Part II

TERRAIN ANALYSIS AND STRUCTURAL LINEAMENTS ON AFTOM 5, 6, 7, 10, 11, 13, and 20 CLAIMS

SKEENA MINING DIVISION
NTS 104B/9W
and 104B/10E

LATITUDE 56 38' N
LONGITUDE 130 24'W

for

TAGISH RESOURCES LIMITED

BY

TED H.F. REIMCHEN

PEGASUS EARTH SENSING CORPORATION
4761 Cove Cliff Road
North Vancouver, B.C.

SEPTEMBER 20, 1991

TABLE OF CONTENTS

LIST OF FIGURES

Introduction

A Structural and Terrain Analysis of this area was requested by Tagish Resources Ltd. This aerial photography interpretation (Part II), located in NTS sheet 104B is part of a more comprehensive geological study performed by Cambria Geological Limited (Part I).

LINEAMENTS

Glacial:

Glacial lineaments have not been plotted on the maps because of their great number and thus confusing directions. Deglaciation has revealed numerous crag and tails, drumlinized ridges and just plain steep sided ridges caused by differential erosion of varying hardness in rock types. In alpine valleys where glaciers exist, one can observe local flow directions parallel to the valley but on the tops of the adjacent mountains, glacial flow directions reflect regional movements. Suffice to say Regional Glacial Flow Directions are from north to south and east to west.

> ***Basal ice flow directions differ by 50 to 60 degrees from the regional flow and in the case of alpine glaciers still resident in cirques--by as much as 180 degrees. If mineralized glacial float is found it will be necessary to field map the local morainal fabric to pinpoint the source.***

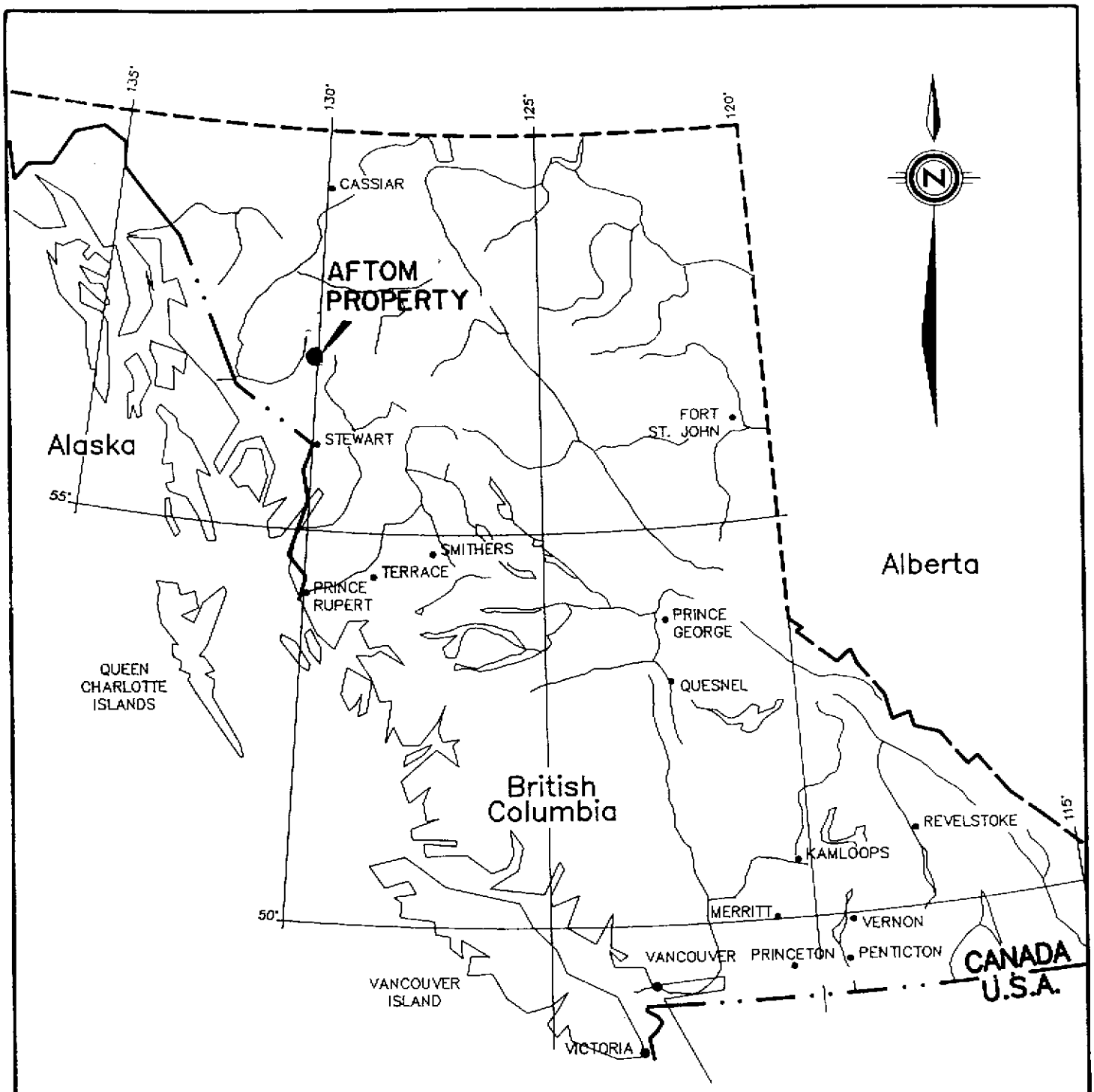
Glacial Ice remaining from the Neo-Glacial Ice Age (3500 years B.P.) is still resident in some of the cirques. In most localities the ice exceeds 100 meters in thickness.

