Crown Grant	1983	June 14/97
Royal 5	T	2479	5644	Reverted Crown Grant	1983	June 14/97
Royal 6	T	2476	5647	Reverted Crown Grant	1983	June 14/97
Royal 7	T	2477	5646	Reverted Crown Grant	1983	June 14/97
Royal 8	T	2468	5648	Reverted Crown Grant	1983	June 13/97
Royal 9	T	2469	5649	Reverted Crown Grant	1983	June 13/97
Royal 10	T	2470	5650	Reverted Crown Grant	1983	June 13/97
Royal A Fr.	T	2483	5682	Reverted Crown Grant	1983	June 14/97
Royal B Fr.	T	2471	5683	Reverted Crown Grant	1983	June 13/97

TABLE A (cont'd)

Claim Status - Butte Group (cont'd)

Claim Name	Owner	Record No.	Lot No.	Type	Year Staked	Expiry Date*
Royal C Fr.	T	2482	5684	Reverted Crown Grant	1983	June 14/97
Royal 11	T	2472	5681	Reverted Crown Grant	1983	June 13/97
Standard 2	T	3022		Modified Grid: 12 Units	1984	Nov. 19/97
Goldstream I	T	3097		Modified Grid: 12 Units	1985	Feb. 22/97
Goldstream II	T	3095		Modified Grid: 12 Units	1985	Feb. 22/97
Goldstream Ext. 1	T	3139		Modified Grid: 6 Units	1985	May 6/97
Goldstream Ext. 2	T	3142		Modified Grid: 4 Units	1985	May 6/97
Pie 1	T	3345		2-Post: 1 Unit	1985	Sept. 17/97
Pie 2	T	3346		2-Post: 1 Unit	1985	Sept. 17/97
Butte-X-Cal	A	2301		Modified Grid: 20 Units	1983	Feb. 14/98

Claim Status - Ungrouped Claims

Claim Name	Owner	Record No.	Lot No.	Type	Year Staked	Expiry Date
Chalco D Fr.	A	N/A	7771	Crown Grant		N/A
Chalco 5	A	N/A	7700	Crown Grant		N/A
Chalco 6	A	N/A	7704	Crown Grant		N/A
Chalco 8 Fr.	A	N/A	7701	Crown Grant		N/A
Chalco 9	A	N/A	7770	Crown Grant		N/A
Chalco 10	A	N/A	7765	Crown Grant		N/A
Chalco 12	A	N/A	7702	Crown Grant		N/A
Chalco 13	A	N/A	7705	Crown Grant		N/A
Chalco 35	A	N/A	7703	Crown Grant		N/A
Chalco 36	A	N/A	7766	Crown Grant		N/A
Chalco 37	A	N/A	7767	Crown Grant		N/A
Chalco 38	A	N/A	7768	Crown Grant		N/A
Chalco 39 Fr.	A	N/A	7769	Crown Grant		N/A

A = Armeno Resources Inc.
T = Trans Atlantic Resources Inc.
N/A = Not Applicable

* Expiry date does not include assessment credits as a result of this programme.

1.3 History and Previous Work

The Standard Creek Property is a recent consolidation of several gold and silver bearing prospects located near the confluence of Standard Creek with Cadwallader Creek.

Interest in the Cadwallader Creek area dates back to 1897 when lode gold was first discovered. Work on the Standard Creek Property is first reported in the early 1930's and is briefly summarized below.

1. During 1932 Standard Gold Mines Ltd. explored the Standard Prospect with several open cuts, trenching and two adits. The largest adit (Standard Adit) 204 metres in length, is reported to have contained a 21 metre gold bearing zone averaging 4.3 grams/tonne (0.125 oz./ton) (Clothier, 1933).

2. Red Hawk Gold Mines Ltd. worked the Red Hawk Property in 1932 and 1933. Several surface cuts and short underground workings were used to test quartz veins carrying gold values (Cairnes, 1937).

3. In 1932 Cadwallader Gold Mines carried out ground sluicing and underground development on the Royal Prospect. A short crosscut adit was driven across quartz veins up to 1.37 metres (4.5 feet) wide (Cairnes, 1937).

4. During 1933 Butte - I.X.L. Gold Mines Ltd. explored the Butte - I.X.L. claims east of the Red Hawk Property. A small shaft and adit were used to test quartz exposures (Clothier, 1933).

5. In 1948 a tungsten-copper showing (Chalco/Lower Piebiter) was discovered above the northwest side of Piebiter Creek, two kilometres north of the Royal Prospect. The showing was drill tested in 1969 and again in 1979-80. Drilling confirmed the presence of low grade tungsten-copper mineralization (Cook, 1970; Elwel, 1980).

6. In 1980 Chopper Mines (Dragon Resources Ltd.) located the Pat and Tom claims along the northeastern boundary of the property to cover a prominent three metre wide Ag bearing quartz vein (Chopper Vein). The vein has been traced over 2,400 metres in length with reported silver values of up to 1,585 grams/tonne (46.36 oz./ton) in selected grab samples (Goldsmith, 1980). The Pat and Tom claims along with the adjoining Mac and June claims were subsequently purchased by Armeno Resources Inc.

7. During the period from 1980 - 1982 Hillside Energy Corp. carried out a soil geochemical sampling programme near the Royal Prospect and on the west side of Cadwallader Creek (Butte - I.X.L.). Results of sampling by Hillside on the Royal and Standard Groups identified several areas of interest. No further work was carried out at the time (Melrose & Fairbank, 1982).

8. In 1985 Hudson Bay Exploration and Development Co. Ltd. conducted geological mapping and geochemical sampling on the Butte-X-Cal prospect, identifying a number of gold geochemical anomalies (Lancaster, 1985). The Butte-X-Cal claims were purchased by Armeno Resources Inc. in August 1986.

9. During 1985 and 1986 Armeno Resources Inc. and Trans Atlantic Resources Inc. conducted an extensive exploration programme comprising geochemical, geological and geophysical surveys and diamond drilling. The programme identified seven areas of interest (Allen et al., 1986).

10. Exploration was continued in 1987 with a first phase programme consisting of geological mapping, geochemical sampling and geophysical surveys. (Carpenter and Haynes, 1987). Based on the results of this program further work was recommended.

1.4 Work By Armeno Resources Inc. In 1987/1988

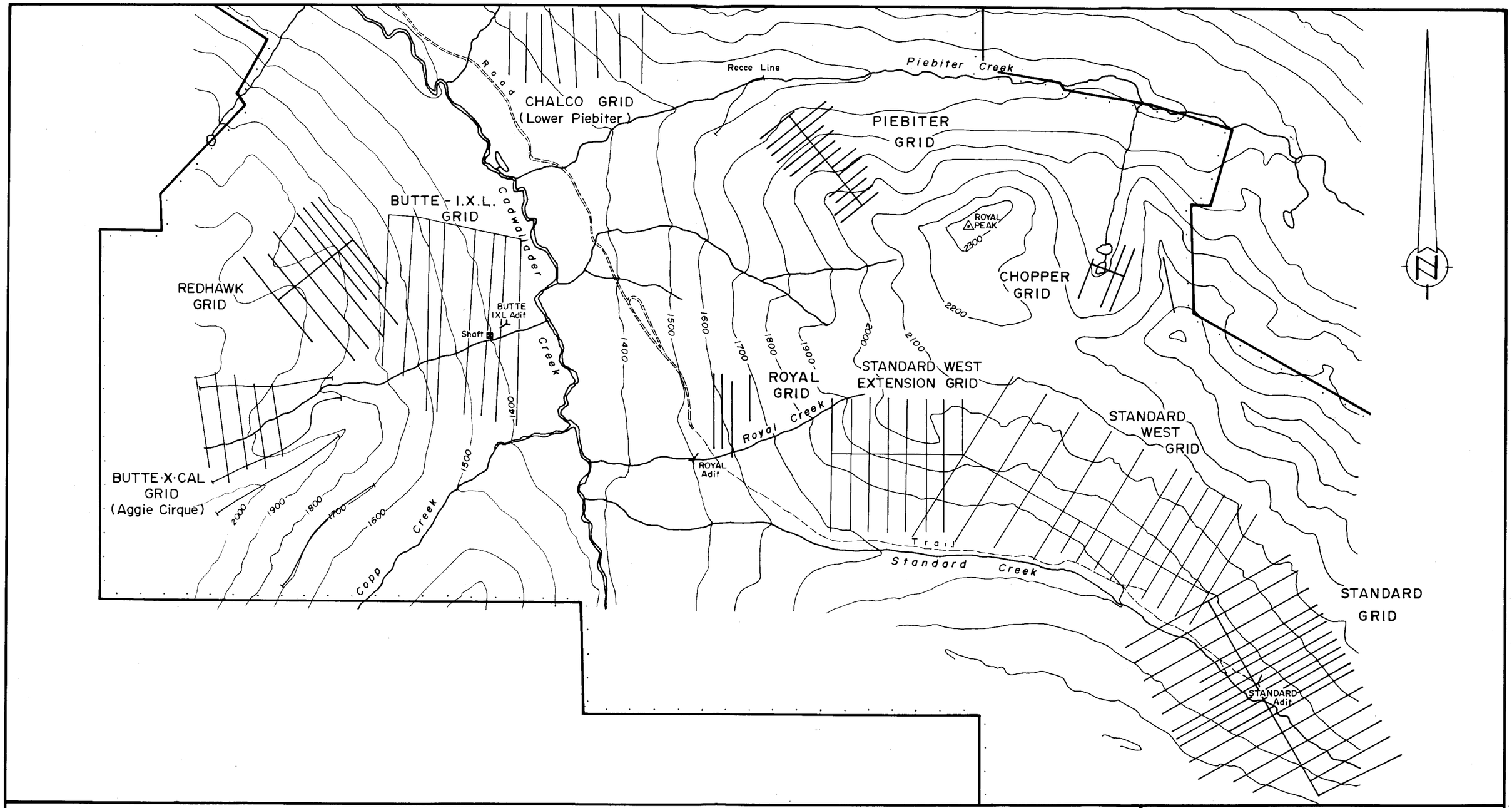
Field work by Armeno Resources Inc. commenced on July 3, 1987 and continued until February 7, 1988 in two phases. The focus of the first phase which ended on August 1, 1987 was to define potential mineralized zones within eight areas of interest (Standard, Royal, Chalco/Lower Piebiter, Upper Piebiter, Butte - I.X.L., Butte-X-Cal, Red Hawk and Chopper) identified by earlier exploration programmes.

Exploration efforts were completed on all but two of these areas (Chalco/Lower Piebiter and Butte - I.X.L.) and included detailed geological mapping, detailed VLF/EM, magnetometer surveys and rock and soil geochemical sampling.

This programme identified several areas on the property with indications of gold-silver mineralization. Additional work, including diamond drilling and underground exploration, was recommended (Carpenter & Haynes, 1987).

Phase two began on August 6, 1987, consisted of diamond drilling on selected targets, underground exploration on the Standard Adit and geological, geophysical and geochemical surveys. Geophysical, geochemical and geological surveys were conducted over the three areas unexamined during phase one as well as over new grids established northwest from the Standard Grid and over the Butte - I.X.L. area.

Approximately 48 kilometres of survey grid were completed on the zones; 6368.10 metres of core were drilled; 139 metres of underground exploration were completed; 642 soil and 3837 rock and split core samples were collected of which 3251 core and 372 rock samples were shipped for analysis. Results of phase two of the 1987 programme are discussed later in the report.



CLAIM BOUNDARY

Contour interval : 100 metres

0 500 1000 1500 metres

Scale 1 : 20,000

ARMENO RESOURCES INC.
TRANS ATLANTIC RESOURCES INC.

STANDARD CREEK PROPERTY

GRID LOCATIONS

- 1987/88 PROGRAMME -

Azimuth Geological Incorporated	By: T.H.C.	Figure: L-1001
	N.T.S. 92-J/10	
	Date : Feb. '88	

g.e.l.

2.0 GEOLOGY AND MINERALIZATION

2.1 Regional Geology

The geology of the Bridge River - Cadwallader Creek area is well documented in the literature and continues to be the subject of investigations. The reader is referred to publications by McCann (1922), Cairnes (1937), Joubin (1948), Roddick and Hutchinson (1973), Pearson (1975), Woodsworth and Roddick (1977), Woodsworth et al. (1977), Bellamy and Saleken (1983) and Church (1987).

The principal stratigraphic assemblages of the area are the Fergusson, Cadwallader and Taylor Creek Groups.

The Fergusson Group, the oldest known unit in the area is believed to be Pre-Permian in age. It consists of steeply dipping chert beds, some marble, schist, gneiss and hornfels. In some places cataclasis has reduced bedding laminations to sheared quartz lenses and intensely milled breccias resembling quartz pebble conglomerate.

Locally the group is invaded by numerous greenstone dykes and sills which have been reduced to chlorite schists in zones of intense shearing, and altered to fine-grained amphibolites in the thermal aureoles of large granitic stocks.

The Pioneer Formation is apparently the oldest unit in the Cadwallader Group. It consists of greenstones (chlorite and epidote bearing basic volcanics) which appear to be connected to the greenstone feeders intruding the underlying Fergusson Group. The only sedimentary rocks assigned to the Pioneer Formation are a few small lenses of limestone and thin tephra beds.

The Noel Formation is typically a discontinuous thinly bedded black argillite and siltstone unit with a few thin zones of dark grey limestone.

At various locations in the area the formation rests directly on Fergusson Group rocks. At other locations it overlies Pioneer greenstones and elsewhere the unit is missing.

The youngest member of the Cadwallader Group is the Hurley Formation, predominantly composed of green, brown and black argillite and cherty argillite. These beds are locally intercalated with gritty siltstones and sandstones and some calcarenites. Boulder and pebble conglomerate has been observed at the base of the formation, resting conformably on the Pioneer Formation.

The Taylor Creek Group, overlying the Cadwallader Group, consists mostly of coarse clastic sedimentary rocks, the source of which is believed to be the Fergusson Group and the Hurley Formation.

The main igneous intrusions of the area are the Bralorne Diorite (Paleozoic), the President ultrabasic rocks and the Coast plutonic rocks (Mesozoic).

The Bralorne diorite is exposed at intervals from Standard Creek through the Bralorne - Pioneer mineral belt to the town of Gold Bridge. The alignment and elongated shape of the diorite suggests emplacement in a major fault zone.

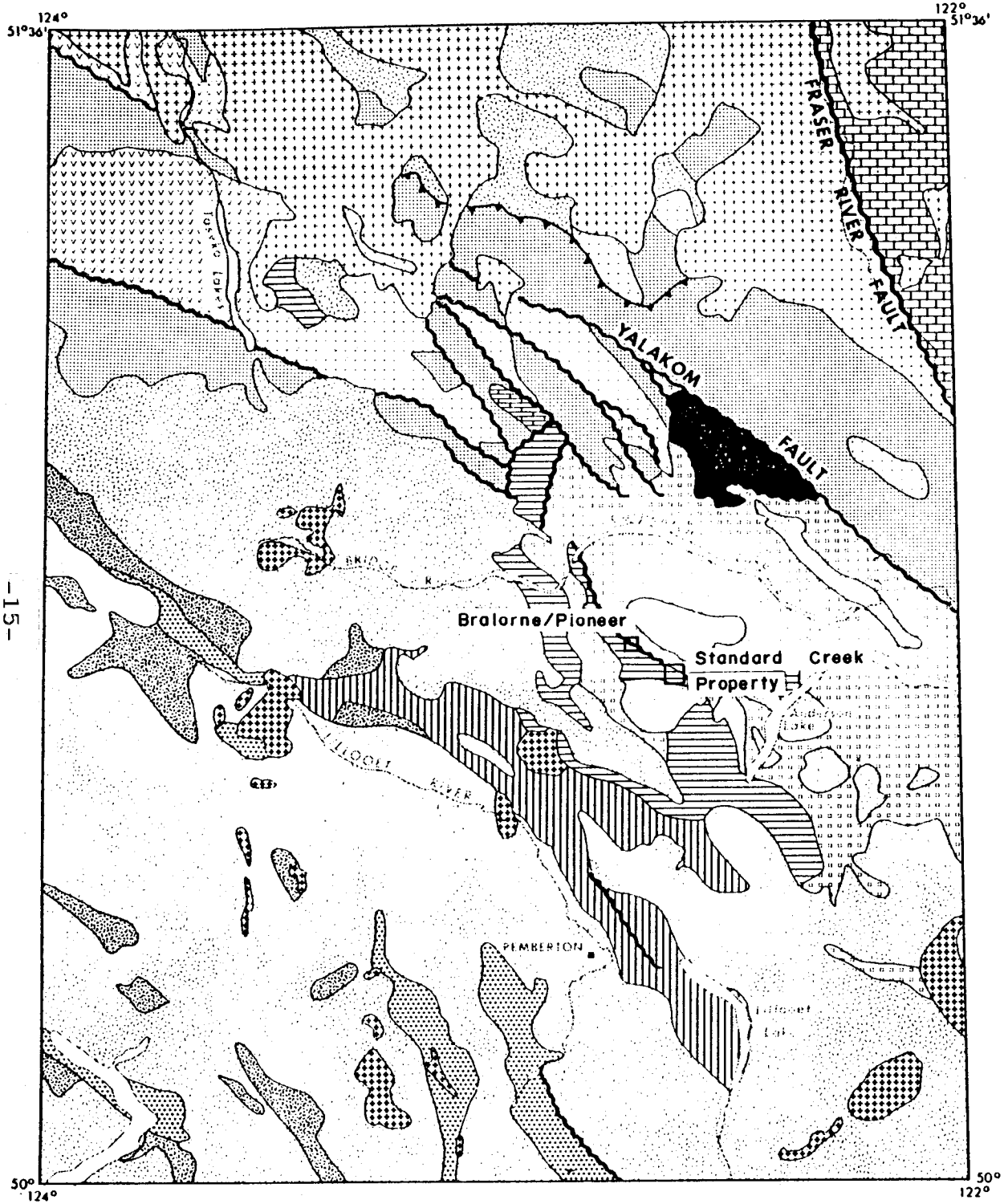
The President ultrabasic rocks are lentincular bodies that follow the belt of the Bralorne Diorite. The ultrabasic rocks are believed to have been emplaced in fault zones either as faulted slivers of pyroxenite and dunites or as a crystalline magma. Emplacement was followed by extensive metasomatism.

The ultrabasic intrusions are known to be younger than the Upper Triassic Hurley rocks which they cut and older than overlying Middle Cretaceous Taylor Creek rocks.

The Coast plutonic rocks comprise an assortment of granitic plutons exposed at various locations including the Bendor Range. These rocks are mainly hornblende granodiorite with quartz diorite and biotite granite as local phases. Apophyses of "soda granite" are associated with the quartz veins in the Bralorne - Gold Bridge belt. The intrusions range from Upper Cretaceous to Lower Tertiary in age, the Bendor Stock being the youngest.

Numerous Mesozoic and Tertiary dykes and sills occur throughtout the area. The main Tertiary effusives are light brown feldspar porphyries, andesite porphyries and less commonly fresh basalt dykes.

The accompanying map (after Woodsworth, 1977) on page 15 illustrates the setting of the Standard Creek property in relation to these rocks.



