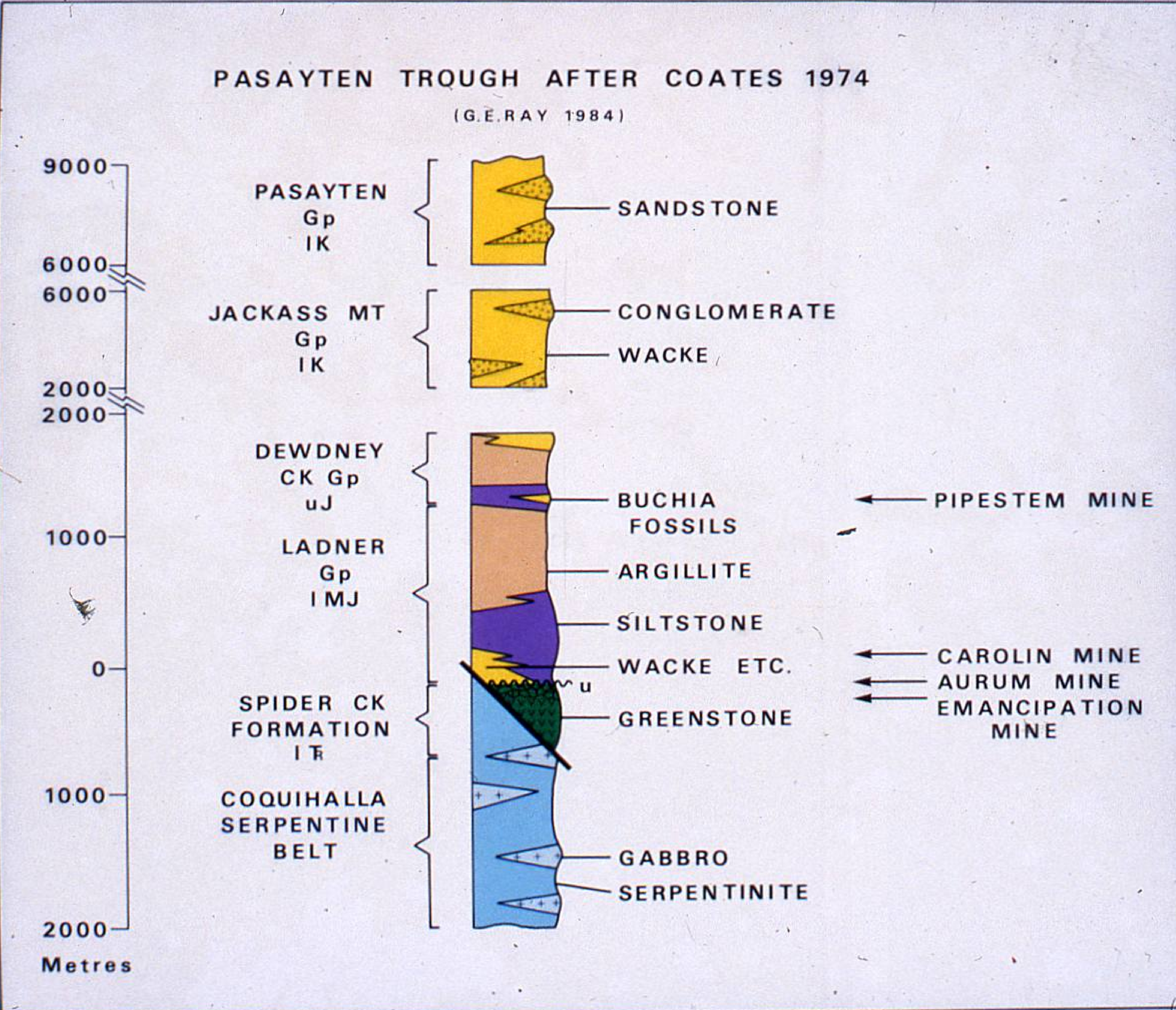
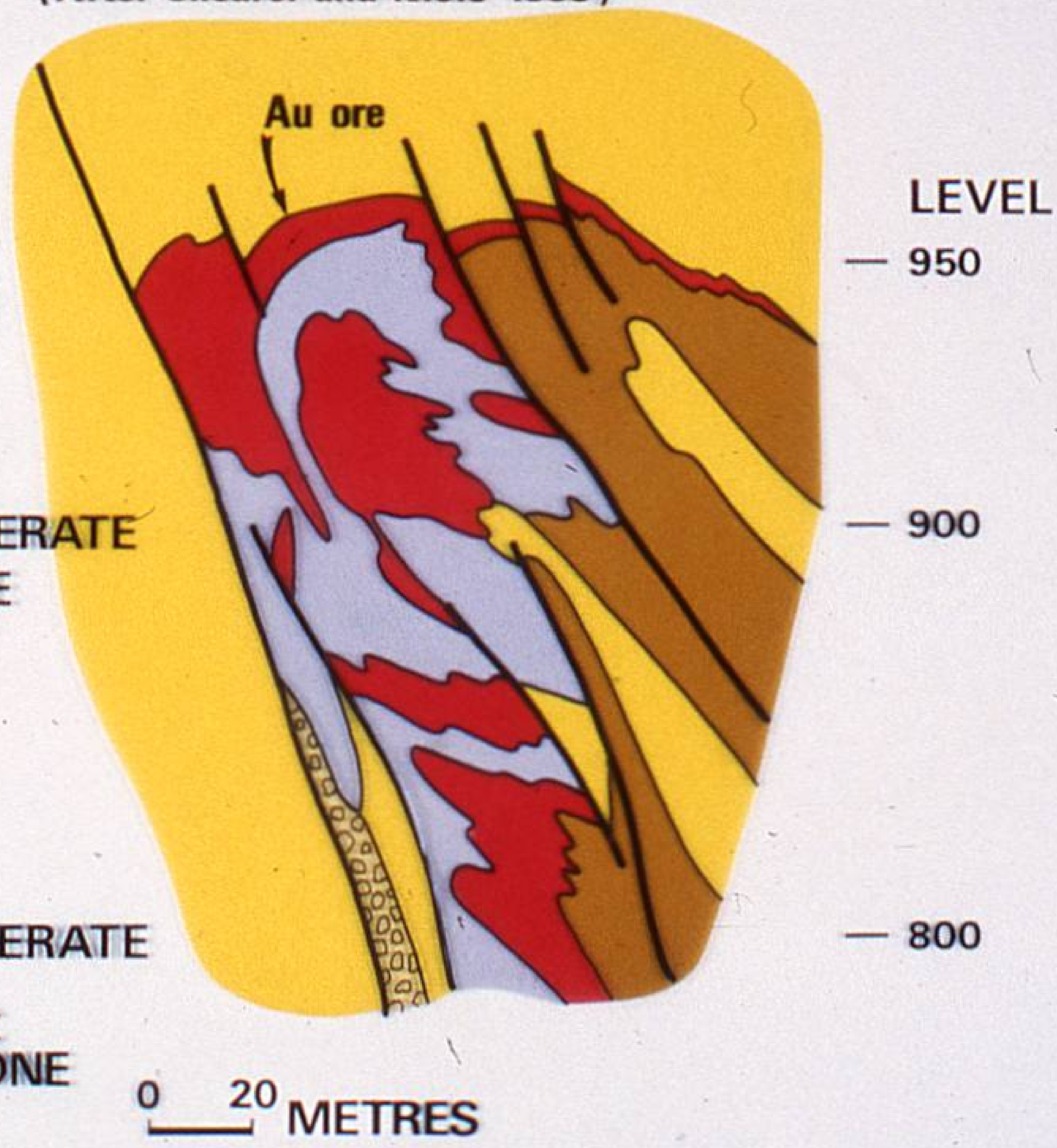
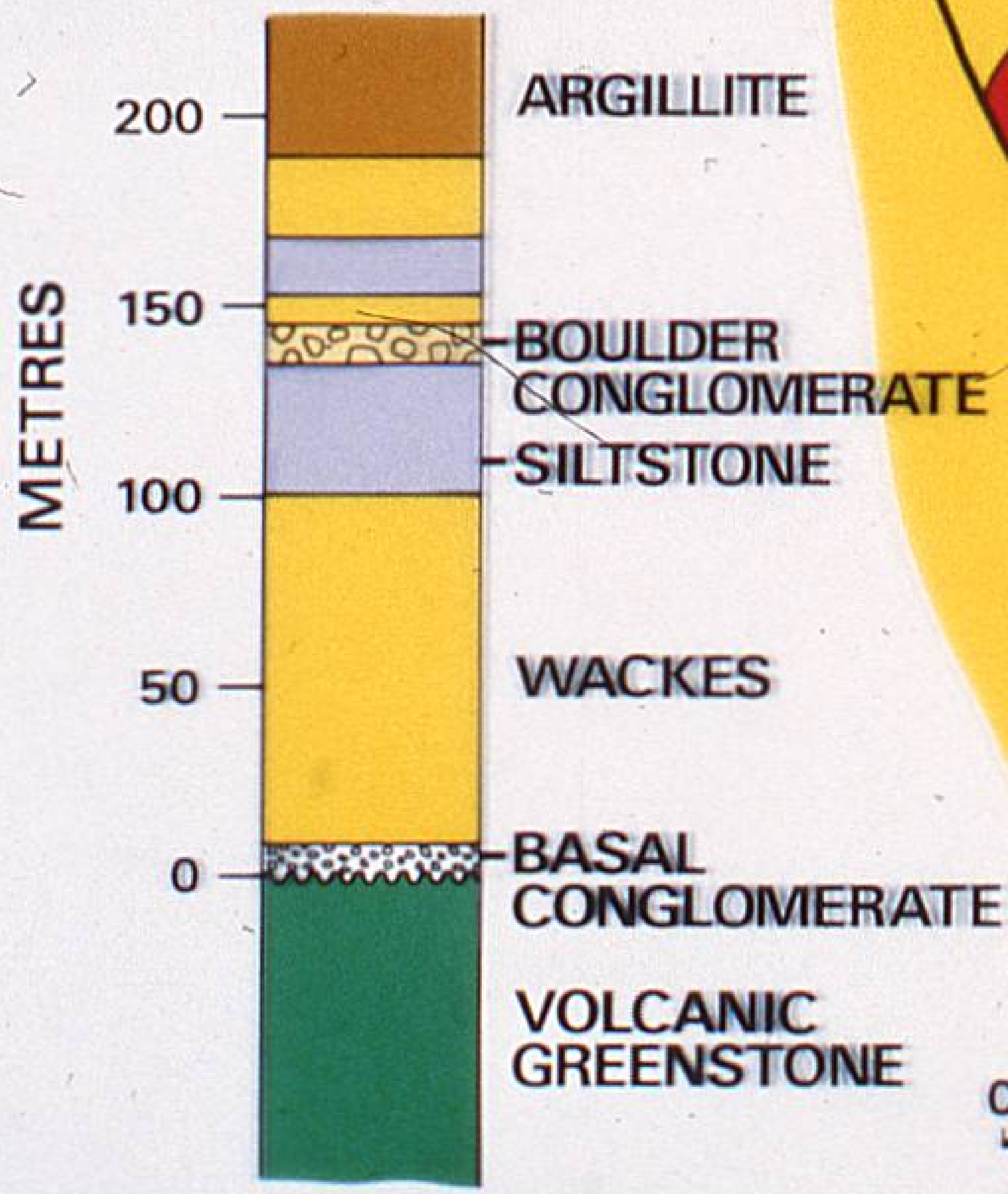

PASAYTEN TROUGH AFTER COATES 1974
(G.E.RAY 1984)
9000
6000
6000
2000
2000
1000
0
1000
2000
Metres
PASAYTEN Gp lK
JACKASS MT Gp lK
DEWDNEY CK Gp uJ
LADNER Gp lMJ
SPIDER CK FORMATION lTr
COQUIHALLA SERPENTINE BELT
SANDSTONE
CONGLOMERATE
WACKE
BUCHIA FOSSILS
ARGILLITE
SILTSTONE
WACKE ETC.
u
GREENSTONE
GABBRO
SERPENTINITE
PIPESTEM MINE
CAROLIN MINE
AURUM MINE
EMANCIPATION MINE

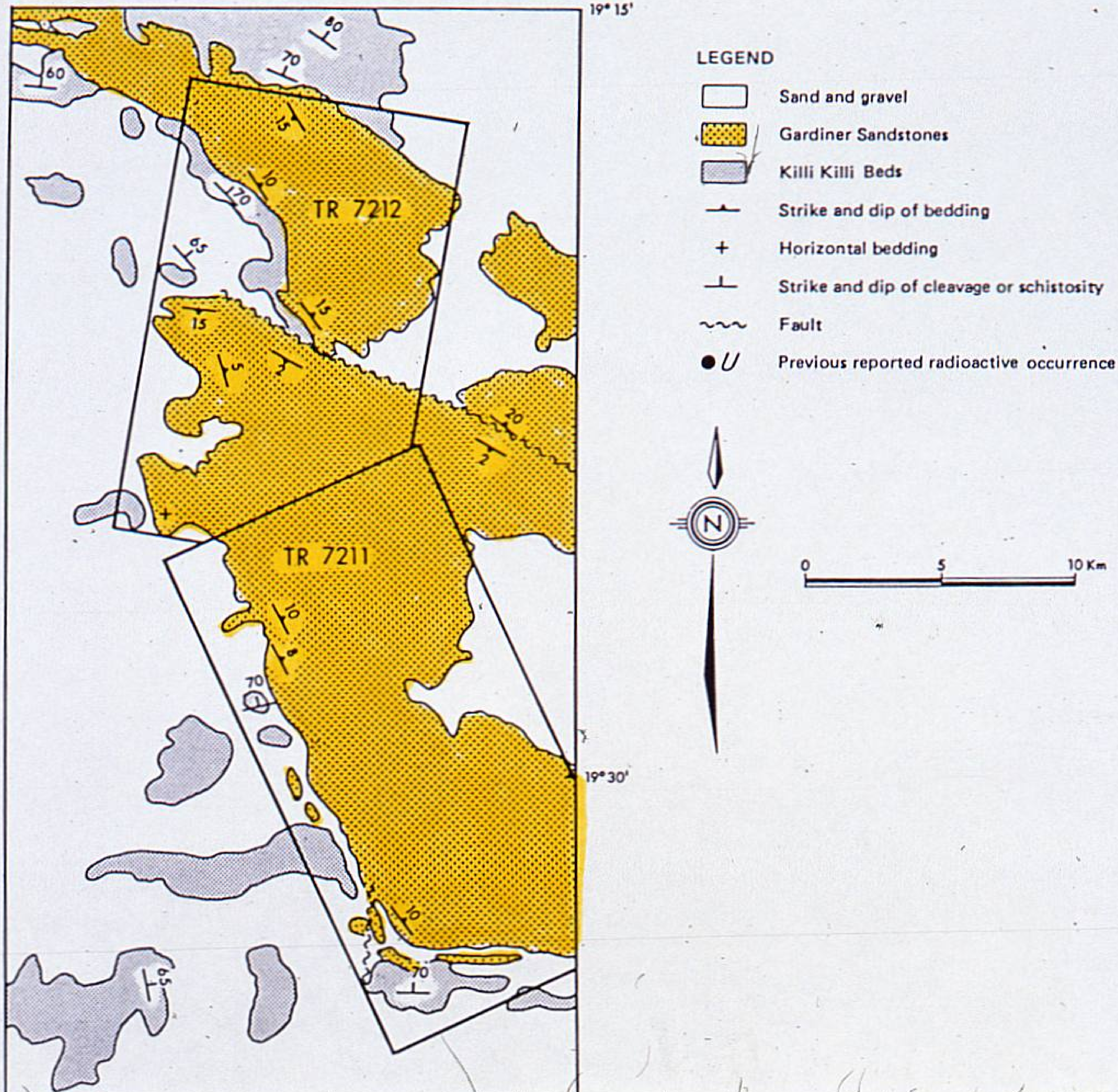
VERTICAL CROSS-SECTION
CAROLIN MINE 766N (looking north)
(After Shearer and Niels 1983)



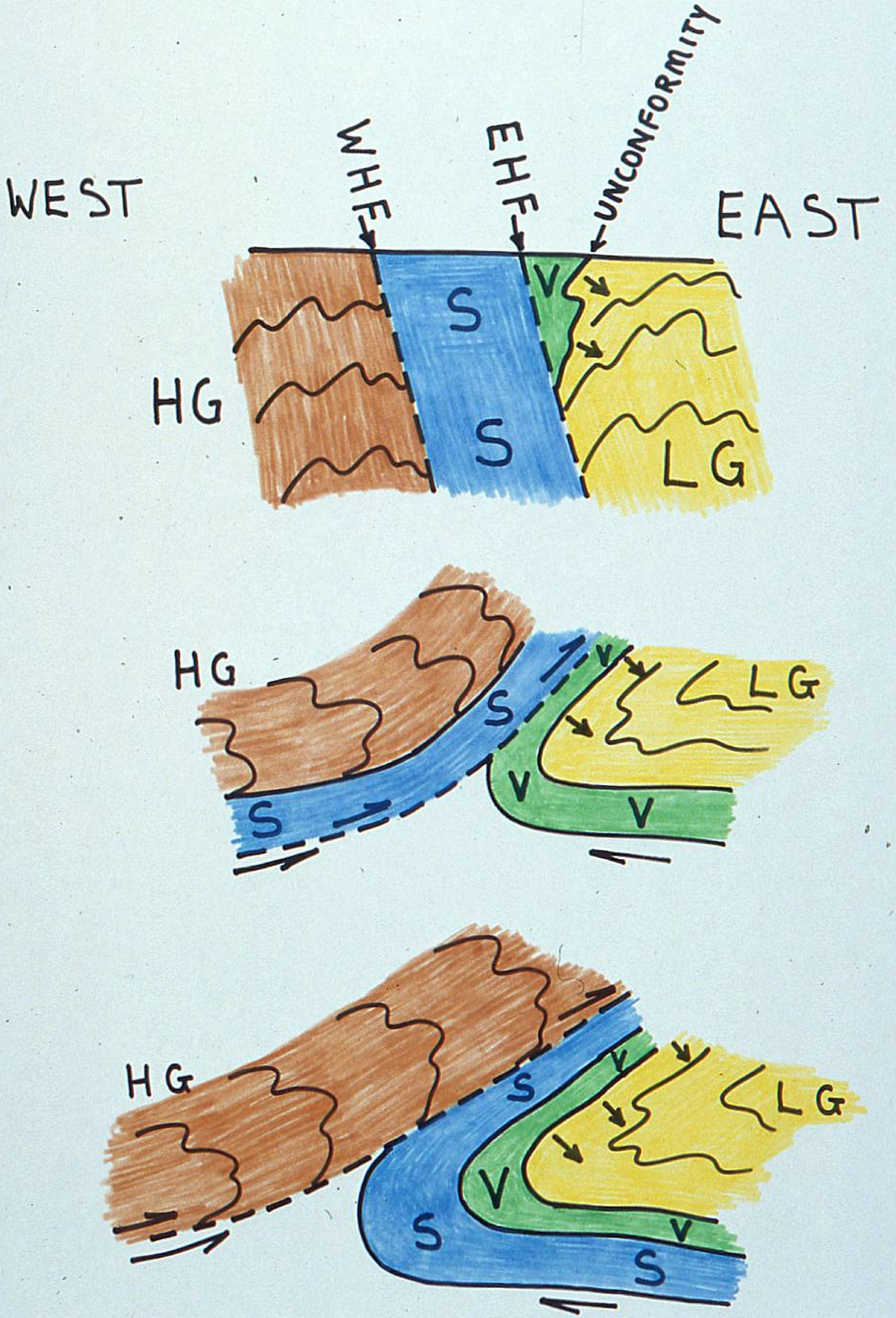


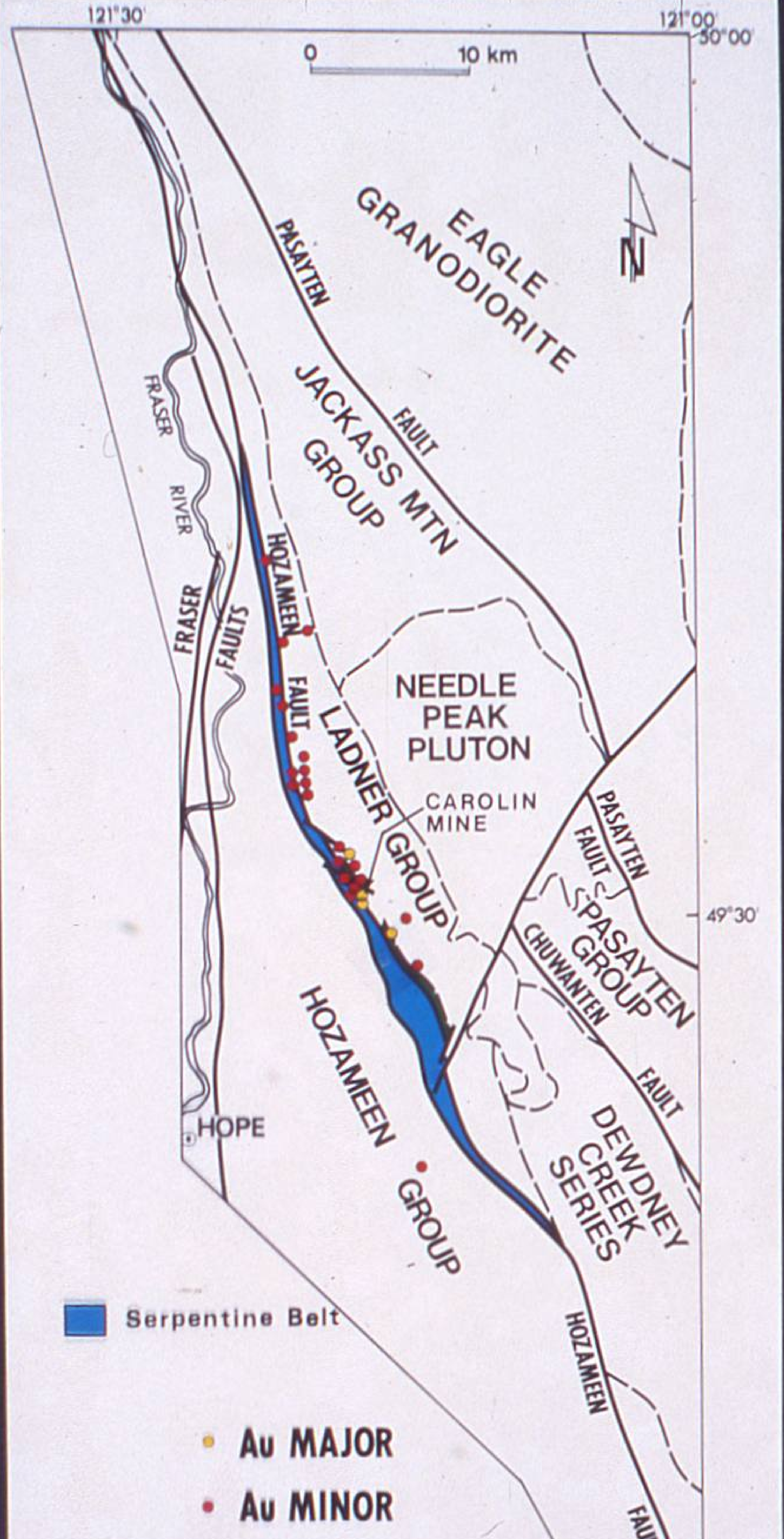
CAROLINE MINE STRATIGRAPHY


GENERALIZED GEOLOGICAL MAP
OF THE
CANADIAN CORDILLERA
Tectonic Belts and
Producing Porphyry Deposits



19° 15'
19° 30'
TR 7212
TR 7211
LEGEND
Sand and gravel
Gardiner Sandstones
Killi Killi Beds
Strike and dip of bedding
Horizontal bedding
Strike and dip of cleavage or schistosity
Fault
Previous reported radioactive occurrence
N
0
5
10 Km


WEST
WHF
EHF
UNCONFORMITY?
EAST
HG
S
S
V
LG
HG
S
S
V
V
V
LG
HG
S
S
V
V
V
S
LG



COQUIHALLA GOLD BELT

CAROLIN MINE GEOCHEMISTRY

ELEMENT ZONING ASSOCIATED WITH GOLD MINERALIZATION

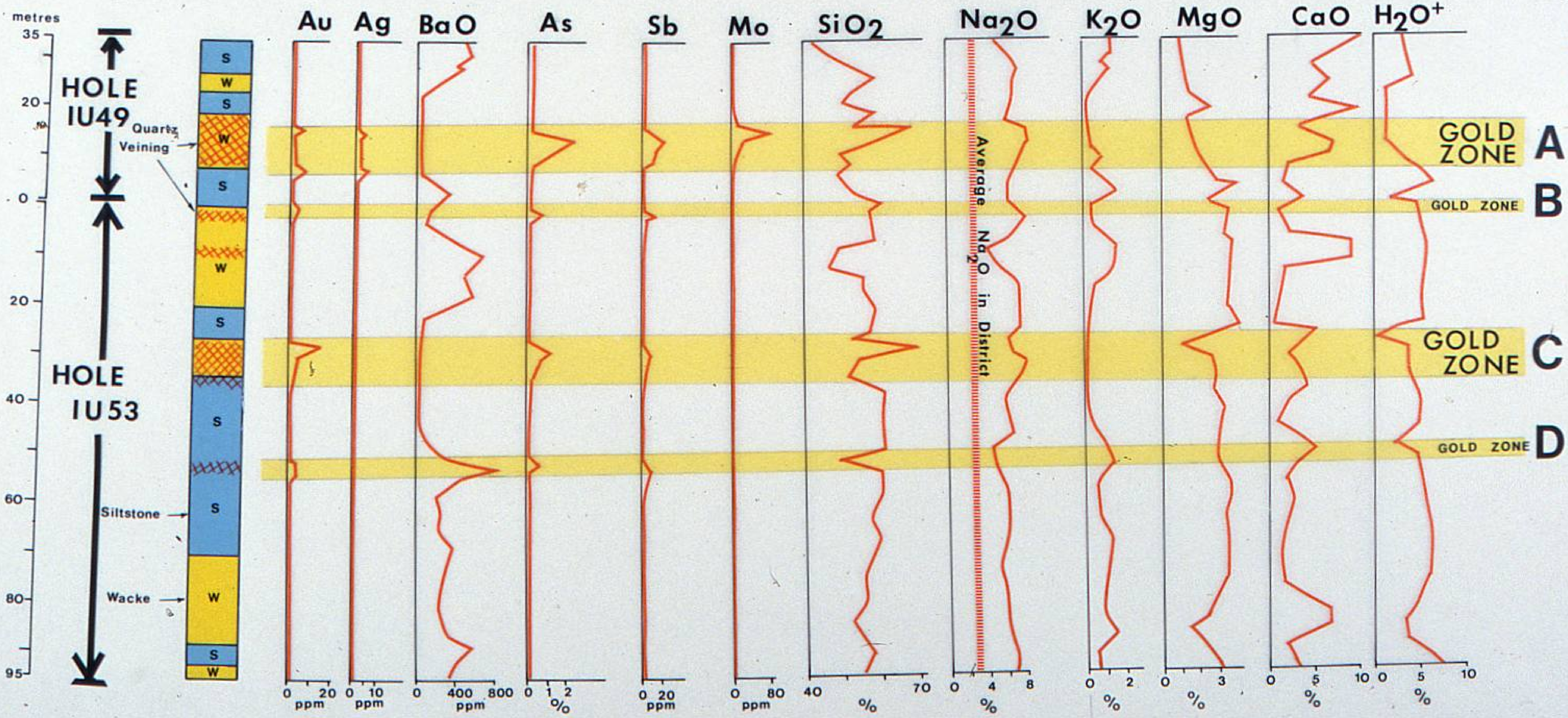
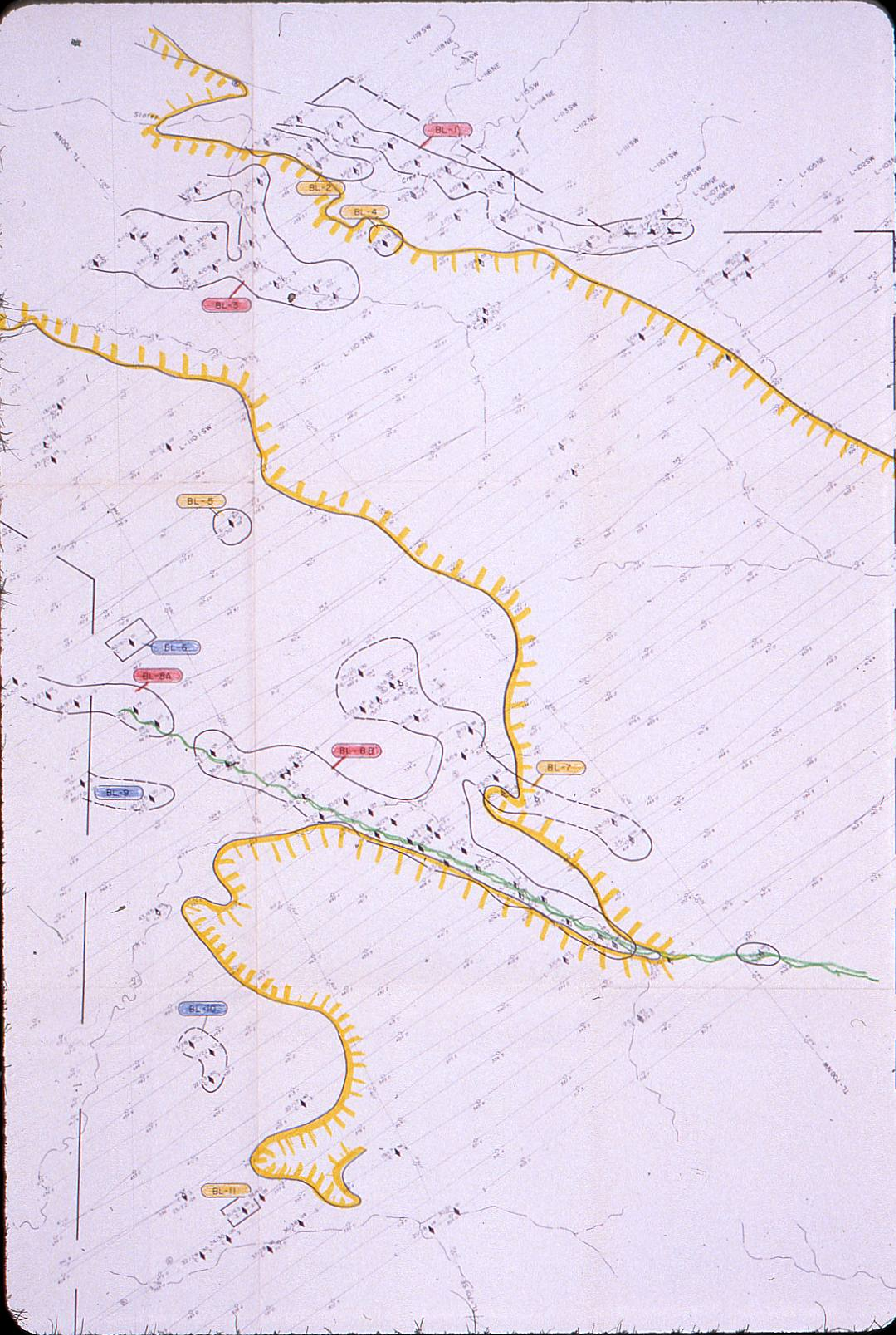
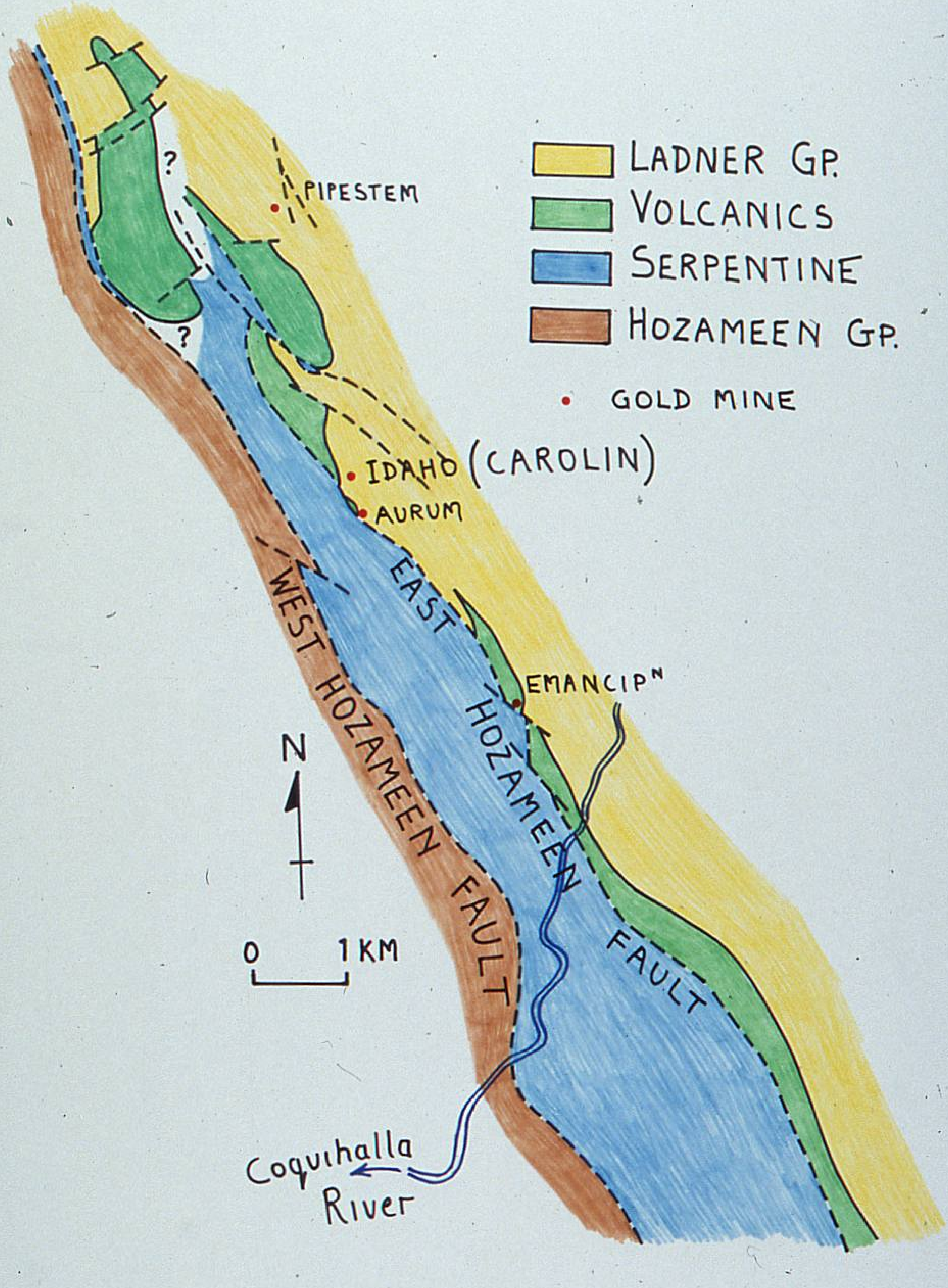
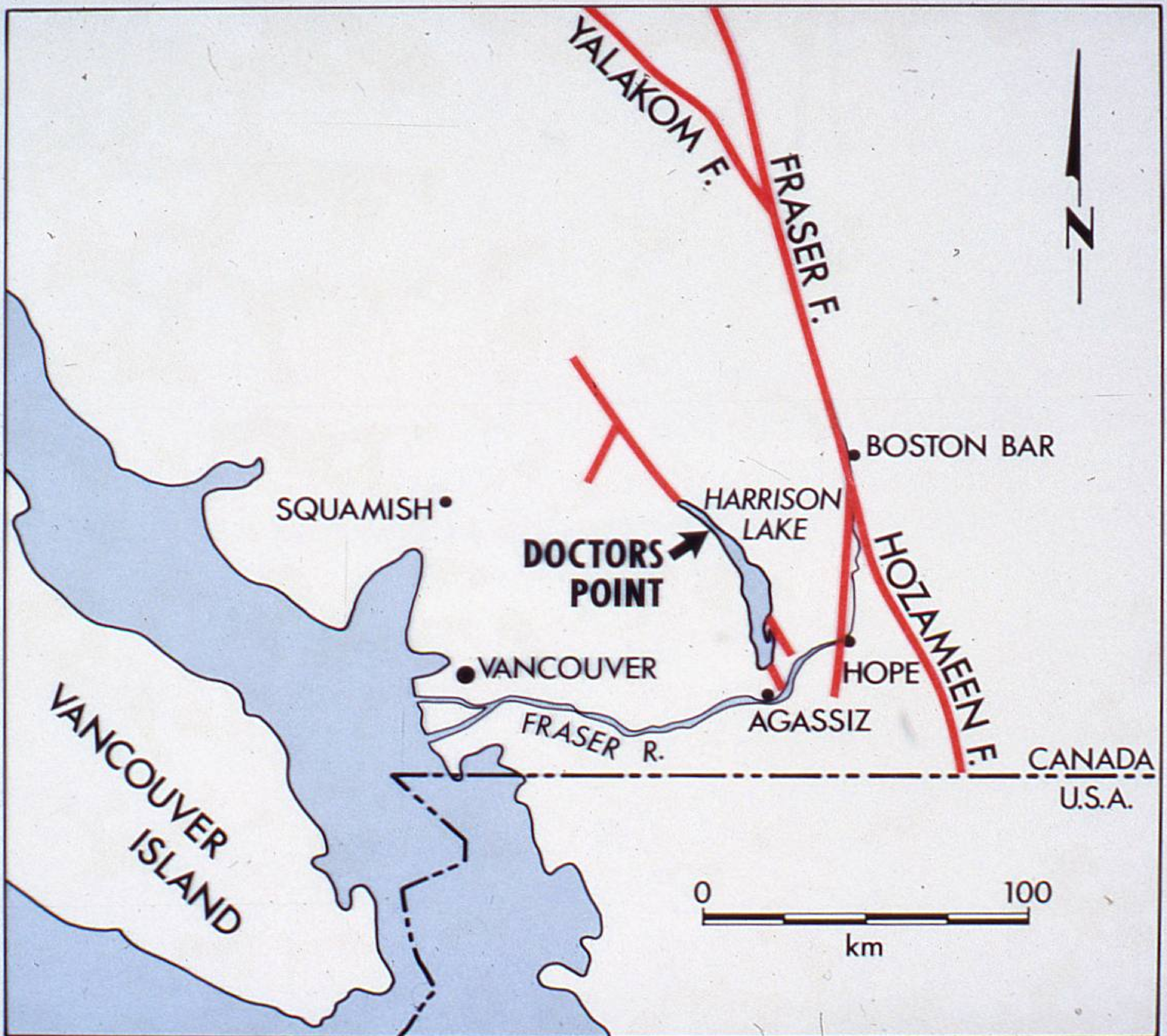


