ALPINE GOLD PROJECT

REPORT ON 1989 DIAMOND DRILL PROGRAM

NELSON AND SLOCAN MINING DIVISIONS

NTS 82F/11 E & W

LATITUDE 49° 41' N

LONGITUDE 117° 15' W

by

Greg Z. Mosher, P. Geol.

for

COMINCO LTD.

Vancouver, B.C.

September 15, 1989
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SUMMARY

During August, 1989, the Alpine Gold Project drill-tested the extension and potential of the gold-bearing Alpine vein down-dip of the former Alpine Mine. The property, under option from Cove Resources Corporation, is located 20 kilometers northeast of Nelson in south-central British Columbia, at about 2,150 meters elevation above sea level. The program consisted of 12 MBHBQ diamond drill holes (1,745 m) drilled in three fans of two holes each from two drill set-ups.

The two drill sites are located north of the Alpine Mine 10 Level at the head of Alpine Creek. Site 2 is on Lot 2881 and site 3 is on Lot 15005. See Fig. 2c.

Four holes intersected quartz vein similar to that exposed in and adjacent to the Alpine Mine; seven holes intersected zones containing quartz veinlets that were interpreted to be stratigraphically equivalent to the Alpine Vein; in one hole the target was displaced by a post-vein lamprophyre dike.

Samples of vein or vein-zone material from six holes (AG-89-01,02,03,05,06,12) contained in excess of one gram per tonne (0.03 ounces per ton) gold; two of these holes (AG-89-05 and 12) contained gold values in excess of ten grams per tonne (0.30 ounces per ton) gold.

Limited mapping and sampling of the surface trace of Alpine vein is also shown on Fig. 2c.

INTRODUCTION

During the month of August, 1989, a diamond drill program was conducted on the Alpine Gold property, located northeast of Nelson, in south-central British Columbia, and held under option by Cominco Ltd. from Cove Resources Corporation.

The Apine Gold Property is centered on the former Alpine Mine which, during the period 1940-1941, produced about 8,500 ounces of gold and 5,200 ounces of silver from about 17,000 tons of ore. The mine exploited a quartz vein, about one meter thick, that strikes 070 degrees azimuth, and dips about 25 degrees to the north.

Investigations conducted by Cove Resources during the period 1987-1988 indicated that many of the working places within the former Alpine Mine ended in ore, and limited surface exploration showed that the mineralized vein extended beyond the limits of underground workings. Shortly thereafter, Cominco Ltd. acquired an option on the property.

The purpose of the 1989 drill program was to test the limits of the Alpine Vein by attempting to intersect it in several step-outs from the old workings, and to determine the thickness and grade of any gold mineralization encountered in the vein.

Details of the program and results obtained are described below.

LOCATION and ACCESS

The Alpine Gold Property is situated about 20 kilometers northeast of Nelson in south-central British Columbia at latitude 49°41'N; longitude 117°15'W (NTS 82f/11). The property straddles the height of land between the drainages of Alpine Creek to the north and Sitkum Creek to the south. The old mine workings lie between elevations 2,100 and 2,250 meters above sea level, at the upper reaches of the tree-line.

Access to the property is via the rehabilitated mine access road that branches from the Nelson-Kaslo highway (3A) about 17 kilometers northeast of Nelson. From the highway to the minesite is a distance of about 16 kilometers, and a rise of about 1750 meters in elevation. This road is in places torturous, having been built for neither comfort nor speed; more expedient access to the property can be gained by helicopter from Nelson, a trip of about 10 minutes duration.

HISTORY

The Alpine Mine is reported[1] to have been discovered in the late 1800's, but was not developed until 1939, at which time both the mine and milling facilities were developed. Principal production occurred during 1940 and 1941, with additional minor production between 1946 and 1948. Underground development consists of about 1000 meters of drifting on five levels.

CURRENT EXPLORATION

The 1989 program consisted of an 1,800 meter (1,745.1 actual) drill program and a minor amount of surface exploration (reported separately). The objective of the drill program was to establish the presence, thickness, and grade of contained mineralization in the Alpine Vein down dip from the old Alpine Mine workings.

The drill program consisted of twelve holes of 145 meters average length, drilled in fans of two, from two set-ups respectively 200 and 400 meters down-dip on the vein from the elevation of the 10th level portal of the Alpine Mine (Location Map, Figure 1). The location and layout of the holes is illustrated in Figures 1 and 2. The drill sites were located on the axis of the Alpine Creek drainage to minimize the drill distance from surface to projected vein depth.

The holes were laid out so as to intersect the vein at a projected down-hole distance of about 110 meters. This projection proved accurate for the first drill set-up, however, at the second set-up the average down-hole distance to the vein was about 130 meters. Each hole that intersected vein material was drilled about 10 meters beyond the footwall contact of the vein to ensure the interval was fully tested. Those holes which did not intersect vein material or cut a very narrow vein were drilled to a depth great enough to reasonably assure that the vein had not been missed.

The core (MBHBQ), was sampled in maximum intervals of one meter within lithological units, or over lesser intervals in order to isolate lithological units. In holes in which the vein was readily identifiable, sampling was carried a minimum of one meter into both the hanging and footwalls. In those holes where a "zone" (see below) rather than a discrete vein was encountered, sampling was conducted over the thickness of the zone.

All samples were obtained by sawing the core in half. Samples were analyzed for gold, silver, lead and zinc; all analyses were performed at the Cominco Laboratory in Vancouver. The unsampled core and the balance of the sampled core are stored at the Alpine Mine site.

Drill logs are appended (Appendix 1), and include sample analytical results. Drill program results are further considered under DISCUSSION below.

GEOLOGY and MINERALIZATION

a) Property Geology

The Alpine Gold Property is underlain by granodioritic rocks of the Nelson Plutonic suite of Cretaceous Age. These rocks are cut by related pegmatites and aplites, and by lamprophyre dikes of two presumed ages; a younger, vertical, north-trending set, and an older, east-trending, north-dipping set.

Within the area of the mine, the batholith is cut by three dominant joint sets: 1) strike 070 degrees, dip 25 degrees north; 2) strike about 070 degrees, dip about 45 to 60 degrees south; and 3) strike 015 degrees, dip vertical. The first set controls the disposition of the Alpine and related quartz veins, as well as defining portions of the topography at the head of Alpine Creek. The third set is the locus of younger lamprophyre dikes in the area of the Alpine Mine. The walls of the rock chute at the head of Alpine Creek are defined by 015/090 joints of set 3) that are occupied by fresh lamprophyre.

The 070/025 joint set was observed in outcrop to be pervasively slickensided and there is abundant evidence in the drill core generated by the current program, notably faulted lithological contacts within the vein-zone, to suggest repeated movement both before and after emplacement of the quartz veins. Drill holes in the current program also intersected both bounding 015/090 joint sets that contain lamprophyre dikes. These intersections were characterized by abundant fault material indicating subatantial movement.

b) Detailed Geology

The property is reported [1] to host at least four quartz veins, the most prominent of which is the Alpine Vein. The vein is exposed over a 300 meter strike length on the six and ten levels of the Alpine Mine, and over about 170 meters of dip between the five and ten levels. Within these workings the vein ranges in thickness from 30 centimeters to over two meters. Within the drill holes covered by this report, the maximum observed thickness of the vein is 70 centimeters. In some holes the Alpine Vein appears to thin to one,or more commonly, to a series of quartz veinlets several millimeters to about 10 centimeters in thickness.

The Alpine Vein strikes about 070 degrees azimuth and dips about 25 degrees to the north. This attitude reflects control of emplacement by the prominent 070/025N joint set mentioned above. This joint set also produces dip-slope topography within the upper reaches of the Alpine Creek drainage, and accounts for the strong parallelism between the topographic grade and the subsurface depth of the vein as evidenced in the drill holes.

The Alpine Vein consists of generally massive, milky-white quartz. Small (5 millimeter diameter) vugs, lined with crystals, are moderately common, and banding is implied by chlorite partings. The vein was not intersected in all drill holes indicating that the vein, at least in this area, is not a solid sheet but rather an intermittent "screen". In the drill holes in which the vein proper was absent, quartz veinlets from several millimeters to about 10 centimeters in thickness were observed. Typically these veinlets occur intermittently over an interval of half to several meters. The vein or veinlets are not host-specific, but do occur within a distinct lithological zone that, in turn, lies within a specific fracture set that cuts the granodiorite. This host zone was not identical in all holes, but some or all of a set of common characteristics were observed in each case.

In all cases the host rock to the vein is aplite characterized by the presence of millilmeter-scale (pin-head), dark-red garnets. Garnet-bearing aplites with no quartz veins were noted elsewhere within the area, but no quartz veins were noted that were not hosted by garnet-bearing aplite. The combined thickness of hanging wall and footwall aplites ranges from about five to 25 meters, and it is assumed that this is a single dike or sill or closely related series of near-identical dikes or sills.

The aplite that hosts the vein or vein-zone is,in all cases, altered. Sausseritization of feldspars and the development of sericite are most pronounced adjacent to the vein or within the center of the zone. Within several meters of the vein, alteration of feldspars is typically complete and the rock has a light green aspect. Partial sausseritization was noted over distances as great as 12 meters but is more typically restricted to within about five meters from the vein or center of the vein-zone. Sericite has a distribution similar to that of sausserite.

As was mentioned above, there are two presumed ages of lamprophyre dikes or sills. The older set is interpreted to pre-date the emplacement of the quartz vein(s) and has been almost entirely reduced to discontinuous biotite "gneiss" within the altered aplite core, presumably by movement within this zone. This unit is referred to within the drill logs as "entrained" lamprophyre. This unit commonly contains about one percent disseminated pyrite.

In holes AG-89-08 and 12, the quartz vein is hosted by the entrained lamprophyre, and in holes AG-89-06 and 11, the lamprophyre is cut by quartz veinlets. Although this older lamprophyre is not present in all holes, and its presence is not a prerequisite for the occurrence of the quartz vein, where both are present, the quartz vein is within or adjacent to the lamprophyre. Where quartz vein material was absent in drill core but the lamprophyre was present, as in holes AG-89-02,05,and 07, the altered lamprophyre was sampled as the most prospective unit.

A final characteristic of the vein-zone is the presence of sulphides. Base metals are essentially unique to quartz veins, and pyrite, with minor exceptions, is restricted to the quartz veins and alteration envelope.

c) Mineralization

Observed mineralization consists, in order of abundance, of pyrite, galena, and sphalerite.

Pyrite is present in both the wall rocks and quartz vein. In the wall rocks pyrite is fine-grained and disseminated and is most abundant near the contacts of quartz veins. Within quartz veins pyrite is commonly euhedral and coarse crystalline, and is most commonly localized along fractures within the quartz.

Galena and sphalerite, either singularly or together, were noted only within quartz veins rather than along vein-wallrock contacts, and are typically coarse crystalline. Within the currently-reported drill intersections, galena is more abundant than sphalerite but the number of observations cannot be considered statistically significant.

DISCUSSION

The extension of the Alpine Vein, as it appears in the underground workings at the Alpine Mine, was intersected in four drill holes (AG-89-03,08,08 and 12). .In all other holes except AG-89-04, in which the vein or vein-zone was displaced by a late lamprophyre dike, an interval containing quartz veinlets was intersected at what was interpreted to be the appropriate stratigraphic interval for the Alpine Vein.

Gold mineralization in excess of one gram per tonne (0.03 ounces per ton) occurs in six holes (AG-89-01, 02, 03, 05, 06, and 12). Of these, the gold values in only two holes (AG-89-05 and 12) exceed 10 grams per tonne (0.30 ounces per ton). All analytical values are included in Appendix 2.

It is clear that the Alpine Vein extends at least 400 meters down-dip from the exposures in the former Alpine Mine. The depth of the vein or vein-zone is remarkably predictable and suggests that the host fracture is not only uniform and persistent, but also that, at least to the depths tested, this fracture must have been the dominant one within the set to which it belongs as no parallel quartz veins were encountered.

Maximum thicknesses of the Alpine Vein observed underground were not observed in drill core, nor was the vein encountered in every hole. These circumstances could be interpreted as being indicative of a dimunition of vein "strength" with increasing depth. Caution should be exercised, however, in drawing such conclusions from the small database provided by the current drill program.

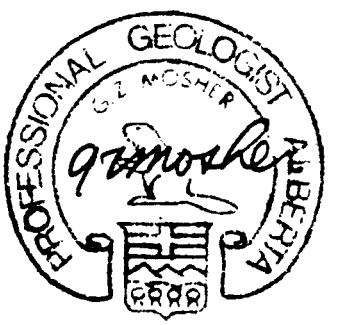
Vein attitudes, as inferred from drill sections, appear to vary both along strike, as between sections containing the first six holes; and down dip, as between sections containing the first six and the latter six holes. All sections have been drawn as if there has been no vertical movement due to faulting. Given the abundance of faults and evidence of movement on them observed in core, the apparent changes in vein attitude implied by the drill sections may, more realistically, reflect fault displacements of a vein of a relatively constant attitude.

On the basis of analytical results, (See Appendices 1 and 2), there is an apparent positive relationship between gold and galena-sphalerite, and gold and pyrite. Neither relationship is linear however. Although the highest values of gold were associated with galena and sphalerite in a quartz vein (AG-89-12), the gold values in holes AG-89-01, and 06, appear to be associated with neither quartz vein nor galena-sphalerite. Further, the galena and sphalerite encountered in AG-89-09, although as abundant as that in AG-89-06, contain no significant gold. It must therefore be concluded that although sulphide-bearing quartz vein is certainly the preferred target, it is not the sole host of gold mineralization.

G Z Mosher

Date: September 15, 1989.

Greg Z. Mosher, P.Geol.



REFERENCES

Peatfield, G.R., 1987: Examination and Program Proposal
Alpine Mine Property
For Cove Energy Corporation

STATEMENT OF QUALIFICATIONS

I, Gregory Zale Mosher of West Vancouver, British Columbia, do hereby certify that:

1) I am a consulting geologist with a business address at 4342 Erwin Drive, West Vancouver, British Columbia.

2) I am a graduate of Dalhousie University, (B.Sc. Hons., 1970), and McGill University, (M.Sc. Applied, 1973).

3) I have practiced my profession in mineral exploration continuously for the past 16 years.

4) I am a member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

5) I have no interest, direct or indirect, nor do I expect to receive interest in the Alpine Gold Property, in Cominco Ltd., or in Cove Resources Corporation.

6) I have based this report on a review of existing reports referenced in the report, and on-site program supervision and core logging between the inclusive dates of July 28 and August 28, 1989.

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

Signed and dated this 15th day of September, 1989, at Vancouver, British Columbia.

G.Z. Mosher

EXPLORATION WESTERN CANADA

STATEMENT OF QUALIFICATION

I, THEODORE W. MURARO, OF THE MUNICIPALITY OF WEST VANCOUVER, HEREBY CERTIFY:

- THAT I AM A GEOLOGICAL ENGINEER RESIDING AT 4438 STONE COURT, WEST VANCOUVER, BRITISH COLUMBIA WITH A BUSINESS ADDRESS AT 2400 - 200 GRANVILLE STREET, VANCOUVER, BRITISH COLUMBIA.

- THAT I GRADUATED WITH BASC DEGREE IN GEOLOGICAL ENGINEERING FROM THE UNIVERSITY OF BRITISH COLUMBIA IN 1956 AND A MSC IN GEOLOGY FROM QUEEN'S UNIVERSITY, KINGSTON, ONTARIO IN 1962.

- THAT I HAVE PRACTISED GEOLOGY WITH COMINCO LTD. FROM 1956 TO PRESENT.

- THAT I AM A REGISTERED MEMBER OF THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF THE PROVINCE OF BRITISH COLUMBIA.

DATED THIS "1st" DAY OF JUNE 1990
AT VANCOUVER, BRITISH COLUMBIA

T.W. MURARO
BASC, MSC, P. ENG.

APPENDIX 1: DIAMOND DRILL LOGS: AG-89-01 THROUGH AG-89-12 INCLUSIVE

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY	:ALPINE GOLD	LOCATION :	HEAD OF ALPINE CREEK	HOLE # :	AG-89-01
COMMENCED	:JULY 29, 1989	CORE SIZE:	NBHBQ	ELEV	: 2,162.1 m
COMPLETED	:JULY 30, 1989	TEST AT :	118.0 m	BEARING:	163 DEG
COORDINATES:		LOGGED BY:	G.Z. MOSHER	DIP	: -55 DEG
OBJECTIVE	:TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN			LENGTH	: 118.0 m

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	2.3	2.3	CASING									
2.3	101.8	99.5	GRANODIORITE: Medium to coarse crystalline, grey to white; up to five (5) percent biotite. Cut by pegmatite sills and dikes throughout. Pegmatite five centimeters to two meters thick; very coarse, with quartz, plagioclase, orthoclase, and minor biotite.									