LEGEND

TERTIARY

- Basalt, andesite, dacite
- GARIBALDI GROUP and related rocks: andesite, basalt, dacite

UPPER CRETACEOUS

- KINGSVALE GROUP: andesite, basalt, arkose, conglomerate, greywacke

JURASSIC and/or LOWER CRETACEOUS

- TAYLOR CREEK GROUP: andesite, basalt, shale;
  JACKASS MOUNTAIN and RELAY MOUNTAIN GROUPS: greywacke, arkose, conglomerate;
  Undivided: andesite, basalt, shale, greywacke
- Metamorphosed sediments and volcanics

UPPER TRIASSIC

- TYAUGHTON GROUP: limestone
- CADWALLADER GROUP: argillite, greenstone, limestone, diorite
- Metamorphosed sediments and volcanics; in part equivalent to Cadwallader Group

MIDDLE TRIASSIC and (?) OLDER

- BRIDGE RIVER GROUP: chert, argillite, basalt, phyllite

PERMIAN and TRIASSIC

- Ultramafic rocks

PENNSYLVANIAN and TRIASSIC

- CACHE CREEK and PAVILION GROUPS: greenstone, argillite, basalt, limestone, chert

AGE MOSTLY UNKNOWN

- Plutonic rocks, mainly granodiorite and quartz diorite
- Migmotitic complexes

Fault

Thrust fault

Scale 1:1,000,000

km 0 30

after Roddick and Woodsworth (1975)
in Economic Geology Volume 72 p. 172-173

2.2 Local Geology

Mapping of the local geology of the Standard Creek Property was carried out at a scale of 1:2500 using geochemical and geophysical grids for control. Results of the grid mapping are presented on Figures 7.2.1, 7.6.1 and 7.9.1. Survey results are also shown on a 1:5000 compilation (Fig. 2.2.1).

Exposed on the property are rocks of the Fergusson Group, the Pioneer and Noel Formations of the Cadwallader Group, Bralorne Diorite, President ultrabasics and Coast Granitic rocks.

Fergusson Group metamorphic rocks occur north of Standard and Cadwallader Creeks. Sedimentary and volcanic rocks of the Pioneer and Noel Formations are found within the Standard Creek Valley and southwest of Cadwallader Creek. Bralorne Diorite outcrops near the junction of Standard and Cadwallader Creeks.

President ultrabasics are found cutting both Fergusson and Cadwallader Group rocks while Coast granitic rocks are generally found intruding Fergusson Group rocks along the Bendor Range in the north and northeast parts of the property.

Ten rock types have been identified during the mapping of the Standard Creek Property. These rock types are described below and are tentatively assigned to stratigraphic groups.

Diorite	Varies from diorite to granodiorite. Composed of quartz, plagioclase, biotite, hornblende and rare pyroxene. Those along the Bendor Range and southeast of Royal Peak are assigned to Coast Intrusives (Upper Cretaceous). Diorite near the junction of Standard and Cadwallader Creeks is assigned to the Bralorne Diorite (Palaeozoic).
"Spotted Schist"	Euhedral to rounded feldspar phenocrysts in a variably foliated fine grained matrix. Biotite along foliations. (Tertiary).

Ultramafics	Undifferentiated. Vary from dunite to pyroxenite in composition. Largely serpentinized.
Talc Altered Ultramafics	Composed of masses of ultramafic material which has been metasomatically altered to talc.
Listwanite	End product of ultramafic alteration. Composed of talc, carbonate, mariposite, quartz and sulphides (after Boyle, 1979).

Ultramafics and altered ultramafics form part of the President Ultrabasics (Jurassic-Cretaceous).

Argillite	Black, massive to fissile, interbedded with dark grey chert. Noel Formation (Triassic).
Volcanics	Volcanic units within Fergusson Group rocks are believed to be feeder dykes and sills connected to overlying Pioneer Formation volcanics. Chlorite schists and amphibolites within the Fergusson Group represent sheared and altered versions of these dykes.
	"Agglomerates", which are often found intimately associated with these volcanics may be due to shearing and milling of quartzites resulting in the formation of rocks agglomeratic in appearance.
	Massive greenstone, usually containing epidote-garnet veins with minor quartz. Pioneer Formation (Triassic).
	Volcanic sediments, ie. agglomerates and tuffs. "Agglomerates" composed of stretched quartz pebbles in biotite matrix. Fergusson Group - Paleozoic.
	Metavolcanics comprising fine grained biotite schists, amphibolites and phyllites. The latter are possible of intermediate volcanic composition.
Limestone	Found as lense-like masses, commonly recrystallized within Noel Formation and Fergusson Group rocks.
Quartzite	Light grey weathering. Thin section descriptions indicate a possible felsic volcanic origin. Fergusson Group (Paleozoic).
Quartz Biotite Schist	Often intimately associated with quartzite. Biotite content to about 30%. Fergusson Group.

2.3 Mineralization

The Cadwallader Gold Belt is characterized by the association of gold bearing quartz veins with a complex northwest trending fault system occupying the Cadwallader Creek Valley. Variably altered ultramafics are closely associated with the fault system and gold mineralization.

Structural controls on the mineralization are best described by Joubin (1948) who describes the serpentinite contact as one of the most important ore controls in the Bralorne - Pioneer mine.

Altered ultramafic rocks appear to be closely associated with gold deposits around the world, although they do not necessarily have a direct spatial relationship to auriferous quartz veins. Gold mineralization in the Allegheny district of California, for example, occurs in steeply dipping veins (Wittkop, 1983).

At the Erickson Mine, Cassiar District, B.C., auriferous quartz veins are sub parallel to and crosscut serpentinites and altered serpentinites (Sketchley and Sinclair, 1987).

Characteristic features of these veins are as follows:

(a) they are extremely rich but erratically distributed
(b) they are surrounded by a zone of carbonate alteration and pyritization often more than 10 feet wide, and
(c) extensive mariposite - bearing quartz-carbonate rocks (listwanites) occur along the serpentinite contacts. Listwanite is presumably developed by metasomatic alteration to form the free quartz found in the rock. The alteration process may have also released gold from ultramafic rocks and remobilized it into quartz veins.

Listwanites have been identified on the Standard Creek Property at the Standard Zone and on the Butte-X-Cal claim. Elsewhere on the property arsenic and gold anomalies in soil samples appear to be closely associated with serpentinites which in turn lie along the Cadwallader Fault system.

During the 1987 programme significant gold and silver mineralization was intersected during the drilling of the Standard Creek Property. Detailed discussions of the mineralization is given in Section 7.0. Summaries of the significant intersections are shown on the following pages in Tables B and D. Table C summarizes significant values reported from the 1986 programme.

Specific characteristics of the areas of primary interest are described below.

Chopper Vein

Located along the precipitous northwest side of a ridge extending from Royal Peak to southeast of Mt. MacGillivray. Consists of blebs tetrahedrite and minor pyrite, with fracture coatings of malachite, azurite in a vuggy quartz vein extending over 2 kilometres in length. The vein averages 1-2 metres in width with two exposed wider zones up to 5 metres in width. The latter may be "chutes" which extend to depth.

Piebiter

Gold is found in quartzites and quartz-biotite schists of the Fergusson Group at and near the contact with ultramafic rocks. Mineralization has been traced over 900 metres along strike, is open at depth and occurs over a width of 50 metres. It appears to be in part structurally controlled within a broad shear zone. A complete understanding of mineralization and mineralizing controls is very difficult as the gold is not usually associated with sulphides or structure and is usually only detectable by analysis.

The Piebiter zone is located along strike northwest of the Chopper Vein and though mineralization styles differ, both areas may be located along a single branch of the Bralorne Fault System.

Standard

An area of secondary interest, the Standard zone consists of a large volume of altered ultramafic rocks with ubiguitous argentiferous quartz veining in the vicinity. The presence of economic gold concentrations derived from the altered ultrmafic rocks is postulated.

TABLE B

Significant Gold Values (1987/88)

Sample No.	DDH	Interval	ppb Au	Assay (oz/ton)	
				Acme	Bondar/ Clegg
13511	P8701	295.68 - 296.18	1150	n/a	0.029
	P8701	295.68 - 296.18 (2nd split)	n/a	n/a	0.037
61110	P8702	35.5 - 36.5	2650	0.072	0.078
61112	P8702	37.5 - 38.5	2665	0.096	0.070
61113	P8702	38.5 - 39.5	3675	0.089	0.064
61115	P8702	40.5 - 41.5	1505	0.048	0.056
61116	P8702	41.5 - 42.5	1450	0.050	n/a
61117	P8702	42.5 - 43.5	5225	0.152	0.170
61118	P8702	43.6 - 44.5	1160	0.048	n/a
61131	P8702	56.5 - 57.5	5905	0.147	0.134
61132	P8702	57.5 - 58.5	2040	0.054	0.065
61156	P8702	81.0 - 82.0	1170	0.037	n/a
61068	P8703	115.5 - 116.0	1050	0.027	n/a
61070	P8703	117.0 - 218.0	1060	0.027	n/a
61757	P8703	154.0 - 155.5	1660	0.041	n/a
61409	P8704	84.0 - 85.0	2510	0.068	n/a
61410	P8704	87.0 - 88.0	1560	0.041	n/a
61462	P8704	147.0 - 148.0	1220	0.036	n/a
61463	P8704	148.0 - 149.0	1090	0.026	n/a
61010	P8706	33.0 - 34.0	1180	0.026	n/a
63020	P8606	25.0 - 26.4	2040	0.053	n/a
61890	P8707	116.0 - 117.0	1550	0.011	n/a
16041	P8710	41.0 - 42.0	3995	0.102	n/a
16042	P8710	42.0 - 43.0	4450	0.122	
16049	P8710	49.0 - 50.0	2760	0.077	
16050	P8710	50.0 - 51.0	4755	0.132	
16051	P8710	51.0 - 52.0	3640	0.101	
16120	P8710	120.0 - 121.0	1030	0.033	
16265	P8711	86.0 - 87.0	1170	0.042	n/a
16268	P8711	89.0 - 90.0	1780	0.051	n/a
16474	P8801	74.0 - 75.0	n/a	0.035	n/a
16476	P8801	76.0 - 77.0	n/a	0.028	n/a
16478	P8801	78.0 - 79.0	n/a	0.048	n/a

n/a: Not Analyzed

TABLE C

Significant Gold Values (1986)*

DDH	Interval	oz/ton
P8604	8.80 - 9.80	0.062
P8604	29.4 - 30.40	0.061
P8604	(29.4 - 31.20)	0.051
P8605	4.10 - 4.70	0.065
P8608	48.04 - 49.04	0.106
P8610	25.8 - 26.8	0.084
P8611	100.20 - 100.40	0.058
P8611	100.80 - 101.00	0.082

* From Report on the 1986 Exploration Program, Standard Creek Report, Donald G. Allen et. al.

TABLE D

Significant Silver Values (1987/88)

Sample No.	DDH	Interval	ppm Ag	Assay (oz/ton)	
				Original	Reject
15044	C8702	250.52 - 251.52	n/a	3.66	3.70
15045	C8702	251.52 - 252.16	n/a	1.30	1.38
15046	C8702	252.16 - 253.16	n/a	13.37	13.09
15047	C8702	253.16 - 254.16	n/a	10.56	10.84
15048	C8702	254.16 - 254.70	n/a	4.92	4.94
15103	C8702	309.02 - 309.62	50	1.75	n/a
55661	C8702	375.22 - 375.52	50	2.49	n/a
15049	C8703	326.82 - 327.82	n/a	0.27	0.25
15050	C8703	327.82 - 328.20	n/a	0.31	0.27

n/a: Not Analyzed

3.0 GEOPHYSICS

Approximately 24.0 kilometers of grid line were placed on the Standard West,(8.5) Standard West Extension (5.2) Butte - I.X.L. (7.8) and Butte-X-Cal (2.5) Zones for geophysical (VLF/EM, magnetic) surveys. The grids were established by compass and hip chain traverses subsequent to the establishment of appropriate base lines. As well a VLF/EM survey was completed over the previously established Chalco/Lower Piebiter and Royal-Piebiter Grids. A magnetometer survey had been completed over the Chalco Grid during a previous programme.

Two lines of a resistivity survey were conducted in the Standard Adit area in addition to the above work.

3.1 Methods and Procedures

3.1.1 Magnetometer Survey - Magnetometer surveys were carried out on the Standard West, Standard West Extension and the Butte - I.X.L. Grids. Stations were selected at 25 metre intervals along grid lines. Magetic data were collected using a Scintrex MP-3 Proton Magnetometer and corrected for diurnal variation using the loop method.

3.1.2 VLF/EM Survey - Surveys were carried out on the Standard West, Standard West Extension, Butte - I.X.L., Butte-X-Cal and Chalco/Lower Piebiter Grids. Data were collected at 25 metre stations along grid lines using a Geonics EM-16 VLF/EM receiver tuned to Seattle (Jim Creek), Washington or Cutler, Maine.

3.1.3 Resistivity Survey - A resistivity survey was carried out in the Standard Adit area utilizing a Geonics EM-16R Resistivity unit. Readings were taken at 10 metre intervals along the grid lines.

The unit measures apparent resistivity of underlying rocks and was

used to define and trace areas of quartz veining and/or silicification within the vicinity of the Adit.

3.2 Presentation of Results

The results of the geophysical surveys are shown on the following drawings:

Drawing #7.1.5	Standard Grid	Resistivity Survey (Cutler, Me)
Drawing #7.1.6	Standard Grid	Resistivity Survey (Jim Creek, Wa)
Drawing #7.2.2	Standard West	VLF/EM (Profiles)
Drawing #7.2.3	Standard West	VLF/EM (Fraser Filter)
Drawing #7.2.4	Standard West	Magnetometer Survey
Drawing #7.3.1	Stand. W. Extension	VLF/EM (Profiles)
Drawing #7.3.2	Stand. W. Extension	VLF/EM (Fraser Filter)
Drawing #7.3.3	Stand. W. Extension	Magnetometer Survey
Drawing #7.5.2	Piebiter Grid	Reconnaissance VLF/EM line (Profile)
Drawing #7.6.1	Chalco/Lower Piebiter	VLF/EM (Profiles)
Drawing #7.6.2	Chalco/Lower Piebiter	VLF/EM (Fraser Filter)
Drawing #7.7.1	Piebiter/Royal	VLF/EM (Profiles)
Drawing #7.7.2	Piebiter/Royal	VLF/EM (Fraser Filter)
Drawing #7.7.3	Piebiter/Royal	Magnetometer Survey
Drawing #7.9.2	Butte - I.X.L.	VLF/EM (Profiles)
Drawing #7.9.3	Butte - I.X.L.	VLF/EM (Fraser Filter)
Drawing #7.9.4	Butte - I.X.L.	Magnetometer Survey
Drawing #7.10.1	Butte-X-Cal Recce	
	Recce. Lines	VLF/EM (Profiles)
	Butte-X-Cal Grid	VLF/EM (Profiles)
	Butte-X-Cal Grid	VLF/EM (Fraser Filter)

Magnetic data (total intensity) have been contoured and are presented as relative values using a base value of 56,800 gammas. VLF/EM data are shown in both profile (basic data) and Fraser Filter form. Resistivity data have been contoured and presented in map form. Interpretation and evaluation of results are discussed later in the report under the pertinent sections.

4.0 GEOCHEMISTRY

4.1 Sampling Procedures

4.1.1 Soil Sampling - Soil samples were collected over two new and one previously established grids on the Standard Creek property. These were the Standard West, Butte - I.X.L. and Chalco/Lower Piebiter Grids respectively.

Soil lines were run perpendicular to the base lines with line spacings at 100 metre intervals. Samples were selected at 25 metre intervals along the previously prepared grids, and were collected from the "B" horizon whenever possible utilizing a steel "tree planters" shovel or cast iron mattock. Samples were collected from a depth of 10 to 50 cm varying with the depth to the "B" horizon.

A total of 642 soil samples were accumulated comprising 136 samples from the Standard West Grid, 212 from the Chalco Grid and 294 from the Butte - I.X.L. Grid.

All samples were placed in kraft paper envelopes and shipped to Bondar Clegg Company Ltd. and/or Acme Analytical Laboratories Ltd. in Vancouver, B.C. for Au (FA+AA) and ICP analysis. Sample preparation and analytical procedures are detailed in Appendix III.

Due to the relative immobility of gold in soils and with extensive overburden cover in the valleys and on hillsides in the area, it was found in earlier surveys that more mobile "pathfinder" elements should be used to define areas of interest. Information to date has shown a strong correlation between gold and arsenic values. The latter therefore has been used to define target areas within the claim group. Contouring of arsenic values within broadly defined arsenic anomalies serves to further delineate target areas.

4.1.2 Heavy Mineral Concentrate Sampling - A total of 17 heavy mineral samples were gathered from streams draining the Standard Creek Property.

To produce a heavy mineral sample approximately 10 kilograms of sediments were collected from the stream bed. This sample was seived to remove oversize fragments and the remaining material was panned using a standard gold pan to produce a heavy mineral concentrate.

These samples were shipped to Acme Analytical Laboratories Ltd. in Vancouver, B.C. where special procedures were employed to determine gold content. (Appendix III).

4.1.3 Core Sampling - Core samples were generally collected over 1 metre intervals within the drill holes. Samples comprise one half of the split core with one half shipped for analysis and one half retained for future study.

4.1.4. Underground Sampling - Rock samples were collected from the Standard Adit using a variety of sampling methods.

During the advance of the Bypass drift the face of each advance was divided into nine blocks of equal dimension. Samples were collected from each block. Individual samples were shipped for analysis from these samples based on a visual examination of sulphide content and other parameters.

One metre long chip samples were collected along the drift walls at a height of one metre from the floor.

Within the Right Crosscut Slusher Drift samples were collected at one metre intervals along the left wall, the back and the right wall.

Within the Number Two Crosscut, samples were collected from each face of advance with the face divided into four equal blocks. Again, samples were shipped for analysis based on visual examination of sulphide content and other parameters.

In the original drift samples were variably collected from mineralized zones over one metre intervals or were confined to quartz veins and shear zones where these structures measured less than 1 metre in width.

At the end of the drifting programme a series of percussion holes were drilled at five metre intervals from the adit to crosscut rock types and structures. The cuttings from these holes were collected over four foot (1.2 m) intervals, bagged and shipped for analysis.

