

PART II

GEOCHEMICAL REPORT:

Geochemistry of Stream Sediments from High Energy Depositional Sites on the Tag West and Tag East Claim Groups, Eskay Creek Area, BC

**Tag West
Claim Group**

Claims: Aftom #20, P-Mac #1 to #10, Fred 15, Noot 1 to 4, Sto 1 to 2,
Polo 7 to 8, Megan 1 to 2, Rambo 1, Rambo 3, Rambo 5,
Fog 1 to 6, Link Fr.

Latitude: 56° 32' 15"N to 56° 36' 30"N

Longitude: 130° 11' W to 130° 33' W

**Tag East
Claim Group**

Claims: Aftom # 7, Aftom # 9, Aftom # 14 to # 19, Calvin, Polo13,
Lance 3 to 4, Bell 1 to 8, Irving 1 to 4

Latitude: 56°36'15"N to 56°39'00"N

Longitude: 130°14'15"W to 130°27'00"W

**Mining
Division:**

Skeena, MD

NTS:

104 B 09W, 10E
104 B 058, 059, 068, 069

Owners:

Registered Owners of Claims: Court Bailiff, Heritage American Resource Corp.,
Watershed Resources Ltd.

Operator:

St. Andrews Goldfields Ltd.

Date:

December 18, 2001

Authors:

Paul McGuigan, P. Geo., Tecucomp Geological Inc.

W. R. Gilmour, P. Geo., Discovery Consultants

Suite 101 – 1338 West 6th Avenue,
Vancouver, BC V6H 1A7
Canada

LEGEND

SYMBOLS

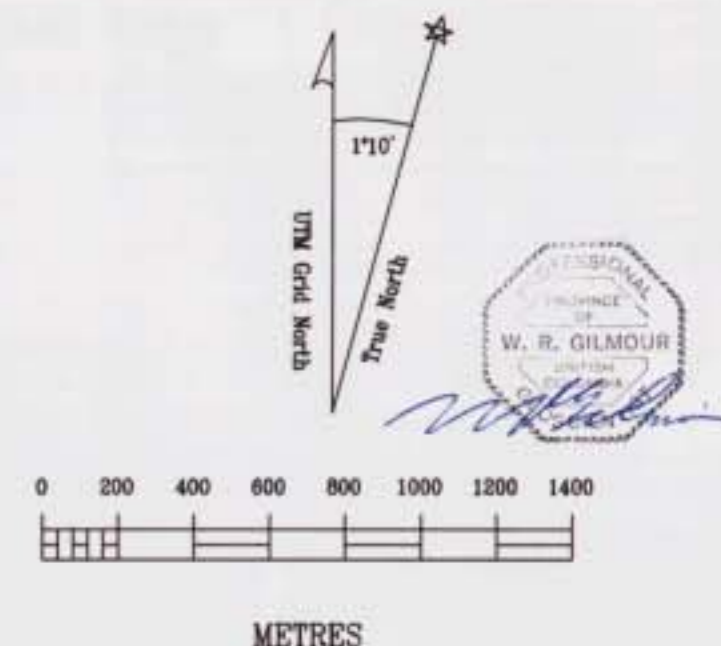
- Stratigraphic contact
- Bold indicates contact between Bowser, Hazelton and/or Stuhini Groups
- Fault, thrust fault, bold is major faults
- Anticlinal fold axis, bold is Eskay anticline
- Synclinal fold axis

GEOLOGY

See Fig. 3b for Geological Legend

| DATE | BY | REVISION |
|----------------|-------|--------------------|
| Sept. 7, 2001 | | |
| Sept. 17, 2001 | RM | IMBREGS - Desc |
| Oct. 17, 2001 | RM/PM | Geology, Silt data |
| Oct. 31, 2001 | RM | BELLE values |
| Nov. 22, 2001 | RM | RM map data |
| Nov. 30, 2001 | RM | Field data |
| Dec. 6, 2001 | RM | Geology update |
| Dec. 16, 2001 | RM | -35+150M up side |