Structural:

Structural lineaments have been integrated with the 1:50,000 scale geological map supplied (Figure 2). Many of these lineaments are faults; some are fractures and still others appear to parallel the strike of stratified rocks.

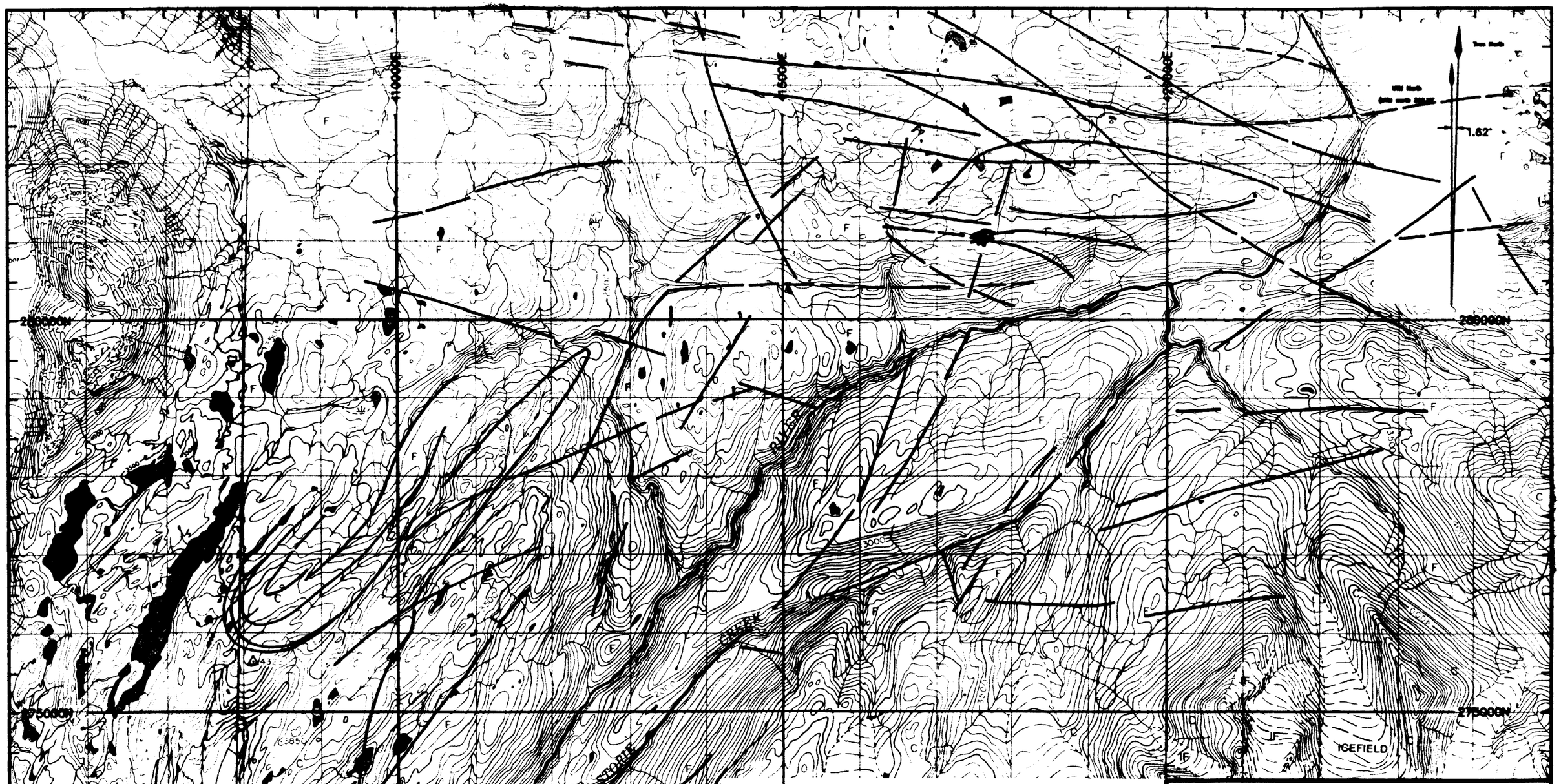
A prominent structure in the area is the tightly folded 'Tom MacKay' syncline and the northeast plunging asymetric anticline. These folded structures appear to lie on the left limb of a much larger Unuk River syncline.