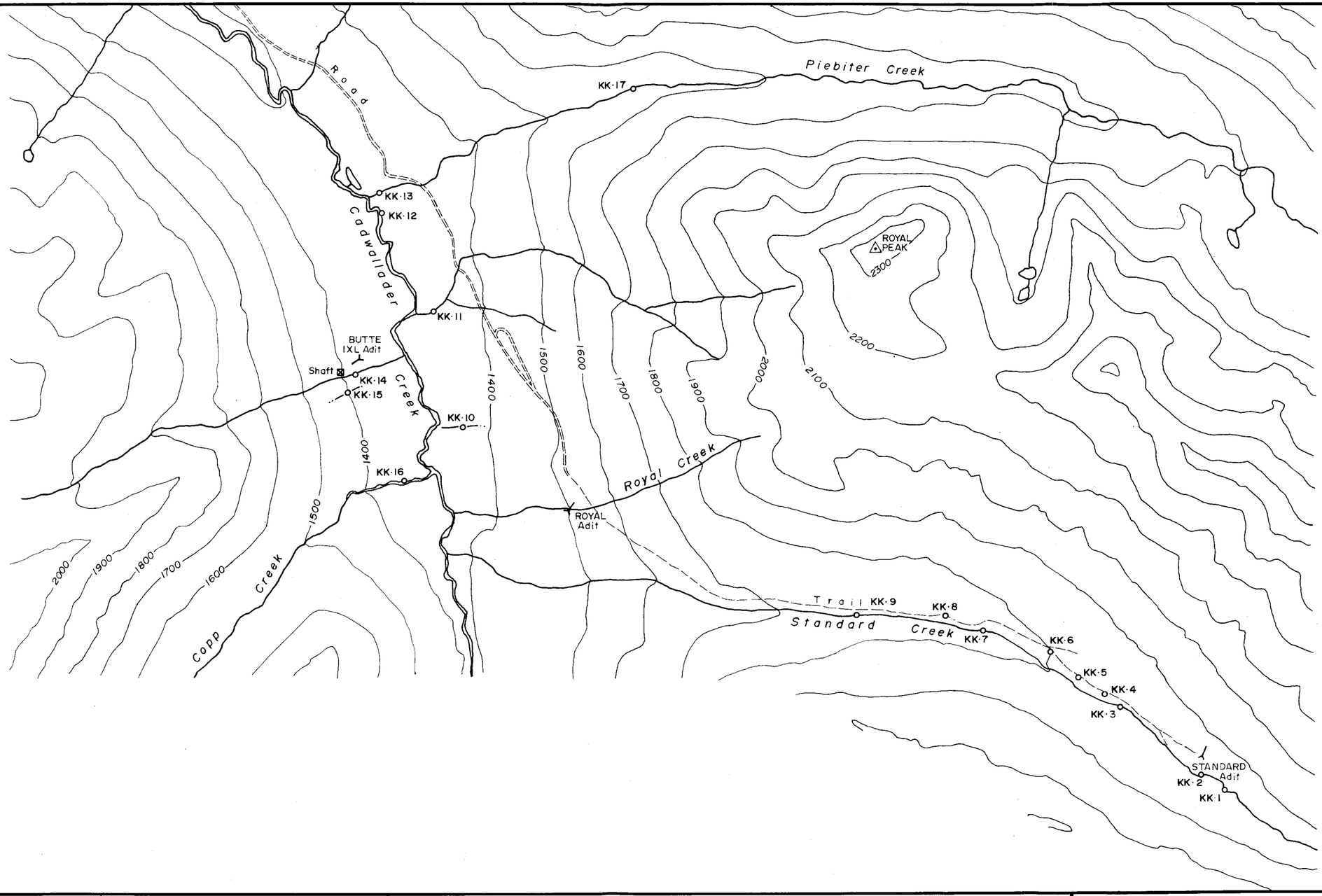
Sample locations are shown on Figure 7.1.2. Every effort was made to ensure that each sample collected was representative of the interval covered.

4.2 Presentation and Discussion of Results

Sample results for the soil, core and underground sampling are presented in map form and are discussed later in the report (Section 7.0). A complete listing of sample results are included as appendices.

The results of the heavy mineral concentrate sampling are presented on Figure GC 1000 and summarized in Table E on page 29. Two anomalous samples (KK 10, KK 11) were found in creeks draining the Royal Zone.

A brief statistical analysis of soil sample results collected from an earlier programme (1986) was prepared by Tony Clark Consulting. Mr. Clark's report is included for reference purposes as Appendix IV.



Sample N°	mg (Au)	gm (sample)
KK-1	.001	178
KK-2	.001	248
KK-3	.010	303
KK-4	.010	227
KK-5	.019	333
KK-6	.001	312
KK-7	.001	290
KK-8	.001	316
KK-9	.001	296

Sample N°	mg (Au)	gm (sample)
KK-10	.777	74.7
KK-11	.351	76.2
KK-12	.157	183.1
KK-13	.053	161.2
KK-14	.001	159.4
KK-15	.001	324.6
KK-16	.001	23.2
KK-17	.001	152.2

o Sample location

Contour interval : 100 metres

0 500 1000 1500 metres

Scale 1: 20,000

ARMENO RESOURCES INC.
TRANS ATLANTIC RESOURCES INC.

STANDARD CREEK PROPERTY

HEAVY MINERAL CONCENTRATES

Azimuth Geological Incorporated

By: K.K.
N.T.S. 92·J/10
Date: Feb. '88

Figure: GC·1000

TABLE E

Analytical Results - Heavy Mineral Concentrates

Sample No.	Total Au (mg)	Sample (gm)	ppb Au (Approximate)
KK-1	.001	178	<10
KK-2	.001	248	<10
KK-3	.010	303	<10
KK-4	.010	227	<10
KK-5	.019	333	<10
KK-6	.001	312	<10
KK-7	.001	290	<10
KK-8	.001	316	<10
KK-9	.001	296	<10
KK-10	.777	74.7	1040
KK-11	.351	76.2	460
KK-12	.157	183.1	33
KK-13	.053	161.2	<10
KK-14	.001	159.4	<10
KK-15	.001	324.6	<10
KK-16	.001	23.2	<10
KK-17	.001	152.2	<10

5.0 DIAMOND DRILLING

Diamond drilling of the Standard Creek Property started on August 9, 1987 and continued until February 6, 1988. Twenty-eight drill holes with a total of 6368.89 metres were completed by three contractors: Tonto Drilling Ltd., Burnaby, B.C., Paragon Drilling Ltd., Kamloops, B.C. and Rainbow Diamond Drilling Ltd., Merritt, B.C.

The purpose of the drilling programme was to test geochemical and geophysical anomalies as well as known mineralization. The drilling was concentrated in five area: the Standard, Chopper, Royal, Piebiter and Chalco Zones. Distribution of the drilling is shown in Table F below. A summary of drill hole information is given in Table G on page 33. For compilation purposes similar data for 1986 drill holes are shown in Table H on page 34.

Table F

Distribution of Diamond Drilling

	Tonto (m)	Paragon (m)	Rainbow (m)	# of holes
Standard	367.9	644.97	303.59	8
Chopper	743.42	-	376.43	3
Royal	-	665.39	-	2
Piebiter	2523.47	310.90	-	13
Chalco	432.82	-	-	2

Drill sites on the Royal, Piebiter and Chalco areas were accessed by four-wheel drive truck. Helicopters were used to move drills and to access drill sites on the Standard and Chopper areas. A D-8 Cat was used for moves in the other areas.

All drill holes were completed using NQ diameter equipment. Three holes, C8701, C8703 and S8706 were reduced to NQ diameter core from HQ diameter. All drill core was moved to the base camp on Piebiter Creek where the core was logged and placed in storage.

Logging of the core was recorded in code form and processed by computer using the Lynx Geolog System. The system's data base was used, in part, to store drill hole information, sample intervals and assays, and drill logs. Strip logs, plan and cross sections, and sample listings were generated from the data base. The system offers numerous other features for data manipulation.

Results of the diamond drilling are discussed in Section 7.0 of the report. Drill hole locations are included with the Discussion of Results. Statements of Qualification for core loggers are included in Appendix X.

TABLE G

Drill Hole Summary (1987/88)

Hole Number	Grid	Location		Elev. (m)	Bearing (o)	Angle (o)	Length Ft.	Length m*
S8701A	Standard	4+00 N	2+55 E	1957.3	220	-50	87	26.52
S8701B	Standard	4+00 N	2+55 E	1957.3	220	-55	347	105.77
S8702A	Standard	6+30 N	2+10 E	1941.7	220	-50	199	60.66
S8702B	Standard	6+30 N	2+10 E	1941.7	220	-60	415	126.49
S8703	Standard	4+00 N	2+15 E	1946.1	220	-60	692	210.92
S8704	Standard	5+75 N	1+15 E	1892.4	225	-60	382	116.44
S8705	Standard	3+10 N	1+40 E	1942.9	225	-50	990	301.76
S8706	Standard	4+75 N	2+00 E	1926.7	248	-50	612	186.54
S8706A	Standard	4+75 N	2+00 E	1926.7	249	-50	394-989	181.36
C8701	Chopper	6617702 N	527360 E	2020.6	160	-45	1186	361.50
C8702	Chopper	5617336 N	528106 E	2109.7	222	-45	1235	376.43
C8703	Chopper	6617228 N	528353 E	2097.1	202	-40	1253	381,92
R8701	Royal	10+40 S	7+75 E	1626.4	030	-45	1497	456.29
R8702	Royal	9+65 S	7+50 E	1638.4	000	-60	686	209.10
P8701+	Piebiter	-	-		045	-45	1020	310.90
P8702	Piebiter	0+40 N	0+35 W		040	-45	734	223.73
P8703	Piebiter	0+65 S	0+40 W		040	-45	805	245.37
P8704	Piebiter	1+20 S	0+65 W		040	-45	694	211.53
P8705	Piebiter	1+40 S	0+20 E		040	-45	518	157.89
P8706	Piebiter	2+45 S	0+65 E		032	-45	734	223.73
P8707	Piebiter	3+60 S	0+60 E		050	-45	604	184.10
P8708	Piebiter	4+60 S	0+60 E		050	-72	737	224.64
P8709	Piebiter	3+75 S	0+70 E		220	-43	744	226.77
P8710	Piebiter	0+40 N	0+35 W		045	-60	705	214.89
P8711	Piebiter	0+40 N	0+35 W		015	-45	624	190.20
P8801	Piebiter	0+10 S	1+00 W		023	-45	615	187.45
P8802	Piebiter	-	-		050	-45	765	233.17
CH8801	Chalco	8+00 N	5+75 W	1342.0	360	-45	805	245.37
CH8802	Chalco	8+25 N	5+00 W	1363.0	360	-45	615	187.45

+ P8701 Survey Location (1987)
N 5618481.5 m, E 525351.8 m, Elevation 1582.9 m

* Discrepancies between metreage shown and metreage reported on drill logs are due to reporting errors on Daily Drill Reports.

TABLE H

Drill Hole Summary (1986)*

Hole Number	Grid	Location		Elev.	Bearing	Angle	Length	
		Northing	Easting	(m)	(o)	(o)	Ft.	m
S8601+	Standard	5615617	528148	1926.7	210	-50	165	50.3
S8602	Standard	561550	528106	1908	210	-55	248	75.6
S8603	Standard	561550	528106	1908	030	-55	47	14.5
S8604	Piebiter	561835	525665	1774	030	-45	505	153.9
S8605	Piebiter	5618315	525665	1774	030	-60	568	173.1
S8606	Piebiter	5618300	525130	1615	030	-50	940	286.5
S8607	Piebiter	5618315	525665	1771	210	-45	268	81.6
S8608	Piebiter	5618310	525540	1745	036	-45	295	89.8
S8609	Piebiter	6618355	525501	1702	015	-46	416	126.8
S8610	Piebiter	5628310	525595	1756	036	-76	341	103.9
S8611	Piebiter	6618255	525520	1740	030	-46	537	163.7
S8612	Piebiter	5618305	525685	1790	045	-45	40	12.2
S8613	Piebiter	5698305	525685	1789	045	-60	400	121.9
S8614	Piebiter	6618255	525522	1740	030	-55.5	629	191.1
S8615	Royal	5616885	525275	1615	032	-45	537	164.3
S8617	Royal	6616800	525257	1602	030	-45	175	53.2
S8616	Chalco (Lower Piebiter)	5618480	524375	1382	040	-50	927	282.5

* From Report on the 1986 Exploration Program, Standard Creek Report, Donald G. Allen et. al.

\+ Surveyed Location and Elevation, 1987.

6.0 UNDERGROUND EXPLORATION

The Standard Adit was reopened in August, 1987 in an attempt to examine gold mineralization reported by earlier workers in the 1930s.

The underground work was conducted by Tonto Mine Development Ltd., Burnaby, B.C. Helicopter support was used to transport personnel and equipment between the adit and base camp 5 kilometres apart.

Underground work included rehabilitation, drifting (92.4 metres), crosscutting (43.0 metres), drilling (21.0 x 6.0 metre test holes), geological mapping and rock sampling. A detailed discussion of the underground programme is contained in Section 7.1.

7.0 DISCUSSION OF RESULTS

7.1 Standard Zone

Introduction

The Standard prospect is situated at the southeastern corner of the property in the valley of Standard Creek northwest of McGillivray Pass. Several pits and an adit 620 feet (190 metres) in length were developed on the property in 1933. The latter is reported to have cut a zone 21 metres in width averaging 0.125 ounces/ton gold. (Clothier, 1933)

History

The Standard area is covered extensively by Cairnes (1937). Work on the property as of 1933 included a number of trenches and two adits 12 ft. and 670 ft. in length. The latter, driven at 032° azimuth, cut a series of argillites and talc altered serpentinites. Quartz veining is common within the argillites and altered serpentinites. Gold assays up to 8 oz/ton were reported.

Clothier (1933) reported gold values averaging 0.125 oz between 214 feet (65 metres) and 284 feet (86 metres) within the Standard Adit.

No record of subsequent work existed on the property until 1980 when the property was contained within claims held by Hillside Energy. The property was held from 1980 to 1982 and further work was recommended to follow up anomalous soil values. However this work was never carried out. The property was later acquired by Trans Atlantic Resources Inc. on whose behalf work programmes were carried out in 1984, 1985 and 1986 by A & M Explorations Ltd.

Surveys carried out in 1984 included geochemical and geophysical surveys, followed in 1985 by additional geochemical sampling and geophysical surveying. In 1985 the caved Standard adit was reopened and some

underground sampling was completed. The adit was caved however at the area of interest and could not be adequately sampled to confirm historical values. (Allen, 1985)

The area was tested in 1986 by three diamond drill holes. Difficult drilling and poor core recovery due to broken and faulted rock led to an early termination of the programme. Values obtained included 140 ppb Au and 2040 ppm As. Further drilling with a larger drill was recommended. (Allen et al, 1986)

1987 Programme

The Standard Adit area was covered by detailed geophysical surveys, a geochemical survey and mapping during Phase I of the 1987 programme. The purpose of this programme was to provide a complete understanding of geological and structural relationships, as well as to delineate geophysically narrow quartz veins which may not have been detected in earlier surveys. Survey results are described in an earlier report (Carpenter & Haynes, 1987).

Phase II of the 1987 programme consisted of underground exploration in the Standard Adit, diamond drilling in the vicinity of the Standard Adit and a limited Resistivity survey. The underground exploration programme was deemed necessary to fully evaluate the potential of the Standard adit due to poor core recovery in both the 1986 drill program and the early phases of the 1987 drilling.

The Standard Adit, which had been reclosed for safety reasons following the 1985 sampling, was reopened on August 29. The use of a wheeled articulated scooptram necessitated the widening and timbering of the existing drift before an attempt was made to remove caved material in the area of interest. The extent of caved material however, and poor ground conditions made necessary a bypass drift around the caved area and a crosscut to provide access to the original adit beyond the caved area.

A shorter slusher drift was cut in an easterly direction in an attempt to bypass the caved area to the south. Work on this drift was halted pending results from the bypass drift. Approximately 68 metres of adit rehabilitation, 97 metres of drifting and 42 metres of crosscut were completed between August 29 and October 8, 1987.

During drifting, chip samples were collected from each face of advance in the Bypass Drift and in the Number Two Crosscut. In the Right Slusher Drift samples were collected at one metre intervals along the left well, the back and the right well. Chip samples were also collected at one metre intervals from the left well of the bypass drift as well as from mineralized zones within the original drift.

Subsequent to drifting, a series of percussion holes were drilled in an overlapping pattern along the drift. Sludge samples were collected from these holes at four foot intervals and analysed in an attempt to provide a more realistic sample medium than rock chips, which are often subject to sampler bias. Sample locations are shown on Fig. 7.1.2. Underground mapping was carried out during drift advance.

Summary of Results

A total of 549 samples were collected from within the Standard Adit of which 335 samples were submitted for analysis. Assay results for Gold and Silver are shown on Fig. 7.1.3. Overall sample results were very disappointing. Best values obtained were 900 & 510 ppb Au (Samples #'s 55092 & 55596) and 25.1 & 23.4 ppm Ag (Samples #'s 55523 & 55591). In contrast Arsenic values in excess of 2000 ppm As were commonplace and seemed to bear no direct relationship to gold values. Realgar crystals (AsS) were noted in several quartz veins however and would appear to explain the prominent arsenic anamolies in the area.

The gold zone of Clothier is presumably that area of mineralized rock exposed between 64 metres and 85 metres from the present portal. This

zone bounds north trending talcose rocks and consists of silicified and quartz-veined argillites containing 1-3% pyrite. The best values obtained in this area however from chip sampling and percussion drilling averaged 0.001 oz/ton Au (30 ppb) and up to 10.6 g Ag.

It would appear therefore that the reported Standard adit gold zone does not exist. Literature studies show that all reported values from the adit were based on word-of-mouth and that no samples were collected by the authors of government reports to corroborate these values.

Underground Mapping

Results of the underground mapping are shown in figure 7.1.1. Rocks encountered consisted predominantly of northwest trending, northeasterly dipping argillites. The argillites are cut by talc altered locally listwanitic serpentinite units trending northerly and northwesterly. The talcose rocks are bounded by zones of variably silicified and quartz veined rocks containing 1-3% pyrite. Quartz veining and quartz fragments are also common within the talc altered rocks. Numerous northwest trending, southwest dipping quartz veins are found cutting the argillites. These veins commonly contain minor (1%) pyrite and occasionally contain realgar, molybdenite and silver bearing galena.

The southwest dipping quartz veins are largely untested by diamond drilling as the drill holes completed to date were predominantly drilled in a southwesterly direction and would have run parallel or subparallel to these veins.

These veins appear to be of a different age than the veins in silicified rocks bounding the talc altered rocks, though the actual relationship in conjectural.

Based on present data, the silicification and quartz veining bounding the talc altered rocks would appear to be caused by silica released during

alteration processes. The southwest dipping quartz veins, on the other hand, may be related to late quartz veining related to emplacement of the Bendor Batholith.

Diamond Drilling

A total of eight diamond drill holes (S87-01 to 06) were completed in the Standard adit area. Holes were drilled in a "fence" pattern to provide a complete understanding of the geology across the area as well as to intersect auriferous quartz veins and/or structures associated with the alteration zone. Hole locations are shown on Figure 7.1.4. Drill hole summaries are as follows:

S87-01 Terminated at 97 feet (29.56m) in argillites due to severe ground conditions. Drilled to test geophysical conductors and to test at depth mineraliztion described in the Standard adit.

S87-01A Shut down at 347' (105.76m) without reaching target. Intersected a series of argillites and altered serpentinites (listwanites). Same location and targets as S87-01.

S87-02 Stopped at 199' (60.65m) in argillites due to severe ground conditions. Drilled to test geophysical conductors and to test Standard Adit gold zone.

S87-02A Shut down at 415' (126.49m). Same targets as S87-02 and same location. Cut a series of argillites and altered serpentinites (listwanites).

