D.C PROPERTY FILE 93E/11E -05 100

014504

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PROSPECTUS **NEW ISSUE**

ALPINE EXPLORATION CORPORATION

(hereinafter called the "Issuer")
604 - 1130 West Pender Street
Vancouver, B.C.

DATED: May 1, 1987

700,000 COMMON SHARES

Shares	Price to Public	Commission	Net Proceeds to be received by the Issuer *
Per Share	$0.55	$0.0825	$0.4675
Total	$385,000	$57,750	$327,250

* Before deduction of the balance of the cost of the issue estimated to be $25,000.

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1000 - 675 West Hastings Street
Vancouver, British Columbia

EFFECTIVE DATE: July 7, 1987

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TROITSA PEAK PROPERTY

WHITESAIL LAKE MAP AREA

93E.

OMINECA MINING DIVISION

N. LAT. 53 35 W. LONG. 127 06

FOR

ALPINE EXPLORATION CORPORATION

BY

MR. C. HARIVEL, FGAC,

BOX 233

SMITHERS, B.C.

NOVEMBER 28, 1986

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SUMMARY

The Troitsa Peak Property is located in the Intermontane Belt of the British Columbia Cordillera, along the southern flank of the Skeena Arch. The property comprises 72 units.

It is underlain by marine and continental volcanics of the Jurassic Hazelton Group intruded by a hypabyssal intrusive complex (Troitsa Complex) of general dacitic composition and probable early Tertiary age. The intrusive complex includes aphanitic and prophyritic dacite, bladed feldspar porphyritic monzonite, ash-flow tuff and diatreme breccias. The property is transected by a major set of faults trending both northerly and east-northeasterly. These faults are probably related to ring and radial fracture systems associated with the Tahtsa Caldera, located to the immediate west.

Mineralization on the property is of epithermal character, associated with the major fracture systems and the diatreme breccias of the Troitsa Complex. Seven zones of mineralization have been located. The Morraine Showing comprises veins, stockworks and silicification associated with argillic alteration and diatreme breccias containing gold values up to 1.06 oz/t.

The Flare Showing comprises silicified zones up to 3 meters wide associated with a 1 1/2 km long northeast trending shear zone. Gold values up to 0.044 oz/t Au and 3.63 oz/t Ag from grab samples have been taken. On the Zinc Creek Showing thin (to 15 cm), veins of quartz-chalcopyrite-sphalerite containing up to 78 oz/t silver and 1.3 oz/t gold are located in marine Hazelton Group sediments near the southwest contact with the Troitsa complex.

On the Wolverine showing, stringers and stockworks of quartz in Hazelton volcanics returned results of up to 0.022 oz/t gold over 10 meters. South of Blitz Creek, a two km, north-northeast trending quartz-carbonate altered shear zone is associated with stibnite-marcasite mineralization and anomalous gold in soils. In and adjacent to Cummins Creek, numerous quartz veins, up to 2 m width, are exposed, with grab values know up to 1.3 oz/t gold and 292 oz/t silver. The Chalco Creek showing comprises a series of quartz veins, up to 1 meter wide, which contains silver up to 10 oz/t and low gold values. Other anomalous zones are present, represented by isolated soil anomalies, and rock samples, both in situe and float.

A soil grid was completed on the property in 1983 along with limited trenching. No drill holes have been collared on the claims. A two phase program is recommended for the property. The first phase of $50,000, completed in September, 1986 consisted of geological mapping, prospecting, drilling and blasting to locate potential drill sites on known showings and identify new showings. The second phase of $200,500, is to continue the work of the first phase and do 2,000 feet of drilling.

INTRODUCTION

In August, 1986 the author was requested by Willis W. Osborne, President of Alpine Exploration Corporation, to set up Phase I of the work program recommended for the Troitsa Peak Property in the June 29, 1986 report. The $50,000 program was planned for September, and it included upgrading known showings on the property through geological mapping, prospecting, hand trenching and blasting. The author visited the property on September 21st.

This report describes the work done on the property in September and details much of the previous work. Noteable amoung sources describing previous work are reports by T.A. Richards (1982), N.G. Cawthorn and H. Jameson (1982) and N.G. Cawthorn et al (1984).

LOCATION AND ACCESS

The Troitsa Peak Property is located in the Whitesail Range of Central British Columbia (NTS Map Sheet 93E/11E) on the eastern flank of the Coast Range. It is approximately 130 km south of the town of Smithers and 95 km west-southwest of the town of Houston.

Access to the property is by helicopter from Houston or Smithers. Alternative access is by approximately 55 km of paved highway from Smithers to Houston, 49 km of all-weather gravel road south from Houston to Owen Lake, then by 60 km of seasonal gravel road southwest to the eastern end of Tahtsa Lake and finally 15 to 25 km southeast by helicopter to the property. Figure 1 (located on the following page) shows the general location of the property at a scale of 1:600,000.

PHYSIOGRAPHY

The property is centered near the western part of the Whitesail Range, a gentle, uplifted mountain block, transitional between the Nechako Plateau and the Hazelton Mountains. Troitsa Peak, the highest point on the Range and claims, occurs near the northeast corner of the property and attains an elevation of 2,089 m. Elevations decrease moderately to the west and south. Low points on the property are on Troitsa Creek (elevation 1,250 m), a prominent drainage system from the P.S. and Whitesail Claims and Cummins Creek (elevation 1,210 m), which drains to the south and east through the Wind Tunnel and Jesse Claims. The lowest point is near the southern boundary of the Jesse Claim where the elevation is 1,150 meters.

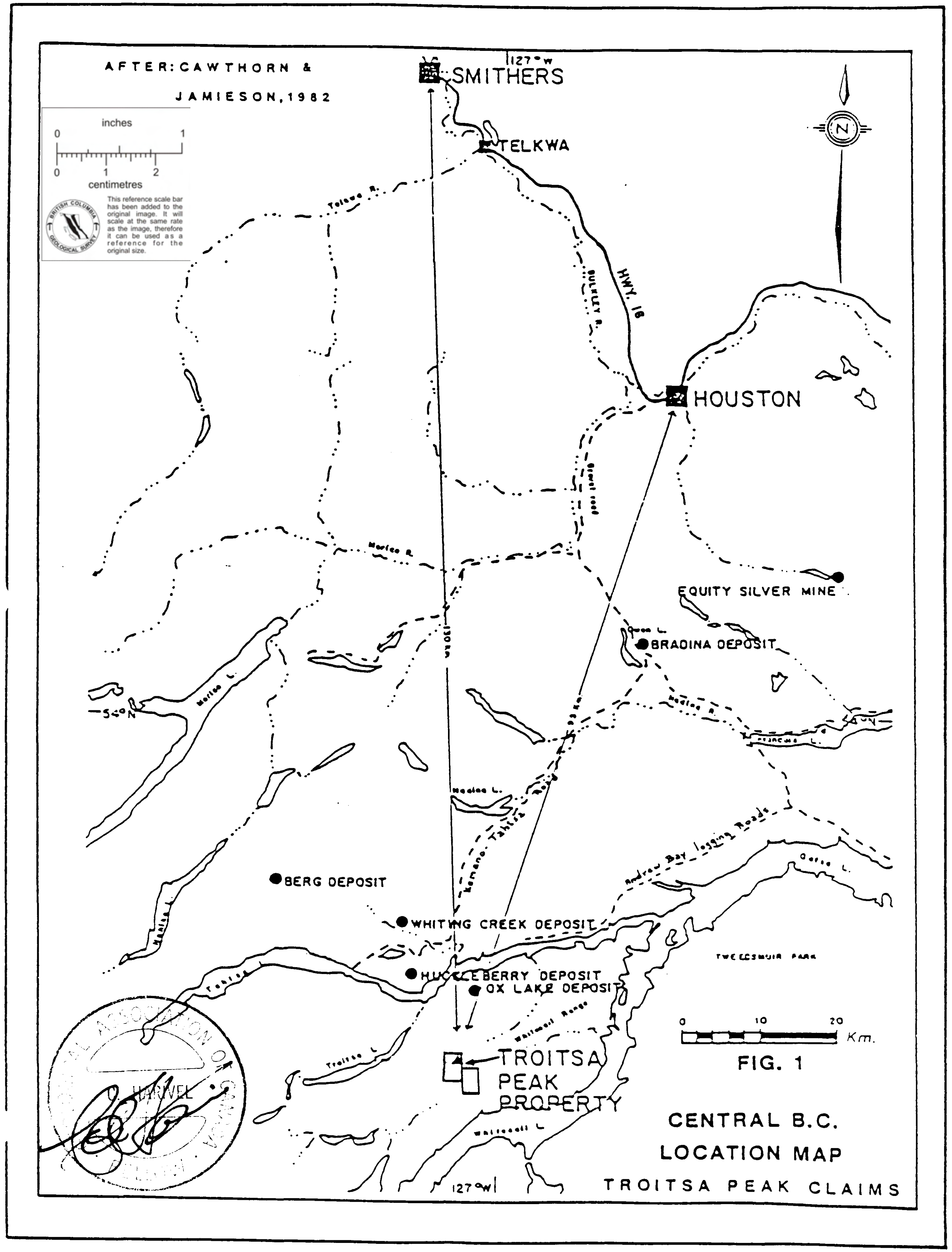


FIG. 1

CENTRAL B.C.
LOCATION MAP

TROITSA PEAK CLAIMS

Relief is generally moderate, except along the lower parts of Troitsa Creek, where prominent westerly facing cliffs are present. Tree-line is generally between 1,400 and 1,500 meters elevation.

PROPERTY HISTORY

Significant precious metal mineralization was first discovered in the Whitesail Range by Dr. T.A. Richards and crew, in 1981, during a reconnaissance exploration program supported by Union Carbide Exploration (UCEX). Prior to this, the only known occurence of precious metal mineralization on the range was a 0.005 oz/ton gold analysis from an altered zone at the headwaters of the creek east of Cummins Creek (Duffel, 1959). Values of up to 1,200 ppb Au and 63 ppm Ag in association with epithermal-style mineralization from the 1981 program resulted in an extensive exploration program by UCEX in 1982. After UCEX terminated mineral exploration in Canada, they optioned the property to Canamax Resources Inc. Canamax explored the property in 1983, covering the area with a detailed soil grid, rock sampling and limited trenching. In 1984 they divested their interest in the property back to UCEX. In 1986, the claims were returned to Dr. T.A. Richards from UCEX.

Following the return of the claims to Richards, two agreements were completed between him and Takpani Resources Ltd. In the first agreement of July 2, 1986, Takpani purchased the P.S. and Whitesail claims from Richards, while in the second agreement of September 11, 1986 the company purchased the Wind Tunnel and Jesse Claims. Subsequently the name of the company was changed to Alpine Exploration Corporation.

In September, 1986 the company carried out a $50,000 program on the property. This program entailed detailed prospecting, hand and blast-pit trenching and geologic mapping to more closely define known showings.

CLAIMS INFORMATION

The property consists of the P.S. and Whitesail claims each of which has 20 units, and the Wind Tunnel and Jesse claims of 16 units each. The claims occur in the Omineca Mining Division. Below is a table showing the record number, record date and expiry date of each claim.

Name of Claims	Record Number	Record Date	Expriy Date
Wind Tunnel	4362	11/13/81	11/13/92
P.S.	4364	11/13/81	11/13/92

Whitesail	4365	11/13/81	11/13/92
Jesse	4571	04/22/82	04/22/93

Figure 2 on the following page shows the locations of the claims.

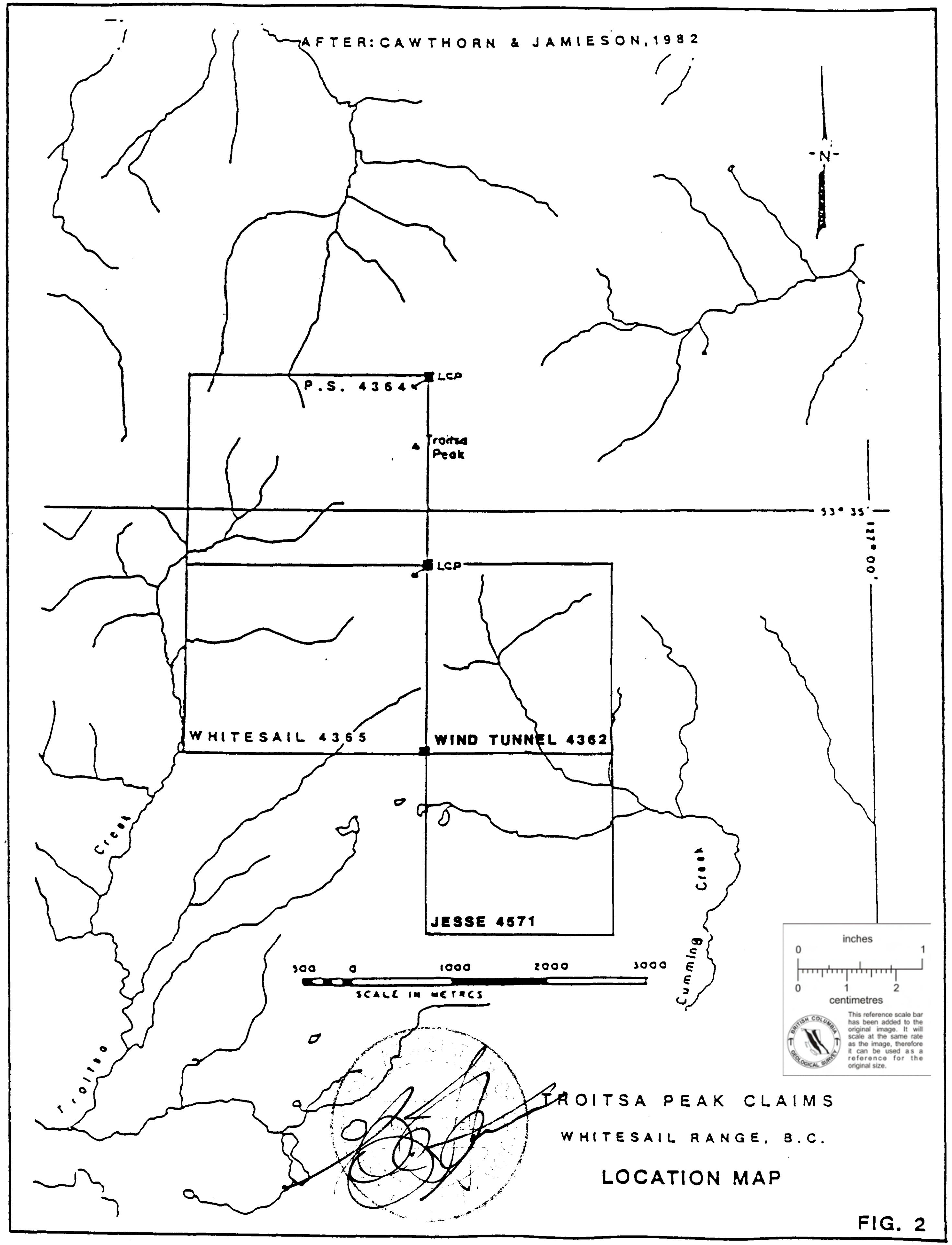
REGIONAL GEOLOGIC SETTING AND MINERALIZATION

The Troitsa Peak Property is located in the west-central part of the Intermontane Belt of the British Columbia Cordillera along the southern margin of a major east-northeast trending, transverse tectonic belt known as the Skeena Arch. (Souther and Armstrong, 1966). This can be seen on Figure 3, Geological Setting, Mineral Deposits West - Central British Columbia, on page 3. Rock units across the Intermontane Belt include Upper Paleozoic to Miocene volcanics, sediments and intrusive rocks. Older units include the volcanic island-arc assemblages of the Upper Paleozoic Asitka Group, the Upper Triassic Takla Group and the Lower and Middle Jurassic Hazelton Group (Tipper and Richards, 1976). The Hazelton Group dominates these lithologies in this area. Unconformably and disconformably overlying these volcanic assemblages are the successor basin assemblages of the Upper Jurassic to Lower Cretaceous Bowser Lake and Skeena Groups. Strata of the Bowser Lake Group are confined to areas immediately north of the Skeena Arch, those of the Cretaceous Skeena Group were deposited as a blanket across the whole of the area.

Continental, calc-alkaline volcanism, of Upper Cretaceous to Eocene age, is related to an episode of block-faulting (basin and range type) and the evolution of caldera and down-drop volcanic basins across, and south of the arch. Volcanics of the Upper Cretaceous Kalsalka and lower Tertiary Ootsa Lake Group were deposited in a series of basins across much of the area, particularly immediately north of and south of Skeena Arch. This volcanic-tectonic episode is responsible for the development of most of the significant mineral deposits in west-central B.C. Overlying these volcanics are Eocene to Miocene basalts of the Endako Group. The period from Miocene to recent was one of uplift and erosion throughout most of the Canadian Cordillera.

The largest number of economically important showings are genetically related to an Upper Cretaceous to Eocene event dominated by explosive, continental volcanism, hypabyssal plutonism, caldera subsidence, basin and range block-faulting and hydrothermal activity.