FIG 1

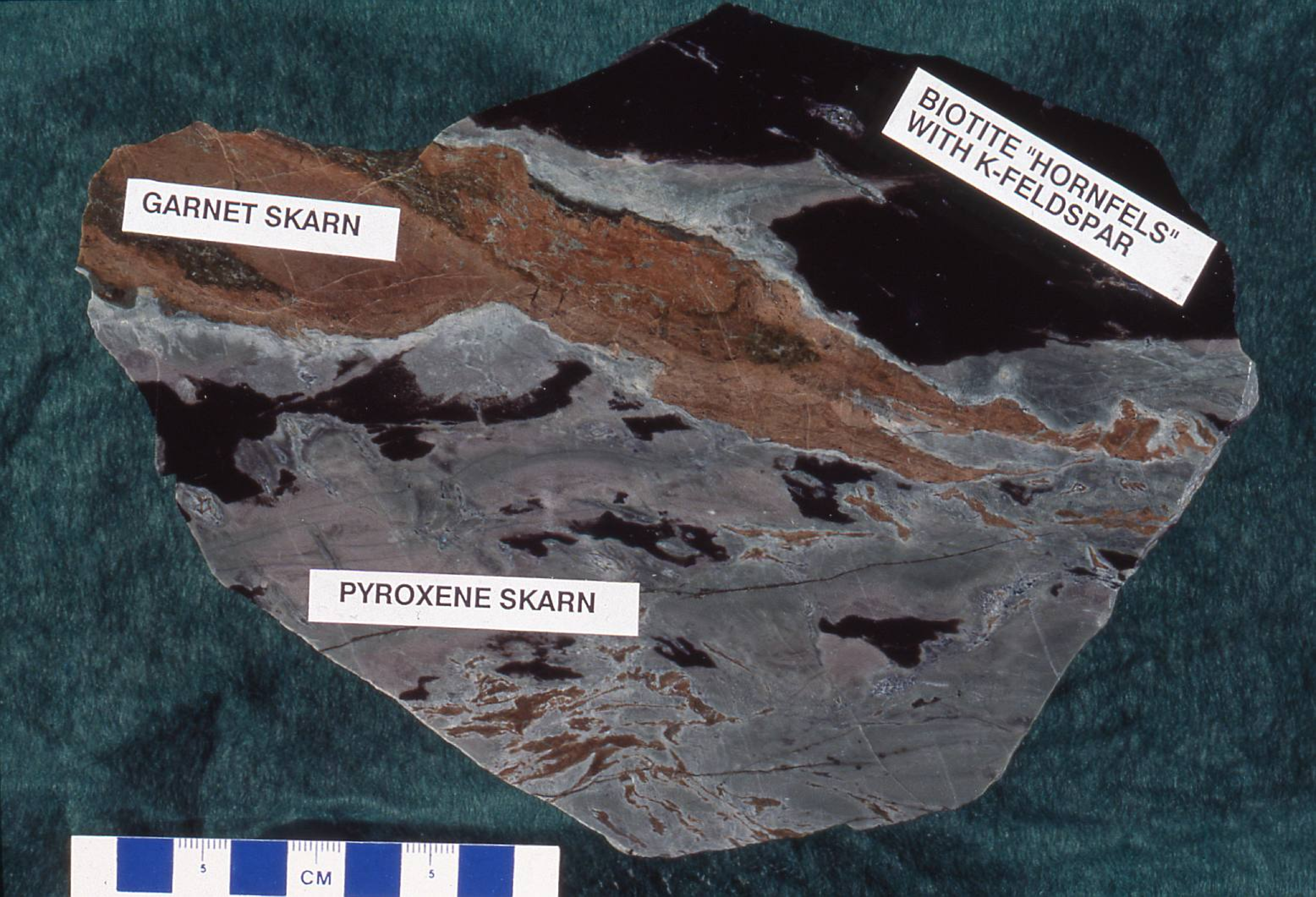

BL-1
BL-2
BL-3
BL-4
BL-5
BL-6
BL-8A
BL-8B
BL-7
BL-9
BL-10
BL-11
L-110 2NE
L-110 1SW
Creek



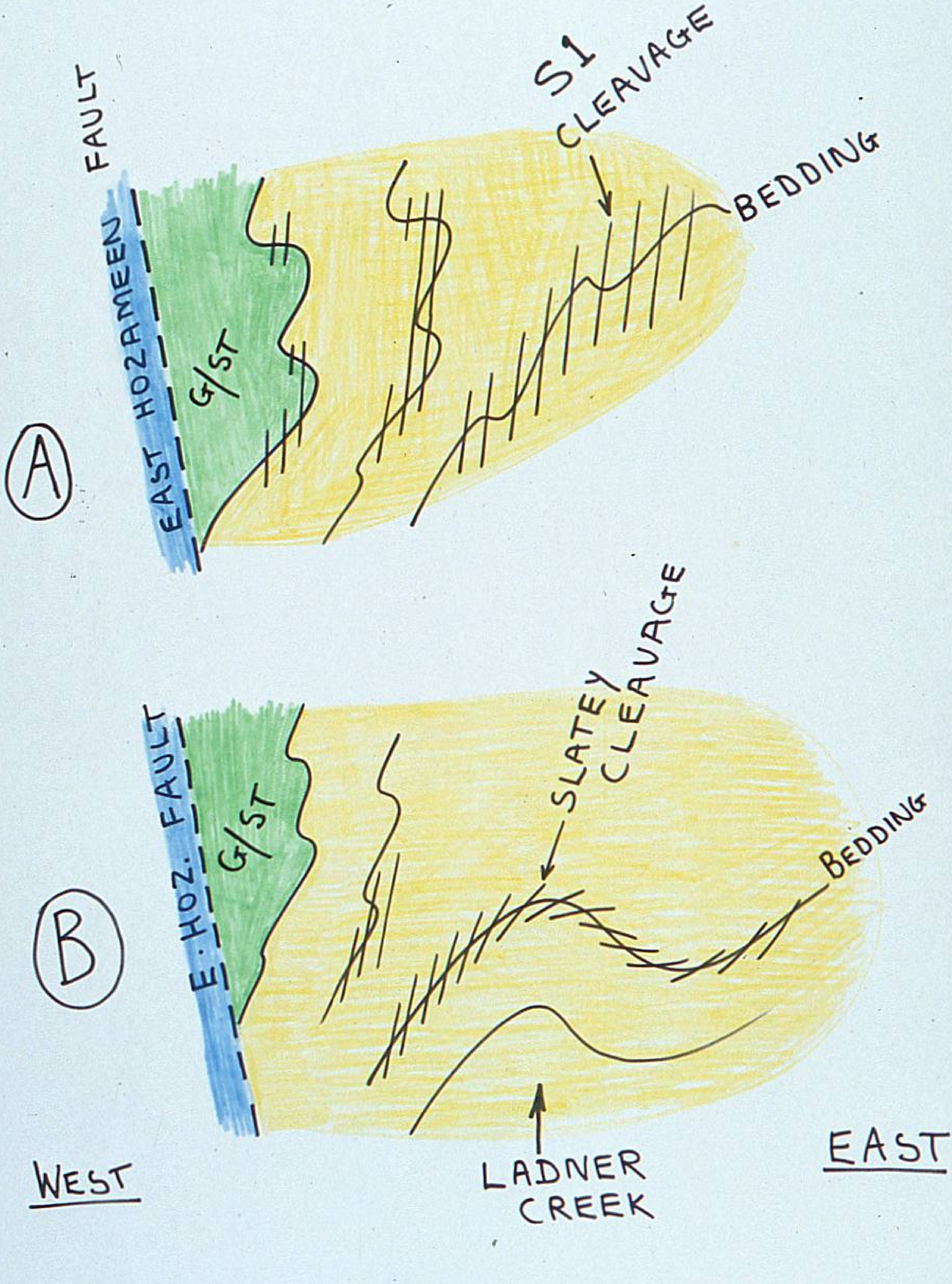
LADNER GP.
VOLCANICS
SERPENTINE
HOZAMEEN GP.
GOLD MINE
PIPESTEM
IDAHO (CAROLIN)
AURUM
EMANCIPN
?
?
WEST HOZAMEEN FAULT
EAST HOZAMEEN FAULT
N
0 1KM
Coquihalla River



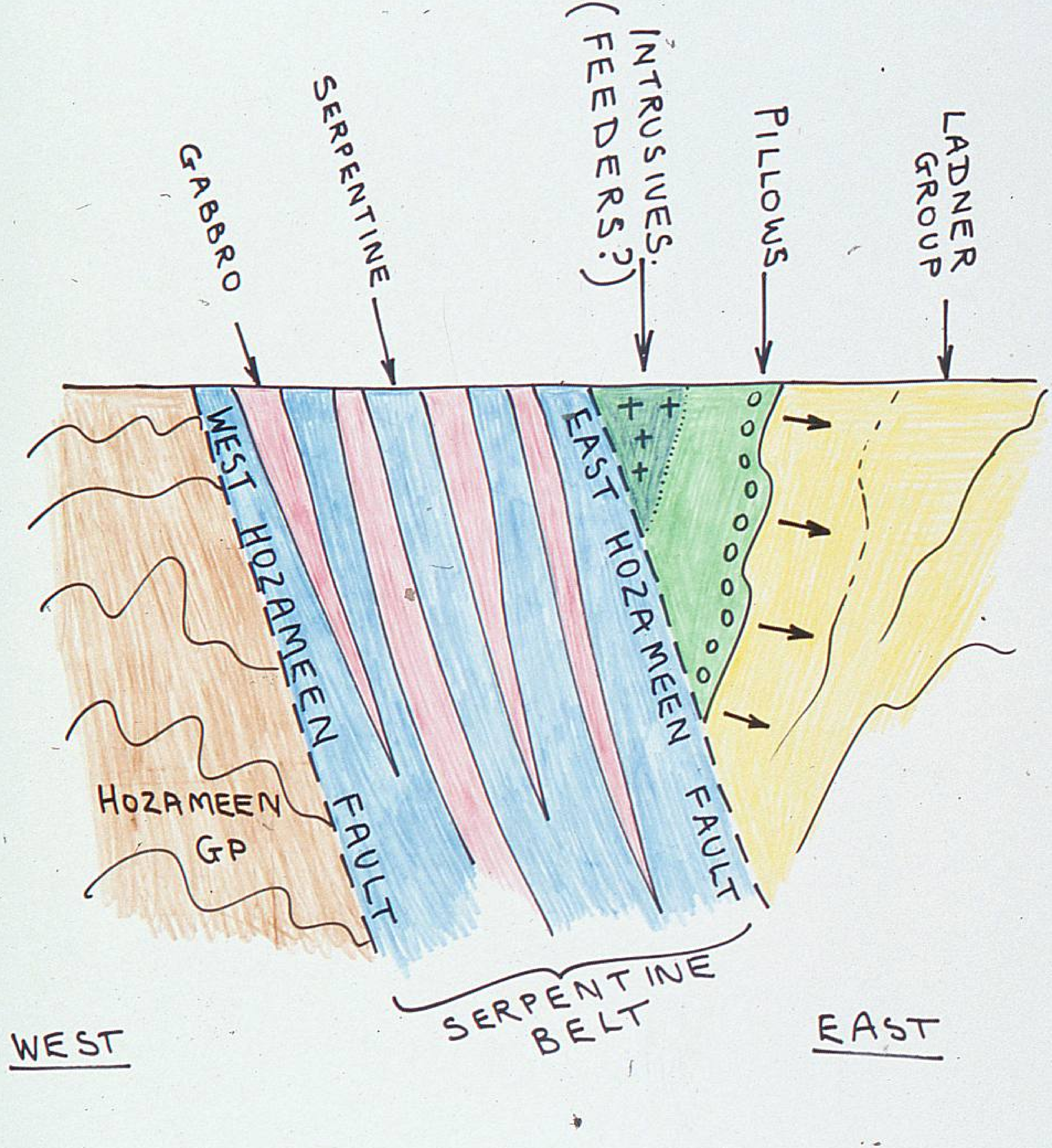
YALAKOM F.
FRASER F.
BOSTON BAR
SQUAMISH
HARRISON LAKE
DOCTORS POINT
HOZAMEEN F.
VANCOUVER
HOPE
AGASSIZ
FRASER R.
VANCOUVER ISLAND
CANADA
U.S.A.
N
0
100
km


GARNET SKARN
BIOTITE "HORNFELS"
WITH K-FELDSPAR
PYROXENE SKARN
5
CM
5

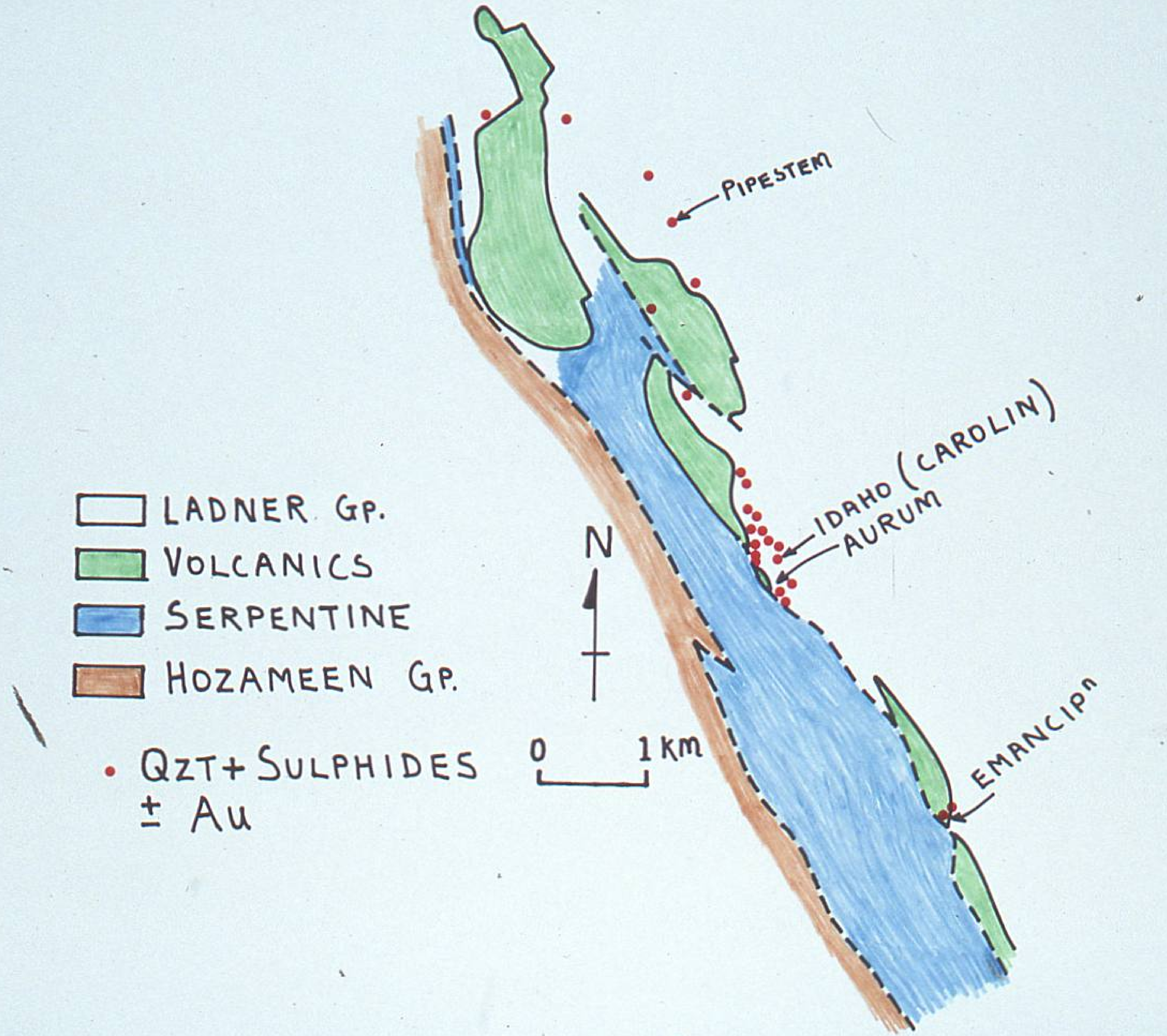

GARDINER
PLATEAU
DONKEY
PLAIN
EMU
PLAIN
LARRANGANNI
PLATEAU
DONKEY CREEK FAULT
PICNIC CREEK FAULT
BUFFALO CREEK FAULT
BUFFALO CREEK
APPROXIMATE BOUNDARY OF TR 7212
TRACK
0
1 km

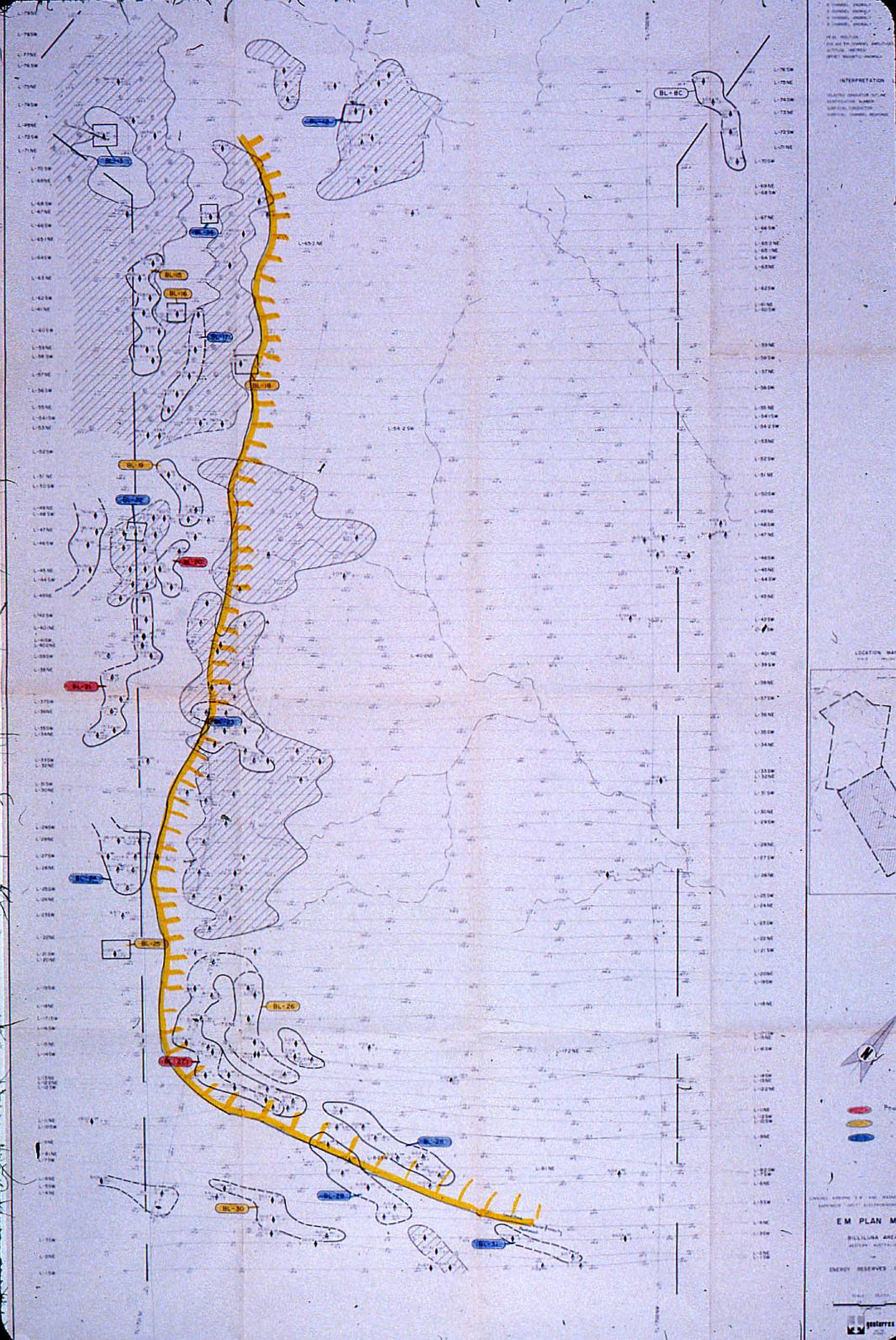


A
EAST HOZAMEEN FAULT
G/ST
S1 CLEAVAGE
BEDDING
B
E. HOZ. FAULT
G/ST
SLATEY CLEAVAGE
BEDDING
LADNER CREEK
WEST
EAST



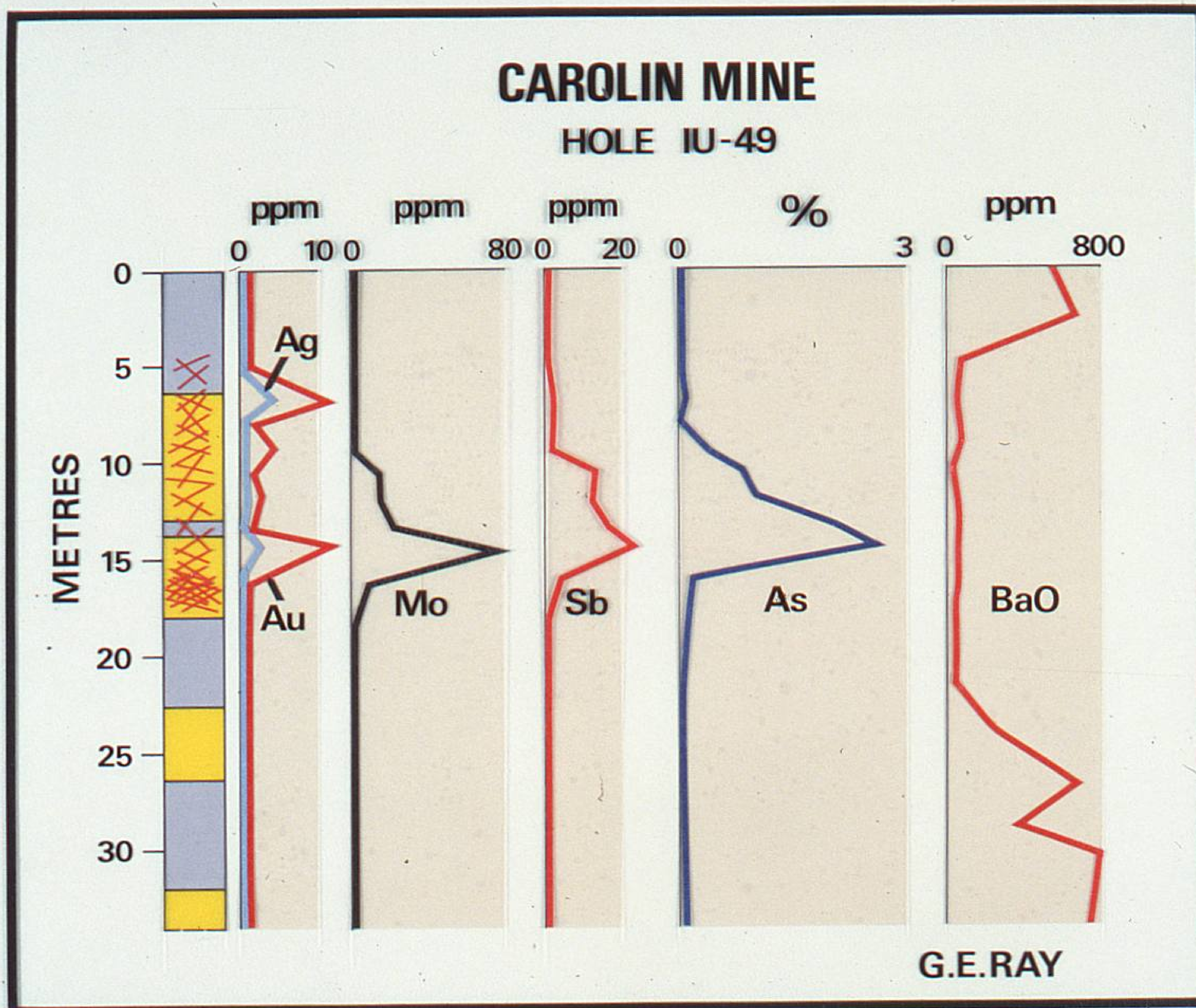
GABBRO
SERPENTINE
INTRUSIVES. (FEEDERS?)
PILLOWS
LADNER GROUP
WEST HOZAMEEN FAULT
EAST HOZAMEEN FAULT
HOZAMEEN GP
SERPENTINE BELT
WEST
EAST


PIPESTEM
IDAHO (CAROLIN)
AURUM
EMANCIPn
LADNER GP.
VOLCANICS
SERPENTINE
HOZAMEEN GP.
N
0 1 km
QZT + SULPHIDES
± Au


INTERPRETATION
BL-8C
BL-15
BL-16
BL-17
BL-18
BL-19
BL-20
BL-21
BL-25
BL-26
BL-27
BL-28
BL-29
BL-30
BL-31
LOCATION MAP
EM PLAN M
BILLILUNA AREA
ENERGY RESERVES
geoterrex

IDAHO ZONE – CAROLIN MINE

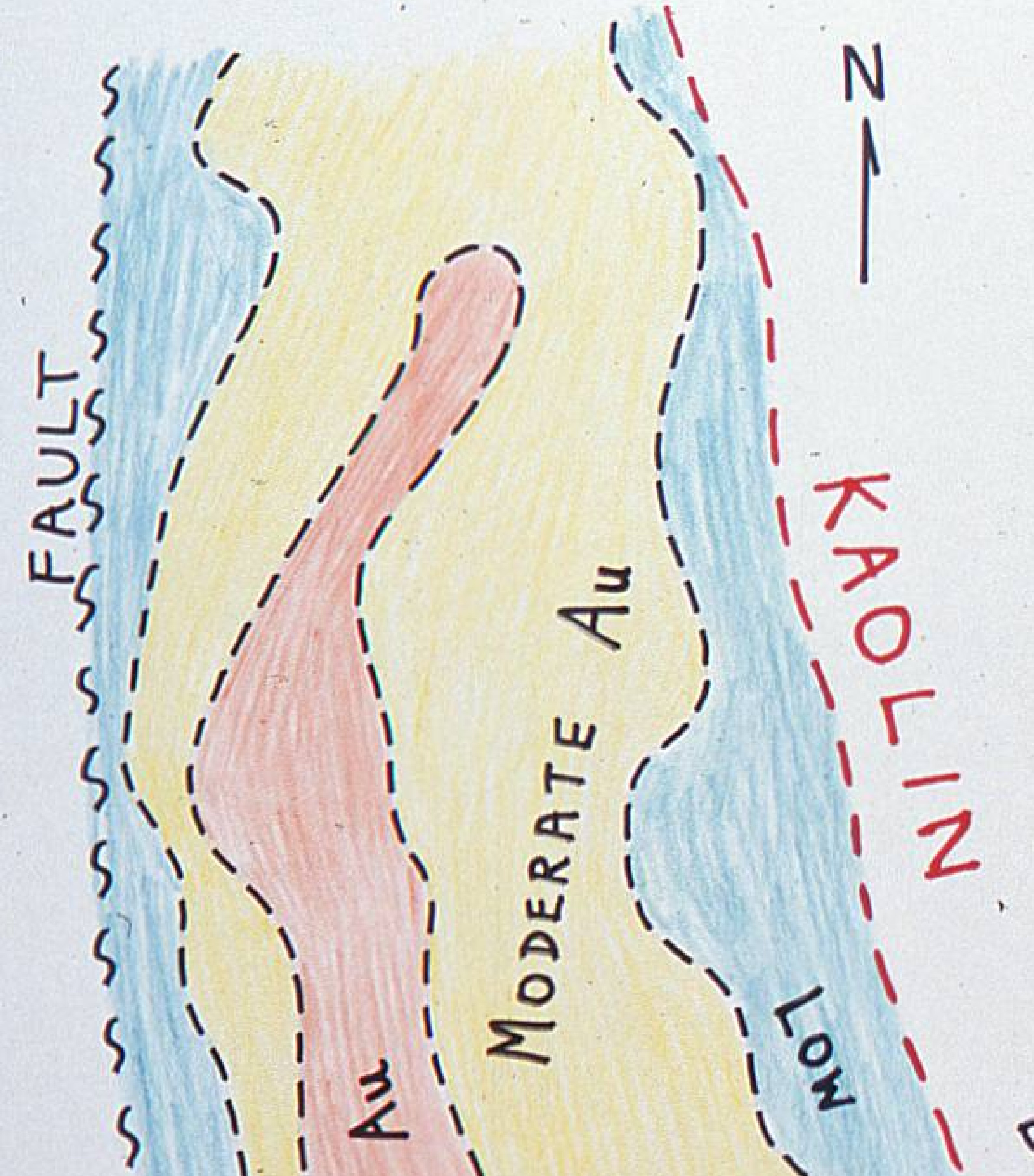
	MINERALIZED WACKES PPM			UNMINERALIZED WACKE PPM
Au	3.5	17.5	16.0	<1
Cu	161	89	81.0	49
Hg	78	72	112	76
Sb	<10	185	13	<10
Mo	<2	75	20	<2
W	13	8	19	<2
Cr	29	16	24	22
Ba	155	<100	<100	1184
Ni	18	14	12	8
Pb	15	21	15	16
Sn	<1	<1	<1	<1
Co	20	19	13	15


CAROLIN MINE
HOLE IU-49
METRES
0
5
10
15
20
25
30
ppm
0
10
Ag
Au
ppm
0
80
Mo
ppm
0
20
Sb
%
0
3
As
ppm
0
800
BaO
G.E.RAY

	MINERALIZED GREYWACKE - IDAHO ZONE	UNMINERALIZED GREYWACKE	WHITE QUARTZ VEIN (IDAHO ZONE)	WHITE CALCITE VEIN (IDAHO ZONE)
AU (PPM)	17.5	<1	<0.3	<0.3
AS %	6.23	0.007	0.07	0.005
CU (PPM)	89	49	40	34
SB (PPM)	185	<10	<10	<10
MO (PPM)	75	<2	5	<2
CO (PPM)	19	12	3	3
SN (PPM)	<1	<1	<1	<1
BA (PPM)	<100	1184	<100	<100
PB (PPM)	21	16	9	27
HG (PPB)	72	76	108	182