Path: 702/geoc702.dwg



ESKAY PROJECT

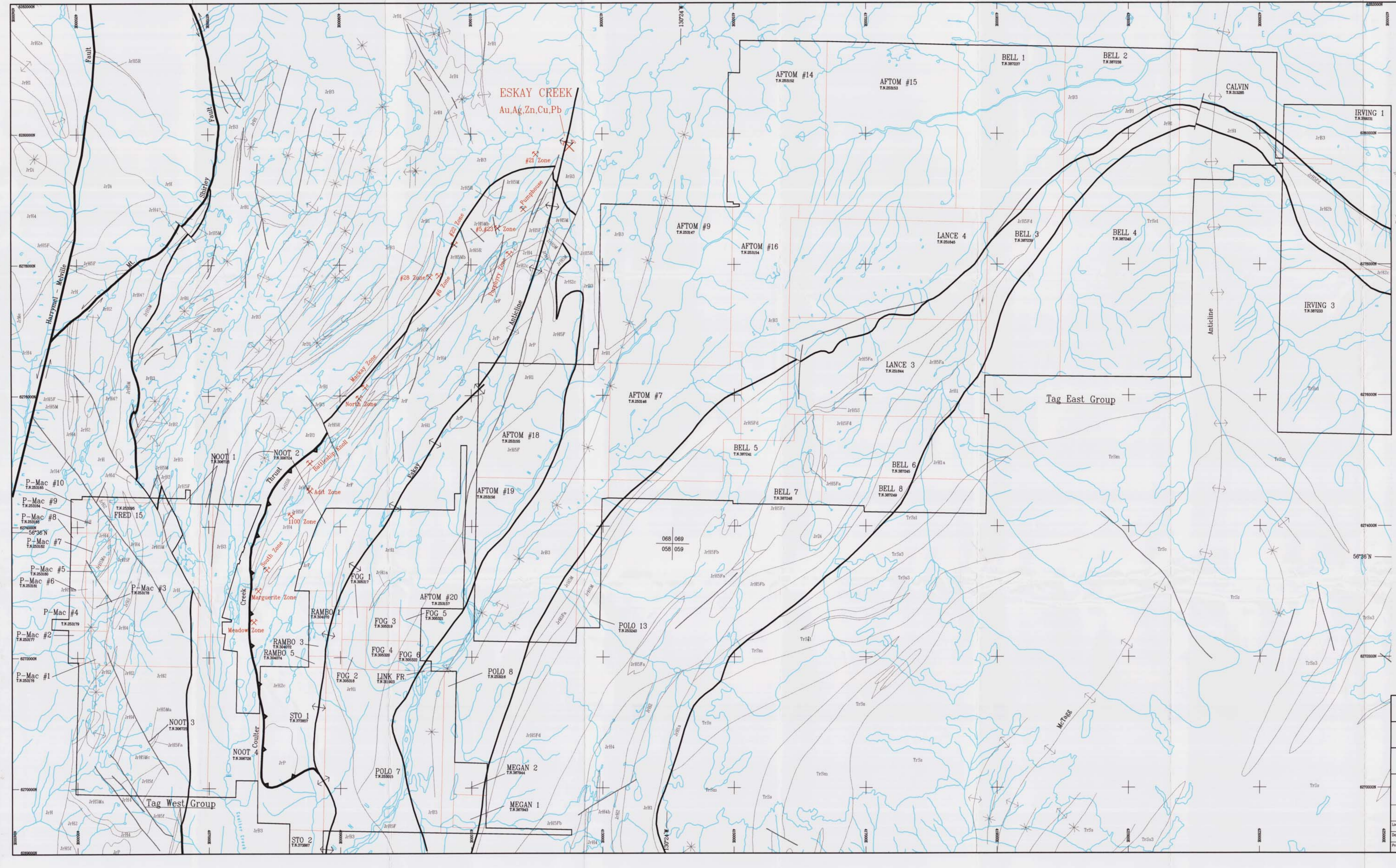
Tag West & Tag East Groups

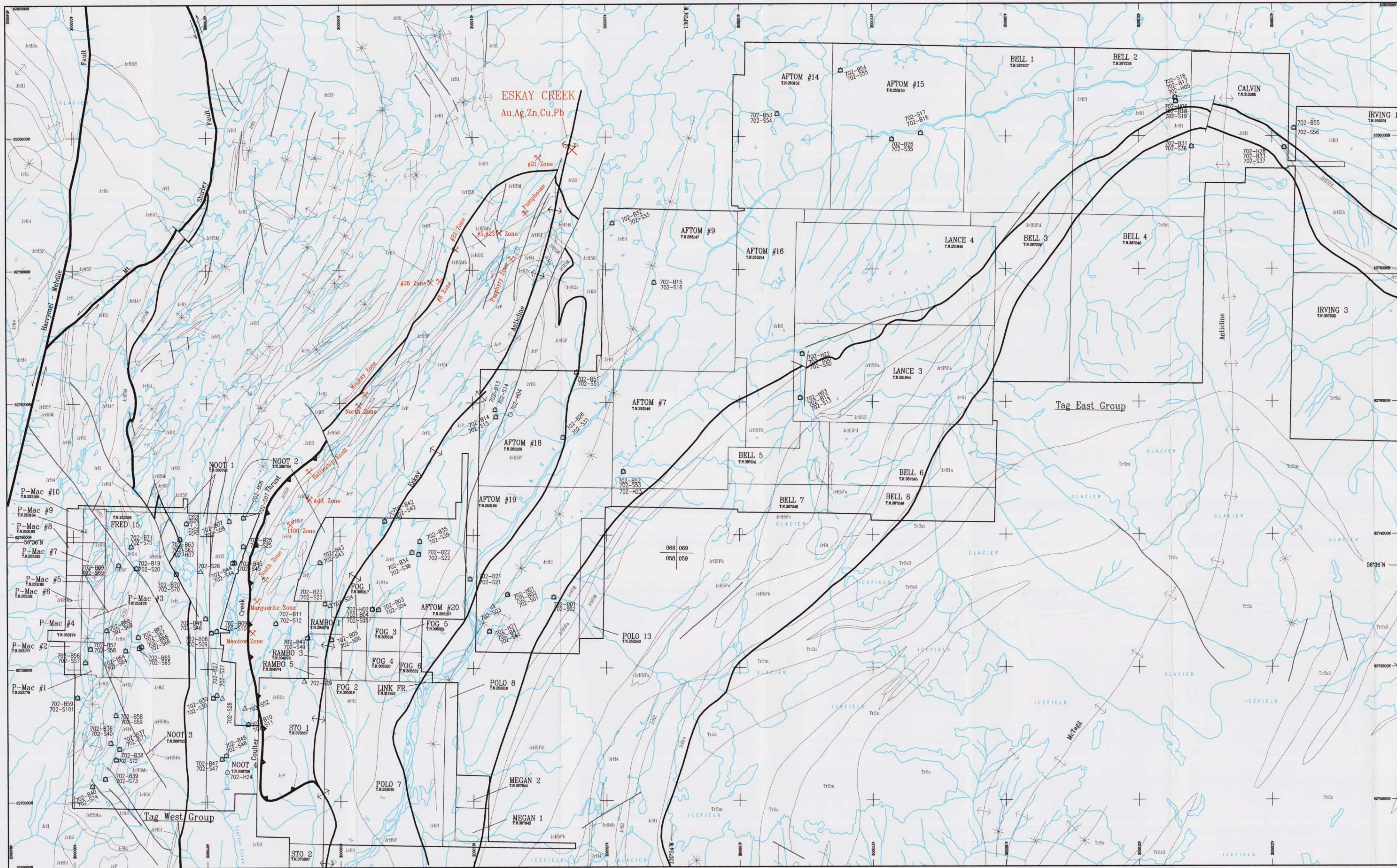
Geochemical Stream Sediment Survey

Mineral Claims

By: P. McGuigan, P. Geo.
W.R. Gilmour, P. Geo.

| | |
|---------------------|-----------------------------|
| Location: Eskay Cr. | Mining Jurisdiction: Skeena |
| Datum: NAD27 | Map Ref.: 1048.058.058.069 |
| Project: 702 | Date: Dec. 17, 2001 |
| | Scale: 1:20,000 |
| | Drawn By: RM |
| | Figure: 2 |





LEGEND

- 702-B01 BLEZ Sample Location
- △ 702-S01 Sieved Silt Sample Location
- 702-H01 Heavy Mineral Sample Location
- ⊠ Multiple sample location

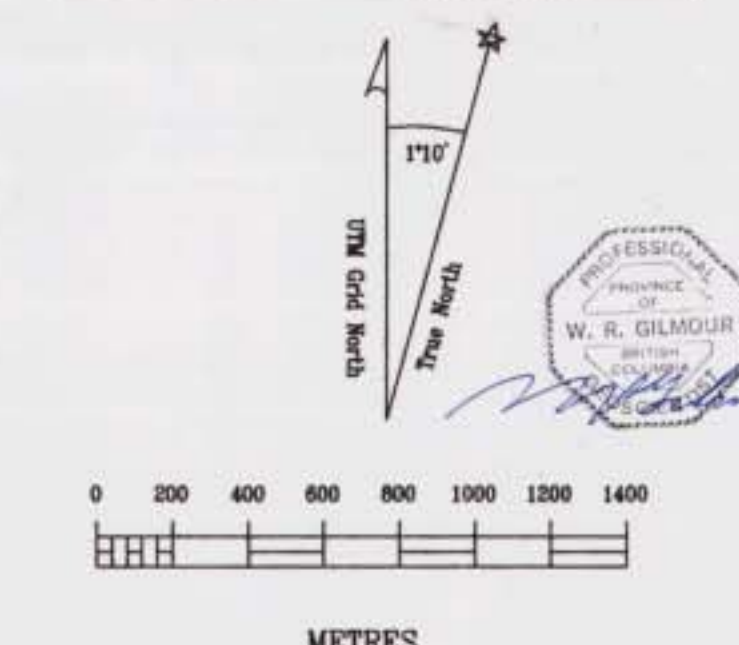
SYMBOLS

- Stratigraphic contact
- Bold indicates contact between Bower, Hazelton and/or Stuhni Groups
- Fault, thrust fault, bold are major faults
- Anticlinal fold axis, bold is Eskay anticline
- Synclinal fold axis

GEOLOGY

See Fig. 3b for Geological Legend

| DATE | BY | REVISION |
|---------------|-------|--------------------|
| Sept. 7/2001 | RM | 702/geo/702.dwg |
| Sept. 17/2001 | RM | HA, BEG, S, locs |
| Oct. 17/2001 | RM/RK | Geology, Silt data |
| Oct. 17/2001 | RM | BLEZ volume |
| Nov. 22/2001 | RM | HA locs data |
| Nov. 30 | RM | Flag # data |
| Dec. 4/2001 | RM | Geology update |
| Dec. 18/2001 | RM | -35+1500m up vote |



ESKAY PROJECT

Tag West & Tag East Groups

Geochemical Stream Sediment Survey

Geology & Sample Location Map

By: P. McGuigan, P. Geo.
W.R. Gilmour, P. Geo.

| | | | |
|-----------|-----------|----------------------|------------------|
| Location: | Eskay Cr. | Mining Jurisdiction: | Skeena |
| Datum: | NAD27 | Map Ref.: | 1048.058.068.068 |
| Project: | 702 | Date: | Dec. 17/2001 |
| | | Scale: | 1:20,000 |
| | | Drawn By: | RM |
| | | Figure: | 3a |

LEGEND

LAYERED ROCKS

QUATERNARY

Qs Unconsolidated fluvial and glacial sediments

PLIOCENE to RECENT

Qv Stikine Volcanic Suite: olivine and plagioclase phryic basaltic flows, tephra and scoria deposits

MIDDLE JURASSIC to LOWER CRETACEOUS

BOWSER LAKE GROUP

JrB Undifferentiated sedimentary rocks

JrB1 Chert pebble to cobble conglomerate, interstratified sandstone

JrB2 Fine- to coarse-grained sandstone, minor interstratified conglomerate or mudstone

JrB3 Thin-bedded mudstone and siltstone

LOWER to MIDDLE JURASSIC

HAZELTON GROUP

JrH Sedimentary and volcanic rocks, undivided

HAZELTON GROUP - Salmon River Formation

JrH5 Bimodal volcanic rocks and interstratified sedimentary rocks

JrH5S **Troy Ridge Member:** Intercalated sedimentary rocks

JrH5Sa Thin-bedded carbonaceous mudstone, turbiditic mudstone to siltstone, locally chert

JrH5Sb "Pyjama Beds": Thin-interbedded white tuffaceous mudstone and dark gray to black argillite

JrH5Sc Calcareous, fossiliferous buff-coloured sandstone.

