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1988  
REVERSE CIRCULATION DRILLING, GEOPHYSICAL,  
GEOCHEMICAL AND PROSPECTING REPORT

On the OKA PROPERTY

South Okanagan Area, Osoyoos Mining Division, B.C.  
NTS: 82E-13W; Lat. 49°48'N; Long. 119°55'W

MARCH, 1989 (BC ASSESSMENT REPORT)

VOLUME II of II - PLATES

GEOPHYSICAL BRANCH  
ASSESSMENT REPORT

18,711

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Volume II - Plates

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REVERSE CIRCULATION DRILLING, GEOPHYSICAL,

GEOCHEMICAL AND PROSPECTING REPORT

ON THE OKA PROPERTY  
(Oka #1-15, Iron Horse and Cap Claims)

Osoyoos Mining Division, B.C.  
Latitude 49°48'N; Longitude 119°55'W.  
NTS; 82/E-13W

For

**FAIRFIELD MINERALS LTD.**  
Vancouver, British Columbia

and

**PLACER DOME INC.**  
Vancouver, British Columbia

By

W. J. Jakubowski, B.Sc., Geologist

**CORDILLERAN ENGINEERING LTD.**  
1980-1055 W. Hastings St.  
Vancouver, B.C. V6E 2E9

Date Submitted: April, 1989  
Work Period: April 18 - July 23, 1988

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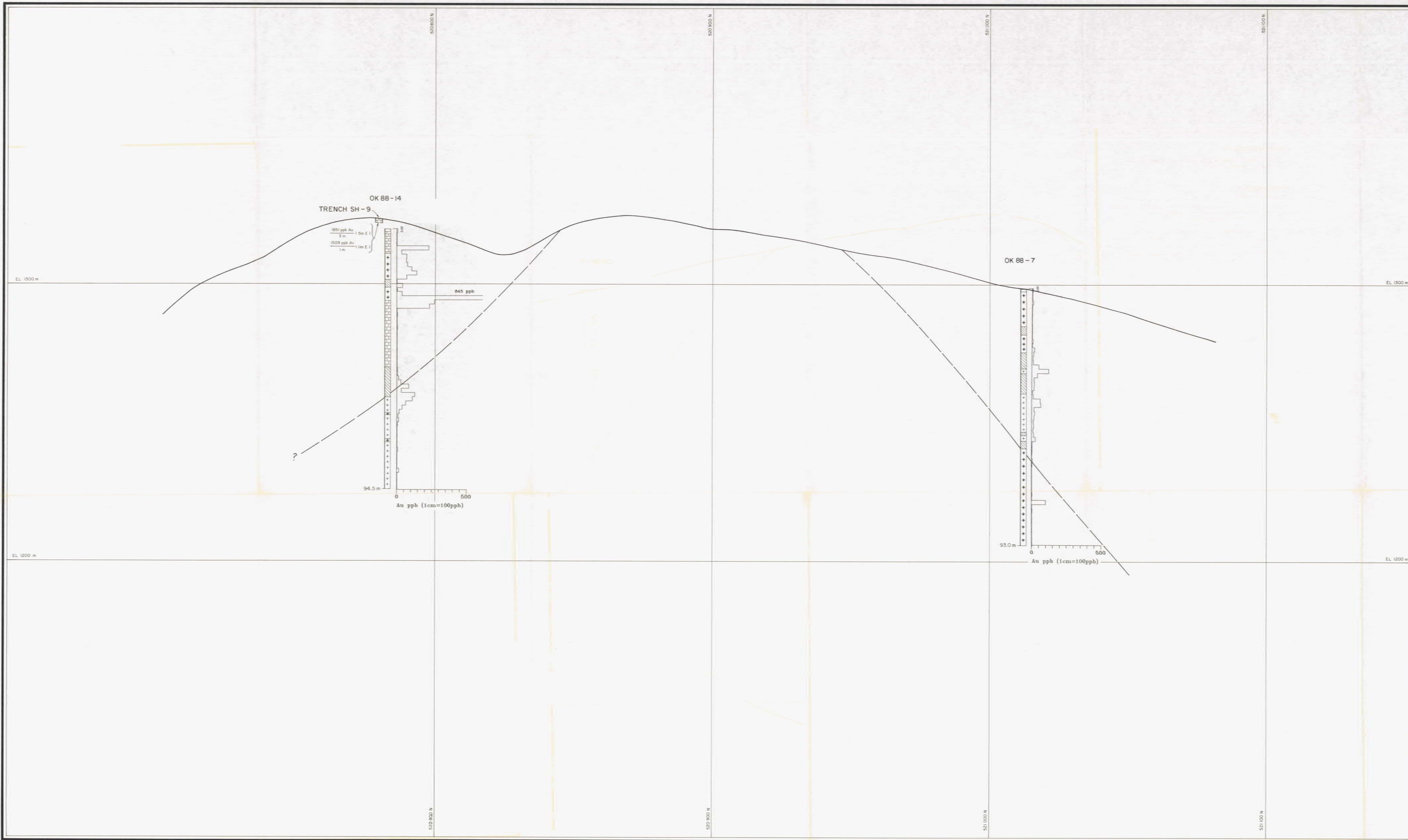
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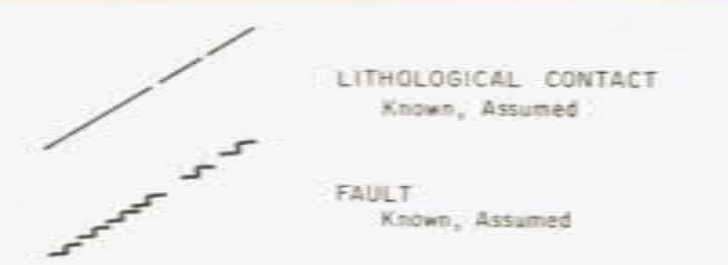


LITHOLOGY

- TERTIARY**
- FELDSPAR PORPHYRY, dykes of granitic(?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**
- NELSON PLUTONIC ROCKS
  - GRANODIORITE, medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGB).
- LOWER JURASSIC (?)**
- DIORITE DYKE or SILL, medium grained with local strong sericite alteration.
- UPPER TRIASSIC**
- NICOLA GROUP**
- ANDESITE to BASALT, dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
  - CRYSTAL TUFF, fine grained, white to light grey siliceous matrix containing 10 to 40% 3 to 1.5mm feldspar (?) crystals.
  - SILTSTONE, black, locally calcareous to lightly siliceous.
  - HORNFELS, black to medium grey to maroon, fine grained, siliceous.
  - FINE GRAINED SILICEOUS ROCK, bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
  - MEDIUM GRAINED SILICEOUS ROCK, bleached, 1 to .5mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
  - SKARN, coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.
  - MARBLE, light to dark grey, abundant calcite veinlets.
  - MASSIVE SULFIDE, dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

SYMBOLS



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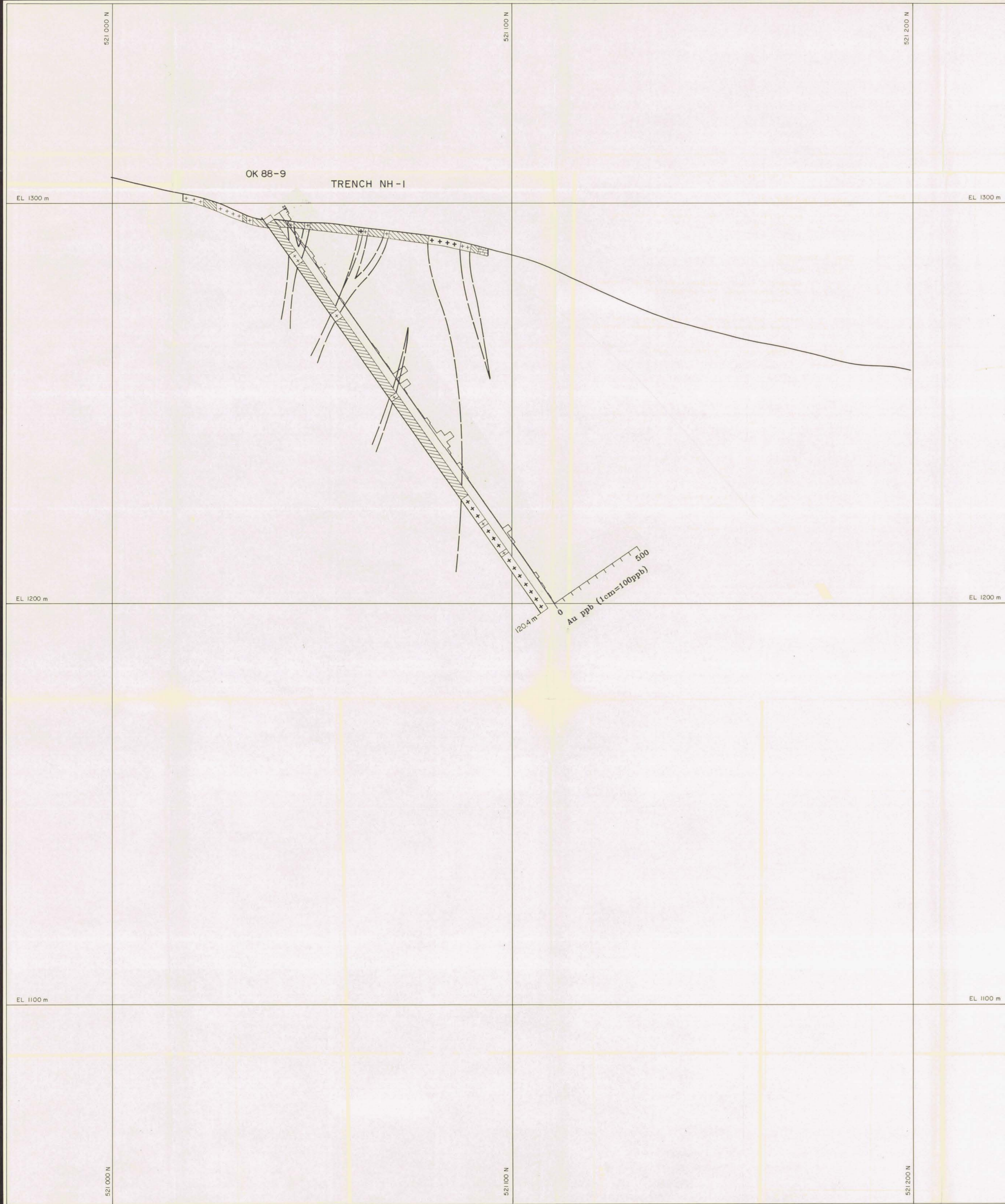
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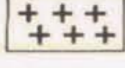
## LITHOLOGY

### TERTIARY


 FELDSPAR PORPHYRY; dykes of granitic (?) composition which may be related to the Coryell intrusions.

### CRETACEOUS

#### NELSON PLUTONIC ROCKS


 GRANODIORITE; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).


### LOWER JURASSIC (?)


 DIORITE DYKE or SILL; medium grained with local strong sericite alteration.

### UPPER TRIASSIC

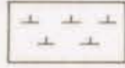
#### NICOLA GROUP

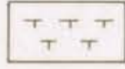
 ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.


 CRYSTAL TUFF; fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.

 SILTSTONE; black, locally calcareous to lightly siliceous.


 HORNFELS; black to medium grey to maroon, fine grained, siliceous.

 FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.

 MEDIUM GRAINED SILICEOUS ROCK; bleached, .1 to .5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.

 SKARN; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.