Pegmatite noted at: (Depth, thickness, attitude)

7.01 m: 15 cm thick: 60 degrees TCA
11.0 m: 20 cm thick:
11.6 m: 15 cm thick:
15.2 m: 30 cm thick:
16.5 m: 90 cm
20.1 m: 5 cm thick:
27.1 m: 45 cm thick: 60 degrees TCA
63.7 to 65.2 m.
68.6 m: 15 cm: 45 degrees TCA
75.9 m: 20 cm:
76.8 m: 25 cm:
79.9 m: 15 cm: 45 degrees TCA
84.3 m: 05 cm: 45 degrees TCA
84.5 m: 10 cm: 45 degrees TCA
90.5 to 90.9: 80 to 90 degrees TCA
92.4 m: 20 cm:
99.4 m: 2.1 m: Coarse crystalline

Aplite noted at: (Depth, thickness, attitude)

32.6 m: 6.1 m; Myrmekitic, minor quartz veinlets

52.7 m: 3.1 m; medium crystalline, with garnets, most 1 to 2 mm diameter, maximum 5 mm. Chlorite after biotite.

93.5 m: 3.9 m; mostly nebulous texture with about 10 percent coarse crystalline pegmatite.

Fractures noted at:

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD	LOCATION :	HEAD OF ALPINE CREEK	HOLE # : AG-89-01
COMMENCED :JULY 29, 1989	CORE SIZE:	NBHBQ	ELEV : 2,162.1 m
COMPLETED :JULY 30, 1989	TEST AT :	118.0 m	BEARING: 163 DEG
COORDINATES:	LOGGED BY:	G.Z. MOSHER	DIP : -55 DEG
OBJECTIVE :TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN			LENGTH : 118.0 m

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			17.4 m: fractured core. 32.6m to 35.7m: fractured core: 52 percent recovery 32.9 m: fault gouge 96.6m to 99.4m: badly fractured: recovery 96 percent 98.5m: fault gouge									
101.8	104.9	3.1	PEGMATITE: With aplite; mixture of nebulous, gneissic, coarse crystalline; contacts vague. Garnets, 1 - 2 mm diameter first appear at 102.1 m. Sericite first appears at 102.4 and becomes abundant (>5%) after 104.3.									
104.9	105.5	0.6	APLITE: graphic/myrmekitic (continuous with unit above), medium crystalline, with nebulous phases. Light green cast due to partial sausseritization of feldspars. Sericite common. Talcose films on fracture surfaces. Rare quartz veinlets 1 to 2 mm thick. Bottom 10 cm of interval quartz vein (80 degrees TCA), milky, with minor, poorly developed vugs 1 to 2 mm dia. Very minor pyrite blebs (2 to 3 noted in interval).	69551	104.9	105.5	0.6	92.0		0.7	167	80
105.5	106.0	0.5	APLITE: graphic, medium crystalline, with more pronounced "gneissic" fabric than preceeding interval. Pale green color due to complete sausseritization of feldspars. Abundant (+/- 5%) sericite. Common clots of K-spar up to 1 cm in diameter, with indistinct margins.Three quartz veinlets noted, 80 degrees TCA, 10 mm thick. Wavy quartz veinlets 1 to 2 mm thick common. Very minor (<< 1%) disseminated euhedral pyrite throughout. Euhedral and whispy pyrite concentrated over 5 cm interval (20 vol %) at 105.7 m, and about 5% pyrite over bottom 5 cm of interval.	69552	105.5	106.0	0.5	5,000.0	0.132	6.3	710	471
106.0	118.3	12.3	APLITE: gneissic, light pink to light grey, with clots of very coarse crystalline K-spar up to 5 cm in dia. Texture is defined by biotite (2% to 5%). Pin-head garnets (1mm) throughout (<<1 vol %). Minor sericite	69553 69554	106.0 107.0	107.0 107.5	1.0 0.5	<10 <10		0.4 <0.4	131 158	96 189

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD	LOCATION :	HEAD OF ALPINE CREEK	HOLE # : AG-89-01
COMMENCED :JULY 29, 1989	CORE SIZE:	NBHBQ	ELEV : 2,162.1 m
COMPLETED :JULY 30, 1989	TEST AT :	118.0 m	BEARING: 163 DEG
COORDINATES:	LOGGED BY:	G.Z. MOSHER	DIP : -55 DEG
OBJECTIVE :TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN			LENGTH : 118.0 m

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			to about 107.6 m. Quartz vein 3 mm thick at 107.3m contains single bleb of GALENA 2 mm in diameter. Rare disseminated pyrite. NOTE: Rock of similar appearence observed in outcrop as sill or dike cutting granodiorite.									
118.3			EOH Acid test @ 118.3m: apparent dip -55 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :	ALPINE GOLD	LOCATION :	HEAD OF ALPINE CREEK	HOLE # :	AG-89-02
COMMENCED :	JULY 30, 1989	CORE SIZE:	NBHBQ	ELEV :	2,162.1 m
COMPLETED :	AUGUST 01, 1989	TEST AT :	169.5 m	BEARING:	N/A
COORDINATES:		LOGGED BY:	G.Z. MOSHER	DIP :	-90 DEGREES
OBJECTIVE :	TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN			LENGTH :	169.5 m

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	1.80	1.80	CASING									
1.80	105.60	103.8	GRANODIORITE: coarse crystalline, with 2 to 5 percent biotite. Cut throughout by pegmatite dikes / sills.									

Pegmatite noted at: (interval, thickness, attitude)

6.5 m: 30 cm
10.5 m: 45 cm
14.3 m: 20 cm
19.7 m: 30 cm
23.5 m: 20 cm

26.5 - 30.6 m: Light pink, coarse crystalline pegmatite mixed with medium crystalline, partially sausseritized aplite.

31.1 m: 90 cm: Footwall contact at 60 degrees TCA
36.7 m: 10 cm
61.3 m: 20 cm
61.7 m: 20 cm: 45 degrees TCA
64.8 m: 70 cm: Mixed pegmatite/aplite; contacts vague.
66.0 m: 30 cm: Aplite ?
66.6 m: 40 cm: Contacts parellel TCA.
71.0 m: 30 cm: Footwall 45 degrees TCA.
72.1 m: 20 cm
81.6 m: 10 cm
87.1 m: 40 cm: Footwall contact faulted.
96.2 m: 20 cm
98.5 m: 20 cm
99.3 m: 30 cm: Contact parallel TCA.
103.0 m: 30 cm
105.0 m: 20 cm

Aplite noted at: (interval, thickness,attitude)

48.10 m: 4.9 m; Light pink to light green, partially sausseritized, medium to coarse crystalline. Footwall contact 45 degrees TCA.
Very fine, very minor (<<1%) disseminated pyrite.

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :	ALPINE GOLD	LOCATION :	HEAD OF ALPINE CREEK	HOLE # :	AG-89-02
COMMENCED :	JULY 30, 1989	CORE SIZE:	NBHBQ	ELEV :	2,162.1 m
COMPLETED :	AUGUST 01, 1989	TEST AT :	169.5 m	BEARING:	N/A
COORDINATES:		LOGGED BY:	G.Z. MOSHER	DIP :	-90 DEGREES
OBJECTIVE :	TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN			LENGTH :	169.5 m

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			53.0 m: 3.5 m; Alternating mixture of aplite/pegmatite with dark green bands (altered dike ?) at 60 degrees TCA Speck of GALENA on fracture at 53.8 m.									
			Fractures noted at: --- 12.0m Fractured core 14.9 m: Fracture 30 degrees TCA with chlorite coating 24.1 to 27.3 Fracture 10 degrees or less TCA 43.0 to 43.4 m: Fractured core 49.2 to 52.0 m: Badly fractured: Fault gouge and rubbly core; possibly 50 cm core loss. Some fractures parallel TCA 53.2 to 57.0: Fractures at 60 degrees TCA									
105.60	112.70	7.10	APLITE SILL/DIKE: With pin-head garnets (1 mm), minor pegmatitic phases. Talcose on fracture surfaces. Hairline fractures parallel TCA. Footwall contact 30 degrees TCA	69555	111.70	112.70	1.00	<10		0.4	152	192
112.70	114.60	1.90	APLITE SILL/DIKE: With 40% to 50% chlorite and biotite bands. Bands foliated. Cut by milky quartz veins 1 to 3 cm thick at about 60 degrees TCA. Aplite is sausseritized and pale green in color. Chlorite concentrated in bands 1 to 30 cm thick. Minor (< 1%) pyrite disseminated throughout.	69556	112.70	113.70	1.00	<10	~	<0.4	92	317
				69557	113.70	114.60	0.90	1000	0.024	0.7	93	180
114.60	130.80	16.20	APLITE SILL/DIKE: Light pink-grey, pin-head garnets; feldspars sausseritized (incomplete). Rare specks of disseminated pyrite to about 117.5 m.	69558	114.60	115.10	0.50	32		<0.4	114	81
130.80	141.00	10.20	GRANODIORITE: Light grey, sausseritization less intense than in above aplite. Pegmatite at 135.2 m: 70 cm 129.4 m: Fractured core. 146.0 m: Fault gouge.									
141.00	164.20	23.20	APLITE SILL/DIKE: Pinkish, medium crystalline, faint									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :	ALPINE GOLD	LOCATION :	HEAD OF ALPINE CREEK	HOLE # :	AG-89-02
COMMENCED :	JULY 30, 1989	CORE SIZE:	NBHBQ	ELEV :	2,162.1 m
COMPLETED :	AUGUST 01, 1989	TEST AT :	169.5 m	BEARING:	N/A
COORDINATES:		LOGGED BY:	G.Z. MOSHER	DIP :	-90 DEGREES
OBJECTIVE :	TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN			LENGTH :	169.5 m

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			gneissic texture. Minor bands of biotite at 60 degrees TCA.									
164.20	169.50	5.30	GRANODIORITE: Medium to dark grey, medium crystalline. Unaltered. Hanging wall contact at 60 degrees TCA Pegmatite noted at: 166.3 m: 5 cm 166.5 m: 5 cm 167.0 m: 10 cm									
169.5			END OF HOLE									
			Acid test @ 169.5m: apparent dip -90 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 01, 1989
COMPLETED :AUGUST 04, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :147.8 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-03
ELEV : 2,162.1M
BEARING: 298 DEG
DIP : -45 DEG
LENGTH : 147.8 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	2.0	2.0	CASING									
2.0	56.9	115.2	GRANODIORITE: Light grey, medium to coarse crystalline, equigranular. Cut by pegmatite and aplite sills and dikes throughout.									

Pegmatite noted at: (interval, thickness, attitude)

8.0 m: 5 cm: 30 degrees TCA
10.3 m: 30 cm: 60 degrees TCA
11.6 m: 30 cm: Contact indistinct
13.7 m: 10 cm:
14.6 m: 20 cm: 45 degrees TCA
15.1 m: 5 cm
16.1 m: 20 cm: 30 degrees TCA
17.0 m: 2.5 m: HW 45 degrees TCA, FW 10 degrees TCA
21.7 m: 3.8 m: HW 30 degrees TCA, FW 45 degrees TCA
27.2 m: 20 cm
38.5 m: 10 cm: 70 degrees TCA
39.2 m: 10 cm

44.2 m: 9.8 m: Pegmatite with 30 percent aplite phases Footwall contact indistinct.

76.6 m: 20 cm: 50 degrees TCA
78.5 m: 20 cm
81.9 m 1.2 m: 50 degrees TCA
84.3 m: 95 cm: 45 degrees TCA
85.9 m: 10 cm
106.35 m: 15 cm
107.8 m: 3.5 m: Pegmatite (60%) and aplite (40%)

112.5 m: 2.7 m: Coarse pegmatite with graphic aplite phases.

Aplite noted at: (interval, thickness, attitude)

86.15 m: 20 cm
93.5 m: 50 cm

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 01, 1989
COMPLETED :AUGUST 04, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :147.8 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-03
ELEV : 2,162.1M
BEARING: 209 DEG
DIP : -45 DEG
LENGTH : 147.8 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			99.2 m: 1.5 m; FW 45 degrees TCA, HW, nearly parallel TCA 104.8 m: 45 degrees TCA Lamprophyre noted at: (Depth, thickness, attitude) --- 54.9 m: 19.4m; Biotitic with inclusions of granodiorite, most in 1 cm. diameter range. Chill margin (HW) 80 cm thick. Basal contact fractured and weathered; chill margin also observed. FW contact weathered over 50 cm. Fractures noted at: --- Fault gouge at 5.2 m, 20 cm core loss. Fault gouge at 5.7 m. Fracture at 7.9 m; 30 degrees TCA Fractured rock 26.4 to 26.8 m Fault gouge at 26.5 m Fault gouge 28.0 to 28.2 m Fracture at 32.5 m; 30 degrees TCA; contains mud.									
115.2	115.9	0.7	APLITE: Graphic, common white mica, minor sausseritization. Quartz vein, 2 cm thick at 115.6 m	69560	115.1	115.9	0.8	1220	0.030	1.6	56	110
			Minor (<1%) euhedral, disseminated pyrite throughout interval.	69561	115.9	116.2	0.3	<10		<0.4	48	104
115.9	119.0	3.1	GRANODIORITE: Contaminated with aplite and pegmatite: rock has pink cast and clots of pegmatitic K-spar. 116.95 m: Aplite: dike or sill: 10 cm thick 117.95 m: Pegmatite: 30 cm thick									
119.0	122.2	3.2	APLITE: Nebulous texture with pegmatitic and gneissic phases.									
122.2	126.8	4.5	APLITE: Graphic texture, light grey-green color. Minor	69562	123.8	124.8	1.0	<10		<0.4	48	91

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 01, 1989
COMPLETED :AUGUST 04, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :147.8 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-03
ELEV : 2,162.1M
BEARING: 208 DEG
DIP : -45 DEG
LENGTH : 147.8 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			quartz veinlets throughout interval at various angles. White mica common, sausseritization complete.	69563	124.8	125.8	1.0	200		<0.4	93	89
			Quartz veins at: 123.5 m: 2 cm thick; 124.3 m: 1 cm; 124.65 m: 5 cm; vuggy; 126.4m; 1cm.	69564	125.8	126.8	1.0	<10		1.0	372	136
			Speck of GALENA at 126.4 m associated with quartz vein.									
126.8	127.4	0.7	QUARTZ VEIN: Milky white minor vugs; contacts at 45 degrees.	69565	126.8	127.4	0.7	4200	0.138	1.4	62	54
			Pyrite on fracture at 127.35 m.									
127.4	127.8	0.3	APLITE: With abundant white mica; very fine disseminated pyrite (<1%) Quartz veinlets up to 1 cm thick.	69566	127.4	127.8	0.3	180		0.9	48	697
127.8	128.2	0.4	LAMPROPHYRE: Contacts at 45 degrees TCA	69567	127.8	128.2	0.4	<10		1.1	27	628
128.2	128.6	0.4	APLITE: With 30 percent foliated biotite in bands (entrained lamprophyre ?)	69568	128.2	128.6	0.4	<10		6.7	51	426
			Pyrite along folia as whisps 1 to 2 mm thick; 1 to 3 percent by volume over interval.									
			Abundant milky quartz (10 % of interval) as veinlets.									
128.6	130.0	1.4	APLITE: Graphic to sucrosic, with garnets (pin-head), and minor quartz veinlets.	69569	128.6	129.6	1.0	162		0.7	40	147
				69570	129.6	130.2	0.6	200		3.9	112	382
			129.25 m: Lamprophyre: appears to pre-date quartz vein 129.65 m: Quartz vein 15 cm: with vugs 129.45 to 129.8 m: dolomite (?) stringers									
			Minor, (<1%) disseminated pyrite throughout interval.									
130.0	131.3	1.3	APLITE: Sucrosic, light grey-buff.									
131.3	147.8	16.5	GRANODIORITE: As in interval 74.3 to 115.2 m									
			Pegmatite and aplite noted at:									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 01, 1989
COMPLETED :AUGUST 04, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:MBHBQ
TEST AT :147.8 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-03
ELEV : 2,162.1M
BEARING: 208 DEG
DIP : -45 DEG
LENGTH : 147.8 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			137.5 m: 1.9 m 147.0 m: 1.8 m: white to light pink pegmatite. 142.0 m: APLITE: with slight fabric 139.6 m: Lamprophyre: 40 cm: contacts at 30 to 40 degrees TCA.									
147.8			END OF HOLE Acid test at 147.8 m: Apparent dip: -44 degrees									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 04, 1989
COMPLETED :AUGUST 05, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :160.9 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-04
ELEV : 2,152.1M
BEARING: 209 DEG
DIP : -60 DEG
LENGTH : 160.9 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	3.0	3.0	CASING									
3.0	144.5	141.5	GRANODIORITE: Medium grey, medium to coarse crystalline, contains 2 to 5 percent biotite. Cut by pegmatite and aplite dikes and sills throughout interval. Top 40 cm of interval slightly pegmatitic.									