TRACE ELEMENT ANALYSIS ON FRESH UNDERGROUND SAMPLES - CAROLIN MINE


T45P8-81



30 m tonnes 0·06 oz/tonne

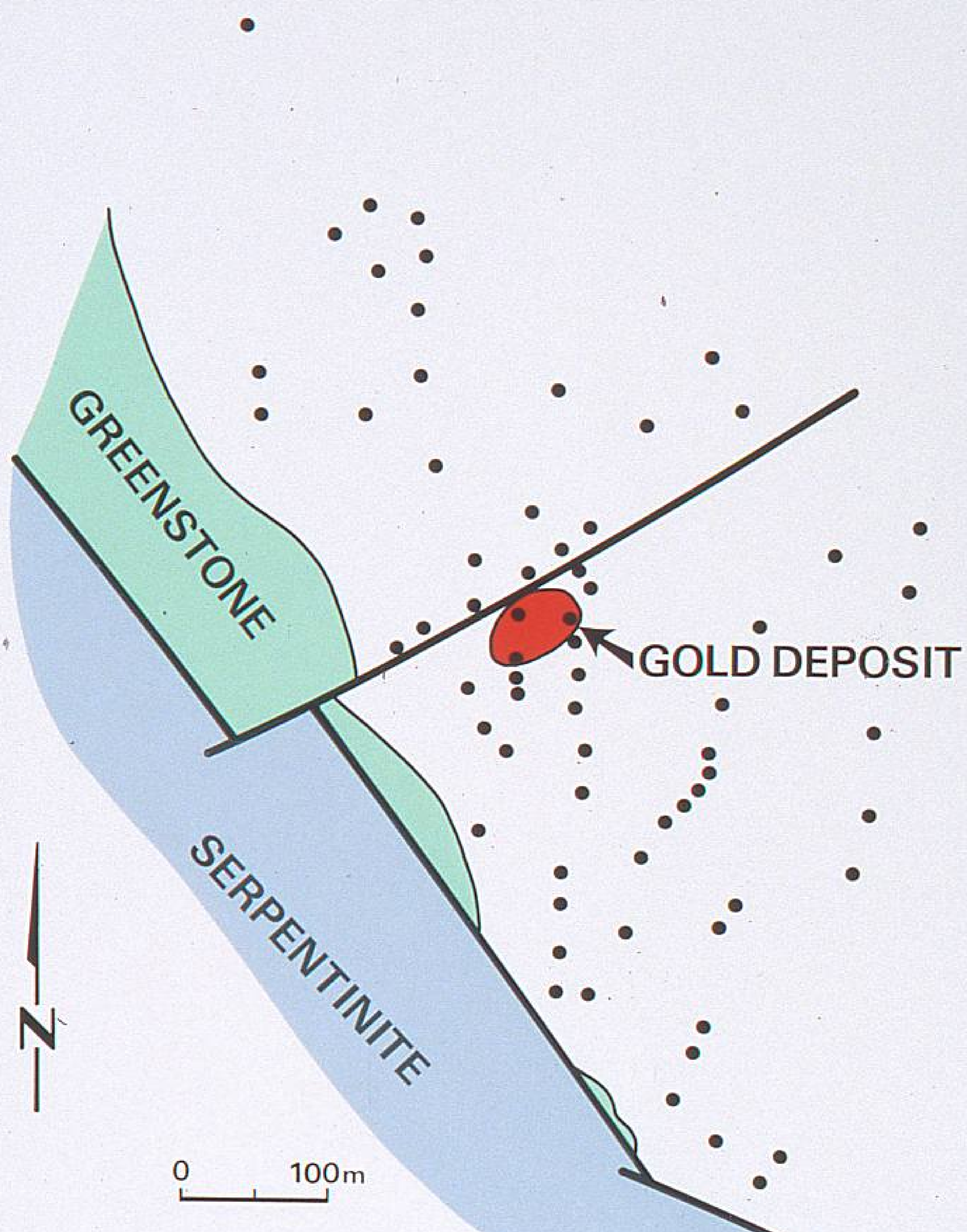
CINOLA - GOLD ZONING (PLAN)

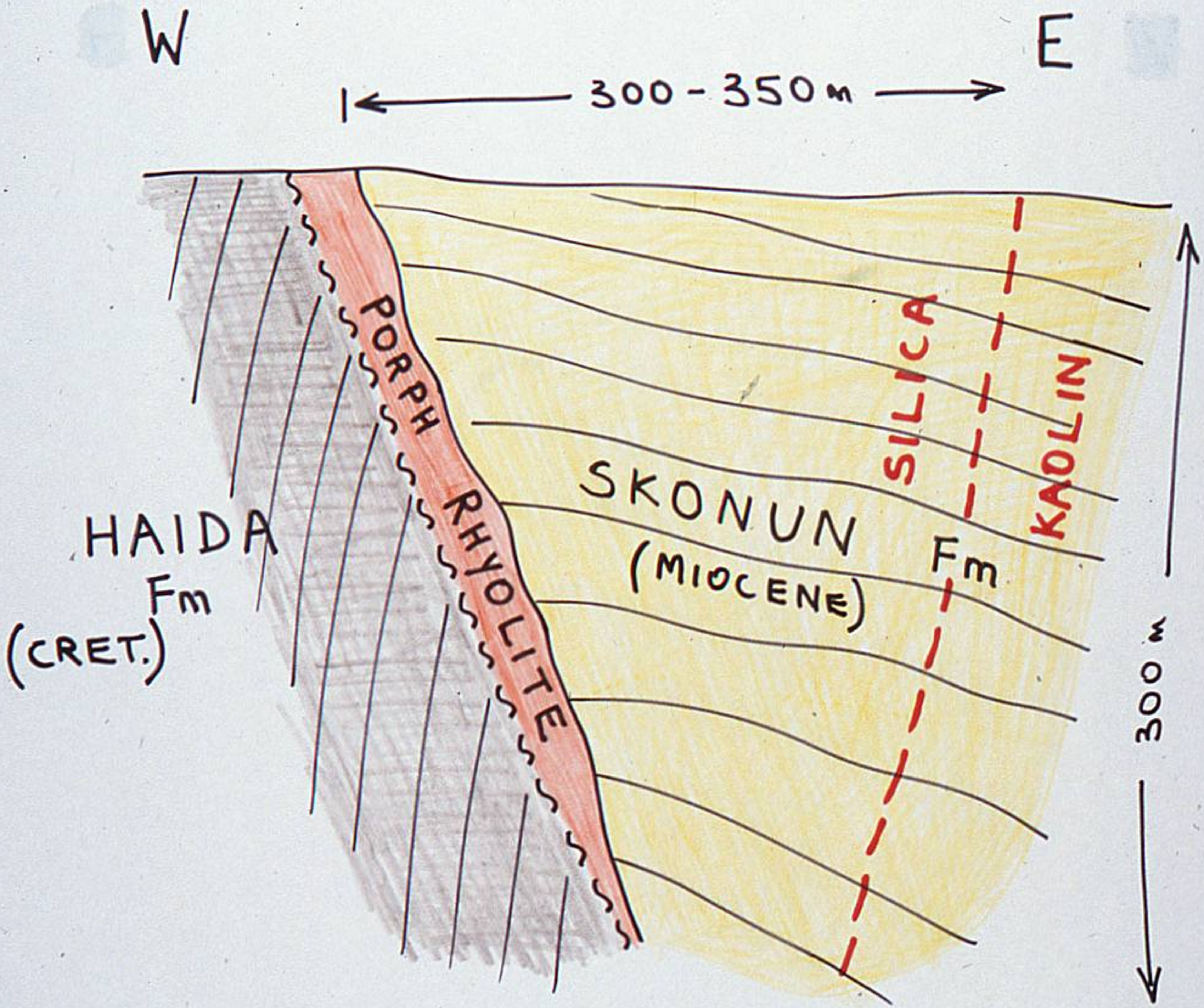

T32 P8-81


P17 T42-81

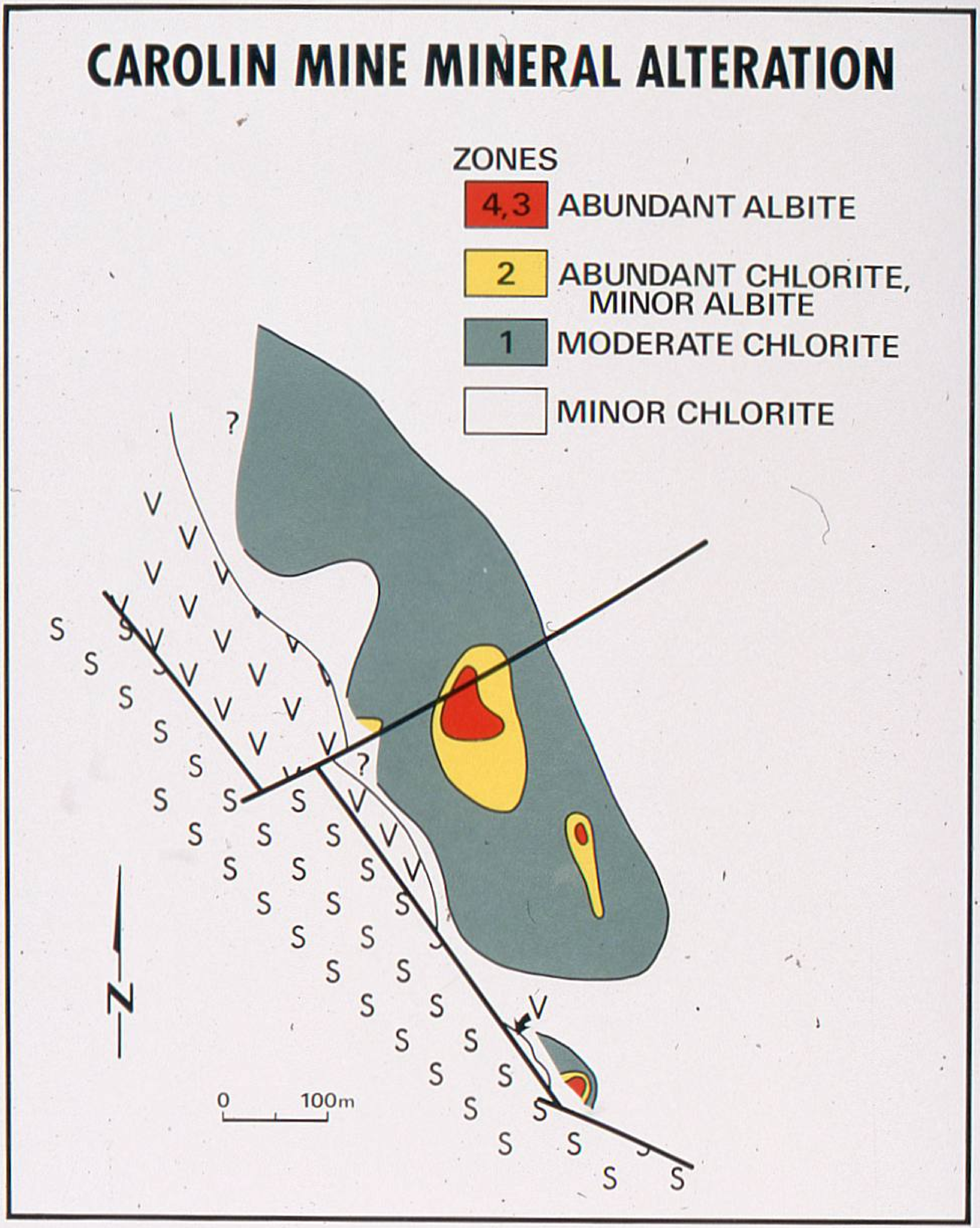

P12 T40-81

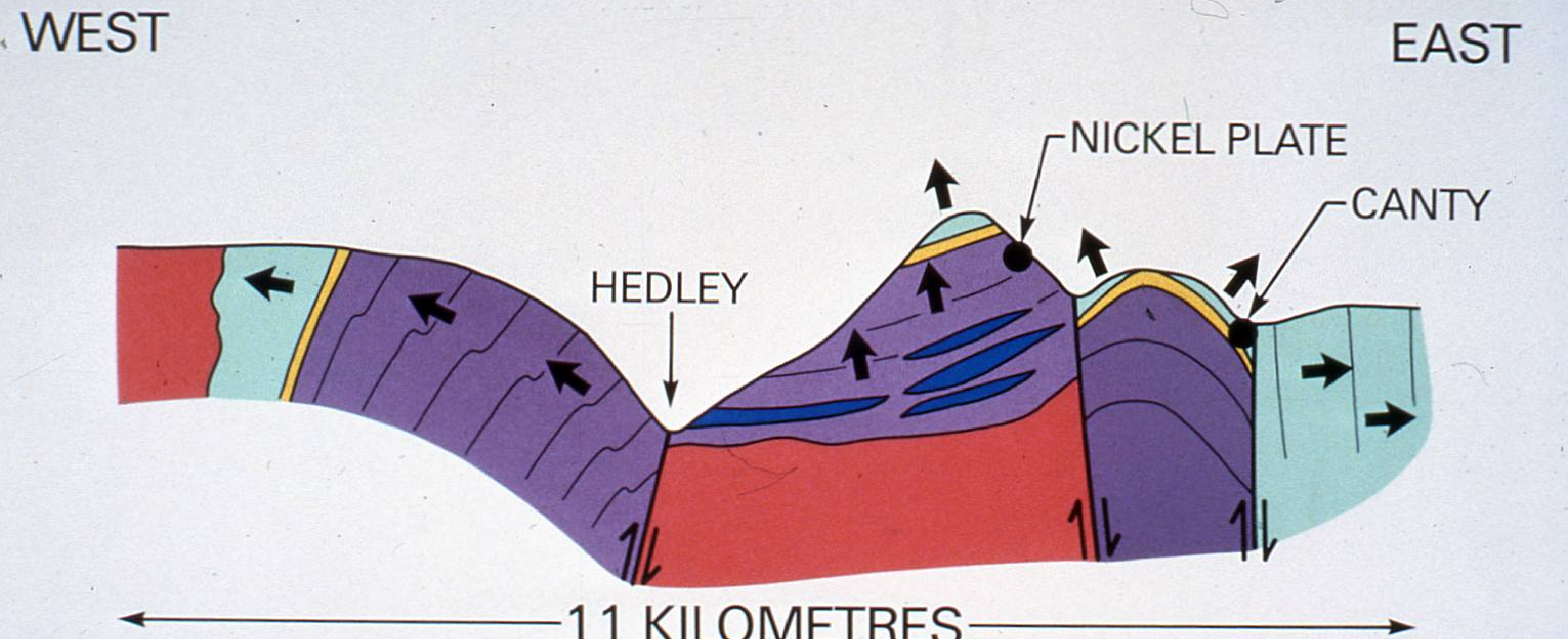
CAROLIN MINE
73 ROCK SAMPLES



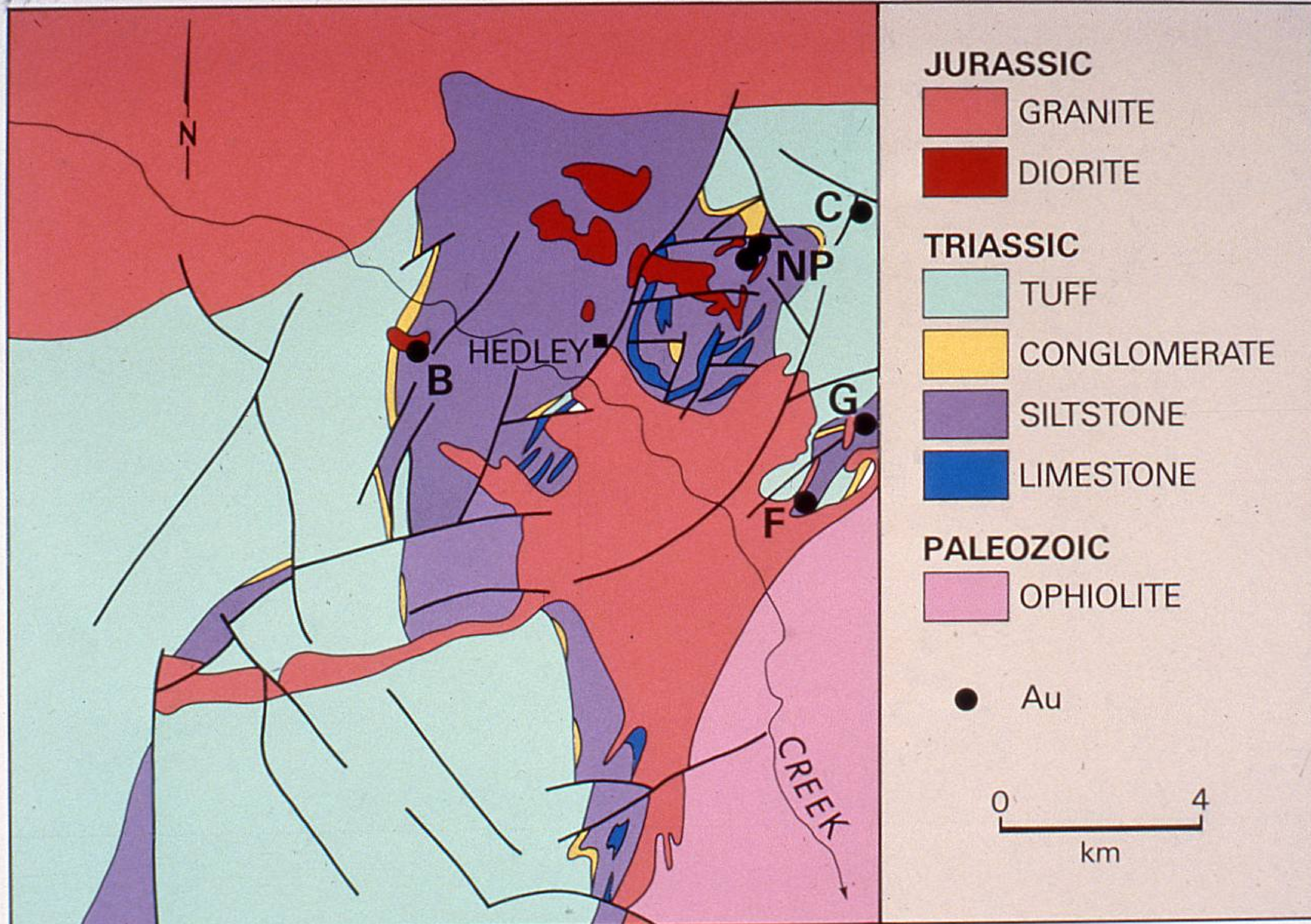


LS GEOLOGY - CINOLA

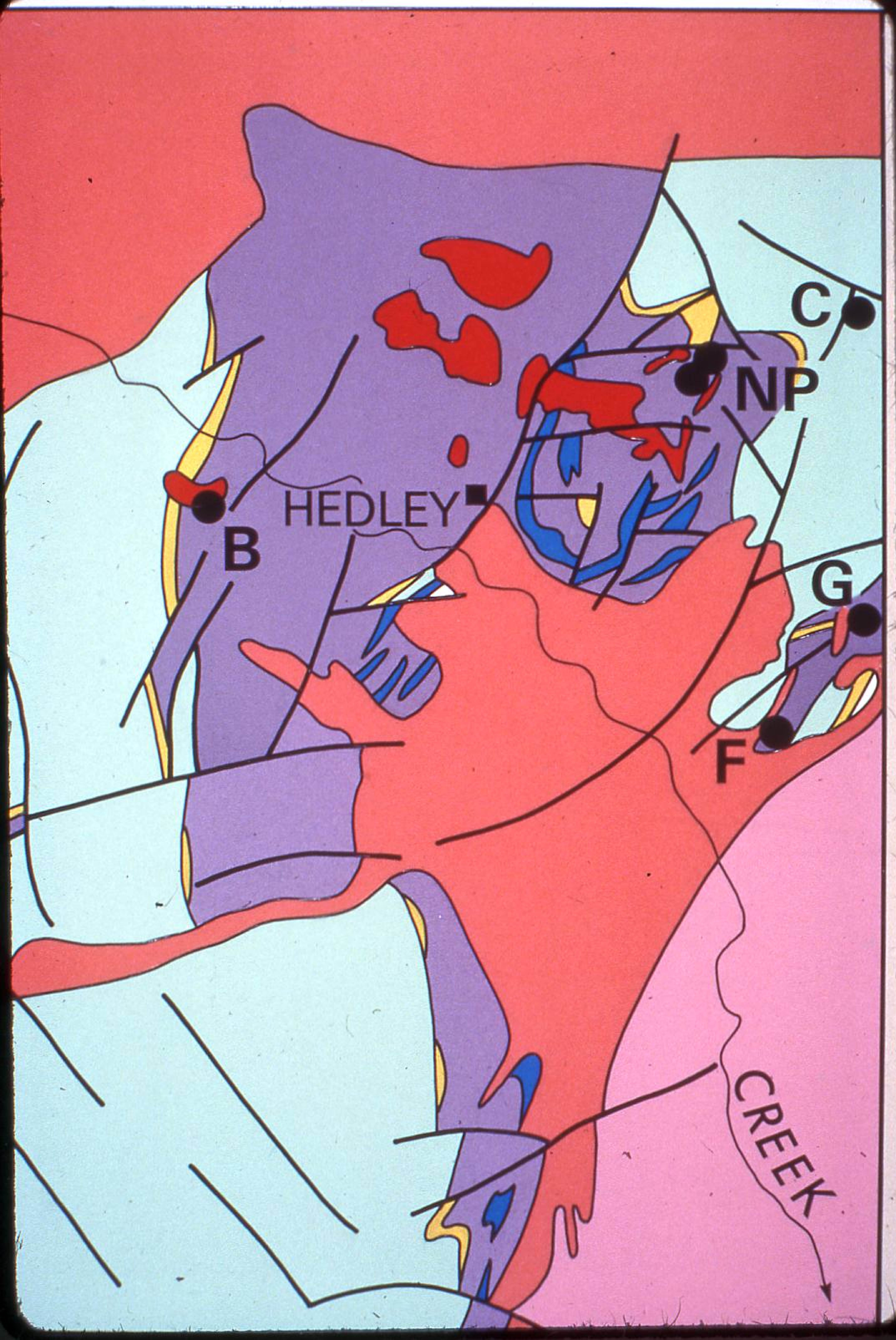

CAROLIN MINE MINERAL ALTERATION
ZONES
4,3 ABUNDANT ALBITE
2 ABUNDANT CHLORITE, MINOR ALBITE
1 MODERATE CHLORITE
MINOR CHLORITE
N
0
100m

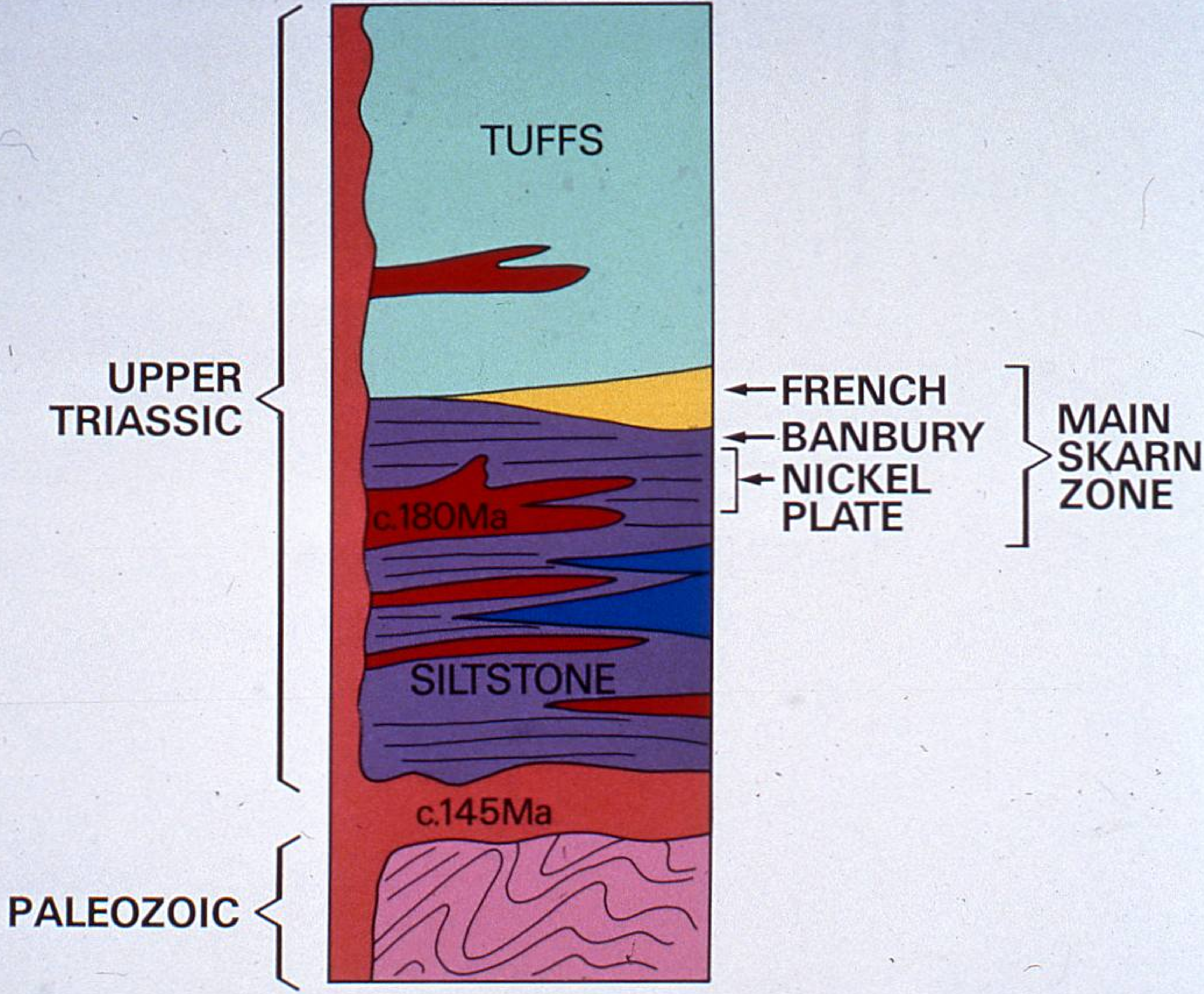


E–W DIAGRAMATIC SECTION
(RAY AND DAWSON 1986)

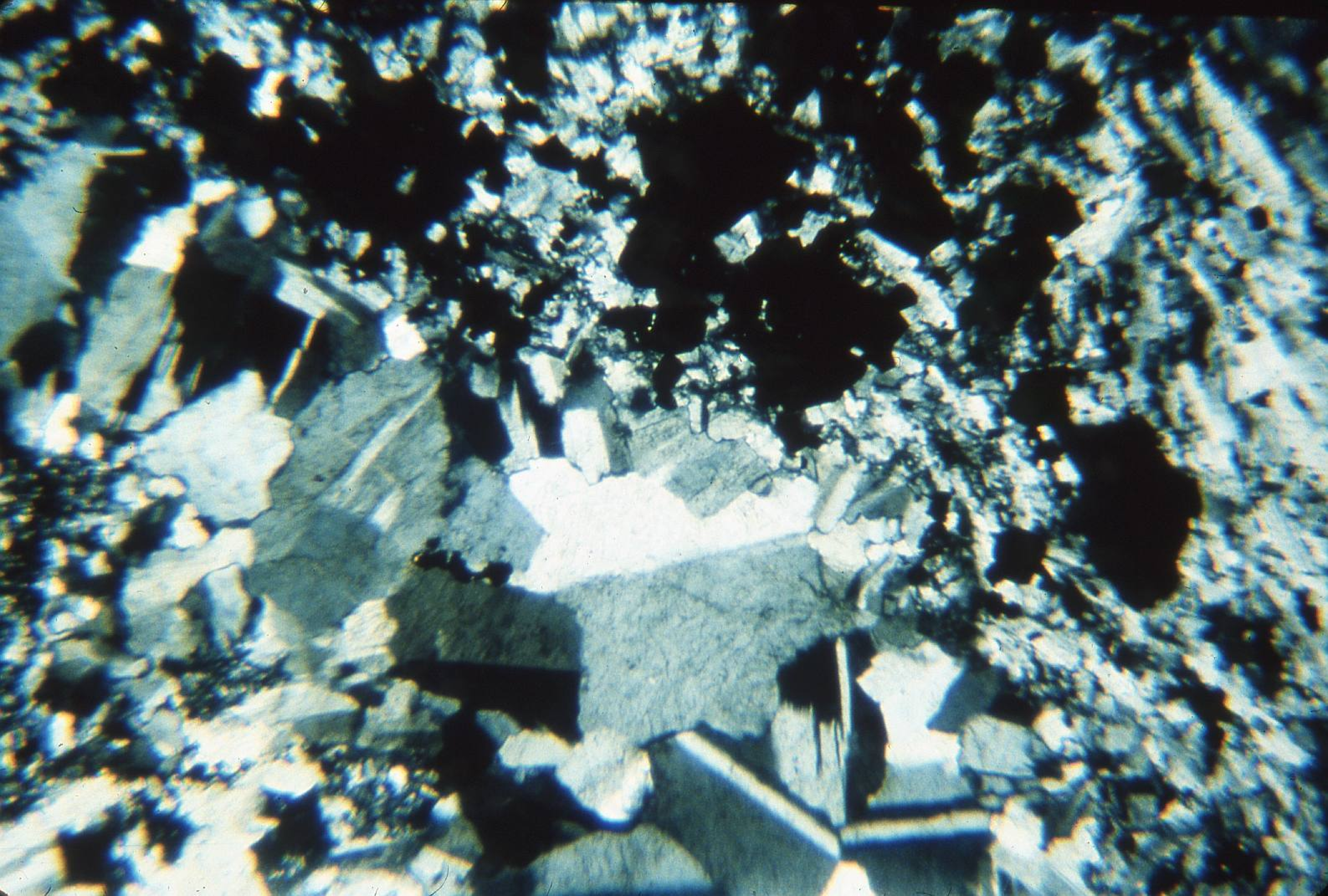


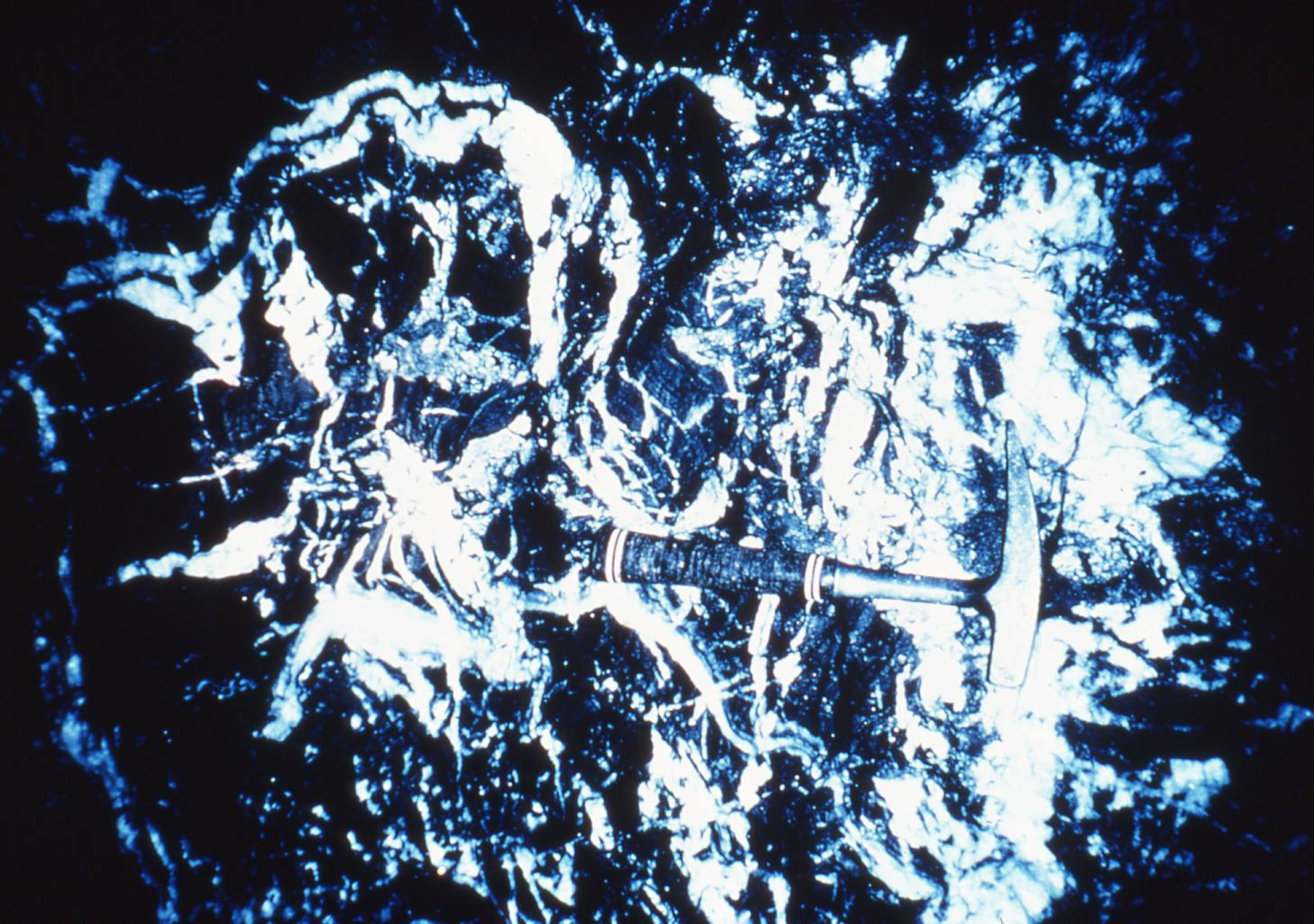
GEOLOGY – HEDLEY AREA
(RAY AND DAWSON 1986)


C
NP
HEDLEY
B
G
F
CREEK



STRATIGRAPHY – HEDLEY
(RAY AND DAWSON 1986)