These events cumulated to form a great array of mineralized showings throughout this region of west-central

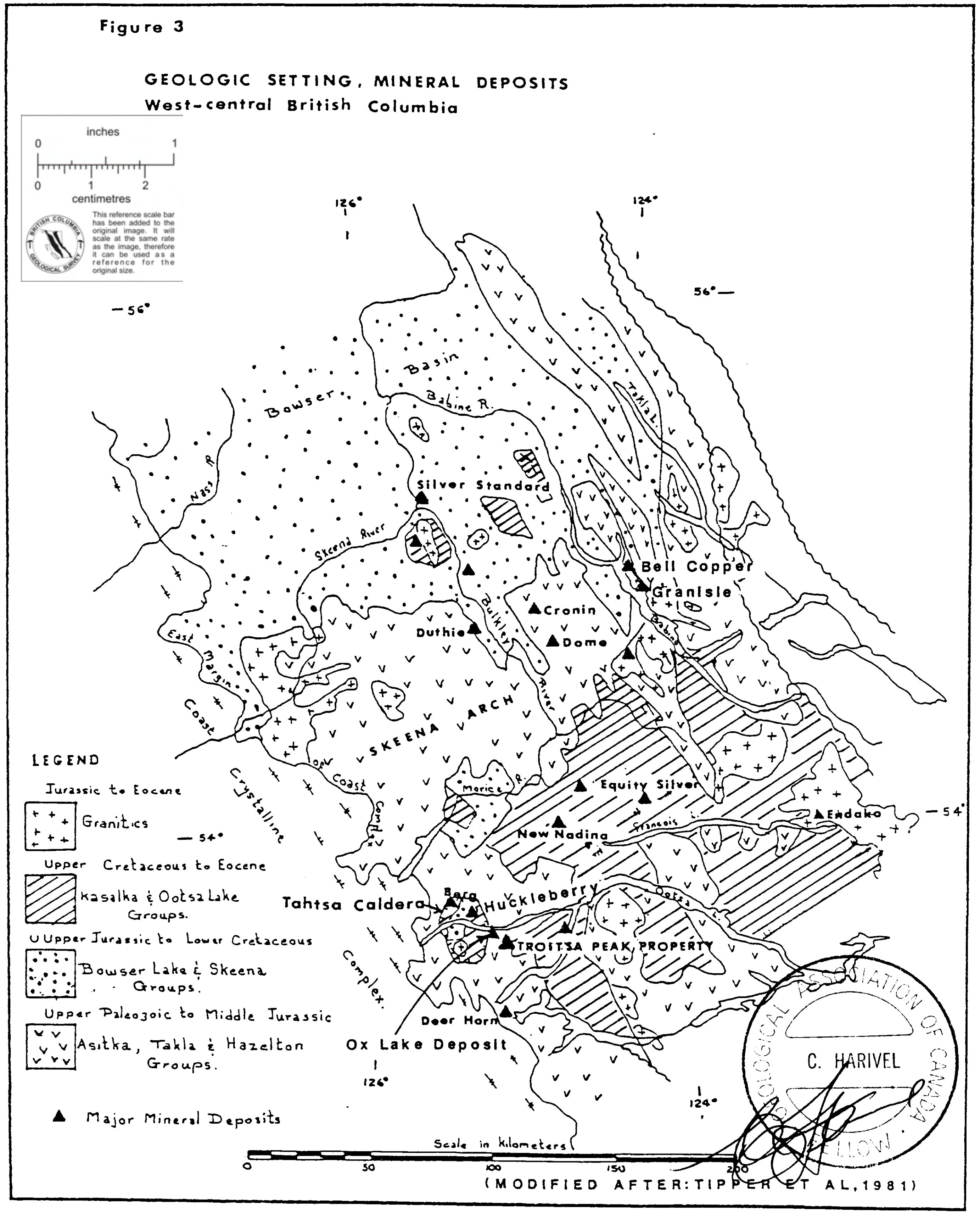


TROITSA PEAK CLAIMS

WHITESAIL RANGE, B.C.

LOCATION MAP

FIG. 2



British Columbia. This sequence of events is similar to the sequence in the American Southwest that was responsible for the development of numerous precious metal and porphyry deposits.

Deposits of significance in this highly productive and mineralized region of west-central British Columbia include: Equity Silver, New Nadina (Bradina), Bell Copper, Granisle, Emerald Glacier, Deer Horn, Topley-Richfield, Silver Standard, the Duthie Mine, Berg, Huckleberry, Glacier Gulch, and numerous prospects of various degrees of merit. Equity Silver and Bell Copper are the only significant producers at present.

Significant production and or reserves of major deposits in the region are:

Equity Silver:	36,000,000 tons; 3 oz/t Ag, 0.026 oz/t Au; and 0.35% Cu.
New Nadina:	500,000 tons; 0.1 oz/t Au, 10.0 oz/t Ag, 0.76% Cu, 2.1% Pb. 6.9% Zn
Deer Horn:	250,000 tons, 0.31 oz/t Au, 8 oz/t Ag.
Berg:	272,000,000 tons, 0.51% Cu, 0.03% Mo.
Huckleberry	77,000,000 tons, 0.40% Cu.

Numerous of these deposits are concentrated in the Whitesail Lake area, in and around the Tahtsa Caldera (McIntyre, 1985). This a resurgent caldera, 20 km in diameter, and 8 km due west of the Troitsa Peak Property. The collapsed caldera center is occupied by rocks of the Cretaceous Skeena Group, volcanics of the Kasalka Group and a variety of intrusive rocks. Several potentially economic mineral deposits are associated with small stocks around the periphery of the caldera, possibly locallized at intersections between ring and radial faults related to caldera development (Hodder and MacIntryre, 1980). These are the Berg (Panteleyev, 1981), Huckleberry (James, 1976) and Ox Lake (Richards, 1981). Hodder and MacIntyre (1980) have pointed out similarities between this area and some important mining districts in the western U.S.A. (eg: San Juan Mountains caldera complex, Lipman, 1976).

The major north and northeast trending fault systems that transect the Troitsa Peak Property are likely part of the ring and radial faults zones related to the Tahtsa Caldera.

GEOLOGICAL SETTING

The Whitesail Range is underlain by four stratagraphic assemblages which range in age from Jurassic to Eocene. These are:

Jurassic	Hazelton Group; marine and non-marine calcalkaline volcanics; intrusives.
Lower Cretaceous	Skeena Group; marine sandstone, siltstone and shale.
Upper Cretaceous	Kasalka Group; continental volcanics; intrusives.
Eocene	Ootsa Lake Group; hornblende - feldspar porphyry volcanics; intrusives.

The Whitesail Range has been previously mapped by the Geological Survey of Canada (open-file map 708, G. Woodsworth), and the area immediately to the west, investigated by R. Hodder and D. McIntyre, (1980). Figure 4, Geological setting: Whitesail area, after G. Woodsworth with modifications by T.A. Richards, appears on the following page.

Deformation is simple, with faulting dictating the style; folding is of local significance noted in thin bedded sedimentary rocks. Upper Cretaceous Kasalka volcanics rest unconformably on Skeena and Hazelton Strata.

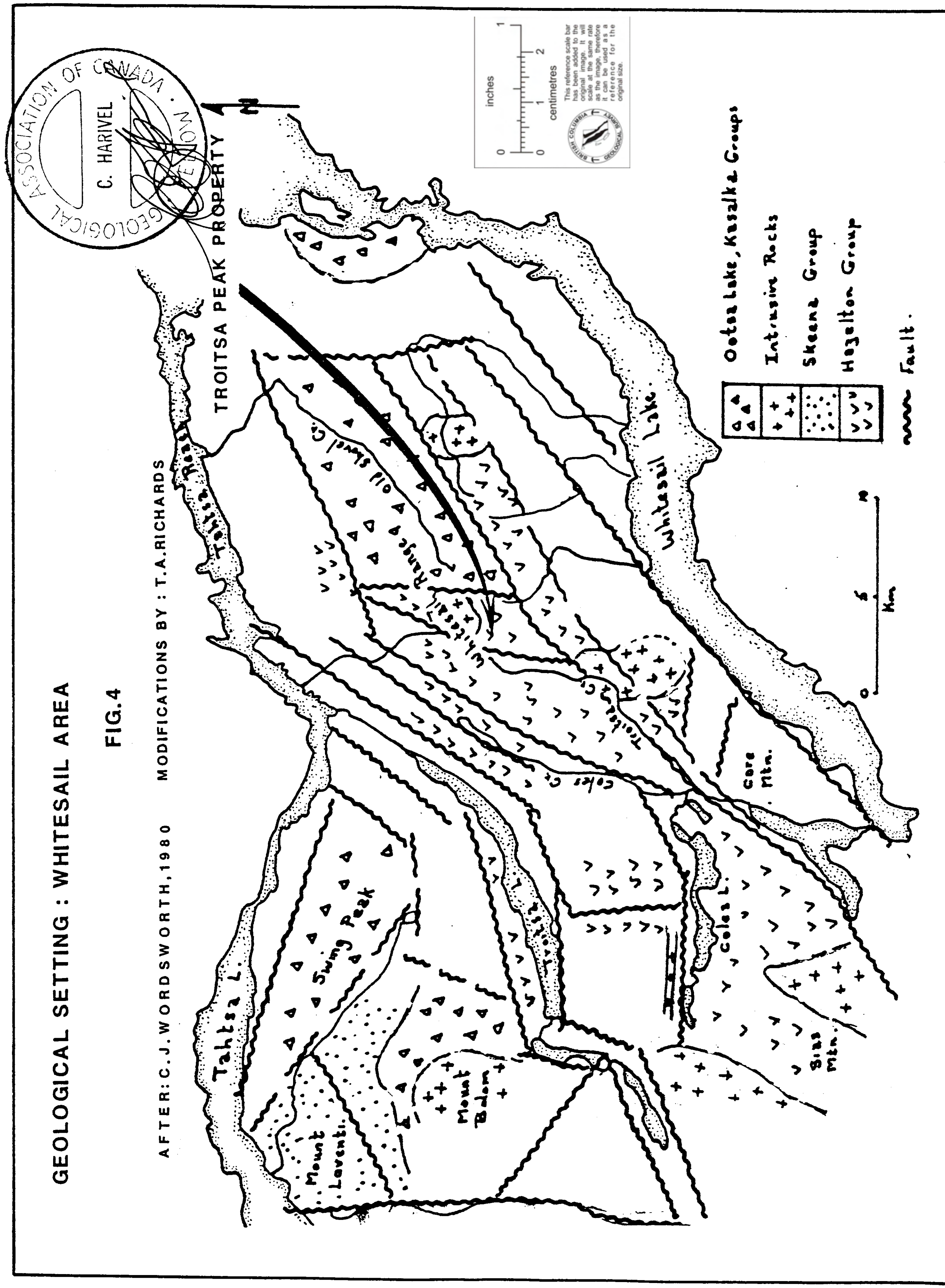
Stratigraphic and Intrusive Units

Hazelton Group

The Hazelton Group is the most extensive unit underlying the region. It is represented by two assemblages: a well, even-bedded assemblage of marine deposited, fine ash to lapilli tuff, cherty tuff, siltstone, volcaniclastic sandstone and shale; and a massive, to thick-bedded assemblage of coarse lapilli tuffs, fine breccia, lahar, ashflow tuff, tephra, sandstone, mudstone and minor flows. The former unit dominates the western and northern portions of the Whitesail Range; the later dominates the remaining areas and is of much more extensive regionally. Intrusive rocks, thought to be correlative to the Hazelton volcanics, are pink, medium-grained granite and quartz monzonite exposed south of the Whitesail Range.

Skeena Group

The Skeena Group strata are exposed northwest of the Whitesail Range. They are a monotonous assemblage of dark to light grey, even, medium, well-bedded, micaceous sandstone, siltstone and black shale. They are of shallow marine origin. Sedimentary structures visible are current ripples, cross-bedding, worm tubes and burrows. Overlying the dark,



GEOLOGICAL SETTING : WHITESAIL AREA

FIG.4

AFTER: C.J. WORDSWORTH, 1980   MODIFICATIONS BY: T.A. RICHARDS bedded strata is an assemblage of red-bed conglomerate and mudstone seen in three localities, exposed particularly to the west. This unit is not exposed on the Whitesail Range.

Kasalka Volcanics

The Kasalka volcanics unconformably overlie the Skeena Group and comprise a highly variable assemblage of intrusive, extrusive and hypabyssal rocks of acidic to intermediate composition that define the Tahtsa Caldera (Hodder and McInture, 1980), west of the Troitsa Peak property. Rock of the Troitsa complex, on the claims in the Whitesail Range, are possibly correlative with the Kasalka Group.

On the Whitesail Range, the Kasalka Volcanics are a thick sequence of fine to bladed feldspar prophyry rhyolite to dacite lahar, flows and intrusives. They are exposed along the northern and northeastern part of the range.

Ootsa Lake Group

Rocks suggested to be correlative with this assemblage lie at the extreme east margin of the area adjacent to Whitesail Reach. They have been little investigated. They comprise fresh hornblende-biotite-feldspar dacite porphyries.

Structure

Faulting dominates the structural style. At least two ages of structural activity are apparent with one affecting the older strata only. The older Hazelton and Skeena are much more intensely fractured, tilted and folded than the younger, mainly flat-lying Kasalka volcanics. The dominant structural trend is northeasterly (050 - 070 deg.), a trend mimiced by the topographic alignment of the major valley systems. A second set of shears trends northerly (350-030 deg.). The northeasterly structures tend to develop as wide, complex shear zones whereas the northerly ones develop as descrete fault zones.

The Whitesail Fault Zone is one of the main northeasterly structures. It is exposed in shattered zones along the southern flank of the Whitesail Range and extends southeasterly to Whitesail Lake with a width of up to 10 km. This zone was probably active in Upper Cretaceous and was reactivated in Tertiary. A similar northeasterly trending shear zone defines the northwestern boundary of the Whitesail Range.

The northerly structures are also evident. Two cut across the Whitesail Range.

Within the above zones Hazelton strata are: intensely sheared, shattered and altered to propyllite and quartz-ankerite-siderite. The younger, Kasalka volcanics are

broken within the fault, and juxtaposed against the underlying Hazelton strata. Subsequent uplift and erosion resulted in a peneplaned surface across the juxtaposed surfaces. This later event caused the development of the present morphology and represents a third fault-deformation episode. Economic mineral occurrences fount in the Whitesail area were exposed as a result of the last episode.

CLAIMS GEOLOGY

The claims are underlain by two units; the volcanic and sedimentary assemblages of the Lower Jurassic Hazelton Group which have been intruded by a high-level, hypabyssal complex called the Troitsa Complex of probable early Tertiary age. The geology of the claims has been mapped at 1:10,000 scale by Ms. H. Jamieson (Cawthorn et al, 1982) and partially mapped at 1:2,000 scale by Canamax geologists (Cawthorn et al, 1984). These maps (Figures 5,9 and 10) are found on pp. 25-30. In reading the descriptions in this section, please refer to the Jamieson Map (Figure 5).

The Hazelton Group strata comprise two lithologic assemblages separated by a major fault, the Troitsa Creek Fault. West of the Troitsa Creek Fault, the Hazelton strata comprise well bedded, volcanic sandstone, siltstone, argillite, tuff, tuffaceous sediments, breccia and ignimbrite of shallow marine origin. East of this fault, the Hazelton stratagraphy comprises a thick assemblage of well to massive bedded lithic lapilli tuffs. These units vary from well-sorted, waterlain varieties to unsorted, chaotic tuff and tuff-breccia. Minor red tuffaceous mudstone, feldspar porphyry flows and breccia and aphanitic andesite comprise a small part of the section.

Thin to massive bedded coarse to fine-grained lapilli tuffs of the Hazelton Group volcanics underlie the Wind Tunnel and Jesse claims. The units are highly variable in color with shades of red, maroon and purple most common in the unaltered rocks. A widespread, pervasive propyllite renders much of the strata a greenish color. A diabase body, probably a dyke, is exposed on the ridge immediately west of Cummins Creek. In a prominent east-flowing tributary to Cummins Creak, highly fractured, propyllitized quartz monzonite is exposed as a series of dyke-like bodies trending parallel to the creek.

The Troitsa complex underlies the northern and eastern part of the P.S. claim. A wide variety of blue-grey aphanitic dacite, with fine feldspar phenocrysts, green-grey dacite porphyry with bladed feldspar phenocrysts, pink feldspar biotite granite porphyry and coarse heterolithic breccia occurs here. The dominant rock type is a fine-grained, glassy to aphyric dacite with scattered fine-grained plagioclase phenocrysts. The unit is usually massive, with local columnar jointing. A grey-green to grey, massive, medium to coarse bladed feldspar porphyry of monzonitic composition is widespread throughout the complex and barely subordinate to the finer-grained dacite.

Much of the southeastern portion of the Troitsa complex on the claims is represented by a heterolithic breccia comprised of a large variety of fragments of lithologies of the complex and wall rock. Fragments are floating in a comminuted matrix of similar material. Fragments are angular, reach up to 1 meter across, with a mode of 1 to 10 cm. These bodies are probably diatreme breccias. Four such bodies are present on the claims. These breccias have been subject to intense hydrothermal (mainly argillic) alteration and pyritization, and are locally cemented by silica (amethyst, bull, chalcedony).

Dykes of fine grained feldspar porphyry and quartz eye-porphyry intrude the Hazelton, ususally parallel to, or within, fault zones.

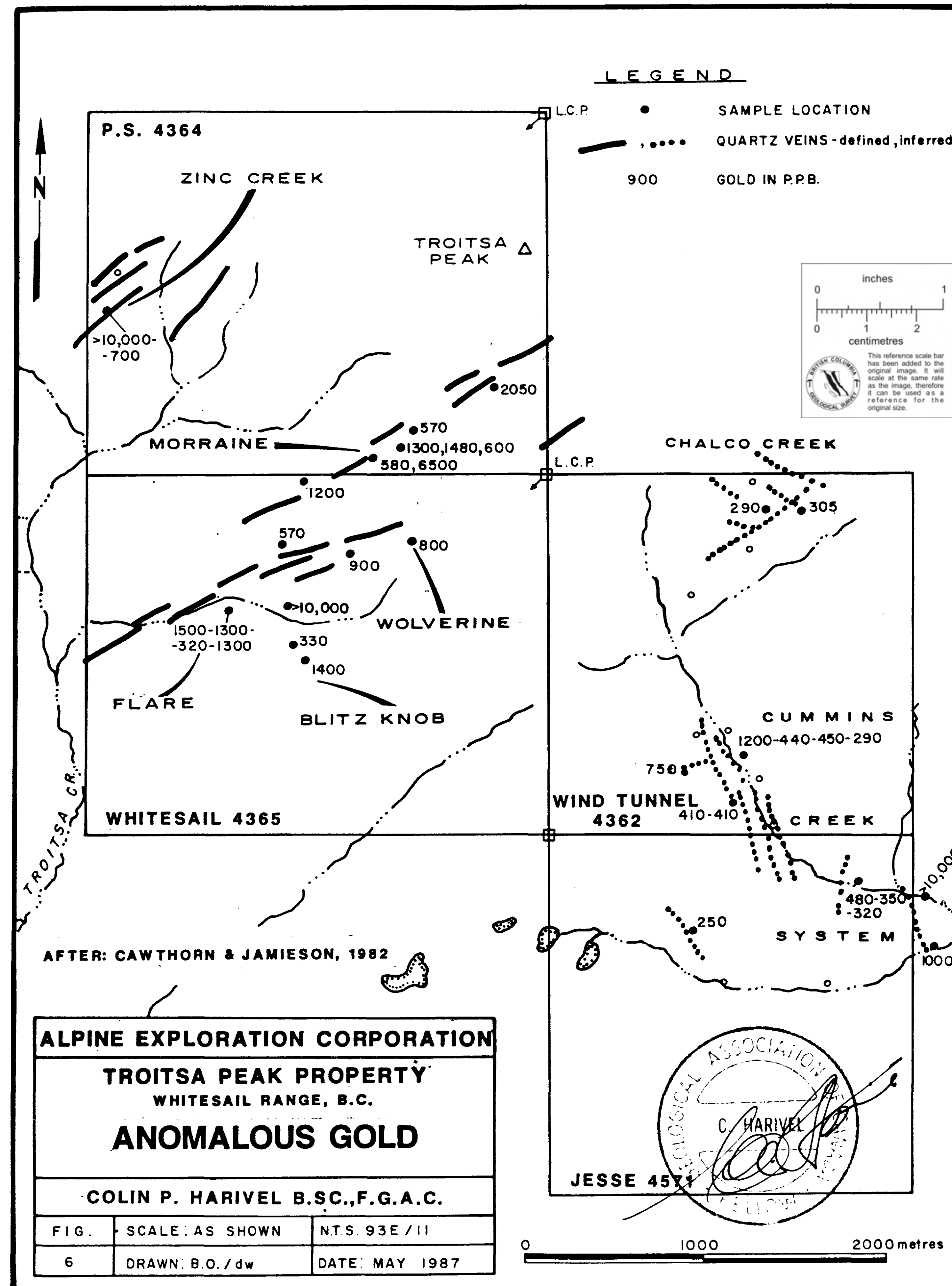
Rock within the Jesse, Wind Tunnel and the southeastern part of the Whitesail claims are cut by shears and shatter zones related to the Whitesail Fault Zone. Three northerly trending faults occur on the claims. They include the Troitsa Creek Fault in the western part of the P.S. and Whitesail claims, the Blitz Fault cutting through the center of the Whitesail claim and the Descovery Fault cutting the northeastern part of the Jesse Claims.