 MARBLE; light to dark grey, abundant calcite veinlets.


 MASSIVE SULFIDE; dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

#### NOTE:

SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

### SYMBOLS

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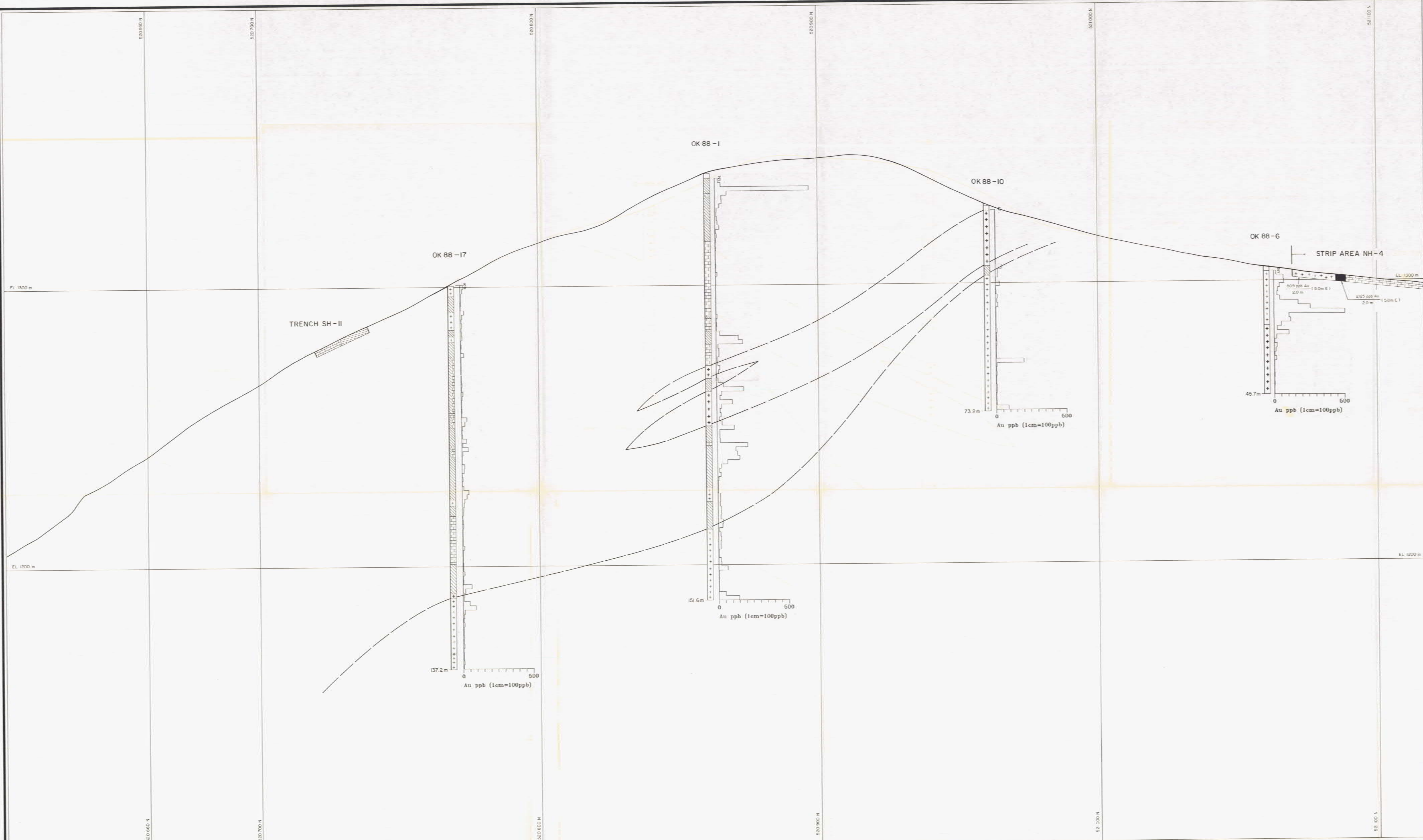
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*W. Jablonski*

PLATE 2



**LITHOLOGY**

- TERTIARY**
- FELDSPAR PORPHYRY, dykes of granitic (?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**
- NELSON PLUTONIC ROCKS**
- GRANODIORITE, medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).
- LOWER JURASSIC (?)**
- DIORITE DYKE or SILL, medium grained with local strong sericite alteration.
- UPPER TRIASSIC**
- NICOLA GROUP**
- ANDESITE to BASALT, dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
  - CRYSTAL TUFF, fine grained, white to light grey siliceous matrix containing 10 to 40% 3 to 1.5 mm feldspar (?) crystals.
  - SILTSTONE, black, locally calcareous to lightly siliceous.
  - HORNFELS, black to medium grey to maroon, fine grained, siliceous.
  - FINE GRAINED SILICEOUS ROCK, bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
  - MEDIUM GRAINED SILICEOUS ROCK, bleached, 1 to 5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
  - SKARN, coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.
  - MARBLE, light to dark grey, abundant calcite veinlets.
  - MASSIVE SULFIDE, dominantly pyrite, pyrrhotite with minor chalcocopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
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Known, Assumed
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Known, Assumed

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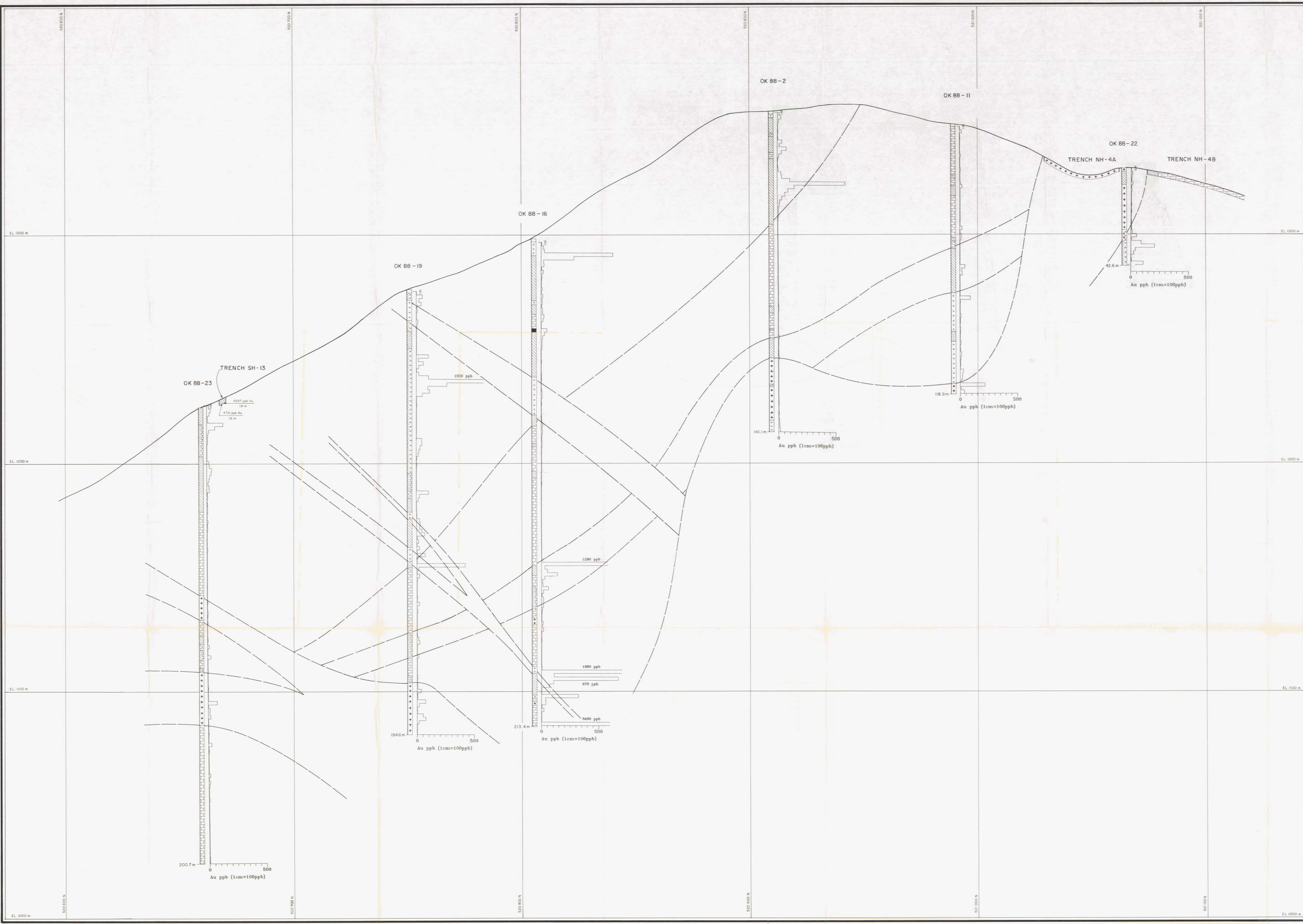
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**LITHOLOGY**

- TERTIARY**
  - FELOSPAR PORPHYRY, dykes of granitic (?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**
  - NELSON PLUTONIC ROCKS
    - GRANDODIORITE, medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FOSB).
- LOWER JURASSIC (?)**
  - DIORITE DYKE or SILL, medium grained with local strong sericite alteration.
- UPPER TRIASSIC**
  - NICOLA GROUP
    - ANDESITE to BASALT, dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
    - CRYSTAL TUFF, fine grained, white to light grey siliceous matrix containing 10 to 40% 3 to 1.5 mm feldspar (?) crystals.
    - SILTSTONE, block, locally calcareous to lightly siliceous.
    - HORNFELDS, block to medium grey to maroon, fine grained, siliceous.
    - FINE GRAINED SILICEOUS ROCK, bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
    - MEDIUM GRAINED SILICEOUS ROCK, bleached, 1 to 5mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
    - SEARLS, coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.
    - MARBLE, light to dark grey, abundant calcite veins.
    - MASSIVE SULFIDE, dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skew.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

**SYMBOLS**

- LITHOLOGICAL CONTACT  
Known, Assumed
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Known, Assumed