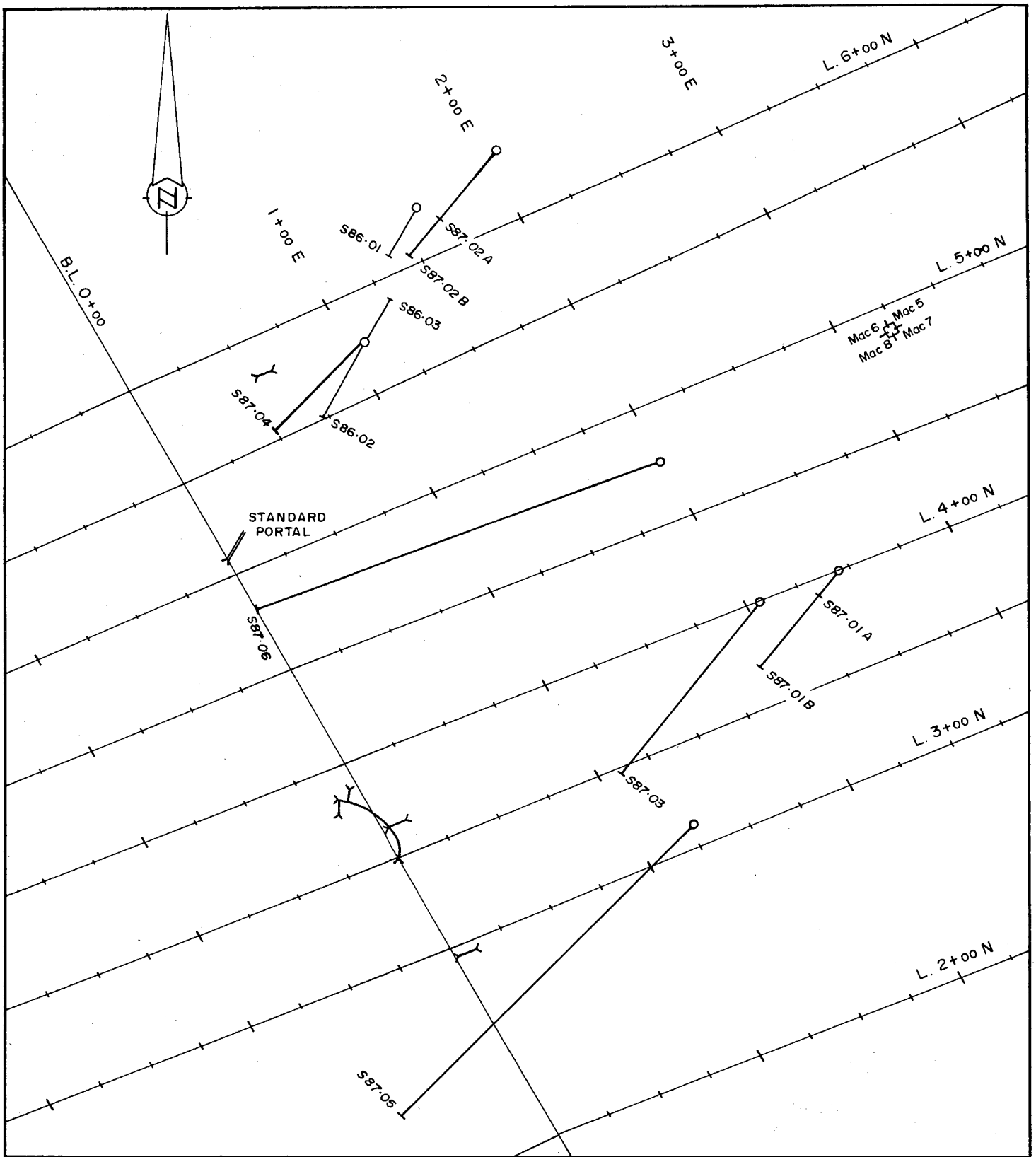
S87-03 Final depth 692' (210.92m). Targeted to intersect Standard gold zone at depth. As with previous holes encountered as series of argillitic rocks and altered ultramafic rocks.

S87-04 Terminated at 382' (116.44m). Drilled to undercut gold zone in Standard adit. Intersected altered ultramafics and argillitic rocks with quartz veining and minor sulphides.

S87-05 Located to undercut mineralized alteration zone on Standard Creek. Intersected altered ultramafics, argillites and dioritic rocks. Final depth 990' (301.76m).

S87-06 Drilled to intersect a prominent N-S trending arsenic anomaly within a broad NW trending zone. Terminated at 989' (301.45m) after cutting argillites and altered ultramafics.

In general, diamond drilling results are similar to those encountered in the Standard adit. In total 239 core samples were collected. Best values obtained were 200 ppb Au (Sample #15162) in S87-06 and 21.1 ppm Ag (Sample #14284) in S87-02A. Values in excess of 2000 ppm Arsenic are common and are probably a result of Realgar in quartz veins. The conductor which bounds the area to the northeast is obviously caused by a major shear zone at and near the contact between argillites to the northeast and talc altered serpentinites to the southwest. The talcose rocks are estimated to be about 100 metres in thickness. Southwest of the talc altered rocks is a sequence of silicified argillites in excess of 120 metres in thickness. Bounding the silicified argillites to the southwest are serpentinized ultramafics intersected in S87-05 and exposed in the valley of Standard Creek southwest of Standard adit. These ultramafics are believed to be about 75-100 metres thick in this area although no contacts are evident.



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STANDARD CREEK PROPERTY

- Standard Grid -

DRILL HOLE LOCATIONS

Azimuth Geological Incorporated	By:	L.R.H.	Figure: 7·1·4
	N.T.S.	92-J/10	
	Date:	Feb. '88	

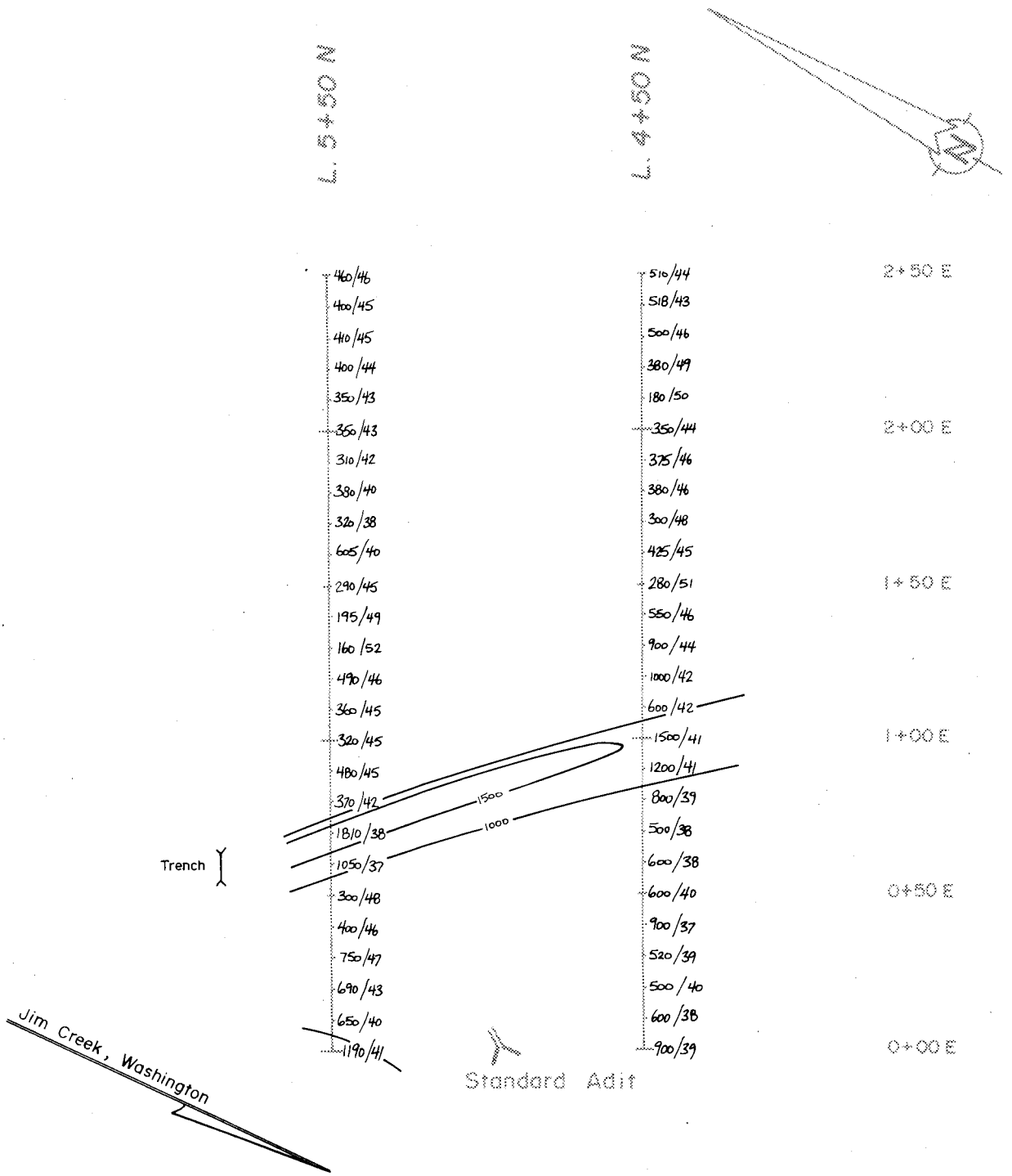
Resistivity Survey

A detailed Resistivity Survey was completed over the Standard Adit area at 10 metre centres along lines 4+50N and 5+50N. This survey was designed to test resistivity response in the vicinity of the adit as an aid in tracing and identifying potential targets away from the adit area.

The survey was carried out with a Geonics EM-16R resistivity unit utilizing transmitter stations in Seattle (Jim Creek), Washington and Cutler, Maine. Survey results are detailed on Figures 7.1.5 and 7.1.6 respectively and show a prominent northwesterly trending zone extending from 4+50N, 0+90E to 5+50N, 0+70E. This zone corresponds on surface with a prominent quartz vein exposed at 5+82N, 0+70E and underground with a quartz vein exposed in Crosscut #2 and in the Bypass Drift (Fig. 7.1.1).

A slightly weaker resistivity zone extends from 0+00, 4+50N to 0+20E, 5+50N (Fig. 7.1.5). This zone does not have any surface expression and no information is available from underground in this area.

In general the test survey shows that detailed resistivity appears to be an excellent tool in identifying and tracing potentially auriferous quartz veins. Unfortunately efforts to utilize this survey in areas away from the Standard Adit were forestalled by the onset of snow.



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STANDARD CREEK PROPERTY

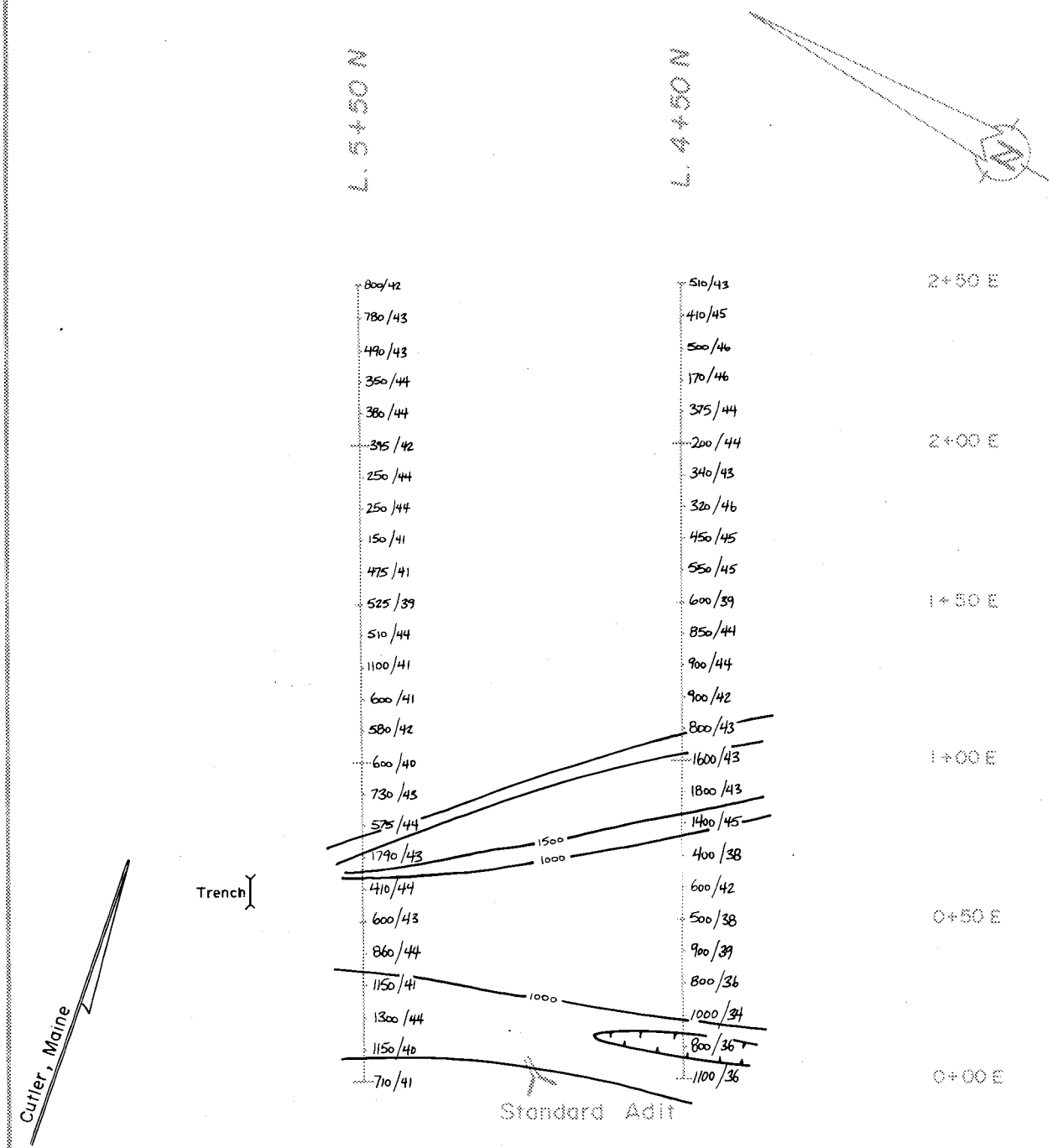
- Standard Grid -

RESISTIVITY SURVEY
- Standard Adit -
(VLF - EM 16R)

Scale 1:2000

0 50 100 metres

Azimuth Geological Incorporated	By: J.C.	Figure: 7·1·5
	N.T.S. 92·J/10	
	Date: Feb. '88	



ARMENO RESOURCES INC.
TRANS ATLANTIC RESOURCES INC.

STANDARD CREEK PROPERTY

- Standard Grid -

RESISTIVITY SURVEY
- Standard Adit -
(VLF - EM 16R)

Scale 1:2000

0 50 100 metres

Azimuth' Geological Incorporated	By: J.C.	Figure: 7·1·6
	N.T.S. 92·J/10	
	Date: Feb. '88	

7.2 Standard West

Introduction

The Standard West grid is located northwest of the Standard Adit area. It was located to cover an area of rusty seeps along strike from the Standard Zone and to test for the possible northwest extension of alteration and structures found in the Standard Adit area.

History

A short 12 ft. long adit (since collapsed) was driven in the vicinity of the seeps in 1933 at the same time as work was carried out on the Standard Adit. No information exists from this work. Minor trenching was done, presumably at this time as well, on small quartz veins in schistose rocks to the north.

The area was contained within the claims of Hillside Energy in 1980-1982. Part of the area was contained within a soil sampling program carried out over the Standard Adit by A & M Exploration in 1985.

1987 Programme

A 1.5 km long baseline trending 140° with crosslines at 200 metres intervals was initially established using compass and hipchain. Infill lines were later added at 100 metre intervals predominantly southwest of the baseline. In total 8.5 kilometres of grid were established. Stations were marked at 25 metre intervals with plastic flagging.

Grid establishment was followed by soil sampling, VLF/EM and Magnetometer surveys and mapping.

Summary of Results

Soil Sampling

A total of 136 soil samples were collected on the Standard West Grid. Gold and arsenic assay values are shown on Figures 7.2.5 and 7.2.6. Analytical results are found in Volume 2A.

Gold values of up to 100 ppb are found on L 10+00 E southwest of the baseline. These occur in the vicinity of the rusty seeps. Mineralized quartz float is also found in the area (Fig. 7.2.1.) No trends are obvious from these isolated anomalies.

An arsenic anomaly with values to 215 ppm As located at 1+25 S on L 10+00 E shows a distinct northwest trend. Anomalous values on lines 5+00 E and 6+00 E also show a northwest trend.

An area of anomalous molybdenum with values to 303 ppm is found between 8+00 E + 11+00 E generally south of the baseline (Fig. 7.2.7, page 49). These values also exhibit a northwest trend.

VLF/EM Survey

A well defined northwest trending conductor extends from 0+25 S on L 15+00 E to 0+75 S on L 10+00 E. From this point the conductor diverges with one branch extending west to 1+75 S on L 8+00 E. A second branch extends northwest to 1+00 N on L 0+00. Other shorter east-west and northwest trending conductors are located at various points on the Standard West Grid (Figs. 7.2.2 and 7.2.3).

The major conductor on the Standard West Grid corresponds to a major fault zone which extends southeast through the Standard Grid.

Other weaker conductors probably represent subsidiary faults related to this structure, minor structures within surrounding rocks or graphitic units.

Magnetometer Survey

Results of the magnetometer survey are shown on Figure 7.2.4. Very little magnetic contrast is seen on the grid although a general northwest trend is noted. A weak magnetic high at 0+50 S on L 8+00 E corresponds with ultramafics in outcrop. A more well defined magnetic high extends from 2+00 N, L 2+00 E to 2+50 N, L 0+00.