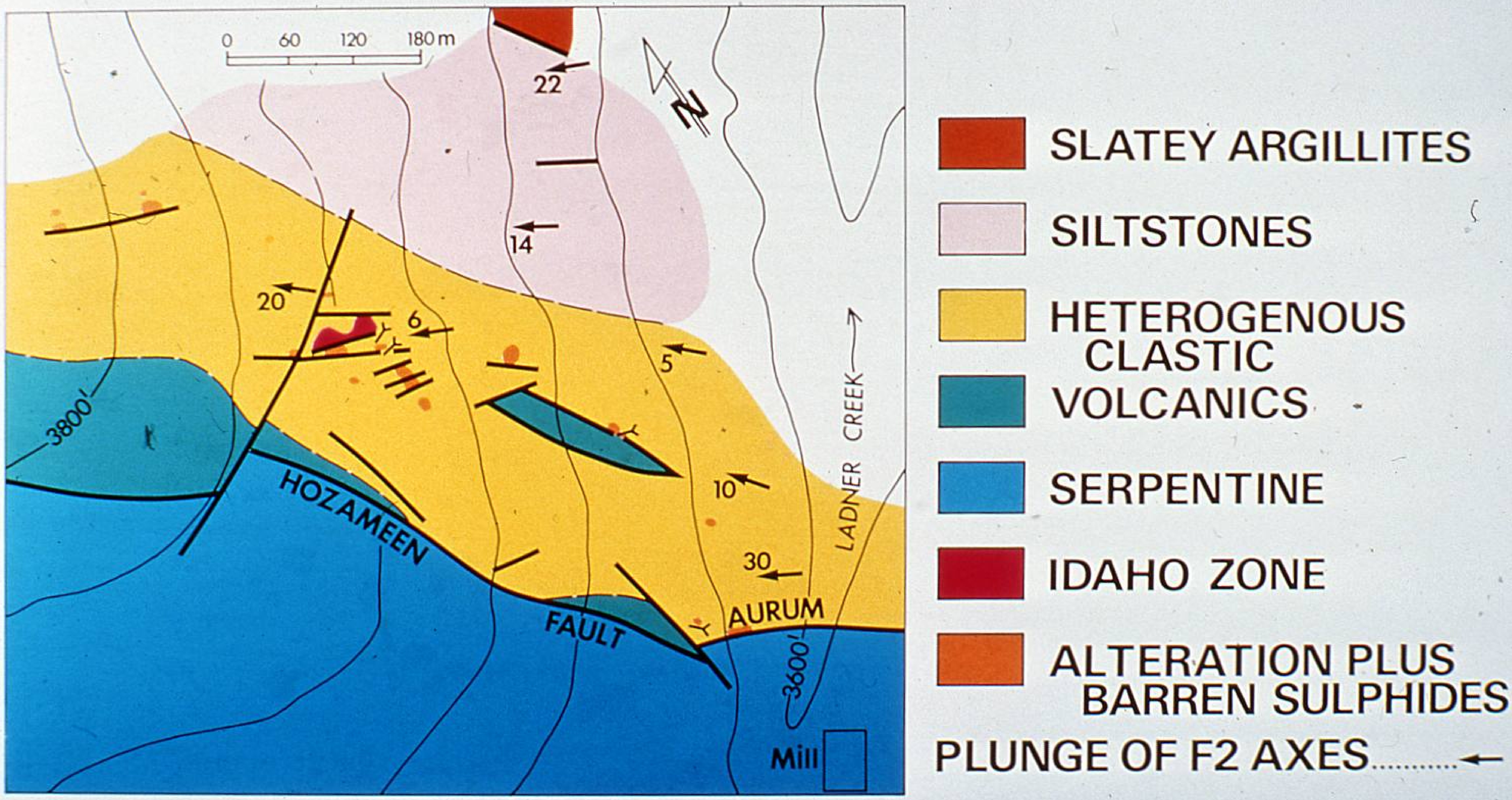


COQUIHALLA GOLD BELT
REGIONAL CONTROL OF GOLD MINERALIZATION

1. COMPETENT ROCKS FOR OPEN–SPACE FRACTURING
   e.g. LOWER LADNER GROUP

2. PROXIMITY (< 200 m) TO SERPENTINITE AND EAST HOZAMEEN FAULT

3. PROXIMITY (< 200m) TO THE BASAL LADNER GROUP UNCONFORMITY


0 60 120 180 m
N
22
14
20
6
5
10
30
3800'
3600'
HOZAMEEN
FAULT
AURUM
LADNER CREEK
Mill
SLATEY ARGILLITES
SILTSTONES
HETEROGENOUS CLASTIC
VOLCANICS
SERPENTINE
IDAHO ZONE
ALTERATION PLUS BARREN SULPHIDES
PLUNGE OF F2 AXES

GOLD PRODUCTION – COQUIHALLA GOLD BELT

MINE	YEAR	TOTAL Au PRODUCTION (KILOGRAMS)
CAROLIN	1981 – 1982	253.2
EMANCIPATION	1916 – 1941	90.1
AURUM	1930 – 1942	16.5
PIPESTEM	1935 – 1937	8.4
WARD	1905	4.1

TOTAL GOLD PRODUCTION 1916 – 1982 = 372.3 KILOGRAMS

CAROLIN MINE GEOCHEMISTRY

ELEMENT ZONING ASSOCIATED WITH GOLD MINERALIZATION

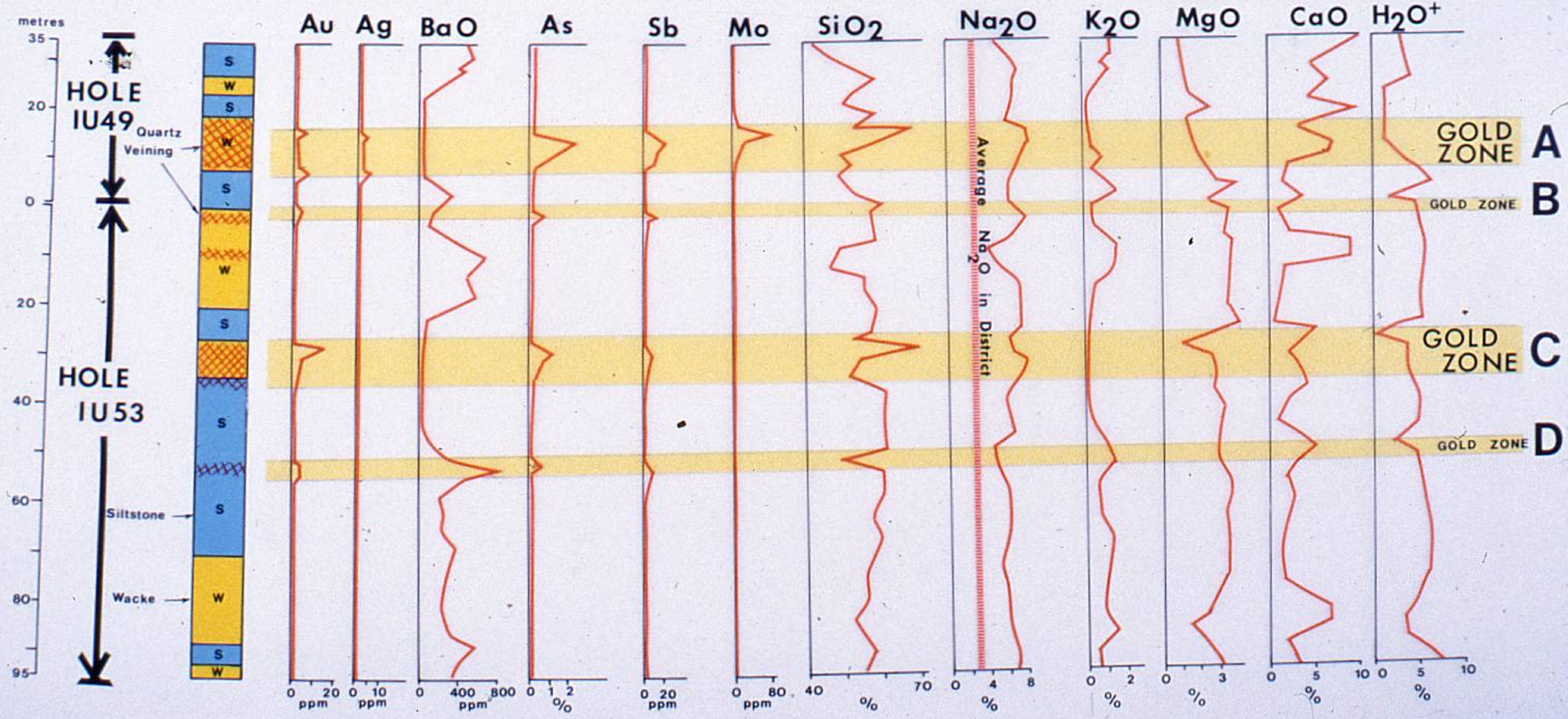
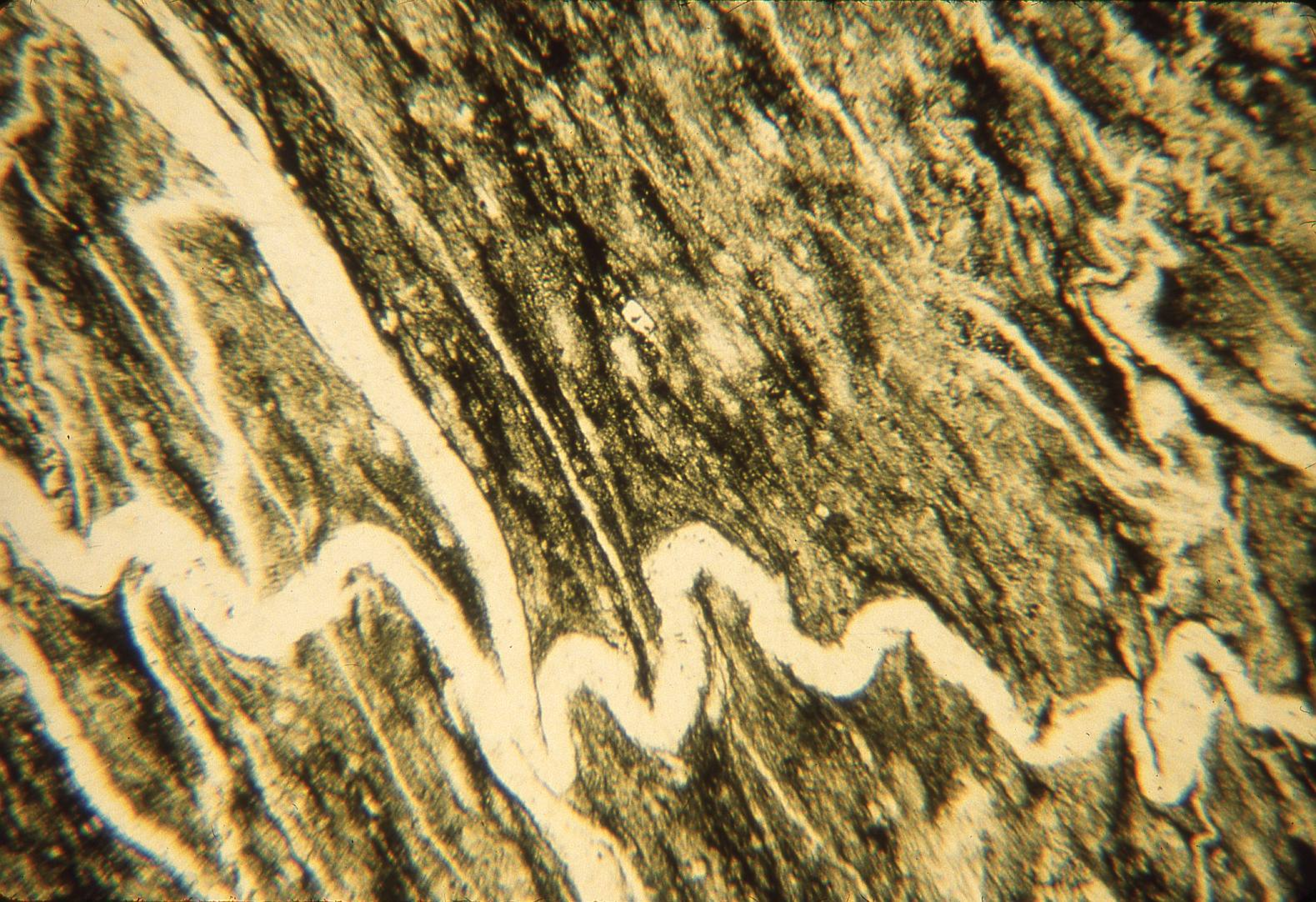


FIG 1



COMPARISON BETWEEN COQUIHALLA AND PETCH CREEK SERPENTINE BELTS

PETCH CREEK	COQUIHALLA
OCCUPIES WESTERN MARGIN OF HOZAMEEN GROUP	OCCUPIES EASTERN MARGIN OF HOZAMEEN GROUP
NO GABBRO LENSES	ABUNDANT GABBRO LENSES
SOME OLIVINE REMNANTS	OLIVINE REMNANTS RARE
NO GOLD MINERALIZATION	ASSOCIATED WITH GOLD MINERALIZATION
REPRESENTS BASAL PART OF HOZAMEEN GROUP	REPRESENTS CRUST FROM BENEATH PASAYTEN TROUGH

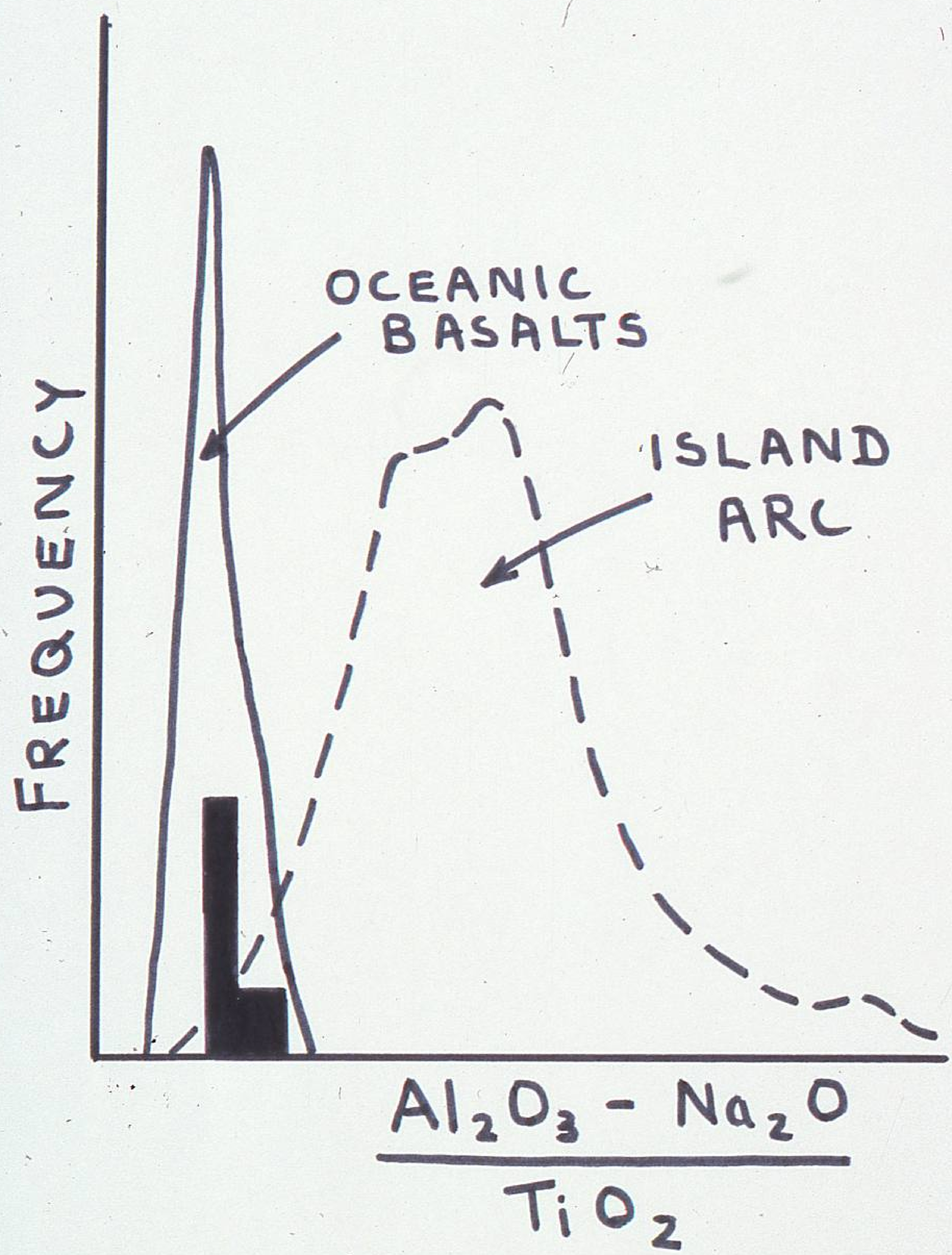

HULK

COQUIHALLA GOLD BELT
REGIONAL CONTROL OF GOLD MINERALIZATION

1. COMPETENT ROCKS FOR OPEN–SPACE FRACTURING
   e.g. LOWER LADNER GROUP

2. PROXIMITY (< 200 m) TO SERPENTINITE AND EAST HOZAMEEN FAULT

3. PROXIMITY (< 200m) TO THE BASAL LADNER GROUP UNCONFORMITY



FREQUENCY
OCEANIC BASALTS
ISLAND ARC
$\frac{Al_2O_3 - Na_2O}{TiO_2}$

RHYOLITE RESERVES
DOCTORS POINT – HARRISON LAKE

	RANGE
Au	0.7 – 34 ppm
Ag	10 – 112 ppm
As	0.6 – 8%

	MAXIMUM VALUES
Cu	0.36%
Bi	56 ppm
W	26 ppm
Sb	580 ppm
Mo	10 ppm
Zn	712 ppm
Co	146 ppm

PROVIDENCE MINE
HARRISON LAKE

	MAXIMUM VALUES
Pb	5.5%
Zn	2.6%
Cu	0.5%
Ag	86 ppm
Au	0.7 ppm
Mo	4 ppm
Sb	95 ppm
Co	10 ppm

CAROLIN MINE GEOCHEMISTRY

ELEMENT ZONING ASSOCIATED WITH GOLD MINERALIZATION

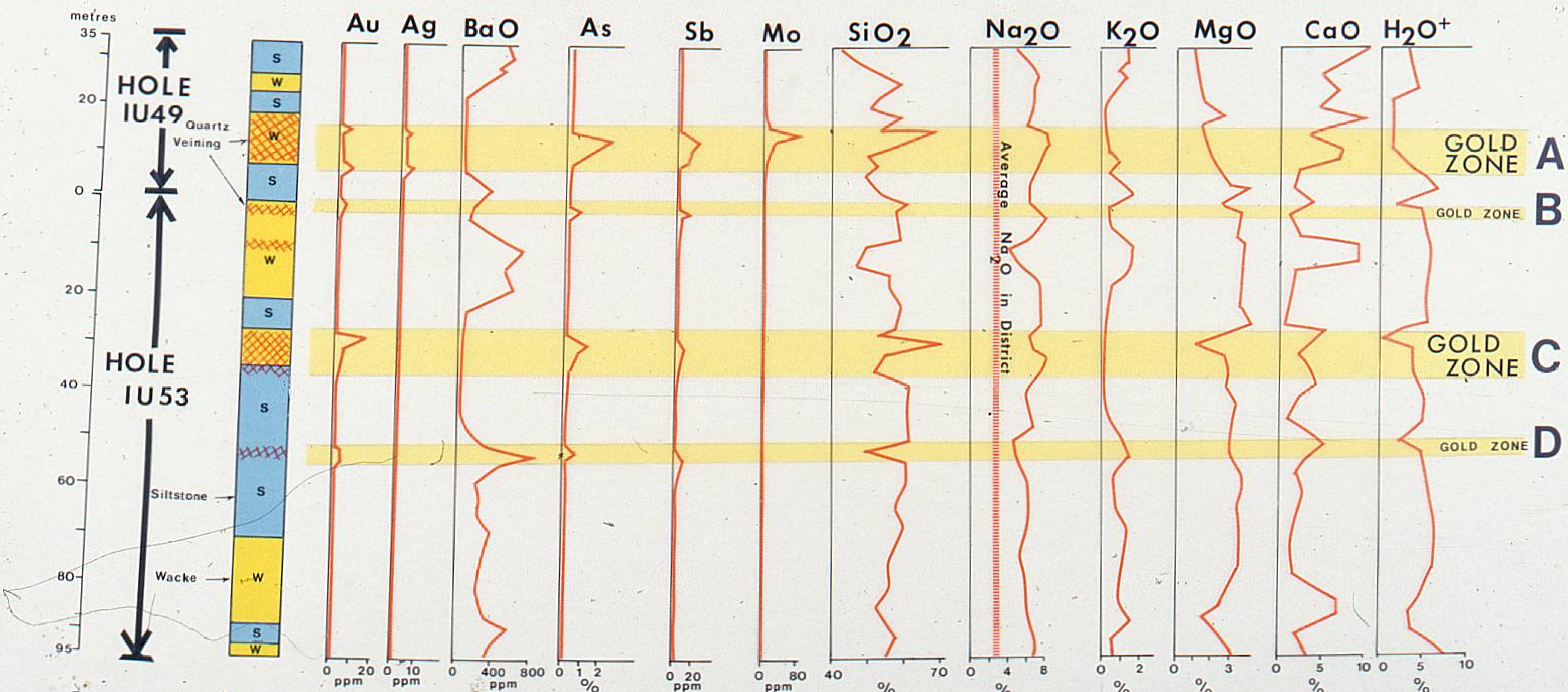
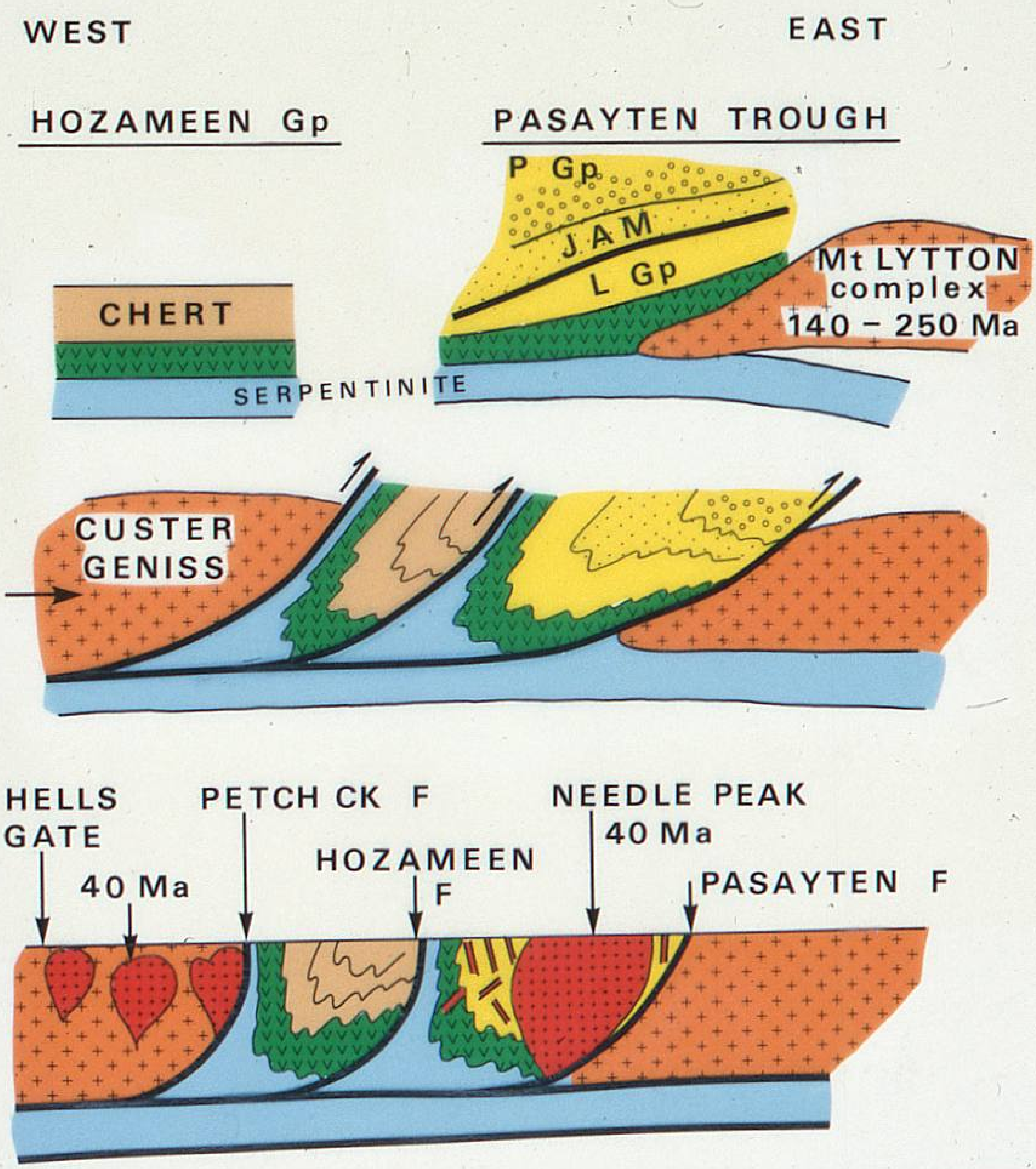
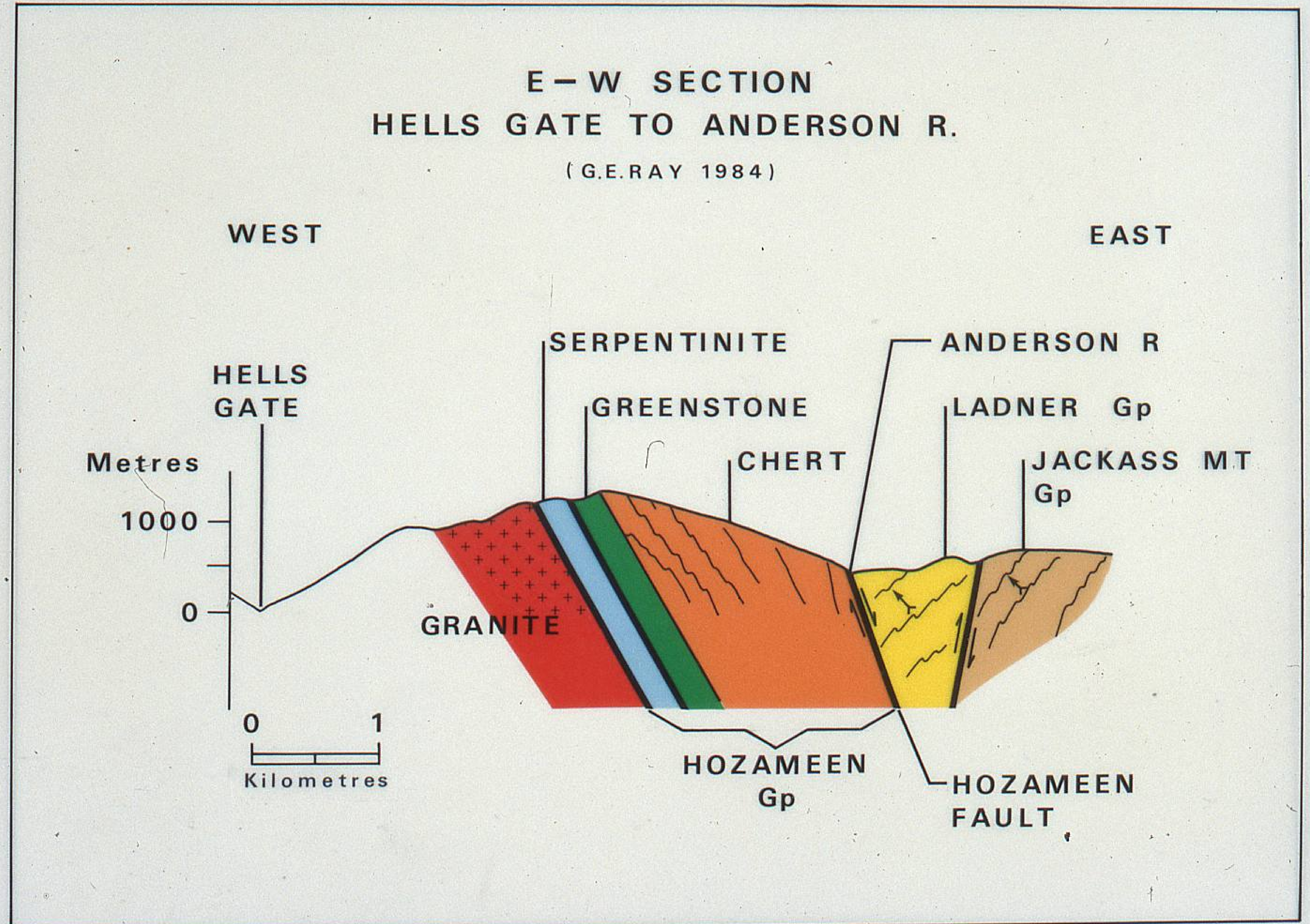


FIG 1

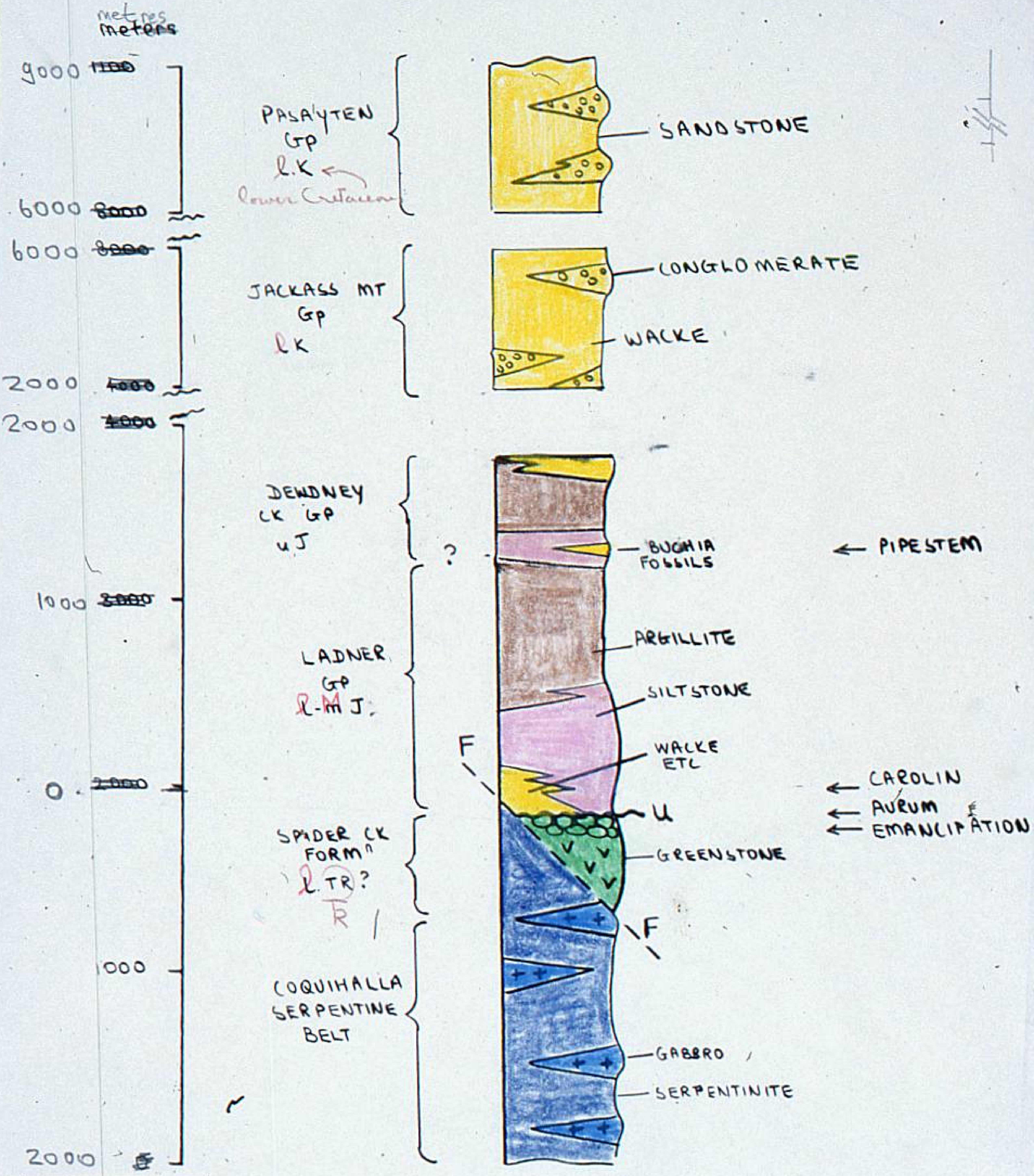
DEVELOPMENT OF HOZAMEEN & PETCH CREEK FAULTS

(G.E. RAY 1984)





E – W SECTION
HELLS GATE TO ANDERSON R.
(G.E. RAY 1984)
WEST
EAST
SERPENTINITE
ANDERSON R
HELLS GATE
GREENSTONE
LADNER Gp
Metres
CHERT
JACKASS MT Gp
1000
0
GRANITE
0
1
Kilometres
HOZAMEEN Gp
HOZAMEEN FAULT