The northeast faulted asymetric anticline closes near MacKay Creek. Two prominent east-north-east cross faults



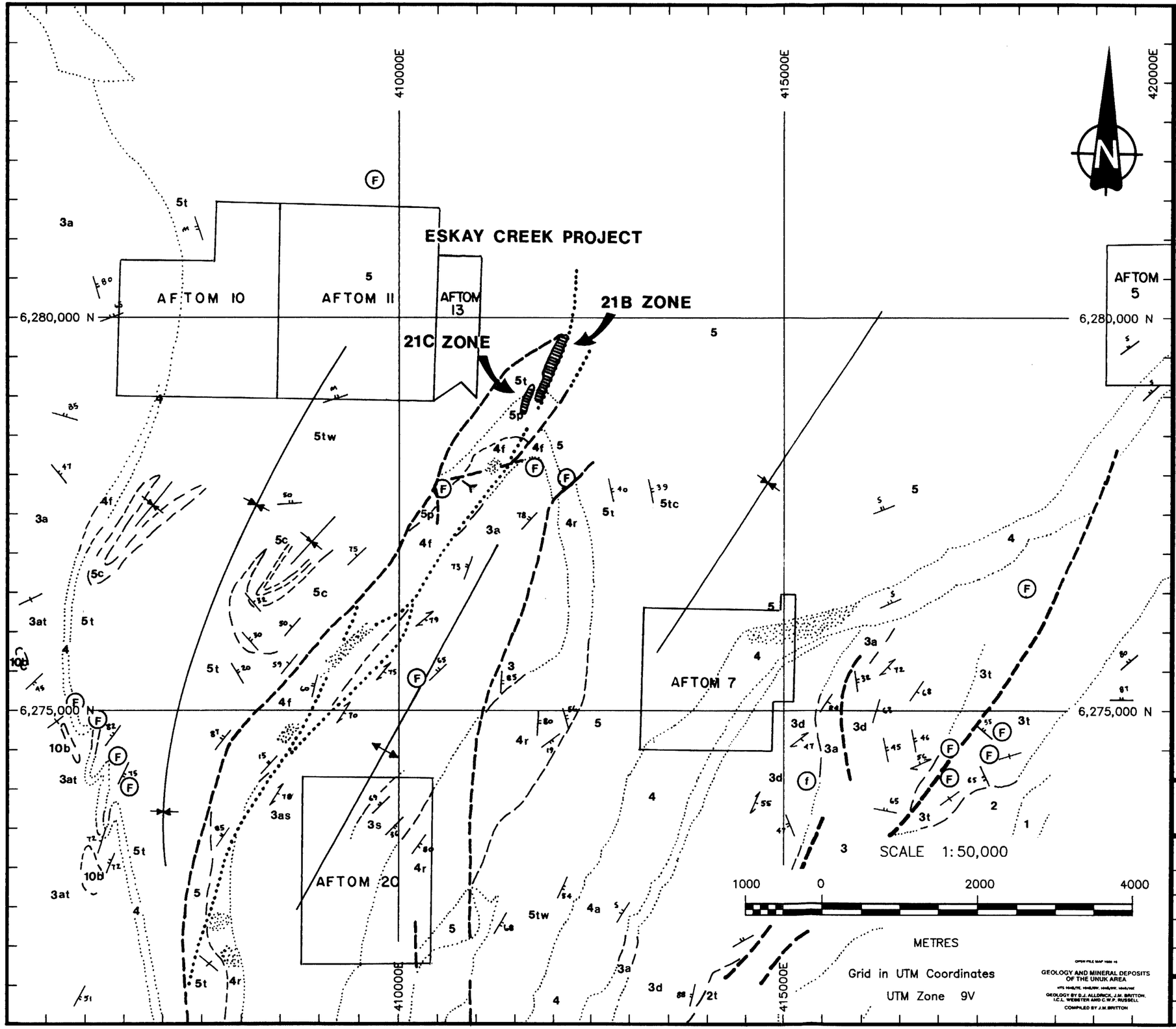
TAGISH RESOURCES LTD.