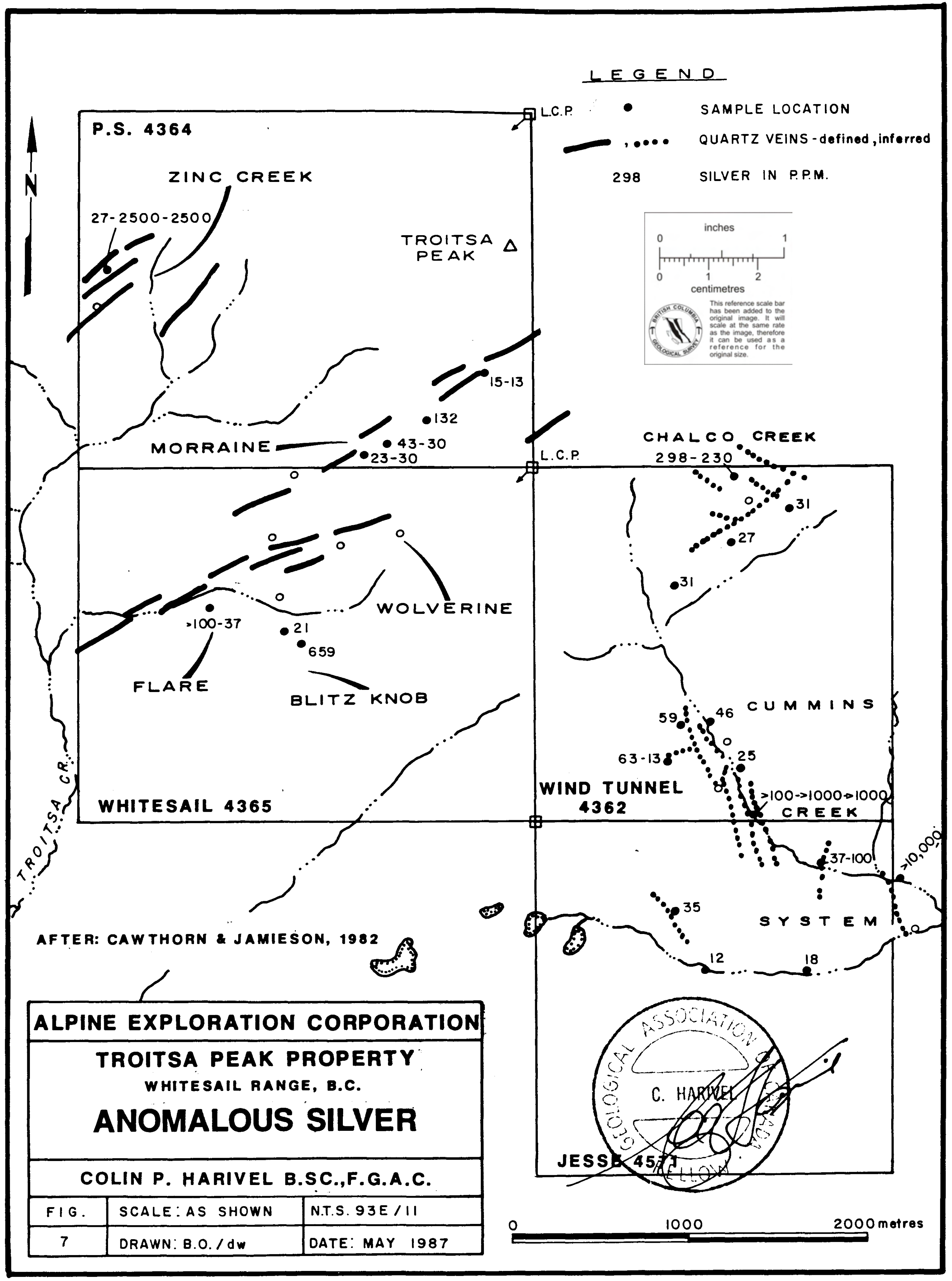
MINERALIZATION

Seven showings and numerous isolated occurrences with anomalous precious metals values are known on the claims. All represent surface showings, discovered by prospecting and enhanced by soil geochemistry, hand and blast-pit trenching. Mineralized showings include veins, stockworks, silicified zones, stringers, lenses,fracture fillings and dissaminations of quartz and sulphides.

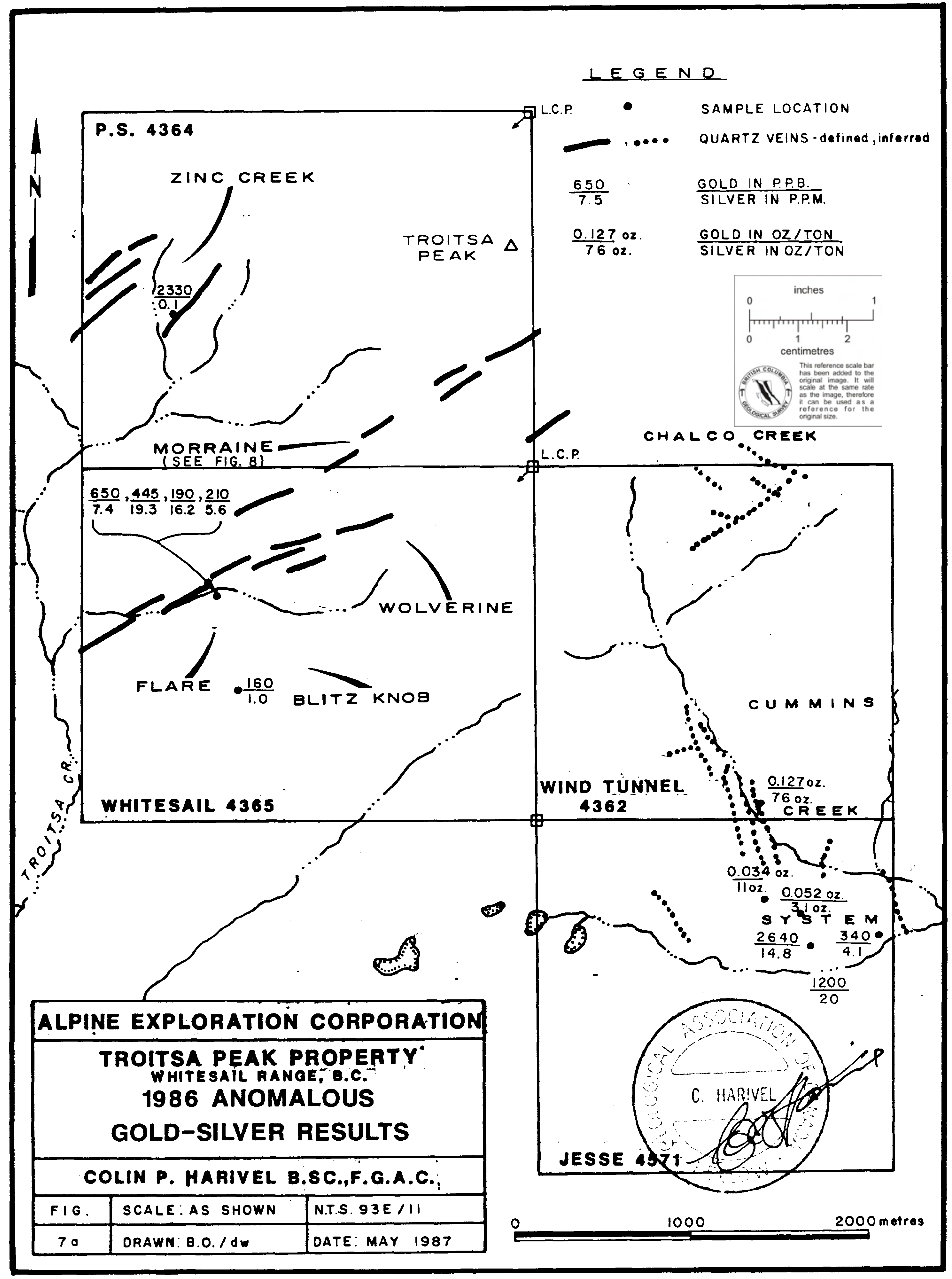
The showings of significance include the Morraine, Blitz, Flare, Wolverine, Zinc Creek, Chalco Creek and Cummins Creek occurrences. Some of the anomalous gold and silver values, from these showings are shown on Figures 6, 7, and 7a on the following pages. Values shown are mainly from grab samples. Those on Figures 6 and 7 are from work in 1982, and those on Figure 7a are from the 1986 program.

Mineralization is of epithermal character and is associated with major north-northeast and east-northeast fault structures and a hypabyssal intrusive volcanic complex (Troitsa Complex). Textures typify the epithermal regime. These include vuggy, cox-comb quartz, banded quartz veins, chaotic explosive breccias (diatremes). Quartz comes in a multitude of varieties including opaline, chalcedonic, cherty, milky, massive, fine-grained, jasper, amethystine and silicified country rock.





LEGEND
SAMPLE LOCATION
QUARTZ VEINS - defined, inferred
298 SILVER IN P.P.M.
inches
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.
L.C.P.
P.S. 4364
ZINC CREEK
27-2500-2500
TROITSA PEAK
15-13
132
43-30
23-30
MORRAINE
CHALCO CREEK
298-230
31
27
31
WOLVERINE
>100-37
21
659
FLARE
BLITZ KNOB
CUMMINS
59
46
63-13
25
WIND TUNNEL 4362
>100->1000->1000
CREEK
WHITESAIL 4365
TROITSA CR.
37-100
>10,000
35
SYSTEM
12
18
AFTER: CAWTHORN & JAMIESON, 1982
ALPINE EXPLORATION CORPORATION
TROITSA PEAK PROPERTY
WHITESAIL RANGE, B.C.
ANOMALOUS SILVER
COLIN P. HARIVEL B.SC., F.G.A.C.
FIG. 7
SCALE: AS SHOWN
DRAWN: B.O./dw
N.T.S. 93E/11
DATE: MAY 1987
JESSE 4571
C. HARIVEL
0 1000 2000 metres



LEGEND
SAMPLE LOCATION
QUARTZ VEINS - defined, inferred
650 / 7.5 GOLD IN P.P.B. / SILVER IN P.P.M.
0.127 oz. / 76 oz. GOLD IN OZ/TON / SILVER IN OZ/TON
inches
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.
L.C.P.
P.S. 4364
ZINC CREEK
2330 / 0.1
TROITSA PEAK
MORRAINE
(SEE FIG. 8)
CHALCO CREEK
650, 445, 190, 210
7.4, 19.3, 16.2, 5.6
WOLVERINE
FLARE
160 / 1.0
BLITZ KNOB
CUMMINS
WIND TUNNEL 4362
0.127 oz. / 76 oz.
CREEK
WHITESAIL 4365
TROITSA CR.
0.034 oz. / 11 oz.
0.052 oz. / 3.1 oz.
SYSTEM
2640 / 14.8
340 / 4.1
1200 / 20
ALPINE EXPLORATION CORPORATION
TROITSA PEAK PROPERTY
WHITESAIL RANGE, B.C.
1986 ANOMALOUS
GOLD-SILVER RESULTS
COLIN P. HARIVEL B.SC., F.G.A.C.
FIG. 7a
SCALE: AS SHOWN
DRAWN: B.O./dw
N.T.S. 93E/11
DATE: MAY 1987
JESSE 4571
C. HARIVEL
0 1000 2000 metres

Precious metal mineralization is associated with sulphide poor assemblages, chalcopyrite - pyrite - galena - sphalerite - tetrahedrite assemblages, arsenopyrite, and argentite - pyragarite - galena - chalcopyrite. Other mineral assemblages include stibnite, marcasite. Alteration is variable, and includes silicification, argillic, phyllic and propyllite. All the mineralized showings are likely the product of a single mineralizing event associated with Tertiary volcanism, high-level plutonism and the reactivation of major fault structures that acted as channelways for mineral deposition.

Morraine Showing

The Morraine Showing comprises a series of quartz veins, stockworks and silicification associated with argillic and propyllitic alteration hosted in heterolithic breccia, bladed feldspar porphyry and flow-banded rhyolite of Tertiary age and volcanics of the Jurassic Hazelton Group. The showings are located at the headwaters of Troitsa Creek. Exposures are limited by an extensive, thin felsenmeer blanket over much of the showing area, except along north-facing cliffs above a small morainal lake at the southern part of the showing area.

Alteration and mineralization is known to extend for more than 1,000 meters in a general northeast direction (030 deg.) Two zones are present, the zone south of the morainal lake being separated from the zone to the north by a small terminal moraine and the lake itself. Best know mineralization is from the north zone, on a broad, flat basin at the immediate head of Troitsa Creek.

In the north Morraine zone, an irregular quartz vein and vein breccia gave a channel sample of 0.114 oz/t Au and 3.55 oz/t Ag across 1 m width. This sample was from a hand trench dug in 1982, across one of the few exposures in the basin. Quartz float is scattered along strike for 250 m from the above vein exposure, with grab samples giving values of 2,040 and 1,580 ppb Au, with others not anomalous (1983). Detailed prospecting of quartz float in 1986 outlined trains of quartz aligned in a north-easterly direction, shown on Figure 8 on page 18. There appears to be a descrete number of mineralized silica systems within the basin, distributed across a width of some 300 meters, traceable on strike for an excess of 600 meters, and open at both ends. Significant values of gold noted include 1.065, 0.286, 0.186 and 0.086 oz/t that enhance the earlier noted values. Silver is generally low, with the exception of 24.62 oz/t from the 1.065 oz/t Au sample. Sample distribution and values are noted in figure 8, and include samples BH 121 to 123, and TR 214 to 263 inclusive (see appendix, gold and ICP geochemistry).

Distributed from the southeast to the northwest, the following silica-associated mineralized systems appear to be

present. These are marked "A" through "J" on Figure 8 on the following page.

A. Float samples of intensely propyllitized volcanics with lenses, veins and stringers of coarse grained, coursely vuggy quartz, frequently amethystine, with disseminated to crystalline galena, sphalerite and chalcopyrite. Precious metals are low, with insignificant gold and silver to one oz/t.

B. Stockwork veins and veinlets of vuggy, fine-grained to chalcedonic quartz with minor disseminated pyrite. Anomalous gold to 340 ppb. This system is exposed on the ridge dividing Cummins Creek from Troitsa Creek.

C. This zone is central to the basin and consisting of aligned series of boulders up to 3 X 2 X 2 ft. comprising stockworks of fine-grained quartz and quartz cemented breccia in argillic and propyllitic heterolithic breccia. Values are to 2,040 ppb. The float train is traceable for 200 meters, but no outcrop was seen.

D. This float train is an extension of the vein sampled in 1982 which gave 0.114 oz/t gold. Values here in fine-grained vuggy, banded quartz and quartz breccia include 7,230 ppb (0.186 oz/t) and 2,170 ppb (0.086 oz/t).

E. A narrow quartz train traceable for 50 meters gave 1.065 oz/t Au from a finely collform banded, chalcedonic, vuggy quartz vein with finely desseminated grey sulphide, galena and sphalerite.

F. Quartz stockwork boulders with low precious metal values.

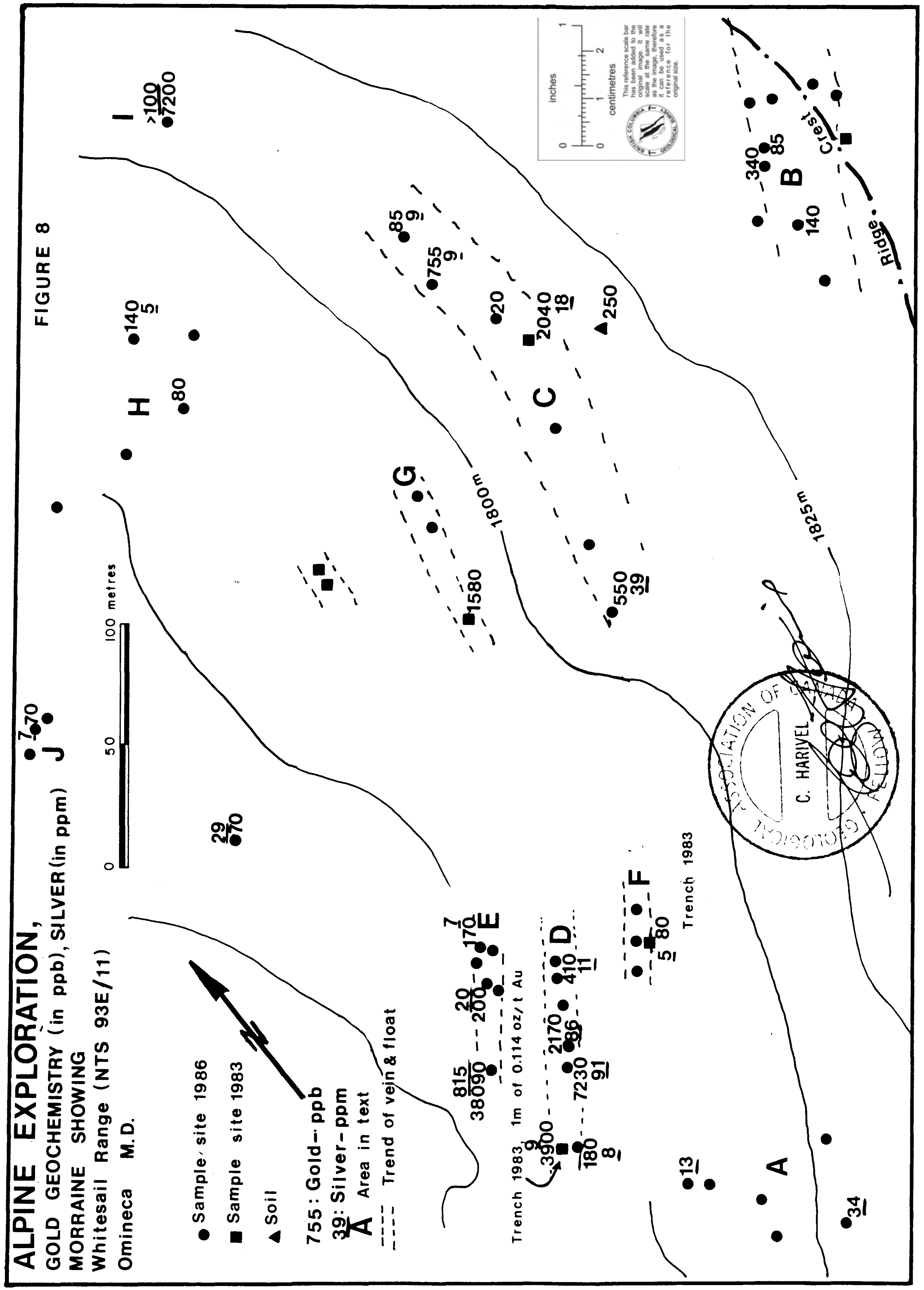
G. Quartz stockworks associated with propyllite and argillic altered heterolithic breccia with gold to 1,580 ppb.