JrH5S **Eskay Rhyolite Member:** Rhyolitic flows, autoclastic breccias

JrH5F **Bruce Glacier Member:** Felsic volcanic rocks, undifferentiated

JrH5Fa Massive, aphyric flow-banded flows, minor flow breccia

JrH5Fb Ash, lapilli tuff, non-welded to densely welded; aphyric to Qtz+Ksp phryic

JrH5Fc Volcanic breccia, monolithic to slightly heterolithic

JrH5Fd Epiclastic breccia to subangular volcanic conglomerate

JrH5M **Johns Peak Member:** Mafic volcanic rocks

JrH5Ma Massive andesitic to basaltic flows; plag +/- cpx phryic

JrH5Mb Pillowed flows, broken pillow breccia, interbedded mudstone

JrH5Mc Volcanic breccia, hyaloclastite, interbedded mudstone

HAZELTON GROUP - Betty Creek Formation

JrH4 **Treaty Ridge Member:** Sedimentary unit

JrH4 Undifferentiated sedimentary rocks

JrH4a Calcareous brown to tan fossiliferous sandstone/wacke

JrH4b Volcanic sandstone, conglomerate, local bioclastic sandy limestone intervals

JrH4c Turbiditic mudstone to siltstone

JrH4d Thin-bedded to massive limestone

JrH4e Thin-bedded to medium-bedded, red to green chert

JrH3 **Brucejack Lake Member:** Felsic volcanic rocks

JrH3 Undifferentiated felsic volcanic and epiclastic rocks

JrH3a Fine-grained crystal tuff, epiclastic tuff, well bedded

JrH3b Flow banded dacitic to rhyolitic flows

JrH3c Lapilli tuff, variably welded

JrH3d Interbedded tuff and epiclastic rocks

JrH2 **Unuk River Member:** Andesitic volcanic and epiclastic rocks

JrH2 Undifferentiated andesitic volcanic and epiclastic rocks

JrH2a Massive hrb+plag phryic andesitic flows

JrH2b Epiclastic rocks: red to green, coarse-grained

JrH2c Andesitic volcanic breccia / black tuff hrb+plag phryic clasts, some interstratified epiclastic rocks

HAZELTON GROUP - Jack Formation

JrH1 Basal sedimentary unit

JrH1 Undifferentiated sedimentary rocks

JrH1a Clast-supported granitoid pebble to boulder conglomerate

JrH1b Sandstone, siltstone, turbiditic mudstone

UPPER TRIASSIC

STUHINI GROUP

TrS Undifferentiated volcanic and sedimentary rocks

Carnian to Norian

TrSv Undifferentiated volcanic rocks

TrSm Mafic volcanic rocks

TrSm Undifferentiated basaltic volcanic flows, tuffs, and volcanic breccia.

TrSm1 Basaltic cpx+plag phryic lapilli to block tuff

TrSi Intermediate volcanic rocks

TrSi Undifferentiated andesitic volcanic flows, tuffs, and volcanic breccia

TrSi1 Andesitic cpx/hrb+plag-phryic block tuff, and volcanic breccia

TrSi2 Heterolithic conglomerate, mainly andesitic cpx/hrb+plag-phryic clasts

TrSs Sedimentary rocks

TrSs Undifferentiated basaltic volcanic flows, tuffs, and breccia

TrSs1 Thin- to medium-bedded argillite, siltstone turbidites, interstratified sandstone and wacke

TrSs2 Pale green thin-bedded siliceous siltstone, mudstone

TrSs3 Thin- to medium-bedded feldspathic fine-grained sandstone/wacke, interstratified siltstone and mudstone

TrSs4 Medium- to thick-bedded coarse-grained feldspathic sandstone and tuffaceous heterolithic conglomerate

TrSs5 Massive dark green sandstone/wacke

TrSs6 Limestone

TrSs7 Green andesitic boulder conglomerate

TrSs8 Orange weathering, medium to coarse fossiliferous wacke

TrSs9 Chert pebble conglomerate

INTRUSIVE ROCKS

TERTIARY

TC Biotite+hornblende granite, minor quartz diorite, associated dykes

TLp **Lee Brant Stock:** hornblende-biotite quartz monzonite

TJrN **Nickel Mountain:** olivine gabbro and related stocks

JURASSIC

Texas Creek Plutonic Suite

JrL **Lehto Pluton:** Coarse K-feldspar± hornblende porphyritic monzodiorite; equiangular monzonite and quartz diorite Early Jurassic

JrLb Potassium feldspar megacrystic porphyry phase

JrLc Equigranular phase

JrMe **Melville Pluton:** Light to dark grey, locally pink, medium-grained, equiangular, biotite-hornblende diorite, monzodiorite and monzonite

JrJ **Johns Peak Pluton:** hornblende diorite

JrGd Unnamed granodioritic to syenitic plutons and stocks

JrDi Unnamed dioritic plutons and stocks

JrP Alkali feldspar-plagioclase-hornblende porphyry (includes **Eskay Porphyry**: Grey-green, plagioclase±K-feldspar±hornblende±biotite porphyry with up to 50% coarse to fine-grained phenocrysts in a aphanitic groundmass; a hypabyssal stock of dacitic or granitic composition; 186 ± 2Ma U/Pb (zircon) age)

JrK **Brucejack Lake Porphyry:** potassium feldspar megacrystic porphyry

JrMi **Mitchell Intrusions:** Fine to coarse-grained quartz diorite, monzodiorite, quartz monzonite: syn- to post-volcanic intrusions. Equiangular to porphyritic, phaneritic to aphanitic

Sulpherets Suite: granite, monzonite, quartz monzonite, monzodiorite

JrI **Inel Porphyry:** altered feldspar (15%) and quartz (5%) porphyry with a fine-grained groundmass; chemical composition = monzodiorite; 190 ± 3Ma U/Pb (zircon) age

JrR **Red Bluff Porphyry Stock:** K-feldspar phryic monzodiorite to granodiorite; 195±1 Ma U/Pb (zircon) age

JrIR **Iskut River Stock:** Potassium feldspar megacrystic monzodiorite?

JrQd Quartz diorite, unnamed

JrF Felsic dykes and stocks, unnamed

JrHd **Harrymel Ridge Diorite**

TRIASSIC

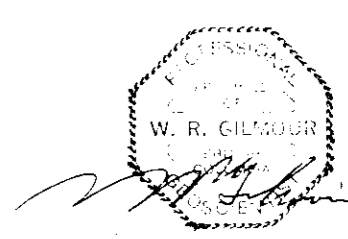
Stikine Plutonic Suite

TrDi Diorite, locally agmatitic texture

TrB **Bronson Stock:** plagioclase ± K-feldspar phryic monzodiorite of Triassic to Jurassic age; ca. 225 to 197 Ma U/Pb (zircon) age

TrSy Potassium feldspar megacrystic syenite

Legend adapted from P. Lewis compilation in MDRU Special Publication No. 1



ESKAY PROJECT

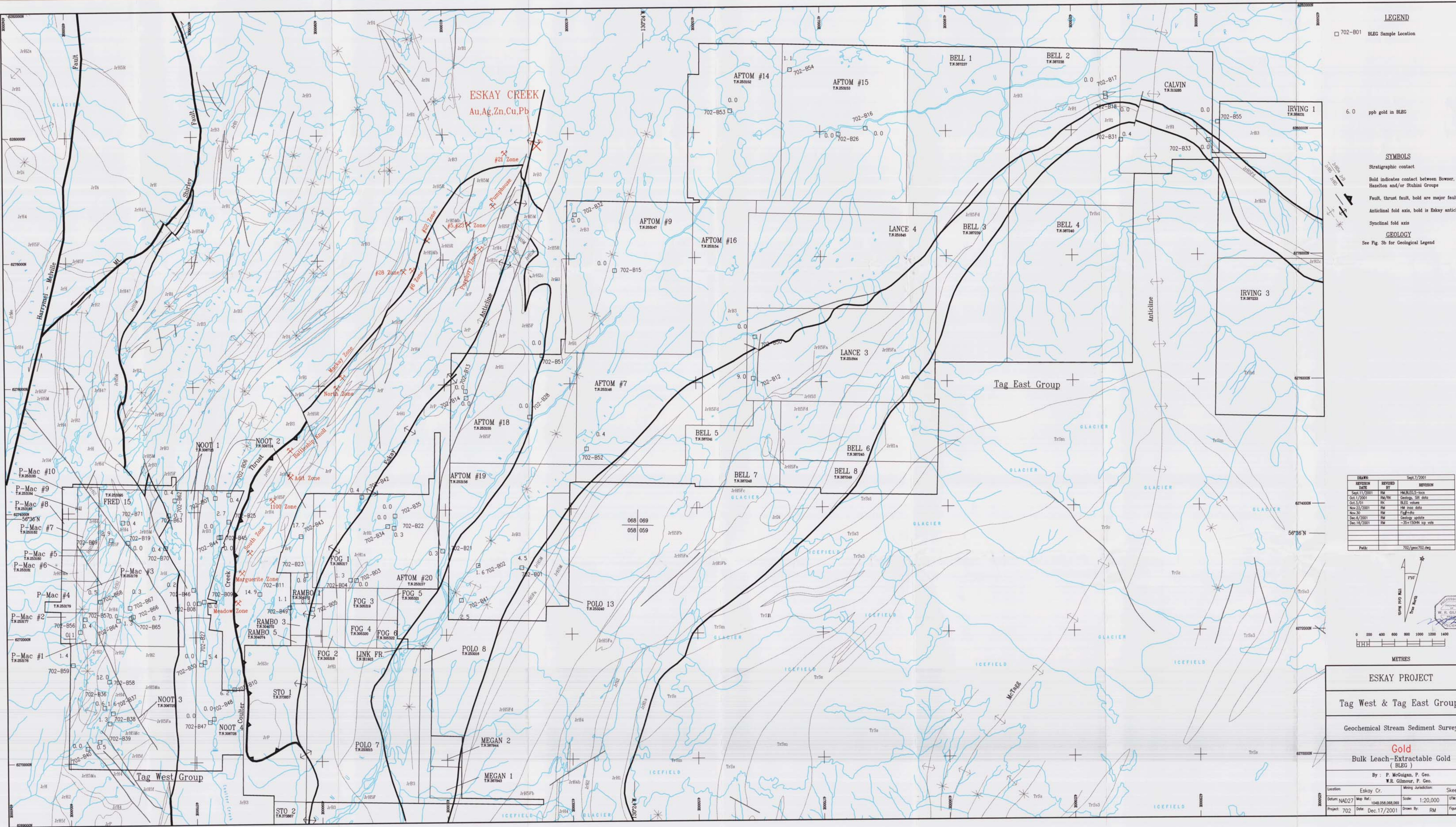
Tag West & Tag East Groups

Geochemical Stream Sediment Survey

Geological Legend

By : P. McGuigan, P. Geo.
W.R. Gilmour, P. Geo.