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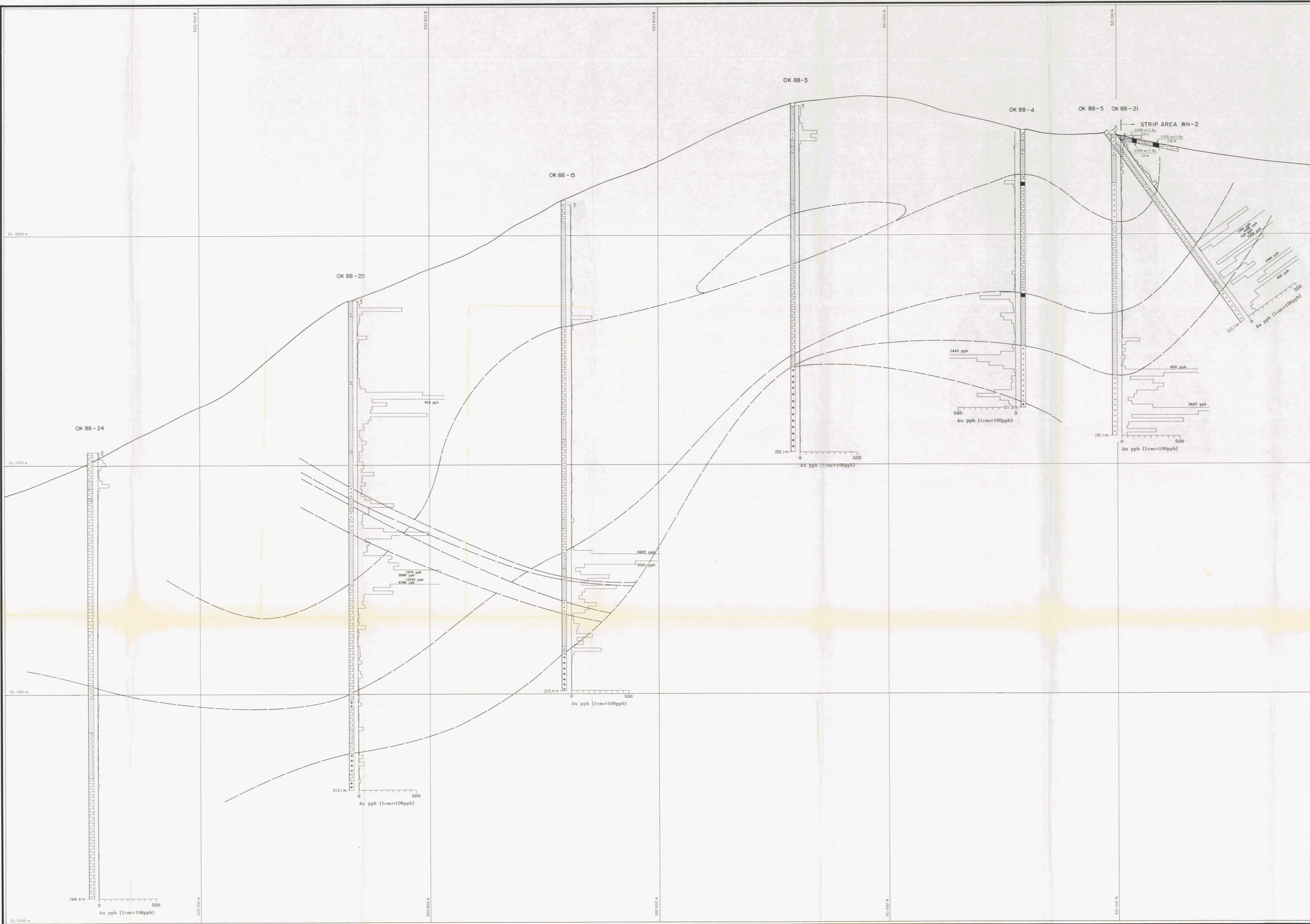
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**LITHOLOGY**

- TERTIARY**
  - FELDSPAR PORPHYRY: dykes of granitic (?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**
  - NELSON PLUTONIC ROCKS
    - GRANODIORITE, medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGB).
- LOWER JURASSIC (?)**
  - DIORITE DYKE or SILL, medium grained with local strong sericite alteration.
- UPPER TRIASSIC**
  - NICOLA GROUP
    - ANDESITE to BASALT, dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
    - CRYSTAL TUFF, fine grained, white to light grey siliceous matrix containing 10 to 40% 3 to 1.5 mm feldspar (?) crystals.
    - SILTSTONE, black, locally calcareous to lightly siliceous.
    - HORNFELS, black to medium grey to maroon, fine grained, siliceous.
    - FINE GRAINED SILICEOUS ROCK, bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
    - MEDIUM GRAINED SILICEOUS ROCK, bleached, 1 to 5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
    - SKARN, coarse grained, predominantly red brown garnet with zircon, local epidote, calcite and wollastonite.
    - MARBLE, light to dark grey, abundant calcite veins.
  - MASSIVE SULFIDE, dominantly pyrite, pyrrhotite with minor chalcopryite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE: SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

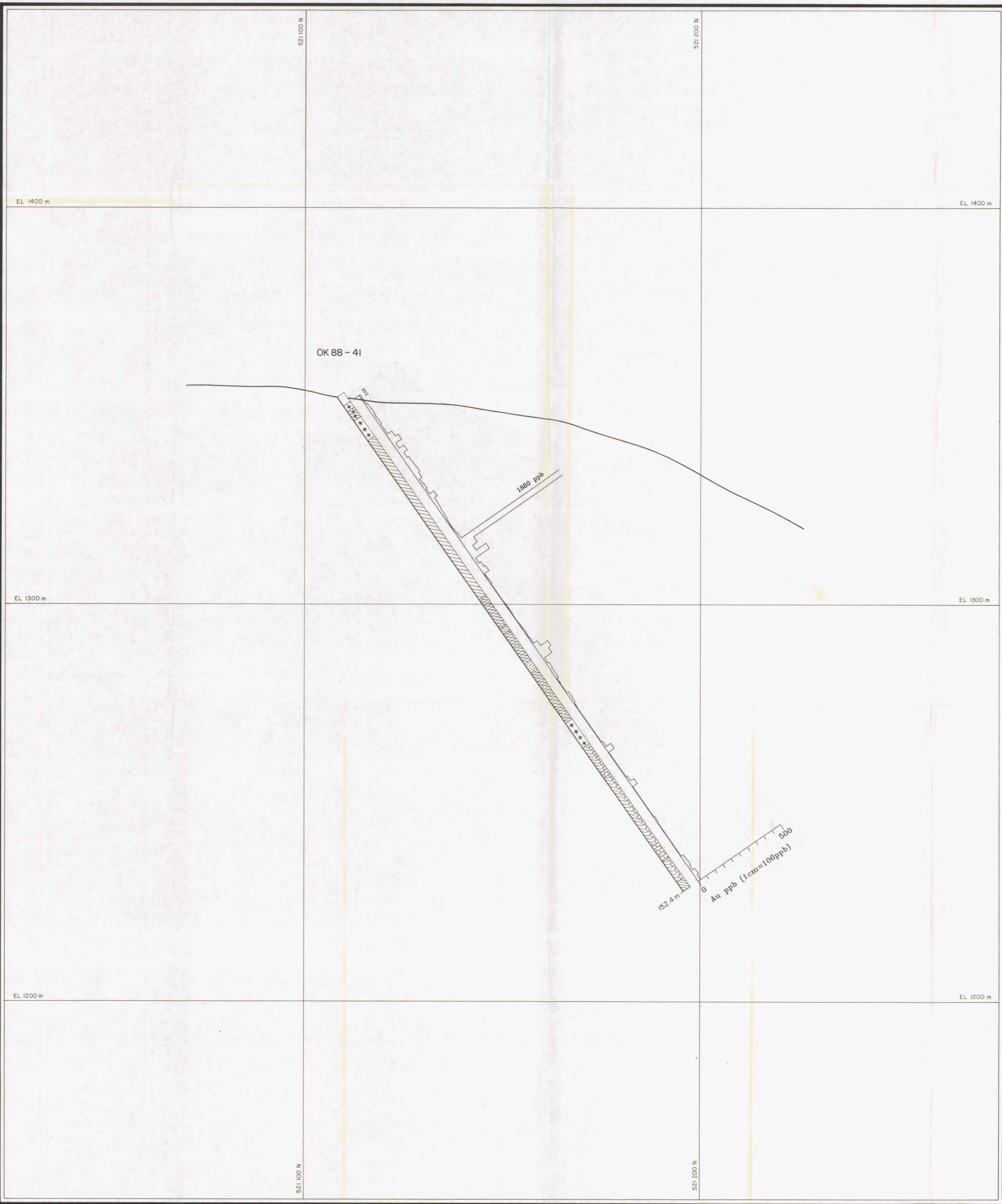
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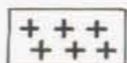
# LITHOLOGY

## TERTIARY

 FELDSPAR PORPHYRY; dykes of granitic(?) composition which may be related to the Coryell intrusions.

## CRETACEOUS

### NELSON PLUTONIC ROCKS

 GRANODIORITE; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).

## LOWER JURASSIC (?)

 DIORITE DYKE or SILL; medium grained with local strong sericite alteration.

## UPPER TRIASSIC


### NICOLA GROUP


 ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.


 CRYSTAL TUFF; fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.

 SILTSTONE; black, locally calcareous to lightly siliceous.

 HORNFELS; black to medium grey to maroon, fine grained, siliceous.

 FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.

 MEDIUM GRAINED SILICEOUS ROCK; bleached, 1 to .5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.

 SKARN; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.

 MARBLE; light to dark grey, abundant calcite veinlets.

 MASSIVE SULFIDE; dominantly pyrite, pyrrhotite with minor chalcocopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

## SYMBOLS

 LITHOLOGICAL CONTACT  
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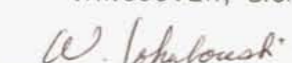



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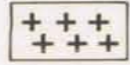
# LITHOLOGY

## TERTIARY

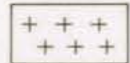
 FELDSPAR PORPHYRY; dykes of granitic(?) composition which may be related to the Coryell intrusions.

## CRETACEOUS

### NELSON PLUTONIC ROCKS

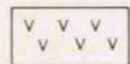
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## LOWER JURASSIC (?)


 DIORITE DYKE or SILL; medium grained with local strong sericite alteration.

## UPPER TRIASSIC


### NICOLA GROUP


 ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.


 CRYSTAL TUFF; fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.

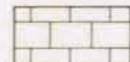
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 FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.

 MEDIUM GRAINED SILICEOUS ROCK; bleached, 1 to 5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.


 SKARN; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.


 MARBLE; light to dark grey, abundant calcite veinlets.

 MASSIVE SULFIDE; dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

## SYMBOLS

 LITHOLOGICAL CONTACT  
Known, Assumed

 FAULT  
Known, Assumed

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,711

Part 2 of 2

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
IRON HORSE AREA

REVERSE CIRCULATION DRILL  
SECTION 521023N

LOOKING NORTH  
SECTION AZIMUTH 90°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