H. An irregular train of quartz boulders typified by dense, cherty find-grained textures with low values.

I. A single sample site of fine-grained cherty, finely vuggy quartz which gave 0.286 oz/t Au. and 3.17 oz/t silver.

J. A large block of very sugary fine-grained grey quartz up to 5 feet wide. A fine-grained grey, unidentified mineral occurs throughout the quartz, values of precious metals were low.

The southwest extension of the above mineralized zone, south of the morainal lake comprises intensely shattered and argillic to propyllitic altered assemblages flooded with a stockwork of fine pyrite and quartz stringers, occassionally amethystine. Gold values of up to 0.136 oz/t and silver to 0.75



oz/t were obtained from this region in 1982. Values of up to 1,300 and 1,400 ppb Au were noted in 1986 (see samples Tr 201 to 231 and PH 107 to 125). Along the western margin of this zone, adjacent the propyllite argillic alteration boundary, a silicified band of rock trending 030/70 E contained most of the significant values noted from this zone.

Blitz Showing

A prominent knob, south of Blitz Creek is bisected by a major northwest trending shear zone (Blitz Fault) defined by a prominent low relief gulley up to 15 meters width. Blast-pit trenching in 1986, across this gulley revealed a mineralized, silicified zone measuring 3 meters in width adjacent to the western margin of the shear zone. A second cut across the zone showed a 1 meter wide silicified zone. Mineralization comprised silicification of lapilli tuffs associated with abundant fine-grained stibnite and marcasite. Precious metals, associated with the stibnite-marcasite are negligible (Samples TR 307 to 315).

Immediately to the north of the stibnite-marcasite mineralized zone, along the north slope of Blitz Knob, two float boulders, located in 1982, gave anomalous precious metal values. Both samples are of fine-grained sugary quartz containing 1,400 and 330 ppb Au and 658 and 21 ppm Ag.

The northward extension of the Blitz Fault zone is traceable through two sets of parallel faults, separated by 50 meters, both containing mineralized showings and coincident with anomalous gold soil geochemistry. Along the eastern fault splay a 2 meter zone of quartz-arsenopyrite mineralization was uncovered by trenching. Samples from this zone are yet to be processed. The western splay is known to extend northward, and likely connects with the southward extension of the Morraine Showing. Along this fault trace is an anomalous soil sample of 250 ppb Au (1983), and gold to 0.494 oz/t from a stringer (1982). Other anomalous samples from 1983 include 1980 ppb Au (83WH 22) from a 0.3 m zone adjacent to the fault and 3,200 ppb Au and 7.2 ppm Ag (83WG 417) from 2 m X 3 m of silicified quartz breccia. The locations of the 1983 samples can be found of Figures 9 and 10.

The connecting of the Blitz fault zone with the Morraine showing defines a structure with just under 2 miles (3,000 m) strike-length, mineralized intermittently along its entire known length.

Flare Showing

The Flare Showings consists of silicified zones and lenses within a major east-northeast trending shear zone located near the east margin of the Whitesail Claim. The shear zone is exposed intermittently for 1,000 meters along the north-facing slopes of Blitz Creek. Exposures are limited to gulley washes across the mineralized zone. Grab samples in 1982 gave values of up to 0.044 oz/t gold and 3.63 oz/t silver. Several further grabs were collected in 1983 from a 5m wide zone of pyritized, silicified and argillic lapilli tuffs which gave results up to 200 ppb Au and 7.2 ppm Ag (83 WG 415) and 740 ppb Au and 4.2 ppm Ag (83 WG 417).

Trenching and channel sampling in 1986 produced anomalous but not significant values from this zone. Samples TR 282 to 306 were collected from the Flare showing.

Zinc Creek

The Zinc Creek Showing comprises a series of narrow vertical-dipping, northeast-striking, quartz-sulphide-barite veins up to 60 cm wide. They cut moderately westerly dipping siltstones and sandstones of the Hazelton Group. Grab samples gave 1.36 oz/t Au and 0.33 oz/t Ag from a barite-calcite vein (10cm thick), and 65.14 and 78.64 oz/t Ag with low gold from two chalcopjute-quartz veins 10 m apart and 10 cm thick. Although these veins of not of potential economic width, their high precious metal values indicates an area of potential interest. The showings are near the southwest contact of the Troitsa Complex.

A sample collected in 1986 gave 2,330 ppb gold (PS 149).

Wolverine Showing

The Wolverine Showing, near the northeast corner of the Whitesail Claim, consists of minor silicification and bleaching of lapilli tuffs adjacent to minor northeasterly trending faults. A series of five, two-meter-long channel-samples collected in 1982 gave average assays of 0.022 oz/t Au and 0.21 oz/t Ag over 10m across the showing. Sampling in 1982 of the same trenches gave an average of 232 ppb Au. No new data was collected in 1986.

Chalco Creek (Suratt) Showing

The Chalco Creek Showing lies immediately northwest of the junction of the Discovery Fault and the Whitesail Fault Zone, at the headwaters of Cummins Creek. It consists of about 12 descrete veins hosted in highly fractured and propylite altered lapilli tuffs, cut by felsite dykes. Veins trend in two directions: northerly (000-030 deg.) and easterly (050-070 deg.). All dip steeply. The veins range from 10 cm to two meters width, commonly between 50 and 150 cm. The pinch and swell and may display prominent rolls. The veins are dominantly dark to milky, dense, fine-grained to chalcedonic quartz. They are massive to finely banded. Siderite veins are present. The veins contain chalcopyrite, pyrite, galena, sphalerite and

possibly tetrahedrite. Sulphides are generally disseminated, but on occasion are massive pods. Geochemistry results (1982) showed mainly silver with values of 298, 238, 34, 31, and 27 ppm. Gold is anomalous with values of 305, 290, 230, 210, and 160 ppb. This system probably relates to tension gashes resultant from fault movement. It was not visited in 1986.

Cummins Creek Vein System

Numerous quartz veins, trending mainly north north easterly and east-northeasterly were discovered in the Cummins Creek drainage along the southern boundary of the Wind Tunnel claim and throughout the Jesse claim in 1982. A float boulder, located then, gave 1.34 oz/t gold and 293 oz/t silver, and was traced to two prominent veins (1 to 2 m width) exposed in Cummins Creek. Grabs from these veins gave results of 0.33 oz/t gold and 64.9 oz/t silver, with mineralization associated with pyrite, galena, argentite and pyargante. Detailed channel sampling and limited trenching along these veins exposed in the creek by Canamax (1983) did not produce results of immediate significance.

In September 1986, a short prospecting program on the Cummins Creek area was undertaken to attempt to establish the area distribution of the quartz veining system noted in the creek. This program outlined an extensive area underlain by quartz veining and proximal float boulders of quartz, some containing anomalous precious metal values. In addition, new veins were noted within Cummins Creek itself. Best value of 0.127 oz/t Au and 76.14 oz/t Ag (BH 209) was a grab from a vein trenched by Canamax (1983). Samples include BH 201-211 and PS 170-190. Argentite, galena and chalcopyrite in quartz float was noted west of Cummins Creek. New showings containing silver values of 11, 25 and 31 oz/t, and gold to 0.097 oz/t, in vein systems, 400 to 600 meters to the south of the known showings in Cummins Creek, were discovered in 1986. This area is underlain by a large amount of proximal quartz float and veins 2 m width.

SOIL GEOCHEMISTRY

In 1983 Canamax ran an extensive soil sampling program over a grid that covers roughly 35% of the P.S. and Whitesail Claims (see Figure 5 for the locations of this grid). The grid runs southwesternly from the southeastern corner of the P.S. Claim to the southwestern corner of the Whitesail Claim. 1360 soil samples were collected at 25m intervals on 31 parellel, southeasterly-trending lines, 100m apart. The samples were analyzed geochemically by Rossbacher Labratory for Au, Ag, Pb, Zn, Cu and Mo. The data was analyzed statistically by Canamax with the following results (Cawthorn et al, 1984, p.14)

	Anomalous Threshold	Highly Anomalous	Peak Value
Au	20 ppb	100 +	570
Ag	0.8 ppm	2.0 +	8.6
Pb	100 ppm	500 +	6,500
Zn	200 ppm	500 +	3,600
Cu	100 ppm	200 +	580
Mo	5 ppm	10 +	450

N.G. Cawthorn et al (1984) identified 10 different gold and/or silver anomalies, a large and intense lead anomoly and some lessor lead, zinc and/or copper anomolies over the area covered by the grid. A summary of the more important anomalies follows. Outlines of these anomolies can be seen on Figures 9 and 10, pages 27 through 30

One gold-silver anomaly occurs around the Flare Showing. This anomaly with up to 570 ppb Au and 2.4 ppm Ag, extends 240 m in an east-northeast direction.

A large lead anomaly of greater than 100 ppm extends west-northwest for 1,200 m from 10+00S on line 24+00E on the Canamex grid. This anomaly is 150 m wide, but it narrows to the west. A zone of anomalous zinc of up to 2,500 ppm is roughly coincident. Within the area of anomalous lead are three zones of greater than 500 Pb, ranging from 160 to 250 m long, with values up to 6,500 ppm. The whole anomalous area mainly overlies porphyritic quartz monzonite with large, bladed-feldspar phenocrysts and heterolithic breccia of the Troitsa Complex. Quartz veins with anomalous precious metals have been found here.

Coincident with the east and west parts of the above, large, lead anomaly are large silver-gold anomolies. Silver is consistently anomalous across these areas whereas anomalous gold values are scattered. Values range up to 8.6 ppm Ag and 250 ppb Au. The Morraine Showing occurs on the north side of the above anomalous area. The northwestern part of this anomaly is located on a moraine.

Extending 1,500 m southwest from the east end of the above lead anomaly is a silver-gold anomaly up to 125 m wide with values ranging up to 120 ppb Au and 3.6 ppm Ag. This is reported to be underlain by bleached and altered shear zones in the Cummins Creek Group volcanics. The southeastern part of this anomaly along lines 1,500 and 1,600 E. as well as scattered anomalous values to the south-southeast appears to be related to the Blitz Fault.

Much of the area north, west and south of Blitz Knob is anomalous in copper. West of Blitz Knob is an area anomalous in lead. Values range up to 580 ppm Cu and 308 ppm Pb. Both the copper and lead anomalies show roughly coincident zinc

anomalies. Silver and gold is also anomalous in these areas. Mapping revealed that minor galena, arsenopyrite and chalcopyrite occurs in fractures cutting lapilli tuffs.

Several smaller anomalies in gold and silver occur within the area covered by the grid. These do not appear to have been investagated. Finally, some of the anomalies southwest of Blitz Knob are open to the southeast as well as the large lead-silver-gold anomaly to the north which appears to be open to the west.

Canamax also ran a soil sampling program over a grid over the northeast corner of the Jesse Claim and the southeast corner of the Wind Tunnel Claim. Four low grade silver anomalies were identified with some anomalous gold values. The largest anomaly crosses and is sub-parallel to Cummins Creek for 560 meters southeast of the point where the creek crosses the boundary between the Wind Tunnel and Jesse claims. This is the area where mineralized quartz veins are found.

CONCLUSIONS AND RECOMMENDATIONS

The general geologic setting is highly favourable for hosting epithermal precious metals deposits. Collapsed caldera structures and associated fault structures are common hosts to precious metal deposits (Sillitoe, 1980). The Whitesail Lake area has been interpreted by McIntyre (1978) as such a setting. In such a setting, the following styles of epithermal precious metal deposits may be expected: vein and shear hosted, breccia hosted and volcanic hosted.

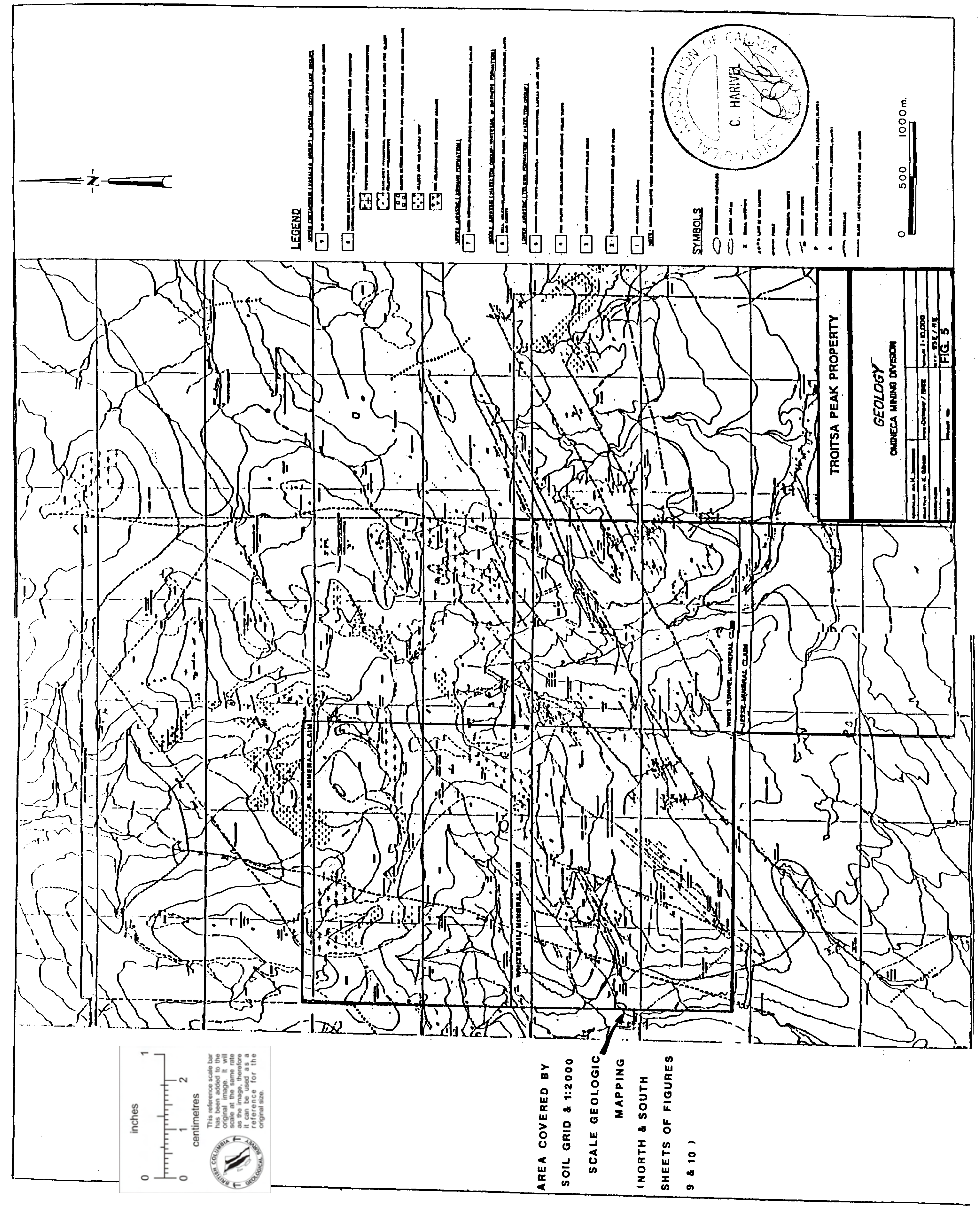
The Morraine Showing presents a potential vein and breccia hosted target with both high-grade and low-grade bulk tonnage potential. Vein and shear hosted targets include anomalies along the Blitz fault zone and in the Cummins Creek vein system, where bonanza potential exists.