| | | | |
|-----------|-----------|----------------------|------------------|
| Location: | Eskay Cr. | Mining Jurisdiction: | Skeena |
| Datum: | NAD27 | Map Ref.: | 104B.058.068.069 |
| Scale: | 1:20,000 | UTM: | 9 |
| Project: | 702 | Date: | Dec.17/2001 |
| Drawn By: | RM | Figure: | 3b |



LEGEND

□ 702-B01 BLEG Sample Location

6.0 ppb gold in BLEG

SYMBOLS

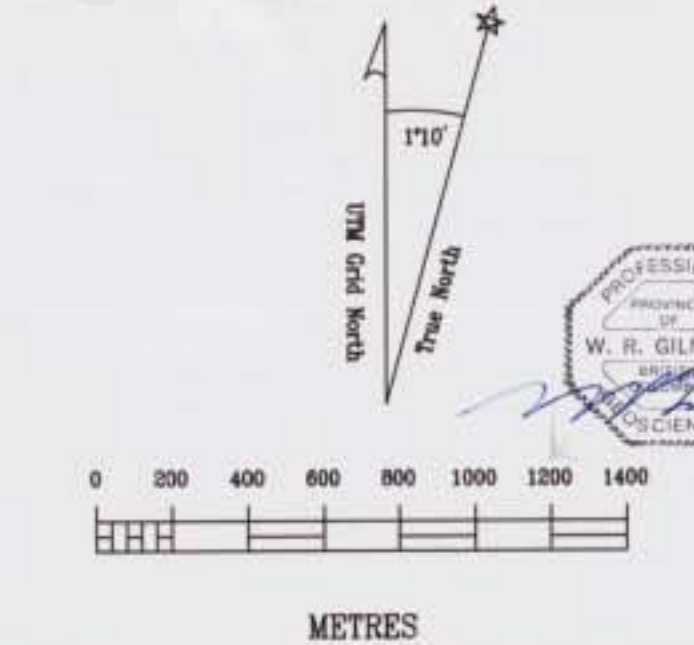
- Stratigraphic contact
- Bold indicates contact between Bowers, Hazelton and/or Stuhini Groups
- Fault, thrust fault, bold are major faults
- Anticline fold axis, bold is Eskay anticline
- Synclinal fold axis

GEOLOGY

See Fig. 3b for Geological Legend

| DATE | REVISED BY | REVISION |
|---------------|------------|--------------------|
| Sept. 11/2001 | RM | RM-BLEG-001 |
| Oct. 1/2001 | RM/PS | Geology, S&P data |
| Oct. 3/01 | RM | BLEG values |
| Nov. 22/2001 | RM | RM spot data |
| Nov. 30 | RM | Fig. 4a |
| Dec. 6/2001 | RM | Geology update |
| Dec. 16/2001 | RM | -35+1500M top view |

Path: 702\geoc\702.dwg



ESKAY PROJECT

Tag West & Tag East Groups

Geological Stream Sediment Survey

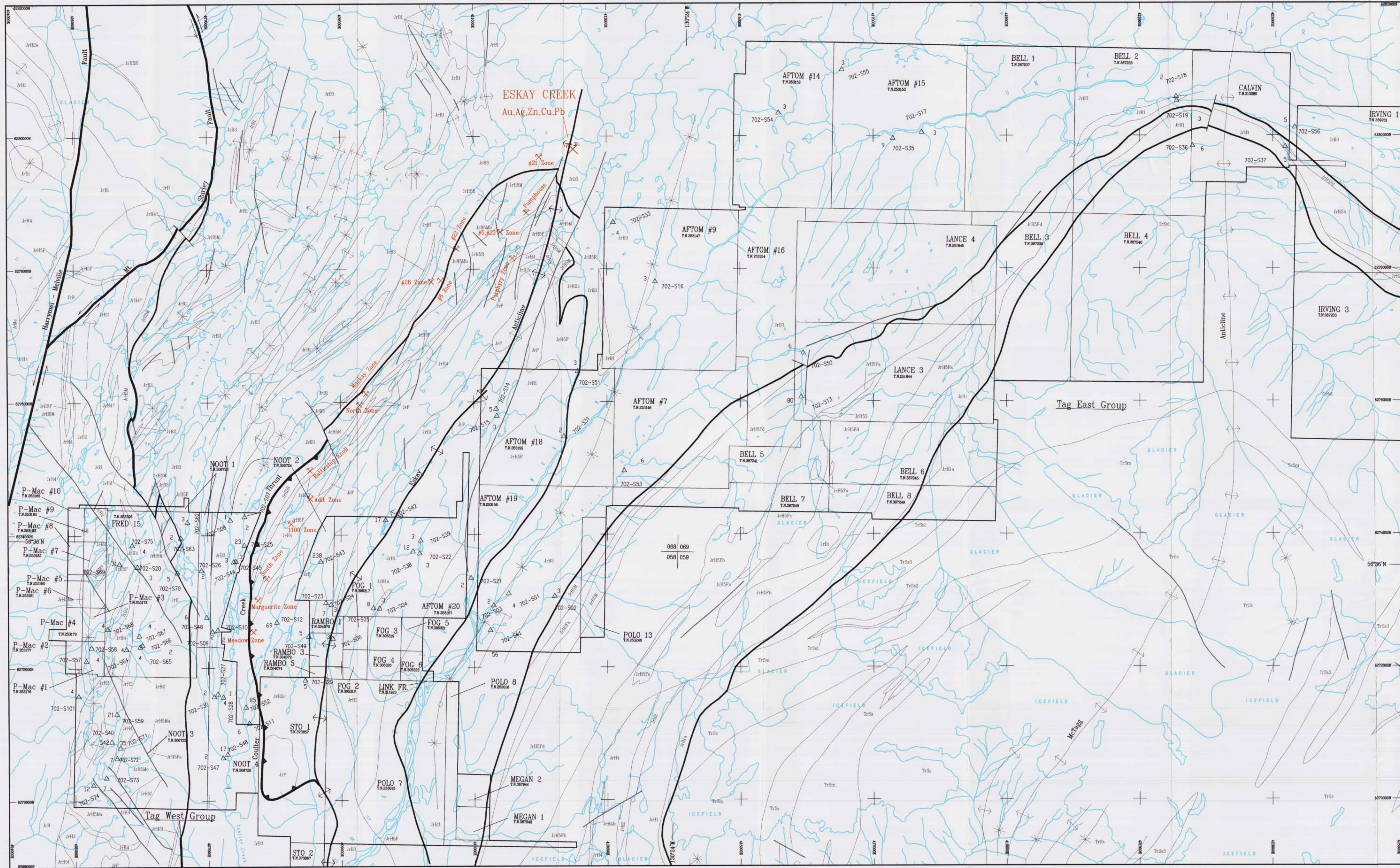
Gold
Bulk Leach-Extractable Gold (BLEG)

By: P. McGuigan, P. Geo.
W.R. Gilmore, P. Geo.