Pegmatite noted at: (interval, thickness, attitude)

8.6 m: 10 cm
10.3 m: 30 cm: 70 degrees TCA
13.1 m: 25 cm
13.7 m: 20 cm
15.5 m: 85 cm; Lower contact parallel TCA

32.5 m: 6.6 m: Light pink-buff, first meter aplitic, hanging wall contact 40 degrees TCA

42.0 m: 25 cm; HW parallel, FW 70 degrees TCA
47.9 m: 40 cm; HW and FW 60 to 70 degrees TCA

52.1 m: 2.4 m; With up to 50 percent myrmekitic, coarse crystalline aplite.

57.4 m: 10 cm; 30 degrees TCA
63.6 m: 10 cm; 70 degrees TCA
64.8 m: 1.8 m; Footwall contact vague.

132.8 m: Pegmatite and Aplite: 60 cm; pink, coarse crystalline, contacts 90 degrees TCA.

134.2 m: Pegmatite and Aplite: 5.8 m; mostly coarse crystalline, equigranular. Granodiorite inclusion (?) at 137.0 m: 20 cm

140.0 m: Pegmatite 70 cm; coarse crystalline, pink.

Aplite noted at: (interval, thickness, attitude)

5.9 m: 50 cm
12.4 m: 25 cm

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 04, 1989
COMPLETED :AUGUST 05, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :160.9 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-04
ELEV : 2,162.1M
BEARING: 208 DEG
DIP : -60 DEG
LENGTH : 160.9 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			48.65 m: 35 cm; pale pink, sucrosic, 30 degrees TCA 58.95 m: 25 cm 59.7 m: 1.95 m; FW contact vague, about 90 degrees TCA.									
			Lamprophyre noted at: --- 85.5m: 46.7m; Coarse crystalline, biotite rich. HW contact about 70 degrees TCA. Chill margin 1 meter. Feldspar phenocrysts up to 1 cm across. Footwall contact 60 degrees TCA. Granodiorite and pegmatite inclusions over bottom 3 meters of interval. 140.7m: 3.8m; With aplite inclusions. HW and FW contacts 45 degrees TCA.									
			Fractures noted at: --- Fractured core: 6.7 to 8.7 meters Fault gouge at 6.7 meters Fractured core: 72.5 to 74.0 m; Fault gouge (mud) 73.0 to 73.8 m, fractures 20 deg TCA. Fractured core at 91.0 and 99.0 meters.									
144.5	151.5	7.0	PEGMATITE: Mixed with aplite. Sausseritized interval 148.7 m to 149.0 m.									
151.5	160.9	9.4	APLITE: Mostly medium crystalline, biotitic with 10 to 20 percent pegmatitic phases.									
160.9			EOH Acid test at 160.9: Apparent attitude: -65 degrees.									
			NOTE: VEIN INTERVAL DISPLACED BY NEAR-VERTICAL LAMPROPHYRE DIKE: HOLE ENTERED DIKE ABOVE VEIN AND EXITED DIKE BELOW VEIN AS PROJECTED FROM AG-89-02 AND AG-89-03.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 05, 1989
COMPLETED :AUGUST 08, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBG
TEST AT :167.0 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-05
ELEV : 2,162.1M
BEARING: 103 DEG
DIP : -45 DEG
LENGTH : 167.0 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	2.0	2.0	CASING									
2.0	114.7	112.7	GRANODIORITE: Medium to coarse crystalline, light grey, contains 2 to 5 percent biotite. Cut throughout by sills and dikes of pegmatite and aplite.									

Pegmatite noted at:(Depth, thickness, attitude)

94.4 m: 2.2 m; Coarse, pinkish.
102.1 m: 20 cm; Hangingwall contact at 45 degrees TCA.

107.6 m: 1.4 m

111.1 m: 1.0 m; Lamprophyre dikelet at 111.4 m; 10 cm, contacts at 40 to 45 degrees TCA.

Aplite noted at: (Depth, thickness, attitude)

66.8 m: 2.1 m; Light grey-pink, sucrosic, with pegmatitic phases. Hanging wall contact diffuse.

72.8 m to 82.6 m. Pale grey, medium to coarse, Granodiorite inclusion at 79.4 m: 1.2 m. Footwall contact at 90 degrees TCA.

103.6 m: 1.6 m; Footwall contact at 30 degrees TCA.

Lamprophyre noted at: (Depth, thickness, attitude)

68.9 m: 85 cm; Hangingwall contact at 45 degrees TCA Contact chilled over 1 to 2 cm. Numerous feldspar phenocrysts laminated at 60 degrees TCA.

82.6 m: 40 cm; Quartz vein at footwall, irregular contact, 5 cm thick. No sulphides.

112.1 m: 1.6 m; Hanging wall contact irregular.

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 05, 1989
COMPLETED :AUGUST 08, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :167.0 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-05
ELEV : 2,162.1M
BEARING: 103 DEG
DIP : -45 DEG
LENGTH : 167.0 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			Fractures noted at: --- 83.0 to 88.5 m: Core highly fractured. Calculated loss within interval about 50 to 60 percent. 98.2 to 99.5 m: Core mostly rubble, 30 cm of fault gouge. 104.0 m: 10 cm fault gouge.									
114.7	115.3	0.5	PEGMATITE: Coarse, pink with sericite and sauseritization. Minor (<1%) disseminated pyrite .	69571	114.8	115.3	0.5	38		0.4	42	30
115.3	116.1	0.8	APLITE: Gneissic, with pin-head (1mm) garnets. Biotite bands with chlorite alteration notably at 115.55 m. Aplite totally altered with sericite and epidote. Quartz veins in interval 115.3 to 115.6 m: Principal vein at 115.4 m: 15 cm; contains speck of galena. 115.9 m: 1 cm vein at 45 degrees TCA. Disseminated pyrite throughout, with concentrations at 115.45 to 115.50 m. (10 %)	69572	115.3	116.1	0.8	22.149	0.645	7.7	291	59
116.1	126.5	10.5	APLITE: Gneissic texture, biotitic, pin-head garnets, with sericite. Lamprophyre dikes noted at: 118.60 m: 10 cm; 45 degrees TCA 118.75 m: 20 cm; 45 degrees TCA 122.50 m: 30 cm; 45 degrees TCA	69573	116.1	116.6	0.5	40		<0.4	24	22
126.5	128.0	1.5	PEGMATITE: With nebulous-textured aplite.									
128.0	158.3	30.3	APLITE: Gneissic fabric with nebulous, sucrosic, and pegmatitic phases.									
158.3	162.5	4.2	GRANODIORITE: As in interval 12.0 to 114.7 meters									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 05, 1989
COMPLETED :AUGUST 08, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :167.0 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-05
ELEV : 2,162.1M
BEARING: 103 DEG
DIP : -45 DEG
LENGTH : 167.0 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
162.5	165.2	2.7	APLITE: Gneissic, light grey, biotitic.									
165.2	166.5	1.3	GRANODIORITE: As above									
166.5	167.0	0.5	PEGMATITE: Coarse, pink.									
167.0			EOH									
			Acid test at 167.0 meters: apparent attitude: -43 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 08, 1989
COMPLETED :AUGUST 09, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBWBQ
TEST AT :127.7 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-06
ELEV : 2,162.1M
BEARING: 103 DEG
DIP : -60 DEG
LENGTH : 127.7 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	1.5	1.5	CASING									
1.5	108.9	107.4	GRANODIORITE: Medium to light grey, medium to coarse xline, contains 2 to 5 percent biotite. Cut throughout by pegmatite and aplite sills and dikes, and less commonly by lamprophyre dikes.									

Pegmatite noted at: (Depth, thickness and attitude)

13.0 m: 10 cm; 45 degrees TCA
13.4 m: 70 cm, 60 degrees TCA
14.4 m: 40 cm
18.2 m: 20 cm
27.1 m: 1.6 m; Band 1 to 2 cm thick parallel TCA
30.0 m: 3.9 m
38.5 m: 30 cm
48.3 m: 2.7 m
60.3 m: 40 cm; 45 degrees TCA
76.1 m: 50 cm, Very coarse with 2 cm biotite flakes
78.7 m: 1.1 m

83.1 m: 1.4 m; Alternating pegmatite and granodiorite in 10 cm to 15 cm bands

90.8 m: 90 cm; With scattered, rare (<<1%) pyrite)

Aplite noted at: (Depth, thickness, attitude)

98.3 m: 60 cm; gneissic, contacts 70 degrees TCA

Lamprophyre noted at: (Depth, thickness, attitude)

65.2 m: 7.5 m; Granodiorite inclusion at 69.8 m, 10 cm
78.9 m: 30 cm; Contacts 30 degrees TCA
88.1 m: 2.7 m; HW 20 TCA, FW 30 to 40 degrees TCA

102.4 m: 3.0 m; Hanging wall chill margin 1 to 2 cm;

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 08, 1989
COMPLETED :AUGUST 09, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :127.7 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-06
ELEV : 2,162.1M
BEARING: 103 DEG
DIP : -60 DEG
LENGTH : 127.7 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			porphyritic (feldspar phenocrysts); FW 35 degrees TCA Calcite or dolomite veinlets in lamprophyre fault breccia.									
			Structures noted at: --- 6.0 m: Fractured core 7.0 m: Fractured core 19.0 m: 4.5 m; fractured core 33.8 m: Core reduced to rubble over 30 cm 52.0 m: 1.0 m Fractured core.									
				69574	109.0	110.0	1.0	24		0.8	26	23
108.9	110.2	1.3	APLITE: Altered (sericite, epidote); containing rare (<<1%) disseminated pyrite. Quartz vein at 110.15 m: 5 cm; with GALENA bleb.	69575	110.0	110.2	0.2	530		2.9	913	250
110.2	110.6	0.4	LAMPROPHYRE: Foot wall contact 45 degrees TCA	69576	110.2	110.6	0.4	<10		<0.4	46	138
110.6	112.9	2.3	APLITE: Light grey, sucrosic, advanced sausseritization and sericitization.	69577	110.6	111.1	0.5	<10		0.5	40	60
				69578	111.1	112.0	0.9	32	✓	<0.4	44	62
				69579	112.0	112.9	0.9	5.143	0.150	6.1	2400	4630
			110.8 to 111.6 m: Quartz veins with associated pyrite and GALENA (<1%) Disseminated pyrite (<1%) throughout interval. Interval badly fractured.									
112.9	115.2	2.3	APLITE: Interval characterized by biotite-rich bands 2 to 10 cm thick. Minor associated pyrite (<1%)	69580	112.9	113.9	1.0	<10	✓	0.5	26	77
				69581	113.9	114.9	1.0	4.869	0.142	7.0	240	158
				69582	114.9	115.2	0.3	78		<0.4	20	150
115.2	122.1	6.9	APLITE: Mixed nebulous and gneissic textures. Pin-head garnets.	69583	115.2	116.2	1.0	<10		<0.4	17	25
122.1	127.7	5.6	PEGMATITE AND APLITE:									
			Structures noted at: 103.4 m to 112.0 m: Fault Zone 102.4 m: 20 cm Fault gouge 103.9 m: 20 cm Fault gouge									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 08, 1989
COMPLETED :AUGUST 09, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :127.7 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-06
ELEV : 2,162.1M
BEARING: 103 DEG
DIP : -60 DEG
LENGTH : 127.7 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			106.5 m: 30 cm Fault gouge									
127.7			EOH									
			Acid test at 127.7 m: apparent dip -61 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 13, 1989
COMPLETED :AUGUST 15, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :152.1 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-07
ELEV : 2,080.1M
BEARING: 157.5 DEG
DIP : -55 DEG
LENGTH : 152.1 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	2.5	2.5	CASING									
2.5	3.1	0.6	APLITE: Pale grey, fine crystalline, sucrosic, slightly gneissic.									
3.1	127.0	123.9	GRANODIORITE: Medium grey, medium to coarse crystalline, cut by pegmatite, aplite and lamprophyre sills and dikes.									

Pegmatite noted at: (depth, thickness, attitude)

7.8 m: 20 cm; 75 degrees TCA
11.1 m: 50 cm; 45 degrees TCA

12.5 m: 4.5 m; Alternating bands of pegmatite and granodiorite. Rusty weathering, irregular contacts.

18.75 m: 25 cm; Pegmatite and aplite; 75 degrees TCA.
25.7 m: 1.5 m; Contacts at 80 degrees TCA.
28.9 m: 30 cm; Coarse crystalline with irregular contacts.

35.0 m: 7.5 m; Alternating pegmatite and granodiorite, pink to pale grey.

46.2 m: 2.8 m; Contacts faulted.

68.0 m: 2.0 m; Nearly parallel to, and in and out of core axis.

85.2 m: 50 cm; 60 degrees TCA
92.7 m: 70 cm; 45 degrees TCA
123.5 m: 60 cm
124.1 m: 40 cm; 90 degrees TCA

Aplite noted at: (depth, thickness, attitude)

9.3 m; 50 cm; 45 degrees TCA.
30.4 m: 3.4 m; Contacts nearly normal TCA and altered.
44.3 m: 1.2 m; Pale grey,biotitic.

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 13, 1989
COMPLETED :AUGUST 15, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :152.1 m
LOGGED BY:G.Z. MOSHEP

HOLE # : AG-89-07
ELEV : 2,080.1M
BEARING: 157.5 DEG
DIP : -55 DEG
LENGTH : 152.1 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			73.1 m: 2.9 m; Mixed pegmatite and aplite, light grey-pink. 100.5 m: 5.3 m; 45 degrees TCA 108.5 m: 60 cm; 60 degrees TCA 113.0 m: 6.5 m; 30 cm Pegmatite at hangingwall. Irregular zoning 45 degrees TCA. Minor sericitization. Lamprophyre noted at: (depth, thickness, attitude) --- 80.2 m: 3.2 m; Hanging and footwall contacts fractured, margins chilled over 30 to 40 cm. 1 cm quartz vein on hangingwall - no sulphides. Cut by carbonate veinlets 60 degrees TCA. Cut by aplite veinlets (1 to 2 cm) 45 degrees TCA. Structures noted at: --- 0.0 m to 3.1 m: core fractured, muddy 14.0 m: 2.0 m; core fractured parallel TCA, rusty. 17.6 m: 20 cm; rusty fault gouge. 33.4 m to 40.0 m: 1.0 m (approximately) core loss. 33.8 m: 20 cm fault rubble. 38.0 to 58.0 m: Core badly fractured. 49.0 m: 10 cm fault gouge. 53.5 m to 56.0 m: 2.0 m (approximately) core loss. 57.6 m: 40 cm; fault rubble, no appreciable loss. 61.5 m: 20 cm; no appreciable loss.									
127.0	129.3	2.3	APLITE: Gneissic for 50 cm, then sucrosic, sausseritized, sericitized. Pin-head garnets. Rare disseminated pyrite (<1%).	69584	128.3	129.3	1.0	80		0.8	24	76
129.3	130.0	0.7	APLITE: Contacts 45 degrees TCA, Foliated biotite constitutes about 70 percent of interval. Interval cut	69585	129.3	130.0	0.7	40		1.1	17	237

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 13, 1989
COMPLETED :AUGUST 15, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :152.1 m
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-07
ELEV : 2,080.1M
BEARING: 157.5 DEG
DIP : -55 DEG
LENGTH : 152.1 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	GOLD (PPB)	GOLD (OZ/TON)	ANALYSES SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			by calcite veinlets. Very minor (<<1%), fine disseminated pyrite associated with sausseritized aplite. Disseminated pyrite (1 to 2 percent) over 5 cm. at footwall.									
130.0	132.5	2.5	APLITE: Pale pink to light grey. Pin-head garnets, chlorite on hairline fractures 45 degrees TCA. Minor disseminated pyrite. Quartz vein 3 cm, at 131.9m with 2 to 3 percent pyrite. Vein associatec with 5 cm biotite-rich interval.	69586 69587	130.0 131.0	131.0 132.0	1.0 1.0	<10 <10		0.6 1.3	36 26	67 213
132.5	152.1	19.6	APLITE: Mostly gneissic with minor pegmatitic phases.									
152.1			EOH									
			Acid test at 152.1 m: Apparent attitude: -54 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 15, 1989
COMPLETED :AUGUST 17, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :136.6 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-08
ELEV : 2,080.1M
BEARING: N/A
DIP : -90 DEG
LENGTH : 136.6 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	2.9	2.9	CASING									
2.9	4.0	1.1	APLITE: Light grey, with pin-head garnets.									
4.0	126.8	122.8	GRANODIORITE: Medium to light grey, biotitic, cut throughout by sills and dikes of pegmatite, aplite, and lamprophyre.									