Mapping

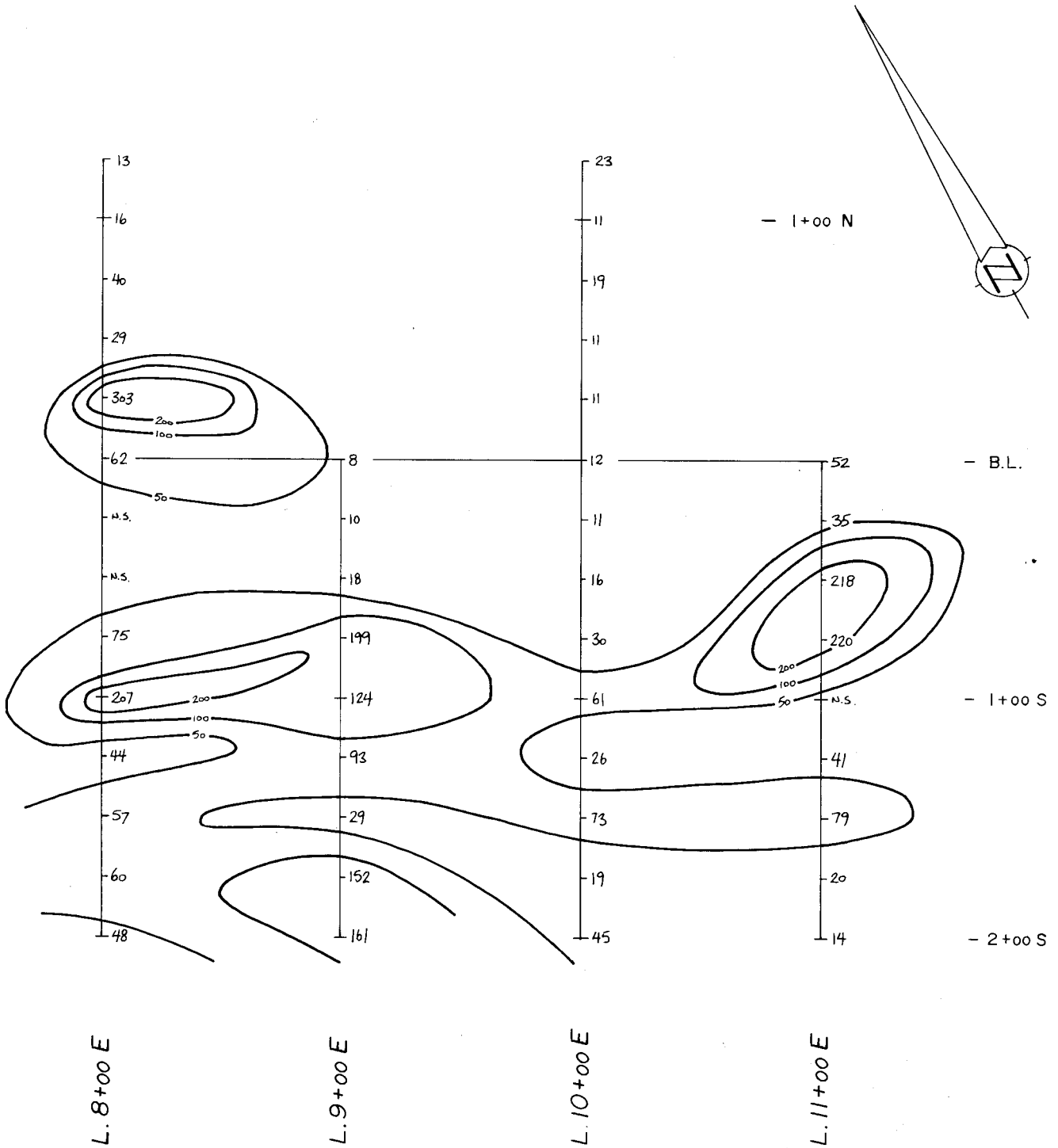
In the north and northwest of the Standard West Grid are found quartz biotite schists and quartzites of the Fergusson Group. South of these rocks in the south and southwest areas of the grid are found argillites and cherts tentatively assigned to the Noel Formation of the Cadwallader Group. These rocks trend approximately northwest with a north to northeast dip.

Both volcanic and ultramafic rocks are exposed at various localities on the grid. The former are massive basic volcanics within the stratigraphic sequence while the scattered ultramafic outcrops are probably emplaced along fault zones.

Hornblende quartz diorite is exposed at the extreme southeast corner of the grid. This diorite is probably a part of the Bendor Intrusives.

Between L 8+00 E and L 12+00 E south of the grid baseline is found an area of rusty seeps with associated quartz float containing pyrite, pyrrhotite and molbydenite.

A total of 10 rock samples were collected from the Standard West Grid. These samples are described in Table I. The samples were assayed for Au and Ag only. Results include assays to 3.7 ppm Ag and 58 ppb Au.



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STANDARD CREEK PROPERTY

- Standard West Grid -

ppm **Mo** in Soils

Scale 1 : 2500

0 50 100 150 Metres

Azimuth Geological Incorporated	By:	Figure: 7·2·7
	N.T.S. 92·J / 10	
	Date: Feb. '88	

Rock Sample Descriptions - Standard West Grid

Sample	Location	Type	Width	Description	Au (ppb) Ag (ppm)
JC - STW L 5+85 E, 2 + 50 N	Standard West Grid	Grab	-	Quartz vein. Rusty and vuggy with trace of pyrite.	2 0.1
JC - STW L7+50 E, 0+70 S	Standard West Grid	Grab	-	Felsic volcanic outcrop (?). Iron stained with traces of disseminated pyrite.	1 0.1
JC - STW L 8+00 E, 0+75 S	Standard West Grid	Grab	-	Float. Quartz vein with 2% pyrite and molybdenite.	1 2.7
JC - STW L 9+15 E, 0+75 S	Standard West Grid	Grab	-	Float. Quartz vein with chalcopyrite, pyrite, malachite, galena and dull silver mineral.	1 0.1
JC - STW L 9+75 E, 0+80 S	Standard West Grid	Grab	-	Sub outcrop. Rusty quartz vein. No visible sulphides.	1 3.7
JC - STW L 11+20 E, 0+15 S	Standard West Grid	Grab	-	Float. Quartz vein disseminated pyrite (less than 1%).	1 0.1
JC - STW L 11+20 E, 0+15 S (A)	Standard West Grid	Grab	-	Float. Quartz vein with 1% pyrite and traces of small disseminated metallic silver mineral.	2 0.3
JC - STW L 11+80 E, 0+15 S	Standard West Grid	Grab	-	Float. Quartz Biotite Schist. Very cherty with 5% pyrite.	1 0.1
JC - STW L 12+00 E, 2+70 N	Standard West Grid	Grab	-	Quartz vein. Rusty with traces of pyrite.	58 0.3
JC - STW L 14+00 E, 1+20 N	Standard West Grid	Grab	-	Float ? Quartz vein. Rust stained and vuggy. No visible sulphide.	15 0.5

7.3 Standard West Extension

Introduction

The Standard West Extension Grid is located due west of the northwest end of the Standard West Grid. It was located to cover the area between the Standard West and Royal Grids to facilitate the tracing of geological structures between these areas.

History

The area was contained within the claims of Hillside Energy in 1980-82. The western part of the area was contained within a soil sampling program carried out by Hillside Energy at that time. The entire area was covered by a soil sampling and geophysical program carried out by A & M Exploration Ltd. in 1986 (Allen, 1986).

1987 Programme

A 5.9 km grid comprising a 0.7 km long baseline trending 270° with cross lines at 100 metre intervals was established using compass and hipchain. Stations were marked at 10 metre intervals with plastic flagging.

Grid emplacement was followed by VLF/EM and magnetometer surveys. Proposed soil sampling and mapping programs were cancelled due to snowfall.

Summary of Results

VLF/EM Survey

A well defined EM conductor extends from 0+10 N on line 0+00 northwest to the vicinity of 3+00 N on line 7+00 W. A weaker parallel conductor

extends from 0+15 N on L 2+00 W to 0+75 N on L 4+00 W. These conductors probably represent the northwestward extension of supposed fault zones detected on the Standard and Standard West Grids.

Other weaker conductors on the grid, both north and south of the baseline show east-west and east-northeast trends which may represent subsidiary faults. VLF results are shown on Figs. 7.3.1 and 7.3.2.

Magnetometer Survey

Two prominent magnetic linears are found in the northwest corner of the grid area (Fig. 7.3.3.) These linears extend from 1+20 N, L 1+00 W to 2+40 N, L 3+00 W and from 2 +20 N, L 0+00 to 2+60 N, L 1+00 W. These magnetic linears are along strike from linears on the Standard West Grid and the former is along strike from exposed ultramafics.

A weaker anomaly forms a linear from 2+20 S, L 4+00 W to 1+00 S, L 7+00 W along strike from ultramafics exposed in the Royal Area. A strong magnetic low occurs at 2+40 S, L 5+00 W.

7.4 CHOPPER VEIN

Introduction

The "Chopper" vein is a strong mineralized vein structure intermittently exposed over a length of 2400 metres from immediately southeast of Royal Peak. It trends northwesterly and dips 65-70° to the southwest. Vein widths range from 1 to 5 metres. The vein is composed of white massive quartz with vugs containing quartz crystals. Present locally within the vein are tetrahedrite, galena, malachite, azurite and occasionally pyrite. Minor amounts of calcite, sphalerite, stibnite and arsenopyrite are also present. Values of up to 1585 grams/tonne (46.36 oz/ton) in a grab sample are reported (Sheppard, 1979). Gold values are low in general (to 0.003 oz/ton Goldsmith, 1980).

Geology

The Chopper vein is contained within a sequence of northwesterly trending, southwest dipping quartz-biotite schists and volcanics with occasional limestone - dolomite lenses.

Adjacent to the vein are found serpentinized ultramafics and "spotted schists" (Fig. 7.4.1). The latter are composed of euhedral to rounded feldspar phenocrysts/porphyroblasts in a pale reddish brown fine grained matrix. The matrix is variably foliated with biotite and is composed of quartzo-feldspathic material.

Similar "spotted schists" with finer grained porphyroblasts are seen in several Piebiter drill holes.

History

Early mention of the Chopper vein was made by Cairnes (1937, p. 67) who noted the occurrence of silver-copper bearing quartz veins extending from Royal peak to and beyond Mt. McGillivray. Adits were driven on the vein on the Hazard and Empire properties which are presumably the present crown grants located between Mt. McGillivray and Mt. Piebiter. Assays of over 35 ounces/tonne Ag were reportedly obtained across widths of several feet at the Empire mine.

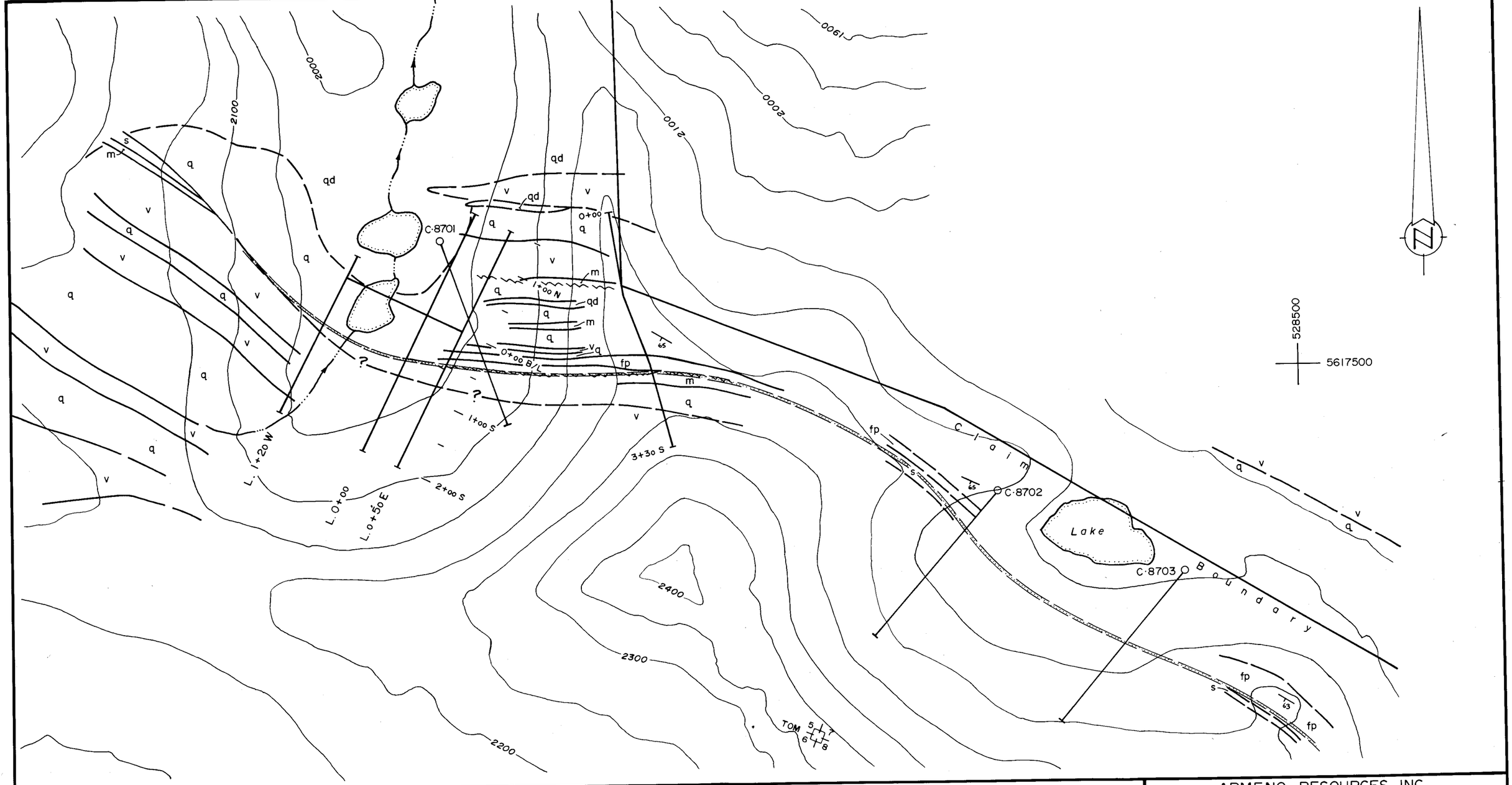
No other work is recorded on the Chopper vein until 1980 when the vein was mapped and sampled in detail for Chopper Mines Ltd. (Goldsmith, 1980). Chip samples across one section of vein averaged 3.65 ounces Ag/ton over 5 metres. Drilling was recommended but no further work was done.

1987 Programme

Mapping during Phase 1 of the 1987 programme suggested that the Chopper vein occupied a major fault zone and is closely associated with serpentinized ultramafic rocks (Carpenter & Haynes, 1987).

Attempts to trace the vein to the northwest were inconclusive. Mineralized quartz veins occuring 150 m south of Royal Peak are dissimilar to the Chopper vein in some respects but are along strike and may represent the northwestern extension of the Chopper vein.

During the Phase II of the 1987 programme three holes were drilled to intersect the Chopper vein at various locations along its length. The precipitous nature of the terrain in the vicinity of the Chopper Vein severely limits the ability to accurately drill test this structure, making it necessary to test drill the Chopper vein from footwall locations. As well a chip sampling/mapping program was undertaken to verify previous results and to correlate drilling results with surface samples (Fig. 7.4.2).



qd — quartz diorite

v — volcanics, chloritized mafic

q — quartzites with argillaceous interbands

m — marble

fp — feldspar porphyry, in part porphyroblastic

s — serpentinite

Chopper Vein

Shear

Compositional layering

Geological contact (defined, assumed)

Topo. contour interval : 50 Metres

0 50 100 200 300 Metres

Scale 1 : 5000

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STANDARD CREEK PROPERTY

– Chopper Vein –

GEOLOGY
&
DRILL HOLE LOCATIONS

Azimuth Geological Incorporated

By: L.R.H.
N.T.S. 92 · J/10
Date: Feb. '88

Figure: 7·4·1

Summary of Results

Drill hole locations on the Chopper vein are shown on Fig. 7.4.1. Hole C87-01 was located near the northwest end of the exposed Chopper vein to intersect a chute over 6 m in width postulated to be plunging to the south. This hole was collared and ended in diorite and failed to intersect the quartz vein. It is unknown whether the vein is cut off at depth by the intrusive or whether C87-01 was ended short of the vein.

Hole C87-02, drilled 250 metres southeast of C87-01 intersected the Chopper vein over 4.18 metres (2 metres true thickness) with an average grade of 7.43 oz/tonne Ag over the 4.18 metres. Ubiquitous quartz veining with anomalous silver values were found throughout the hole. Assay results for C8702 are given in Table J below.

TABLE J

Assay Results (C8702) - Chopper Vein

Interval		Width (metres)	Ag(oz/ton) (Original)	Ag(oz/ton) (Check)
250.52	251.52	1.0	3.66	3.70
251.52	252.16	0.64	1.30	1.38
242.16	253.16	1.0	13.37	13.09
253.16	254.16	1.0	10.56	10.84
254.16	254.70	0.54	4.92	4.94

Hole C87-03 was drilled 370 metres southeast of C87-02 and intersected 1.38 m of vein material (0.7 true thickness). Silver values at this location averaged less than 0.5 oz/tonne.

A chip sample/mapping program was undertaken along that portion of the Chopper vein between C87-01 and C87-02. This mapping indicated the presence of two zones of veining up to 5 metres in thickness separated by 300 metres of strike length. Between these zones the Chopper vein, where exposed, averages about 1 metre in thickness.

The thicker zones are variably mineralized with blebs of tetrahedrite with malachite and azurite along fractures. The best value obtained in chip samples was 3.96 oz/ton Ag. Evidence indicates that these zones may form northwesterly plunging "chutes" within the Chopper vein and may continue to depth. Results of the chip sampling are shown in Fig. 7.4.2. and are summarized in Table K below.

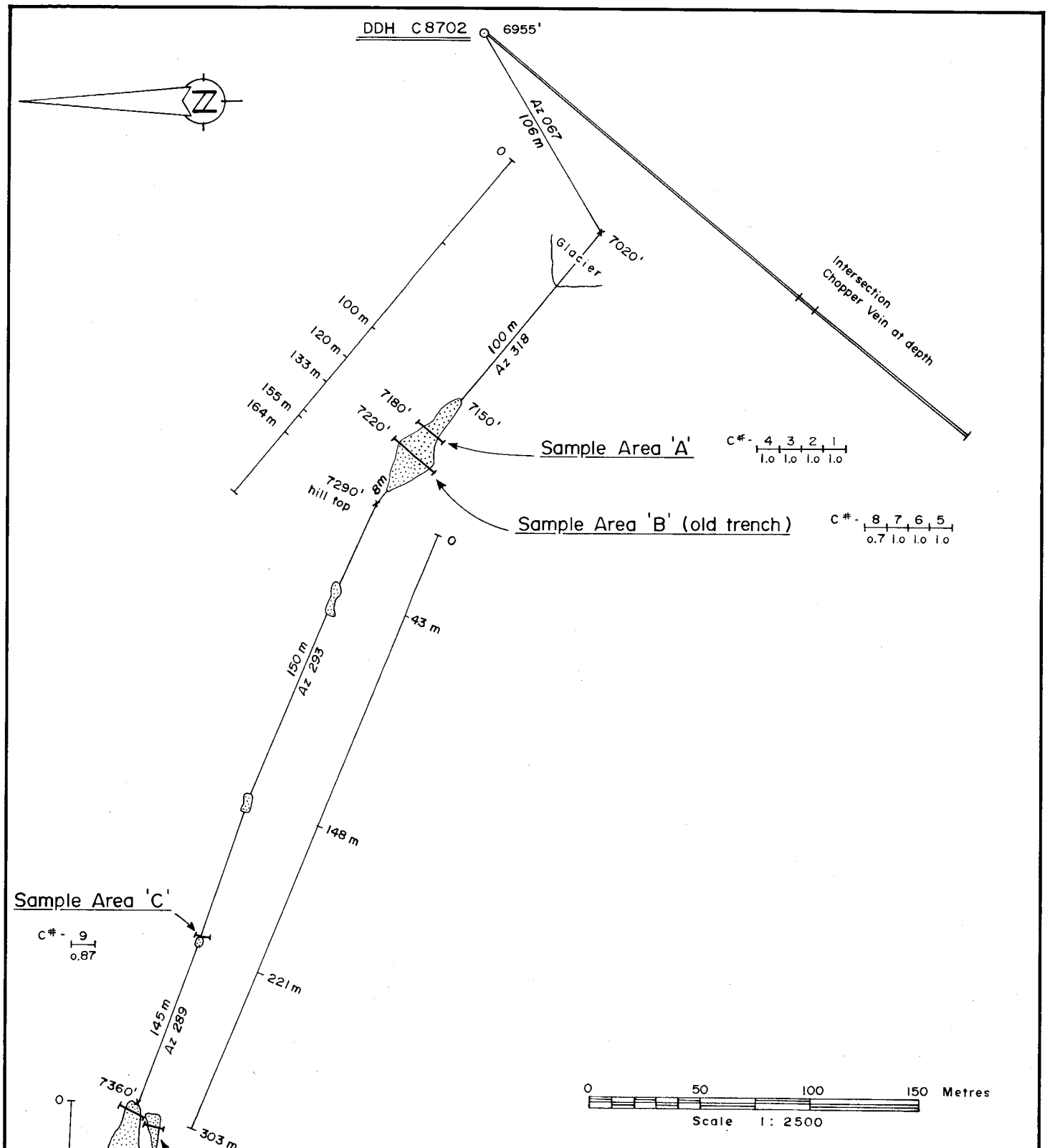
TABLE K

Chip Sample Results - Chopper Vein

Sample NO.	Width (m)	Ag (oz/ton)	Au (oz/ton)
C-1	1.0	2.10	.001
C-2	1.0	.52	.001
C-3	1.0	.25	.001
C-4	1.0	.62	.001
C-5	1.0	.17	.002
C-6	1.0	.12	.001
C-7	1.0	1.07	.001
C-8	1.0	3.96	.001
C-9	0.87	1.29	.001
C-10	1.0	1.55	.001
C-11	1.0	.17	.001
C-12	1.0	.14	.001
C-13	1.0	.05	.001
C-14	1.0	.97	.001
C-15	1.0	.55	.001
C-16	1.0	.33	.001
C-17	1.0	.23	.001

It is noteworthy that assay results appear to be higher within drill core than in surface chip samples. Core values may therefore be more representative of the average grade of the Chopper vein than surface samples.