Location: Eskay Cr. Mining Jurisdiction: Skeena

Datum: NAD27 Map Ref.: 1048 058 069 Scale: 1:20,000 UTM: 9

Project: 702 Date: Dec.17/2001 Drawn By: RM Figure: 4



LEGEND

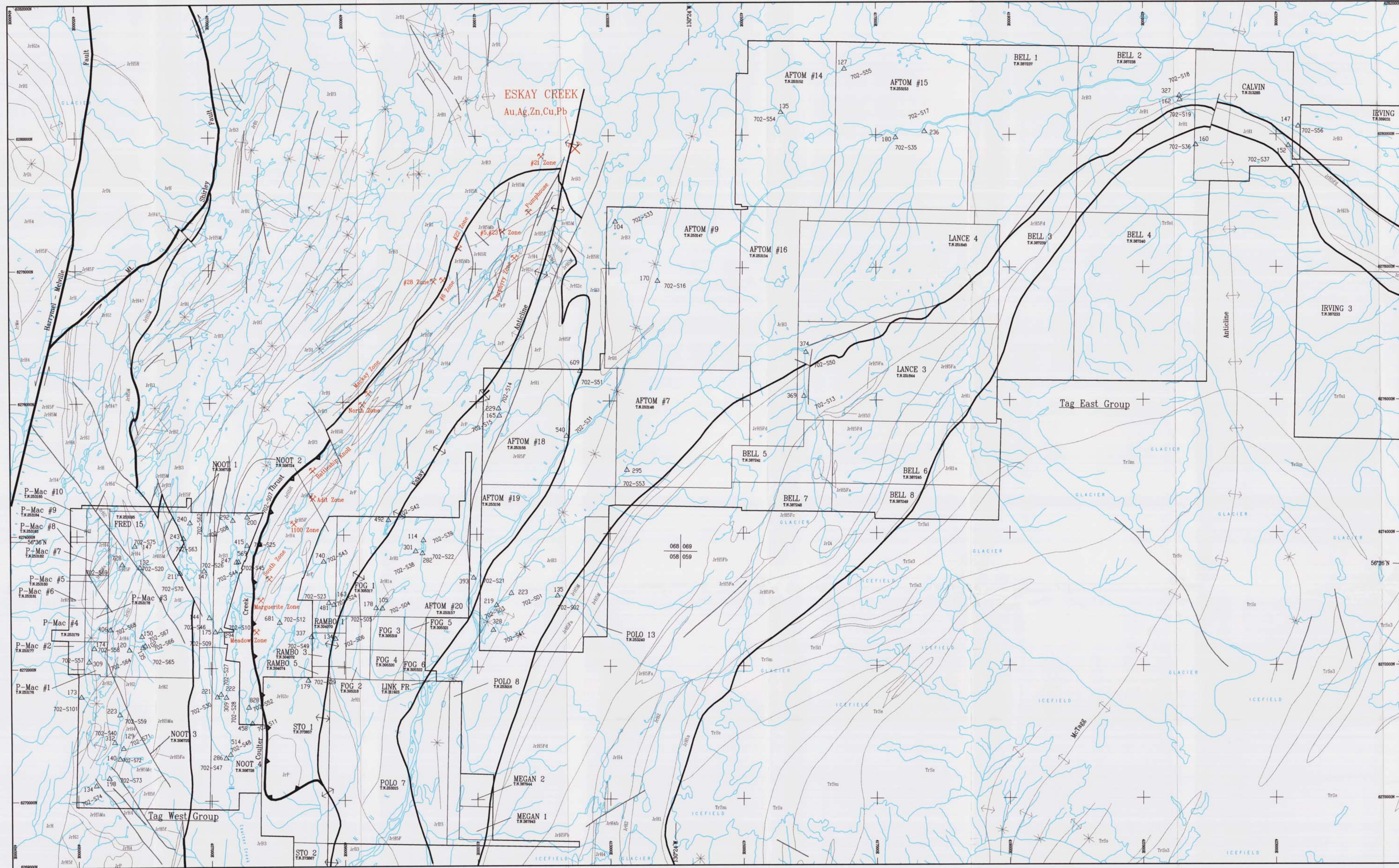
- △ 702-S01 Sieved Silt Sample Location
- △ 5 ppb gold in sieved silt
- SYMBOLS**
- Stratigraphic contact
- Bold indicates contact between Bowser, Hazelton and/or Stuhini Groups
- Fault, thrust fault, bold is major faults
- Anticlinal fold axis, bold is Eskay anticline
- Synclinal fold axis
- GEOLOGY**
- See Fig. 3b for Geological Legend

| REVISION | DATE | BY | REVISION |
|--------------|-------|--------------------|----------|
| Sept 11/2001 | RM | HM,REC-S-Base | |
| Oct 17/2001 | RM/RK | Geology, Silt data | |
| Oct 17/2001 | RM | REG values | |
| Nov 22/2001 | RM | HM note data | |
| Nov 30 | RM | Fig 4 data | |
| Dec 6/2001 | RM | Geology updates | |
| Dec 16/2001 | RM | -S01-S026 up vols | |

Path: 702/geo/702.dwg



| | |
|--|-----------------------------|
| ESKAY PROJECT | |
| Tag West & Tag East Groups | |
| Geochemical Stream Sediment Survey | |
| Gold Sieved Silt | |
| By : P. McGuigan, P. Geo. W.R. Gilmour, P. Geo. | |
| Location: Eskay Cr. | Mining Jurisdiction: Skeena |
| Datum: NAD27 | Map Ref.: 1048.058.068.069 |
| Scale: 1:20,000 | UTM: 9 |
| Project: 702 | Date: Dec.17/2001 |
| Drawn By: RM | Figure: 5 |



LEGEND

- △ 702-S01 Sieved Silt Sample Location
- △ 147 ppb silver in sieved silt

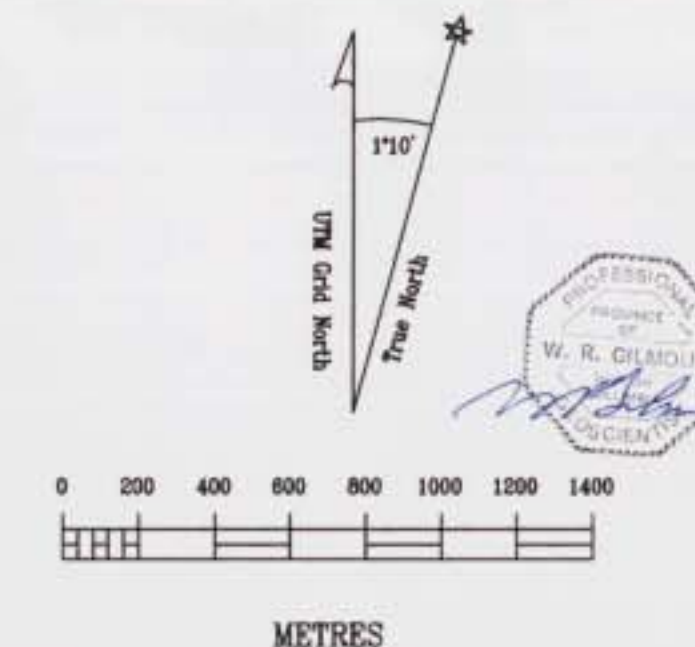
SYMBOLS

- Stratigraphic contact
- Bold indicates contact between Bowser, Hazelton and/or Stuhini Groups
- Fault, thrust fault, bold are major faults
- Anticline fold axis, bold in Eskay anticline
- Synclinal fold axis

GEOLOGY

See Fig. 3b for Geological Legend

| DATE | BY | REVISION |
|----------------|-------|-----------------------|
| Sept. 11, 2001 | RM | Initial ESK-1000 |
| Oct. 1, 2001 | RM/RK | Geology, Silt data |
| Oct. 3, 2001 | RM | REG values |
| Nov. 27, 2001 | RM | 1st map date |
| Nov. 30, 2001 | RM | Fig. 1 date |
| Dec. 6, 2001 | RM | Geology update |
| Dec. 16, 2001 | RM | -35+150ppb esp. value |