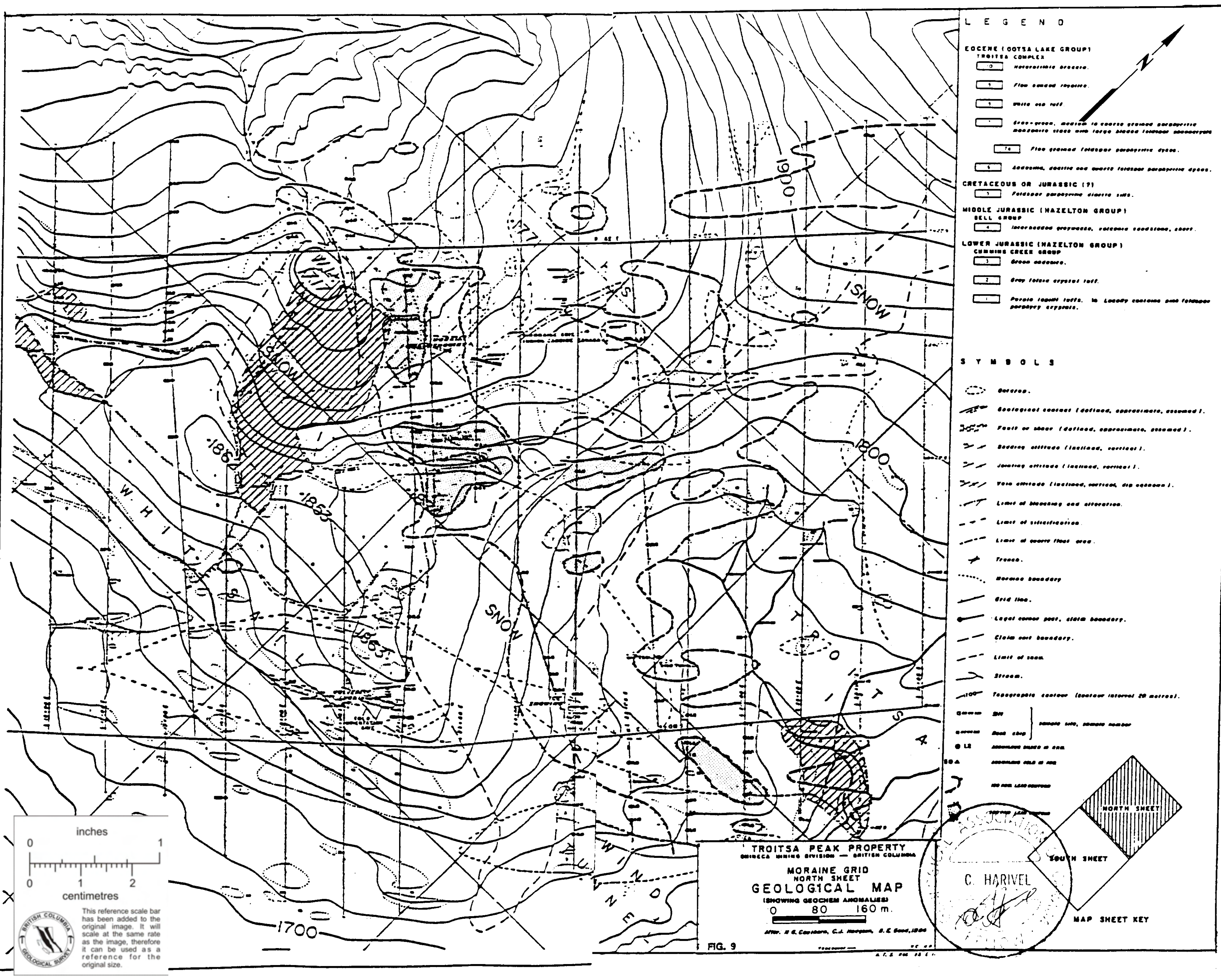
Phase One of the program, carried out in September 1986, consisted of detailed prospecting, sampling, trenching and geological interpretations of showings discovered and outlined in 1981, 1982 and 1983 by Dr. T.A. Richards, Union Carbide Canada Ltd. and Canamax. The purpose of Phase One was to evaluate the previous work, locate potential drillable targets and to determine the direction of Phase Two of the project. Results of phase one have outlined targets for drilling in the Morraine show area across which a series of short to medium depth (100 to 200 m) holes is recommended to be drilled. Areas where further follow-up by trenching, detailed prospecting and sampling may define further drill targets, include the Cummins Creek area and along the Blitz Fault. Prospecting, as a routine measure, should be continued on the property to evaluate anomalous areas not investigated in 1986, particularly along the northern extension of the Morraine Showing, in the headwaters of

Cummins Creek, and on the Chalco Creek Showing area. VLF-EM should be done across areas of high overburden to locate structures. Soil survey grids should be done across selected areas to confirm and further outline soil anomalies noted from the 1983 work.

BUDGET ESTIMATES: TROITSA PEAK PROPERTY

	PHASE 1	PHASE 2
Geologic Mapping, Supervision	6,000	12,000
Prospectors, Assistants, Labor	12,000	30,000
Camp Costs	3,500	12,000
Equipment Rentals	3,000	8,000
Supplies	3,000	7,000
Travel (including helicopter)	5,000	12,000
Geochemistry	6,000	15,000
Diamond Drilling (est. $35/ft.)	-	70,000
Office, insurance, expediting	1,000	5,000
Report Preparation	3,500	6,000
Engineering, Consulting	2,000	3,000
Contingencies	5,000	20,500
	50,000	200,500




LEGEND
EOCENE (OOTSA LAKE GROUP)
TROITSA COMPLEX
CRETACEOUS OR JURASSIC (?)
MIDDLE JURASSIC (HAZELTON GROUP)
LOWER JURASSIC (HAZELTON GROUP)
SYMBOLS
SNOW
WHITESAIL
TROITSA
1900
1800
1700
TROITSA PEAK PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA
MORAINE GRID
NORTH SHEET
GEOLOGICAL MAP
(SHOWING GEOCHEM ANOMALIES)
0 80 160 m.
NORTH SHEET
SOUTH SHEET
MAP SHEET KEY
C. HARIVEL
inches
centimetres
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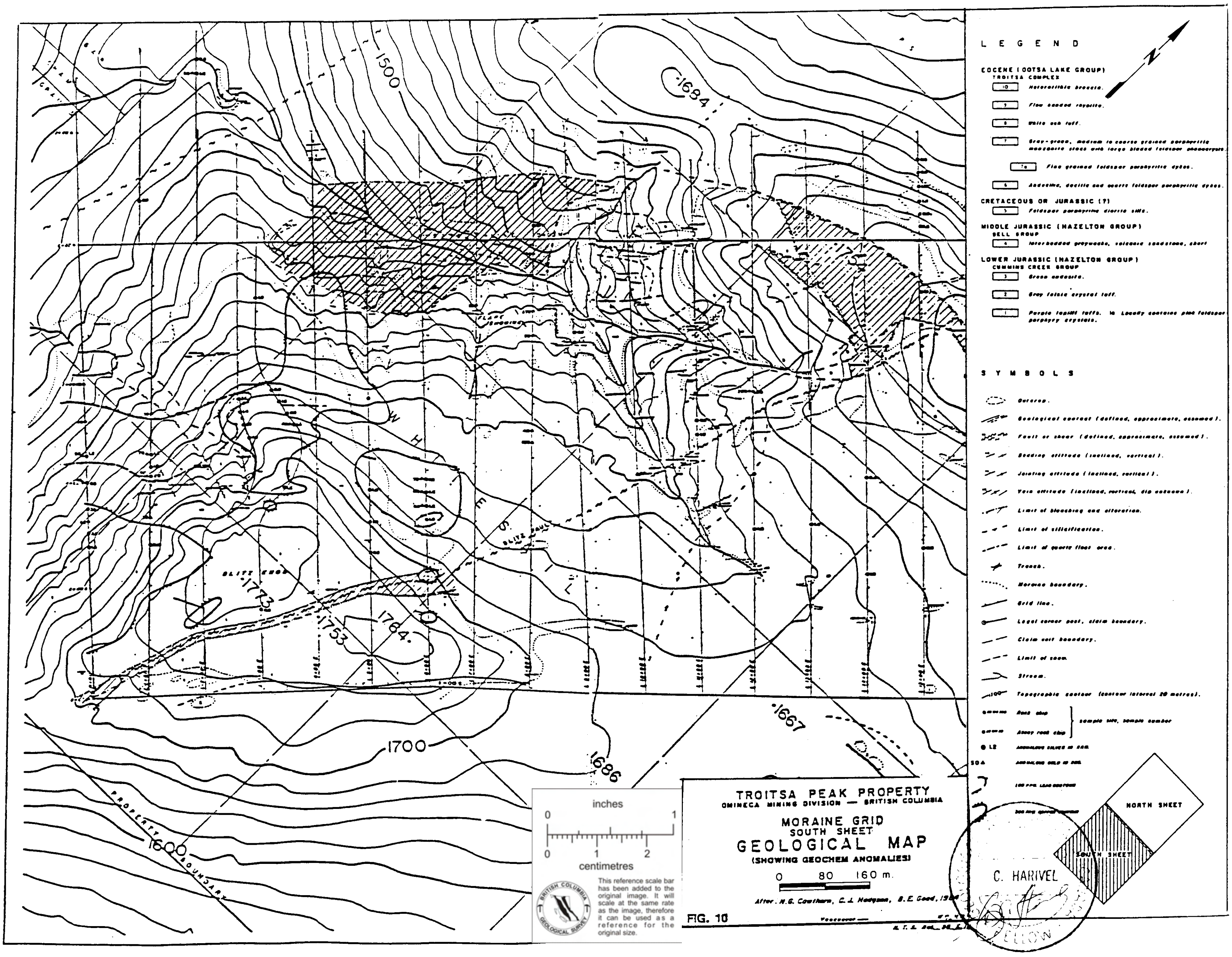
BRITISH COLUMBIA GEOLOGICAL SURVEY
FIG. 9


LEGEND
EOCENE (OOTSA LAKE GROUP)
TROITSA COMPLEX
CRETACEOUS OR JURASSIC (?)
MIDDLE JURASSIC (HAZELTON GROUP)
LOWER JURASSIC (HAZELTON GROUP)
SYMBOLS
1500
1684
1700
1667
1686
1600
1773
1753
1764
WHITESAIL
PROPERTY BOUNDARY
TROITSA PEAK PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA
MORAINE GRID
SOUTH SHEET
GEOLOGICAL MAP
(SHOWING GEOCHEM ANOMALIES)
0 80 160 m.
After. N.G. Cowthorn, C.L. Hodgson, B.E. Good, 19
NORTH SHEET
SOUTH SHEET
C. HARIVEL
inches
centimetres
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BRITISH COLUMBIA GEOLOGICAL SURVEY
FIG. 10

CERTIFICATE

I, COLIN P. HARIVEL, of business address P.O. Box 233, Smithers, British Columbia, DO HEREBY CERTIFY THAT:

1. I am a geologist and have practised my profession in the mining exploration industry in Australia, Canada and the United States of America since 1972.

2. I am a graduate of the University of British Columbia with a B.Sc. in Geology (1972).

3. I am a Fellow of the Geological Association of Canada.

4. I visited the subject property in May and September of 1986.

5. I have, in the course of my professional work in Canada, explored for deposits of the type that may exist on the property described in this report.

6. I have no interest, direct or indirect, in the properties or securities of Alpine Exploration Corporation or of their affiliates, nor do I expect to receive any such interest.

7. I consent to a review of this report by other geologists or engineers for the Vancouver Stock Exchange or the Superintendent of Broker's Office.

8. I consent to the use of this report, or a summary thereof, by Alpine Exploration Corporation in a Statement of Material Facts or for whatever purpose they deem necessary.

GEOLOGICAL ASSOCIATION OF CANADA
C. HARIVEL
FELLOW

Signed:

Colin P. Harivel, F.G.A.C.

Nov. 28, 1986

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VGC

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BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 860530 AA JOB NUMBER: 860530 TAKPANI RESOURCES LIMITED

SAMPLE #	Ag oz/st	Au oz/st
BH-86-121	24.62	1.065
BH-86-123	3.17	.286
BH-86-207	--	.036
BH-86-208	3.34	--
BH-86-209	76.14	.127
BH-86-210	2.61	--
PH-86-116R	--	.040
PS-86-149R	--	.068
PS-86-176R	--	.030
PS-86-177R	--	.094
PS-86-179R	31.08	.052
PS-86-182R	25.00	.097
PS-86-188R	11.38	.034
TR-86-203	--	.028
TR-86-216	--	.186
TR-86-217	--	.086
DETECTION LIMIT	.01	.005

1 Troy oz/short ton = 34.28 ppm 1 ppm = 0.0001% ppm = parts per million < = less than

signed: ____________________

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REPORT NUMBER: 860530 GA JOB NUMBER: 860530 **TAKPANI RESOURCES LIMITED**

SAMPLE #	Au ppb
BH-101 -86	nd
BH-102 -86	20
BH-103 -86	10
BH-104 -86	nd
BH-105 -86	90
BH-106 -86	5
BH-107 -86	10
BH-107 -86(A)	20
BH-108 -86	20
BH-109 -86	10
BH-110 -86	nd
BH-111 -86	nd
BH-112 -86	10
BH-113 -86	130
BH-114 -86	130
BH-115 -86	nd
BH-116 -86	10
BH-118 -86	340
BH-119 -86	nd
BH-120 -86	nd
BH-121 -86	38090
BH-122 -86	70
BH-123 -86	7200
BH-124 -86	nd
BH-125 -86	40
BH-126 -86	40
BH-127 -86	90
BH-128 -86	25
BH-129 -86	30
BH-130 -86	30
BH-131 -86	nd
BH-132 -86	150
BH-133 -86	25
BH-134 -86	35
BH-135 -86	80
BH-136 -86	15
BH-137 -86	15
BH-138 -86	nd
BH-139 -86	nd
DETECTION LIMIT	5

nd = none detected — = not analysed is = insufficient sample

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BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 860530 GA JOB NUMBER: 860530 **TAKPANI RESOURCES LIMITED**

SAMPLE #	Au ppb
BH-140 -86	nd
BH-141 -86	nd
BH-142 -86	240
BH-143 -86	10
BH-144 -86	25
BH-145 -86	nd
BH-146 -86	nd
BH-147 -86	10
BH-148 -86	nd
BH-149 -86	nd
BH-150 -86	nd
BH-151 -86	50
BH-152 -86	nd
BH-153 -86	480
BH-154 -86	30
BH-155 -86	445
BH-156 -86	40
BH-157 -86	nd
BH-158 -86	nd
BH-201 -86	60
BH-202 -86	nd
BH-203 -86	25
BH-204 -86	50
BH-205 -86	70
BH-206 -86	15
BH-207 -86	1400
BH-208 -86	750
BH-209 -86	5000
BH-210 -86	5
BH-211 -86	40
LAT-006RF-86	40
LAT-007R -86	nd
LAT-008R -86	nd
LAT-009R -86	785
LAT-010R -86	nd
LAT-011R -86	40
LAT-012R -86	5
LAT-013R -86	240
PH-100R -86	5
DETECTION LIMIT	5

nd = none detected — = not analysed is = insufficient sample

VGC
VANGEOCHEM LAB LIMITED
MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578
BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 860530 GA JOB NUMBER: 860530 **TAKPANI RESOURCES LIMITED**

SAMPLE #	Au ppb
PH-101R -86	60
PH-102R -86	100
PH-103R -86	50
PH-104R -86	310
PH-105R -86	5
PH-106R -86	nd
PH-107R -86	200
PH-108R -86	nd
PH-109R -86	20
PH-110R -86	nd
PH-111R -86	nd
PH-112R -86	190
PH-113R -86	110
PH-114R -86	50
PH-115R -86	90
PH-116R -86	1400
PH-117R -86	nd
PH-118R -86	890
PH-119R -86	nd
PH-120R -86	20
PH-121R -86	60
PH-122R -86	100
PH-123R -86	250
PH-124R -86	90
PH-125R -86	30
PH-126R -86	nd
PH-128R -86	nd
PH-129R -86	130
PH-130R -86	nd
PH-131R -86	nd
PH-132R -86	nd
PH-134R -86	nd
PH-147R -86	nd
PS-148RF-86	nd
PS-149R -86	2330
PS-150R -86	20
PS-151R -86	205
PS-152R -86	5
PS-153RF-86	60
DETECTION LIMIT	5

nd = none detected — = not analysed is = insufficient sample

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(604) 251-5656

REPORT NUMBER: 860530 GA JOB NUMBER: 860530 **TAKPANI RESOURCES LIMITED**

SAMPLE #	Au ppb
PS-154RF-86	nd
PS-155R -86	nd
PS-156R -86	nd
PS-157R -86	30
PS-158R -86	nd
PS-159R -86	620
PS-160R -86	5
PS-161R -86	15
PS-162R -86	60
PS-163R -86	20
PS-164R -86	5
PS-165R -86	90
PS-166R -86	nd
PS-167R -86	30
PS-168R -86	610
PS-169R -86	nd
PS-170R -86	515
PS-171R -86	nd
PS-172R -86	545
PS-173R -86	nd
PS-174R -86	340
PS-175R -86	nd
PS-176R -86	1200
PS-177R -86	2640
PS-178R -86	80
PS-179R -86	1645
PS-180R -86	nd
PS-181R -86	nd
PS-182R -86	3085
PS-183R -86	60
PS-184R -86	20
PS-185R -86	410
PS-186R -86	10
PS-187R -86	nd
PS-188R -86	790
PS-189R -86	25
PS-190RF-86	35
TR-200 -86	60
TR-201 -86	550
DETECTION LIMIT	5

nd = none detected — = not analysed is = insufficient sample

VANGEOCHEM LAB LIMITED

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(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
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VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 860530 GA JOB NUMBER: 860530 **TAKPANI RESOURCES LIMITED**

SAMPLE #	Au ppb
TR-202 -86	120
TR-203 -86	1300
TR-204 -86	860
TR-205 -86	40
TR-208 -86	nd
TR-209 -86	520
TR-210 -86	20
TR-211 -86	40
TR-212 -86	340
TR-213 -86	5
TR-214 -86	110
TR-215 -86	180
TR-216 -86	7230
TR-217 -86	2170
TR-218 -86	5
TR-219 -86	410
TR-220 -86	nd
TR-221 -86	10
TR-222 -86	5
TR-223 -86	nd
TR-224 -86	nd
TR-225 -86	nd
TR-226 -86	nd
TR-227 -86	nd
TR-228 -86	nd
TR-229 -86	300
TR-230 -86	40
TR-231 -86	80
TR-232 -86	nd
TR-233 -86	200
TR-234 -86	10
TR-235 -86	170
TR-236 -86	10
TR-237 -86	nd
TR-238 -86	nd
TR-239 -86	140
TR-240 -86	10
TR-241 -86	340
TR-242 -86	85
DETECTION LIMIT	5

nd = none detected -- = not analysed is = insufficient sample

VANGEOCHEM LAB LIMITED

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1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 860530 GA JOB NUMBER: 860530 **TAKPANI RESOURCES LIMITED**

SAMPLE #	Au ppb
TR-243 -86	nd
TR-244 -86	10
TR-245 -86	nd
TR-246 -86	nd
TR-247 -86	550
TR-248 -86	nd
TR-249 -86	nd
TR-250 -86	20
TR-251 -86	755
TR-252 -86	85
TR-253 -86	nd
TR-254 -86	10
TR-255 -86	80
TR-256 -86	nd
TR-257 -86	140
TR-258 -86	nd
TR-259 -86	nd
TR-260 -86	nd
TR-261 -86	nd
TR-262 -86	70
TR-263 -86	nd
TR-282 -86	nd
TR-283 -86	nd
TR-284 -86	40
TR-285 -86	35
TR-286 -86	650
TR-287 -86	445
TR-288 -86	190
TR-289 -86	210
TR-290 -86	220
TR-291 -86	5
TR-292 -86	5
TR-293 -86	5
TR-305 -86	100
TR-306 -86	nd
TR-307 -86	nd
TR-308 -86	nd
TR-309 -86	nd
TR-310 -86	nd
DETECTION LIMIT	5

nd = none detected -- = not analysed is = insufficient sample

VANGEOCHEM LAB LIMITED

MAIN OFFICE
1521 PEMBERTON AVE.
NORTH VANCOUVER, B.C. V7P 2S3
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE
1630 PANDORA ST.
VANCOUVER, B.C. V5L 1L6
(604) 251-5656