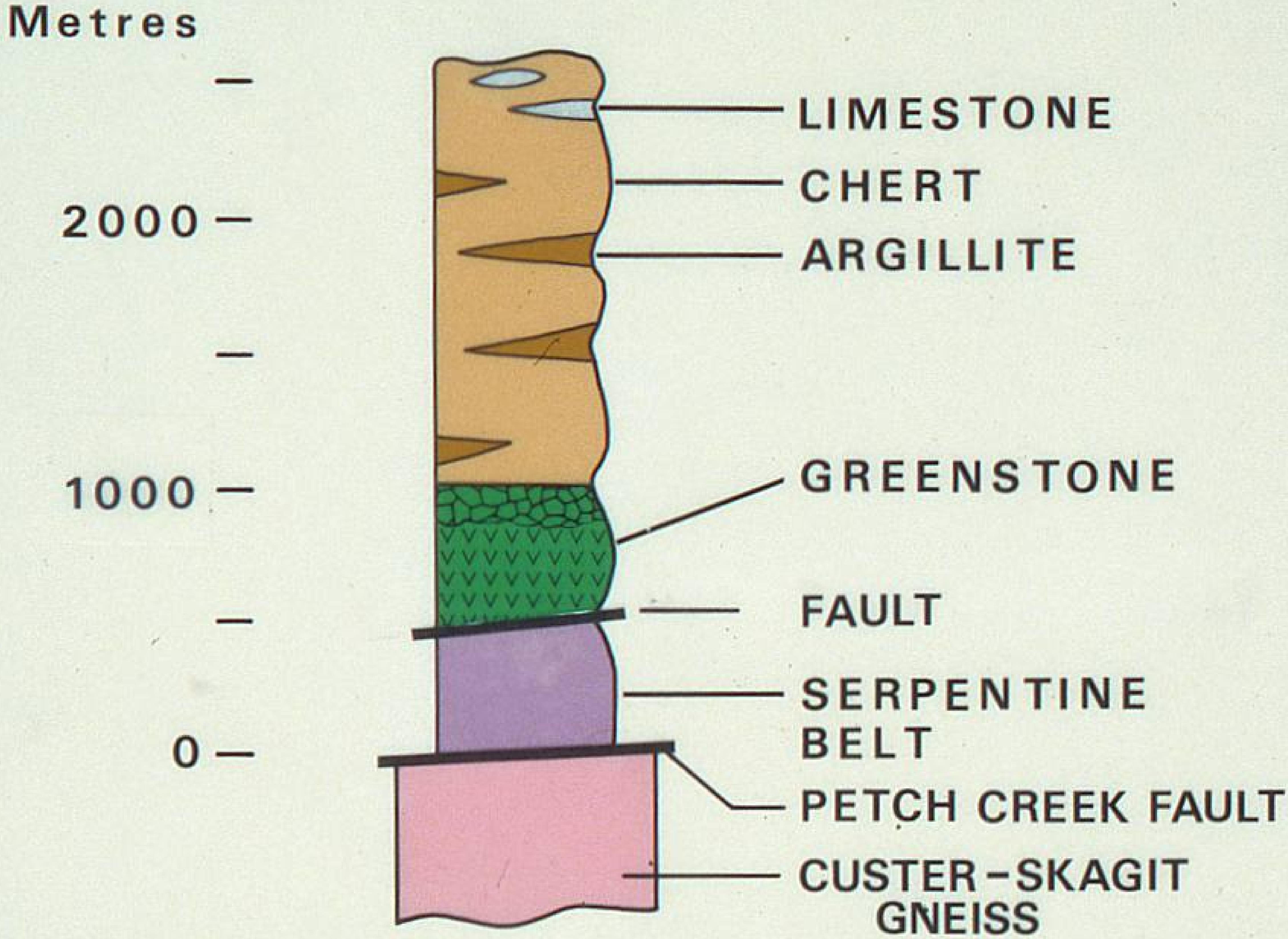


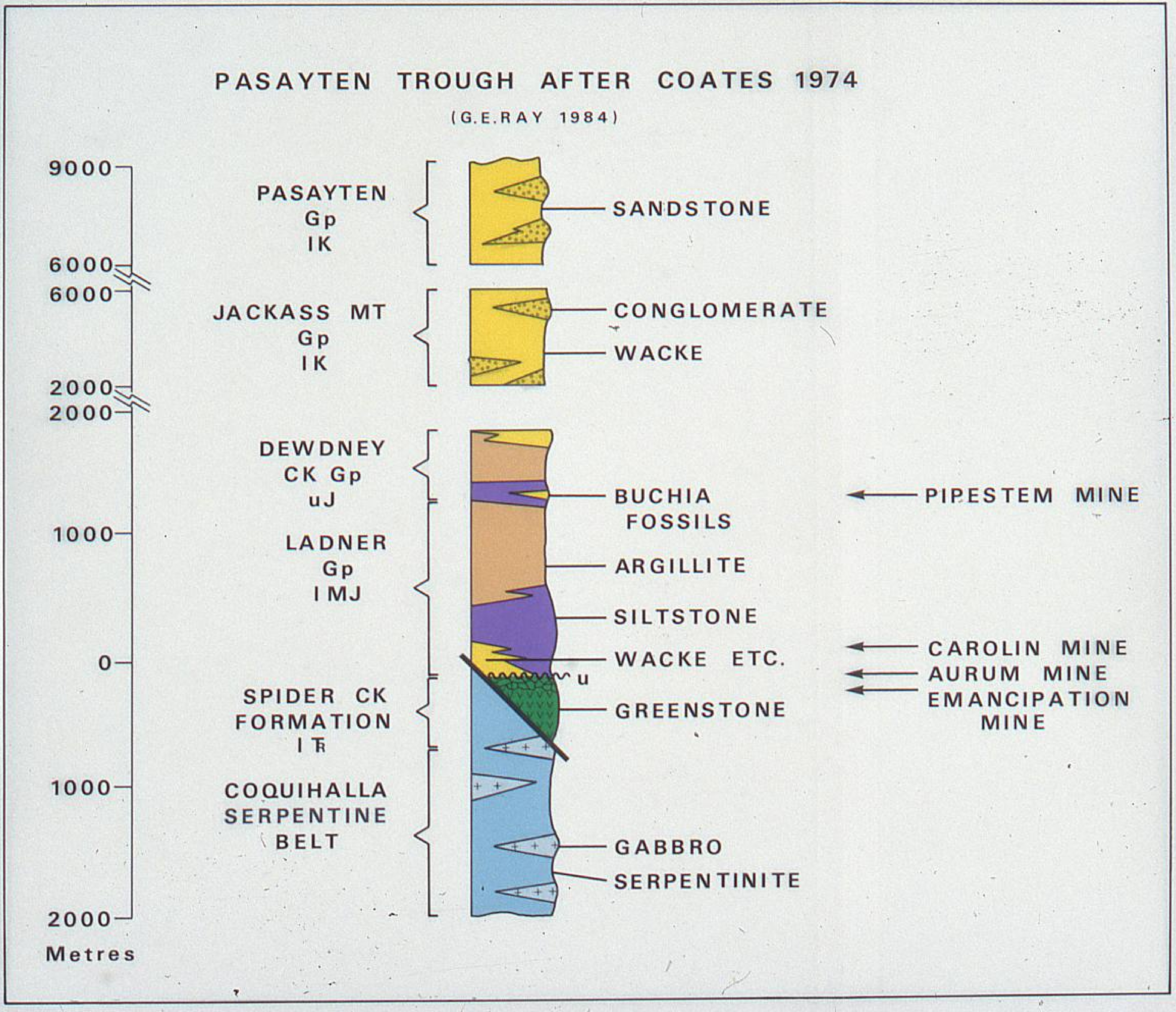
PASAYTEN TROUGH

AFTER COATES 1974; RAY 1984

HOZAMEEN GROUP STRATIGRAPHY EAST OF HELLS GATE

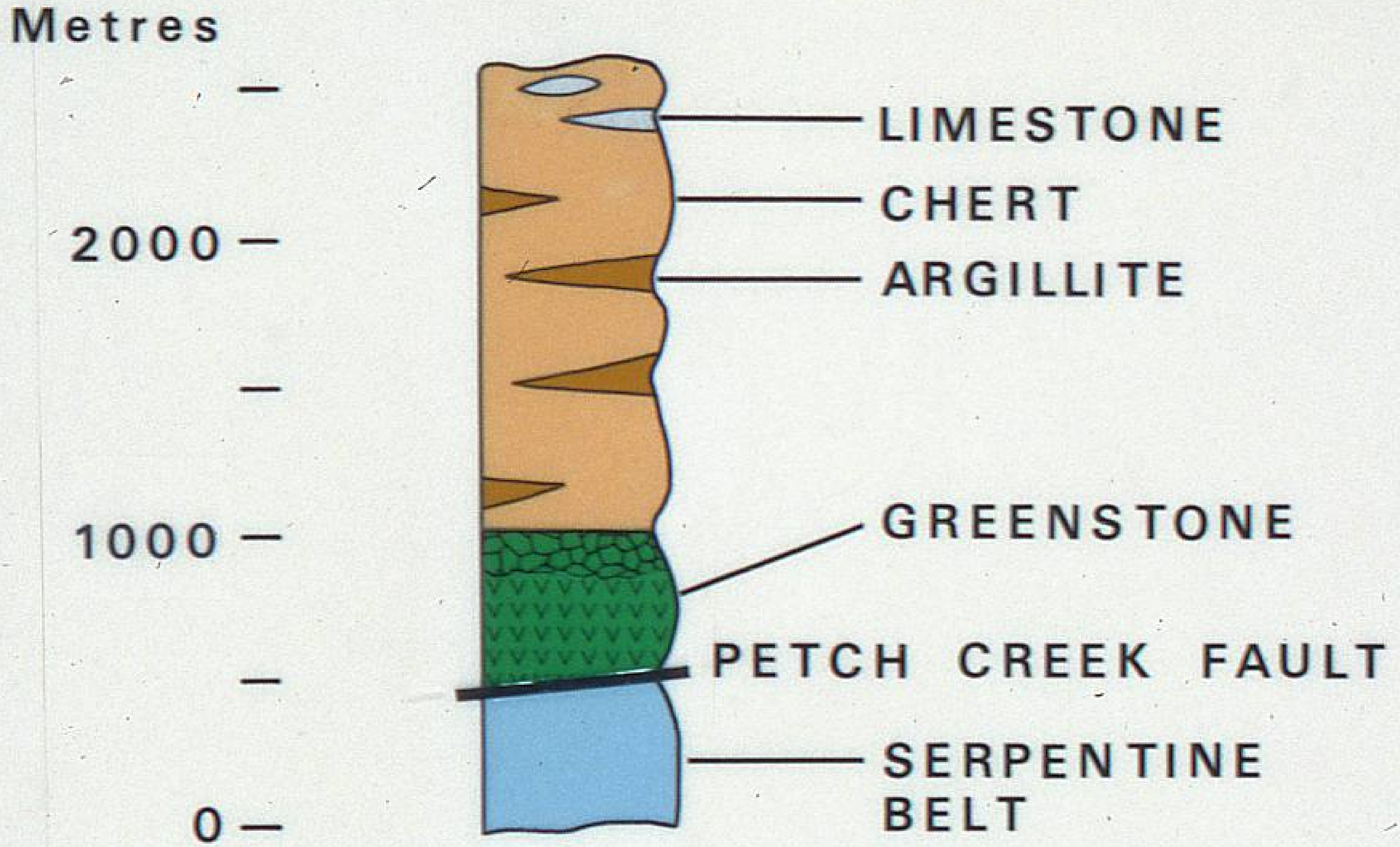
(G.E. RAY 1984)

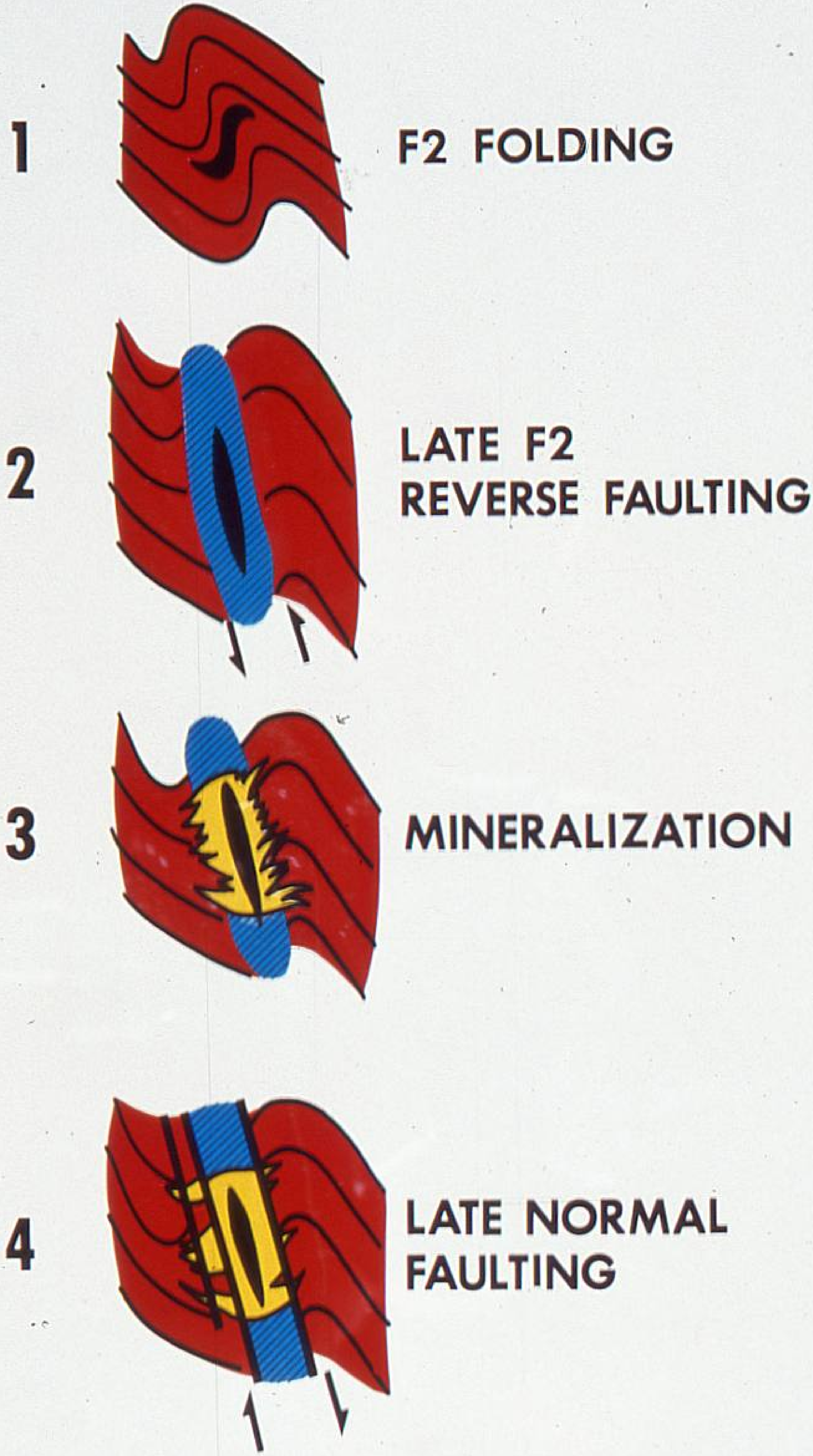



PASAYTEN TROUGH AFTER COATES 1974
(G.E.RAY 1984)
9000
6000
6000
2000
2000
1000
0
1000
2000
Metres
PASAYTEN Gp lK
JACKASS MT Gp lK
DEWDNEY CK Gp uJ
LADNER Gp lMJ
SPIDER CK FORMATION lTR
COQUIHALLA SERPENTINE BELT
SANDSTONE
CONGLOMERATE
WACKE
BUCHIA FOSSILS
ARGILLITE
SILTSTONE
WACKE ETC.
u
GREENSTONE
GABBRO
SERPENTINITE
PIPESTEM MINE
CAROLIN MINE
AURUM MINE
EMANCIPATION MINE

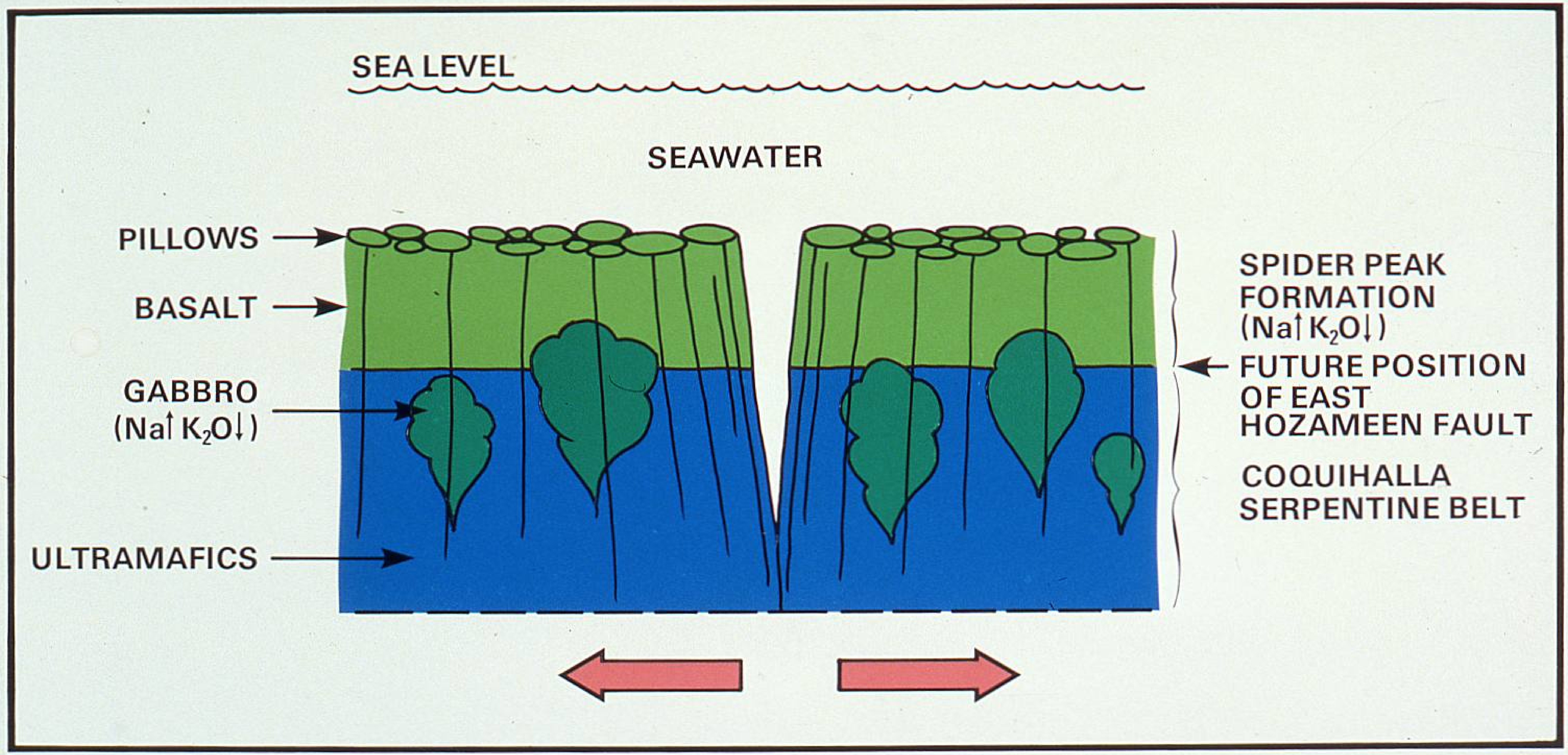
HOZAMEEN GROUP STRATIGRAPHY EAST OF HELLS GATE

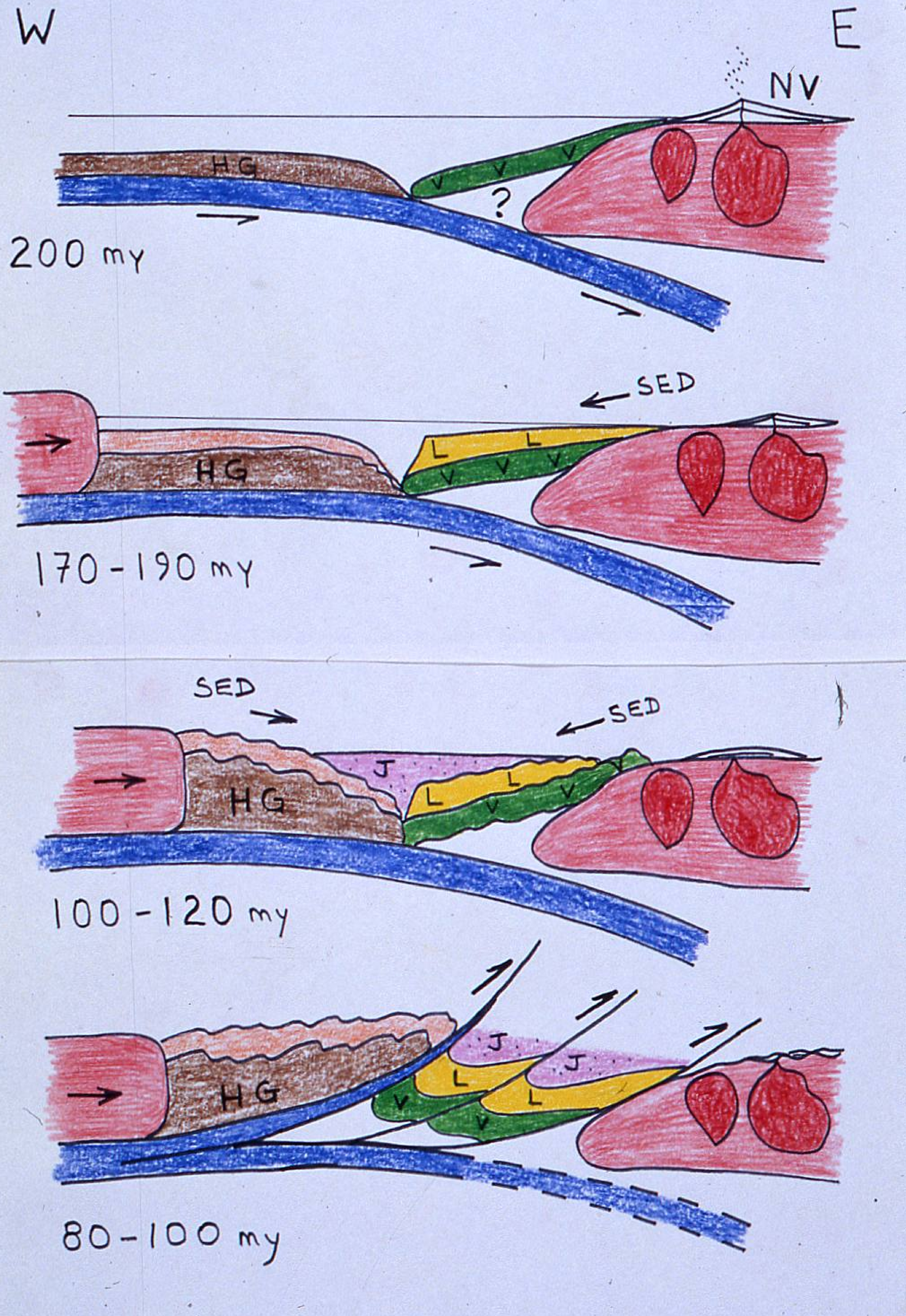
(G.E. RAY 1984)





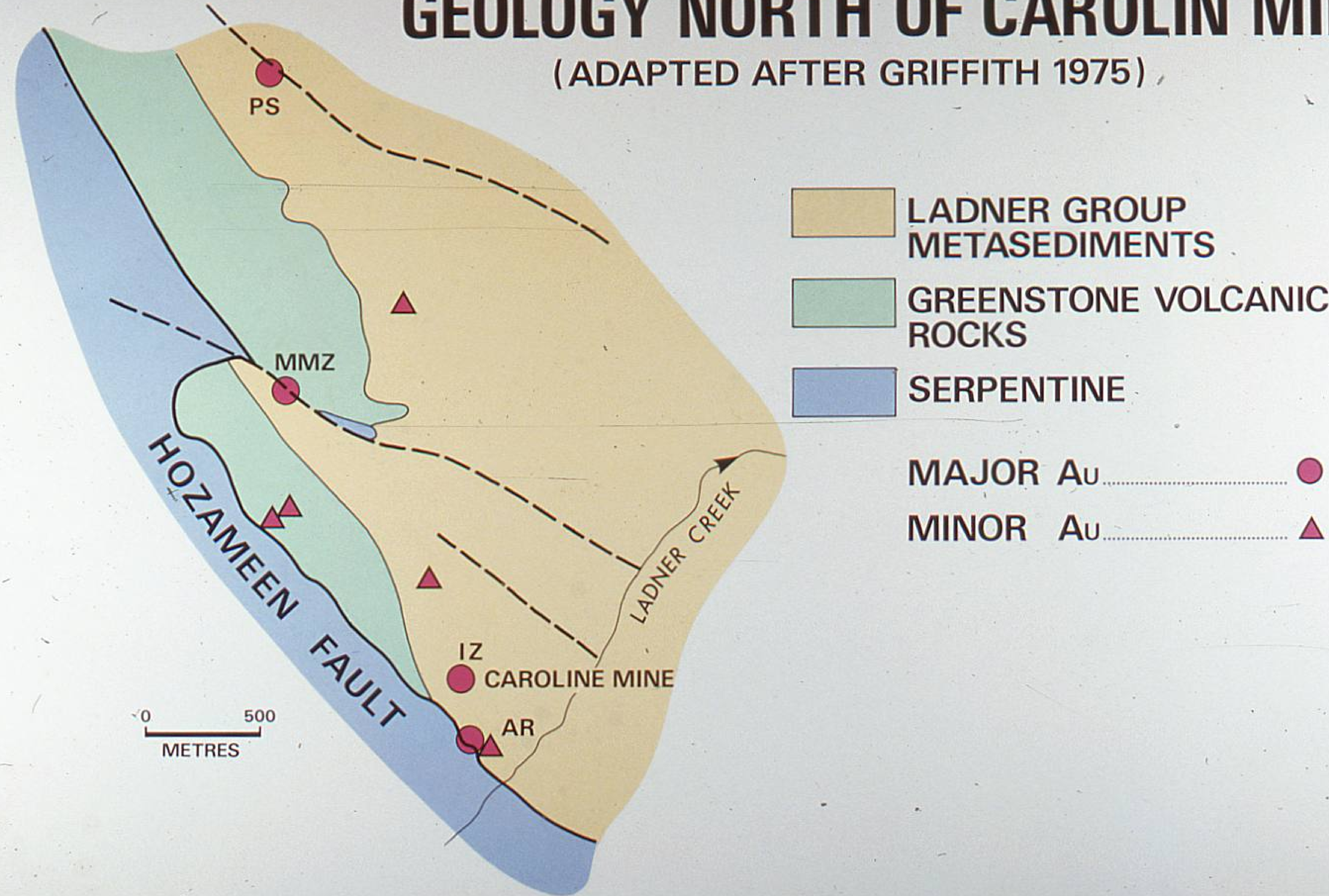
POSTULATED DEVELOPMENT OF THE IDAHO ZONE—CAROLIN MINE

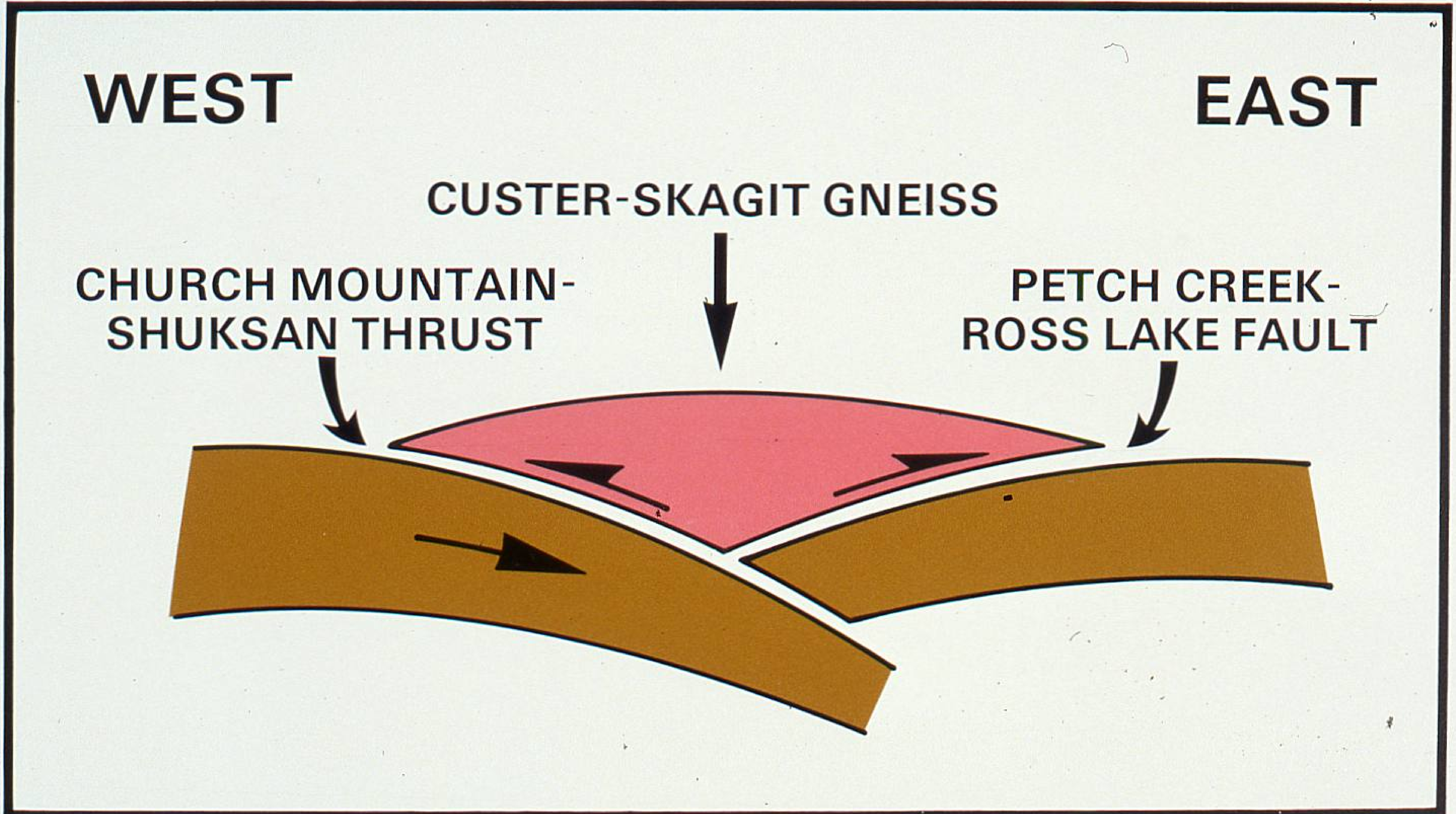

SEA LEVEL
SEAWATER
PILLOWS
BASALT
GABBRO
(Na↑ K2O↓)
ULTRAMAFICS
SPIDER PEAK
FORMATION
(Na↑ K2O↓)
FUTURE POSITION
OF EAST
HOZAMEEN FAULT
COQUIHALLA
SERPENTINE BELT

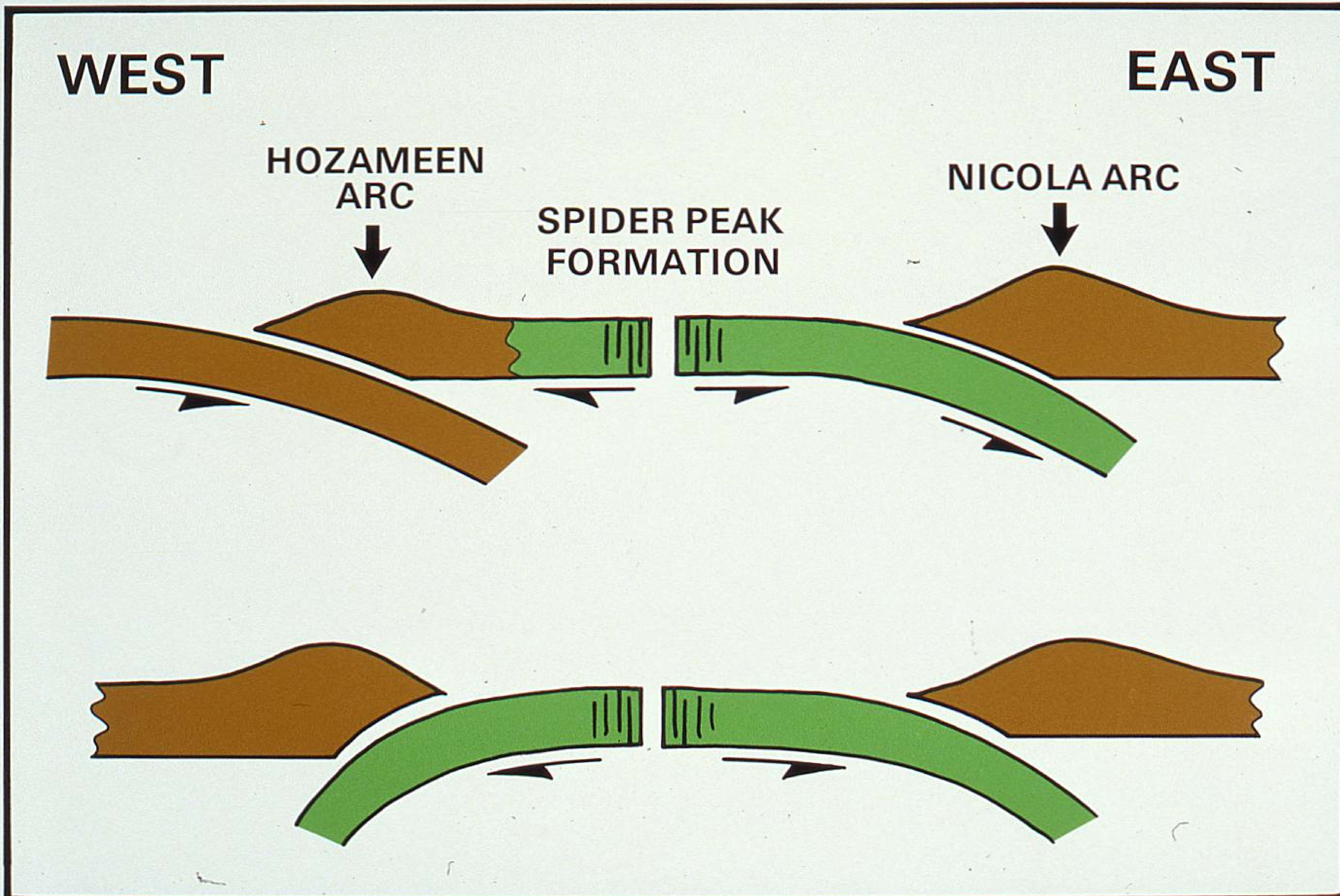

W
E
NV
HG
V
?
200 my
SED
L
HG
V
170-190 my
SED
SED
J
L
HG
V
100-120 my
J
L
HG
V
80-100 my