Pegmatite noted at: (Depth, thickness, attitude)

8.5 m: 30 cm; 45 degrees TCA
10.8 m: 3.5 m; 45 degrees TCA, with aplitic zones.

15.1 m: 5.3 m; HW 45 degrees TCA, FW 30 degrees TCA
With aplitic zones.

23.3 m: 3.2 m; Grey pegmatite and aplite. HW 45 degrees TCA, FW irregular and altered for 50 cm.

60.5 m: 20 cm; 45 degrees TCA.
67.2 m: 40 cm; 45 degrees TCA
68.7 m: 8.5 m
79.9 m: 9.9 m; With granodiorite apophyses 45 degrees TCA
96.0 m: 1.2 m
109.0 m: 40 cm; HW 45 degrees TCA, FW 30 degrees TCA

Aplite noted at: (Depth, thickness, attitude)

53.0 m: 4.3 m; Medium grey, nebulous texture, 10 cm zone of pegmatite on hangingwall. Contact at 45 degrees TCA.

115.3 m: 2.7 m; Banded aplite and granodiorite. Contacts 45 and 70 degrees TCA.

Fractures noted at:

15.6 m: 2.4 m; Fracture parallel TCA, rusty.

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 15, 1989
COMPLETED :AUGUST 17, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :136.6 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-08
ELEV : 2,080.1M
BEARING: N/A
DIP : -90 DEG
LENGTH : 136.6 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			20.0 m: 20 cm; Rusty fracture with rusty rubble. 33.0 m: 3.6 m; Badly broken core with gouge. 32.6 m to 47.5 m: 1.0 meter core loss 39.5 m: 5.6 m; core reduced to rubble and gouge. 45.1 m: 2.4 m; Rock heavily weathered - feldspars altered to clay. Lesser alteration to 51.0 m. 50.5 m: Fault gouge. 70.0 m: 1.0 m; Fracture parallel TCA. 85.0 m: 1.5 m; Rock fractured with minor gouge. 101.8 m: 30 cm; Fault gouge.									
126.8	128.6	1.8	APLITE: With 10 cm of pegmatite at HW, contact 60 degrees TCA. Light grey-pink, sucrosic, with pin-head garnets.									
128.6	130.3	1.7	APLITE: Medium to dark green, with chlorite in nebulous zones and on fractures. Feldspars sausseritized. Pin-head garnets present. Pegmatite zones 1 to 5 cm thick.	69588	129.3	130.3	1.0	62		<0.4	15	63
130.3	131.0	0.7	QUARTZ VEIN: Milky white, with very minor vugs. Rare pyrite (1%), coarse, euhedral (up to 5 mm), generally associated with hairline chlorite laminae, which are most common near both contacts. GALENA is very rare (<1%). SPHALERITE - one bleb noted near footwall	69589	130.3	131.0	0.7	612		9.4	1133	117
131.0	133.0	2.0	APLITE: With nebulous chlorite. Feldspars epidote-altered. Unit medium to dark green. Presumed zone of entrained lamprophyre. Pegmatite phases present. Disseminated pyrite rare (<1%), most common near HW.	69590	131.0	132.0	1.0	<10		<0.4	21	89
133.0	136.6	3.6	APLITE: With biotite-rich zones 45 to 60 degrees TCA. Pin-head garnets present, minor alteration of feldspars, rock light grey-pink in color.									
			--- Fractures noted at:									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 15, 1989
COMPLETED :AUGUST 17, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :136.6 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-08
ELEV : 2,080.1M
BEARING: N/A
DIP : -90 DEG
LENGTH : 136.6 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			128.6 m: 1.7 m; To QV rock badly fractured, commonly parallel TCA. 130.0 m: 30 cm; rubble. 131.0 m: 3.0 m fractured rock.									
136.6			EOH									
			Acid test at 136.6 m: Apparent attitude -90 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 18, 1989
COMPLETED :AUGUST 19, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :146.0 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-09
ELEV : 2,080.1 M
BEARING: 202.5 DEG
DIP : -45 DEG
LENGTH : 146.0 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	4.5	4.5	CASING									
4.5	128.3	123.8	GRANODIORITE: Medium grey, medium crystalline, with prominent biotite content. Cut throughout by pegmatite, aplite, and lamprophyre sills and dikes.									

Pegmatite noted at: (Depth, thickness, attitude)

23.4 m: 30 cm; contacts 45 degrees TCA. Epidotized, coarse crystalline K-spar rare. Rare (<<1%) dissem-inated pyrite.

24.0 m: 5.9 m; HW contact weathered, possibly 90 degrees TCA. FW contact vague.

33.7 m: 16.3 m; With aplite phases and granodiorite inclusions. Possible contamination of pegmatite with granodiorite throughout interval 38.0 to 41.0 meters. Biotite chloritized throughout.

58.6 m: 2.9 m; Coarse crystalline
84.7 m: 70 cm; Contacts 70 degrees TCA.
98.2 m: 1.1 m; Contacts indistinct.
102.2 m: 4.0 m; Granitized. (Pegmatite and granodiorite)

106.2 m: 3.0 m; Interval 106.2 to 106.5 cut by lamprophyre dikelets at 45 degrees TCA.

118.8 m: 80 cm; Contacts 90 degrees TCA.

Aplite noted at: (Depth, thickness, attitude)

50.0 m: 6.0 m; Light grey-pink, slightly gneissic. Biotite banding 60 to 70 degrees TCA. HW contact with pegmatite vague. FW contact 45 degrees TCA.

76.6 m: 10 cm; Contacts 45 degrees TCA. Buff white, sucrosic.

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 18, 1989
COMPLETED :AUGUST 19, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :146.0 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-09
ELEV : 2,080.1 M
BEARING: 202.5 DEG
DIP : -45 DEG
LENGTH : 146.0 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			79.0 m: 30 cm; 45 degrees TCA. 79.6 m: 10 cm; 45 degrees TCA. 110.8 m: 50 cm; Contacts vague. Lamprophyre noted at: (Depth, thickness, attitude) ---------- 86.8 m: 8.7 m; HW chilled over 1.0 meter, 45 degrees TCA. FW 60 degrees TCA, with wallrock (granodiorite) inclusions over 50 cm. 101.9 m: 30 cm; 45 degrees TCA, chilled. 106.2 m: 30 cm; Two dikelets cutting pegmatite. Structures noted at: ---------- 0.0 m to 23.0 m: Rock badly broken or reduced to rubble; approximately 15 meters of core loss in interval. 19.0 m to 21.5 m: Rusty weathering granodiorite, feldspars gone to clay. 23.8 m to 24.1 m: Feldspars weathered to clay. 32.5 m to 33.2 m: Feldspars weathered to clay. 34.5 m to 35.0 m: Incipient clay after granodiorite. 40.7 m to 41 m: Fault gouge and weathered feldspars. 102.5 m to 105 m: Calcite-filled fracture parallel TCA.									
128.3	134.0	5.7	APLITE: Grey-buff, medium crystalline, slight gneissic fabric, otherwise sucrosic. Pin-head garnets present. Feldspars sausseritized, chlorite and epidote on slip planes. Very rare (<<1%) pyrite throughout interval. Quartz vein 1 cm, at 130.9 m with one speck of pyrite. Quartz vein, 1 cm, at 133.5 m with 1% pyrite.	69591	133.0	134.0	1.0	24		0.9	51	53

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 18, 1989
COMPLETED :AUGUST 19, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE MINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :146.0 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-09
ELEV : 2,080.1 M
BEARING: 202.5 DEG
DIP : -45 DEG
LENGTH : 146.0 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
134.0	134.5	0.5	QUARTZ VEIN: Milky white, minor vugs. Chlorite inclusions from hairline to 5 cm thick. Pyrite fine, disseminated, 1%, commonly associated with chloritic inclusions near HW and FW,and on slip-planes. Galena and sphalerite 1 to 2 %, coarse (up to 5mm) crystalline, concentrated near center of vein.	69592	134.0	134.5	0.5	304		4.0	2750	2900
134.5	146.0	11.5	APLITE: Grey-buff, with rare pin-head garnets. Banding 45 to 60 degrees TCA. Biotite-rich inclusions (lamprophyre) with minor carbonate and pyrite at 142.5 m (10 cm), 60 degrees TCA, and 143.0 m (30 cm), 60 to 90 degrees TCA. Rare (<1%) disseminated pyrite.	69593	134.5	135.5	1.0	<10		1.0	32	53
146.0			EOH Acid test at 146.0 m: Apparent attitude -41 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 20, 1989
COMPLETED :AUGUST 21, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :136.9 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-10
ELEV : 2,280.1M
BEARING: 202.5 DEG
DIP : -60 DEG
LENGTH : 136.9 M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION
0	4.2	4.2	CASING
4.2	108.4	104.2	GRANODIORITE: Medium to light grey, medium crystalline, with prominent biotite. Cut throughout by dikes and sills of pegmatite, aplite, and lamprophyre.

Pegmatite noted at: (Depth, thickness, attitude)

9.2 m: 2.1 m

82.2m to 89.1m (6.9m): Pegmatite blotches in leucocratic granodiorite.

96.6m to 100.75m: (4.15m); Coarse crystalline.

100.75m to 102.0 m: (1.25 m) Granodiorite with pegmatite bands at 45 degrees TCA.

102.0m to 103.8m (1.8m): Pegmatite with aplite in center.
105.1m to 108.4m (3.3m): Coarse, pink.

Aplite noted at: (Depth, thickness, attitude)

11.9m to 14.0 m (2.1m): Contacts 45 degrees TCA.

54.6m to 57.6m (3.0m): Mixture of aplite and pegmatite, light grey-pink. HW 60 degrees TCA, FW 80 degrees TCA. Slight gneissic texture 60 degrees TCA.

58.9m to 63.5m (4.6m): Aplite with pegmatite on HW. Contacts 45 degrees TCA.

85.7m to 86.0m (30cm): Orange-red, contacts 70 to 80 degrees TCA.

Lamprophyre noted at: (Depth, thickness, interval)

89.1m to 96.6m (7.5m): Contacts chilled over 1.0 m, HW 45 degrees TCA, FW 60 degrees TCA.

SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 20, 1989
COMPLETED :AUGUST 21, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBG
TEST AT :136.9 M
LOGGED BY:G.Z. MOSHER

HOLE # : AG-89-10
ELEV : 2,280.1M
BEARING: 202.5 DEG
DIP : -60 DEG
LENGTH : 136.9 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			97.75m to 97.85m (10cm): Contacts 45 degrees TCA. 98.45m to 98.75m (30cm): Chilled Fractures noted at: --- 8.5m to 11.0m (2.5m): Rock broken and rusty. 14.0m to 31.7m (17.7m): Core mostly gouge and rubble, approximately 3.0 meters core loss in interval. Feldspars noticably weathered to 38.0 m.									
108.4	123.7	15.3	APLITE: Light pink, biotitic, slightly gneissic 60 to 90 degrees TCA. Rare (<1%) pin-head garnets. Cut by lamprophyre at: 113.6m to 114.9m (1.3m): Chilled with aplite inclusions. Contacts 45 degrees TCA. 115.6m to 115.7m (10cm): With clusters of plagioclase phenocrysts. 116.0m to 116.25m (25cm): With clasts of aplite. 116.8m to 117.2m (40cm): With aplite clasts or phenocrysts. 118.0m to 119.2m (1.2m): With aplite folia 1cm to 3cm thick. 119.5m to 119.6m (10cm): Contacts 45 degrees TCA.	69594	122.7	123.7	1.0	24		0.5	14	174
123.7	126.6	2.9	APLITE: Completely sausseritized, light greenish cast, with slight gneissic texture emphasized by quartz xls. Sericite abundant. Pegmatite clots throughout, increasing after 125.4 m. Rare quartz veinlets at random orientations. Quartz vein, 2cm, at 123.2m. Quartz vein, 1cm, at 123.7m. Quartz vein, 4 cm, at 126.55m Pyrite common throughout (1 to 2 %), especially	69595 69596 69597	123.7 124.7 125.7	124.7 125.7 126.6	1.0 1.0 0.9	156 <10 <10		<0.4 <0.4 <0.4	6 4 10	8 6 5

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 20, 1989
COMPLETED :AUGUST 21, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :136.9 M
LOGGED BY:G.J. MOSHER

HOLE # : AG-89-10
ELEV : 2,280.1M
BEARING: 202.5 DEG
DIP : -60 DEG
LENGTH : 136.9 M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			abundant at 124.3m with very coarse (1cm) euhedra on fracture. About 10 percent pyrite over 10 cm.									
126.6	136.9	10.3	APLITE: Light pink, pin-head garnets rare (1%), biotite common (2% to 5%). Slight gneissic texture.	69598	126.6	127.6	1.0	<10		0.4	14	25
			Cut by lamprophyre at: 127.9m to 128.0m (10cm): Chilled, contacts 45 degrees TCA. 128.1m to 128.6m (50cm): 133.3m to 133.5m (50cm): Contacts 45 degrees TCA.									
136.9			EOH									
			Dip test at 136.9m: Apparent dip -62 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 21, 1989
COMPLETED :AUGUST 23, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :145.7m
LOGGED BY:G.Z.MOSHER

HOLE # : AG-89-11
ELEV : 2,080.1M
BEARING: 112.5 DEG
DIP : -45 DEG
LENGTH : 145.7M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0	2.7	2.7	CASING									
2.7	4.0	1.3	PEGMATITE: With pin-head garnet aplite.									
4.0	129.6	125.6	GRANODIORITE: Light grey, medium crystalline, with prominent biotite. Cut by pegmatite, aplite, and lamprophyre throughout.									

Pegmatite noted at: (Depth, thickness, attitude)

6.7m to 19.5m (12.8m): Medium pink to grey-buff, with aplite phases. Apophyses of granodiorite at 15.1 m (80cm) and 16.3 m (30cm). Contacts and banding at 45 degrees TCA.

22.1m to 22.6m (50cm): 60.5m to 63.0m (2.5m): With 10cm of granodiorite at 62.5m. Contacts at 45 degrees TCA.

60.5m to 63.0m (2.5m): Contacts at 45 degrees TCA, 10 cm interval of grandiorite at 62.5 m.

67.2m to 67.7m (50cm): Grey, medium crystalline, and pink, very coarse crystalline.

71.3m to 72.0m (70cm): Coarse crystalline.

78.8m to 81.3m (2.5m): Cross-cut by aplite and containing apophyses of granodiorite.

119.8m to 121.6m (1.8m): Phases of aplite and pegmatite.

123.4m to 124.1m (70cm): Contacts 45 degrees TCA.

Aplite noted at: (Depth, thickness, attitude)

49.3m to 58.0m (8.7m): HW obscured by fracturing, FW underlain by 60 cm thick zone of alteration in granodiorite (bleaching, hematization, feldspars altered to clay). Contact 45 degrees TCA. Aplite pinkish-grey,

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 21, 1989
COMPLETED :AUGUST 23, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :145.7m
LOGGED BY:G.Z.MOSHER

HOLE # : AG-89-11
ELEV : 2,080.1M
BEARING: 112.5 DEG
DIP : -45 DEG
LENGTH : 145.7M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB)	GOLD) (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)

coarse crystalline, nebulous textured, with minor biotite and rare pin-head garnets. Minor cross-cutting sucrosic aplite dikelets.

85.8m to 86.3m (50cm): Medium-grey, contacts 70 degrees TCA.

101.1m to 103.7m (3.6m): Medium-grey, very similar in aspect to granodiorite.

109.7m to 111.4m (1.7m): Pink-grey with 10 cm of pegmatite at FW. Contacts at 45 degrees TCA.

Lamprophyre noted at: (Depth, thickness, attitude)

72.0m to 74.6m (2.6m): HW 60 degrees TCA, FW broken, about 45 degrees TCA. Both contacts chilled for 1.0m.

78.7m to 78.8m (10cm): Contacts 45 degrees TCA.

81.3m to 82.7m (1.4m): Contacts 70 degrees TCA, FW weathered, 10cm granodiorite apophysy at 45 degrees TCA.