Report by: KH/PM	AFTOM PROPERTY Location Map
Date: NOV. 1991	
NTS: 1048 /9W	
Mining Division: Skeena	Fig. 1



TAGISH RESOURCES LTD.

Report by: T.H.F.R.	AFTOM PROPERTY
Date: Nov. 1991	Structural Lineaments
NTS: 104B/9W	
Mining Division Skeena, Liard	PEGASUS EARTH SENSING CORP.
	Map: 2



LEGEND

VOLCANIC AND SEDIMENTARY ROCKS

TRIASSIC TO JURASSIC
HAZELTON GROUP

MIDDLE JURASSIC (TOARCIAN TO BAJOCIAN)

5 SILTSTONE SEQUENCE (Salmon River Formation):
- 5c Chert pebble conglomerate and arenite
- 5t Rhythmically bedded siltstone and shale (turbidite)
- 5w Thinly bedded wacke
- 5p Andesitic pillow lavas and pillow breccias with minor siltstone interbeds

LOWER JURASSIC (TOARCIAN)

4 FELSIC VOLCANICS SEQUENCE (Mount Dilworth Formation):
- 4a Variably bedded airfall tuffs
- 4f Massive felsic tuff
- 4r Black and white, carbonaceous felsic volcanics; locally flow banded and autobrecciated

LOWER JURASSIC (PLIENSBACHIAN TO TOARCIAN)

3 PYROCLASTIC EPICLASTIC SEQUENCE (Betty Creek Formation):
- 3a Green and grey, massive to poorly bedded andesite
- 3d Grey, green and purple dacitic tuff, lapilli tuff, crystal and lithic, massive to well bedded; feldspar phyric
- 3t Black, thinly bedded siltstone, shale and argillite (turbidite)

UPPER TRIASSIC TO LOWER JURASSIC (NORIAN TO SINEMURIAN)

2 ANDESITE SEQUENCE (Unuk River Formation):
- 2a Grey and green, plagioclase + hornblende porphyritic andesite; massive to poorly bedded
- 2s Grey, brown and green thinly bedded, tuffaceous siltstone and fine grained wacke
- 2t Black, thinly laminated siltstone (turbidite); shale argillite

TRIASSIC
STUHINI GROUP

UPPER TRIASSIC (CARNIAN TO NORIAN)

1 LOWER VOLCANIC-SEDIMENTARY SEQUENCE
- 1w Brown and grey, fine grained tuffaceous wacke; minor siltstone or conglomerate
- 1a Green, fine-grained, andesitic ash tuff; feldspar and hornblende phyric
- 1p Grey and green, andesitic breccia with augite-hornblende-plagioclase clasts and augite-rich matrix

INTRUSIVE ROCKS

10 STH TO POST-VOLCANIC INTRUSIONS:
- 10b Barb Lake Dyke: fine to medium-grained hornblende diorite

SYMBOLS

- Geological boundary (defined, approximate, assumed)
- Bedding, tops known (horizontal, inclined, vertical, overturned)
- Bedding, tops unknown (horizontal, inclined, vertical)
- Bedding, estimated dip (gentle, moderate, steep)
- Compositional layering in metamorphosed rocks: foliation (inclined, vertical)
- Regional anticline; syncline
- Antiform, synform (normal, overturned)
- Fault (defined, assumed; D=downthrown side)
- Air photo lineament
- Fossil locality
- Flume
- Adit
- Disseminated pyrite in felsic volcanics

TAGISH RESOURCES LTD.