A series of five chip samples (C18 - C22) were collected from the Chopper vein and other quartz veins south of hole C87-03. A description of the samples is given in Table L on page 59.



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STANDARD CREEK PROPERTY

- Chopper Vein -

SURFACE CHIP SAMPLING

Azimuth Geological Incorporated	By: J.C.	Figure: 7·4·2
	N.T.S. 92·J/10	
	Date: Feb. '88	

g.e.l.

TABLE L

Rock Sample Descriptions - Chopper Vein

Sample	Location	Type	Description	Assays Ag (ppm)	Au (ppb)	Sb (ppm)
C 18 2930 E, 1630 N	Chopper Vein Ext.	Grab	Quartz vein at summit of ridge just N of Mt. McGillivary. (Not main Chopper Vein.)	0.5	2	5
C 19 2930 E, 1621 N	Chopper Vein Ext.	Grab	Quartz vein along strike of C-18 to SE. Approx. 250 m down slope. Disseminated pyrite. (Not main Chopper (Vein).	0.5	1020*	3
C 20 2957 E, 1641 N	Chopper Vein Ext.	Grab	Lower Adit (2410 m) on Chopper Vein. Quartz vein with 30% Stibnite.	12.0	33	40362
C 21 2830 E, 1702 N	Chopper Vein Ext.	Grab	Extension of Chopper Vein? (Smaller northerly parallel vein) 150 m due S of C 8703 @ 2195 m.	24.1	9	584
C 22 2830 E, 1701 N	Chopper Vein Ext.	Grab	Outcrop of 0.8 m vein. Possibly Chopper Vein, 100 m South of C 21. Molybdenite, stibnite, tetrahedrite.	218.3	7	558

* Native gold reported from laboratory.

7.5 Upper Piebiter

Introduction

The Upper Piebiter Zone is located on the south slope of Piebiter Creek valley immediately northwest of Royal Peak. The zone was discovered by soil and rock sampling in 1985 and consists of gold values ranging up to 0.17 ounces per ton in quartzites and quartz-biotites schists of the Fergusson Group. Surface showings consist of rusty outcrops of Fergusson Group rocks near the contact with lenses and sills of President ultramafic rocks. A low grade gold zone grading 0.015 to 0.02 oz/ton over an area 15 to 36 metres wide and up to 600 metres in length has been suggested (Allen et al, 1986).

Geology

Rocks encountered during drilling comprised predominantly northwest trending southwest dipping quartzites and quartz-biotite schists. Varying thicknesses of "volcaniclastics" were found within the quartzite/quartz-biotite schist sequence. These rocks consist of angular to rounded-lenticular quartz fragments in a biotite rich matrix. Where exposed on surface these rocks resemble agglomerates and have been termed volcaniclastics in drill core. These rocks however are probably cataclastic in origin, a result of intense milling and shearing of original quartzitic rocks of the Fergusson Group.

The volcanics encountered during drilling have been described by Church (1987) as feeder dykes and sills connected to overlying Pioneer Formation volcanics. These volcanics are locally schistose. A large mass of massive chloritized volcanics in the southern part of the grid contains ubiquitous veins and pockets of garnet-epidote alteration.

A series of ultramafic sills are found bounding "agglomerates" and within the quartzite/quartz-biotite schist sequence. The ultramafics presumably occupy fault zones related to the Cadwallader Fault System. Ultramafics outcropping on line 4+00S suggest a northerly trending cross structure in this area (Fig. 7.5.1).

History

Though the Piebiter zone lies along strike midway between the Chopper vein and the Chalco showings, no evidence of work prior to 1985 exists. The area was partially included within claims held by Hillside Energy Corporation from 1980 to 1982.

Soil sampling in 1985 by A & M Exploration revealed anomalous Au values in soils in the area. Follow-up rock sampling resulted in the discovery of an area 50 metres in diameter containing gold values up to 2800 parts per billion (0.082 oz/ton).

This discovery was followed in 1986 by a diamond drilling programme consisting of 10 drill holes predominantly centred around the main discovery area. An 11th hole containing anomalous gold values located approximately 700 metres to the northwest suggested possible continuity of the mineralized zone along strike (Allen et al, 1986).

The principal feature of Piebiter mineralization is that it is indistinguishable. No obvious correlation of gold with sulphides or any other recognizable feature occurs. Consequently it is necessary to split all core to pinpoint mineralization.

1987 Programme

The area was regridded and covered by detailed geophysical and geochemical surveys and by mapping during Phase I of the 1987 programme. The purpose of this programme was to provide a more

complete understanding of geological and structural parameters in the area and their relationship to mineralization.

The surveys outlined a northwest trending mineralized zone paralleling the contact between quartzites/quartz-biotite schists and later ultramafic rocks.

The contact is locally defined by a prominent VLF/EM conductor.

Phase II of the 1987 programme consisted of road building to allow access to the soutwest along strike from known mineralization, diamond drilling within and along strike from the previously defined zone and additional sampling of the 1986 drill holes.

Summary of Results

Exploration on the Piebiter in 1986 was limited by access which necessitated drill moves by helicopter and by lack of water on the hillside. The completion of an access road to the upper levels of the Piebiter zone in 1987 has greatly facilitated access by eliminating costly helicopter usage and has eased water supply problems.

A total of 11 diamond drill holes with a combined 2413.75 metres of core were drilled in the area in 1987. Another two holes containing 420.62 metres of core were completed in January 1988. At the same time 2.3 kilometres of road building was completed. Drilling to-date has been limited to following mineralization along strike. Hole locations are shown on Figure 7.5.1. Anomalous gold values were found in all holes drilled in 1987 and significant gold values were found in eight of the eleven holes and in one of the two 1988 holes (Table B).

Best values obtained were found in P87-02 which contained 9 metres from 35.5 to 44.5m averaging 0.065 oz/ton Au including one metre (42.5 - 43.5m) containing 0.154 oz/ton and two metres (37.5-39.5m) averaging 0.093

oz/ton. Also in P87-02 a two metre section from 56.5 to 58.5 metres averaged 0.117 oz/ton Au including a one metre section of 0.147 oz/ton Au. From 80.0 to 82.0 metres gold content averaged 0.031 oz/ton.

A later hole P87-10, drilled to undercut P87-02, encountered lower gold values including 0.112 oz/ton from 41.0-43.0m and 0.116 oz/ton from 50.0 - 52.0m.

Holes drilled north and south of the P87-02 location, P87-11 and P88-01, showed much lower results. P87-11 contained .042 oz/ton Au from 86.0 - 87.0m and 0.051 oz/ton Au from 89.0 - 90.0 metres. P88-01 contained 0.035 oz/ton Au from 74.0 - 75.0m and 0.048 oz/ton Au from 78.0 - 79.0m or 0.029 oz/ton from 74.0m to 79.0m.

These results would seem to suggest the presence of a "chute" or a mineralized cross structure in the area of P87-02 and P87-11 which was not intersected by holes to either side.

Southeast of P87-02 hole P87-03 contained values up to 0.041 oz/ton Au (154.0 - 155.0m), hole P87-04 contained values to 0.068 oz/ton Au (84.0 - 85.0m). P87-06 contained 0.026 oz/ton Au from 33.0 -34.0m and P87-07 contained an assay of 0.011 oz/ton Au from 116.0 - 117.0m. Au determination by geochemical means from 116.0 - 117.0m in P87-07 on the other hand returned a value of 1550 ppb (0.045 oz/ton Au).

Northwest of P87-02 sampling of untested intervals in P86-09 revealed values up to 0.053 oz/ton Au (2040 ppb) from 25.0 - 26.4m.

Overall, the 1987 drill program on the Piebiter, as did the 1987 programme, left many questions unresolved. Known mineralization has been extended 300 metres southeast of the southernmost 1986 holes and grades have been increased locally (P87-02 & 10). However, the continuity of the zone is uncertain and the zone does not appear to be as wide as earlier assumed

(Allen at al, 1986, p. 33). Further detailed drilling would have to be completed before an accurate assessment of tonnage or grade could be made.

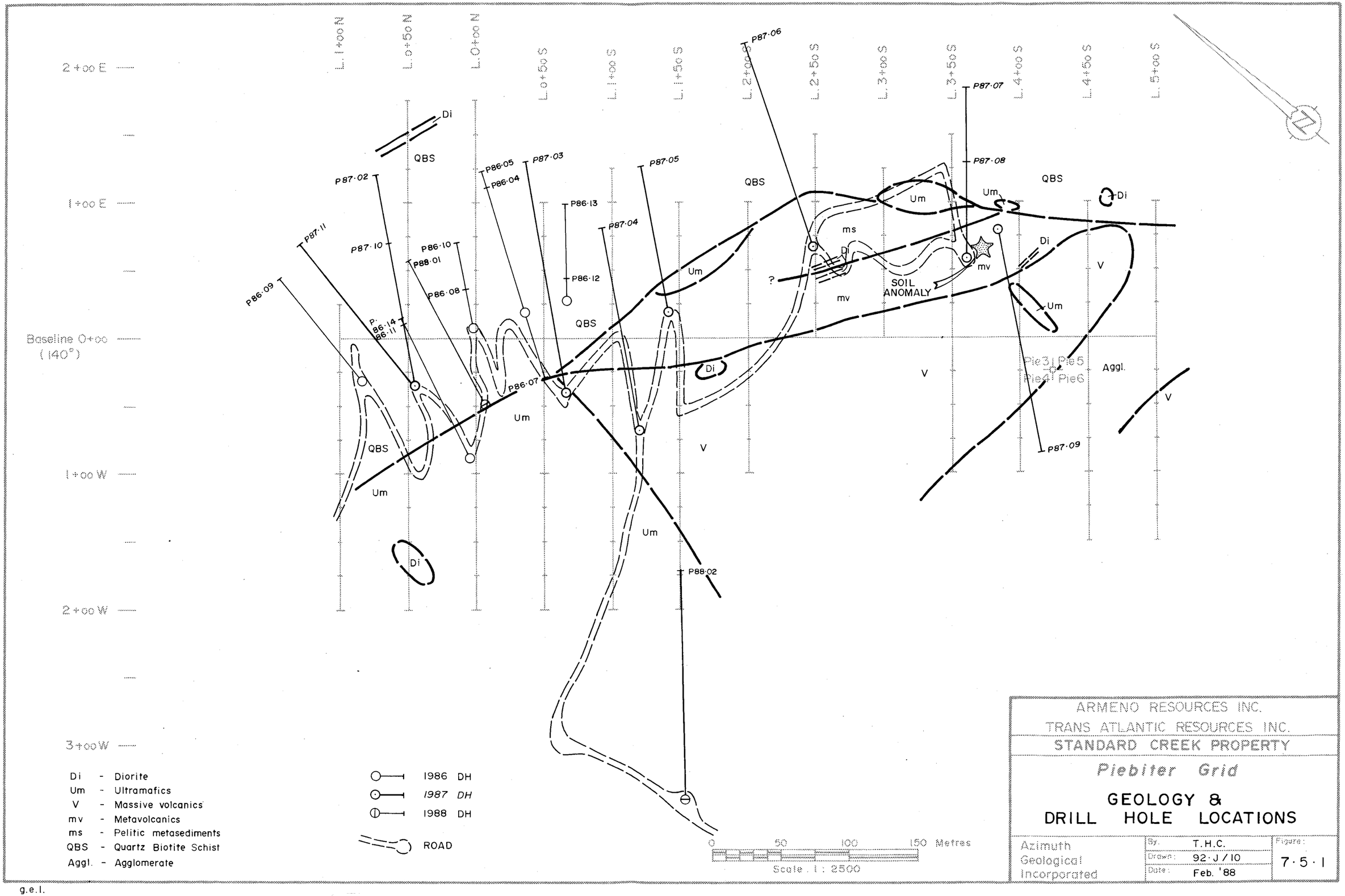
Apparent offsetting of the mineralized zone to the southwest between holes P87-03 and P87-04 suggests the presence of previously unrecognized cross structures in the area. Cross structures play a very important role in localizing mineralization in the Bralorne area (Joubin, 1948) and the increased grades discovered in 1987 may be a result of such localization.

At present the zone is open to the northwest and at depth. It is also possible that holes located souteast of P87-04 may have been drilled northeast of the main mineralized zone and may have intersected narrow zones similar to those seen in P87-02 below the principal mineralized zone.

The cause of a strong soil anomaly (7200 ppb Au) discovered in 1985 is also unresolved. The sample site, located at 3+70S, 0+65E on the north edge of a talus slope, was resampled early in Phase II of the 1987 programme and assayed 5700 ppb Au. A pan concentrate from the same hole showed visible gold.

Three holes (P87-07,08,09) were drilled in the vicinity of this anomaly but failed to intersect mineralization of equivalent grade. Skarnified volcanics at the top of holes P87-07 and P87-08 contained anomalous values in copper to 1707 ppm (Sample #62620). However, potential gold bearing structures may have been missed by P87-07 and 08 due to the necessity of locating both holes practically on top of the anomaly. The siting of P87-07 and 08 was restricted by the limited ability to construct access roads in an area of large talus blocks. Attempts should be made in future to construct a drill site southwest of the P87-07 site to further test this target.

Drill hole P88-02 tested the downward extension of a soil anomaly occurring on L 1+50S, 2+00W. Only low values in gold were detected.



ARMENO RESOURCES INC.
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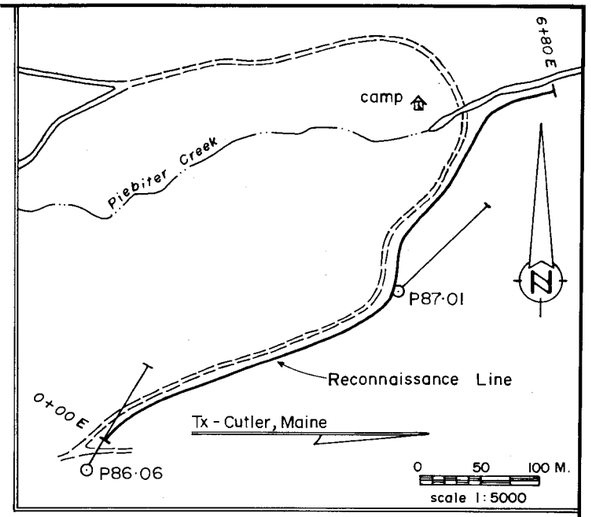
STANDARD CREEK PROPERTY

Piebiter Grid

GEOLOGY & DRILL HOLE LOCATIONS

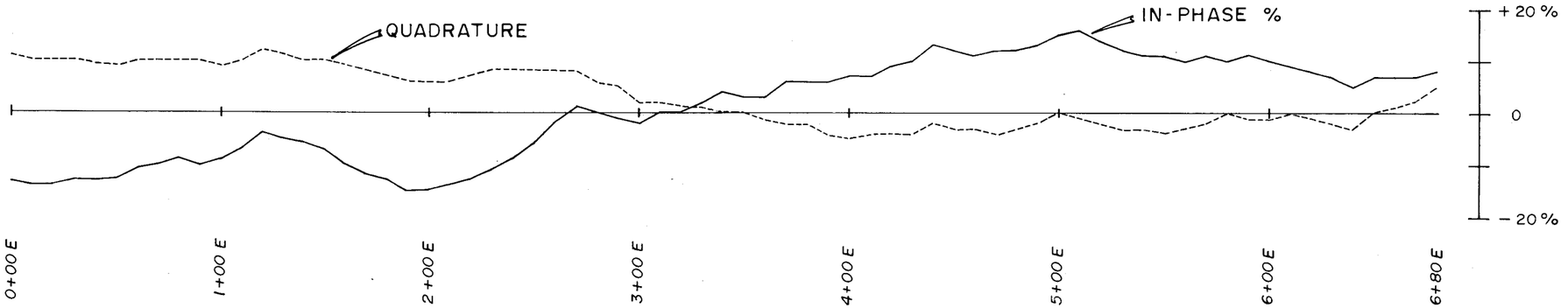
Azimuth Geological Incorporated	By: T.H.C. Drawn: 92-J/10 Date: Feb. '88	Figure: 7-5-1

g.e.l.



FRASER FILTER (positive values only)

+2 +1 +2 +5 +5 +2 +3 +8 +7 +3 +5 +7 +10 +12 +13 +9 +3 +4 +6 +5 +2 +3 +3 +1 +2 +3 +5 +7 +6 +1 +2 +4 +6 +2 +2 +2 +1



0 50 100 150 metres
Scale 1:2500

ARMENO RESOURCES INC.
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STANDARD CREEK PROPERTY

– Piebiter Creek and Drill Road –

VLF-EM-16 Reconnaissance Survey

In-Phase % and Quadrature Profiles

Azimuth Geological Incorporated	By: K.K.	Figure: 7-5-2
	N.T.S. 92-J/10	
	Date: Feb. '88	

g.e.l.

7.6 Chalco/Lower Piebiter

Introduction

The Chalco Zone comprises at least five skarn zones in laminated feldspathic hornblendite and crystalline limestone within 300 metres of the contact with the Bendor diorite. The skarns consist of quartz, diopside, garnet, epidote, chalcopyrite and scheelite.

The Chalco lies along strike northwest of the Piebiter zone. The area includes the Lower Piebiter zone of Allen, 1986. The entire zone will henceforth be known as the Chalco zone.

History

Work was done in 1933 on the Bramoose Group which lies at the northwest corner of the Chalco area. Low gold values were reported in a limestone skarn locally heavily mineralized with pyrrhotite and chalcopyrite (Cairnes, 1937).

The presence of scheelite was not recognized until the late 1930's when the ultra-violet lamp was developed for prospecting.

The B.C. Minister of Mines Report for 1948 mentions the discovery of scheelite and chalcopyrite in similar rocks on what is now the Chalco showings. Molybdenite was also noted. The purity and possible market potential of the limestone on the Chalco claims were also noted at this time.