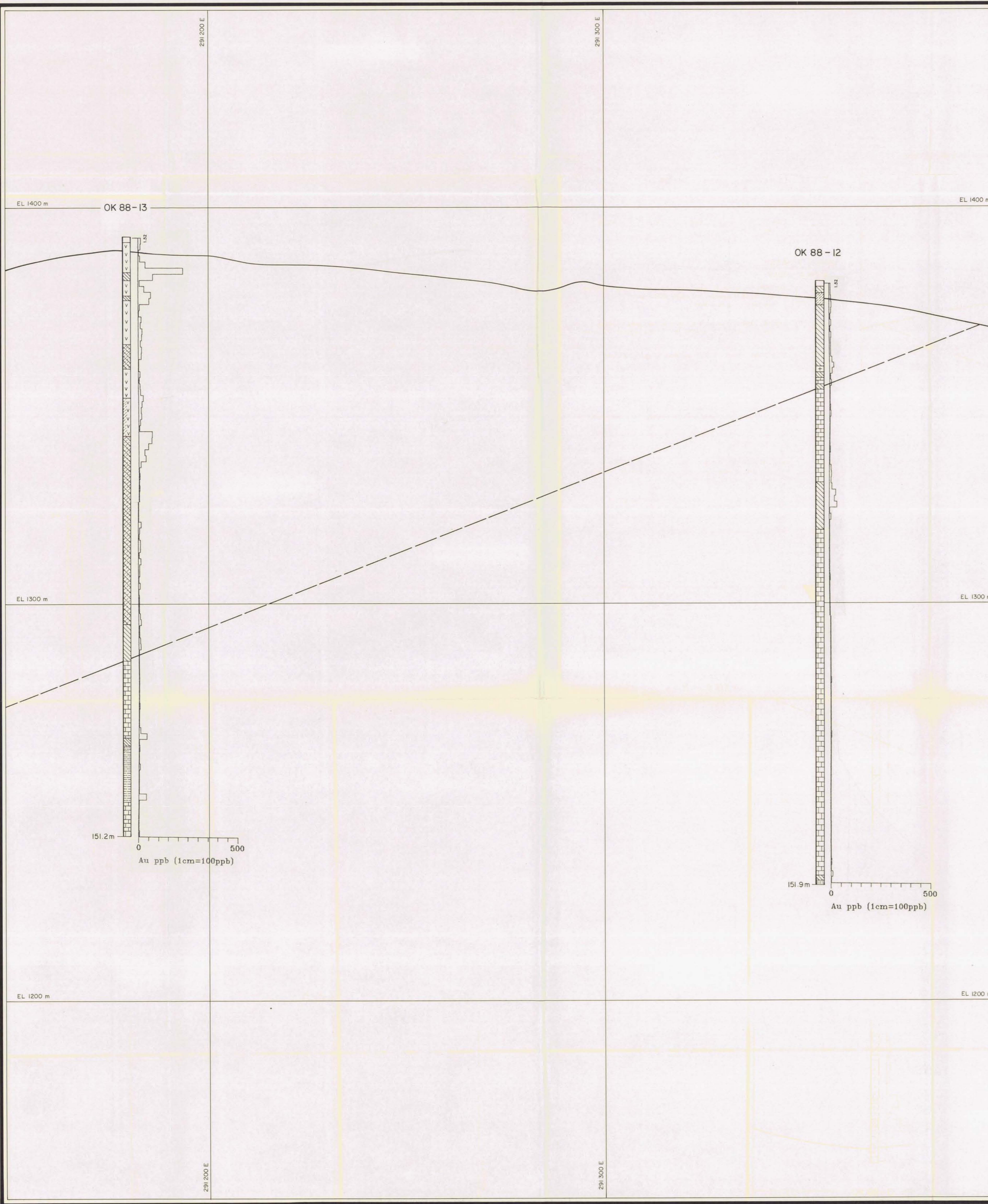
meters 0 5 10 15 20 25 30 35 40 45 50 metres

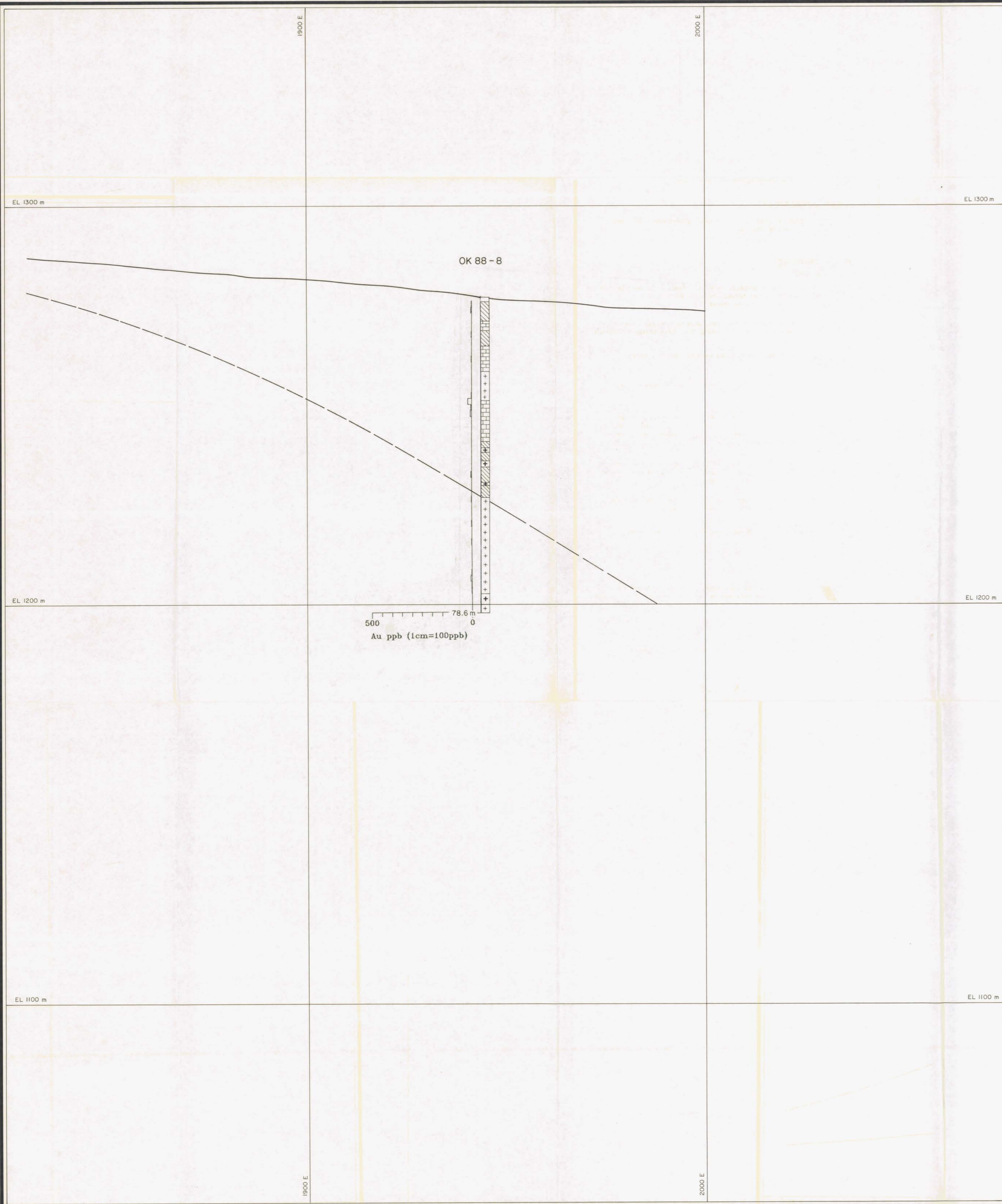
CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988

*W. Johnston*


PLATE 7






# LITHOLOGY

## TERTIARY

 FELDSPAR PORPHYRY; dykes of granitic(?) composition which may be related to the Coryell intrusions.

## CRETACEOUS

### NELSON PLUTONIC ROCKS


 GRANODIORITE; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).

## LOWER JURASSIC (?)

 DIORITE DYKE or SILL; medium grained with local strong sericite alteration.

## UPPER TRIASSIC

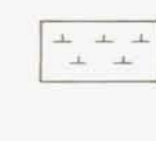
### NICOLA GROUP

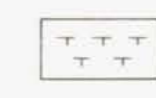
 ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.

 CRYSTAL TUFF; fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.

 SILTSTONE; black, locally calcareous to lightly siliceous.

 HORNFELS; black to medium grey to maroon, fine grained, siliceous.

 FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.

 MEDIUM GRAINED SILICEOUS ROCK; bleached, .1 to .5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.

 SKARN; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.

 MARBLE; light to dark grey, abundant calcite veinlets.

 MASSIVE SULFIDE; dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

## SYMBOLS

 LITHOLOGICAL CONTACT  
Known, Assumed

 FAULT  
Known, Assumed

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**18,711**  
*Part 2 of 2*

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
IRON HORSE AREA

REVERSE CIRCULATION DRILL  
SECTION 521 060 N

LOOKING NORTH  
SECTION AZIMUTH 90°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

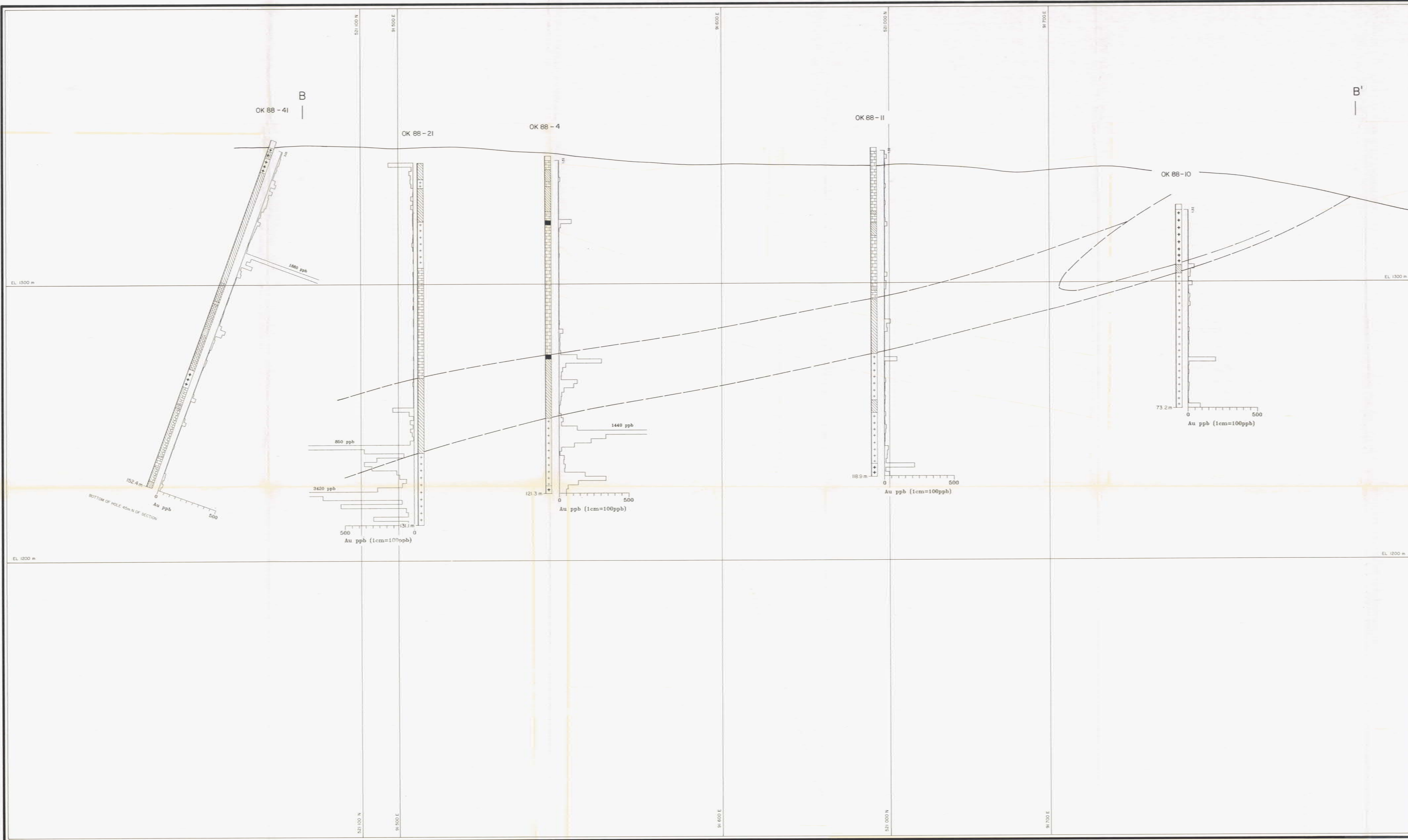
meters 0 5 10 15 20 25 30 35 40 45 50 metres

CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988

*W. Johnston*

PLATE 8



**LITHOLOGY**

- TERTIARY**
  - ★ ★ ★ FELDSPAR PORPHYRY, dykes of granitic(?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**
  - ★ ★ ★ NELSON PLUTONIC ROCKS
    - ★ ★ ★ GRANODIORITE, medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).
- LOWER JURASSIC (?)**
  - ★ ★ ★ DIORITE DYKE or SILL, medium grained with local strong sericite alteration.
- UPPER TRIASSIC**
  - NICOLA GROUP**
    - ★ ★ ★ ANDESITE to BASALT, dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
    - ★ ★ ★ CRYSTAL TUFF, fine grained, white to light grey siliceous matrix containing 10 to 40% 3 to 1.5 mm feldspar (?) crystals.
    - ■ ■ SILTSTONE, black, locally calcareous to lightly siliceous.
    - ■ ■ HORNFELS, black to medium grey to maroon, fine grained, siliceous.
    - ■ ■ FINE GRAINED SILICEOUS ROCK, bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
    - ■ ■ MEDIUM GRAINED SILICEOUS ROCK, bleached, 1 to 5mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
    - ■ ■ SKARN, coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and wollastonite.
    - ■ ■ MARBLE, light to dark grey, abundant calcite veinlets.
    - ■ ■ MASSIVE SULFIDE, dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

**SYMBOLS**

- / — LITHOLOGICAL CONTACT  
Known, Assumed
- / — FAULT  
Known, Assumed

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**18,711**  
*Part 2 of 2*

FAIRFIELD MINERALS LTD.  
OKA PROPERTY  
IRON HORSE AREA

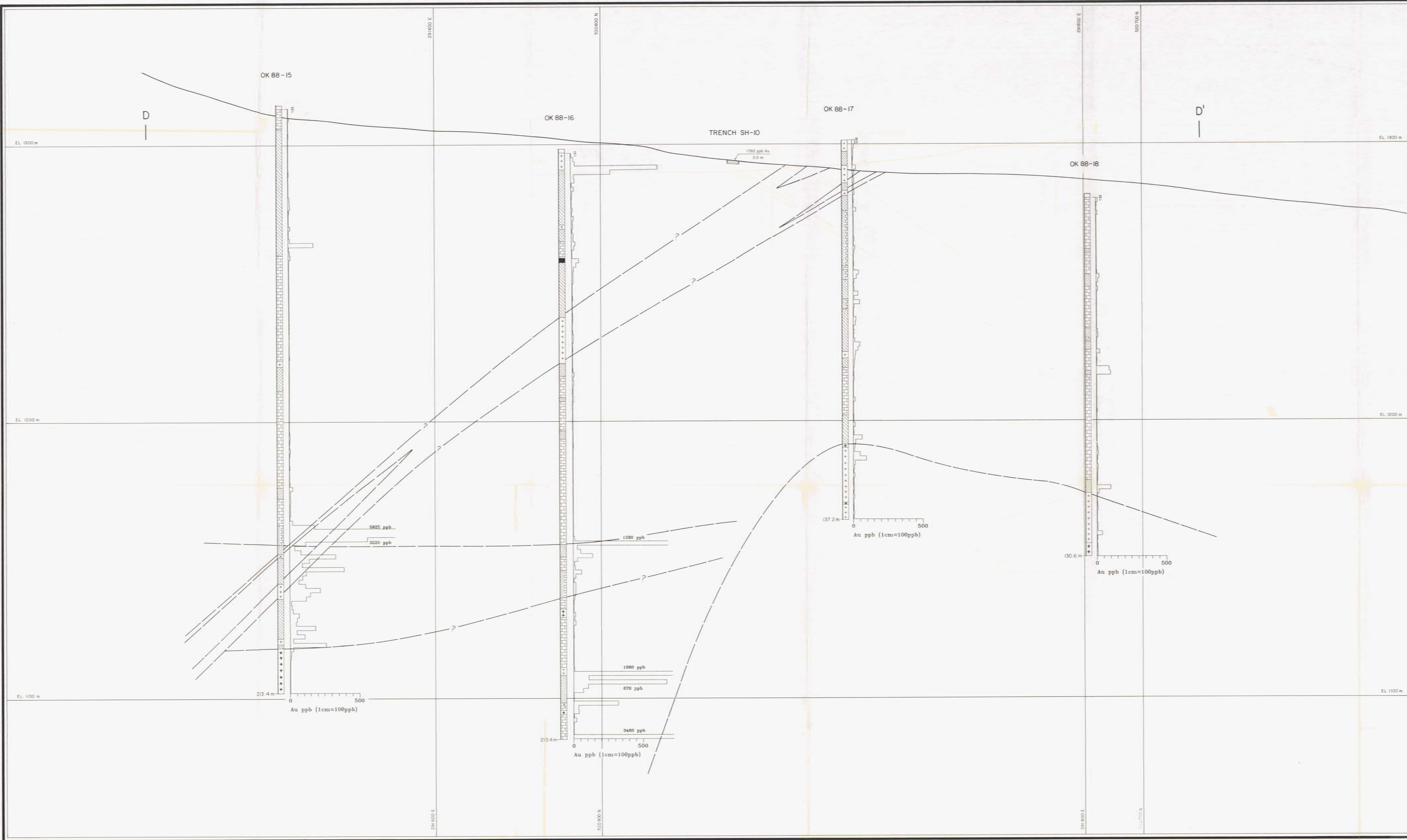
REVERSE CIRCULATION DRILL  
SECTION B - B'  
LOOKING NORTHEAST  
SECTION AZIMUTH 301°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988 *W. Johnston* PLATE 9



LITHOLOGY

- TERTIARY**
- FELDSPAR PORPHYRY, dykes of granitic (?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**
- NELSON PLUTONIC ROCKS**
- GRANDIODORITE, medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red slate (FGSB).
- LOWER JURASSIC (?)**
- DIORITE DYKE or SILL, medium grained with local strong sericite alteration.
- UPPER TRIASSIC**
- NICOLA GROUP**
- ANDESITE to BASALT, dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
  - CRYSTAL TUFF, fine grained, white to light grey siliceous matrix containing 10 to 40% 3 to 1.5 mm feldspar (?) crystals.
  - SILTSTONE, black, locally calcareous to lightly siliceous.
  - HORNFELS, black to medium grey to maroon, fine grained, siliceous.
  - FINE GRAINED SILICEOUS ROCK, bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
  - MEDIUM GRAINED SILICEOUS ROCK, bleached, 1 to 5mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
  - SKARN, coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.
  - MARBLE, light to dark grey, abundant calcite veins.
  - MASSIVE SULFIDE, dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

SYMBOLS

- LITHOLOGICAL CONTACT  
Known, Assumed
- FAULT  
Known, Assumed

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,711  
Part 2 of 2

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
IRON HORSE AREA

REVERSE CIRCULATION DRILL  
SECTION D-D'  
LOOKING NORTHEAST  
SECTION AZIMUTH 301°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

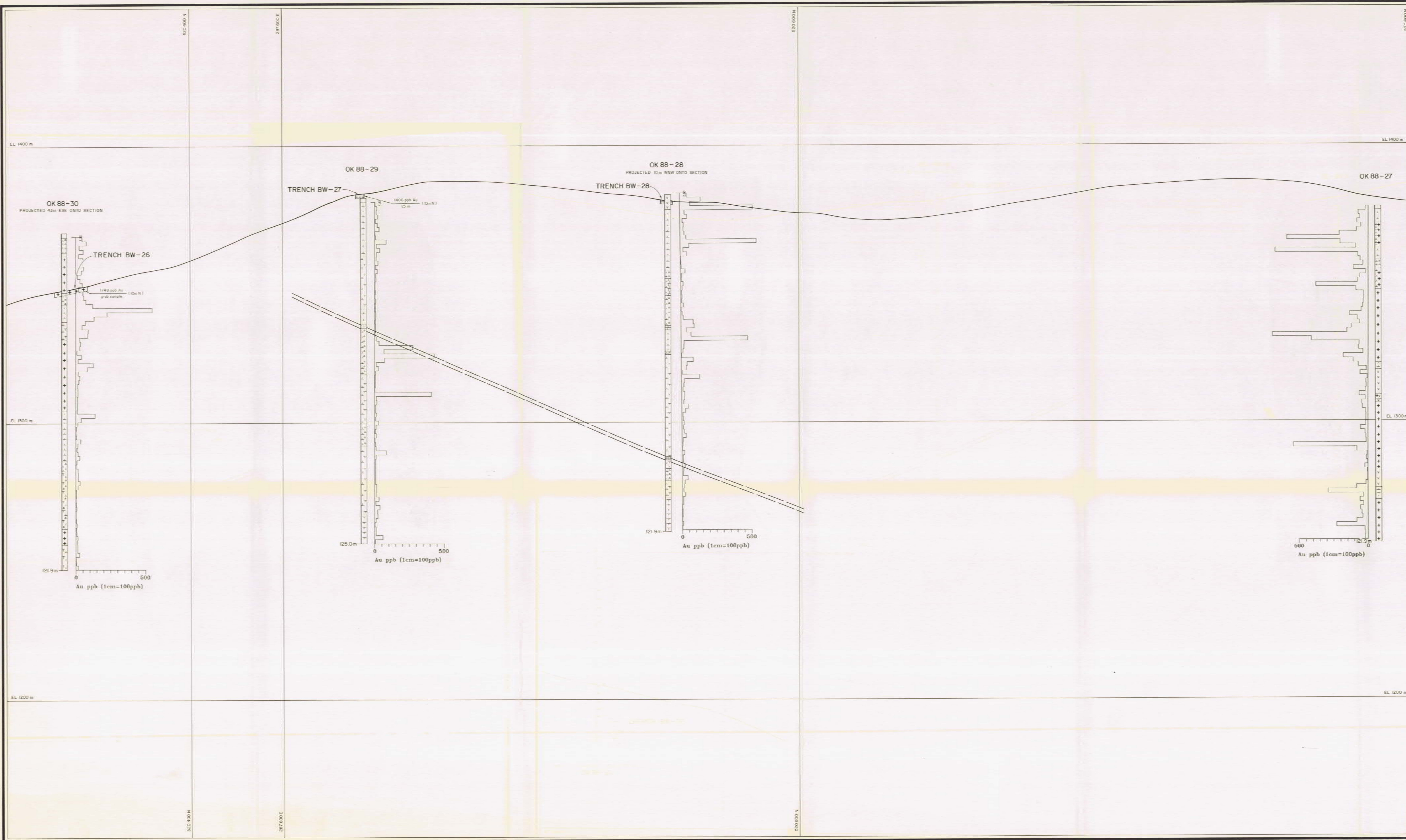


CORDELLERAN ENGINEERING LTD.  
1990-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988

W. J. K. L. O. U. S. T.

PLATE 10



**LITHOLOGY**

- TERTIARY**
- FELDSPAR PORPHYRY; dykes of granitic (?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**
- NELSON PLUTONIC ROCKS
  - GRANODIORITE; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).
- LOWER JURASSIC (?)**
- DIORITE DYKE or SILL; medium grained with local strong sericite alteration.
- UPPER TRIASSIC**
- NICOLA GROUP**
- ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
  - CRYSTAL TUFF; fine grained, white to light grey siliceous matrix containing 10 to 40% 3 to 1.5 mm feldspar (?) crystals.
  - SILTSTONE; black, locally calcareous to lightly siliceous.
  - HDRNFELS; black to medium grey to maroon, fine grained, siliceous.
  - FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
  - MEDIUM GRAINED SILICEOUS ROCK; bleached, 1 to 5mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
  - SKARN; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.
  - MARBLE; light to dark grey, abundant calcite veinlets.
  - MASSIVE SULFIDE; dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

**SYMBOLS**

- LITHOLOGICAL CONTACT  
Known, Assumed
- FAULT  
Known, Assumed

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**18,711**  
*Part 2 of 2*

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
BOLIVAR WEST AREA

REVERSE CIRCULATION DRILL  
SECTION A - A'