Report by: KH, PM
Date: Nov. 1991
NTS: 104B/9W
Mining Division: Skeena

AFTOM PROPERTY
Regional Geology Map

Fig. 2a

further cut this asymetric anticline. The most southern one appears to stop at the northeasterly trending Eskay Creek 'fold-fault?' (about 400 m. west of Eskay Creek). The north one trends northeast across Eskay Creek to the Unuk River. The Eskay Creek 'fault-fold' structure continues northward veering off to the northeast and seems to form the western limb of a much larger syncline.

Major faults in the Argillite Creek area strike north-northeast. East-north-east trending cross-faults cut these major structures. The same can not be said in the area underlain by the Aftom 1-4 claims. In this area major faulting (lineaments) are essentially ESE - WNW with 'minor?' northwest trending structures.

An interesting series of normal and probably high angle reverse faults combined with the muchly fractured nose of a fold structure (the Unuk River Syncline??) are present just north of the Afton 14 and 15 Claims. This area seems to contain a later deformation of east-west folding as the 'faulting' cuts across the northeast trending syncline? of the Unuk River.

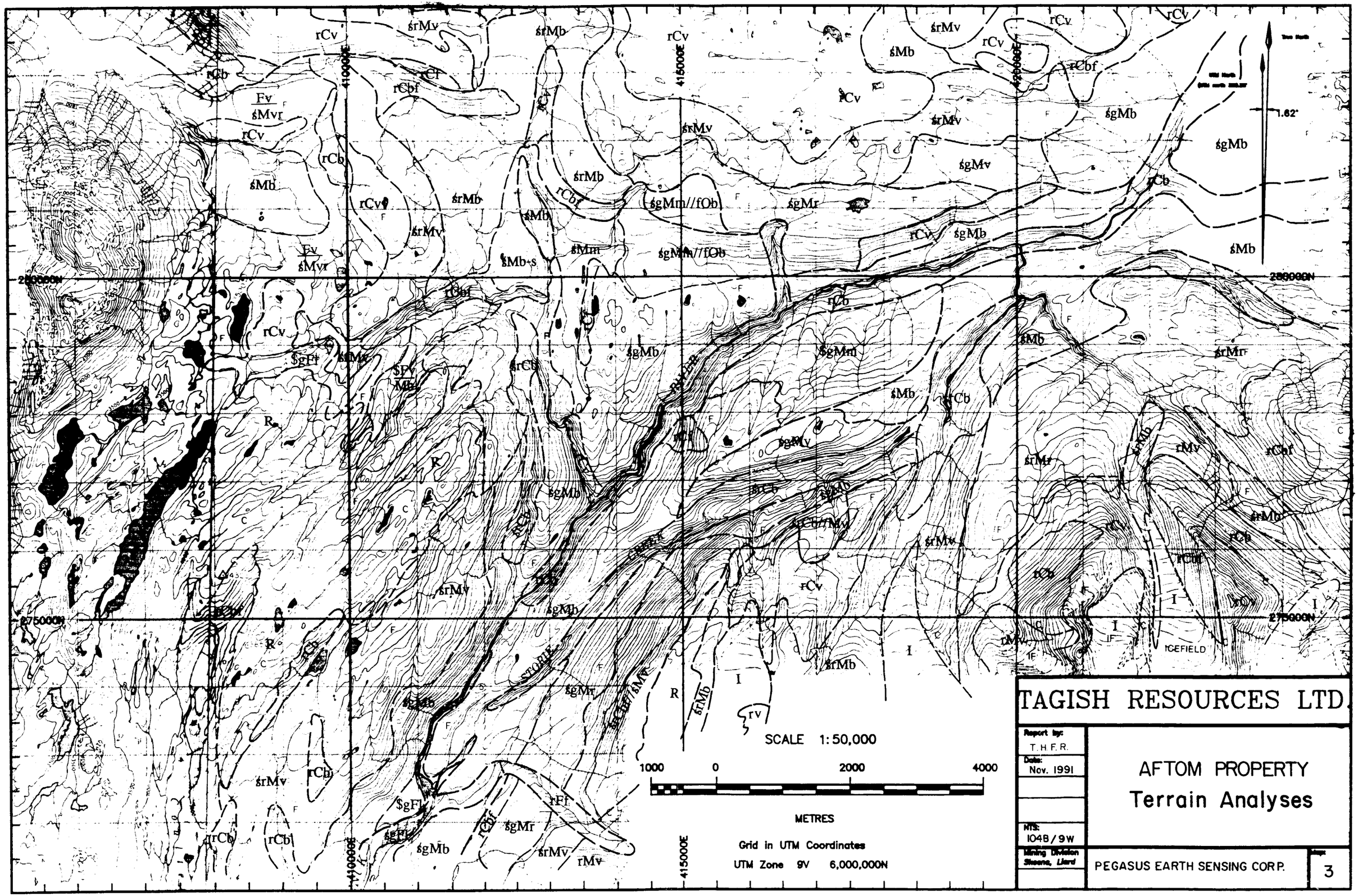
SURFICIAL GEOLOGY

The area can be described as having classical alpine glacial geology. Cirque glaciers that have accumulated in U-shaped depressions, are moving downslope virtually in all directions of the compass. Unlike most glaciers on the earth today, these have been melting very slowly as the ice surface in the height of summer still has Neve' or Firn-(compact granular material older than one summer melt season and transitional in textrure and density between snow and glacier ice).

Ice directions plotted on photographs show the general trend of the valley glaciers. Glacial erosion (mainly north to south and east to west) has eroded the landscape into a variety of landforms ranging from steep ridges to rolling plains (Figure 3).

Experience has shown that local movement can vary as much as 180 degrees off the regional movement. The reason for this is that bedrock topography diverts the basal ice around obstacles. Since the ice behaves as a somewhat plastic medium it may continue on in the diverted direction (with its bed load of till), often for a few hundred meters before stopping or changing course. Changing basal ice directions can be observed around the bedrock highs and near the tops of the mountains.