ESKAY PROJECT

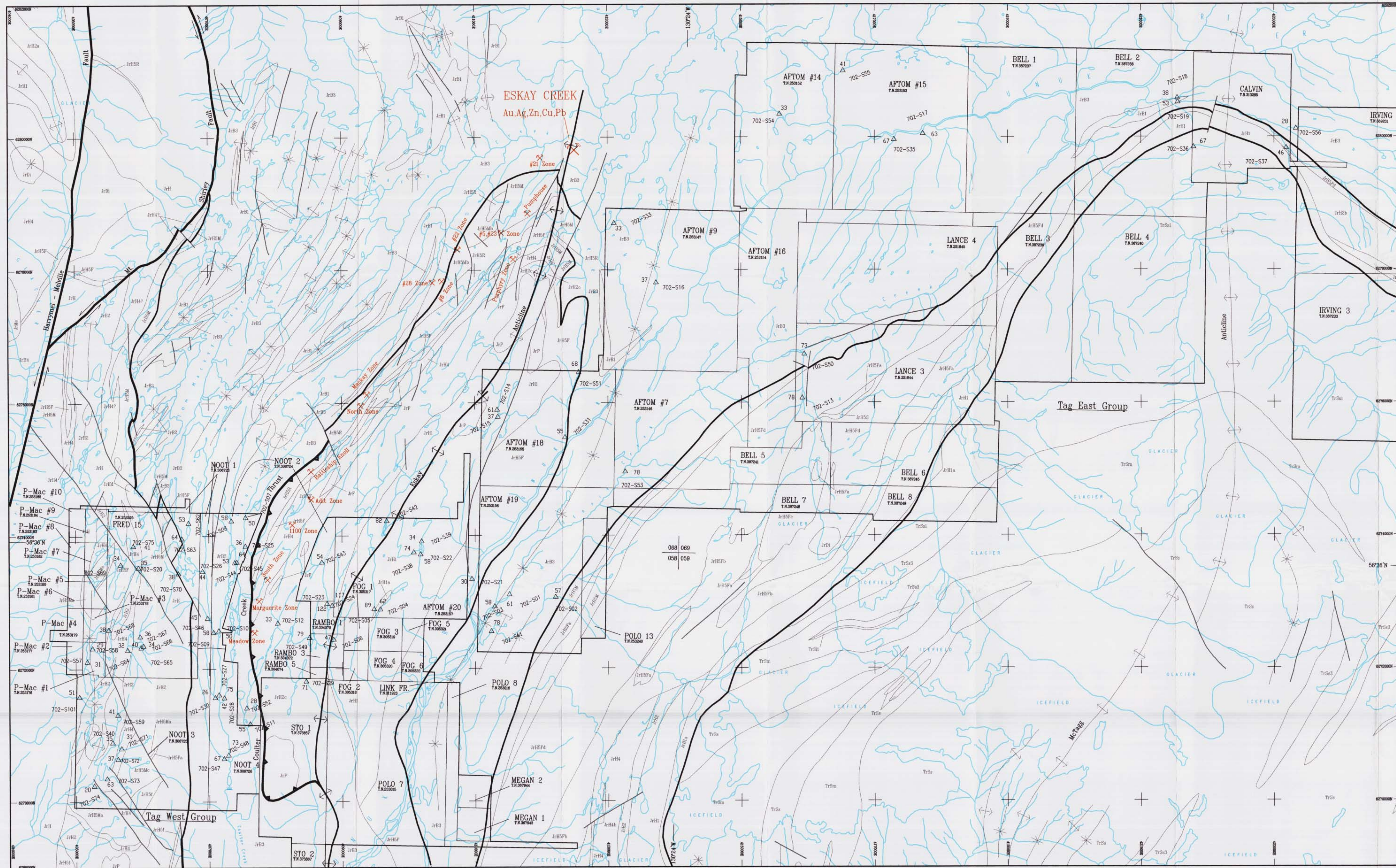
Tag West & Tag East Groups

Geochemical Stream Sediment Survey

Silver
Sieved Silt

By: P. McQuigan, P. Geo.
W.R. Gilmour, P. Geo.

| | | | |
|-----------|-----------|----------------------|---------------------|
| Location: | Eskay Cr. | Mining Jurisdiction: | Skeena |
| Datum: | NAD27 | Map Ref.: | 1048, 058, 068, 069 |
| Project: | 702 | Date: | Dec. 17, 2001 |
| | | Scale: | 1:20,000 |
| | | Drawn By: | RM |
| | | UTM | 9 |
| | | Figure: | 6 |



LEGEND

- △ 702-501 Sieved Silt Sample Location
- △ 28 ppm copper in sieved silt

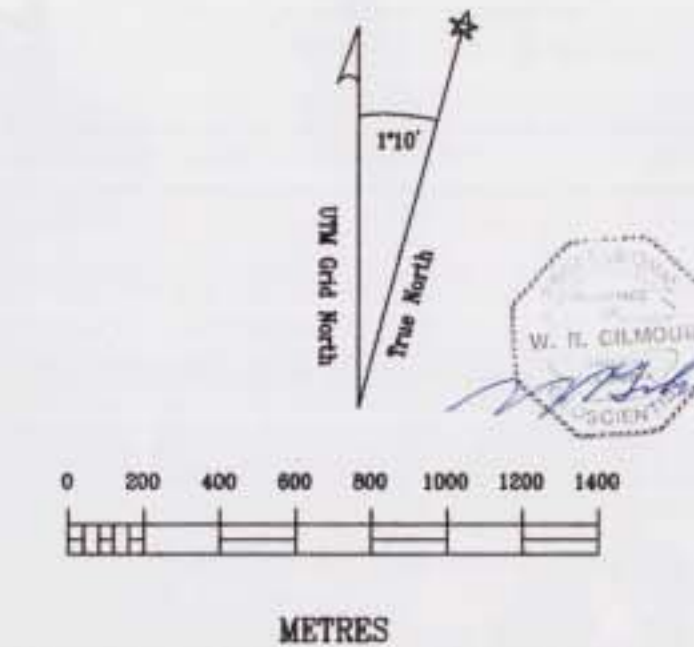
SYMBOLS

- Stratigraphic contact
- Bold indicates contact between Bowser, Hazelton and/or Stuhini Groups
- Fault, thrust fault, bold are major faults
- Anticlinal fold axis, bold is Eskay anticline
- Synclinal fold axis

GEOLOGY

See Fig. 3b for Geological Legend

| REVISION | DATE | REVISION BY | REVISION |
|--------------|-------|--------------------|----------|
| Sept 17/2001 | RM | W.R.G. (S)-hcs | |
| Oct 1/2001 | RM/RK | Geology, Silt data | |
| Oct 3/01 | RM | Silt values | |
| Nov 22/2001 | RM | Silt map data | |
| Nov 30 | RM | Fig 4 data | |
| Dec 6/2001 | RM | Geology update | |
| Dec 16/2001 | RM | -S+1500m up with | |



ESKAY PROJECT

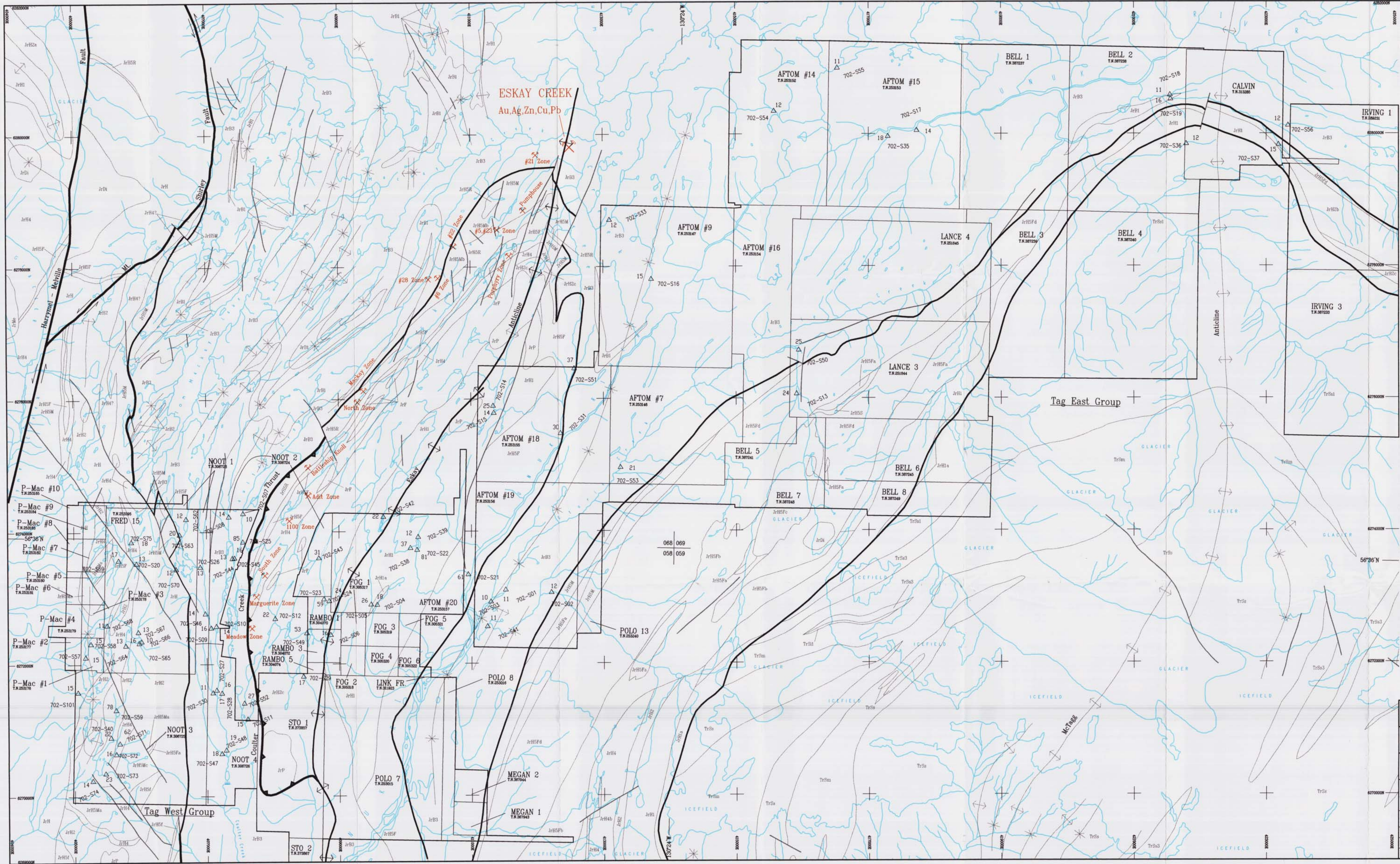
Tag West & Tag East Groups

Geochemical Stream Sediment Survey

Copper Sieved Silt

By: P. McGuigan, P. Geo.
W.R. Gilmour, P. Geo.