103.1m to 103.5m (40 cm): Chilled, margins 45 degrees TCA.

111.7m to 12.0m (30cm): Contacts at60 degrees TCA.

121.8m to 122.7m (90cm): Phenocrysts alligned at 45 degrees TCA.

Structures noted at:

0.m to 4.0m (4.0m): Rock rusty.

12.0m to 12.2m (20cm): Rock broken, fault gouge.

24.3m to 24.7m (40cm): Rock broken, fault gouge.

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 21, 1989
COMPLETED :AUGUST 23, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :145.7m
LOGGED BY:G.Z.MOSHER

HOLE # : AG-89-11
ELEV : 2,080.1M
BEARING: 112.5 DEG
DIP : -45 DEG
LENGTH : 145.7M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	GOLD (PPB)	GOLD (OZ/TON)	ANALYSES SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			28.2m to 48.0m (19.8m): Advanced argillic alteration of fledspars, most reduced to clay; core white and crumbly, with less-altered, more quartz-rich bands one to 20 cm thick at 45 degrees TCA. Minor hematization, especially on fractures. Chlorite after biotite. Less pronounced alteration from 48.7m to 49.3m. Alteration possibly fault related but unresolved whether of supergene or hydrothermal origin. HW sharp and possibly fault, FW gradational over about 10 cm and fractured. Original lithotypes asumed to be granodiorite, pegmatite and aplite.									
			78.2m to 79.2m (1.0m) Broken core.									
			86.3m to 86.4m (10cm): Broken core.									
			86.7m to 86.8m (10cm): Broken core.									
			88.8m to 88.85m (5cm): Fault gouge.									
129.6	134.3	4.7	APLITE: Sucrosic, grey-buff-pink in color, with rare pin-head garnets, minor (<1%) biotite, and common pegmatite clots. HW 90 degrees TCA, FW 45 degrees TCA.	69603	133.3	134.3	1.0	312		0.5	22	34
134.3	136.9	2.6	LAMPROPHYRE: Entrained, altered, with pronounced fabric 45 to 60 degrees TCA. Minor quartz veinlets (1 to 2mm) throughout. Very rare (<<1%) pyrite.	69604	134.3	135.3	1.0	654		0.4	28	227
				69605	135.3	136.3	1.0	80		<0.4	19	249
			Quartz vein, 1 cm, in middle of 10 cm zone of saussaritization at 134.55m. Pyrite 1 to 2 % over interval.									
			Quartz vein, 5cm, at 135.7m, contains <1% pyrite, no other sulphides noted.									
[illegible].9	140.5	3.6	APLITE: Nebulous texture with gneissic phases. Chlorite, epidote, hematite on fractures 45 degrees TCA.									
140.5	142.0	1.5	LAMPROPHYRE: Contacts 45 degrees TCA, calcite veinlets cross-cutting at 45 degrees TCA.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 21, 1989
COMPLETED :AUGUST 23, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF ALPINE CREEK
CORE SIZE:NBHBQ
TEST AT :145.7m
LOGGED BY:G.Z.MOSHER

HOLE # : AG-89-11
ELEV : 2,080.1M
BEARING: 112.5 DEG
DIP : -45 DEG
LENGTH : 145.7M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
142.0	145.7	3.7	APLITE: Buff, slightly gneissic, biotitic. Contacts at 45 degrees TCA.									
145.7			EOH.									
			Acid test at 145.7m; apparent attitude -46 degrees.									

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 23, 1989
COMPLETED :AUGUST 24, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF APLINE CREEK
CORE SIZE:NBHBQ
TEST AT :136.9M
LOGGED BY:G.Z.MOSHER

HOLE # : AG-89-12
ELEV : 2,080.1M
BEARING: 112.5 DEG
DIP : -60 DEG
LENGTH : 136.9M

METERAGE FROM	METERAGE TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
0.0	3.0	3.0	CASING									
3.0	119.4	116.4	GRANODIORITE: Medium to light grey, medium crystalline, equigranular, contains 2 to 5 percent biotite. Cut throughout by pegmatite, aplite, and lamprophyre.									

Pegmatite noted at: (Depth, thickness, attitude)

8.0m to 10.0m (2.0m): Myrmekitic, light pink, biotitic.
21.1m to 21.9m (80cm): Contacts vague.
38.4m to 39.6m (1.2m): Mixed with granodiorite.

61.1m to 63.1m (2.0m): Pegmatite and aplite, contacts 45 degrees TCA.

85.4m to 86.9m (2.5m): Pink-grey.
87.8m to 88.2m (1.4m): Contacts 45 degrees TCA.

Aplite noted at: (Depth, thickness, attitude)

10.0m to 15.5m (5.5m): With pegmatitic phases.
17.7m to 20.7m (3.7m): Sucrosic texture.
27.1m to 28.0m (90cm): With pegmatite phases.
106.3m to 107.1m (80cm): Light pink.

Lamprophyre noted at: (Depth, thickness, attitude)

107.8m to 108.5m (70cm): HW irregular, 30 degrees TCA, FW 10 degrees TCA. Dike contains rare calcite veinlets up to 2 mm thick.

Fractures noted at:

51.3m to 51.5m (20cm): Rubble.
60.5m to 61.0m (50cm): Rubble

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 23, 1989
COMPLETED :AUGUST 24, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF APLINE CREEK
CORE SIZE:NBHBQ
TEST AT :136.9M
LOGGED BY:G.Z.MOSHER

HOLE # : AG-89-12
ELEV : 2,080.1M
BEARING: 112.5 DEG
DIP : -60 DEG
LENGTH : 136.9M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
			62.1m to 63.4m (1.3m): Rubble and fractures parallel TCA. Minor gouge. 69.0m to 69.4m (40cm): Fractured parallel TCA, minor gouge. 79.0m to 79.4m (40cm): Rubble 80.5m to 81.7m (1.2m): Fractured and rubble. 110.8m to 111.0m (20cm): Fault gouge with calcite veinlets.									
119.4	121.9	2.5	APLITE: Sucrosic, light grey, with biotite. Looks like granodiorite, slightly finer crystalline and lighter.									
121.9	125.0	3.1	Broken core: negligable core loss.									
121.9	124.5	2.6	PEGMATITE: Feldspars altered to clay. Chlorite on fractures. (Both feartures in rubble zone).									
124.5	126.0	1.5	APLITE: Nebulous and gneissic textures, with fabric normal TCA. Pegmatitic clots common. Pyrite very rare (<<1%). Pin-head garnets noted. Advanced saussaritization and sericitization. Minor quartz veinlets 1 to 3mm.	69599	125.4	126.0	0.6	<10		<0.4	110	56
126.0	126.4	0.4	APLITE: With gneissic fabric due to abundant biotite. Start of entrained lamprophyre dike. Contacts normal TCA.	69600	126.0	126.4	0.4	<10		<0.4	16	35
126.4	127.1	0.7	QUARTZ VEIN: Milky white, contacts at 80 degrees TCA. Cut by hair-line fractures withn chlorite coatings. 126.9m to 126.95m (5cm): SPHALERITE and GALENA 10% 127.1m: Coarse euhedral pyrite. Minor disseminated pyrite elsewhere.	69601	126.4	127.1	0.7	>82,000	3.512 ✓	59.2	5020	9900
127.1	128.3	1.2	APLITE: With entrained lamprophyre dike as bands 2 to 5 cm. thick, normal TCA. Chloritic, with minor pyrite. FW 30 degrees TCA.	69602	127.1	128.1	1.0	86		4.2	125	236

DRILL HOLE RECORD: COMINCO LTD WESTERN DISTRICT EXPLORATION

PROPERTY :ALPINE GOLD
COMMENCED :AUGUST 23, 1989
COMPLETED :AUGUST 24, 1989
COORDINATES:
OBJECTIVE :TO TEST DOWN-DIP EXTENSION OF ALPINE VEIN

LOCATION :HEAD OF APLINE CREEK
CORE SIZE:NBHBQ
TEST AT :136.9M
LOGGED BY:G.Z.MOSHER

HOLE # : AG-89-12
ELEV : 2,080.1M
BEARING: 112.5 DEG
DIP : -60 DEG
LENGTH : 136.9M

METERAGE FROM	TO	INT (m)	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	ANALYSES GOLD (PPB/G)	GOLD (OZ/TON)	SILVER (PPM)	LEAD (PPM)	ZINC (PPM)
128.3	136.9	8.6	APLITE: With pegmatite. Light pink.									
136.9			EOH									
			Dip test at 136.9m. Apparent attitude: -58 degrees.									

APPENDIX 2: DRILL CORE SAMPLE ANALYTICAL RESULTS

ALPINE GEOLOGY LTD

JOB V 89-03772R
REPORT DATE 21 SEP 1989

LAB NO	FIELD NUMBER	DRILL INTERVAL FROM (METRES)	TO	Au PPB	Wt Au GRAM	Ag PPM	Pb PPM	Zn PPM	Au(1) G/T	Au(1) OZ/T
R8913204	69551 BDH-1	104.90	105.50	92	5	.7	167	80		
R8913205	69552 BDH-1	105.50	106.00	5000	5	6.3	710	471	4.526	0.132
R8913206	69553 BDH-1	106.00	107.00	<10	5	.4	131	96		
R8913207	69554 BDH-1	107.00	107.50	<10	5	<.4	158	189		
R8913208	69555 BDH-2	111.70	112.70	<10	5	.4	152	192		
R8913209	69556 BDH-2	112.70	113.70	<10	5	<.4	92	317		
R8913210	69557 BDH-2	113.70	114.60	1000	5	.7	93	180	0.823	0.024
R8913211	69558 BDH-2	114.60	115.10	32	5	<.4	114	81		
R8913212	69560 BDH-3	115.10	115.90	1220	5	1.6	56	110	1.029	0.030
R8913213	69561 BDH-3	115.90	116.20	<10	5	<.4	48	104		
R8913214	69562 BDH-3	123.80	124.80	<10	5	<.4	48	91		
R8913215	69563 BDH-3	124.80	125.80	200	5	<.4	93	89		
R8913216	69564 BDH-3	125.80	126.80	<10	5	1	372	136		
R8913217	69565 BDH-3	126.80	127.40	4200	5	1.4	62	54	4.731	0.138
R8913218	69566 BDH-3	127.40	127.80	180	5	.9	48	697		
R8913219	69567 BDH-3	127.80	128.20	<10	5	1.1	27	628		
R8913220	69568 BDH-3	128.20	128.60	<10	5	6.7	51	426		
R8913221	69569 BDH-3	128.60	129.60	162	5	.7	40	147		
R8913222	69570 BDH-3	129.60	130.20	200	5	3.9	112	288		

I=INSUFFICIENT SAMPLE X=SMALL SAMPLE E=EXCEEDS CALIBRATION C=BEING CHECKED R=REVISED
IF REQUESTED ANALYSES ARE NOT SHOWN RESULTS ARE TO FOLLOW

ANALYTICAL METHODS

- Au — AQUA REGIA DECOMPOSITION / SOLVENT EXTRACTION / AAS
- Wt Au — THE WEIGHT OF SAMPLE TAKEN TO ANALYSE FOR GOLD (GEOCHEM)
- Ag — AQUA REGIA DECOMPOSITION / AAS
- Pb — AQUA REGIA DECOMPOSITION / AAS
- Zn — AQUA REGIA DECOMPOSITION / AAS
- Au(1) — FIRE ASSAY LEAD COLLECTION /AA (LOW LEVEL) OR GRAV. FINISH (HIGH LEVEL)
- Au(1) — FIRE ASSAY LEAD COLLECTION /AA (LOW LEVEL) OR GRAV. FINISH (HIGH LEVEL)

ALPINE GOLD—WEB

JOB V 89-03902
REPORT DATE 5 SEP 1989

LAB NO	FIELD NUMBER	DRILL INTERVAL FROM (METRES)	TO	Au PPB	WT Au GRAM	As PPM	Pb PPM	Zn PPM	Au(1) G/T	Au(1) OZ/T
R8913692	69571	BDH-5	114.80	115.30	38	5	.4	42	30		
R8913693	69572	BDH-5	115.30	116.10	E17100	5	7.7	291	59	22.149	0.646
R8913694	69573	BDH-5	116.10	116.60	40	5	<.4	24	22		
R8913695	69574	BDH-6	109.00	110.00	24	5	.8	26	23		
R8913696	69575	BDH-6	110.00	110.20	530	5	2.9	912	250		
R8913697	69576	BDH-6	110.20	110.60	<10	5	<.4	46	138		
R8913698	69577	BDH-6	110.60	111.10	<10	5	.5	40	60		
R8913699	69578	BDH-6	111.10	112.00	32	5	<.4	44	62		
R8913700	69579	BDH-6	112.00	112.90	6680	5	6.1	2400	4630	5.143	0.150
R8913701	69580	BDH-6	112.90	113.90	<10	5	.5	26	77		
R8913702	69581	BDH-6	113.90	114.90	6640	5	7	240	158	4.869	0.142
R8913703	69582	BDH-6	114.90	115.20	78	5	<.4	20	150		
R8913704	69583	BDH-6	115.20	116.20	<10	5	<.4	17	25		

I=INSUFFICIENT SAMPLE S=SMALL SAMPLE E=EXCEEDS CALIBRATION C=BEING CHECKED R=REVISED
*F REQUESTED ANALYSES ARE NOT SHOWN *RESULTS ARE TO FOLLOW

ANALYTICAL METHODS

Au AQUA REGIA DECOMPOSITION / SOLVENT EXTRACTION / AAS
WT Au THE WEIGHT OF SAMPLE TAKEN TO ANALYSE FOR GOLD (GEOCHEM)
As AQUA REGIA DECOMPOSITION / AAS
Pb AQUA REGIA DECOMPOSITION / AAS
Zn AQUA REGIA DECOMPOSITION / AAS
Au(1) FIRE ASSAY *LEAD COLLECTION /AA (LOW LEVEL) OR GRAV. FINISH (HIGH LEVEL)
Au(1) FIRE ASSAY *LEAD COLLECTION /AA (LOW LEVEL) OR GRAV. FINISH (HIGH LEVEL)

ALPINE GOLD—WX

Job V 89-0429R
Report date 5 SEP 1989

LAB NO	FIELD NUMBER	DRILL INTERVAL FROM (METRES)	TO	Au PPB	Wt Au GRAM	Pb PPM	Zn PPM	As PPM
R8916117	69584	DH-7	128.30	129.30	80	5	24	76	.8
R8916118	69585	DH-7	129.30	130.00	40	5	17	237	1.1
R8916119	69586	DH-7	130.00	131.00	<10	5	36	67	.6
R8916120	69587	DH-7	131.00	132.00	<10	5	24	213	1.3
R8916121	69588	DH-8	129.30	130.30	62	5	15	63	<.4
R8916122	69589	DH-8	130.30	131.00	612	5	1130	117	9.4
R8916123	69590	DH-8	131.00	132.00	<10	5	21	89	<.4
R8916124	69591	DH-9	133.00	134.00	24	5	51	53	.9
R8916125	69592	DH-9	134.00	134.50	304	5	2750	2900	4
R8916126	69593	DH-9	134.50	135.50	<10	5	32	53	1

J=INSUFFICIENT SAMPLE X=SMALL SAMPLE E=EXCEEDS CALIBRATION C=BEING CHECKED R=REVISED
IF REQUESTED ANALYSES ARE NOT SHOWN RESULTS ARE TO FOLLOW

ANALYTICAL METHODS

Au AQUA REGIA DECOMPOSITION / SOLVENT EXTRACTION / AAS
Wt Au THE WEIGHT OF SAMPLE TAKEN TO ANALYSE FOR GOLD (GEOCHEM)
Pb AQUA REGIA DECOMPOSITION / AAS
Zn AQUA REGIA DECOMPOSITION / AAS
As AQUA REGIA DECOMPOSITION / AAS

ALPINE GOLD-WD

JOB V 89-0443R
REPORT DATE 20 OCT 1989

LAB NO	FIELD NUMBER	DRILL INTERVAL FROM (METRES)	TO	Au PPB	Wt Au GRAM	Ag PPM	Pb PPM	Zn PPM	Au(1) G/T	Au(1) OZ/T
RB917269	69594	BDH-10	122.70	123.70	24	5	.5	14	174		
RB917270	69595	BDH-10	123.70	124.70	156	5	(.4	6	8		
RB917271	69596	BDH-10	124.70	125.70	(10	5	(.4	4	6		
RB917272	69597	BDH-10	125.70	126.60	(10	5	(.4	10	5		
RB917273	69598	BDH-10	126.60	127.60	(10	5	.4	14	25		
RB917274	69599	BDH-12	125.40	126.00	(10	5	(.4	110	56		
RB917275	69600	BDH-12	126.00	126.40	(10	5	(.4	16	35		
RB917276	69601	BDH-12	126.40	127.10	E92000	5	59.2	5020	9900	122.46	3.572
RB917277	69602	BDH-12	127.10	128.10	86	5	4.2	125	236		
RB917278	69603	BDH-11	133.30	134.30	312	5	.5	22	34		
RB917279	69604	BDH-11	134.30	135.30	654	5	.4	28	227		
RB917280	69605	BDH-11	135.30	136.30	80	5	(.4	19	249		

I=INSUFFICIENT SAMPLE X=SMALL SAMPLE E=EXCEEDS CALIBRATION C=BEING CHECKED R=REVISED
IF REQUESTED ANALYSES ARE NOT SHOWN /RESULTS ARE TO FOLLOW

ANALYTICAL METHODS

- Au AQUA REGIA DECOMPOSITION / SOLVENT EXTRACTION / AAS
- Wt Au THE WEIGHT OF SAMPLE TAKEN TO ANALYSE FOR GOLD (GEOCHEM)
- Ag AQUA REGIA DECOMPOSITION / AAS
- Pb AQUA REGIA DECOMPOSITION / AAS
- Zn AQUA REGIA DECOMPOSITION / AAS
- Au(1) FIRE ASSAY /LEAD COLLECTION /AA (LOW LEVEL) OR GRAV. FINISH (HIGH LEVEL)
- Au(1) FIRE ASSAY /LEAD COLLECTION /AA (LOW LEVEL) OR GRAV. FINISH (HIGH LEVEL)

COMINCO LTD.