LOOKING NORTHWEST  
SECTION AZIMUTH 26°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500



CORDILLERAN ENGINEERING LTD.  
1980-1955 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988

*W. Johnson*

PLATE II

LITHOLOGY

- TERTIARY**
- FELDSPAR PORPHYRY, dykes of granitic (?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**  
NELSON PLUTONIC ROCKS
- GRANODIORITE, medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FQSB).
- LOWER JURASSIC (?)**
- DIORITE DYKE or SILL, medium grained with local strong sericite alteration.
- UPPER TRIASSIC**  
NICOLA GROUP
- ANDESITE to BASALT, dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
  - CRYSTAL TUFF, fine grained, white to light grey siliceous matrix containing 10 to 40% 3 to 1.5mm feldspar (?) crystals.
  - SILTSTONE, black, locally calcareous to lightly siliceous.
  - HORNFELS, black to medium grey to maroon, fine grained, siliceous.
  - FINE GRAINED SILICEOUS ROCK, bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
  - MEDIUM GRAINED SILICEOUS ROCK, bleached, 1 to 5mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
  - SKARN, coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.
  - MARBLE, light to dark grey, abundant calcite veinlets.
  - MASSIVE SULFIDE, dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

SYMBOLS

- LITHOLOGICAL CONTACT  
Known, Assumed
- FAULT  
Known, Assumed

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,711  
Part 2 of 2

FAIRFIELD MINERALS LTD.  
OKA PROPERTY  
BOLIVAR WEST AREA

REVERSE CIRCULATION DRILL  
SECTION B - B'

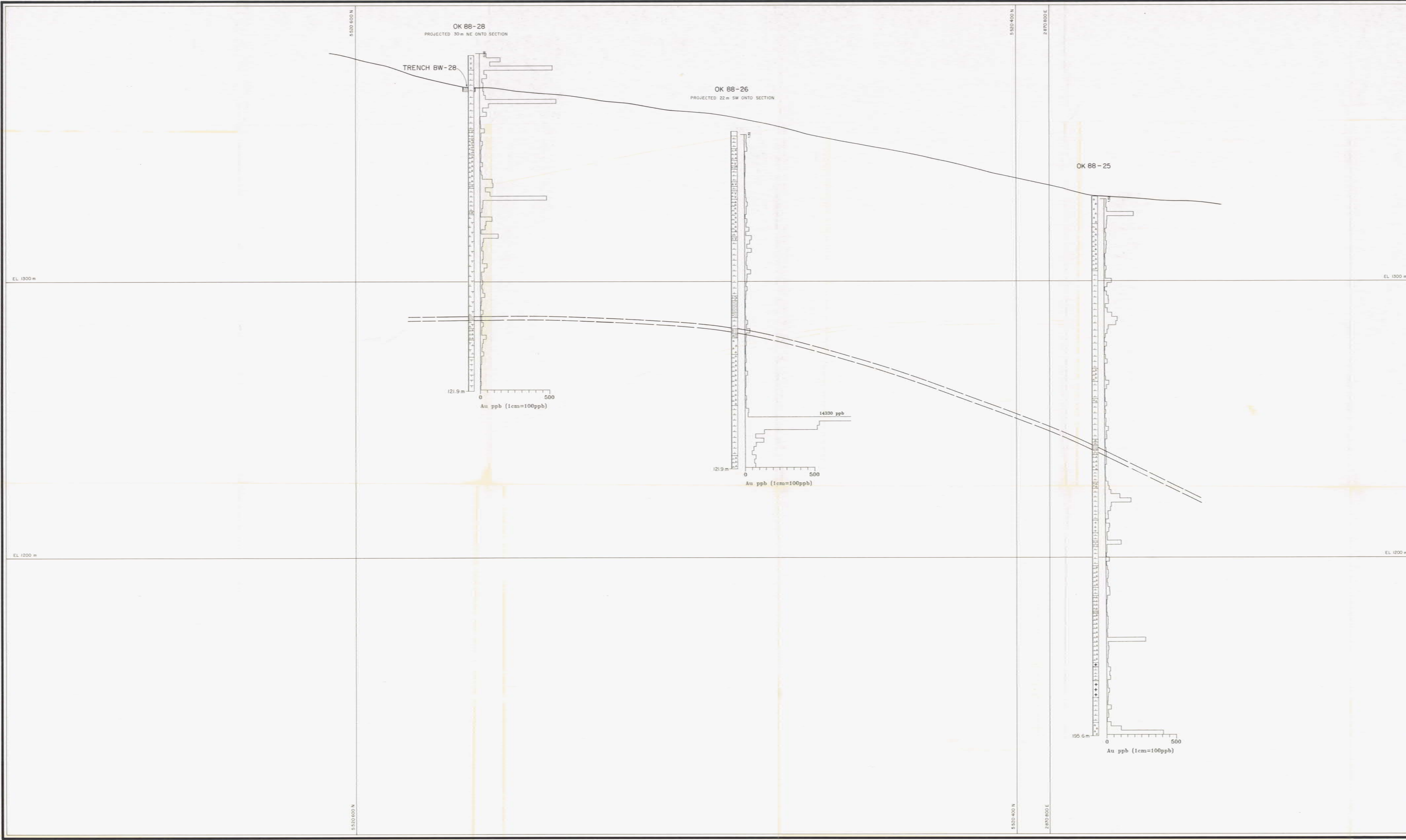
LOOKING NORTHEAST  
SECTION AZIMUTH 150°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9


SEPTEMBER 1988 *W. Johnson* PLATE 12





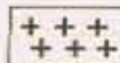
# LITHOLOGY

## TERTIARY

 FELDSPAR PORPHYRY; dykes of granitic(?) composition which may be related to the Coryell intrusions.

## CRETACEOUS

### NELSON PLUTONIC ROCKS


 GRANODIORITE; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).


## LOWER JURASSIC (?)


 DIORITE DYKE or SILL; medium grained with local strong sericite alteration.

## UPPER TRIASSIC

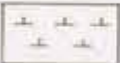
### NICOLA GROUP

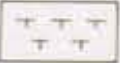
 ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.


 CRYSTAL TUFF; fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.

 SILTSTONE; black, locally calcareous to lightly siliceous.


 HORNFELS; black to medium grey to maroon, fine grained, siliceous.

 FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.

 MEDIUM GRAINED SILICEOUS ROCK; bleached, 1 to .5mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.

 SKARN; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.


 MARBLE; light to dark grey, abundant calcite veinlets.

 MASSIVE SULFIDE; dominantly pyrite, pyrrhotite with minor chalcocopyrite and sphalerite. Commonly contains 10 to 30% skarn.

### NOTE:

SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

## SYMBOLS

 LITHOLOGICAL CONTACT  
Known, Assumed

 FAULT  
Known, Assumed

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 18,711

## Part 2 of 2

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
BOLIVAR EAST AREA

REVERSE CIRCULATION DRILL  
SECTION 520 622 N

LOOKING NORTH  
SECTION AZIMUTH 090°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

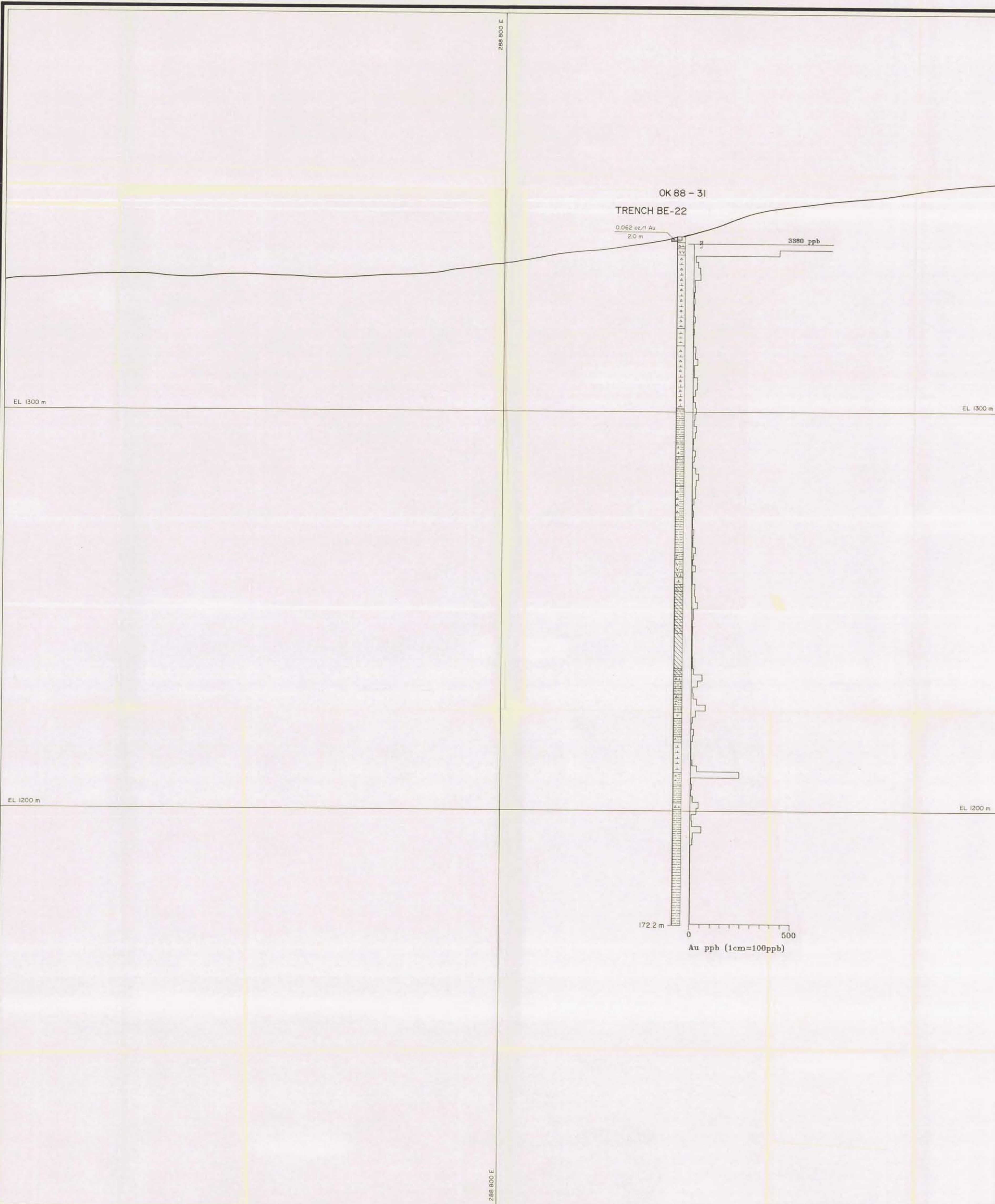
metres 0 5 10 15 20 25 30 35 40 45 50 metres

CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988

*W. Johnston*

PLATE 13



# LITHOLOGY

## TERTIARY

FELDSPAR PORPHYRY; dykes of granitic (?) composition which may be related to the Coryell intrusions.

## CRETACEOUS

### NELSON PLUTONIC ROCKS

GRANODIORITE; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).

## LOWER JURASSIC (?)

DIORITE DYKE or SILL; medium grained with local strong sericite alteration.

## UPPER TRIASSIC

### NICOLA GROUP

ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.

CRYSTAL TUFF; fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.

SILTSTONE; black, locally calcareous to lightly siliceous.

HORNFELS; black to medium grey to maroon, fine grained, siliceous.

FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.

MEDIUM GRAINED SILICEOUS ROCK; bleached, .1 to .5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.

SKARN; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.

MARBLE; light to dark grey, abundant calcite veinlets.

MASSIVE SULFIDE; dominantly pyrite, pyrrhotite with minor chalcocopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

## SYMBOLS

LITHOLOGICAL CONTACT  
Known, Assumed

FAULT  
Known, Assumed

## GEOLOGICAL BRANCH ASSESSMENT REPORT

# 18,711

## Part 2 of 2

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
BOLIVAR EAST AREA

REVERSE CIRCULATION DRILL  
SECTION C-C'

LOOKING NORTHEAST  
SECTION AZIMUTH 136°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

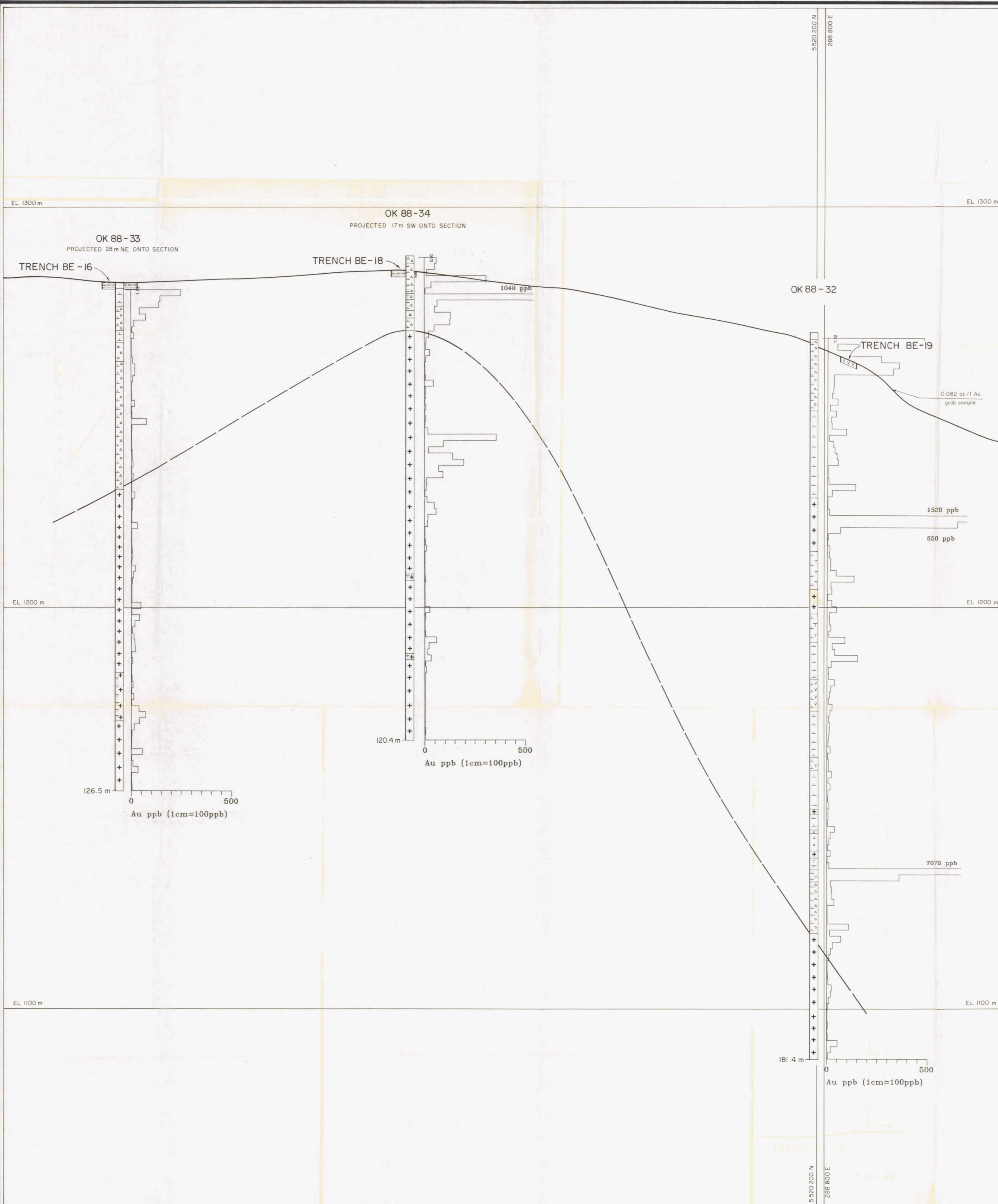
0 5 10 15 20 25 30 35 40 45 50 metres

CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988


*W. Johnston*

PLATE 14



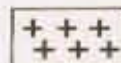
# LITHOLOGY

## TERTIARY



**FELDSPAR PORPHYRY**; dykes of granitic(?) composition which may be related to the Coryell intrusions.

## CRETACEOUS

### NELSON PLUTONIC ROCKS



**GRANODIORITE**; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).


## LOWER JURASSIC (?)



**DIORITE DYKE or SILL**; medium grained with local strong sericite alteration.


## UPPER TRIASSIC


### NICOLA GROUP

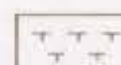

**ANDESITE to BASALT**; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.



**CRYSTAL TUFF**; fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.

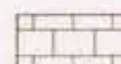

**SILTSTONE**; black, locally calcareous to lightly siliceous.



**HORNFELS**; black to medium grey to maroon, fine grained, siliceous.


**FINE GRAINED SILICEOUS ROCK**; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.


**MEDIUM GRAINED SILICEOUS ROCK**; bleached, 1 to .5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.


**SKARN**; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.


**MARBLE**; light to dark grey, abundant calcite veinlets.


**MASSIVE SULFIDE**; dominantly pyrite, pyrrhotite with minor chalcocopyrite and sphalerite. Commonly contains 10 to 30% skarn.

## NOTE

SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

## SYMBOLS


**LITHOLOGICAL CONTACT**  
Known, Assumed


**FAULT**  
Known, Assumed

**GEOLOGICAL BRANCH**  
**MINES AND TECHNICAL SERVICES**  
**ASSESSMENT REPORT**

# 18,711

## Part 2 of 2

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
BOLIVAR EAST AREA

REVERSE CIRCULATION DRILL  
SECTION D - D'

LOOKING NORTH - NORTHWEST  
SECTION AZIMUTH 250°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

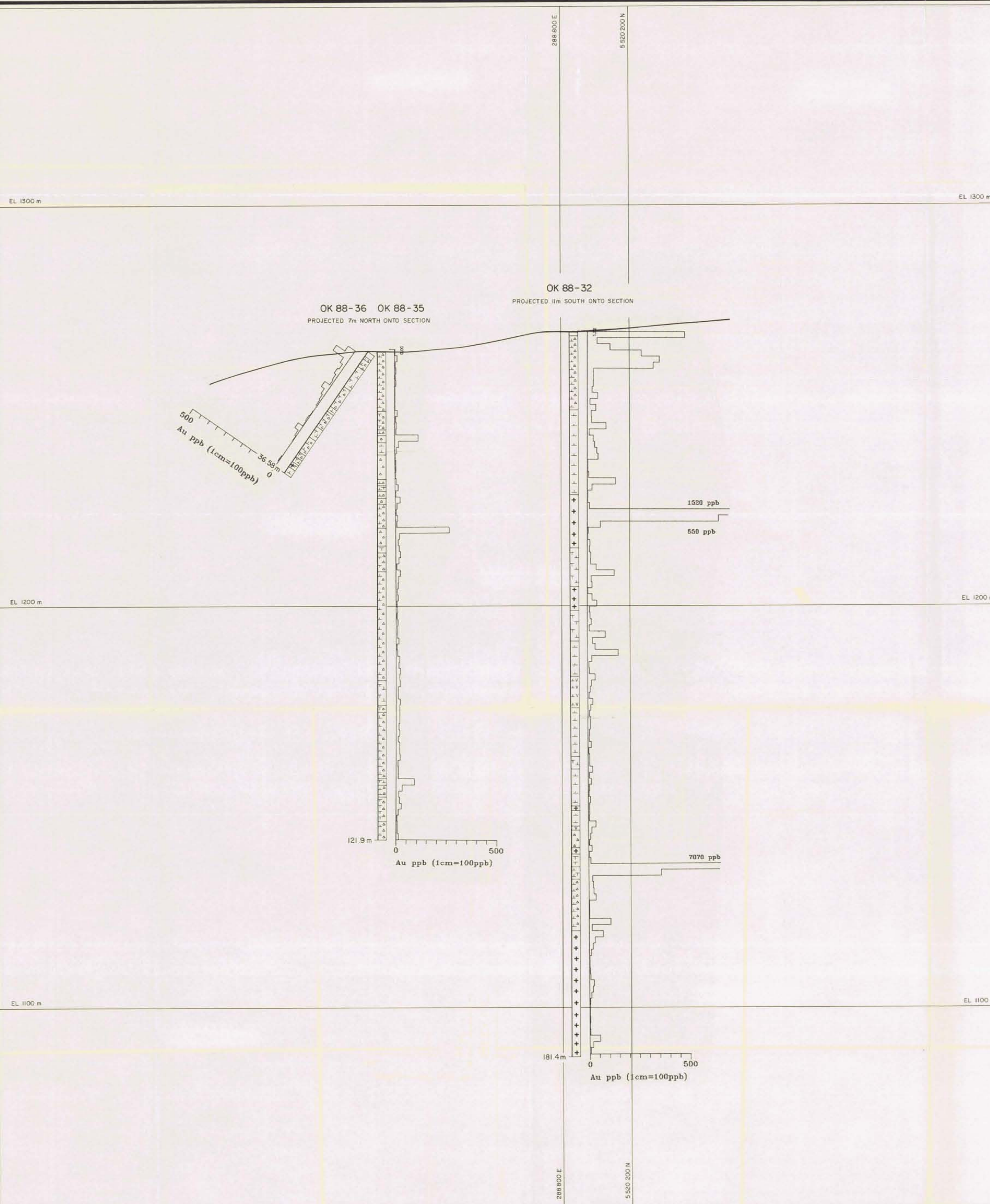
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CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988


*W. Schubert*

PLATE 15



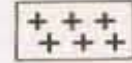
# LITHOLOGY

## TERTIARY


 FELDSPAR PORPHYRY, dykes of granitic(?) composition which may be related to the Coryell intrusions.

## CRETACEOUS

### NELSON PLUTONIC ROCKS


 GRANODIORITE, medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).


## LOWER JURASSIC (?)

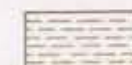
 DIORITE DYKE or SILL, medium grained with local strong sericite alteration.

## UPPER TRIASSIC


### NICOLA GROUP


 ANDESITE to BASALT, dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.


 CRYSTAL TUFF, fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.

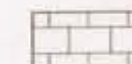
 SILTSTONE, black, locally calcareous to lightly siliceous.

 HORNFELS, black to medium grey to maroon, fine grained, siliceous.

 FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.

 MEDIUM GRAINED SILICEOUS ROCK; bleached, 1 to .5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.

 SKARN, coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.


 MARBLE, light to dark grey, abundant calcite veinlets.


 MASSIVE SULFIDE, dominantly pyrite, pyrrhotite with minor chalcocopyrite and sphalerite. Commonly contains 10 to 30% skarn.