An exploration and drilling programme was carried out on the Chalco claims in 1969. This exploration defined a zone up to 50 metres in length by 3 to 4 metres in width with grades to 6% Cu, 1.8% WO_3, 2.5 oz/ton Ag and 0.01 oz/ton Au. Reserves, based on drilling, were estimated at 32,648 tons grading 0.57% WO_3 (Cook, 1970).

Results of a 1980 drilling programme for Hat Creek Energy indicated proven and probable reserves of from 75 - 85,000 tons grading 1.3% WO_3 (Elwell, 1980).

A geochemical and geophysical programme was carried out over the Chalco area in 1985 by A & M Exploration. A drill hole, in 1986, tested an induced polarization anomaly and the down dip extension of an arsenic anomaly with scattered gold anomalies. Values to 100 ppb Au and 740 ppm. As were encountered. Additional drilling was recommended.

1987 Program

Work in 1987 consisted of soil sampling, a VLF/EM and reconnaissance magnetometer surveys and mapping. Surveys were carried out over a pre-existing grid.

These programmes were followed in early 1988 by a diamond drilling programme on a selected target.

Summary of Results

Soil Sampling

A total of 212 soil samples were collected on the Chalco grid. Gold and arsenic assay values are shown on Figures 7.6.4 and 7.6.5 respectively. Analytical results are found in Vol. II.

Gold values are somewhat sporadic over the sampled area. A weak but definite linear with highs to 60 ppb Au extends in a southwesterly direction from 10+25 N, L 2+00 W to 8+50 N, L 6+00 W.

A well defined arsenic anomaly extends from 9+50 N, L 3+00 W to 8+25 N, L 6+00 W and corresponds well to the above Au anomaly. This As anomaly

also has a southeast trending component extending from 9+00 N, L 5+00 W to 8+50 N, L 2+00 W. Other isolated anomalies and minor linears are evident elsewhere on the grid.

VLF/EM Survey

A well defined VLF conductor extends from the vicinity of 11+50 N, L 1+00 E to 14+50 N, L 6+00 W. Other weaker conductors on the grid have a similar northwest trend and are probably related to fault zones of the Cadwallader Fault System.

A relatively strong southwest trending conductor is found between 9+50 N, L 3+00 W to 8+75 N, L 5+00 W. This conductor corresponds well to the anomalous gold and arsenic soil linear in this area and probably represents subsidiary faulting/jointing within the Cadwallader Fault System.

Magnetometer Survey

A magnetometer survey was completed over the area during the 1986 programme (Allen, 1986). A reconnaissance survey was run over the area during the present programme to test background magnetic values and magnetic contrast.

Magnetometer surveys over other areas of the Standard Creek Property have shown a strong contrast in magnetic values over ultramafic rocks. Whereas many of these rocks, as would be expected show high magnetism others, such as those on the Chalco grid, show lower magnetic values than surrounding rocks.

Lower values may represent variations in whole rock composition or variable alteration.

Results of the mapping program are shown on Figure 7.6.1. Rocks exposed in the area comprise predominantly quartz-biotite schists, limestones,

volcanics and "agglomerates" of the Fergusson Group. These rocks trend northwest and exhibit a steep southwesterly dip.

Intruding the Fergusson near the southeast corner of the grid are found diorite dikes of the Bendor intrusives. Diorite of the Bendor Batholith is also exposed at the northwest corner of the grid.

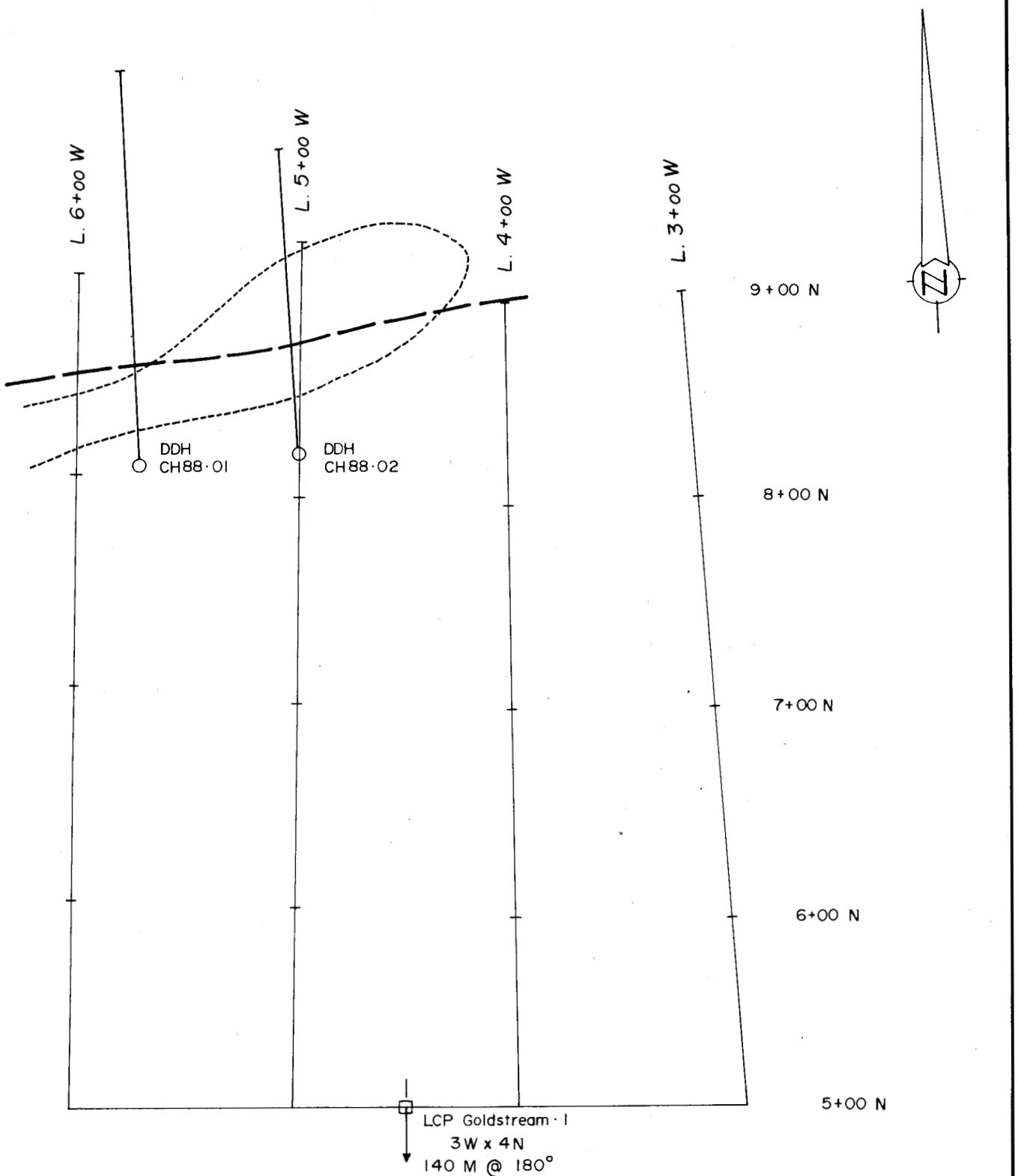
President ultramafics are exposed in the central and southeast parts of the grid. Based on exposures seen on Piebiter Creek these ultramafics form dykes within the Fergusson Group rocks.

Drill Programme

Two diamond drill holes were collared on the Chalco grid to test the coincident southwest trending gold and arsenic anomalies and VLF/EM conductor from 9+00 N, 5+00 W to 8+50 N, 6+00 W.

Holes CH 8801 and CH 8852 were positioned at 5+75 W, 8+00 N and 5+00 W, 8+25 N respectively. Both holes were drilled at an angle of -45° and azimuths of 360°. Rocks intersected principally included quartz-biotite schists and cataclastics of the Fergusson Group and President ultramafics. Minor quartz veining was evident in CH 8801.

Zones of broken sheared rock, locally graphitic, were seen in both holes and probably correspond to the VLF/EM conductor. No direct cause for the geochemical anomalies are immediately apparent. The best values obtained in core are 250 ppb Au and 754 ppm As.



Au - As Soil Anomaly

VLF - EM Conductor

Scale 1:2500

0 50 100 150 Metres

ARMENO RESOURCES INC.
TRANS ATLANTIC RESOURCES INC.

STANDARD CREEK PROPERTY

- Chalco Grid -

DRILL HOLE LOCATIONS

Azimuth Geological Incorporated	By: L.R.H. N.T.S. 92·J/10 Date: Feb. '88	Figure: 7·6·1

7.7 Piebiter-Royal Zone

Introduction

The Piebiter-Royal Zone consists of that area located between the Piebiter and Royal Zones. This area is not known for its mineral potential as no records of any exploration or mineralization in the area are existant. An understanding of the area was thought necessary as this area and its extension to the northwest respresent a little known part of the property.

No record of any work in the area exists prior to 1980. However, an adit located on L3+00E, 2+85S and a trench located at 3+85S, L10+00E indicates work was carried out in the area probably in the early 1930's.

History

The area is included within ground held by Hillside Energy in 1980-82 and was later acquired by Trans Atlantic Resources Inc. as part of the Standard Creek Property.

Geophysical and geochemical surveys were carried out over the area on behalf of Trans Atlantic Resources Inc. in 1986.

1987 Programme

Magnetometer and VLF/EM surveys were run over the Piebiter-Royal area in an attempt to trace geological and structural features encountered on the Standard Grids to the southeast. In conjunction with the geophysics a reconnaisance mapping programme was also completed.

Summary of Results

Magnetometer Survey

A strong magnetic linear extends in a northwesterly direction from 12+50S on L10+00E to 10+00S on L6+00E. This linear is along strike from a linear found on the Standard West Extension Grid that corresponds to ultramafic rocks found in the Royal area.

Smaller isolated magnetic highs about 400 metres north of this linear on lines 6+00E and 8+00E may represent a parallel structure.

An isolated magnetic high at approximately 6+75S on L4+00E may represent the northwest extension of this linear.

VLF/EM Survey

Several prominent VLF conductors are evident on the Royal-Piebiter Grid (Fig. 7.7.2). The majority of these conductors show a prominent northwest trend coincident with the strike of rocks and structures in the area.

A northeast-southwest trending conductor from 4+50S, L12+00E to 6+00S, L8+00E may represent a geological cross structure in this area. However this anomaly may be a result of inaccurate survey control and attendant contouring problems. More detailed VLF/EM would be necessary in this area to fully assess this feature.

A well defined conductor trending from 12+50S, L10+00E to 9+75S, L6+00E corresponds to a magnetic linear and outcropping ultramafics. The conductor probably represents the sheared contact of these ultramafics.

A very strong conductor at 3+00S, L4+00E trends southeast, bifurcates and bounds a magnetic high on L6+00E at 4+50S. This conductor probably represents a major shear zone in the area. However, lack of outcrop precludes an accurate assessment of this anomaly.

Other conductors north of the baseline probably represent subsidiary faults in the area.

Survey results are shown on Fig. 7.7.3.

Mapping

Little outcrop is exposed between the Royal and Piebiter areas. Rocks encountered principally comprise quartzites and quartz biotite schists with occasional argillitic interbeds. These rocks trend northwest with a steep southwesterly dip and form a part of the Fergusson Group.

A total of five rock samples were collected in the Piebiter-Royal area. Samples and descriptions are listed in Table M.

TABLE M

Rock Sample Descriptions - Royal - Piebiter Grid

Sample	Location	Type	Width	Description	Au (ppb) Ag (ppm)
GC L 8+00 E, 3+10 N	Royal-Piebiter Grid	Grab	-	Quartzite/Quartz Biotite Schist. Pyrite along foliation in biotite rich bands and as disseminations in quartzites. Pyrite to 1-2%. Note 1986 sample 80-603201.	1 0.3
GC L 8+00 E, 3+75 N	Royal-Piebiter Grid	Grab	-	Quartzite with biotite rich bands, locally agglomeratic? with siliceous angular fragments in a more biotite rich siliceous groundmass. Disseminated pyrite to 1-2%. Note 1986 sample 80-603199.	1 0.1
GC L 8+00 E, 5+90 S(a)	Royal-Piebiter Grid	Chip	1.5 cm	Quartz vein with disseminations, aggregates and fracture coatings of pyrite to 10%. Minor disseminated pyrite in country rock marginal vein.	1 5.9
GC L 8+00 E, 5+90 S(b)	Royal-Piebiter Grid	Grab	-	Interbedded quartzite and quartz biotite schist. Rust weathering. Disseminated pyrite to 1%.	1 0.4
GC L 8+00 E, 3+85 S	Royal-Piebiter Grid	Grab (Float)	-	Bull quartz. Locally with limonitic patches hosting trace, fine grained (<1 mm) pyrite. Found scattered around old pit.	1 0.1

7.8 Royal Zone

Introduction

The Royal Zone consists of numerous quartz veins with hornblende diorite and surrounding metasediments and metavolvanics. Initial work in 1932 consisted of ground sluicing, surface cuts and a short crosscut adit on the largest of these veins which measured 1.5 m in width. The veins generally average several centimetres in thickness and have been found over an area 1800 metres by 1000 metres. Mapping on the Standard West Grid east of the Royal Zone indicates that the vein system may extend several kilometres to the southwest.

Sampling by Ostler, (1980) of vein material from the original workings indicated minor values in tungsten (0.01 to 0.25% WO_3), silver (0.10 to 0.2 oz/ton) and gold (0.003 oz/ton).

Recent work has also indicated anomalous molybdenum values.

Geology

The Royal area is located within a sequence of quartzites, argillites, quartz biotite schists and minor volcanics. The southern part of the area is occupied by diorite.

Northwest trending serpentinized ultramafics are found in the vicinity of R86-15. These are along strike from and may correspond with ultramafics located with the Standard Creek Valley south of the Standard Adit (Fig. 2.2.1).

History

A gold bearing quartz vein in diorite was reported on the property in 1932 and was exposed for 40 feet on surface. Work continued to 1934 and included a crosscut adit to cut the vein at depth.

The diorite exposed on the Royal claims represents the southeastern most exposure of intrusives found along Cadwallader Creek. These hornblende diorites were at that time considered to be of considerable importance to mineralization in the Bralorne area, as economic quartz veins were generally found within diorite or in greenstone intruded by tongues of diorite (Cockfield and Walker, 1932).

A geochemical program was carried out in the Royal area by Hillside Energy who held the property from 1980 to 1982 (Fairbank and Brownlee, 1980). Although results were positive, no further work was carried out. The Royal claims were subsequently acquired in 1984 by Trans Atlantic Resources Inc. as part of the Standard Creek Property.

Work programs carried out for Trans Atlantic Resources by A & M Exploration Ltd. in 1984 and 1985 included magnetometer and VLF/EM surveys (Allen 1984, 1985). In 1986 the property was joint ventured with Armeno Resources Inc. During a major exploration programme conducted in 1986, two holes were drilled to determine the source of anomalous Au-As values in soils detected by previous surveys. The drill programme encountered quartz veining containing pyrite, minor chalcopyrite and molybdenite. Au assays however were disappointing and additional drilling was recommended (Allen 1986).

1987 Programme

An evaluation of earlier work led to a re-examination of the Royal Zone during Phase I of the programme. Results of this work suggested that soil geochemical and geophysical anomalies had not been adequately drill tested (Carpenter & Haynes, 1987).

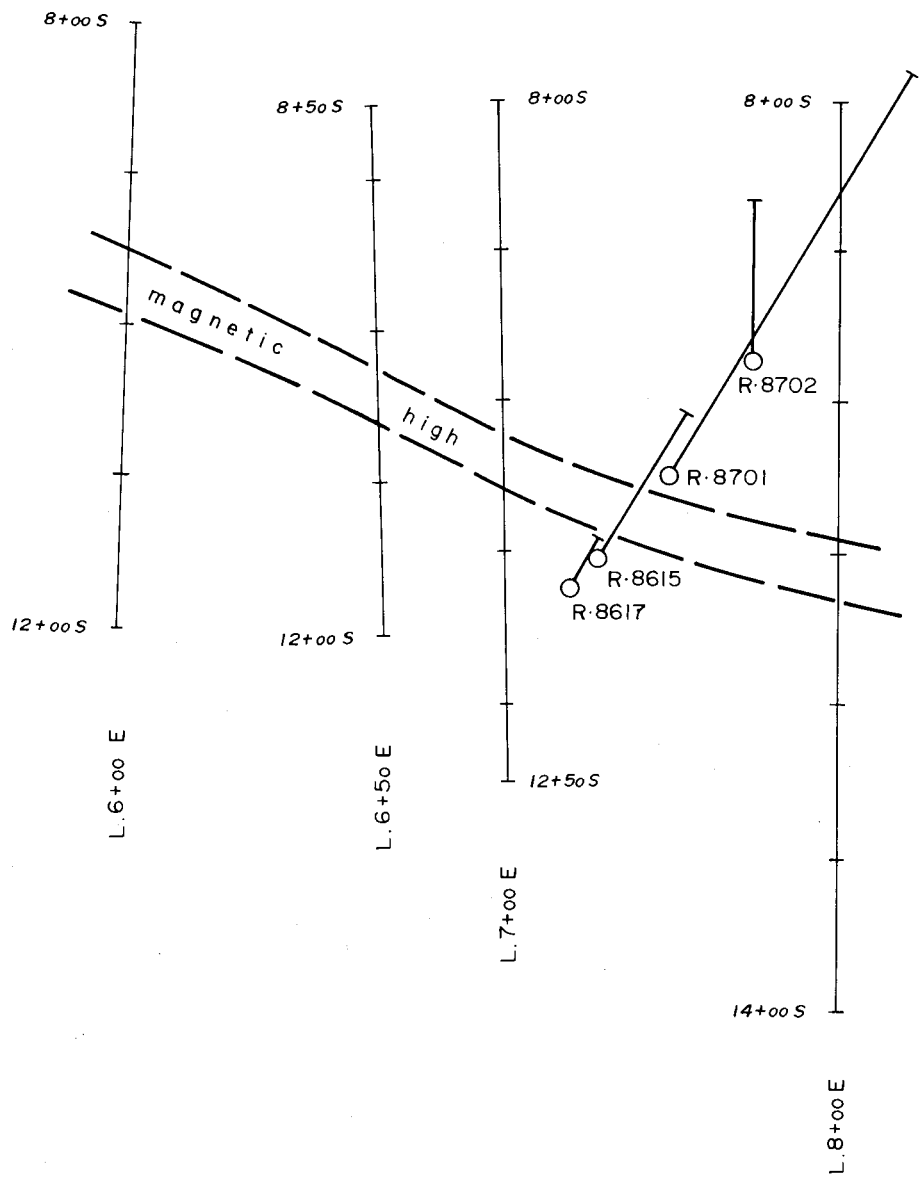
Two holes, R8701 and R8702 were subsequently drilled in the Royal area during Phase II of the 1987 programme. These holes were located immediately north of the holes drilled in 1986 (See Fig. 7.8.1).

Summary of Results

Like the 1986 holes the 1987 drill holes intersected silicified metasedimentary and metavolcanic rocks cut by two stages of quartz veins. The quartz veins are variably mineralized with pyrite, molybdenite, chalcopyrite and sphalerite.

As with the 1986 drilling, Au values were disappointing. The best Au value obtained was 60 parts per billion, with associated arsenic values greater than 2000 ppm (Sample #15497). Other anomalous values include 1769 ppm Zn (#15485), 465 ppm Mo (#14477) and 896 ppm Cu (#14468).