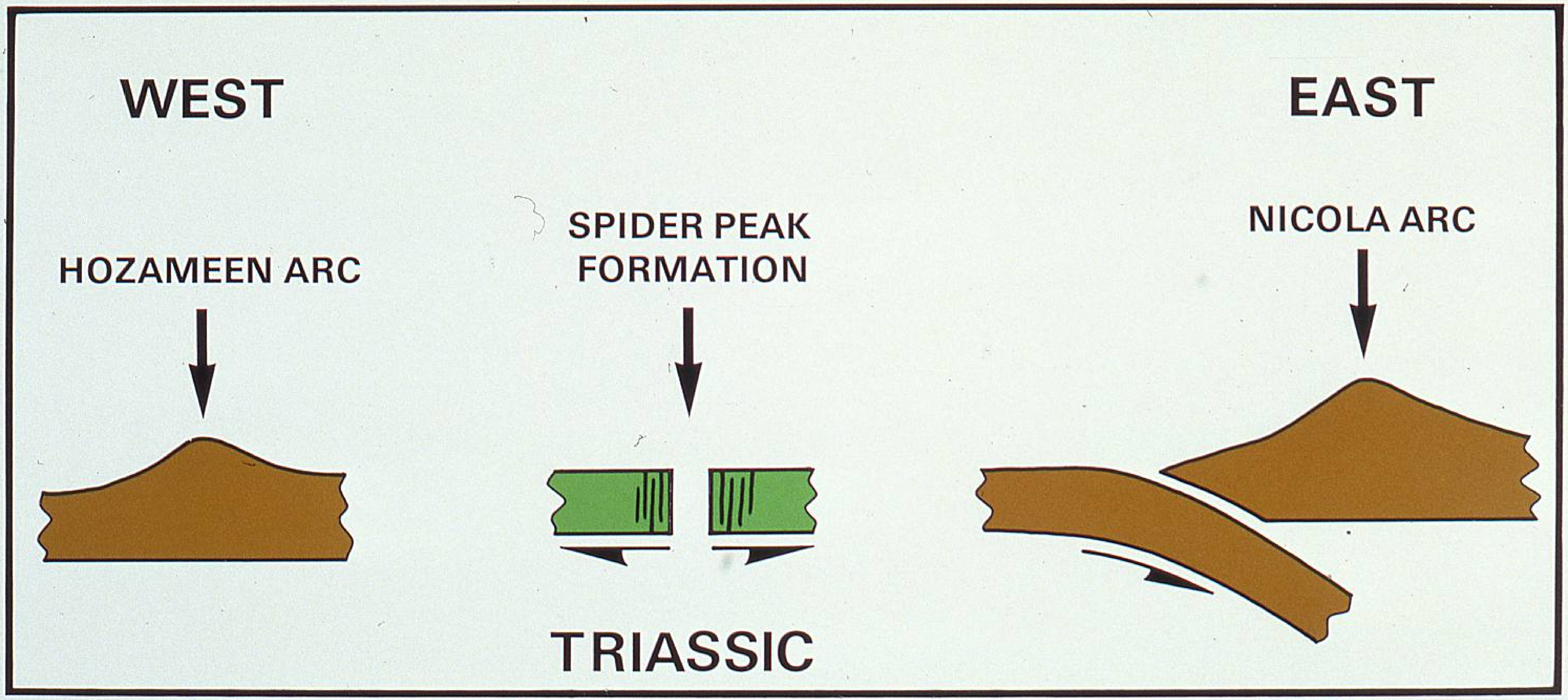
GEOLOGY NORTH OF CAROLIN MINE

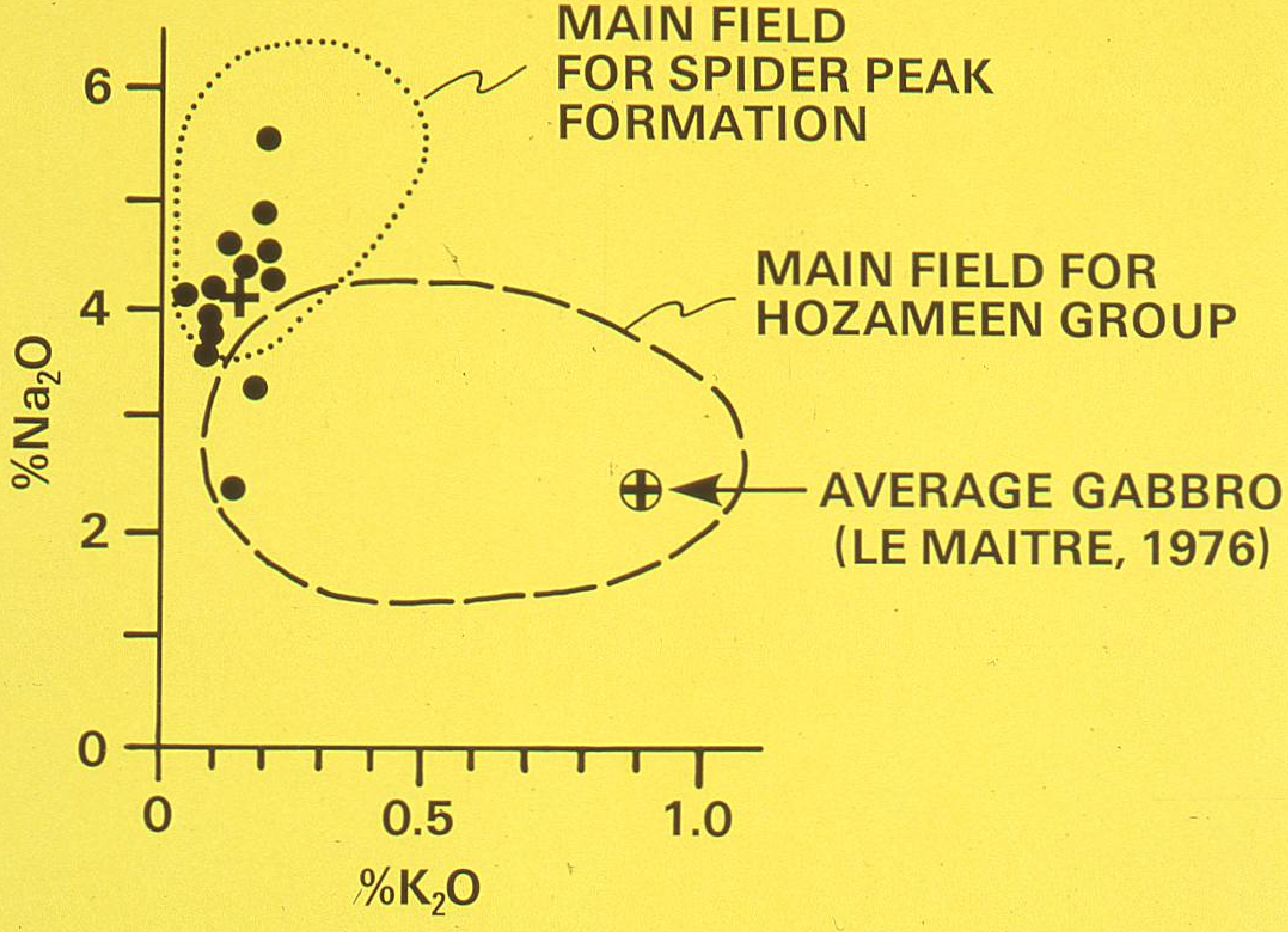
(ADAPTED AFTER GRIFFITH 1975)



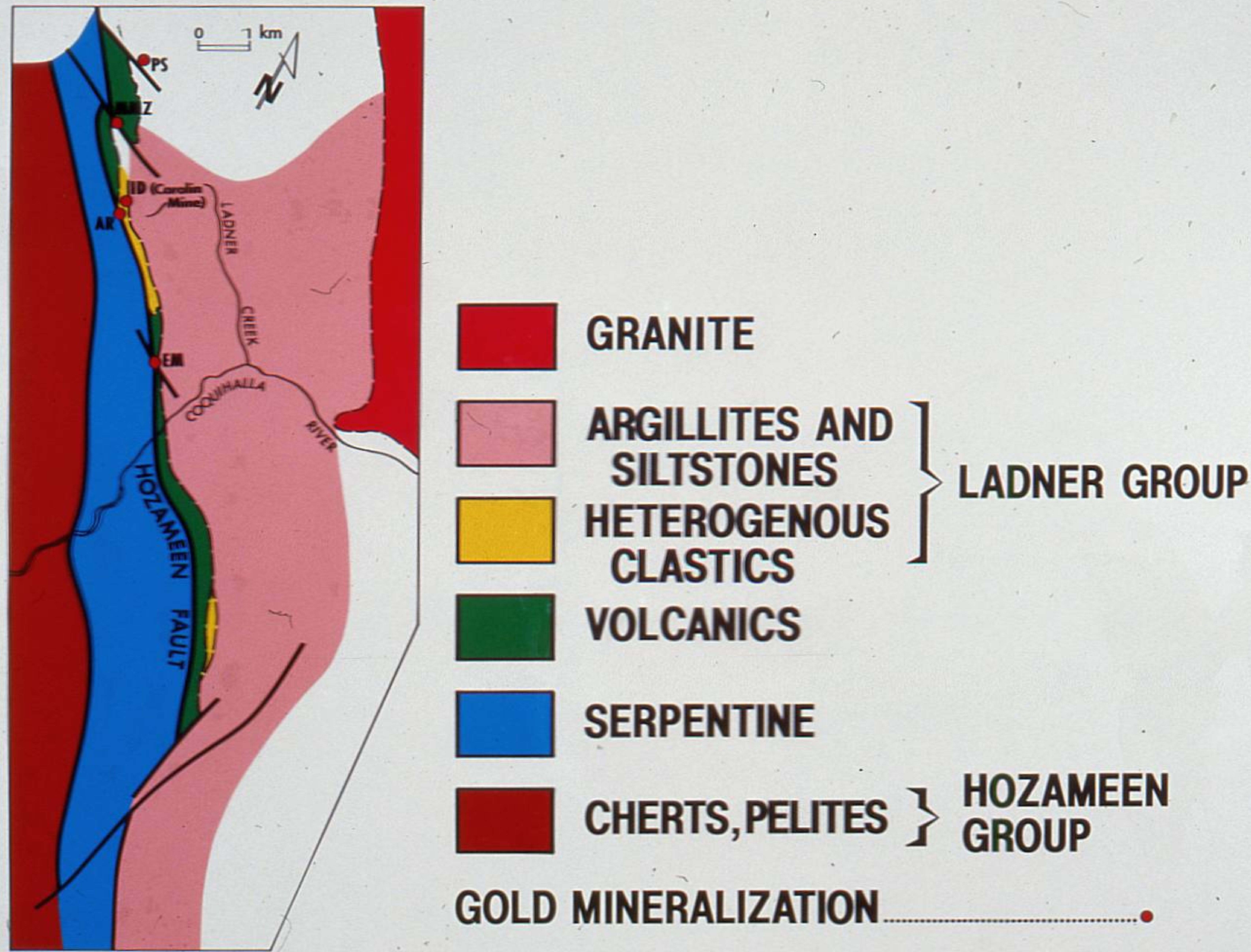

WEST
EAST
CUSTER-SKAGIT GNEISS
CHURCH MOUNTAIN-
SHUKSAN THRUST
PETCH CREEK-
ROSS LAKE FAULT


WEST
EAST
HOZAMEEN ARC
SPIDER PEAK FORMATION
NICOLA ARC

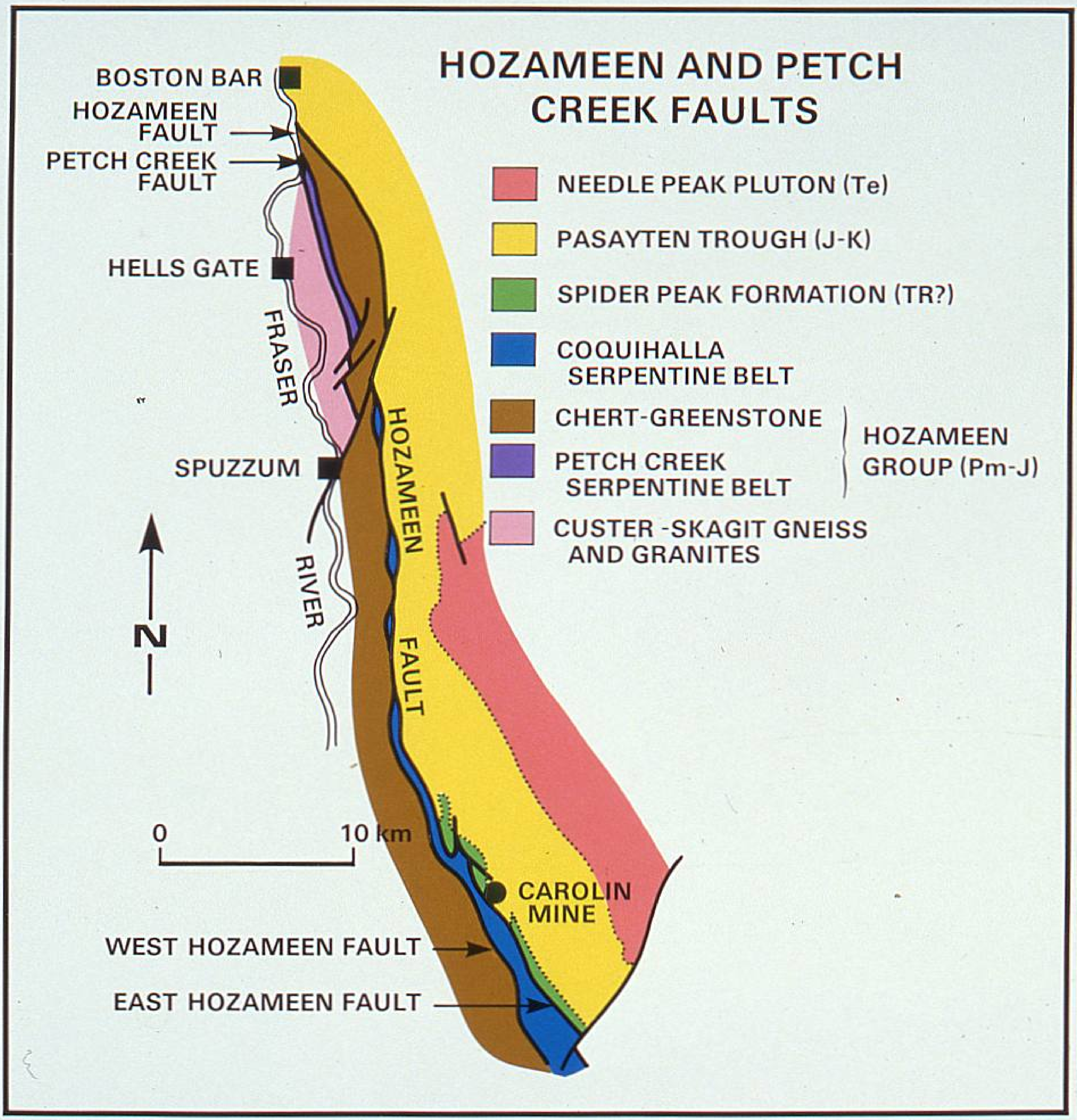

WEST
EAST
SPIDER PEAK
FORMATION
HOZAMEEN ARC
NICOLA ARC
TRIASSIC

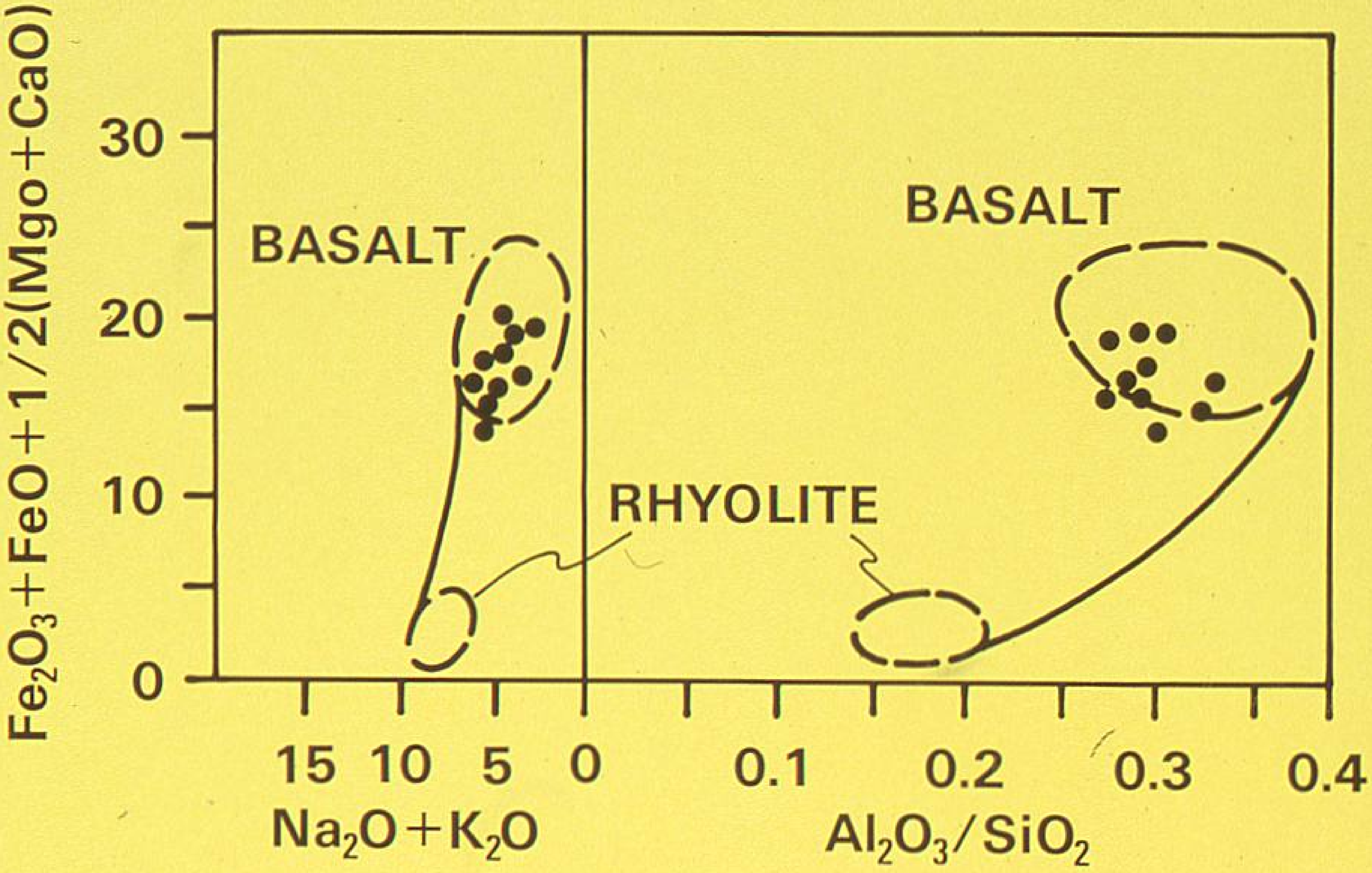


GABROIC ROCKS IN COQUIHALLA SERPENTINE BELT

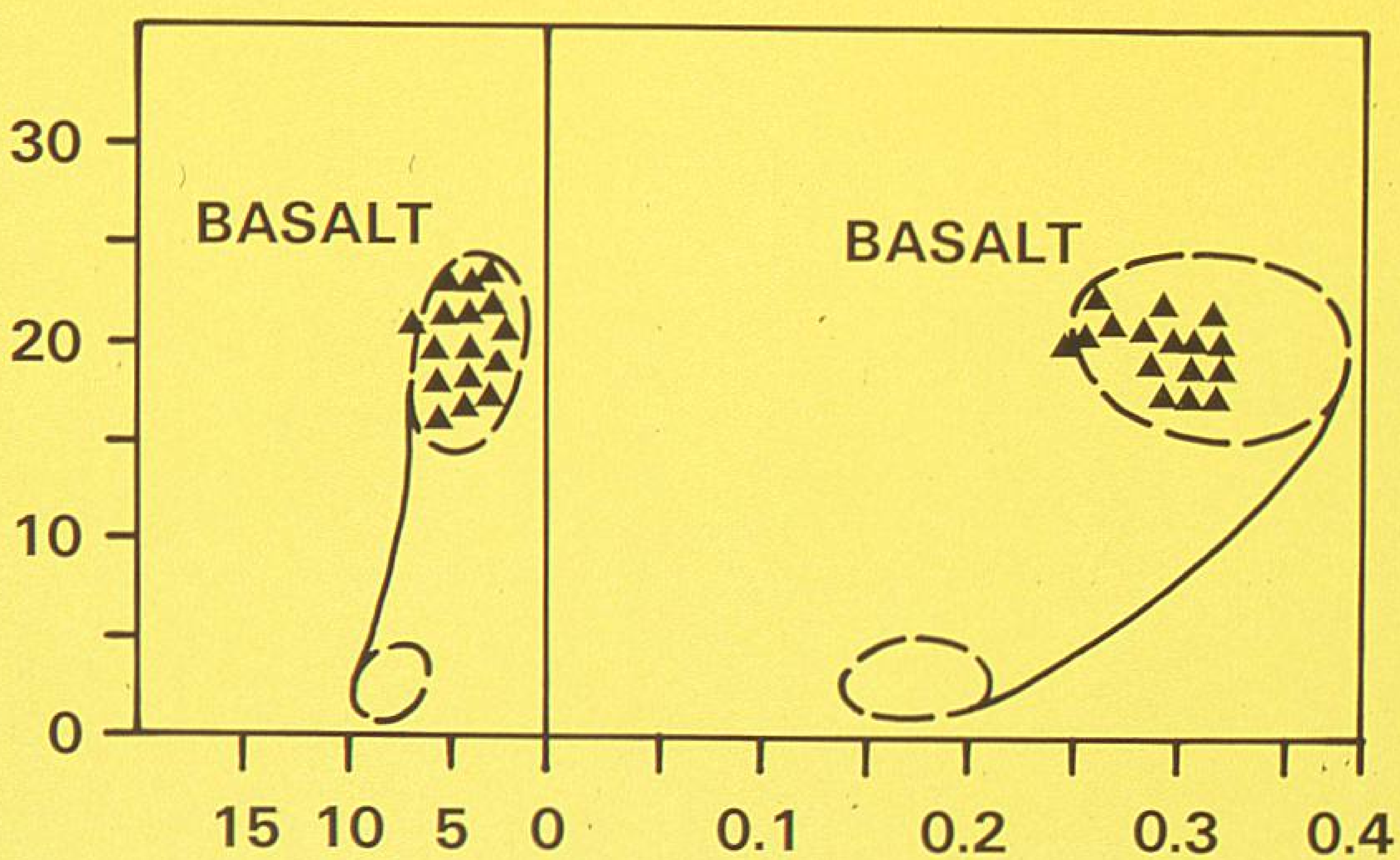


0 1 km
N
PS
ID (Carolin Mine)
AR
EM
LADNER CREEK
COQUIHALLA RIVER
HOZAMEEN FAULT
GRANITE
ARGILLITES AND SILTSTONES
HETEROGENOUS CLASTICS
LADNER GROUP
VOLCANICS
SERPENTINE
CHERTS, PELITES
HOZAMEEN GROUP
GOLD MINERALIZATION


HOZAMEEN AND PETCH CREEK FAULTS
NEEDLE PEAK PLUTON (Te)
PASAYTEN TROUGH (J-K)
SPIDER PEAK FORMATION (TR?)
COQUIHALLA SERPENTINE BELT
CHERT-GREENSTONE
PETCH CREEK SERPENTINE BELT
HOZAMEEN GROUP (Pm-J)
CUSTER -SKAGIT GNEISS AND GRANITES
BOSTON BAR
HOZAMEEN FAULT
PETCH CREEK FAULT
HELLS GATE
FRASER RIVER
SPUZZUM
HOZAMEEN FAULT
N
0
10 km
CAROLIN MINE
WEST HOZAMEEN FAULT
EAST HOZAMEEN FAULT

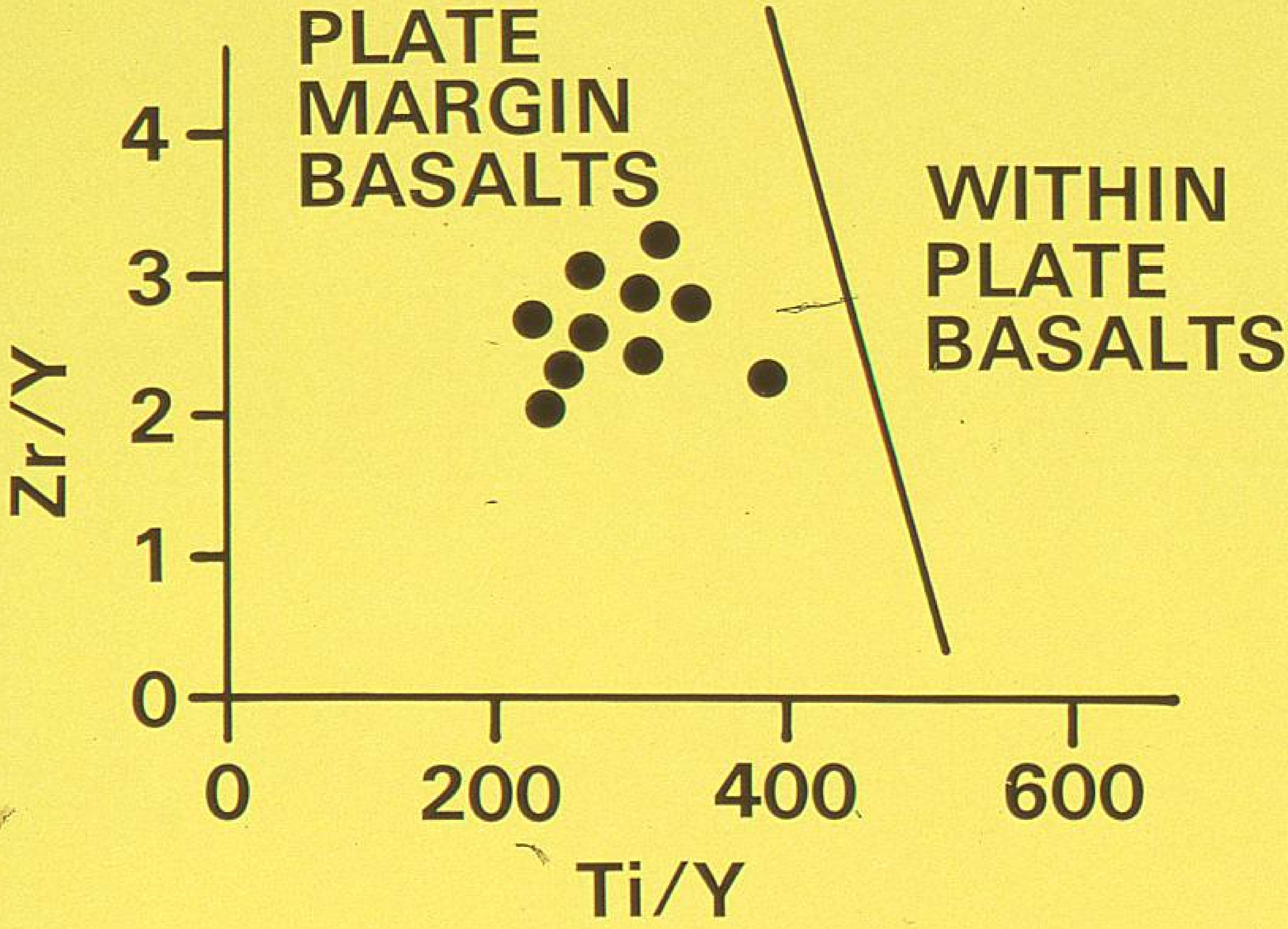


SPIDER PEAK FORMATION

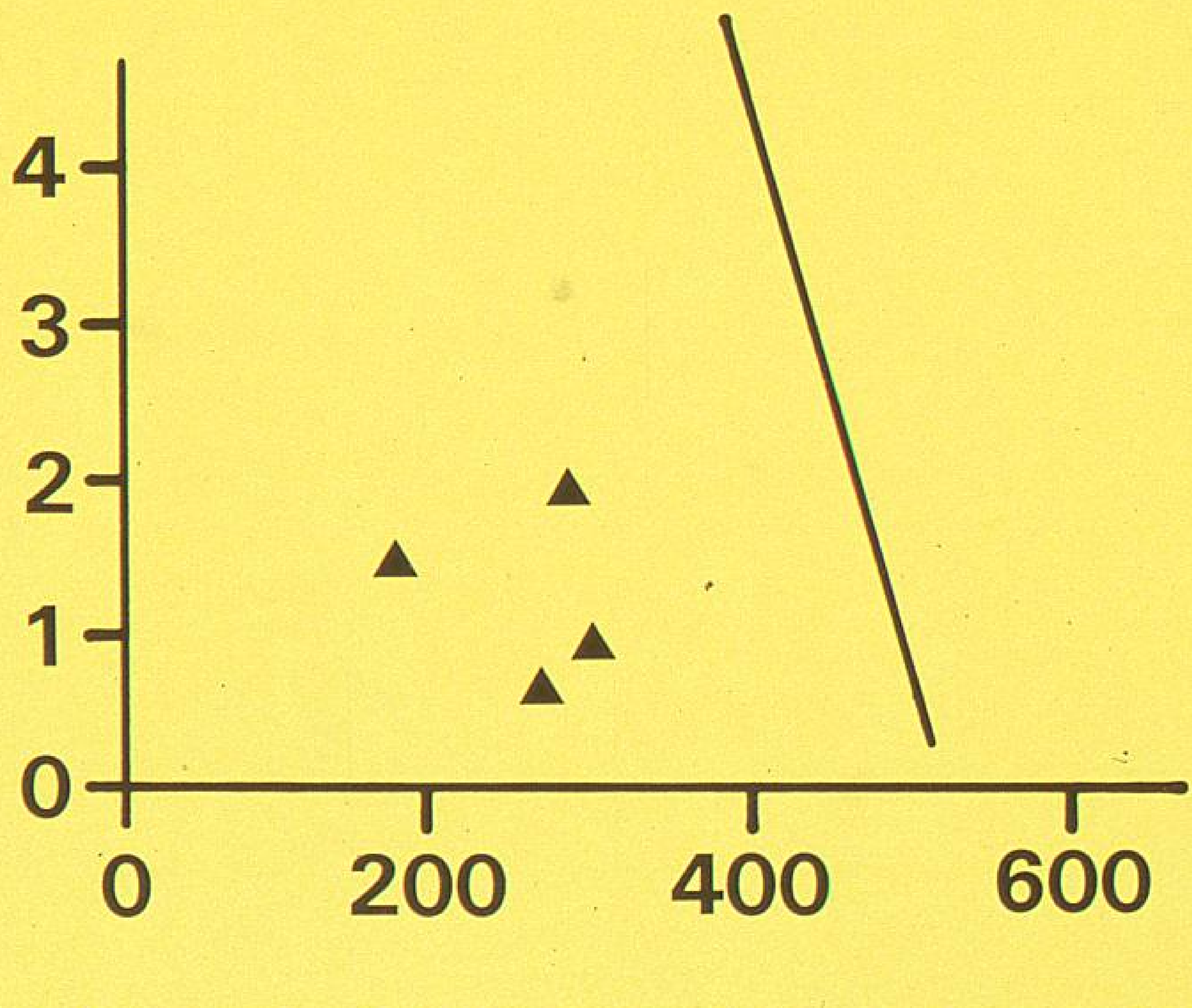


HOZAMEEN GROUP

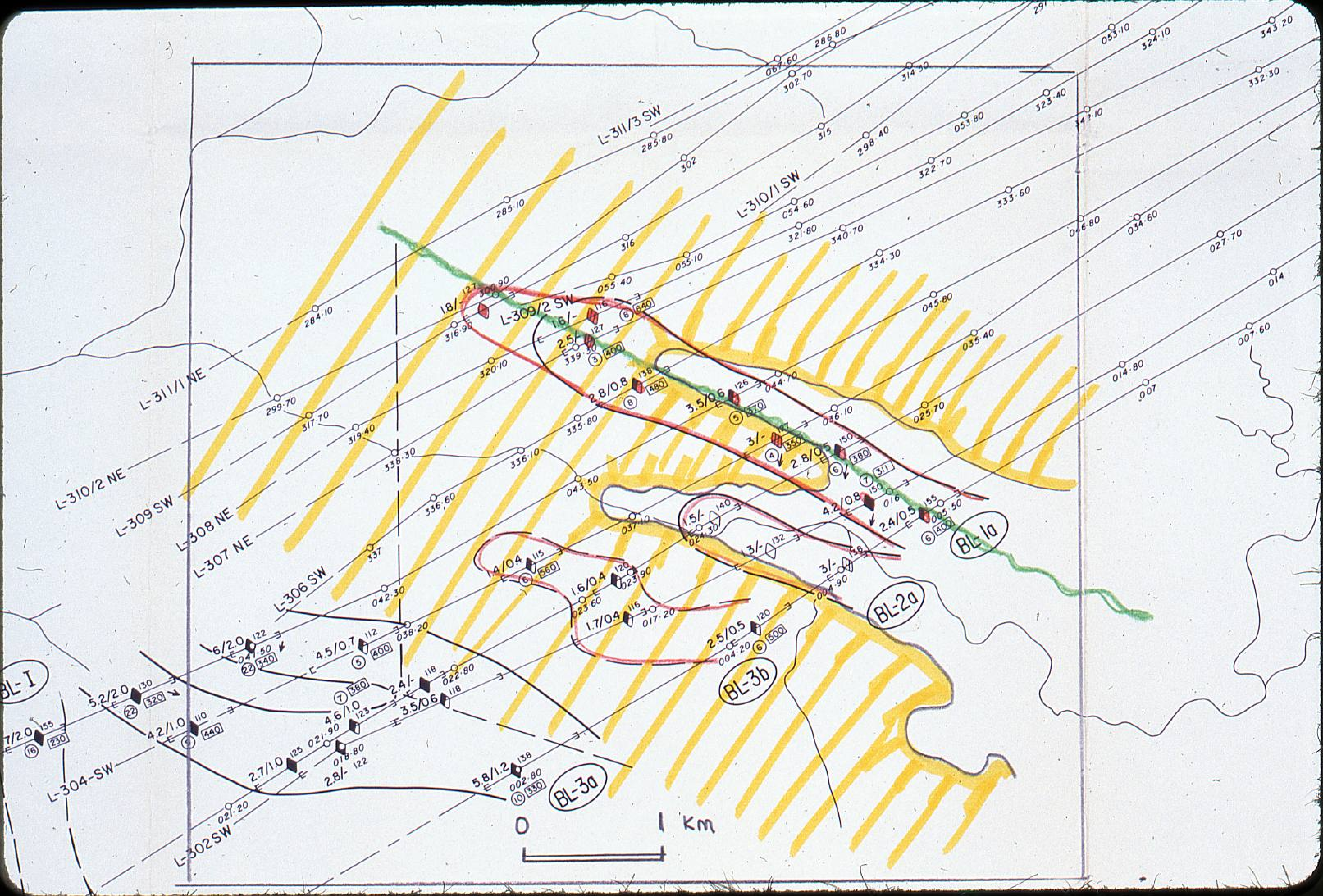
(PLOTS AFTER CHURCH, 1975)