ALPINE PROPERTY

STATEMENT OF EXPENDITURES

INCEPTION - SEPTEMBER 30, 1989

	INCEPTION TO September 30, 1989
COMMUNICATIONS	$ 213
GEOLOGY	29,883
SURVEY & GROUND CONTROL	1,648
ACCESS	15,121
GEOCHEMISTRY	956
DIAMOND DRILLING	140,748
ORGANIZATION & FIELD SUPERVISION	5,688
TRANSPORTATION	43,016
TRENCHING	3,954
CAMP COSTS	518
TENURE	397
OPTION PAYMENTS	45,000
ADMINISTRATIVE SERVICES	17,411
	$ 304,553

Cominco Ltd.
EXPLORATION VANCOUVER
October 20, 1989
cc: Consulting Geologist, Exploration (TWM)
Senior Tenure Technician (SSS)
File
alpine.sta

R.L. Woods
Controller, Exploration Division

ITEMIZED COST STATEMENT

Communications		$ 213
	Rental of hand held radios for helicopter to drill crew communication on drill moves and crew changes.	
Geology		17,088
	Contract geologist period July 27 to Sept. 15 @ $400.00 per day or $50.00 per hour plus expenses - G. Mosher.	
		12,795
	Purchase of air photos and production of 1:5,000 scale topographic map (Hugh Hamilton Ltd., Vancouver)	
		1,648
	Survey and ground control - contracted to Gordon Stein, B.C. Land Surveyor, Nelson	
Access		15,121
	Sitkum Creek road rehabilitation: purchase and placement of culverts, bulldozer and backhoe work - contracted to locals C. Bellmond, Russ Phillips, J.E. Woods and Dennis Bialtioski. D-8 machine plus operator @ $60.00 per hour, Dump truck, 4 x 4 3/4 ton and loader all at $50.00 per hour.	
Geochemistry		956
	Sawed halves of mineralized core intervals analyzed for Au and Ag.	
Diamond Drilling		5,942
	Drill consultant, Bruce Griffith designed and negotiated drill contract; supervised initial set up 16 days @ $250.00 per day plus expenses.	
		134,806
	Diamond drilling contracted to Coates Drilling Ltd. @ $62.00 per meter direct drilling plus crew time on mob, demob, helicopter drill moves, plus consumables, stand by time and core boxes.	
Transportation		43,016
	No camp. Helicopter crew changes Nelson to drill site. Crew moves charged at $225.00 per move or $450.00 per day; other work - fuel trips core boxes charged @ $580.00 per hour (Bell 206) for 34 drill days; plus Bell 212 @ $1,550.00 per hour for mob, demob and drill move plus ferrying and consumables.	

Trenching		$ 3,954
	Contracted E & E Enterprises, Winlaw B.C.	
Camp Costs		518
	Emergency shelter and core storage.	
Organization and Supervision		5,688
	T.W. Muraro - 2/3 man month	
	TOTAL DIRECT COST	$241,745
Administrative Services		$17,411

Cominco Ltd.
Exploration, Vancouver
May 31, 1990

T.W. Muraro
Consulting Geologist
Exploration

TWM/eml

EXPLORATION WESTERN CANADA

IN THE MATTER OF THE B.C. MINERAL ACT AND

IN THE MATTER OF A DIAMOND DRILL PROGRAM

CARRIED OUT ON THE ALPINE PROPERTY

LOCATED IN THE NELSON AND SLOCAN MINING DIVISIONS

BRITISH COLUMBIA - MORE PARTICULARLY N.T.S. 82F/11 E & W

A F F I D A V I T

I, THEODORE W. MURARO OF THE MUNICIPALITY OF WEST VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, MAKE OATH AND SAY:

1. THAT I AM EMPLOYED AS AN IN-HOUSE CONSULTING GEOLOGIST BY COMINCO LTD. AND AS SUCH HAVE A PERSONAL KNOWLEDGE OF THE FACTS TO WHICH I HEREINAFTER DEPOSE:

2. THAT ANNEXED HERETO AND MARKED AS "APPENDIX 3 AND 3a" TO THIS REPORT IS A TRUE COPY OF EXPENDITURES OF A DIAMOND DRILL PROGRAM CARRIED OUT ON THE ALPINE PROPERTY.

3. THAT SAID EXPENDITURES WERE INCURRED MAINLY FROM THE 27TH DAY OF JULY TO THE 29TH DAY OF AUGUST, 1989 FOR THE PURPOSE OF EXPLORING ALPINE VEIN STRUCTURE.

T.W. MURARO

SCHEDULE A

Claims	Record No.
Alexis 1	5860 (E)
Alexis 2	5317 (E)
Charley 1	4697 (E)
Charley 3	4699 (E)
Marley 3	5518 (E)
Lakes 1	6050 (E)
Lakes 2	6051 (E)
MF 8004	61 (E)
MF 8204	62 (E)
Gold Blow	5344 (C)
Coupon 1	5824 (C)
Coupon 2	5825 (C)
Coupon 3	5826 (C)
King Solomon 1	1392 (D)
King Solomon 8	3481 (D)
Gold Crown 1	3857 (D)
Gold Crown 2	3858 (D)
Gold Crown 3	3859 (D)

ML 353 (Mining Lease) (Lots 2218, 5758, 5759) (B)

Crown Grants	Lot No.	Crown Grants	Lot No.
Nelson No. 5	2215 (A)	Washington Fr.	15004 (A)
Crown Point No. 6	2216 (A)	Oregon Fr.	15005 (A)
Swiss	2879 (A)	Idaho	15006 (A)
Highland Chief	2880 (A)	Noonday	2136 (A^1)
Bernie	2881 (A)	Gray Eagle	2137 (A^1)
Kootenay Pass	2882 (A)	Fourth of July	2138 (A^1)
Rocky Fr.	2883 (A)	Baby Fr.	5542 (A^1)
Basin	14922 (A)	Bolander	2143 (A^1)
Meadow	14928 (A)	Pamlico	2843 (A^1)
Sitkum	14929 (A)	Bell	2844 (A^1)
Swiss Fr.	15002 (A)	Silver Cord	3739 (A^1)
Alpine Fr.	15003 (A)		

(A) - Cove Energy Corp/Noonday Mines Ltd. Agreement of April 22/87
(Note: Claims marked (A^1) are located outside the Alpine Gold property area.)

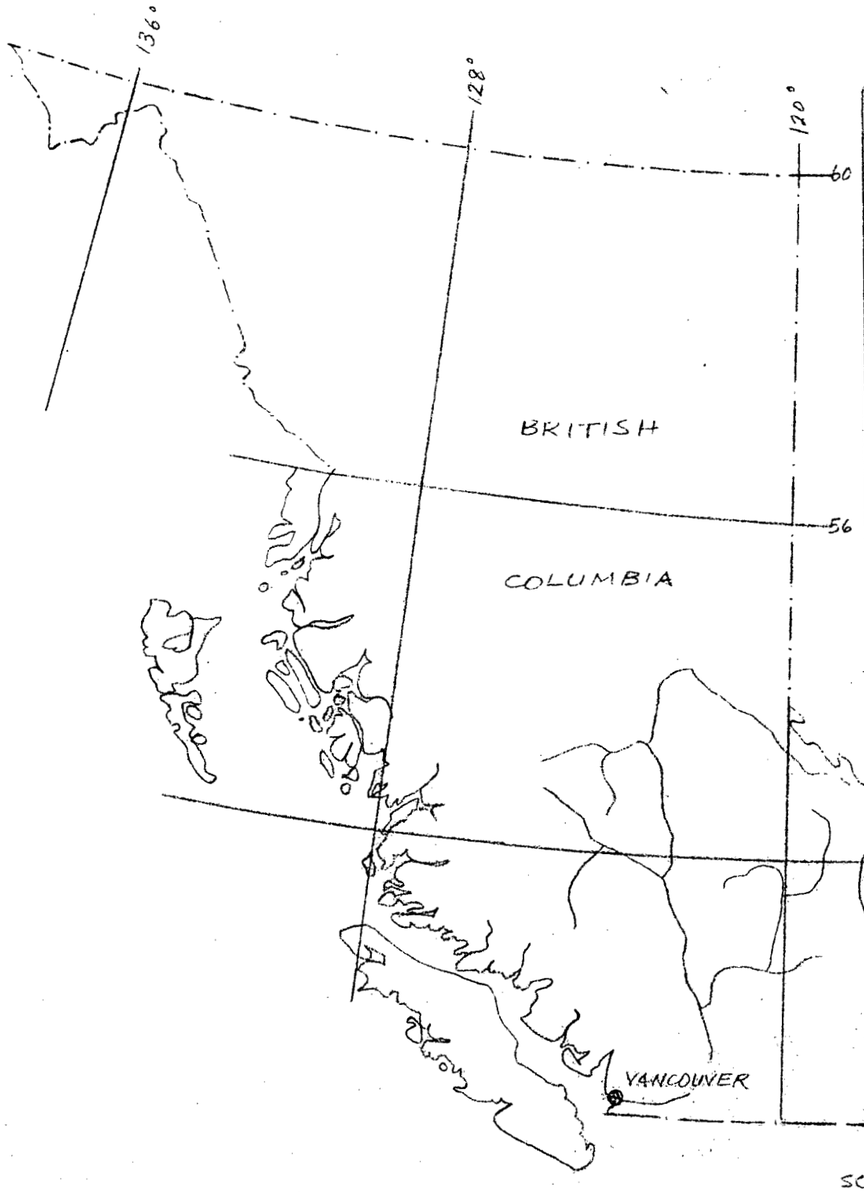
(B) - Cove Resources Corp/Knight Inlet Resources Ltd. Agreement of Nov. 28/89.

(C) - Cove Resources Corp/E.W. Denny & J.N. Denny & D. Pearce Agm't of Nov. 20/88

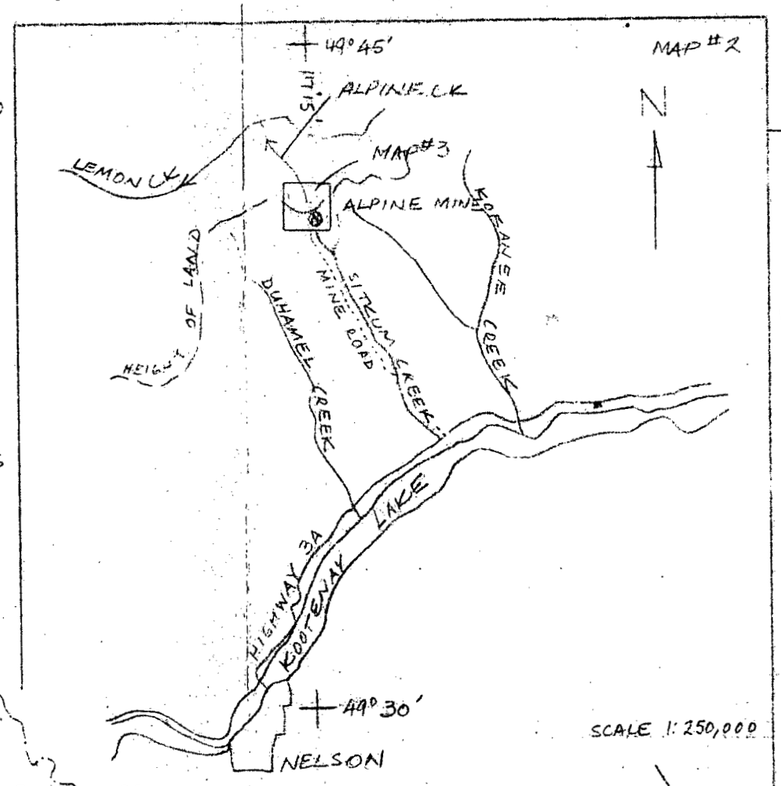
(D) - A. Matovich/E.W. Denny Agreement of May 28/87

(E) - Claims held directly by Cove and/or its agents.

FIGURE 1



SCALE 1: 7,500,000



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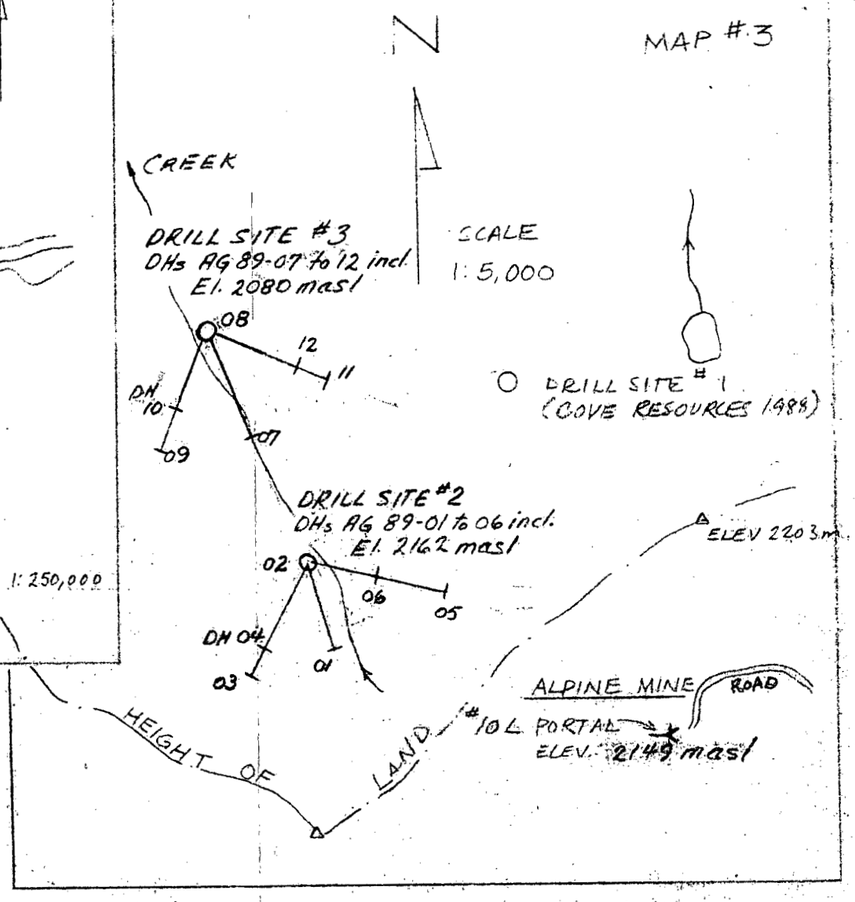


COMINCO LIMITED
ALPINE GOLD PROJECT
LOCATION MAP.

SEPT. 15/89
9TM.