| | | | |
|-----------|-----------|----------------------|------------------|
| Location: | Eskay Cr. | Mining Jurisdiction: | Skeena |
| Date: | NAD27 | Map Ref.: | 1048.058.068.089 |
| Project: | 702 | Date: | Dec.17/2001 |
| | | Scale: | 1:20,000 |
| | | Drawn By: | RM |
| | | Figure: | 7 |



LEGEND

- △ 702-S01 Sieved Silt Sample Location
- △ 12 ppm lead in sieved silt

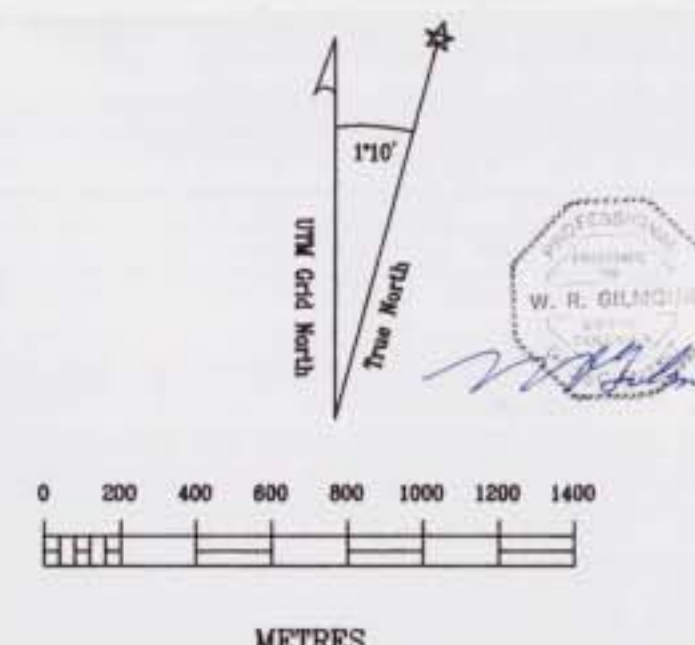
SYMBOLS

- Stratigraphic contact
- Bold indicates contact between Bowser, Hazelton and/or Stuhini Groups
- Fault, thrust fault, bold are major faults
- Anticlinal fold axis, bold is Eskay anticline
- Synclinal fold axis

GEOLOGY

See Fig. 3b for Geological Legend

| REVISION | DATE | BY | REVISION |
|----------|---------------|-------|--------------------|
| 01 | Sept. 17/2001 | RM | Initial |
| 02 | Sept. 17/2001 | RM | HAZELTON-S-100s |
| 03 | Oct. 1/2001 | RM/WR | Geology, Silt data |
| 04 | Oct. 3/2001 | RM | RIIS values |
| 05 | Nov. 22/2001 | RM | RM notes data |
| 06 | Nov. 25 | RM | Fig 4-8 |
| 07 | Jan. 4/2001 | RM | Geology update |
| 08 | Dec. 14/2001 | RM | -35+1500m top view |



ESKAY PROJECT

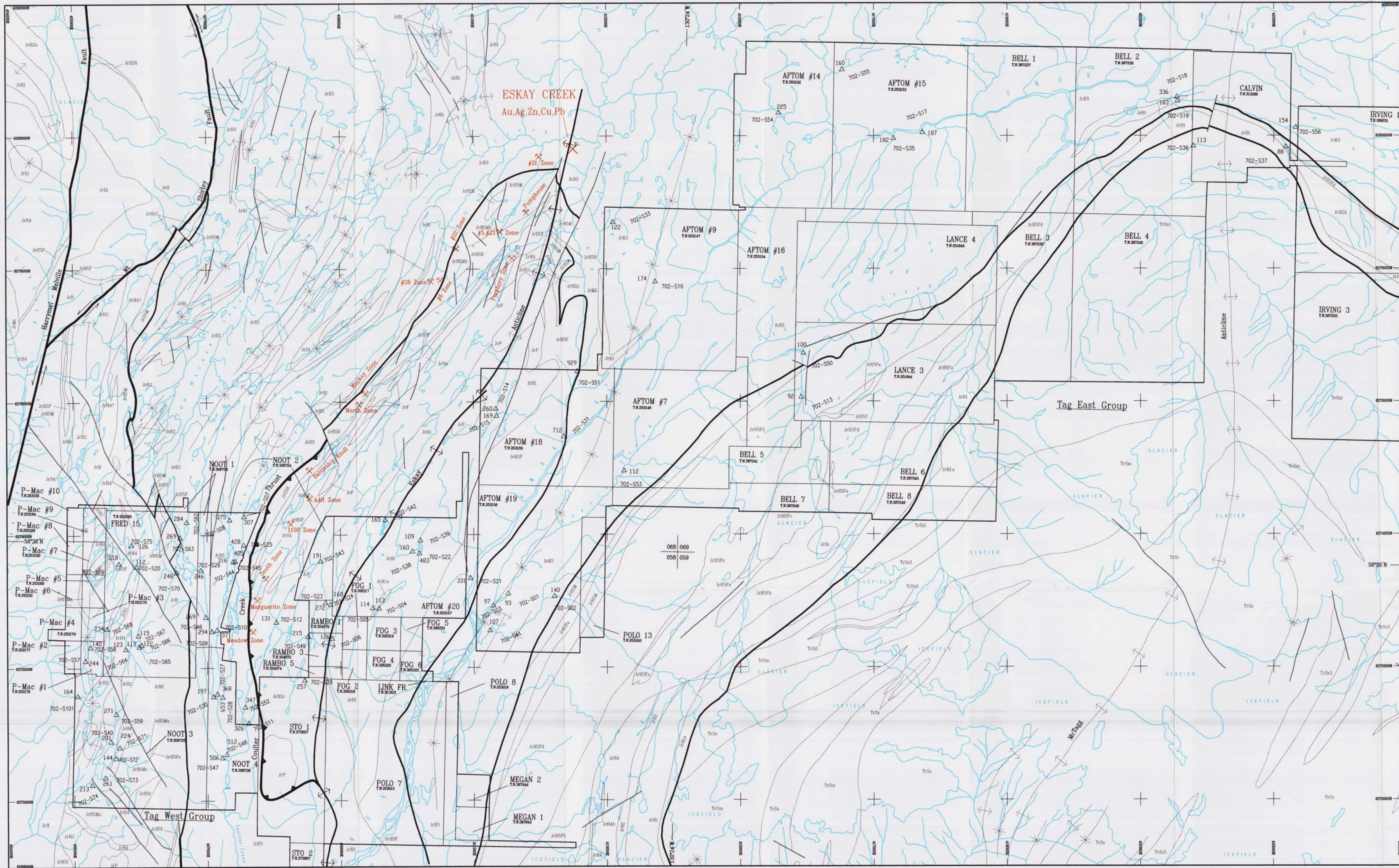
Tag West & Tag East Groups

Geochemical Stream Sediment Survey

Lead Sieved Silt

By : P. McQuigan, P. Geo.
W.R. Gilmour, P. Geo.

| | | | |
|-----------|-----------|----------------------|-------------------|
| Location: | Eskay Cr. | Mining Jurisdiction: | Skeena |
| Datum: | NAD27 | Map Ref.: | 1048.058, 068.068 |
| Project: | 702 | Date: | Dec. 17/2001 |
| | | Scale: | 1:20,000 |
| | | UTM: | 9 |
| | | Drawn By: | RM |
| | | Figure: | 8 |