Upon deglaciation glacial ice melted first from hills and mountains below the regional snow line. Differing hardness in rock types has caused an aburpt change in morphology.



TAGISH RESOURCES LTD.

Report by: T.H.F.R.	AFTOM PROPERTY
Date: Nov. 1991	Terrain Analyses
NTS: 104B/9W	
Mining Division Skeena, Liard	PEGASUS EARTH SENSING CORP.
	Figure 3

Texture

f fibrous (woody)
g gravelly pebbles to boulders, sub-to well rounded
m mesic (grassy) organic material in advance stage of decomposition.
r rubbly (angular)
c clayey
ǂ silty
s sandy, with minor silt, less than 2mm.

Genetic Unit

C colluvium
F fluvial(includes local alluvium and glaciofluvial)
I ice and neve'
M moraine (till)
O organic
R residual and outcrop

Modifying Features

-A avalanched snow and rock, process is active
-E surface crossed by a series of channels, process is inactive
-S area affected by seepage, process is active

Thickness

v veneer, less than 1.5 meters in thickness
b blanket, more than 1.5 meters, obscures underlying topography

Morphology

d delta,
f fan, upslope derivation
h hummocky
l level, as in creek floodplain
m rolling but not wave-like
t terraced
r ridged

Lineations

Glacial
- unknown
- known
- meltwater channels

Stratigraphy

sgFv/Mb--a sandy gravelly Fluvial veneer overlying a Morainal blanket.

LEGEND
FIG. 3a

Thus, landforms developed on the sedimentary Salmon River Formation and the felsic volcanic sequence of the Mount Dilworth Formation, tend to range from smooth to gently rolling. Landforms developed on the pyroclastic Betty Creek Formation are drumlinized and with minor crag and tail features* (*a landform consisting of a bedrock knob and an elongate morainal deposit extending from the lee side parallel to the direction of glacial flow). Rocks belonging to the andesitic Unuk River Formation are irregular crags with minor tails of debris.

The terrain analyses are comprised of six major units. A modified terrain analyses legend was developed for this area and is briefly described.

LEGEND

C **COLLUVIUM:** consists of angular rock rubble and debris; usually found on the tops of mountains and the sides of steep slopes as a veneer overlying bedrock. Colluvium is always derived from materials directly upslope. Will look very similar to local till in the alpine zone but usually can be distinguished by the clast and matrix angularity. In this area, talus slopes and rock falls are classified as colluvium.