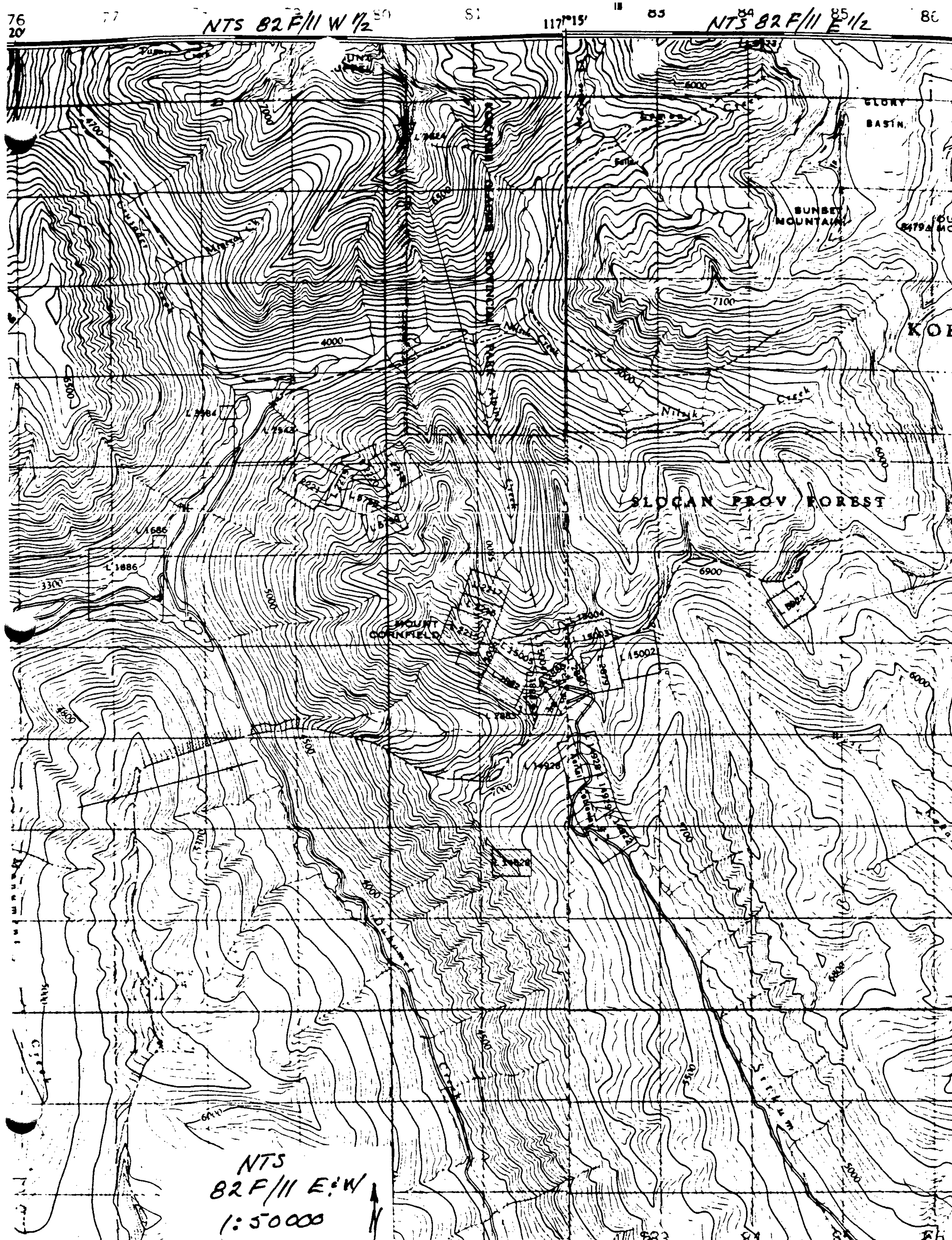
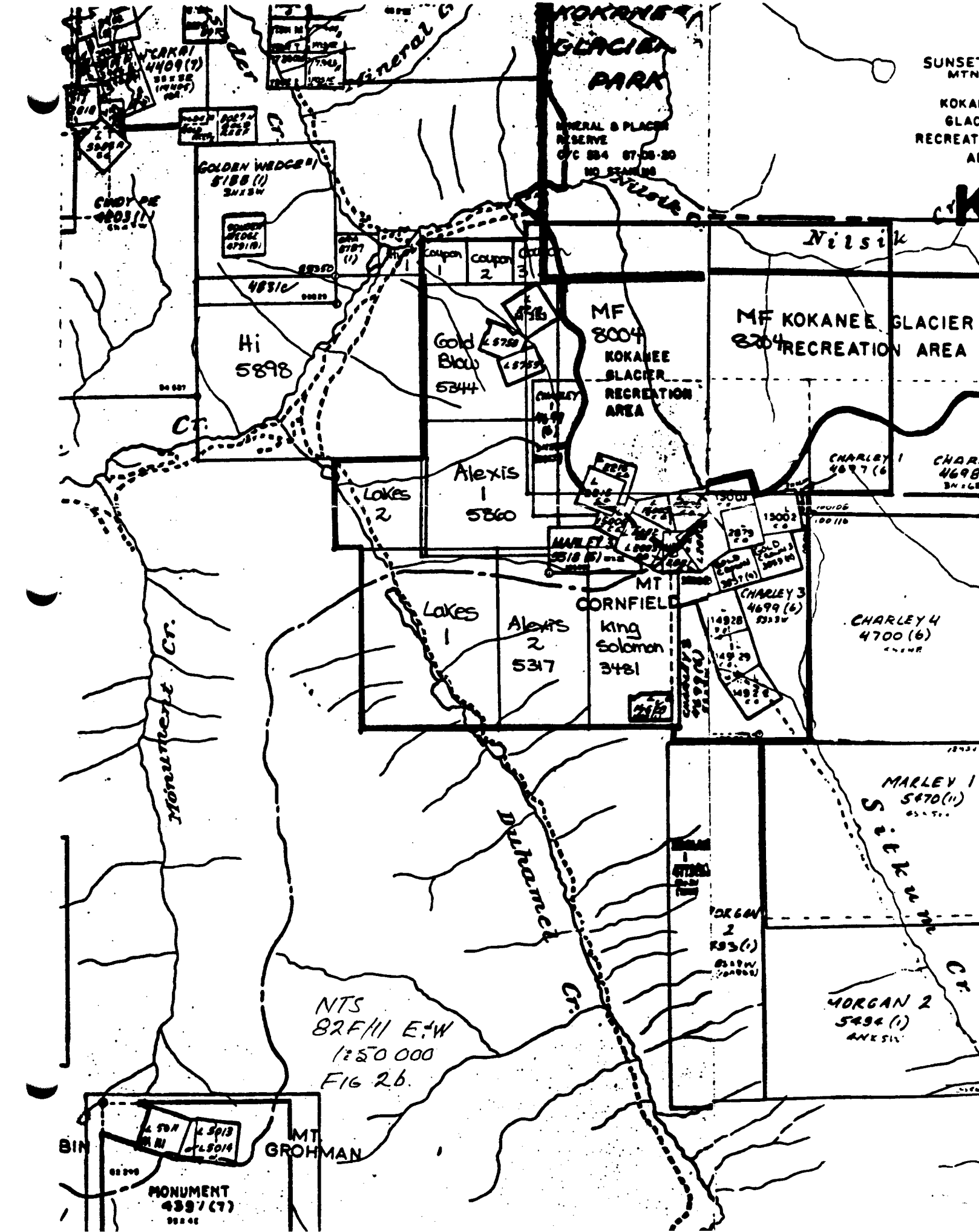
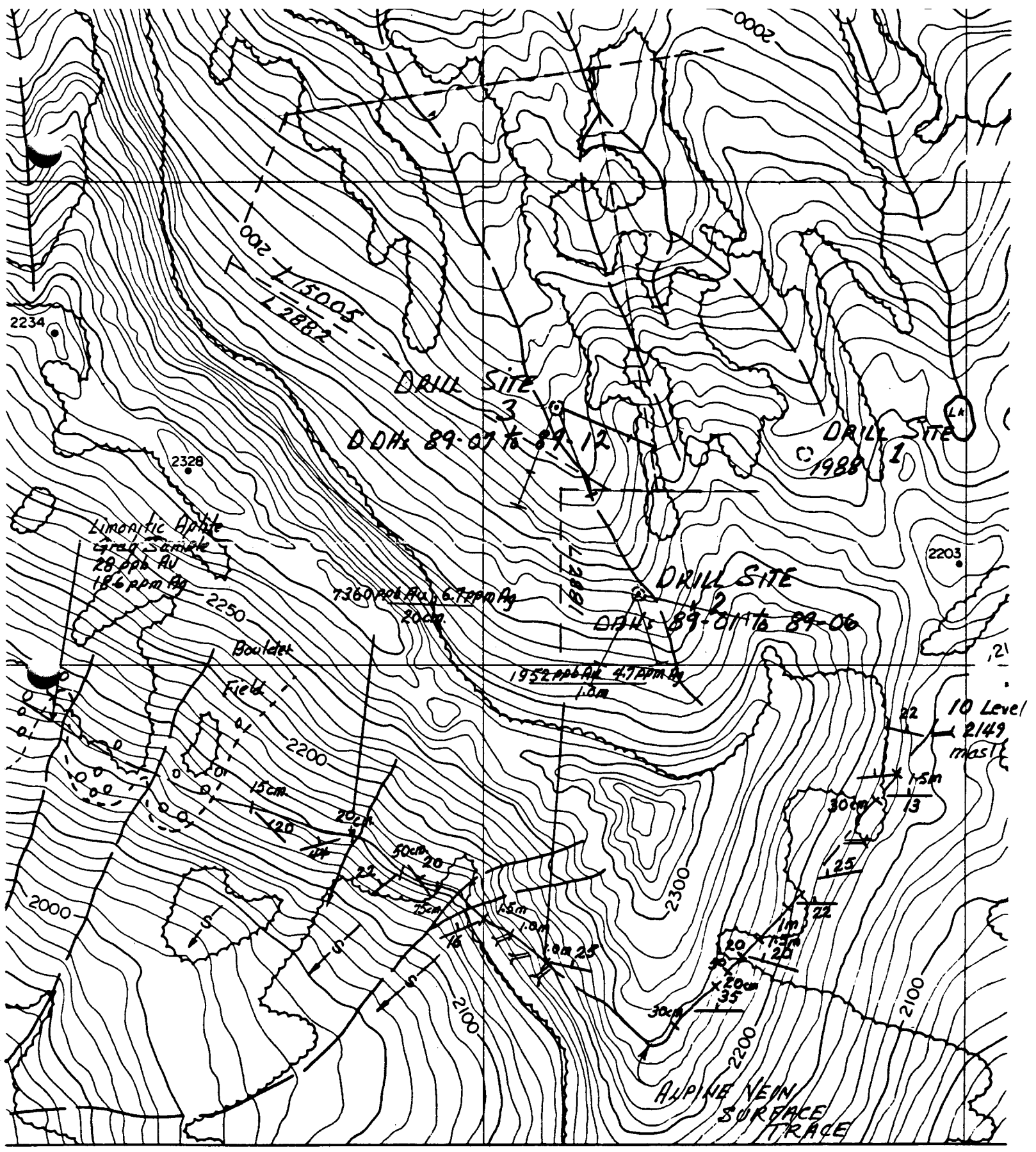

NTS 82 F/11 W 1/2
NTS 82 F/11 E 1/2
117°15'
GLORY
BASIN
SUNSET
MOUNTAIN
SLOCAN PROV FOREST
MOUNT
CORNFIELD
Nilsik
Creek
L 1886
L 1686
L 15002
L 15003
L 15004
7100
6900
4000
5000
6000
3300
NTS
82 F/11 E:W
1:50000

FIG. 2a


KOKANEE GLACIER PARK
MINERAL & PLACER RESERVE
SUNSET MTN
Nilsik
MF 8004 KOKANEE GLACIER RECREATION AREA
MF KOKANEE GLACIER 8204 RECREATION AREA
Hi 5898
Gold Blow 5844
Alexis 1 5860
Lakes 2
Lakes 1
Alexis 2 5317
MT CORNFIELD
King Solomon 3481
CHARLEY 1 4697 (6)
CHARLEY 3 4699 (6)
CHARLEY 4 4700 (6)
MARLEY 1 5470 (11)
MORGAN 2 5494 (1)
Monument Cr.
Dutch Cr.
Sittem Cr.
NTS 82F/11 E½W 1:50 000 FIG 26.
MT GROHMAN
MONUMENT 439 (7)



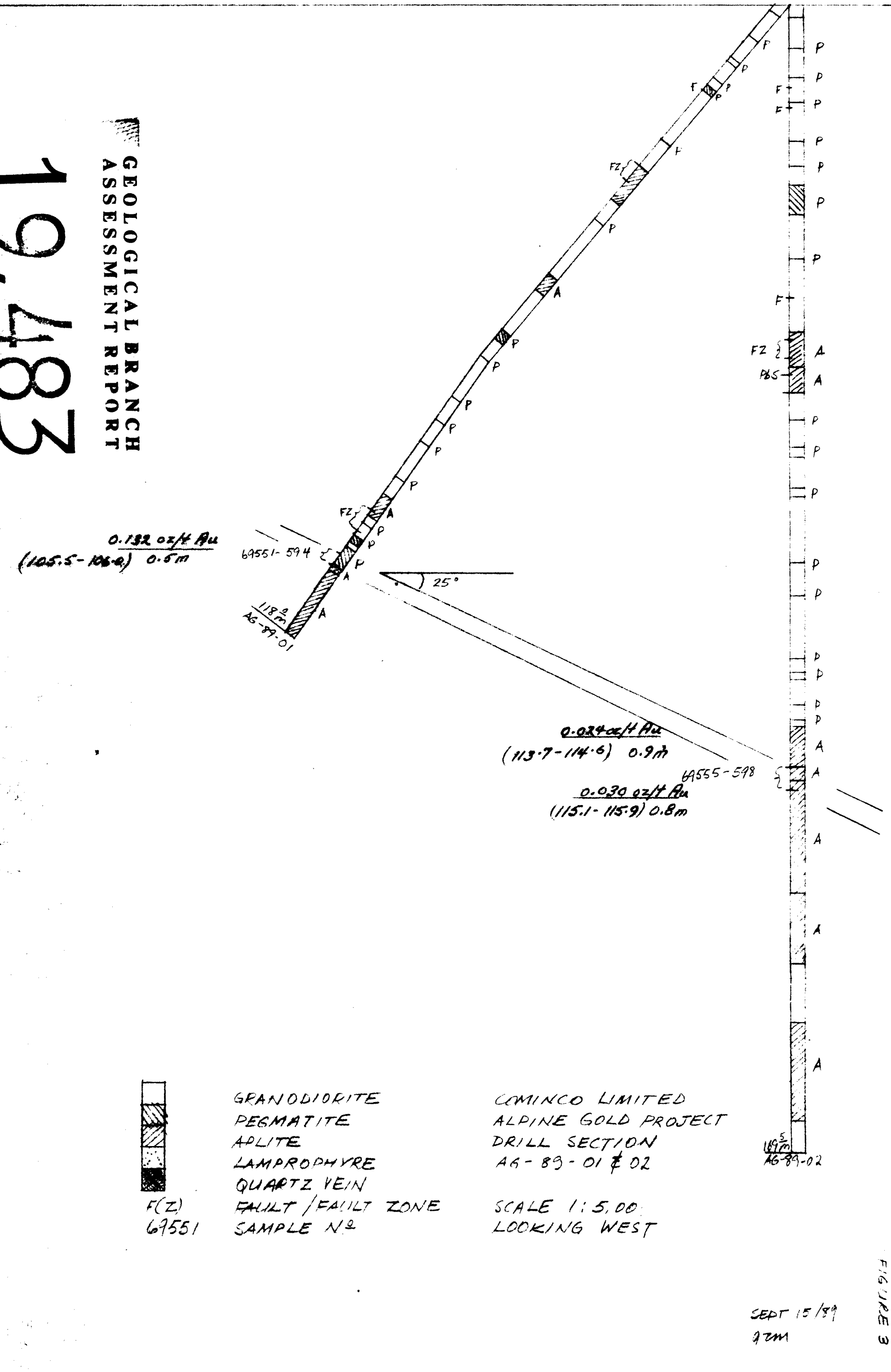
ALPINE MINE AREA

Fig. 2c

10 LEVEL ADIT
SURFACE TRACE OF VEIN
DRILL SITES
LOT BOUNDARIES

SCALE 1:5000

AG-89-01, 02



SEPT 15/89
JZM

FIGURE 3

FIGURE 4.