LEGEND

△ 702-S01 Sieved Silt Sample Location
 △ 154 ppm zinc in sieved silt

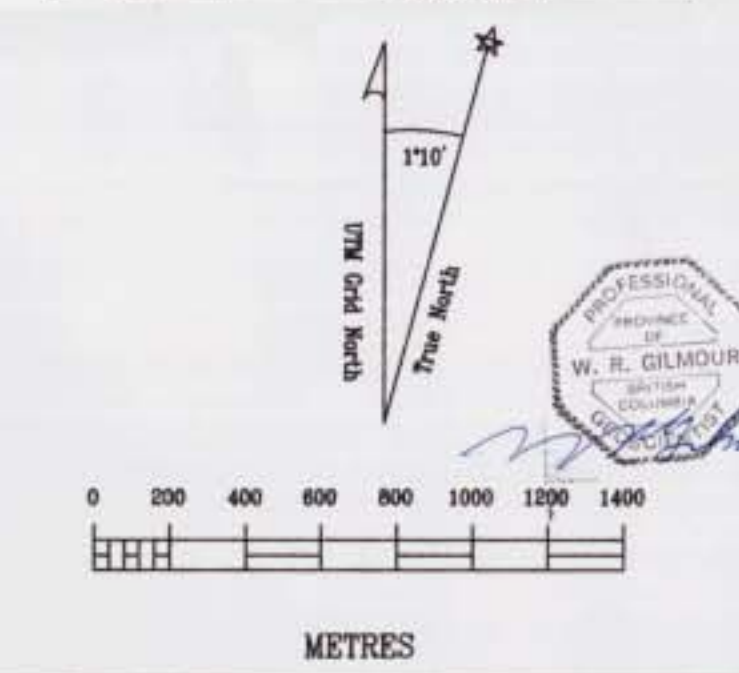
SYMBOLS

Stratigraphic contact
 Bold indicates contact between Bowser, Hazelton and/or Stuhini Groups
 Fault, thrust fault, bold are major faults
 Anticline fold axis, bold is Eskay anticline
 Synclinal fold axis

GEOLOGY
 See Fig. 3b for Geological Legend

| DATE | REVISION BY | REVISION |
|--------------|-------------|--------------------|
| Sept 17/2001 | RM | Final EIS - 6000 |
| Oct 1/2001 | RM/RSK | Geology, Silt data |
| Oct 3/01 | RSK | BLG values |
| Nov 22/2001 | RM | Map area data |
| Nov 30 | RM | Fig 4 data |
| Dec 5/2001 | RM | Geology update |
| Dec 16/2001 | RM | -35+150m sp vels |

Path: 702/geoc/702.dwg



ESKAY PROJECT

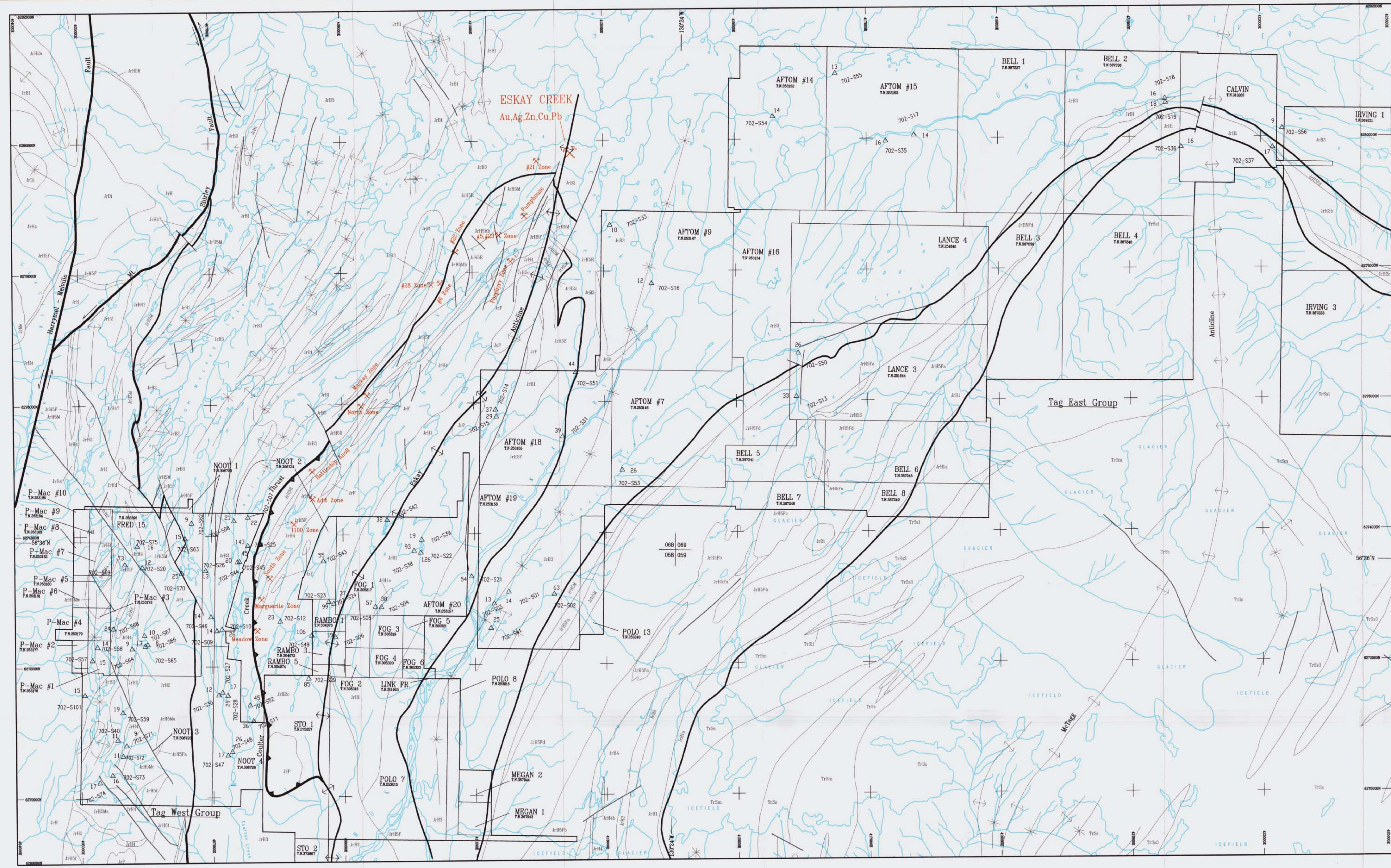
Tag West & Tag East Groups

Geochemical Stream Sediment Survey

Zinc Sieved Silt

By: P. McQuigam, P. Geo.
 W.R. Gilmore, P. Geo.

| | | | |
|---------------------|---------------------------|-------------------|--------------|
| Location: Eskay Cr. | Map Ref: 1048.018.068.068 | Scale: 1:20,000 | Sheet: 9 |
| Date: NAD27 | Project: 702 | Date: Dec.17/2001 | Drawn By: RM |
| Province: BC | Figure: 9 | | |



LEGEND

- △ 702-S01 Sieved Silt Sample Location
- △ 9 ppm arsenic in sieved silt

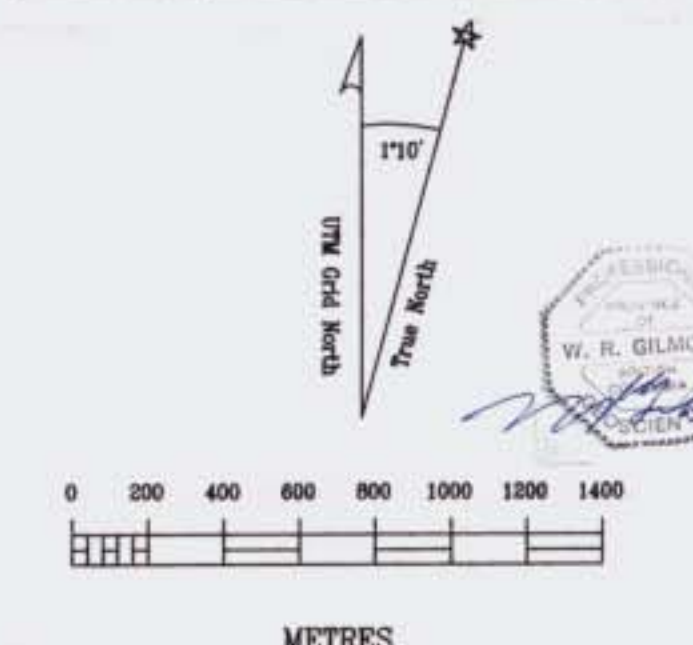
SYMBOLS

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- Synclinal fold axis

GEOLOGY

See Fig. 3b for Geological Legend

| REVISION | DATE | BY | REVISION |
|--------------|-------|--------------------|----------|
| Sept 11/2001 | RM | HA/ELCS - locs | |
| Oct 17/2001 | RM/TK | Geology, silt data | |
| Oct 17/01 | RM | ELCS values | |
| Nov 27/2001 | RM | HM data data | |
| Nov 30 | RM | 702-513 | |
| Dec 14/2001 | RM | Geology update | |
| Dec 16/2001 | RM | -35+150M exp. vels | |



| | | |
|--|-----------------------------|-----------------|
| ESKEY PROJECT | | |
| Tag West & Tag East Groups | | |
| Geochemical Stream Sediment Survey | | |
| Arsenic Sieved Silt | | |
| By : P. McGuigan, P. Geo. W.R. Gilmour, P. Geo. | | |
| Location: Eskey Cr. | Mining Jurisdiction: Skeena | |
| Datum: NAD27 | Map Ref.: 1048.058.068.069 | Scale: 1:20,000 |
| Project: 702 | Date: Dec.17/2001 | Drawn By: RM |
| | | Figure: 10 |