REPORT NUMBER: 860530 GA JOB NUMBER: 860530 TAKPANI RESOURCES LIMITED

SAMPLE #	Au ppb
TR-311 -86	nd
TR-312 -86(A)	40
TR-312 -86(B)	nd
TR-313 -86	nd
TR-314 -86	160
TR-315 -86	nd
WW-001	nd
WW-002	nd
WW-003	nd
WW-004	nd
WW-005	nd
WW-006	10
WW-007	10
WW-008	150
WW-009	30
WW-015	nd
WW-018	100
WW-019	nd
WW-024	nd
WW-025	nd
WW-026	nd
WW-028	80
1100E 275S WW 19	nd

DETECTION LIMIT 5
nd = none detected -- = not analysed is = insufficient sample

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1521 PEMBERTON AVE. N.VANCOUVER B.C. V7P 2S3 PH:(604)986-5211 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA ST. VANCOUVER B.C. V5L 1L6 PH:(604)251-5656

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:2 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,MN,FE,CA,P,CR,MG,BA,PD,AL,NA,K,W,PT AND SR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, -= NOT ANALYZED

COMPANY: TOM RICHARDS
ATTENTION: TOM RICHARDS
PROJECT: N/G

REPORT#: 860530PA
JOB#: 860530
INVOICE#: 860530NA

DATE RECEIVED: 86/10/09
DATE COMPLETED: 86/10/17
COPY SENT TO:

ANALYST ________

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
BH/86/101	2.0	.49	61	ND	110	ND	.17	.6	4	92	166	2.17	.07	.19	441	12	.01	6	.08	1266	ND	ND	14	1	7	12	ND	269
BH/86/102	.5	1.59	42	ND	38	ND	.29	.2	6	11	8	3.84	.09	1.09	1395	8	.01	8	.16	56	ND	ND	11	ND	8	6	ND	113
BH/86/103	.1	.09	17	ND	36	ND	17.49	.1	3	2	15	3.33	.01	10.51	2316	ND	.01	ND	.01	ND	ND	ND	ND	ND	329	ND	6	91
BH/86/104	.1	.32	12	ND	2338	4	2.59	.1	5	2	28	1.43	.09	1.36	1509	ND	.01	3	.01	9	ND	ND	5	ND	289	13	3	66
BH/86/105	2.6	.46	173	ND	877	3	.23	.1	ND	38	4	1.28	.10	.16	113	14	.01	ND	.03	375	ND	ND	14	ND	38	11	ND	8
BH/86/106	.3	1.22	29	ND	432	ND	.48	3.7	7	5	3	1.95	.13	.35	1321	ND	.01	2	.19	220	ND	ND	9	ND	26	14	ND	77
BH/86/107	.3	1.50	27	ND	71	3	1.97	8.0	11	15	53	3.91	.19	.83	1814	1	.01	6	.20	1107	ND	ND	7	ND	65	10	ND	1347
BH/86/108	.4	1.67	28	ND	255	3	.34	.6	6	25	102	3.74	.13	.61	992	ND	.01	4	.20	630	ND	ND	9	ND	18	11	ND	257
BH/86/109	.6	1.10	46	ND	92	3	.38	2.8	7	17	31	2.48	.13	.50	1044	3	.01	5	.09	460	ND	ND	8	ND	13	12	ND	497
BH/86/110	34.8	.41	89	ND	68	4	.14	49.9	3	56	498	2.47	.08	.13	226	19	.01	3	.13	35916	ND	ND	30	ND	36	ND	10	7117
BH/86/111	.9	.70	49	ND	84	ND	1.66	1.0	8	19	24	3.20	.15	.38	722	1	.01	4	.15	896	ND	ND	6	ND	58	16	ND	254
BH/86/112	1.1	.74	80	ND	66	ND	1.78	.7	11	36	12	2.83	.18	.29	859	5	.01	6	.18	291	ND	ND	8	ND	82	18	ND	156
BH/86/113	.8	.36	85	ND	119	ND	.13	.1	5	15	11	2.67	.07	.10	581	10	.01	4	.10	99	ND	ND	8	ND	20	8	ND	53
BH/86/114	.7	.30	148	ND	44	3	.06	.1	1	66	10	2.16	.07	.08	122	8	.01	4	.06	95	ND	ND	8	ND	6	13	ND	103
BH/86/115	1.3	1.09	130	ND	38	ND	1.76	.1	9	24	14	8.27	.21	.64	1720	52	.01	5	.08	42	ND	ND	8	ND	47	15	ND	134
BH/86/116	.9	1.53	46	ND	39	ND	2.68	7.2	8	25	79	3.98	.20	.58	1691	2	.01	3	.14	906	ND	ND	6	ND	99	14	3	1011
BH/86/117	.1	.40	42	ND	46	ND	.17	.2	4	13	6	3.76	.08	.10	176	4	.01	3	.10	180	ND	ND	6	ND	7	6	ND	151
BH/86/118	17.8	.09	105	ND	68	ND	.05	.1	1	87	48	1.90	.06	.02	69	17	.01	5	.03	18889	ND	ND	21	ND	13	10	ND	258
BH/86/119	.1	.16	30	ND	15	ND	18.75	.1	8	3	54	4.08	.01	10.24	2475	ND	.01	2	.01	648	ND	ND	ND	ND	68	ND	7	150
BH/86/120	.1	.46	41	ND	14	ND	16.89	.1	10	6	9	2.71	.01	7.06	3093	ND	.01	5	.01	224	ND	ND	ND	ND	202	ND	8	115
BH/86/121	>100	.14	52	44	65	ND	.27	.7	1	80	19	.85	.06	.13	340	110	.01	21	.01	183	ND	ND	54	ND	4	7	ND	45
BH/86/122	29.3	.56	101	ND	28	ND	.12	.1	3	13	20	5.96	.06	.32	162	67	.01	9	.01	57	ND	ND	10	ND	7	ND	ND	21
BH/86/123	>100	.08	36	61	9	ND	.04	.1	ND	78	6	.51	.02	.03	120	23	.01	5	.01	34	ND	ND	12	ND	1	8	ND	13
BH/86/124	37.7	1.05	28	3	105	3	.09	61.8	6	83	807	2.32	.02	.76	1534	7	.01	4	.01	37033	ND	ND	34	ND	13	ND	32	10730
BH/86/125	.1	.75	445	ND	24	ND	28.62	.5	6	3	50	2.52	.01	1.68	3363	2	.01	3	.01	845	ND	ND	8	ND	486	ND	ND	390
BH/86/126	.1	.53	1992	ND	17	ND	16.12	.1	2	4	21	5.49	.01	6.86	4757	31	.01	1	.01	236	ND	ND	7	ND	223	ND	5	186
BH/86/127	.1	.32	902	ND	7	ND	10.37	.1	4	3	54	9.09	.08	4.48	5995	28	.01	3	.01	63	ND	ND	7	ND	375	ND	11	191
BH/86/128	.1	2.49	2192	ND	13	ND	.43	.1	23	19	17	10.62	.05	1.59	1069	2	.01	1	.09	143	ND	ND	47	ND	13	ND	4	102
BH/86/129	.3	.34	135	ND	55	ND	.19	.1	2	58	5	1.71	.01	.23	246	111	.01	ND	.01	16	ND	ND	5	ND	7	ND	ND	22
BH/86/130	.4	.18	74	ND	34	ND	.06	.2	ND	7	4	.69	.13	.04	76	17	1.00	ND	.02	17	ND	ND	6	ND	7	12	ND	12
BH/86/131	1.0	.89	93	ND	21	ND	.08	.1	11	25	127	3.43	.05	.72	580	29	.01	4	.06	20	ND	ND	9	ND	6	5	5	45
BH/86/132	7.2	.47	340	ND	52	ND	.03	.1	5	41	2018	4.67	.06	.27	213	15	.01	3	.02	14	ND	ND	11	ND	5	5	ND	25
BH/86/133	1.3	.37	88	ND	14	ND	.06	.1	10	86	91	5.42	.05	.31	214	41	.01	6	.04	36	ND	ND	4	ND	2	3	ND	46
BH/86/134	.1	.17	158	ND	501	ND	.02	.1	1	24	23	.87	.01	.02	58	44	.01	3	.01	7	ND	ND	5	ND	10	3	ND	8
BH/86/135	4.1	.09	71	ND	183	ND	.01	.2	ND	87	8	1.36	.04	.01	28	181	.01	1	.01	151	ND	ND	6	ND	8	ND	ND	17
BH/86/136	1.3	1.19	59	ND	118	ND	.49	17.4	11	42	39	3.19	.08	.65	1474	78	.01	7	.05	751	ND	ND	6	ND	19	ND	8	2823
BH/86/137	.1	1.53	16	ND	78	ND	1.82	.6	11	12	21	3.51	.16	1.03	740	5	.01	9	.17	34	ND	ND	3	ND	108	12	3	162
BH/86/138	.1	.13	15	ND	983	ND	.51	.3	5	44	122	.49	.05	.17	161	1	.01	7	.01	14	ND	ND	ND	ND	147	9	ND	199
BH/86/139	.1	.23	ND	ND	1234	ND	.57	.2	2	54	59	.35	.05	.06	115	ND	.01	3	.02	8	ND	ND	ND	ND	220	6	ND	73
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

CLIENT: TOM RICHARDS JOB#: 860530 PROJECT: N/G REPORT: 860530PA DATE: 86/10/17

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
BH/86/140	.1	.41	ND	ND	880	ND	11.26	.1	14	7	12	3.92	.01	5.57	2019	ND	.01	27	.01	12	ND	ND	ND	ND	93	ND	ND	129
BH/86/141	.1	.76	3	ND	217	ND	2.65	.1	3	46	10	1.75	.07	1.16	1338	ND	.01	10	.01	24	ND	ND	3	ND	120	7	ND	84
BH/86/142	.8	.57	ND	ND	277	ND	1.07	1.7	11	56	4773	5.32	.07	.79	973	1	.01	11	.07	138	ND	ND	5	ND	15	5	ND	134
BH/86/143	.5	1.80	96	ND	50	ND	.20	.1	18	16	173	16.01	.15	.56	555	2	.01	6	.08	34	ND	ND	22	ND	9	ND	ND	68
BH/86/144	.1	1.43	70	ND	24	ND	.14	.1	12	27	71	9.00	.08	.41	374	ND	.01	2	.11	25	ND	ND	15	ND	5	ND	ND	42
BH/86/145	.1	2.92	329	ND	24	ND	.12	.1	27	4	71	14.57	.11	.82	626	ND	.01	4	.11	25	ND	ND	20	ND	2	ND	ND	79
BH/86/146	.9	1.67	10	ND	90	4	1.86	.1	21	64	649	5.16	.12	1.08	1454	ND	.01	9	.06	23	4	ND	5	5	12	8	ND	159
BH/86/147	.1	.42	251	ND	154	3	.12	.1	7	32	37	1.23	.05	.08	110	1	.01	ND	.02	23	ND	ND	11	ND	5	9	ND	12
BH/86/148	.1	.30	295	ND	154	ND	.07	.1	2	49	14	.74	.03	.03	116	ND	.01	1	.02	22	ND	ND	10	ND	6	8	ND	9
BH/86/149	.1	1.50	60	ND	98	ND	.44	.1	5	20	54	3.18	.13	.54	645	1	.01	ND	.05	30	ND	ND	14	ND	10	15	ND	71
BH/86/150	.1	1.48	5	ND	143	ND	9.51	.1	31	5	125	8.38	.14	4.38	4474	ND	.01	10	.02	24	ND	ND	ND	ND	62	ND	8	248
BH/86/151	.1	.34	2447	ND	54	ND	.33	.1	10	63	14	3.67	.06	.18	218	ND	.01	5	.01	24	ND	ND	39	ND	7	ND	ND	43
BH/86/152	.1	2.88	1158	ND	33	ND	.12	.1	21	9	124	8.17	.06	.99	1698	10	.01	7	.03	67	ND	ND	53	ND	2	ND	ND	177
BH/86/153	.1	1.18	11907	ND	42	ND	.05	.1	22	80	43	6.88	.03	.61	507	5	.01	8	.01	24	ND	ND	305	ND	1	ND	ND	155
BH/86/154	.1	.27	1881	ND	213	ND	.06	.1	3	60	20	3.25	.01	.07	276	114	.01	1	.01	19	ND	ND	63	ND	3	ND	ND	45
BH/86/155	.5	.33	54246	ND	50	ND	.02	.1	14	44	73	6.49	.03	.07	82	9	.01	5	.01	8	ND	ND	944	ND	1	ND	ND	91
BH/86/156	1.8	.48	2080	ND	14	ND	.06	.1	7	92	21	6.18	.01	.57	209	112	.01	4	.01	226	ND	ND	44	ND	2	ND	ND	73
BH/86/157	.1	.75	546	ND	70	ND	.01	.1	ND	16	14	4.96	.03	.23	388	4	.01	1	.07	27	ND	ND	14	ND	3	ND	ND	24
BH/86/158	.1	.27	215	ND	72	ND	.05	.1	ND	51	4	1.78	.04	.05	98	5	.01	ND	.05	76	ND	ND	7	1	42	ND	ND	6
BH/86/201	2.8	.18	96	ND	69	ND	.02	.1	ND	99	6	.54	.01	.02	33	58	.01	1	.02	31	ND	ND	8	ND	5	ND	ND	3
BH/86/202	.3	.18	47	ND	219	ND	.05	.1	ND	11	9	1.79	.02	.03	46	59	.01	13	.06	35	ND	ND	6	ND	13	ND	ND	7
BH/86/203	5.3	.81	18	ND	89	ND	.12	1.1	4	47	392	1.33	.04	.39	389	3	.01	10	.04	99	ND	ND	4	ND	4	ND	ND	91
BH/86/204	.6	.06	12	ND	16	ND	.05	.1	ND	53	97	.47	.01	.01	86	34	.01	1	.01	117	ND	ND	4	ND	2	ND	ND	15
BH/86/205	.5	.53	38	ND	88	ND	.11	.1	5	68	15	1.20	.01	.20	153	353	.01	2	.02	74	ND	ND	9	ND	4	ND	ND	14
BH/86/206	.1	.22	31	ND	24	ND	.04	.1	3	25	9	.79	.01	.09	191	12	.01	3	.01	21	ND	ND	3	ND	2	ND	ND	6
BH/86/207	31.8	.14	30	ND	18	ND	.04	8.6	2	81	408	.76	.01	.12	97	267	.01	7	.01	363	ND	ND	12	ND	2	ND	ND	211
BH/86/208	>100	.33	25	ND	18	4	.13	4.2	4	70	323	1.43	.01	.36	201	299	.01	13	.03	242	ND	ND	8	ND	5	ND	ND	114
BH/86/209	>100	.01	18	3	9	ND	.01	86.8	1	131	424	.53	.01	.04	82	30	.01	2	.01	2409	ND	ND	8	1	1	ND	ND	973
BH/86/210	>100	.03	8	ND	9	ND	.25	5.7	ND	28	3860	.79	.01	.03	91	45	.01	ND	.01	857	ND	ND	5	ND	3	ND	ND	116
BH/86/211	10.9	.07	16	ND	38	3	.01	.3	ND	75	78	.51	.01	.01	58	63	.01	3	.01	75	ND	ND	5	1	3	ND	ND	15
LAT-86-(F)6R	8.0	.27	14	ND	59	ND	.04	.1	ND	19	40	.56	.03	.08	116	9	.02	1	.02	42	ND	ND	3	1	5	ND	ND	14
LAT-86-7R	4.9	.44	295	ND	9	ND	.04	.1	5	44	14	8.73	.07	.42	372	46	.01	ND	.05	87	ND	ND	23	ND	3	ND	343	21
LAT-86-8R	2.4	.97	68	ND	72	4	.02	.1	4	38	21	4.83	.04	.63	531	4	.01	1	.06	36	ND	ND	7	ND	4	ND	32	48
LAT-86-9R	2.4	2.50	19	ND	9	4	.16	.1	13	20	31	6.48	.06	1.51	1237	ND	.01	ND	.10	22	ND	ND	5	ND	3	ND	11	93
LAT-86-10R	.4	.26	17	ND	122	ND	.05	.1	ND	13	6	.60	.04	.06	77	2	.01	ND	.03	22	ND	ND	3	ND	9	ND	ND	60
LAT-86-11R	.1	.94	24	ND	20	ND	.07	.1	2	36	5	1.90	.02	.70	609	3	.01	ND	.04	18	ND	ND	4	ND	3	ND	ND	76
LAT-86-12R	.1	.66	145	ND	7	4	7.43	.9	8	7	13	4.12	.07	4.58	522	ND	.01	2	.01	19	ND	ND	ND	ND	446	ND	11	146
LAT-86-13R	37.4	.07	25	ND	4	ND	.15	.1	ND	71	5	.57	.01	.10	48	12	.01	1	.01	27	ND	ND	4	ND	9	ND	ND	14
LAT-86-100R	2.0	.21	48	ND	23	ND	.08	.1	12	74	7	8.01	.07	.08	89	11	.01	2	.02	839	ND	ND	4	ND	5	ND	ND	99
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