## NOTE:

SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

## SYMBOLS

 LITHOLOGICAL CONTACT  
Known, Assumed

 FAULT  
Known, Assumed

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,711

Part 2 of 2

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
BOLIVAR ROAD AREA

REVERSE CIRCULATION DRILL  
SECTION 520 683 N

LOOKING NORTH  
SECTION AZIMUTH 090°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

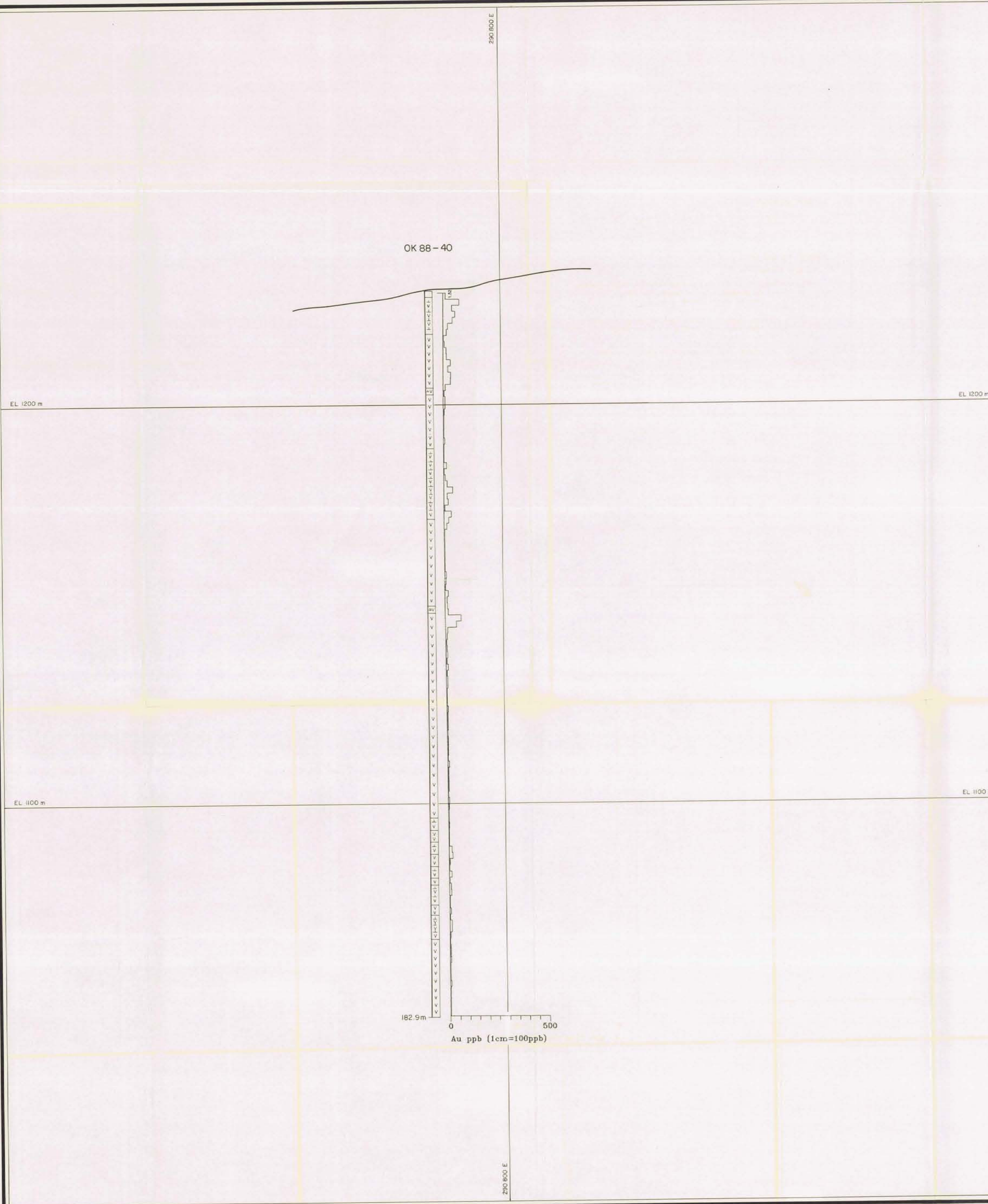
0 5 10 15 20 25 30 35 40 45 50 metres

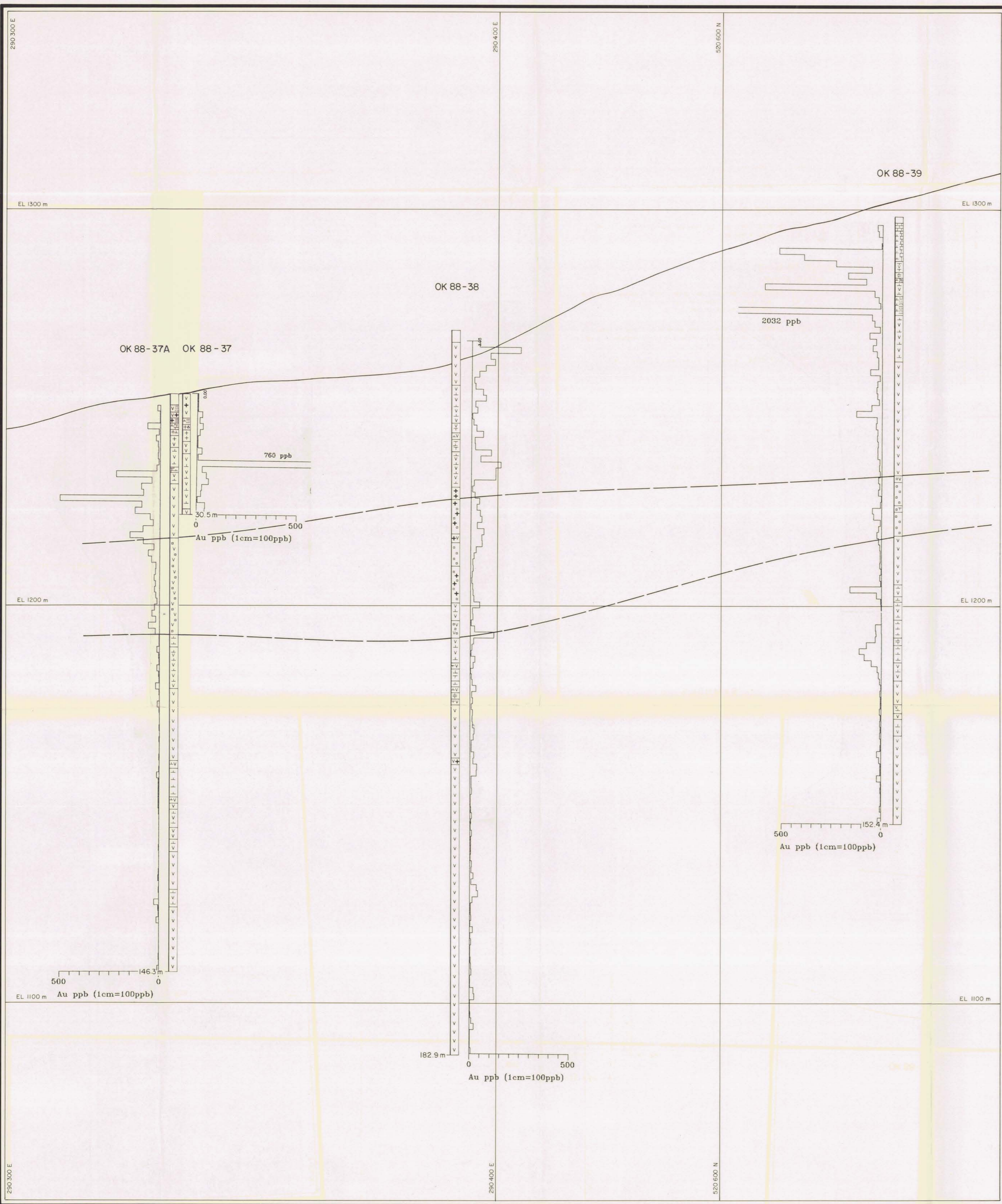
CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988

*W. Johnson*

PLATE 16





LITHOLOGY

- TERTIARY**
- FELDSPAR PORPHYRY; dykes of granitic (?) composition which may be related to the Coryell intrusions.
- CRETACEOUS**
- NELSON PLUTONIC ROCKS
- GRANODIORITE; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).
- LOWER JURASSIC (?)**
- DIORITE DYKE or SILL; medium grained with local strong sericite alteration.
- UPPER TRIASSIC**
- NICOLA GROUP
- ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.
  - CRYSTAL TUFF; fine grained, white to light grey siliceous matrix containing 10 to 40% .3 to 1.5 mm feldspar (?) crystals.
  - SILTSTONE; black, locally calcareous to lightly siliceous.
  - HORNFELS; black to medium grey to maroon, fine grained, siliceous.
  - FINE GRAINED SILICEOUS ROCK; bleached, very fine grained rock of undefined origin, possibly fine pyroclasts or bleached, silicified sediment. Noted in surface exposure interbedded with siltstone.
  - MEDIUM GRAINED SILICEOUS ROCK; bleached, 1 to 5 mm grain size, of undefined origin, possibly a fine pyroclastic or bleached silicified sediment.
  - SKARN; coarse grained, predominantly red brown garnet with pyroxene, local epidote, calcite and Wollastonite.
  - MARBLE; light to dark grey, abundant calcite veinlets.
  - MASSIVE SULFIDE; dominantly pyrite, pyrrhotite with minor chalcopyrite and sphalerite. Commonly contains 10 to 30% skarn.

NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

SYMBOLS

- LITHOLOGICAL CONTACT  
Known, Assumed
- FAULT  
Known, Assumed

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

18,711

Part 2 of 2

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
BOLIVAR ROAD AREA

REVERSE CIRCULATION DRILL  
SECTION A-A'

LOOKING NORTHWEST  
SECTION AZIMUTH 56°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500



CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9


SEPTEMBER 1988

*W. Johnson*

PLATE 17

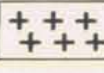
# LITHOLOGY

## TERTIARY

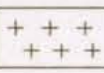
 FELDSPAR PORPHYRY; dykes of granitic(?) composition which may be related to the Coryell intrusions.

## CRETACEOUS

### NELSON PLUTONIC ROCKS


 GRANODIORITE; medium to coarse grained, local moderate to strong quartz and sericite alteration occasionally bleached and containing fine red biotite (FGSB).


## LOWER JURASSIC (?)


 DIORITE DYKE or SILL; medium grained with local strong sericite alteration.


## UPPER TRIASSIC


### NICOLA GROUP


 ANDESITE to BASALT; dark green, finely to coarsely crystalline with abundant feldspar and augite phenocrysts. Commonly chlorite altered.


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NOTE:  
SYMBOLS OF INTERBEDDED LITHOLOGIES ARE SUPERIMPOSED.

## SYMBOLS

 LITHOLOGICAL CONTACT  
Known, Assumed

 FAULT  
Known, Assumed

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 18,711

## Part 2 of 2

FAIRFIELD MINERALS LTD.

OKA PROPERTY  
CAP AREA

REVERSE CIRCULATION DRILL  
SECTION A-A'

LOOKING WEST-NORTHWEST  
SECTION AZIMUTH 030°

OSOYOOS MINING DIVISION, BRITISH COLUMBIA  
NTS 82E/13W

Scale = 1:500

metres 0 5 10 15 20 25 30 35 40 45 50 metres

CORDILLERAN ENGINEERING LTD.  
1980-1055 W. HASTINGS STREET  
VANCOUVER, B.C. V6E 2E9

SEPTEMBER 1988

*W. Johnson*

PLATE 18