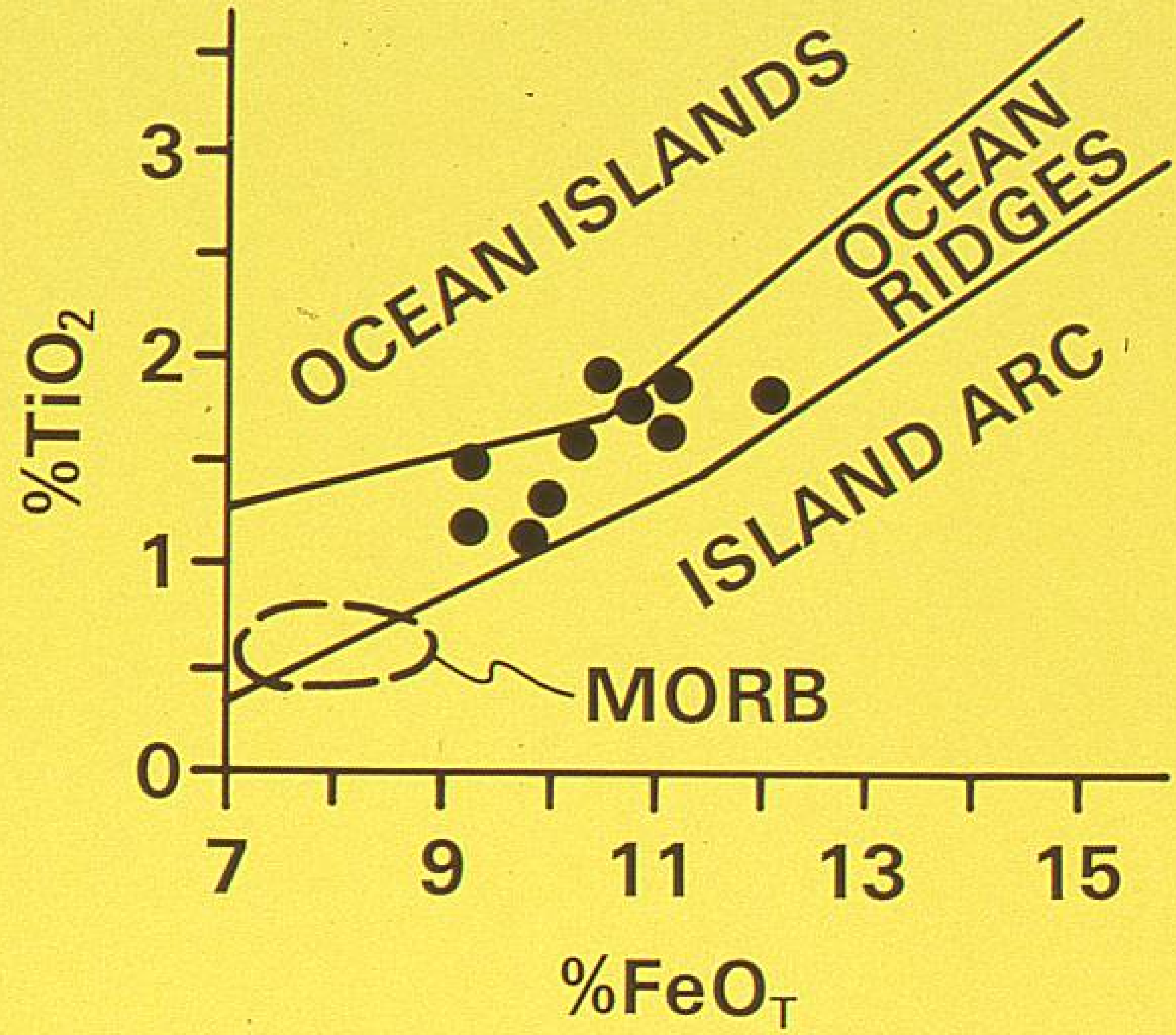
SPIDER PEAK FORMATION



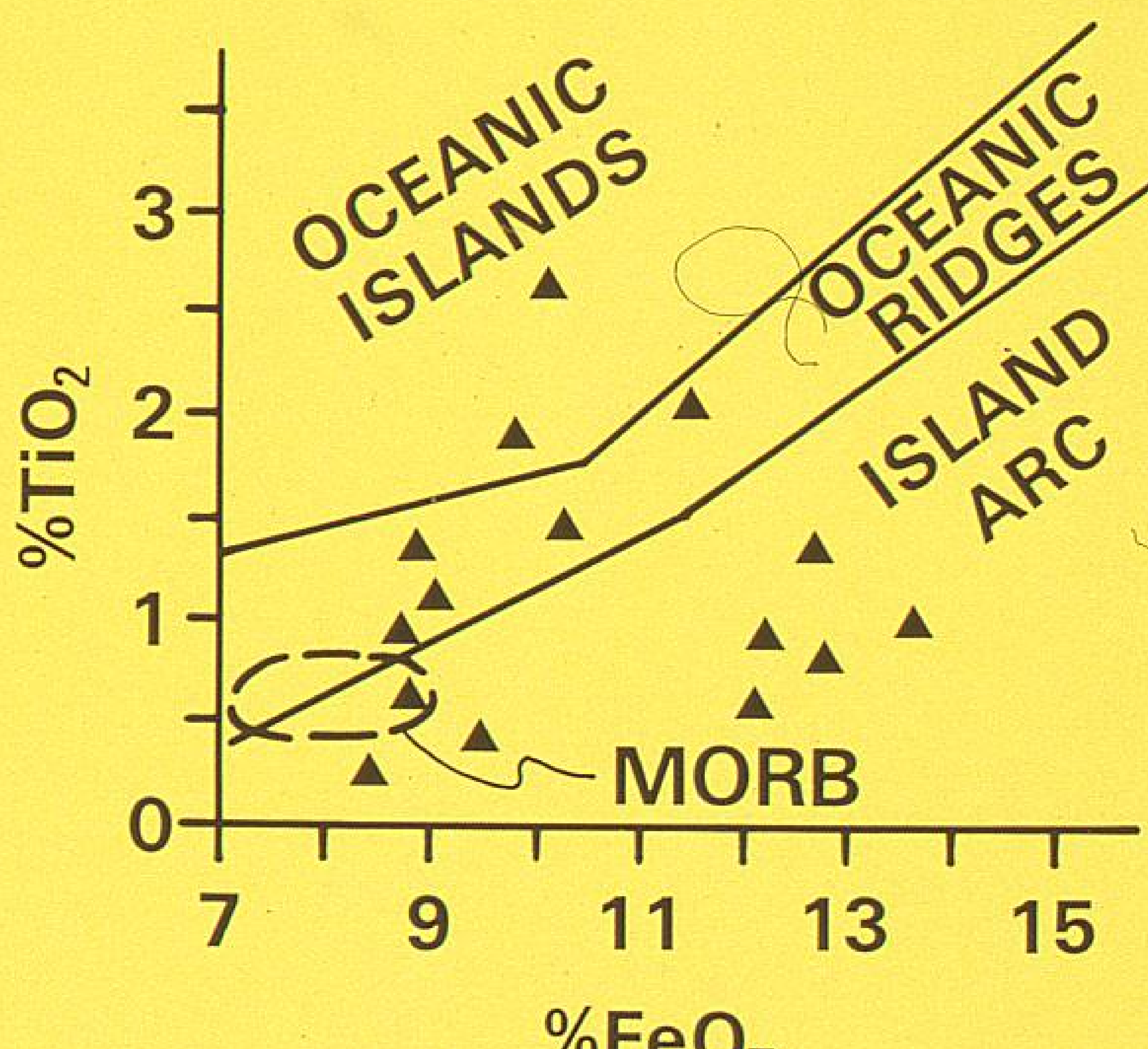
HOZAMEEN GROUP



L-311/3 SW
L-310/1 SW
L-309/2 SW
L-311/1 NE
L-310/2 NE
L-309 SW
L-308 NE
L-307 NE
L-306 SW
L-304-SW
L-302 SW
BL-Ia
BL-2a
BL-3b
BL-3a
BL-I
0
1 Km

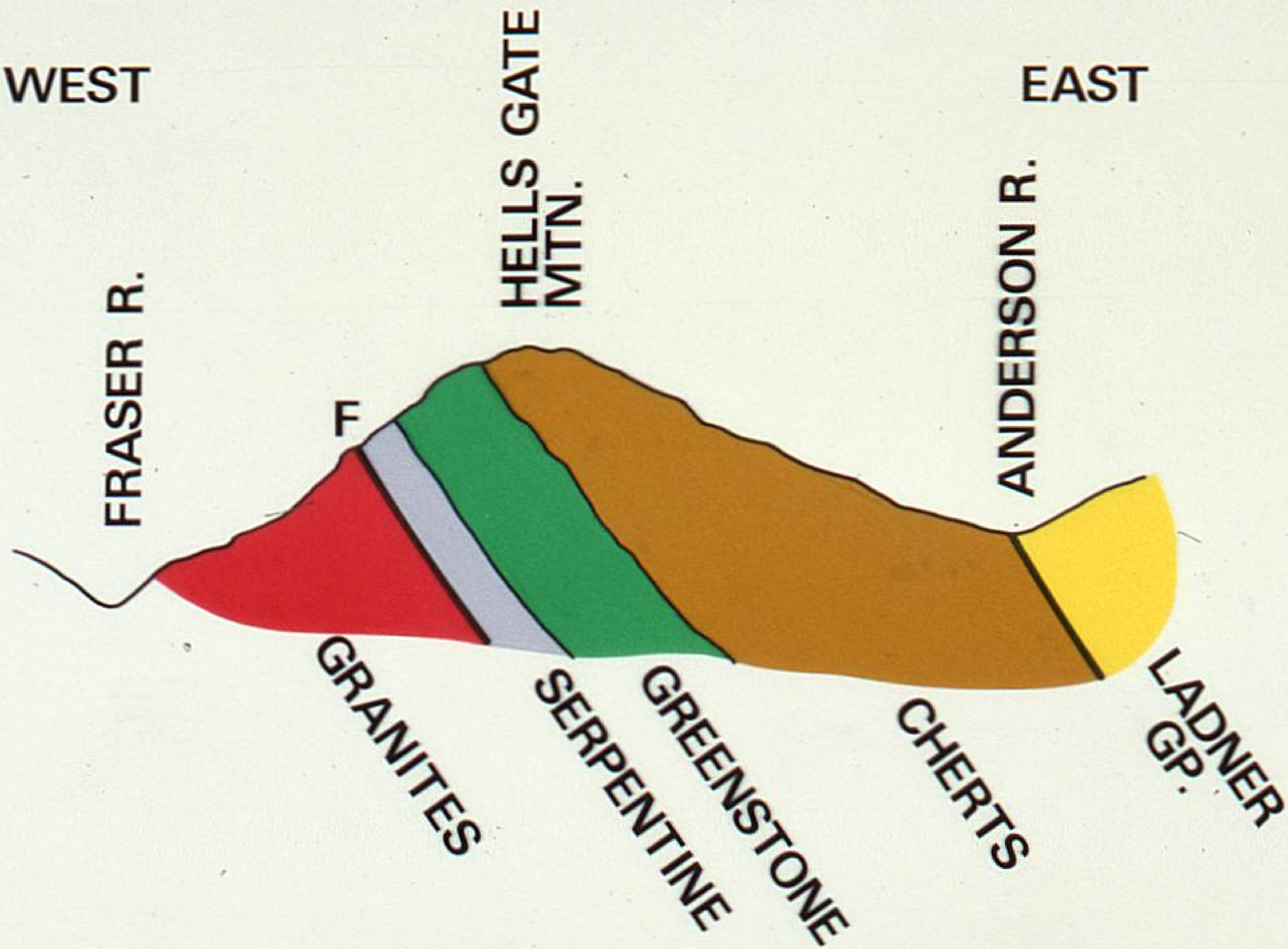


SPIDER PEAK FORMATION



HOZAMEEN GROUP

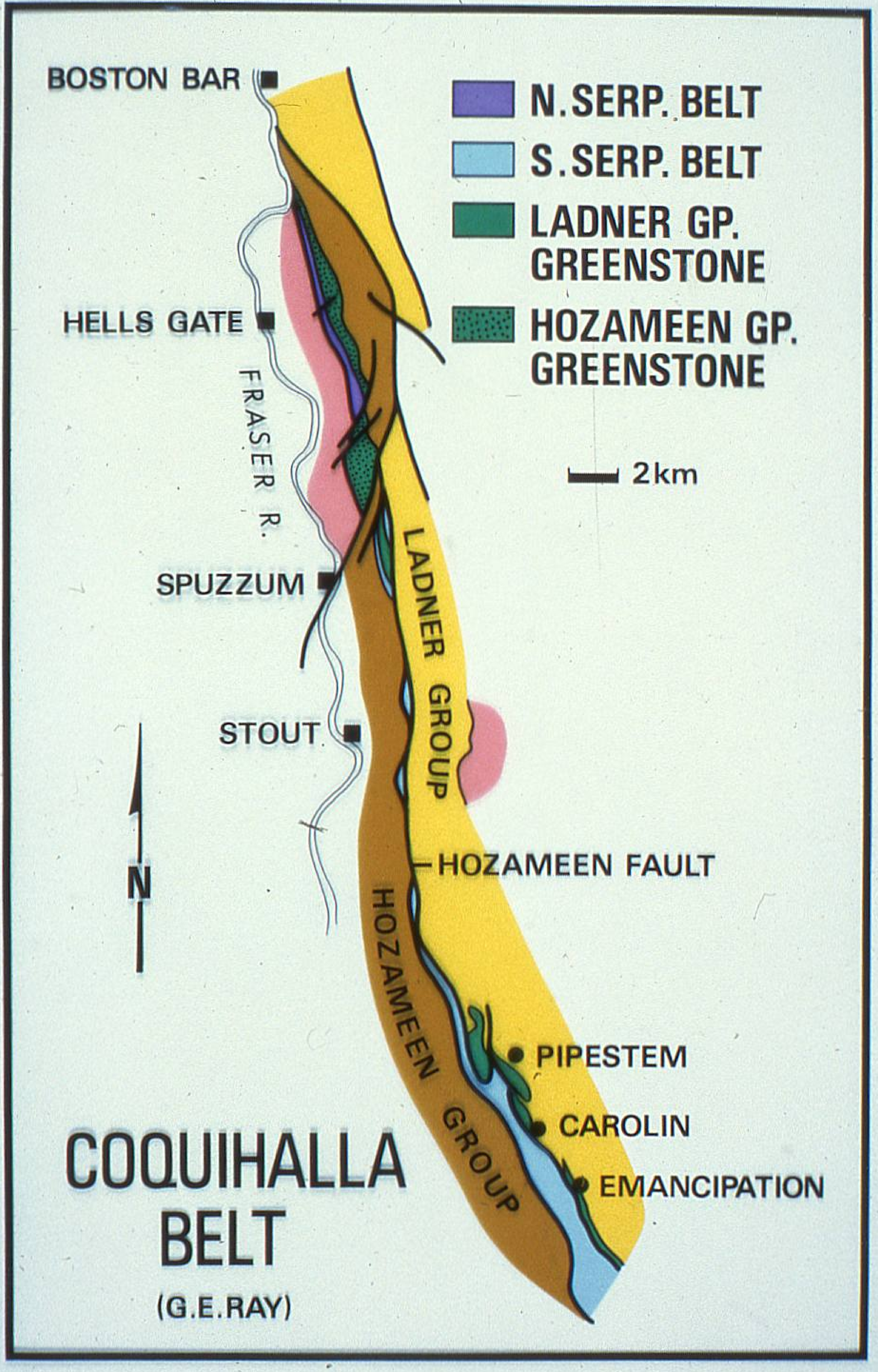
PLOTS AFTER
DE ROSEN-SPENCE, 1976



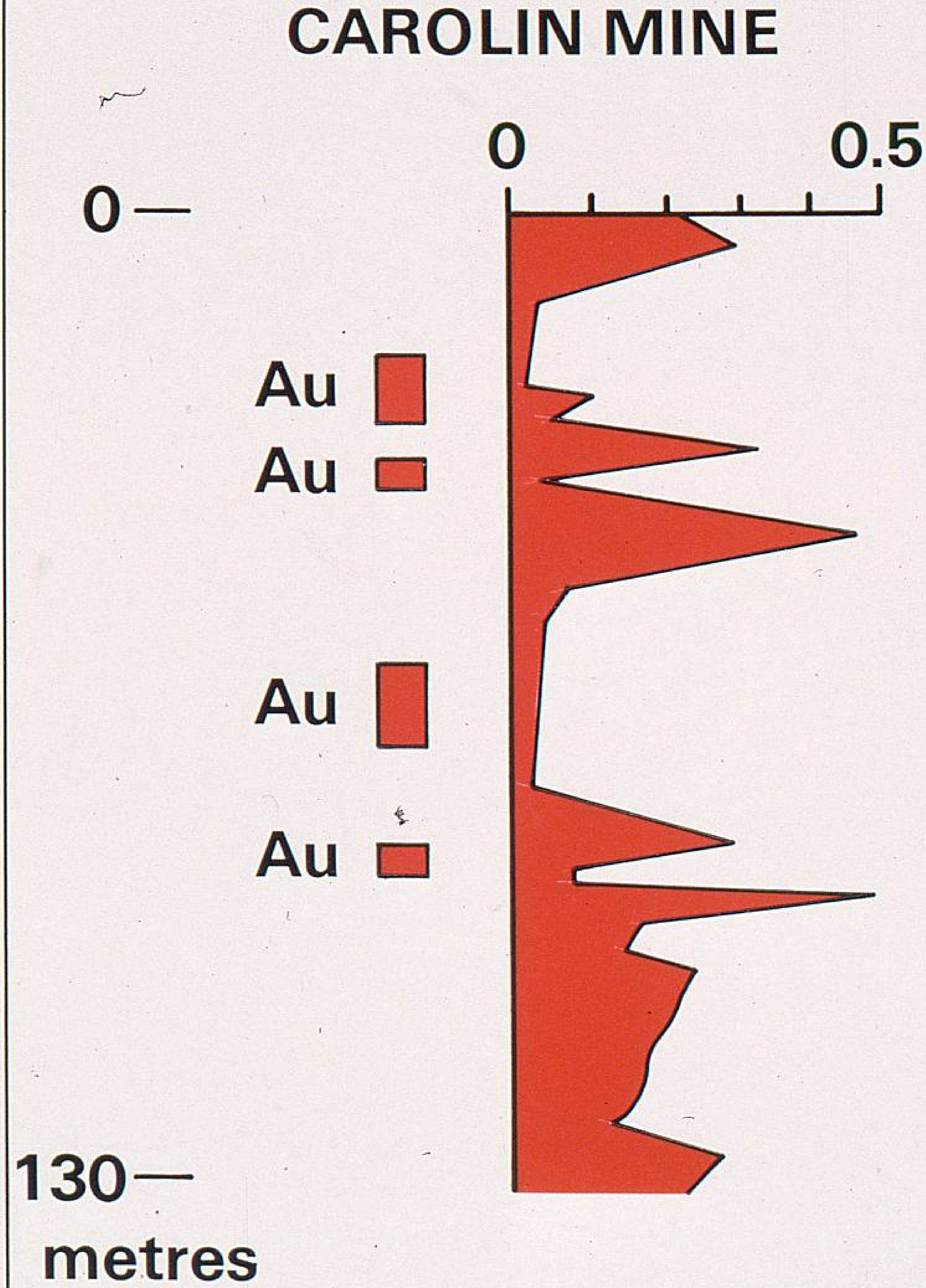
E-W SKETCH SECTION

HELLS GATE - ANDERSON RIVER (G.E. RAY)

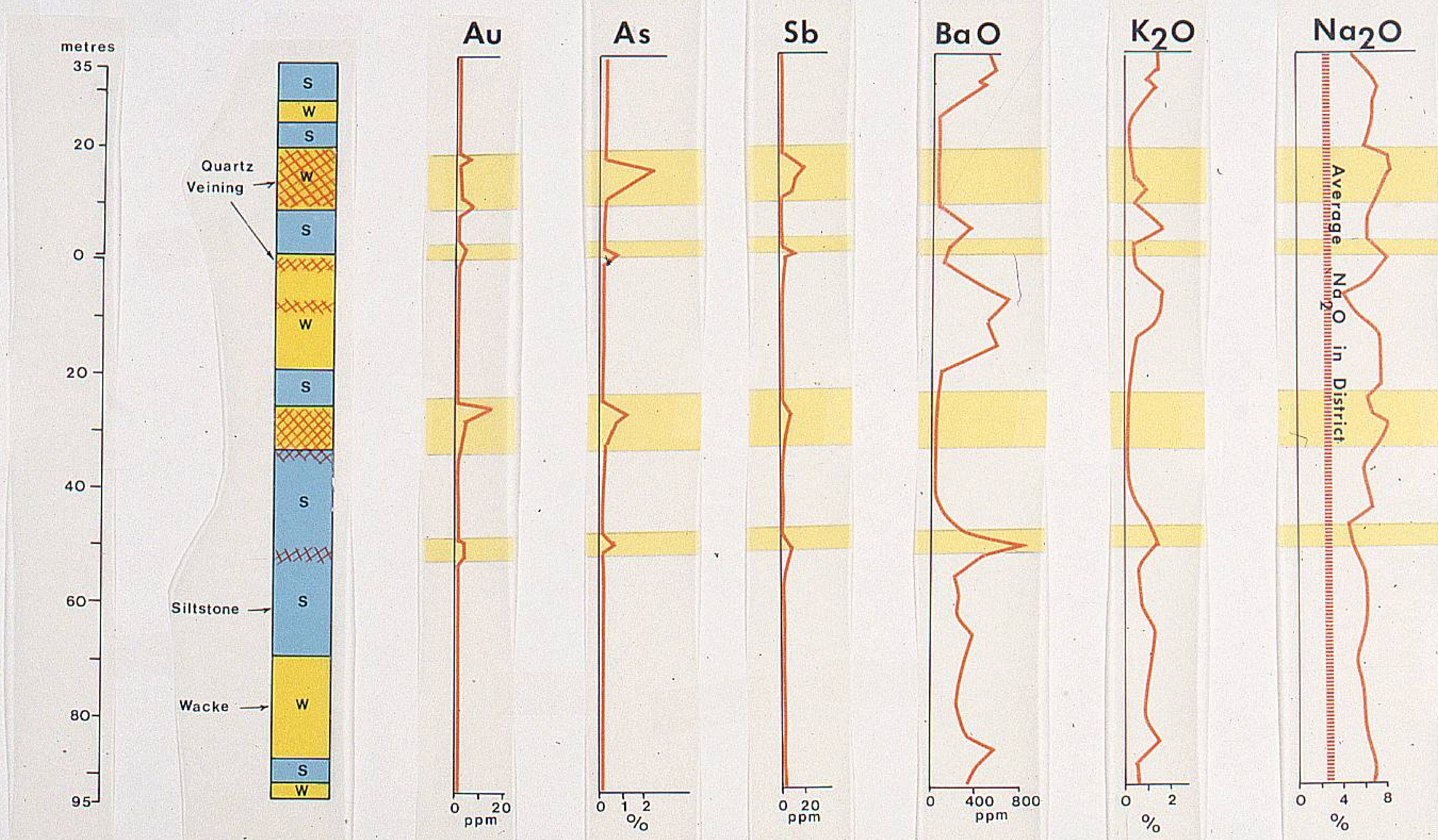
LENGTH OF SECTION 4 km


BOSTON BAR
N. SERP. BELT
S. SERP. BELT
LADNER GP. GREENSTONE
HOZAMEEN GP. GREENSTONE
HELLS GATE
FRASER R.
2km
SPUZZUM
LADNER GROUP
STOUT
N
HOZAMEEN FAULT
HOZAMEEN GROUP
PIPESTEM
CAROLIN
EMANCIPATION
COQUIHALLA BELT
(G.E.RAY)

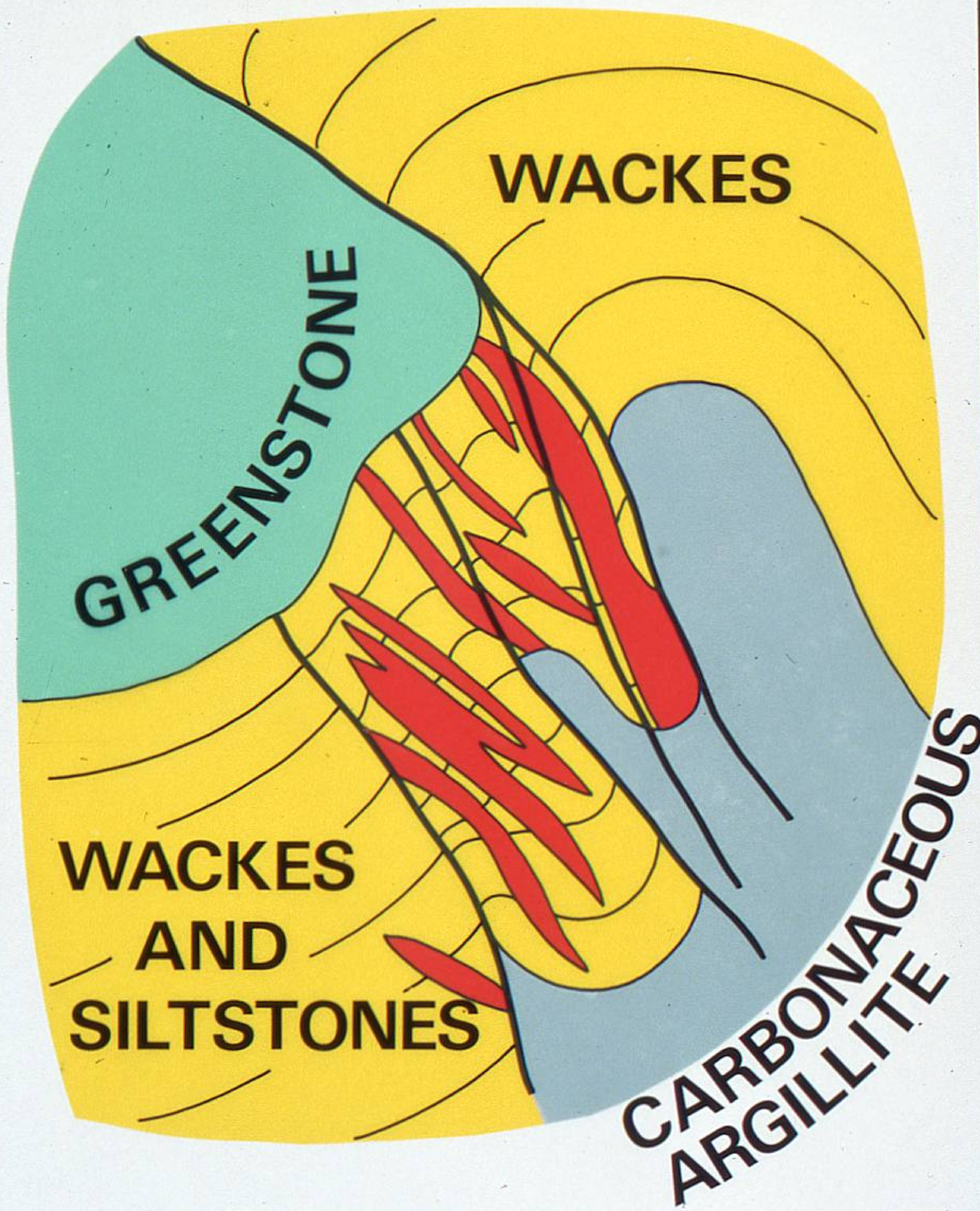
K_2O/Na_2O RATIOS



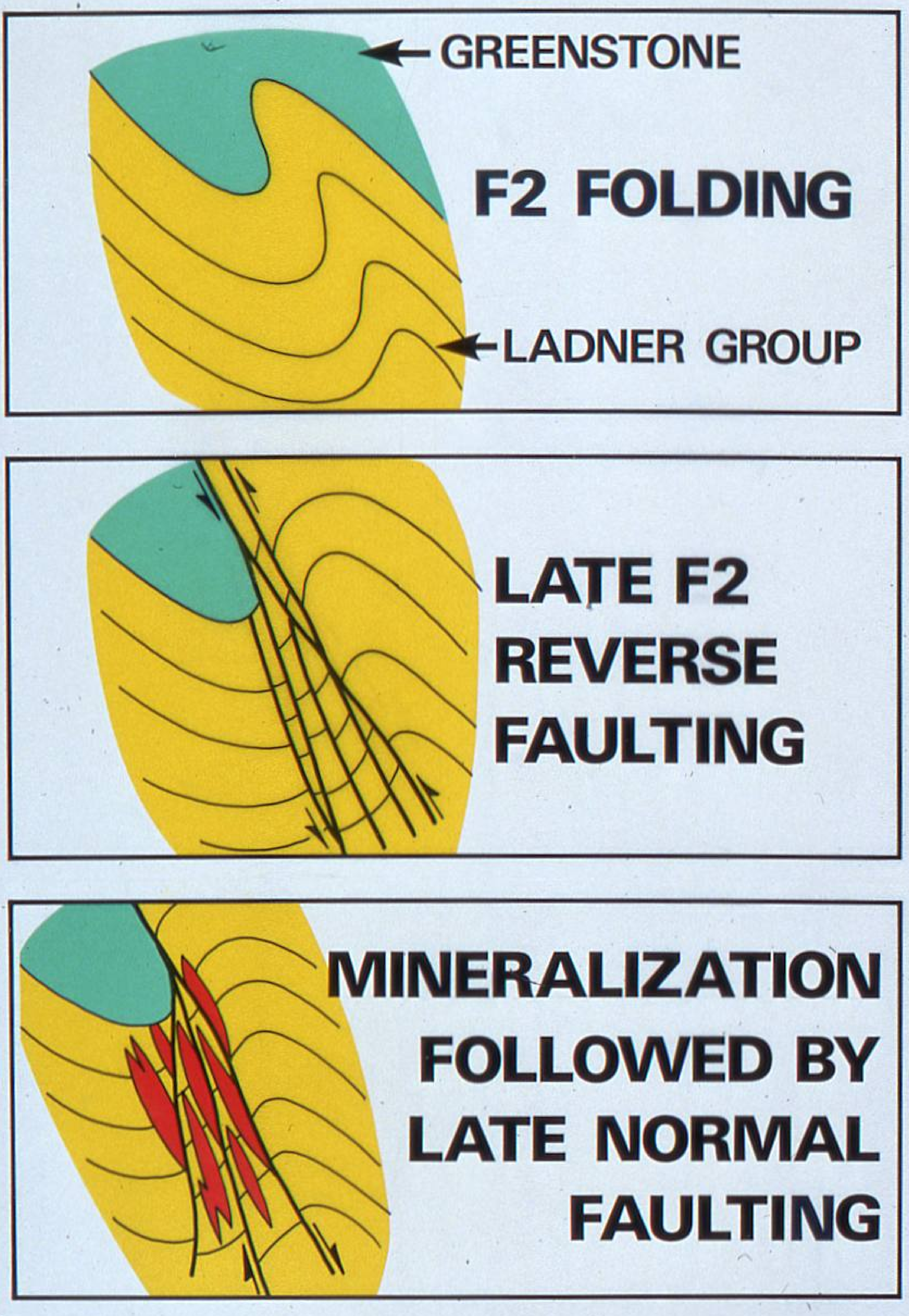
CAROLIN MINE GEOCHEMISTRY

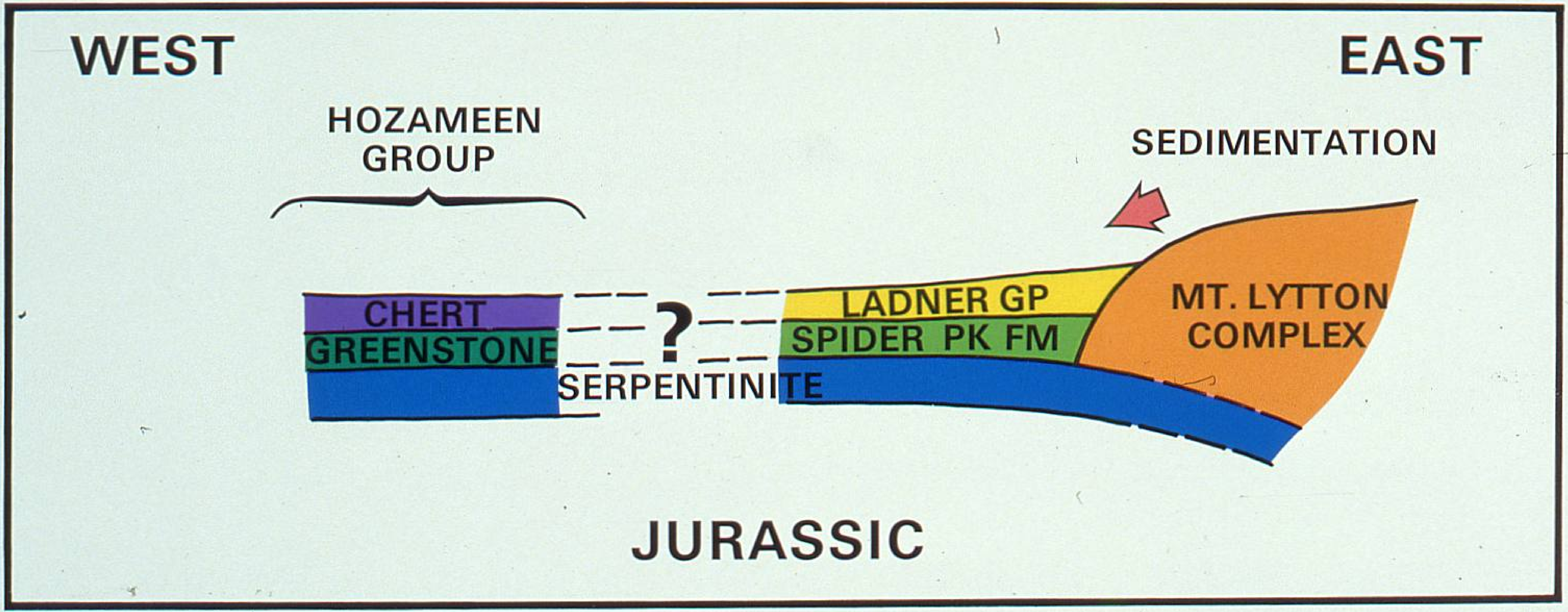


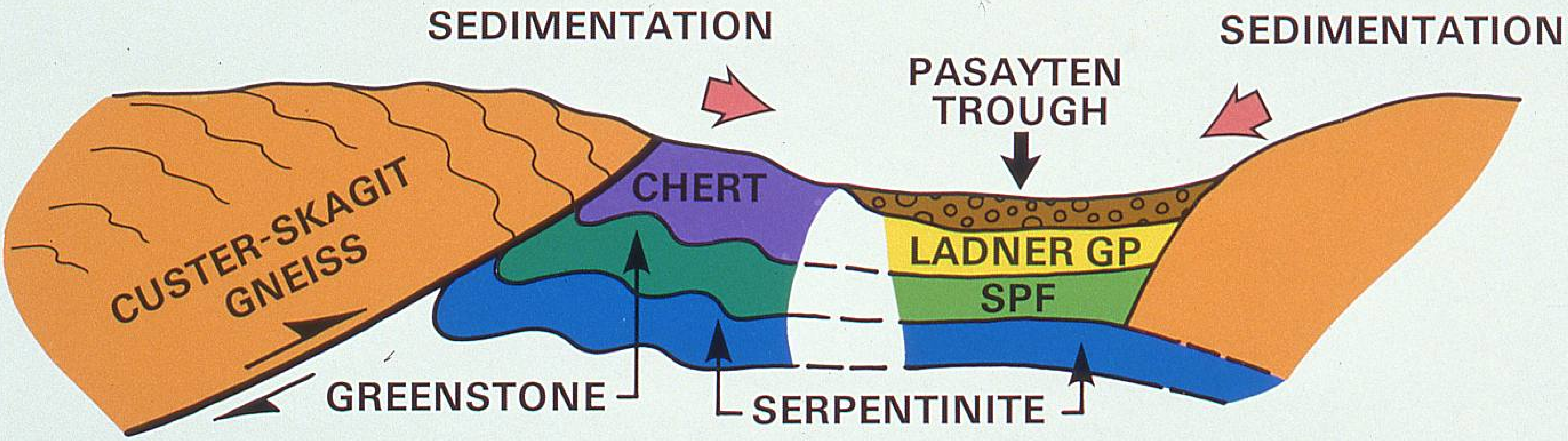
IDAHO ZONE
(INTERPRETATION)