CLIENT: TOM RICHARDS JOB#: 860530 PROJECT: N/G REPORT: 860530PA DATE: 86/10/17

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
PH-86 R101	19.6	1.08	38	ND	27	ND	1.47	43.5	11	50	718	3.29	.19	.58	1522	6	.01	16	.05	15799	ND	ND	17	ND	45	ND	8	6239
PH-86 R102	1.7	.10	64	ND	38	ND	.07	1.1	2	50	37	2.70	.02	.05	108	4	.01	5	.02	1716	ND	ND	4	ND	16	ND	ND	235
PH-86 R103	40.2	.07	97	ND	22	ND	.13	2.2	3	119	133	1.89	.03	.03	113	23	.01	4	.05	34783	ND	ND	40	ND	8	ND	ND	577
PH-86 R104	.1	1.77	4795	ND	67	ND	6.74	.1	14	3	105	12.69	.31	3.16	6486	ND	.01	6	.05	632	ND	ND	217	ND	132	5	11	70
PH-86 R105	11.8	.15	147	ND	17	ND	.56	.2	4	60	12209	1.93	.10	.07	427	8	.01	5	.01	285	ND	ND	16	1	11	11	3	18
PH-86 R106	.5	.34	87	ND	28	ND	.07	.1	1	17	255	4.91	.10	.10	412	10	.01	ND	.03	122	ND	ND	6	ND	2	4	ND	135
PH-86 R107	.1	1.06	117	ND	21	ND	.27	.2	7	75	115	3.54	.11	.65	950	1	.01	7	.10	169	ND	ND	4	ND	8	ND	ND	130
PH-86 R108	.1	.32	59	ND	38	ND	.13	.1	ND	8	37	1.29	.07	.13	293	4	.01	ND	.02	51	ND	ND	5	ND	6	ND	ND	85
PH-86 R109	.1	.71	46	ND	80	ND	.25	.1	4	17	27	3.37	.15	.31	450	1	.01	2	.15	37	ND	ND	ND	ND	9	5	ND	123
PH-86 R110	.1	1.62	79	ND	26	ND	.01	.1	12	8	33	6.07	.07	.92	1176	2	.01	2	.05	24	ND	ND	4	ND	2	ND	3	81
PH-86 R111	.6	.32	98	ND	39	ND	.01	.1	3	46	14	1.62	.07	.07	77	16	.01	1	.05	59	ND	ND	4	ND	2	ND	ND	16
PH-86 R112	5.5	.56	257	ND	42	ND	.01	.1	2	5	16	2.90	.10	.15	165	255	.01	ND	.07	540	ND	ND	19	ND	7	ND	ND	27
PH-86 R113	3.4	.29	205	ND	154	3	.02	.1	3	32	48	2.37	.10	.05	77	17	.01	1	.07	434	ND	ND	7	ND	11	ND	ND	117
PH-86 R114	2.1	.40	149	ND	93	ND	.03	.1	5	50	28	3.20	.10	.07	127	19	.01	2	.07	360	ND	ND	5	ND	5	ND	ND	25
PH-86 R115	7.5	.40	156	ND	35	ND	.05	.1	1	16	38	5.16	.10	.05	132	145	.01	ND	.07	450	ND	ND	16	ND	11	ND	ND	109
PH-86 R116	50.1	.22	180	ND	40	ND	.20	.4	8	61	35	3.12	.03	.10	215	702	.01	5	.01	134	ND	ND	16	ND	8	ND	ND	77
PH-86 R117	.1	.21	226	ND	29	ND	18.88	1.2	7	2	7	7.43	.01	6.25	14795	13	.01	2	.01	83	ND	ND	ND	ND	150	ND	12	522
PH-86 R118	.2	.15	25824	ND	159	ND	.58	.1	2	95	164	4.03	.03	.26	444	7	.01	2	.01	16	ND	ND	339	ND	36	ND	ND	31
PH-86 R119	.1	.15	485	ND	13	ND	17.57	.1	13	4	9	4.23	.01	9.12	2914	2	.01	6	.01	40	ND	ND	ND	ND	79	ND	3	156
PH-86 R120	1.7	1.25	304	ND	20	3	.51	.1	3	51	50	2.54	.01	1.41	479	300	.01	10	.01	22	ND	ND	7	ND	4	ND	ND	40
PH-86 R121	2.7	.26	148	ND	27	ND	.07	.1	7	81	38	4.32	.03	.15	201	19	.01	19	.01	106	ND	ND	20	ND	5	ND	ND	17
PH-86 R122	5.5	.31	51	ND	26	ND	.03	.1	ND	4	43	1.27	.07	.05	47	16	.01	3	.07	5635	ND	ND	6	ND	40	ND	ND	83
PH-86 R123	13.1	.44	24	ND	34	ND	.52	11.3	4	67	1107	2.05	.05	.23	484	5	.01	5	.05	7116	ND	ND	7	ND	16	ND	ND	1831
PH-86 R124	21.6	.05	26	ND	6	ND	.03	.1	1	73	54	.92	.01	.02	190	9	.01	1	.01	16608	ND	ND	19	ND	4	ND	ND	138
PH-86 R125	2.2	1.12	44	ND	33	ND	.14	.1	3	37	111	3.51	.07	.59	769	11	.01	2	.15	3028	ND	ND	5	ND	8	ND	ND	586
PH-86 R126	.1	.47	21	ND	55	ND	2.58	.1	ND	31	18	1.89	.10	.67	1350	1	.01	ND	.01	176	ND	ND	ND	ND	28	ND	ND	44
PH-86 R128	1.6	.45	1573	ND	36	ND	.31	.1	18	10	116	8.73	.14	.11	622	1	.01	4	.01	85	ND	ND	303	ND	3	ND	ND	171
PH-86 R129	.1	.14	36	ND	16	ND	33.01	.1	ND	2	24	.51	.01	.07	1613	ND	.01	1	.01	33	ND	ND	3	ND	32	ND	ND	25
PH-86 R130	.1	.20	45	ND	37	ND	.56	.1	ND	73	7	1.77	.07	.02	104	5	.01	ND	.01	26	ND	ND	8	1	5	ND	ND	13
PH-86 R131	.1	.33	2003	ND	54	ND	.30	.1	1	25	18	1.50	.02	.10	94	1	.01	ND	.01	14	ND	ND	124	ND	6	ND	ND	30
PH-86 R132	.1	.15	143	ND	15	ND	14.85	.1	13	2	5	4.00	.01	6.68	2163	ND	.01	6	.01	40	ND	ND	63	ND	120	ND	ND	133
PH-86 R134	1.5	.03	11298	ND	53	ND	.25	.1	10	108	6	3.66	.03	.11	80	2	.01	6	.01	30	ND	ND	7021	ND	6	ND	ND	47
PS-86 R147	.1	.30	280	ND	16	ND	.20	.1	1	39	6	1.27	.01	.16	179	2	.01	3	.01	4	ND	ND	151	ND	5	ND	ND	24
PS-86 R148(F)	.1	.53	202	ND	23	ND	.60	.5	ND	15	2	.56	.05	.33	518	1	.01	ND	.01	42	ND	ND	39	ND	19	ND	ND	112
PS-86 R149	.1	.83	11910	ND	39	ND	.16	.1	3	61	12	3.88	.03	.70	274	2	.01	6	.03	47	ND	ND	75	ND	11	ND	ND	124
PS-86 R150	.1	.92	437	ND	13	ND	7.84	.1	10	29	53	9.48	.20	2.33	10298	ND	.01	5	.01	30	ND	ND	4	ND	63	ND	8	41
PS-86 R151	.1	.65	2292	ND	50	ND	.35	.1	19	5	17	5.86	.11	.26	357	3	.01	7	.07	54	ND	ND	19	ND	10	ND	ND	27
PS-86 R152	.1	.77	100	ND	21	ND	.27	1.2	4	13	6	2.26	.07	.35	701	2	.01	ND	.07	74	ND	ND	3	ND	4	ND	ND	129
PS-86 R153	.2	.87	1113	ND	41	ND	.47	.1	4	78	10	2.04	.07	.40	206	4	.01	14	.03	85	ND	ND	12	ND	5	ND	ND	157
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

CLIENT: TOM RICHARDS JOB#: 860530 PROJECT: N/G REPORT: 860530PA DATE: 86/10/17 PAGE 4 OF 7

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
PS-86 F154	.1	.22	79	ND	14	ND	23.67	.1	ND	3	10	1.49	.01	.16	4828	ND	.01	7	.01	6	ND	ND	ND	ND	60	ND	ND	89
PS-86 F155	.1	.14	18	ND	2534	ND	.62	.1	2	15	7	1.67	.06	.03	448	1	.01	5	.01	ND	ND	ND	4	1	81	ND	ND	61
PS-86 F156	.1	.63	28	ND	156	ND	4.83	.1	ND	47	8	1.54	.15	.36	969	ND	.01	2	.02	ND	ND	ND	3	ND	27	8	ND	8
PS-86 F157	.1	.69	610	ND	44	ND	9.66	.1	13	5	16	10.56	.16	5.15	3588	3	.01	4	.01	30	ND	ND	5	ND	418	ND	12	118
PS-86 F158	.1	.30	879	ND	81	ND	.32	.1	3	27	6	2.37	.04	.14	237	21	.01	5	.02	6	ND	ND	39	ND	20	ND	ND	134
PS-86 F159	33.1	.81	106	ND	101	ND	.32	1.1	4	78	25	3.03	.04	.42	397	72	.01	6	.02	59	ND	ND	9	ND	6	ND	ND	116
PS-86 F160	1.7	.63	45	ND	34	ND	.08	.1	3	55	11	1.90	.03	.29	448	37	.01	6	.02	14	ND	ND	7	ND	5	ND	ND	41
PS-86 F161	.2	.22	41	ND	42	ND	.33	.1	3	22	5	2.35	.05	.23	348	4	.01	4	.01	8	ND	ND	4	ND	8	5	ND	29
PS-86 F162	12.1	.24	63	ND	12	ND	.03	.1	6	96	6	1.80	.02	.14	136	540	.01	6	.01	43	ND	ND	9	1	2	ND	ND	14
PS-86 F163	.4	.03	105	ND	254	ND	.02	.1	1	76	4	.60	.01	.02	177	343	.01	2	.01	6	ND	ND	9	1	6	ND	ND	17
PS-86 F164	16.1	.97	86	ND	99	ND	.01	.1	1	49	34	3.48	.03	.65	311	50	.01	5	.03	19	ND	ND	23	ND	2	ND	ND	49
PS-86 F165	2.9	.86	105	ND	107	ND	.02	.1	2	14	28	2.66	.04	.53	301	187	.01	2	.02	25	ND	ND	10	ND	10	ND	ND	29
PS-86 F166	.1	.22	33	ND	65	ND	.04	.1	ND	62	27	.39	.01	.02	52	9	.01	1	.02	6	ND	ND	5	ND	2	ND	ND	4
PS-86 F167	.2	.53	1493	ND	64	ND	.08	.1	6	28	30	1.76	.04	.15	155	62	.01	3	.02	5	ND	ND	94	ND	4	ND	ND	44
PS-86 F168	4.4	.17	4468	ND	31	ND	.02	.1	15	18	28	6.24	.07	.04	45	13	.01	7	.01	18	ND	ND	52	ND	2	ND	ND	61
PS-86 F169	.1	.78	210	ND	55	ND	.52	.1	4	10	7	3.37	.11	.35	622	1	.01	2	.07	5	ND	ND	10	ND	19	ND	ND	188
PS-86 F170	1.1	.17	39345	ND	27	ND	.04	.1	15	20	58	5.01	.05	.05	77	7	.01	9	.01	18	ND	ND	772	ND	3	ND	ND	88
PS-86 F171	3.5	.07	20700	ND	45	ND	.01	.1	ND	71	13	2.90	.04	.01	104	2	.01	5	.01	18	ND	ND	400	ND	2	ND	ND	6
PS-86 F172	2.2	.15	9589	ND	369	ND	.03	.1	1	75	15	1.89	.03	.02	141	39	.01	2	.01	23	ND	ND	143	ND	13	ND	ND	26
PS-86 F173	.8	.36	579	ND	47	ND	1.23	.1	7	43	38	2.40	.09	.57	557	294	.01	5	.02	20	ND	ND	14	ND	33	ND	ND	34
PS-86 F174	4.1	.27	108	ND	64	ND	.12	.2	4	103	23	1.13	.01	.13	158	198	.01	22	.03	15	ND	ND	8	ND	7	ND	ND	22
PS-86 F175	2.5	.06	60	ND	31	ND	.02	.1	ND	46	27	.51	.01	.01	44	37	.01	5	.01	156	ND	ND	7	1	4	ND	ND	5
PS-86 F176	20.5	.01	157	ND	38	ND	.01	.1	ND	89	7	.71	.01	.01	40	143	.01	6	.01	119	ND	ND	11	1	2	ND	ND	3
PS-86 F177	14.8	.01	274	ND	17	ND	.01	.1	ND	31	17	1.05	.01	.01	41	157	.01	3	.01	104	ND	ND	21	1	2	ND	ND	4
PS-86 F178	41.9	.11	53	ND	22	ND	2.04	6.6	1	101	378	.91	.09	.07	411	68	.01	5	.01	663	ND*	ND	6	ND	33	9	ND	126
PS-86 F179	>100	.05	33	ND	10	ND	2.65	36.2	ND	53	347	.46	.07	.03	605	38	.01	2	.01	1738	ND	ND	3	ND	42	5	ND	241
PS-86 F180	14.8	.26	42	ND	35	ND	.10	.7	1	78	76	1.55	.02	.15	221	160	.01	7	.04	125	ND	ND	7	1	4	ND	ND	25
PS-86 F181	3.7	.14	41	ND	24	ND	.31	.4	1	29	130	.62	.01	.16	163	14	.01	5	.01	57	ND	ND	4	1	6	ND	ND	18
PS-86 F182	>100	.03	47	3	4	ND	.10	197.8	2	143	4957	.89	.01	.08	74	45	.01	4	.01	11419	ND	ND	36	2	1	ND	ND	2836
PS-86 F183	19.7	.86	53	ND	23	ND	.07	5.0	7	62	179	1.85	.01	.69	271	176	.01	25	.02	281	ND	ND	10	ND	3	ND	ND	101
PS-86 F184	14.1	.02	39	ND	25	ND	.05	1.9	ND	62	1274	.87	.01	.03	193	28	.01	4	.01	76	ND	ND	19	ND	2	ND	ND	37
PS-86 F185	14.3	.08	77	ND	79	ND	.02	.3	2	157	58	1.46	.01	.04	51	669	.01	6	.03	113	ND	ND	11	1	3	ND	ND	18
PS-86 F186	.5	.54	32	ND	146	ND	.36	.2	2	15	164	1.05	.06	.31	707	35	.01	5	.04	16	ND	ND	5	ND	11	ND	ND	40
PS-86 F187	2.1	.12	29	ND	10	ND	4.12	12.9	1	46	540	.94	.09	.02	364	15	.01	2	.02	322	ND	ND	ND	ND	55	5	ND	171
PS-86 F188	>100	.03	49	ND	11	ND	.10	98.3	1	93	818	1.10	.01	.01	52	16	.01	5	.01	12901	ND	ND	11	1	5	ND	ND	1008
PS-86 F189	12.1	.38	40	ND	21	ND	.04	3.7	2	97	47	.97	.03	.29	167	217	.01	4	.02	523	ND	ND	8	ND	2	3	ND	88
PS-86 F190	4.1	.08	32	ND	9	ND	.02	.4	1	26	224	.50	.01	.08	98	7	.01	4	.01	96	ND	ND	3	ND	1	3	ND	14
TR-86 200	2.5	.35	182	ND	40	ND	.05	.1	2	48	28	2.34	.06	.13	172	52	.01	1	.08	111	ND	ND	9	ND	4	ND	ND	30
TR-86 201	9.1	.10	107	ND	13	ND	.01	.1	2	75	14	1.49	.01	.01	34	128	.01	5	.01	86	ND	ND	9	1	1	ND	ND	25
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