As suggested by Allen (1986) the mineralization encountered seems to suggest the presence of a porphyry molybdenum system in the Royal area with peripheral or telescoped lead-zinc precious metal mineralization. This mineralization may be contemporaneous with emplacement of the hornblende diorite in the area.



0 50 100 150 200 250 Metres

Scale 1:5000

ARMENO RESOURCES INC.
TRANS ATLANTIC RESOURCES INC.

STANDARD CREEK PROPERTY

- Royal Grid -

DRILL HOLE LOCATIONS

Azimuth Geological Incorporated	By:	L.R.H	Figure: 7·8·1
	N.T.S.	92·J/10	
	Date:	Feb. '88	

g.e.l.

7.9 BUTTE - I.X.L.

Introduction

The Butte - I.X.L. group consists of quartz veins in sediments and volcanics along strike from and northwest of the Royal Adit. The veins are contained within rocks of the Pioneer and Noel Formations which strike northwest and dip steeply to the southwest. In places the veins are heavily mineralized with pyrrhotite, chalcopyrite and sphalerite with lesser pyrite and galena. Low values in gold are reported. (Allen, 1986).

Geology

The Butte - I.X.L. lies along the northwest trending Cadwallader Shear Zone, marked by a tightly folded and faulted sequence of Noel and Pioneer Formation sediments and volcanics in contact with the sediments of the Fergusson Group.

Quartz veins are developed at or near the contact between the Noel Formation and the Pioneer Formation of the Cadwallader Group.

Immediately north and south of the principal adit on the Butte - I.X.L., fault related northwest trending serpentinized ultramafic dikes occur within the Cadwallader Shear Zone. To the south, near the headwaters of Aggie Creek, a larger stocklike mass of serpentinized and locally steatitized ultramafic rocks are exposed.

History

Between 1933 and 1934 an 803 foot (244.8 m) long adit and 165 ft (50. 3 m) shaft were developed on two quartz veins within sediments and volcanics. The veins are in places heavily mineralized with pyrrhotite, chalcopyrite and sphalerite. Lesser amounts of pyrite and galena also occur. Minor gold values are reported (Cairnes, 1937).

No other work is recorded on the Butte - I.X.L. until 1980 when the claims were held by Hillside Energy. Geological and geochemical surveys were conducted on the Jana-Butte-Royal-Standard claim group in 1980 and 1982 (Ostler 1980, Melrose and Fairbank, 1982). A geological and geochemical program was carried out over the area in 1984 for X-Calibre Resources. Further work was recommended (Mazur, 1984).

Geophysical and geochemical surveys were undertaken by A & M Exploration for Trans Atlantic Resources in 1985 north and northwest of the Butte - I.X.L. which was not at that time a part of the Standard Creek property (Allen, 1985).

No other work was carried out in the area until the present programme.

1987 Programme

The 1987 programme consisted of grid establishment using compass and hip chain. Lines were run at 100 metre intervals extending south from a pre-existing grid to the north. Stations were marked at 25 metre intervals along the lines with plastic flagging.

Grid establishment was followed by mapping, VLF/EM and magnetometer surveys and soil sampling.

Summary of Results

Soil Sampling

A total of 284 soil samples were collected on the Butte - I.X.L. grid. Gold and arsenic assay values are shown on Figures 7.9.5 and 7.9.6 respectively. Analytical results are found in Appendix VI.

Gold values are extremely sporadic with no well defined anomalies. Values on lines 5+00W to 10+00W are low with a "high" of only 25 ppb Au. Two spot highs of 111 ppb and 54 ppb occur on lines 11+00 W and 12+00 W at 4+25 S and 2+50 S respectively. These highs occur along strike from minor anomalies exposed to the southeast and may form a single northwest trending anomaly. Infill soil sampling will be necessary however to further define this anomaly. No associated arsenic values are evident.

VLF/EM Survey

Two strong and one moderate northwest trending VLF conductors are located on the Butte - I.X.L. grid (Fig. 7.9.3). The most northerly of these extends from 2+50 S on L 6+00 W to 0+50 S on L 11+00 W. This conductor is in an overburden covered area and no cause for the conductor is discernible.

A second conductor extends from 0+75 S on L 7+00 W to 5+25 S on L 12+00 W. conductor corresponds to the contact between ultramafics to the north and argillites to the south and probably represents a shear zone.

The third and weakest conductor extends from 8+00 S to L 7+00 W to 7+25 S on L 11+00 W and then swings south to 7+75 S on L 12+00 W. This conductor probably represents, at least in part, the northerly contact of the stocklike ultramafic mass to the south with volcanics to the north.

Magnetometer Survey

Results of the magnetometer survey are shown on Figure 7.9.4. A distinct magnetic high extends from 1+00 S, L 5+00 W to 0+00, L 7+00 W. This high represents the southeastern extension of a magnetic linear detected in the 1985 programme. This linear extends to 10+00 N, L 18+00 W. Little bedrock is exposed along this high except at the west end where argillites and ultramafics are exposed in a creek bed. It is presumed that the magnetic linear corresponds to the southeast extension of this ultramafic.

A second, weaker linear extends northwest and southeast from the vicinity of L 8+00 W, 5+00 S. This linear corresponds with ultramafics exposed west of the Butte - I.X.L. shaft and probably represents the trend of these rocks. Other magnetic highs are associated with ultramafics at the southwest corner of the grid.

Overall the magnetic background in the area is relatively low in sharp contrast to ultramafic rocks with high magnetic signatures. This contrast should provide a useful exploration tool for delineating ultramafic rocks.

Mapping

Tightly folded Noel Formation argillites and Pioneer Formation volcanics are exposed in the Butte - I.X.L. area. These rocks trend northwest and a cut by northwest trending serpentinized ultramafic rocks. The latter occur within faults of the Cadwallader Fault System.

At the southwest corner of the grid occurs a large stocklike mass of serpentinized and steatized ultramafic rocks.

Old workings in the area include an adit and shaft developed to explore quartz veins exposed in sediments and volcanics near the contract between Noel and Pioneer Formation rocks (Fig. 7.9.1).

TABLE N

Rock Sample Descriptions - Butte - I.X.L.

Sample	Location	Type	Width	Description	Au (ppb) Ag (ppm)
JC - IXL L 6+00 W, 8+30 S	Butte - I.X.L. Grid		-	Fine grained rock with 2% disseminated pyrite. Light grey weathering. Possible hornfels.	1 0.2
JC - IXL L 6+15 W, 9+50 S	Butte - I.X.L. Grid		-	Massive white quartz.	1 0.2
JC - IXL L 7+00 W, 5+12 S	Butte - I.X.L. Grid		-	Massive white quartz.	1 0.2
JC - IXL L 9+60 W, 7+00 S	Butte - I.X.L. Grid		-	Graphitic argillite, rusty weathering.	1 0.2

7.10 Butte-X-Cal

Introduction

The Butte-X-Cal claim consists of listwanitic alteration at the contact between ultramafic rocks of the President ultramafics and sedimentary rocks of the Noel Formation. The listwanites are cut by quartz veinlets to 1-2 cm in thickness.

Geology

Ultramafics, largely serpentinized, comprise approximately 50% of the rock in the Butte-X-Cal area. The ultramafics have been fault emplaced within sediments and volcanics of the Noel Formation which occupy the area between Copp Creek and the cirque at the headwaters of Aggie Creek.

A small ultramafic body within the cirque contains a 1-2 metre zone of listwanite along both contacts.

Several aplite dykes have been mapped in the area. These are probably related to Bendor Intrusives which are exposed to the east across Cadwallader Valley. Quartz veining is commonly associated with these aplites and signs of former prospecting activity are evident.

History

Trenching within the Butte-X-Cal area presumably dates from 1933 to 1934 when work was conducted on the Butte - I.X.L. area to the northeast and the Red Hawk area to the north. Three old adits north of Aggie Creek were driven on aplite dykes with minor associated quartz veining by Red Hawk Gold Mines around 1933.

Geological and geochemical surveys were conducted by Hudson Bay Exploration in 1985 and outlined several isolated gold anomalies.

1987 Program

1987 program consisted primarily of geological mapping, soil sampling and VLF/EM surveys in the area of the Red Hawk claims immediately north of the Butte-X-Cal during Phase I of the program (Carpenter & Haynes 1987).

Minor prospecting was also carried out in the Butte-X-Cal area. During Phase II of the program a reconnaissance and detailed VLF/EM surveys were completed in the Butte-X-Cal area. These surveys were undertaken to determine whether linear gold anomalies were associated with possible structural features.

Four reconnaissance VLF/EM lines were run northeast-southwest across the area to intersect possible northwest trending structures (Fig. 7.10.1) As a result of a strongly anomalous conductor picked up on Recon Line #2 a detailed grid was established within the cirque area at the headwaters of Aggie Creek.

Summary of Results

Initial prospecting in the area had confirmed the accuracy of the mapping program carried out by Hudson Bay Exploration. Results of this program have therefore been included on the geological compilation (Fig. 2.2.1).

Two strong VLF conductors were detected within the area of the detailed grid (Fig. 7.10.3). These conductors trend east-west and probably represent fault contacts and subsidiary faulting between ultramafics and sediments in the area.

No northwest trending structures were detected by reconnaissance VLF and it appears likely, from all evidence available, that anomalous gold values in soils are due to minor gold values in northwest trending aplite dykes.

The possibility exists that both the grade and width of listwanites in the area may increase with depth but priority should be given to better, more accessible targets on the property.

8.0 Conclusions and Recommendations

8.1 Conclusions

The Standard Creek Property is host to known concentrations of gold and silver mineralization. The presence of large volumes of altered rocks and suitable geologic structures suggests that potential also exists for the discovery of economically viable precious metal deposits.

These conclusions are based on the following information:

Chopper Vein

The Chopper vein consists of possible ore chutes up to 5 metres in thickness within a mineralized quartz vein extending over 2 kilometres within the property boundary.

Two holes cut the vein during 1987 drilling. One of these holes, C87-02 intersected 4.7 metres of vein material (2.2 metres true width) averaging 7.43 oz/ton silver. The best value obtained during the surface chip sampling program however was 3.96 oz/ton Ag over 0.7 metres which would seem to indicate that actual grades within the vein may be significantly higher than surface chip sampling has indicated. The possibility of the wider zones along the vein extending to depth should be explored.

Piebiter Area

The Piebiter area consists of gold mineralization in a northwest trending cataclastic zone within quartzites and quartz-biotite schists of the Fergusson Group. Gold mineralization appears to be concentrated at and near the contacts with ultramafic rocks which are locally anomalously rich in gold. Drilling in 1986 encountered anomalous gold values up to 0.166 oz Au/ton over 0.2 metres in a near surface mineralized zone with a maximum thickness of approximately 15 metres and a possible 600 metre strike length. The zone was drilled to a depth of approximately 100 metres from surface.

Continued drilling on the Piebiter area in 1987/88 has traced Au mineralization 300 metres southeast of previous drilling. Grades in excess of 0.03 oz/ton Au were found in eight of eleven holes drilled, with values as high as 0.17 oz Au/ton over one metre in a 9 metre intersection averaging 0.065 oz/ton Au in drill hole P87-02. Additional drilling will be necessary to establish continuity and grade before any attempt can be made to establish geological reserves. The zone is open to the northwest, to the southeast and at depth. The possibility exists of richer zones of mineralization occurring within a long narrow near surface low grade mineralized zone potentially mineable by open pit methods.

Additional exploration is warranted in the vicinity of the high soil anomaly (5700 ppb Au) near the south end of the grid.

Anomalous gold values on the Piebiter Grid, (L1+50E,2+005) and in the vicinity of hole P86-06 (1985 data) as well as along strike to the northwest, occur at and near the contact between ultramafics and agglomerate (cataclasite). This points to the possibility of a second zone parallel to the present mineralized zone.

Chalco

Localized soil anomalies in the Chalco area combined with its position along strike from the Piebiter area makes the area of further exploration interest. If ultramafics or a certain type of ultramafic are found to be a factor in localizing mineralization in the Piebiter area, efforts should be made to identify the northwest extension of these rocks in the Chalco area.

Standard Zone

The original Standard gold zone as reported by Clothier (1933) does not exist. However numerous quartz veins and a large volume of talc altered serpentinites occur in the Standard Adit area. During alteration a substantial portion of the gold contained within unaltered rocks is released into the geological environment. Thus given a potential source of gold such

as altered serpentinites, and suitable channelways (faulting, jointing) for the transport of ore-bearing fluids, the only parameter required for the localization of gold mineralization is a suitable depositional site. Further exploration in the Standard Adit area should be devoted to pinpointing such a site.

Standard West Grid

Contains anomalous gold values in soils and quartz veins in float. These veins may be related in part to molybdenun rich quartz veins exposed in outcrop and intersected in drill holes in the Royal area. The quartz veining may also be related to silver rich quartz veins exposed in the Standard Adit area.

Exploration in this area should be conducted in conjunction with that in the Standard area.

Royal Area

Despite disappointing Au values in drill holes heavy mineral samples taken from streams draining the Royal area are the highest of all samples collected. Part of the area west and north of the Royal Adit is not known to have been previously sampled.

Butte - I.X.L.

There is little evidence to indicate the presence of economic gold values in the Butte - I.X.L. area. Nevertheless several soil samples anomalous in gold indicate the presence of a possible linear which should be investigated.

Butte-X-Cal, Red Hawk

There is little incentive to recommend further work in these areas. Historical work on quartz veins in the area indicated only trace gold values. Work in 1987 has tended to confirm this information.

8.2 Recommendations

Additional work should be undertaken on the Standard Creek Property, principally on the Piebiter, Chopper and Standard zones, with an estimated budget of $1,300,000.

Further drilling is recommended on the Piebiter Grid now accessible by road once field conditions permit. Where possible, road spurs should be pushed southwest from existing switchbacks to act as drillsites. Drill holes should be planned to undercut mineralization intersected in P8703 and P8704 and to test the possible northwest extension of mineralization in P8704.

Holes should also be designed to undercut P86-09 from the switchback to the south and to test the extension of mineralization northwest of P87-02.

In the vicinity of P8707 and P8708 as much talus as possible should be removed to test the possible source of high gold values in soil. Any exposed outcrop and structures should be sampled in detail.

This report incorporates the analysis of all the major components in the Piebiter from the information accumulated to date. A further analysis of this information may provide a more detailed understanding of the controlling factors influencing the mineralization patterns in the Piebiter area. Possible whole rock analysis may aid in tracing rock types from hole to hole to help to identify alteration patterns asociated with mineralization. Any information derived from these surveys may help extend mineralization onto the Chalco Grid to the northwest.

Detailed soil sampling should be done along the ridge southeast and northwest from L1+50S, 2+00W to test for anomalous gold values at and near the contact between ultramafics and "agglomerates".

The quartz veining exposed immediately south of Royal Peak should be examined as the possible extension of the Chopper Vein. A resistivity survey northwest of these exposures may help to trace these veins along strike.

Any drilling on the Chopper Vein should be designed to test the thicker parts of the zone. If a resistivity survey is successful in tracing the Chopper Vein to the northwest, road access may be feasible. To facilitate moves and minimize downtime, any helicopter supported drilling should be undertaken using a Longyear "38" drill designed for helicopter moves using a Bell 206 helicopter or equivalent.

Future drilling in the Standard Area should be preceded by detailed resistivity surveys at 10 metre spacings to trace potentially auriferous quartz veins. Unfortunately these veins, as with the general structure, probably trend northwest and are likely to be found in the Standard Creek valley where thick overburden will preclude geochemical methods of target definition.

The resistivity survey should be combined with a detailed VLF/EM survey which will aid in defining potential geological structures. The presence of an old telegraph line in Standard Creek valley may however cause interference with electromagnetic surveys in the area and removal of the line may be necessary prior to commencement of the survey.

Limited resistivity northwest of the Butte - I.X.L. may help to outline potentially auriferous quartz veins. Targets in this area could be trenched and sampled as a preliminary evaluation.

A cost estimate for the recommended work is included as Section 9.0.

Respectfully submitted,

per T. Carpenter

Thomas H. Carpenter, B.Sc., F.G.A.C.

L. Haynes

Larry R. Haynes, B.Sc., F.G.A.C.

9.0 COST ESTIMATE

Detailed geophysical surveys, minor detailed mapping, road and drill site construction, diamond drilling of the Piebiter, Standard and Chopper zones.

Salaries			
Project Geologist	1 x 120 days	@ $300/day	36,000
Geologists	2 x 90 days	@ $225/day	40,500
Technicians	4 x 90 days	@ $175/day	63,000
Room and Board	630 man days	@ $55/day	34,500
Camp Mobilization and Demobilization			5,000
Equipment Purchase			5,000
Vehicle Rental	2 x 90 days	@ $75/day	13,500
Geophysical Surveys			
VLF/EM and Resistivity Unit Rentals			4,500
Diamond Drilling			
Piebiter	2,000 m x $200/m		400,000
Chopper	700 m x $200/m		140,000
Standard	700 m x $200/m		140,000
Bulldozer and Backhoe			
Drillsite preparation, road construction, reclamation mobiliztion, operation	400 hours	@ $120/hr.	48,000
Helicopter Support	200 hours	@ $550/hr.	110,000
Geochemical Analysis and Assay			
2,800 samples @ 15/sample			42,000
Report Preparation			25,000
Data Processing			25,000
Supervision, Consulting			50,000
			1,182,100
	Contingency		118,000
Total			**1,300,000**

10.0 CERTIFICATE

I, Thomas H. Carpenter, of the City of Vernon, in the Province of British Columbia hereby certify that:

1. I am a Geologist residing at 3011 23rd Street, Vernon, B.C.

2. I hold a Bachelor of Science degree in Geology from Memorial University of Newfoundland granted in May of 1971.

3. I have been practicing my profession continuously since that date in Canada, the United States and Australia.

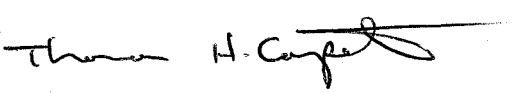
4. I am a Fellow of the Geological Association of Canada (Membership Number F4838).

5. I hold no interest either directly or indirectly in the shares or securities of Armeno Resources Inc. nor do I expect to receive any interest.

6. This report is based on work carried out by myself and others under my supervision between August 1, 1987 and February 22, 1988 and on an evaluation of previously acquired technical data.

7. I consent to the use of this report in a Prospectus, Statement of Material Facts or Qualifying Report.

Dated this 29th day of February, 1988.



Thomas H. Carpenter, B.Sc., F.G.A.C.

10.0 CERTIFICATE

I, Larry R. Haynes residing at 127 East 18th Avenue, Vancouver, B.C., hereby certify that:

1. I graduated from the University of British Columbia in 1972 with a B.Sc. in Geology.

2. I have worked full-time since 1972 as an exploration geologist in Canada and the Western United States.

3. I am a Fellow of the Geological Association of Canada, with membership number F4291.

4. I hold no interest either directly or indirectly in the shares or securities of Armeno Resources Inc. nor do I expect to receive any interest.

5. This work is based on work carried out by myself and others under the supervision of Thomas H. Carpenter and on an evaluation of previously acquired technical data.

6. I consent to the use of this report in a Prospectus, Statement of Material Facts or Qualifying Report.

Dated this 29th day of February, 1988.

L. Haynes

Larry R. Haynes, B.Sc., F.G.A.C.

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