F **FLUVIAL:** consists of silty to sandy gravels washed out from glaciers and glacial moraines, range from well sorted to poorly sorted, depending on the proximity of the ice front.

I **ICE and NEVE':** Consists of snow and ice where evidence of active glacier movements and deglaciation is present. Features such as drift filled crevasses, icefalls, ogives, and lateral moraines are usually present.

M **MORAINAL-till:** consists of a heterogenous assortment of silt to boulders (both rounded and angular), moved and deposited by glacial ice; exists with crude stratification in the major valleys. **The differing hardness of the rock formations has caused gouging and scraping of the less resistant units. As a result swales tend to be wetter receiving seepage from the adjacent ridges (sMb-S).** Organic materials both mesic and fibric will collect in these locales.

In the lower portions of cirque basins and in the upper reaches of small tributary valleys, moraine will consist of silty rubble with very little rounding of the clasts. In fact,

s sandy, with minor silt, washed, less than 2mm.
s silty,

Stratigraphy

sMb a blanket of sandy moraine greater than 1.5 meters
R overlying residual or bare rock

rCv//Mb a surface that is 2/3 rubbly colluvial veneer and 1/3 covered by a blanket of moraine.

LINEARS

Some of the linears are plotted on the aerial photograhs but because of their numbers have not been plotted on the accompanying maps. Local ice movements can only be determined with accuracy from field measurements.

Structural lineaments have been plotted as definite_____ or assumed------- on Figure 2.

SINCERELY,

T.H.F.REIMCHEN, P.Geol. (Alberta, 1972)

PROFESSIONAL GEOLOGIST ALBERTA T. REIMCHEN

CERTIFICATE

I, TED. H.F. REIMCHEN OF 4761 COVE CLIFF ROAD, North Vancouver, in the Province of British Columbia, Canada, DO HERBY CERTIFY:

1. THAT I am a Professional Geologist with an office at the above address.

2. THAT I am a graduate of the University of Alberta located at Edmonton, Alberta where I obtained a BSc. and MSc. Degree in Geology in 1966 and 1968 respectively.

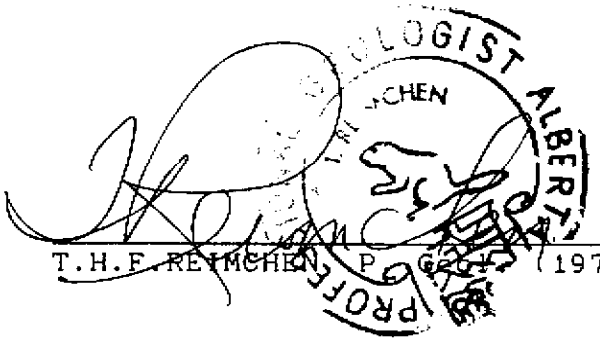
3. THAT I have been practicing my profession as a Professional consulting geologist in the Province of British Columbia, since 1972.

4. THAT I am a registered Professional Geologist in the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1972.

5. THAT I have personally prepared the terrain analyses and structural lineament interpretation for TAGISH RESOURCES LTD. of the Eskay Creek Area in NTS Sheet 104B in September, 1991.

6. THAT I have no direct, indirect or contingent interest in any of the claims or leases for this area or in any securities or common stock issued by Tagish Resources Ltd.

Dated this 20 day of September, 1991, at the City of Vancouver in the Province of British Columbia.



T.H.F. REIMCHEN, P.Geol. (1972, Alta.)

PEGASUS
earth sensing
corporation

4761 COVE CLIFF ROAD
NORTH VANCOUVER, BRITISH COLUMBIA
CANADA V7G 1M8
TELEPHONE: (604) 929-0244
FACSIMILE: (604) 929-7231

STATEMENT OF COSTS

CAMBRIA GEOLOGICAL Ltd
1531 West Pender St.
Vancouver, B.C.,
Canada, V6G 2T1

Attn. Paul McGuigan September 20, 1991

Billing FOR
Aerial Photographic interpretation of the terrain analyses and structural lineament interpretation in the Eskay Area (104B) for Tagish Resources Ltd., in British Columbia.

PROFESSIONAL SERVICES:

Principal:.....27 hours @ $75.00.....$2025.00

GST.....141.75

TOTAL.....$2166.75

GST Registration R122934417

(INCLUDED AS PART OF STATEMENT OF EXPENDITURES PART I)