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SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
TR-86 202	4.5	1.33	178	ND	52	ND	.04	.1	14	7	66	4.68	.10	.46	503	153	.01	5	.04	31	ND	ND	10	ND	5	ND	ND	102
TR-86 203	25.8	.33	235	ND	19	ND	.01	2.0	11	15	335	4.26	.08	.17	286	1243	.01	6	.01	1999	ND	ND	44	ND	3	ND	ND	651
TR-86 204	26.1	.24	68	ND	52	ND	.01	.5	2	64	53	1.44	.06	.03	59	229	.01	2	.02	194	ND	ND	11	1	2	ND	ND	80
TR-86 205	2.9	.50	88	ND	40	ND	.05	.1	6	20	15	3.01	.09	.14	273	67	.01	5	.06	82	ND	ND	5	ND	5	ND	ND	36
TR-86 208	.8	.30	45	ND	42	ND	.02	.2	ND	15	11	.87	.08	.05	50	18	.01	ND	.03	61	ND	ND	4	1	2	ND	ND	59
TR-86 209	7.0	.19	24	ND	131	3	.01	.3	ND	46	18	.40	.06	.01	22	202	.01	1	.02	288	ND	ND	11	ND	1	3	ND	122
TR-86 210	.4	.26	31	ND	47	ND	.01	.1	ND	8	7	.85	.07	.02	25	29	.01	ND	.02	66	ND	ND	3	ND	1	ND	ND	17
TR-86 211	.9	.26	115	ND	46	ND	.01	.1	1	16	19	1.81	.06	.03	41	16	.01	ND	.04	33	ND	ND	4	ND	1	ND	ND	21
TR-86 212	4.1	.24	43	ND	42	ND	.01	.1	2	13	9	.63	.06	.02	80	39	.01	ND	.03	142	ND	ND	6	ND	1	ND	ND	57
TR-86 213	1.3	.18	27	ND	42	ND	.04	.5	ND	60	5	2.28	.08	.01	40	21	.01	ND	.01	43	ND	ND	4	ND	3	ND	ND	144
110 TR-86 214	2.9	.19	86	ND	43	ND	.09	.1	2	17	56	1.74	.08	.08	97	42	.01	2	.05	100	ND	ND	6	1	6	3	ND	65
180 TR-86 215	8.1	.05	33	ND	19	ND	.01	.1	ND	93	25	.75	.03	.02	61	17	.01	7	.01	54	ND	ND	3	1	1	ND	ND	18
7320 TR-86 216	91.7	.06	27	9	9	ND	.01	.2	ND	55	11	.73	.02	.01	40	57	.01	ND	.01	170	ND	ND	6	1	1	ND	ND	15
2170 TR-86 217	86.2	.17	31	ND	27	ND	.01	.4	10	119	16	.74	.06	.01	658	186	.01	4	.01	161	ND	ND	9	1	1	3	ND	27
5 TR-86 218	7.4	.07	20	ND	11	ND	.01	.1	ND	25	9	.34	.04	.01	58	16	.01	3	.01	26	ND	ND	ND	ND	1	ND	ND	6
410 TR-86 219	11.3	.08	41	ND	42	ND	.01	.2	1	89	9	.70	.03	.01	100	167	.01	6	.01	68	ND	ND	6	2	1	ND	ND	16
TR-86 220	.8	.15	32	ND	112	ND	.03	.1	ND	54	3	.87	.05	.04	182	12	.01	1	.02	12	ND	ND	ND	ND	3	ND	ND	7
TR-86 221	.3	.06	26	ND	110	ND	.01	.1	ND	154	4	.84	.02	.01	57	6	.01	3	.01	9	ND	ND	ND	ND	1	ND	ND	9
TR-86 222	.2	.07	21	ND	158	ND	.01	.1	ND	24	4	.62	.03	.01	40	3	.01	1	.01	7	ND	ND	ND	1	1	ND	ND	5
TR-86 223	.6	.38	16	ND	122	ND	.45	.2	ND	87	4	.47	.07	.04	285	18	.01	5	.01	10	ND	ND	ND	ND	6	5	ND	24
TR-86 224	2.6	.29	689	ND	33	ND	.05	.1	1	50	48	3.64	.09	.10	166	6	.01	18	.06	1079	ND	ND	86	ND	20	ND	ND	69
TR-86 225	2.2	.96	171	ND	53	ND	1.97	7.6	6	98	55	2.80	.13	.61	1776	9	.01	8	.03	1693	ND	ND	23	ND	54	ND	ND	1334
TR-86 226	13.6	.36	67	ND	75	ND	.10	14.7	2	29	380	1.83	.07	.13	330	6	.01	5	.05	1214	ND	ND	10	ND	5	ND	ND	2308
TR-86 227	34.1	.24	112	ND	49	ND	.04	2.2	1	85	1420	2.29	.05	.11	242	8	.01	6	.03	1865	ND	ND	11	ND	2	ND	ND	519
TR-86 228	2.9	.94	51	ND	65	ND	.05	1.2	6	49	130	2.92	.08	.46	857	5	.01	4	.04	1578	ND	ND	7	ND	3	ND	3	495
300 - TR-86 229	10.3	.74	354	ND	45	ND	.02	.1	3	16	163	8.36	.17	.19	212	47	.01	1	.29	10207	ND	ND	13	ND	46	ND	ND	1061
TR-86 230	10.6	.72	65	ND	28	ND	.13	2.1	9	18	411	3.09	.10	.34	751	19	.01	4	.12	5147	ND	ND	10	ND	10	ND	3	740
TR-86 231	2.6	.21	83	ND	15	ND	.16	.3	3	63	26	2.27	.10	.12	139	37	.01	4	.09	248	ND	ND	4	ND	5	ND	ND	105
TR-86 232	6.6	.16	29	ND	194	ND	.01	.1	ND	39	6	.59	.04	.01	39	60	.01	1	.02	77	ND	ND	ND	ND	6	ND	ND	21
700 - TR-86 233	20.5	.20	80	ND	358	ND	.01	.1	ND	16	7	.98	.06	.01	31	383	.01	3	.02	64	ND	ND	6	ND	7	ND	ND	22
TR-86 234	3.3	.20	35	ND	63	ND	.01	.1	ND	36	2	.58	.05	.01	21	72	.01	1	.02	29	ND	ND	3	ND	4	ND	ND	9
TR-86 235	6.8	.24	126	ND	164	ND	.04	.1	2	61	11	1.78	.06	.11	139	586	.01	4	.04	246	ND	ND	16	ND	9	ND	ND	38
TR-86 236	.5	.45	63	ND	67	ND	.26	.1	2	52	4	1.60	.11	.06	66	27	.01	1	.20	21	ND	ND	3	ND	9	ND	ND	36
TR-86 237	1.3	.30	27	ND	33	ND	.05	.2	ND	11	23	.53	.10	.02	44	22	.94	1	.03	25	ND	ND	3	ND	2	4	ND	33
TR-86 238	.5	.24	55	ND	406	ND	.02	.1	ND	47	7	1.27	.07	.03	79	26	.01	4	.04	33	ND	ND	4	ND	7	ND	ND	22
TR-86 239	1.7	.36	22	ND	88	ND	.02	.1	ND	45	4	1.31	.05	.12	194	54	.01	1	.04	39	ND	ND	4	ND	3	ND	ND	22
TR-86 240	1.2	.01	19	ND	7	ND	.01	.1	ND	144	5	.31	.01	.01	46	6	.01	5	.01	13	ND	ND	ND	1	1	ND	ND	6
340 - TR-86 241	1.4	.35	81	ND	67	ND	.15	.1	1	18	10	2.25	.08	.05	81	11	.01	4	.12	20	ND	ND	4	ND	7	ND	ND	36
TR-86 242	3.3	.01	19	ND	4	ND	.01	.1	ND	87	3	.35	.01	.01	38	6	.01	3	.01	5	ND	ND	ND	1	ND	ND	ND	4
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
TR-86 243	2.1	.27	94	ND	61	3	.04	.2	1	41	12	1.06	.05	.06	98	28	.01	9	.03	29	ND	ND	5	1	6	3	ND	16
TR-86 244	3.4	.08	72	ND	41	ND	.01	.1	ND	118	4	.76	.04	.01	42	10	.01	6	.01	25	ND	ND	4	1	15	ND	ND	6
TR-86 245	3.4	.29	62	ND	67	3	.02	.1	1	24	13	1.21	.03	.12	187	7	.01	5	.03	14	ND	ND	4	1	3	ND	ND	38
TR-86 246	2.1	.17	27	ND	10	4	.01	.3	ND	53	3	.26	.02	.01	34	3	.01	5	.01	7	ND	ND	ND	1	ND	ND	ND	13
550- TR-86 247	39.2	.63	38	ND	184	ND	.12	.5	ND	27	4	2.22	.07	.24	213	82	.01	3	.11	61	ND	ND	6	ND	9	3	ND	29
TR-86 248	3.5	.32	33	ND	189	ND	.04	.1	ND	89	4	1.35	.08	.07	90	95	.01	4	.04	20	ND	ND	4	1	6	4	ND	25
TR-86 249	2.7	.25	24	ND	131	ND	.05	.4	ND	15	2	.79	.07	.03	60	75	.01	3	.04	10	ND	ND	3	1	6	ND	ND	19
TR-86 250	1.1	.44	58	ND	106	ND	.08	.1	ND	34	4	2.79	.08	.11	121	105	.01	3	.15	33	ND	ND	4	ND	7	5	ND	19
755- TR-86 251	9.1	.44	37	ND	140	ND	.13	.1	ND	39	4	1.45	.08	.12	161	62	.01	3	.08	23	ND	ND	5	1	8	4	ND	22
TR-86 252	9.3	.32	35	ND	45	ND	.08	.4	1	72	4	1.33	.05	.06	131	272	.01	3	.06	46	ND	ND	6	1	4	3	ND	26
TR-86 253	1.8	.25	39	ND	71	ND	.08	.1	1	17	5	1.56	.08	.02	49	135	.01	3	.10	23	ND	ND	4	ND	4	ND	ND	9
TR-86 254	2.7	.26	66	ND	229	ND	.06	.1	ND	33	7	2.09	.08	.02	56	66	.01	2	.12	150	ND	ND	5	ND	18	ND	ND	15
TR-86 255	1.2	.14	121	ND	141	3	.08	.1	1	62	5	2.08	.06	.03	72	143	.01	2	.07	188	ND	ND	8	1	14	ND	ND	12
TR-86 256	3.9	.27	25	ND	282	3	.08	.3	2	116	15	1.26	.06	.11	338	103	.01	6	.05	65	ND	ND	5	1	10	ND	ND	37
TR-86 257	5.4	.12	40	ND	48	4	.05	.1	2	29	5	1.85	.06	.02	73	700	.01	3	.05	1582	ND	ND	27	1	7	ND	ND	9
TR-86 258	.8	.08	107	ND	38	3	.05	.1	2	73	5	1.88	.04	.04	71	52	.01	7	.04	57	ND	ND	ND	1	4	3	ND	6
TR-86 259	.3	1.04	8	ND	41	5	.08	.3	3	45	22	1.72	.07	.77	562	11	.01	6	.03	22	ND	ND	3	ND	5	4	ND	71
TR-86 260	.6	.64	8	ND	211	3	.10	.2	4	81	17	2.20	.11	.22	355	36	.01	5	.10	22	ND	ND	3	ND	7	5	ND	58
TR-86 261	4.6	.16	29	ND	62	3	.01	.1	1	17	5	1.25	.07	.02	33	203	.01	4	.01	148	ND	ND	5	2	5	ND	ND	7
TR-86 262	6.9	.06	133	ND	79	ND	.01	.1	ND	42	4	2.22	.10	.01	23	168	.01	4	.01	223	ND	ND	7	2	6	3	ND	2
TR-86 263	1.7	.20	21	ND	59	ND	.05	.2	1	26	9	1.92	.10	.07	66	91	.01	24	.03	47	ND	ND	3	ND	12	4	ND	8
TR-86 282	.1	1.18	29	ND	65	ND	.76	.1	19	22	103	5.70	.16	.89	2381	4	.01	13	.06	10	ND	ND	6	ND	30	6	5	150
TR-86 283	.1	2.20	346	ND	70	ND	.40	.1	27	12	183	9.44	.17	1.20	3110	7	.01	14	.08	13	ND	ND	19	ND	17	5	10	227
TR-86 284	.4	1.16	1120	ND	40	ND	.22	.1	24	14	123	5.91	.13	.51	2482	6	.01	11	.06	11	ND	ND	53	ND	10	3	ND	151
TR-86 285	1.3	.61	1339	ND	87	ND	.10	.1	21	14	112	5.02	.13	.12	1533	67	.01	7	.05	11	ND	ND	68	ND	7	7	ND	122
650- TR-86 286	7.4	.34	7732	ND	42	ND	.02	.1	12	12	46	5.20	.11	.05	141	73	.01	7	.01	19	ND	ND	133	ND	2	ND	ND	62
715- TR-86 287	19.3	.30	3788	ND	30	ND	.01	.1	15	26	67	5.99	.11	.04	57	16	.01	9	.02	18	ND	ND	76	ND	1	ND	ND	48
190- TR-86 288	16.2	.51	3119	ND	38	ND	.03	.1	13	12	121	6.00	.11	.06	70	42	.01	6	.06	12	ND	ND	104	ND	1	ND	ND	62
210- TR-86 289	5.6	.55	3692	ND	52	ND	.03	.1	10	19	69	4.80	.11	.06	61	23	.01	4	.03	10	ND	ND	82	ND	2	ND	ND	47
220- TR-86 290	1.5	.28	3162	ND	38	ND	.01	.1	5	11	19	3.37	.08	.04	47	4	.01	5	.01	14	ND	ND	57	ND	1	ND	ND	26
TR-86 291	.5	.38	788	ND	33	ND	.01	.1	6	9	30	5.94	.11	.03	251	13	.01	3	.07	8	ND	ND	20	ND	2	ND	3	73
TR-86 292	.3	.77	168	ND	35	ND	.03	.1	3	7	35	6.45	.13	.12	220	7	.01	3	.12	8	ND	ND	9	ND	1	5	3	68
TR-86 293	.1	.71	416	ND	22	ND	.01	.1	4	11	91	10.64	.16	.12	387	19	.01	1	.10	6	ND	ND	19	ND	ND	4	4	80
TR-86 305	3.7	.34	38	ND	42	ND	.02	.6	3	9	29	2.50	.14	.16	129	266	.01	6	.04	94	ND	ND	8	ND	8	8	ND	61
TR-86 306	2.4	.34	36	ND	45	ND	.06	.1	4	32	21	2.75	.13	.19	155	181	.01	6	.07	47	ND	ND	6	1	11	11	ND	24
TR-86 307	.1	.70	1579	ND	369	ND	.20	.1	55	9	40	11.85	.19	.27	7726	8	.01	21	.05	55	ND	ND	124	ND	10	6	4	455
TR-86 308	1.5	.25	9544	ND	61	ND	.05	.1	22	13	13	5.62	.10	.05	323	10	.01	10	.01	28	ND	ND	2038	ND	8	ND	ND	122
TR-86 309	.4	.07	9631	ND	36	ND	.03	.1	28	74	15	5.73	.10	.02	122	8	.01	15	.01	27	ND	ND	9935	ND	2	ND	ND	80
TR-86 310	2.5	.07	10300	ND	110	ND	.07	.1	18	75	8	4.94	.10	.03	116	11	.01	9	.01	34	ND	ND	2425	ND	6	ND	ND	116
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

SAMPLE NAME	AG PPM	AL %	AS PPM	AU PPM	BA PPM	BI PPM	CA %	CD PPM	CO PPM	CR PPM	CU PPM	FE %	K %	MG %	MN PPM	MO PPM	NA %	NI PPM	P %	PB PPM	PD PPM	PT PPM	SB PPM	SN PPM	SR PPM	U PPM	W PPM	ZN PPM
TR-86 311	2.4	.10	14366	ND	36	ND	.03	43.1	32	70	13	5.78	.09	.02	75	10	.01	15	.01	21	ND	ND	1334	ND	4	ND	ND	77
TR-86 312A	.6	.14	7938	ND	83	ND	.04	22.3	10	93	53	2.63	.04	.03	109	3	.01	8	.01	5	ND	ND	173	ND	5	ND	ND	50
TR-86 312B	.4	.14	8262	ND	15	ND	.02	22.9	29	176	12	4.95	.07	.02	52	6	.01	14	.01	27	ND	ND	15564	ND	1	ND	ND	62
TR-86 313	.6	.12	9512	ND	17	ND	.02	24.7	30	113	10	5.02	.08	.02	52	6	.01	18	.01	29	ND	ND	17534	1	1	ND	ND	60
TR-86 314	1.0	.16	18351	ND	47	ND	.02	50.4	16	150	96	4.85	.08	.03	63	4	.01	8	.01	6	ND	ND	994	ND	4	ND	ND	68
TR-86 315	.1	.66	1278	ND	197	ND	.25	3.1	31	14	176	9.69	.23	.21	5016	1	.01	12	.08	20	ND	ND	254	ND	8	4	ND	233
WW-1	.1	1.04	239	ND	97	4	.20	.9	8	14	15	4.11	.15	.39	951	9	.01	3	.18	99	ND	ND	81	ND	14	5	ND	222
WW-2	.4	1.07	133	ND	97	5	.13	.1	6	9	18	4.13	.14	.41	817	7	.01	3	.16	329	ND	ND	39	ND	10	5	ND	345
WW-3	.1	1.80	60	ND	95	4	.42	2.8	8	28	46	3.57	.16	.85	1620	2	.01	5	.19	419	ND	ND	22	ND	21	4	3	613
WW-4	.4	1.67	89	ND	69	ND	.33	.2	14	14	21	3.87	.16	.60	1243	3	.01	6	.21	31	ND	ND	12	ND	11	5	ND	104
WW-5	1.1	.76	132	ND	82	ND	.14	.1	5	21	10	4.10	.14	.18	356	8	.01	1	.21	23	ND	ND	15	ND	9	9	ND	44
WW-6	.9	.74	104	ND	64	ND	.28	.1	10	10	10	3.44	.15	.27	1066	11	.01	4	.18	22	ND	ND	8	ND	15	6	ND	52
WW-7	1.2	.58	145	ND	70	3	.08	.1	2	42	15	3.41	.12	.13	175	23	.01	2	.17	135	ND	ND	10	ND	11	6	ND	25
WW-8	8.6	.43	2420	ND	52	3	.06	4.8	11	23	53	3.68	.11	.07	77	17	.01	5	.03	14	ND	ND	61	ND	4	3	ND	59
WW-9	.1	.74	977	ND	37	ND	.19	1.5	13	23	24	7.72	.16	.28	1435	20	.01	4	.04	2	ND	ND	28	ND	6	ND	ND	61
WW-15	.2	1.09	548	ND	59	ND	.05	.6	3	7	27	4.04	.08	.37	315	10	.01	5	.11	23	ND	ND	9	ND	71	ND	ND	149
WW-18	.8	.19	61	ND	30	ND	.75	.1	9	55	672	1.52	.09	.03	664	29	.01	4	.02	7	ND	ND	6	ND	7	3	ND	18
WW-19	.1	.50	43	ND	18	ND	.04	.2	ND	26	26	.72	.05	.12	218	2	.01	1	.01	5	ND	ND	6	ND	2	ND	ND	8
WW-24	.1	1.46	61	ND	124	ND	.13	.1	13	12	55	4.51	.12	.39	1329	ND	.01	5	.04	14	ND	ND	5	ND	7	ND	ND	73
WW-25	.1	2.77	258	ND	116	ND	.15	.1	13	14	87	7.68	.14	1.21	2239	ND	.01	6	.08	16	ND	ND	19	ND	8	ND	ND	132
WW-26	.1	2.71	3	ND	27	ND	7.83	.5	7	9	13	3.33	.06	3.38	1443	ND	.01	19	.07	5	ND	ND	ND	ND	75	ND	5	124
WW-28	3.8	.46	851	ND	22	ND	.24	.3	ND	19	18	6.29	.11	.14	133	42	.01	6	.03	26	ND	ND	28	ND	3	ND	ND	21
1100E 2755 WW19	.1	1.44	193	ND	105	ND	.17	.4	8	18	28	3.59	.10	.43	994	3	.01	5	.06	72	ND	ND	5	ND	10	ND	4	150
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

CERTIFICATE OF THE ISSUER

Dated: May 1, 1987

The foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Prospectus as required by the Securities Act and its regulations.

ALPINE EXPLORATION CORPORATION

Willis W. Osborne, Promoter & Chief Executive Officer

Frederick J. Brooks-Hill, Chief Financial Officer

On behalf of the Board of Directors:

Carol A. Gadison, Director

Michael F. Bolton, Director

CERTIFICATE OF THE AGENTS

Dated: May 1, 1987

To the best of our knowledge, information and belief, the foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Prospectus as required by the Securities Act and its regulations.

CONTINENTAL CARLISLE DOUGLAS

Per:

C.M. OLIVER & COMPANY LIMITED

Per:

GEORGIA PACIFIC SECURITIES CORPORATION

Per:

McDERMID ST. LAWRENCE LIMITED

Per:

The following includes the name of every person or company having an interest, either directly or indirectly, to the extent of not less than 5% in the capital of:

Continental Carlisle Douglas: Angus I. MacPhail, G. Robert Fay, D. Grant Macdonald, and J. Arthur Charpentier.

C.M. Oliver & Company Limited: Eagletree Estates Ltd. (controlled by Robert A. Chilcott), Robert A. Chilcott, R.P.C. Holdings Ltd. (controlled by R. Page Chilcott), Leon Lotter and Sperrin Enterprises Ltd. (controlled by T.J.L. McKinney).

Georgia Pacific Securities Corporation: R.B.A. Investments Ltd. (wholly owned by R. Brian Ashton); KWS Investment Co. Ltd. (wholly owned by K.C. Kam); Duggan Securities Ltd. (controlled by Dean Duggan); Pacific High Management Inc. (wholly owned by Larry Martin); and Jusco Investments Ltd. (wholly owned by Colin Chow).

McDermid St. Lawrence Limited: J. Lawrence Goad, Warring P. Clarke, Keith N. Aune, Robert L. Harrison, Robert J. Rose, James A. Tartaglio, John A. Wheeler, Wayne H.W. Latta, Leonard D. Fiessel.