SEPT 15/89
TDM

AG-89-02, 03, 04

COMINCO LIMITED
ALPINE GOLD PROJECT
DRILL SECTION
AG-89-02, 03, 04

SCALE 1:500
LOOKING WEST

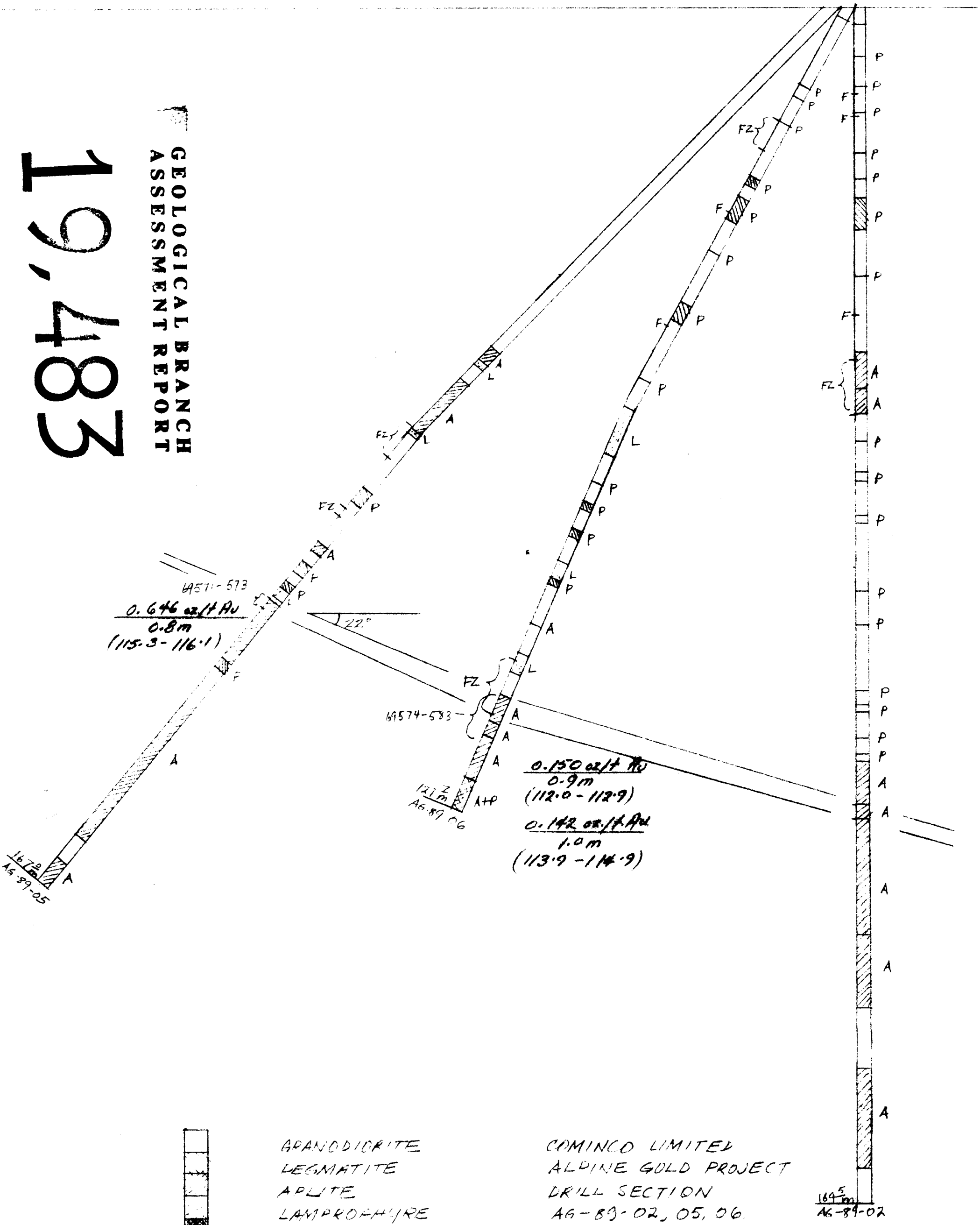
GRANODIORITE
LEGMATITE
APLITE
LAMPROPHYRE
QUARTZ VEIN
FAULT / FAULT ZONE
SAMPLE N.O.

F(Z)
69652

AG-89-02, 05, 06

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,483



SEPT 15/89
JZMH

FIGURE 5

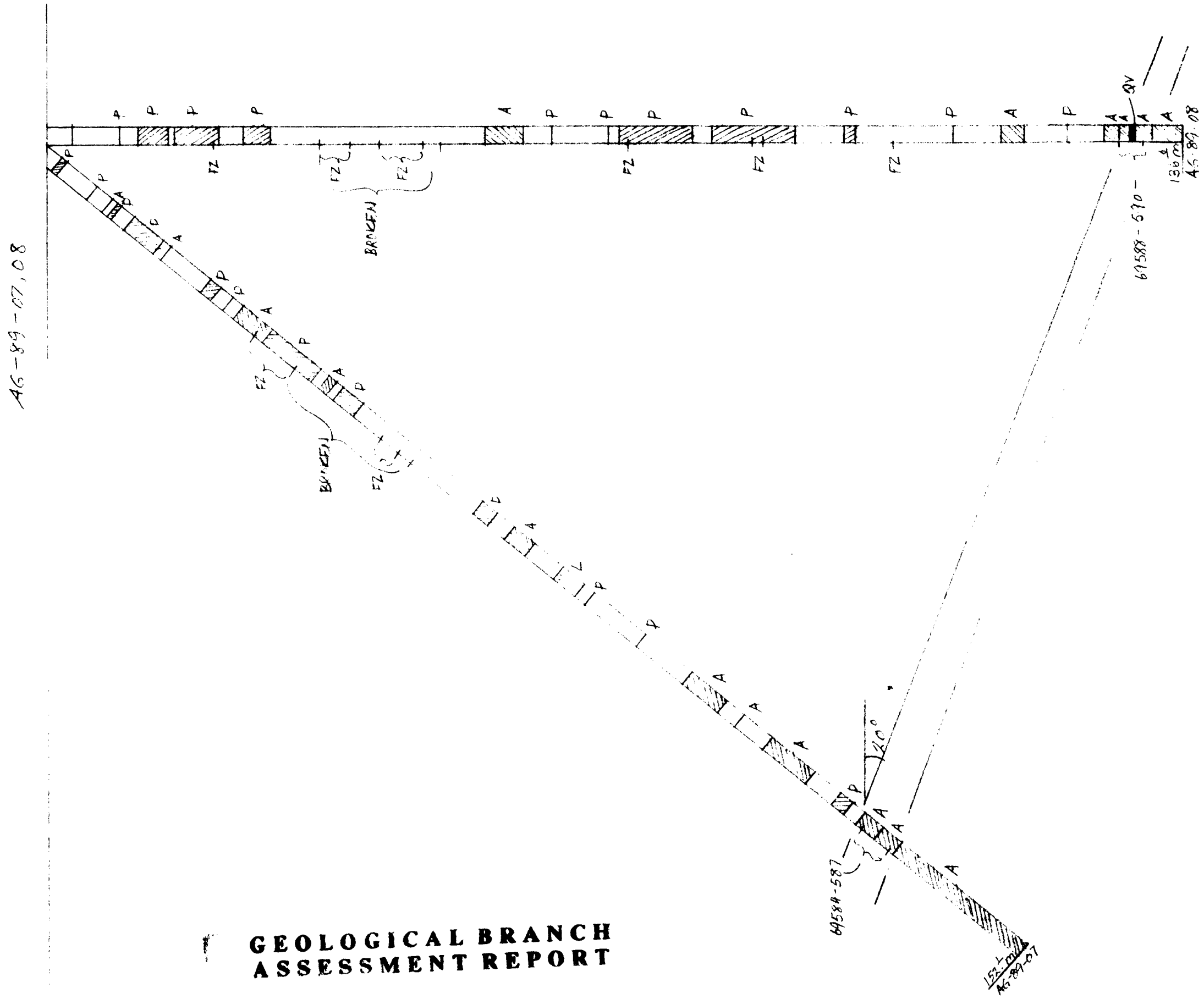


FIGURE 6

EAST ELEV.

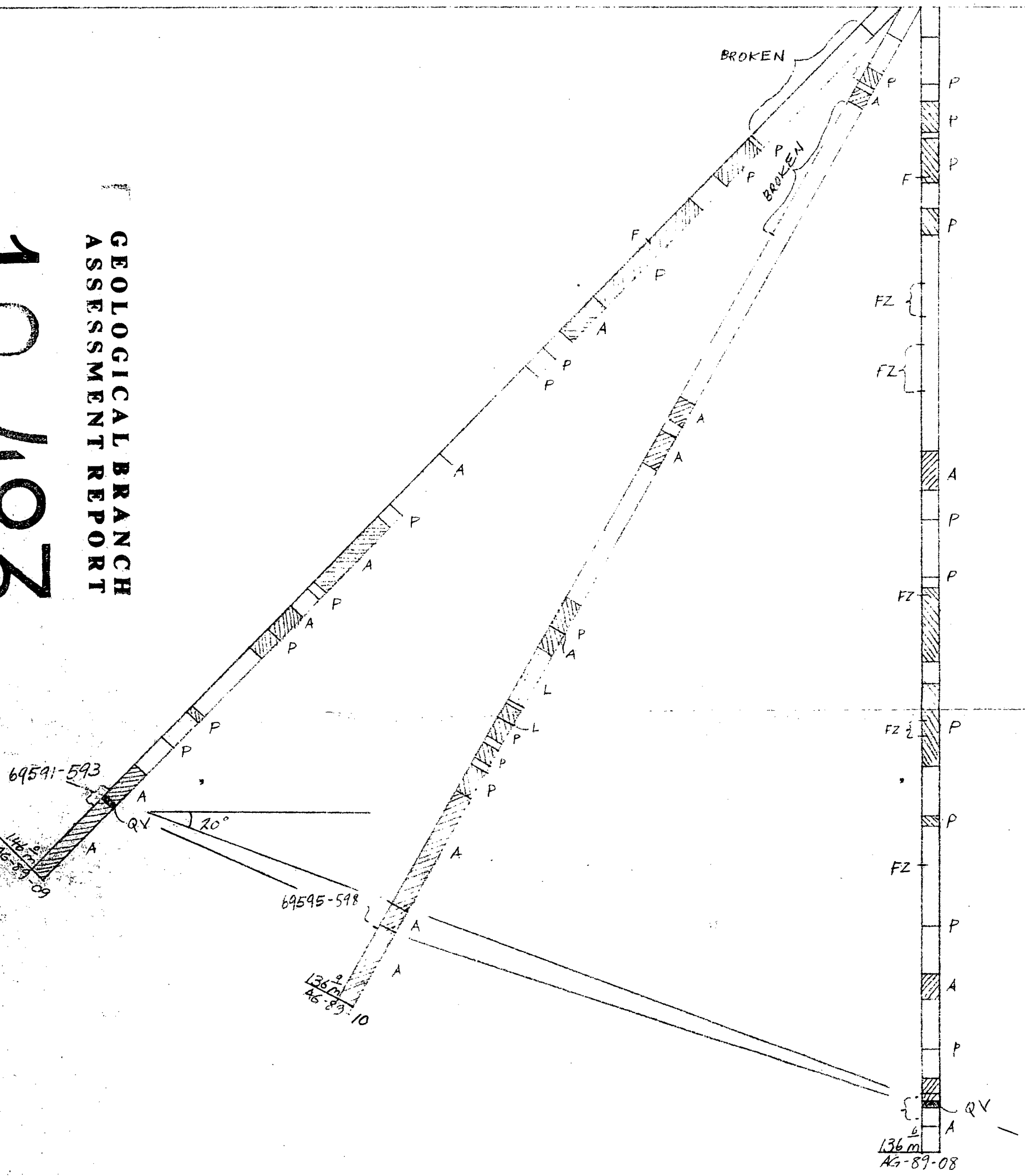
MINING LIMITED
ALPINE GOLD PROJECT
DRILL SECTIONS
AG-89-07 & 08

SCALE 1:500
LOOKING WEST

AG-89- 08, 09, 10

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,482



GRANODIORITE
PEGMATITE
APLITE
LAMPROPHYRE
QUARTZ VEIN
F(Z) FAULT / FAULT ZONE
69595 SAMPLE N°.

COMINCO LIMITED
ALPINE GOLD PROJECT
DRILL SECTION
AG-89-08, 09, 10.

SCALE 1:5,00
LOOKING WEST.

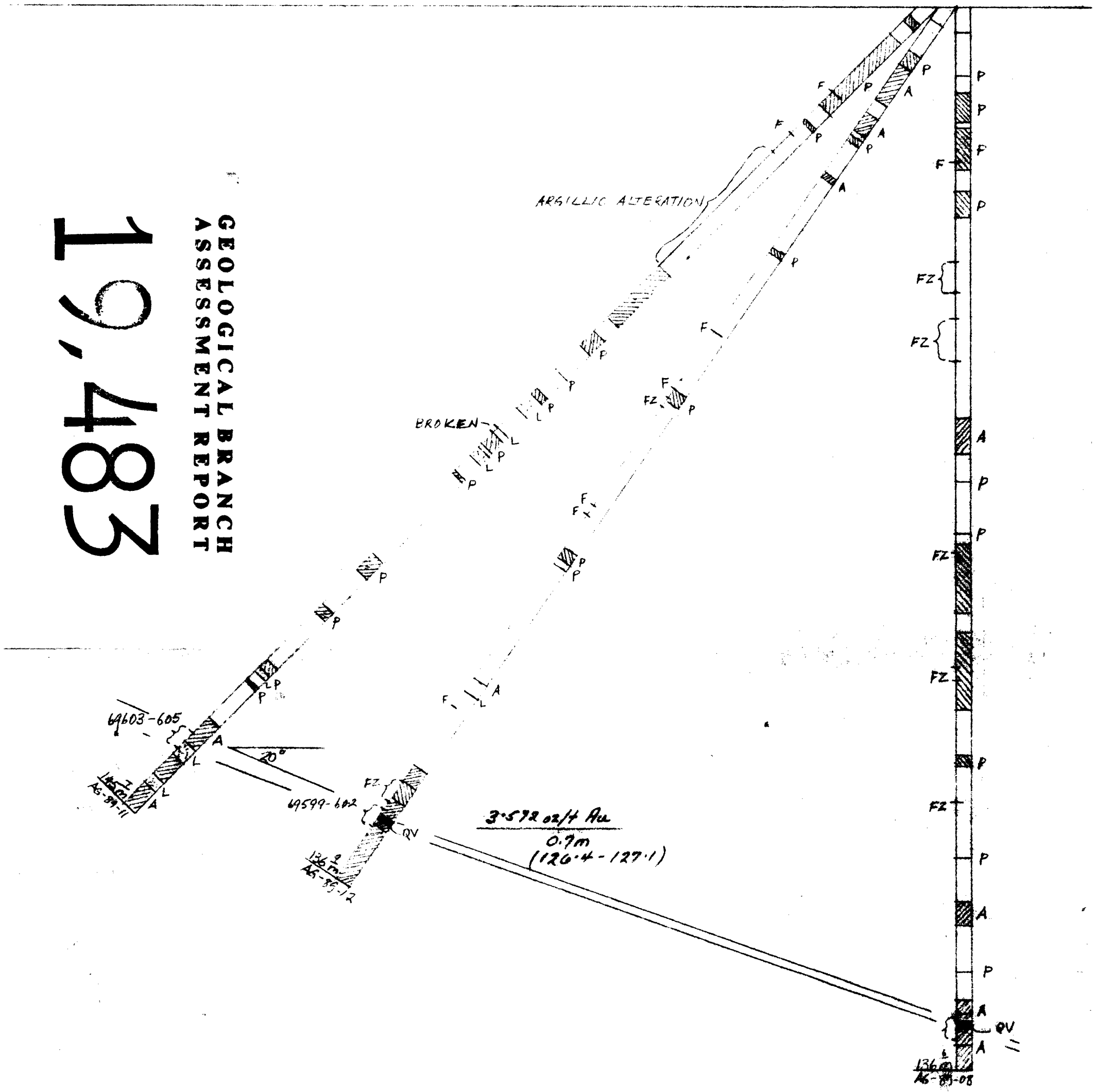
SEPT 15/89
9ZM

FIGURE 7

AG-89-08, 11, 12

19,483

GEOLOGICAL BRANCH
ASSESSMENT REPORT



GRANODIORITE
PEGMATITE
APLITE
LAMPROPHYRE
QUARTZ VEIN
F(Z) FAULT / FAULT ZONE
69603 SAMPLE #'s

COMINCO LIMITED
ALPINE GOLD PROJECT
DRILL SECTION
AG-89-08, 11, 12

SCALE 1:5.00
LOOKING SOUTH WEST

SEPT 15/89

FIGURE 8.