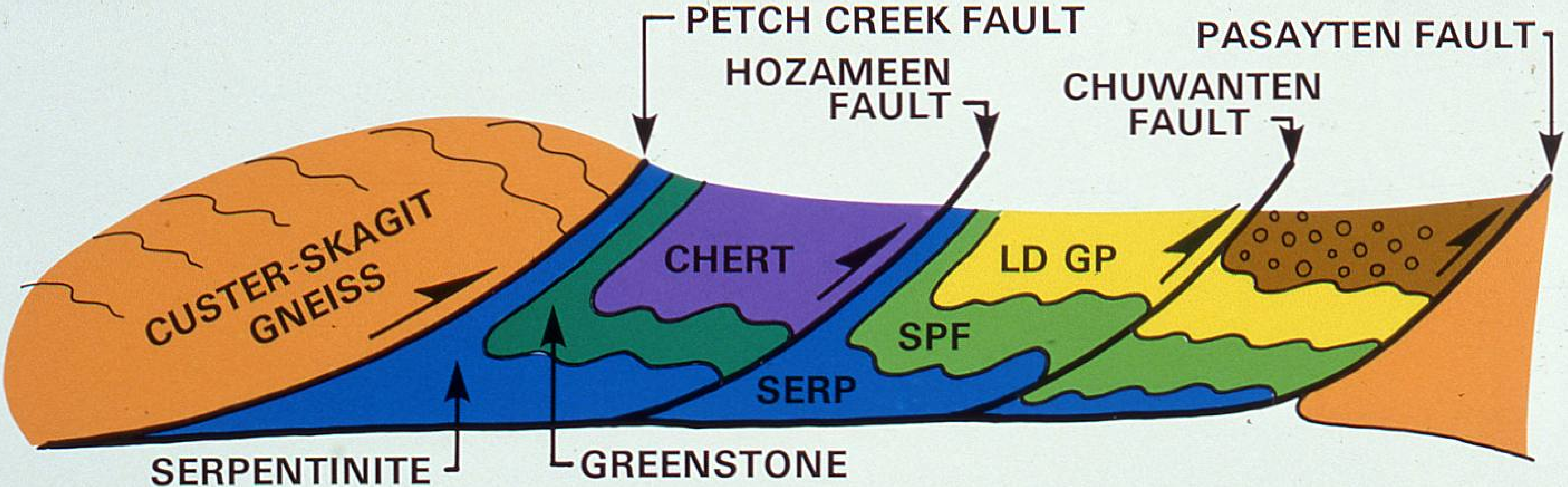
POSTULATED DEVELOPMENT OF IDAHO ZONE - CAROLIN MINE



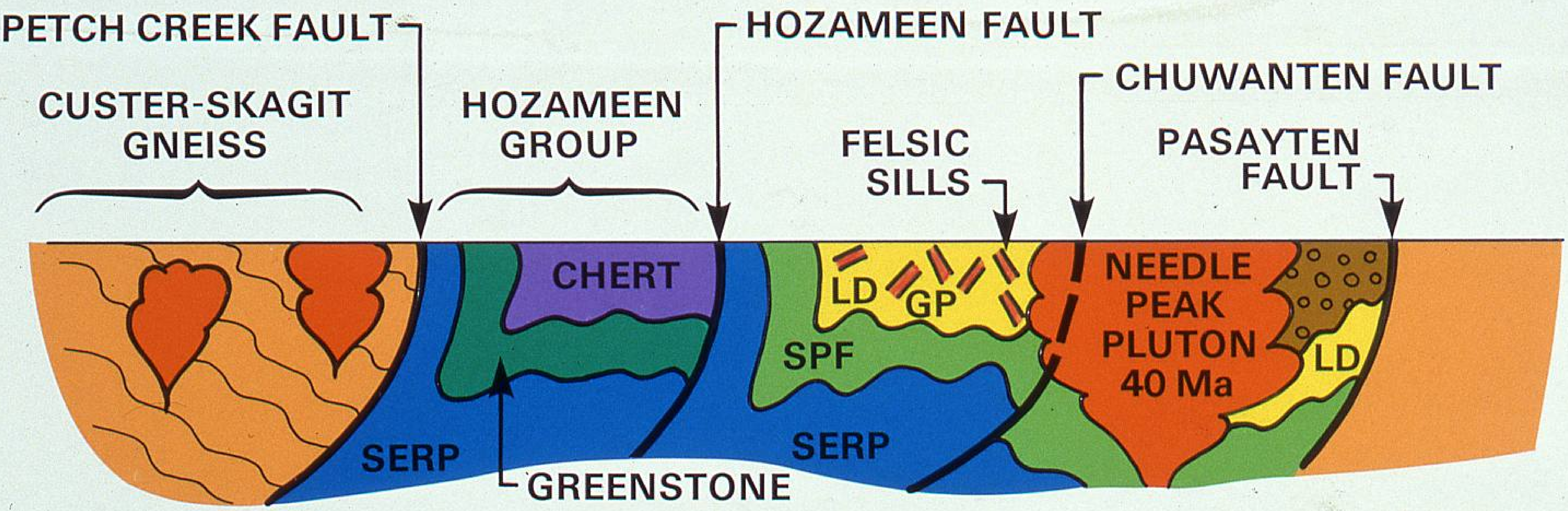

WEST
EAST
HOZAMEEN
GROUP
SEDIMENTATION
CHERT
GREENSTONE
?
SERPENTINITE
LADNER GP
SPIDER PK FM
MT. LYTTON
COMPLEX
JURASSIC



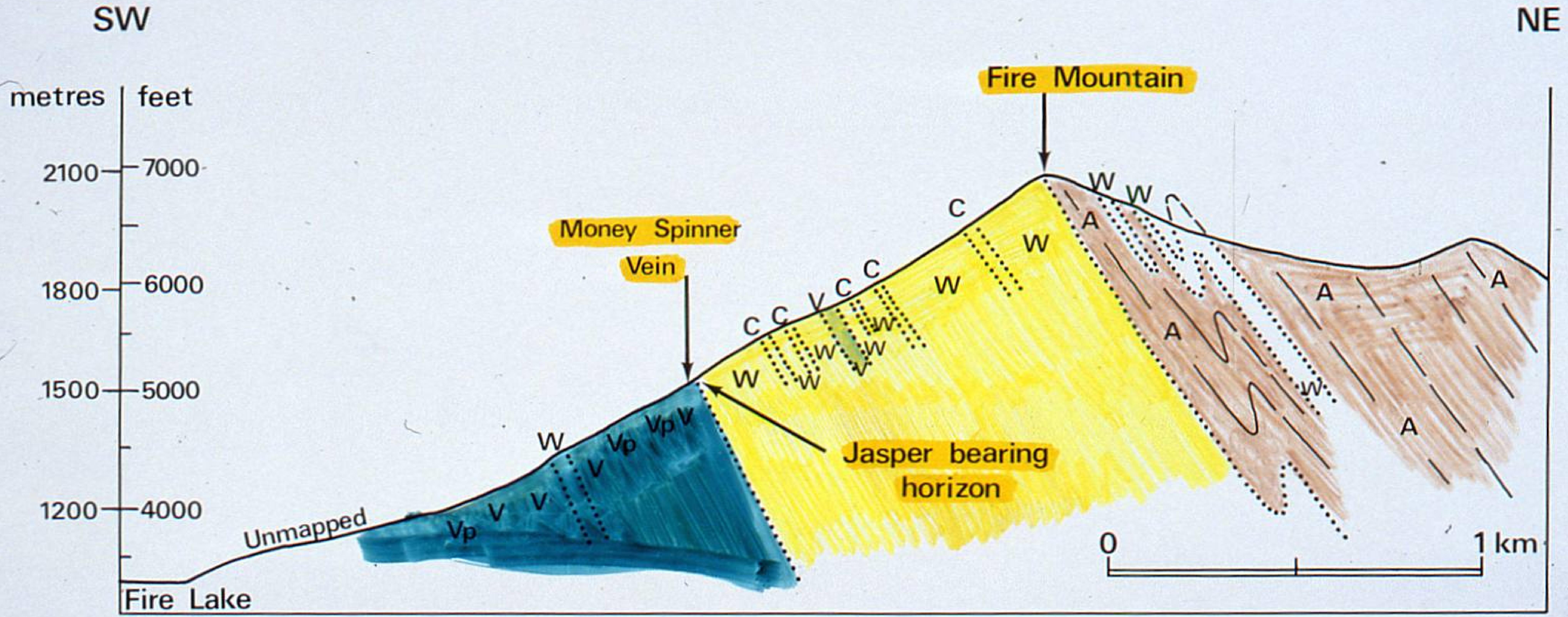
EARLY TO MID CRETACEOUS



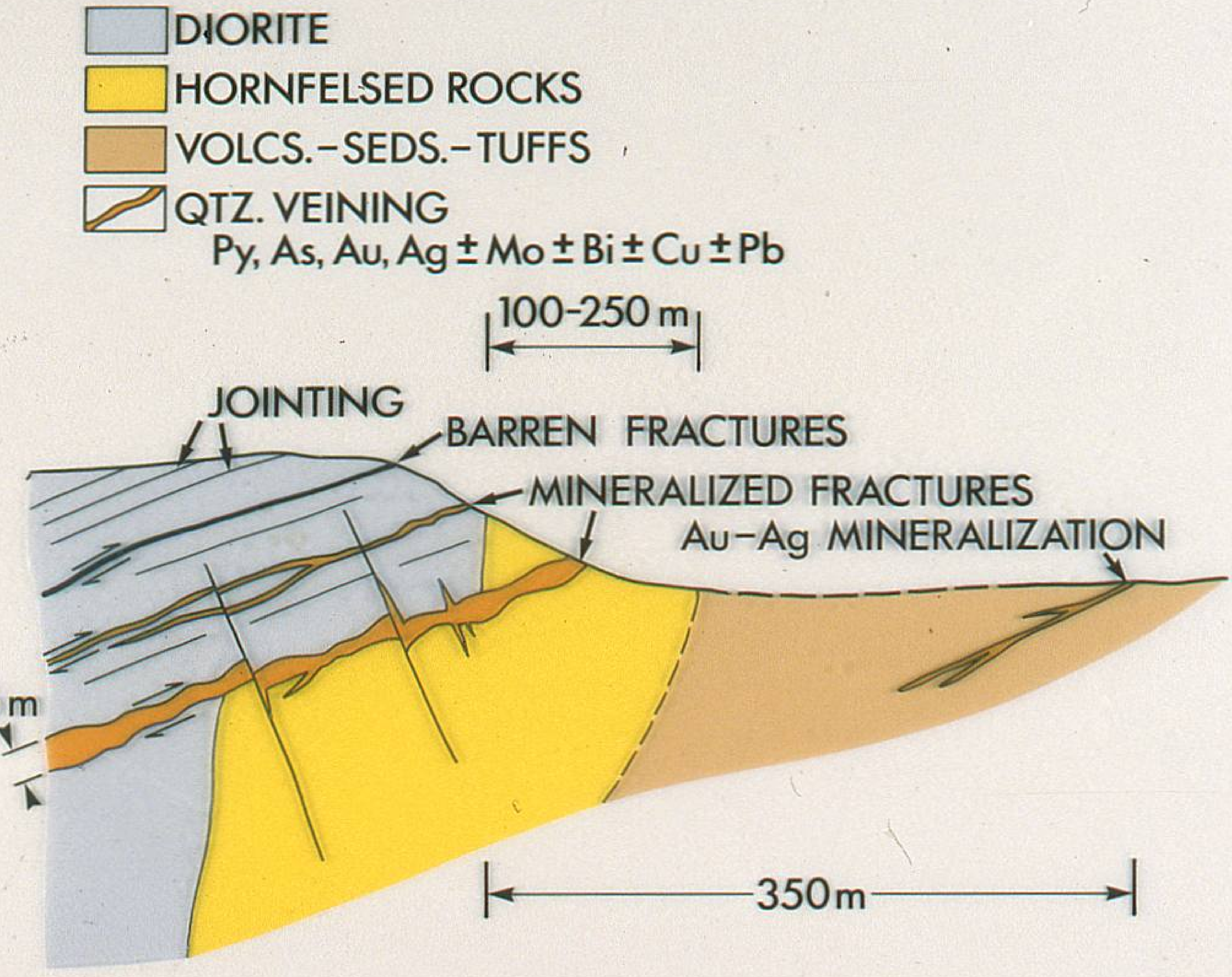
MID TO LATE CRETACEOUS


PETCH CREEK FAULT
HOZAMEEN FAULT
CHUWANTEN FAULT
CUSTER-SKAGIT GNEISS
HOZAMEEN GROUP
FELSIC SILLS
PASAYTEN FAULT
CHERT
LD
GP
NEEDLE PEAK PLUTON 40 Ma
SPF
LD
SERP
SERP
GREENSTONE

PRESENT DAY



SW
NE
metres
feet
2100
7000
1800
6000
1500
5000
1200
4000
Fire Mountain
Money Spinner
Vein
Jasper bearing
horizon
Unmapped
Fire Lake
0
1 km
W
C
V
Vp
A

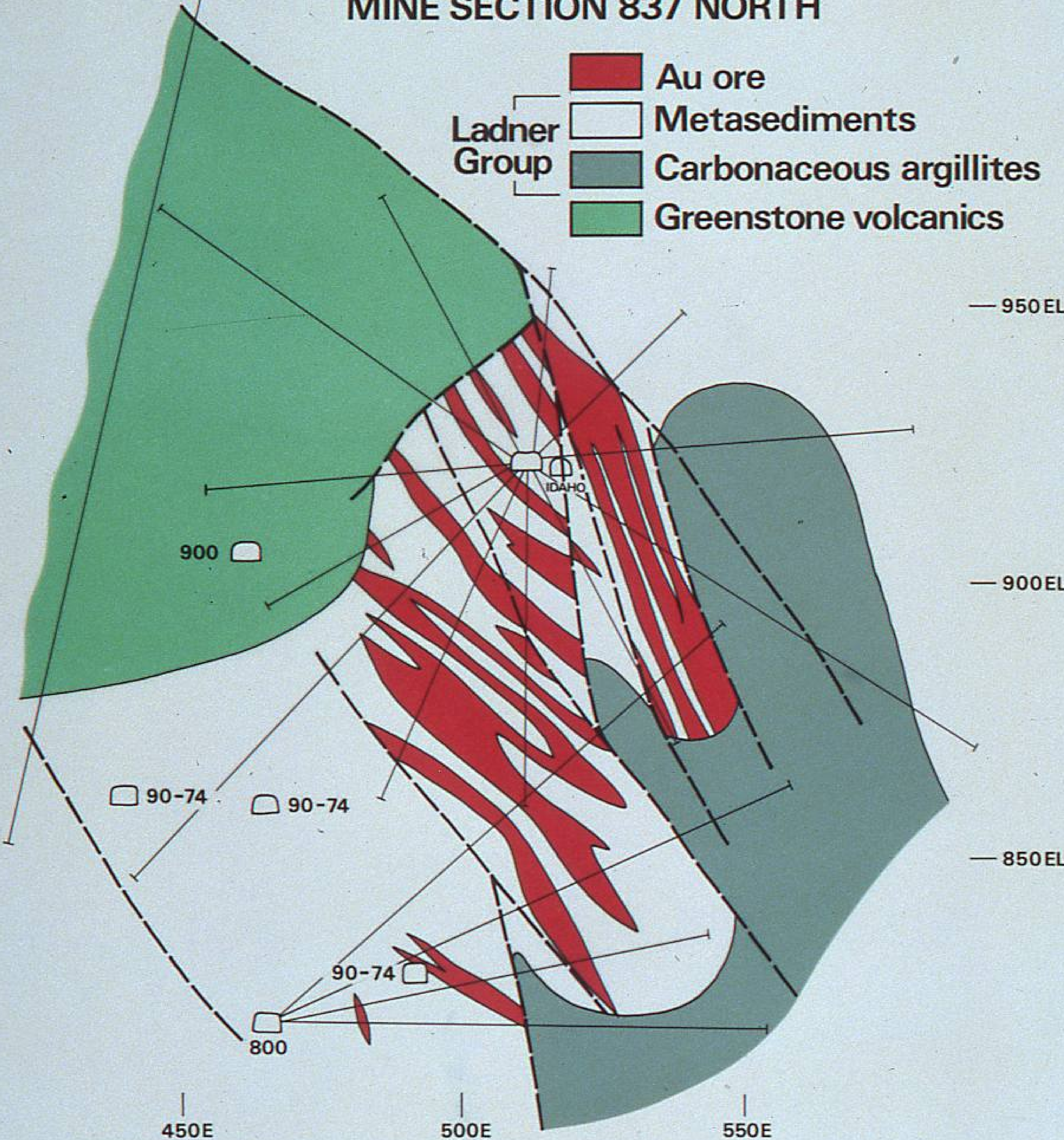


SCHEMATIC SECTION SHOWING
Au-Ag MINERALIZATION-DOCTORS BAY, HARRISON LAKE

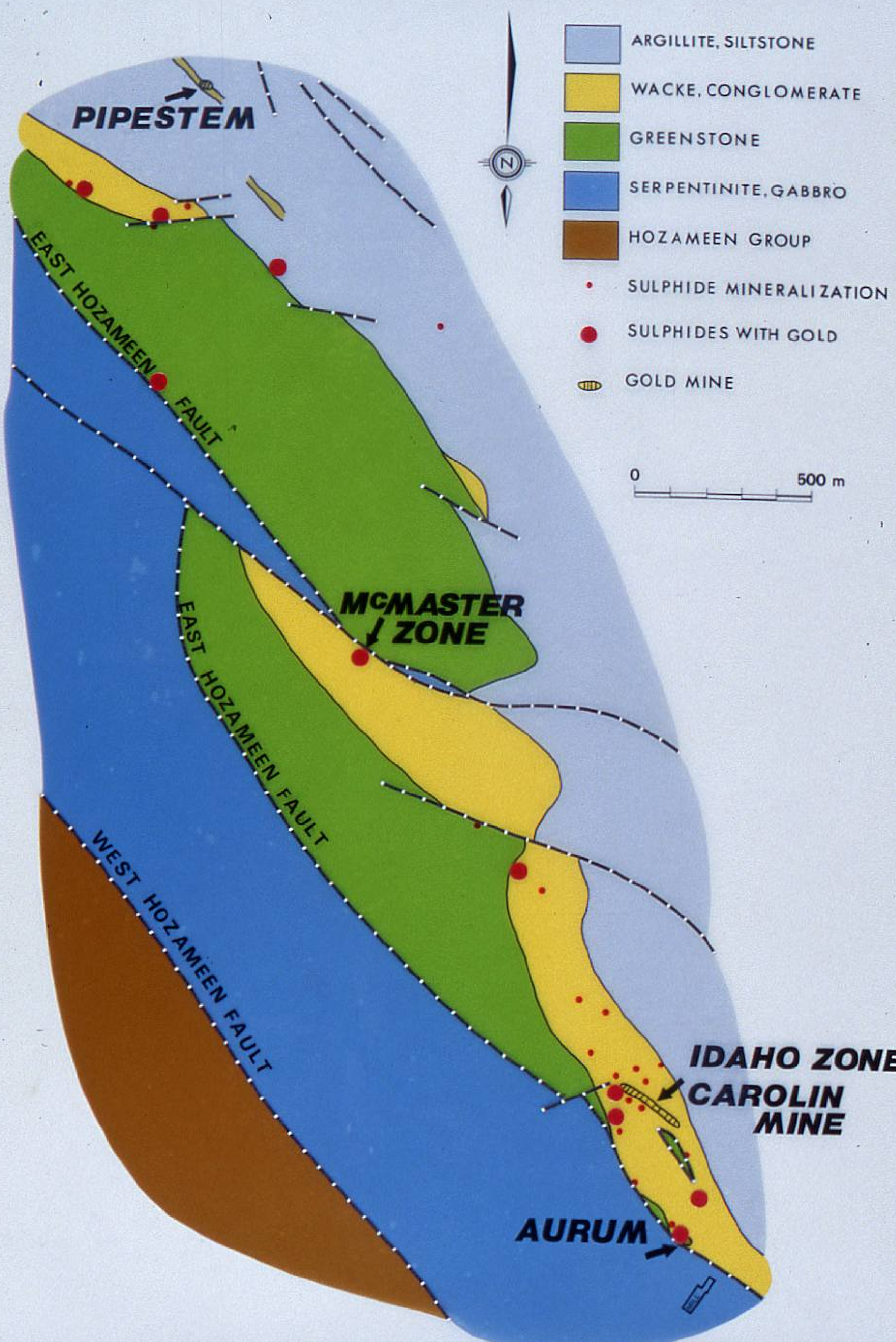
(G.E. RAY 1983)

IDAHO ZONE (CAROLIN MINE)

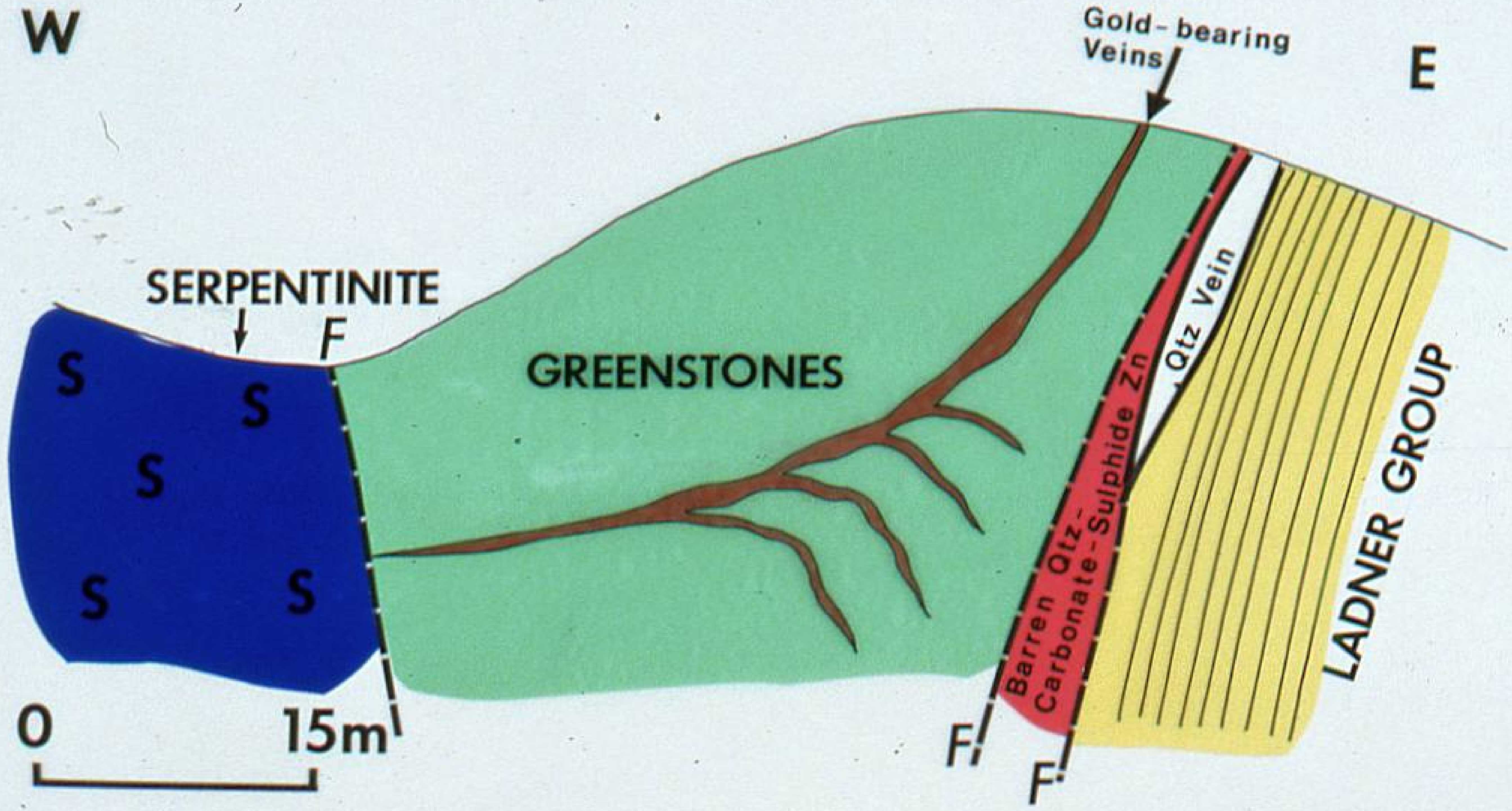
MINE SECTION 837 NORTH



GEOLOGY AFTER D. GRIFFITH, W. CLARKE AND R. NIELS



ARGILLITE, SILTSTONE
WACKE, CONGLOMERATE
GREENSTONE
SERPENTINITE, GABBRO
HOZAMEEN GROUP
SULPHIDE MINERALIZATION
SULPHIDES WITH GOLD
GOLD MINE
N
0
500 m
PIPESTEM
EAST HOZAMEEN FAULT
EAST HOZAMEEN FAULT
WEST HOZAMEEN FAULT
McMASTER ZONE
IDAHO ZONE
CAROLIN MINE
AURUM

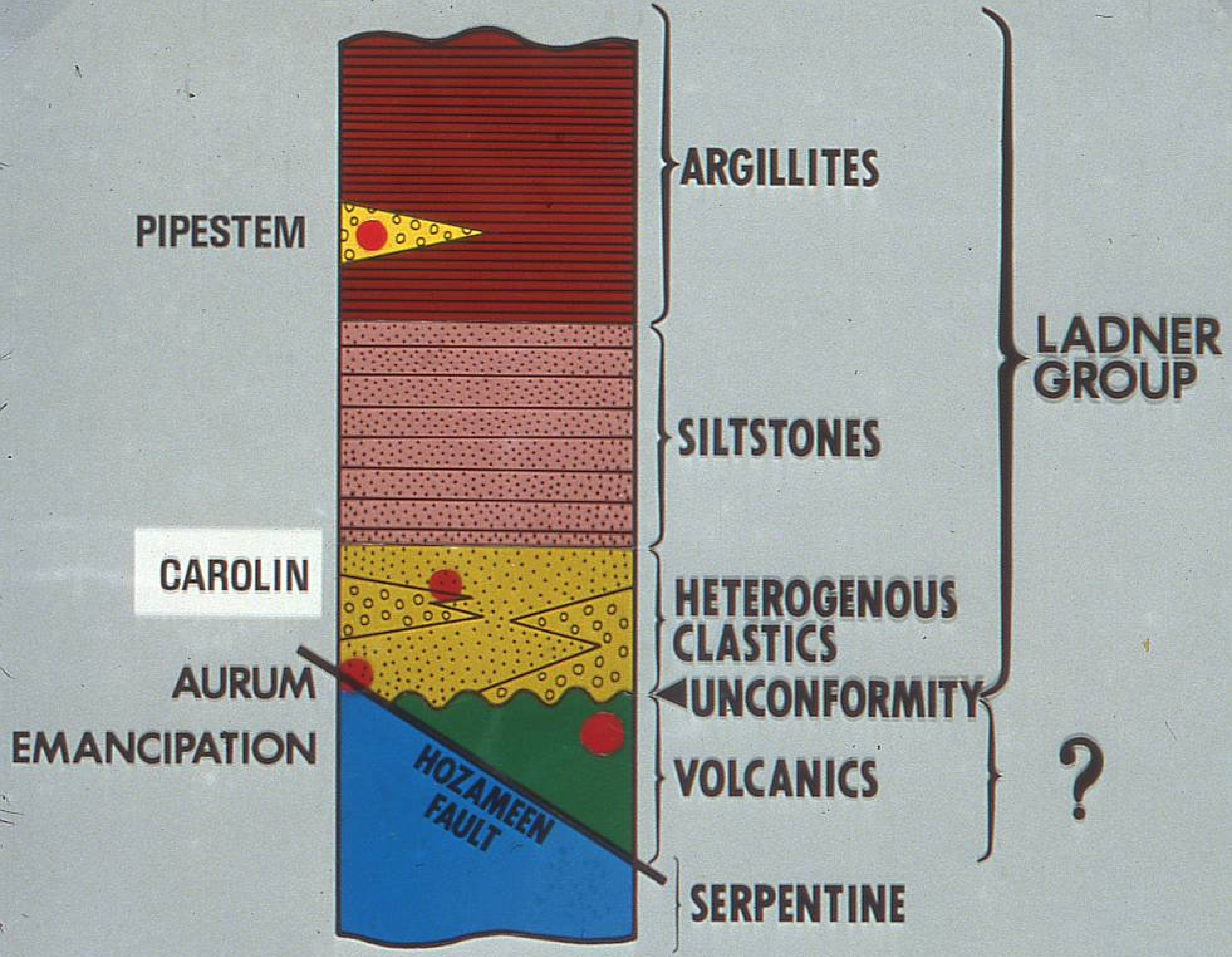


LS Emancipation Mine

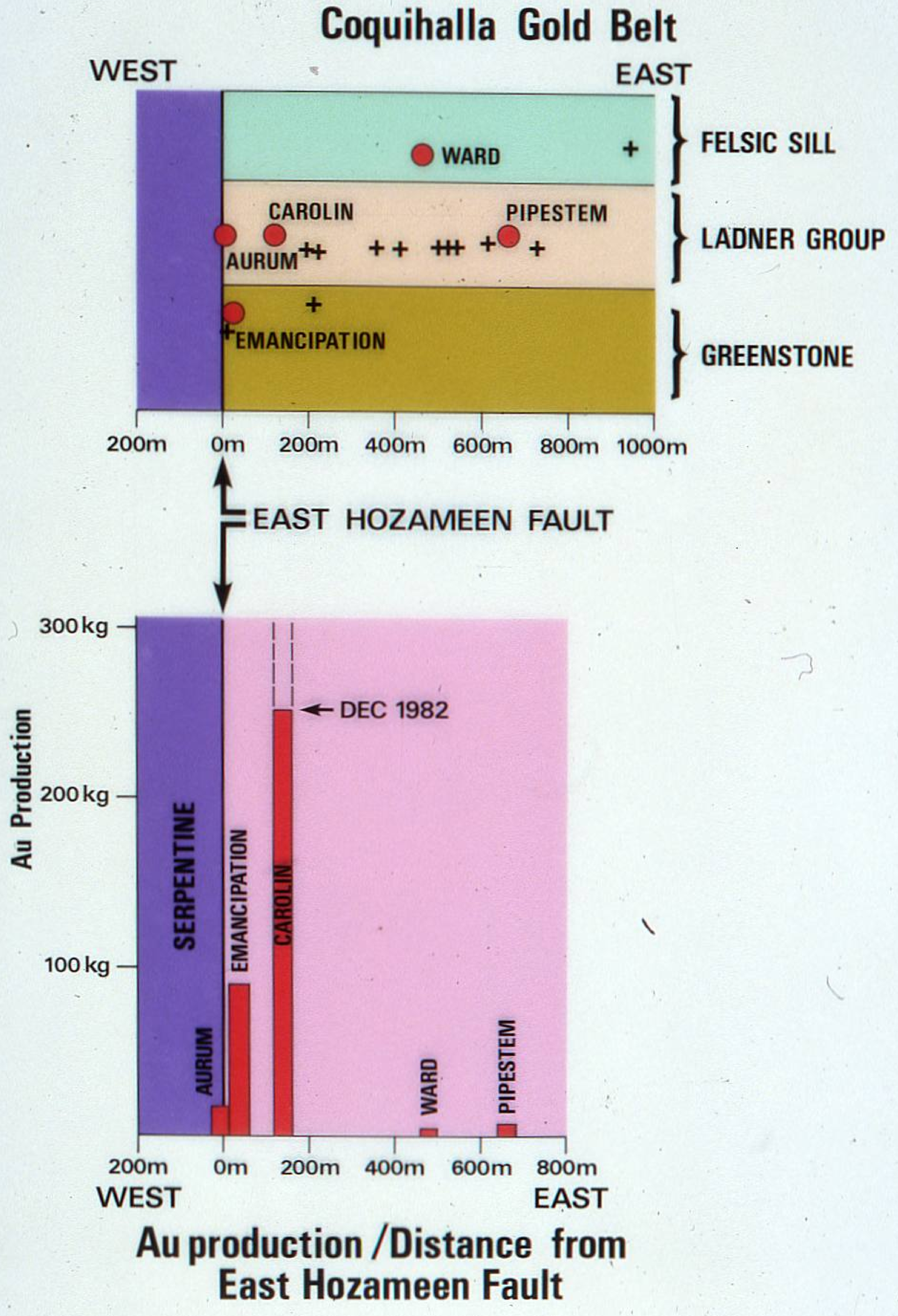
(after Cairnes 1924 and Cardinal 1981)

1916–41 Produced 90,104 g Au

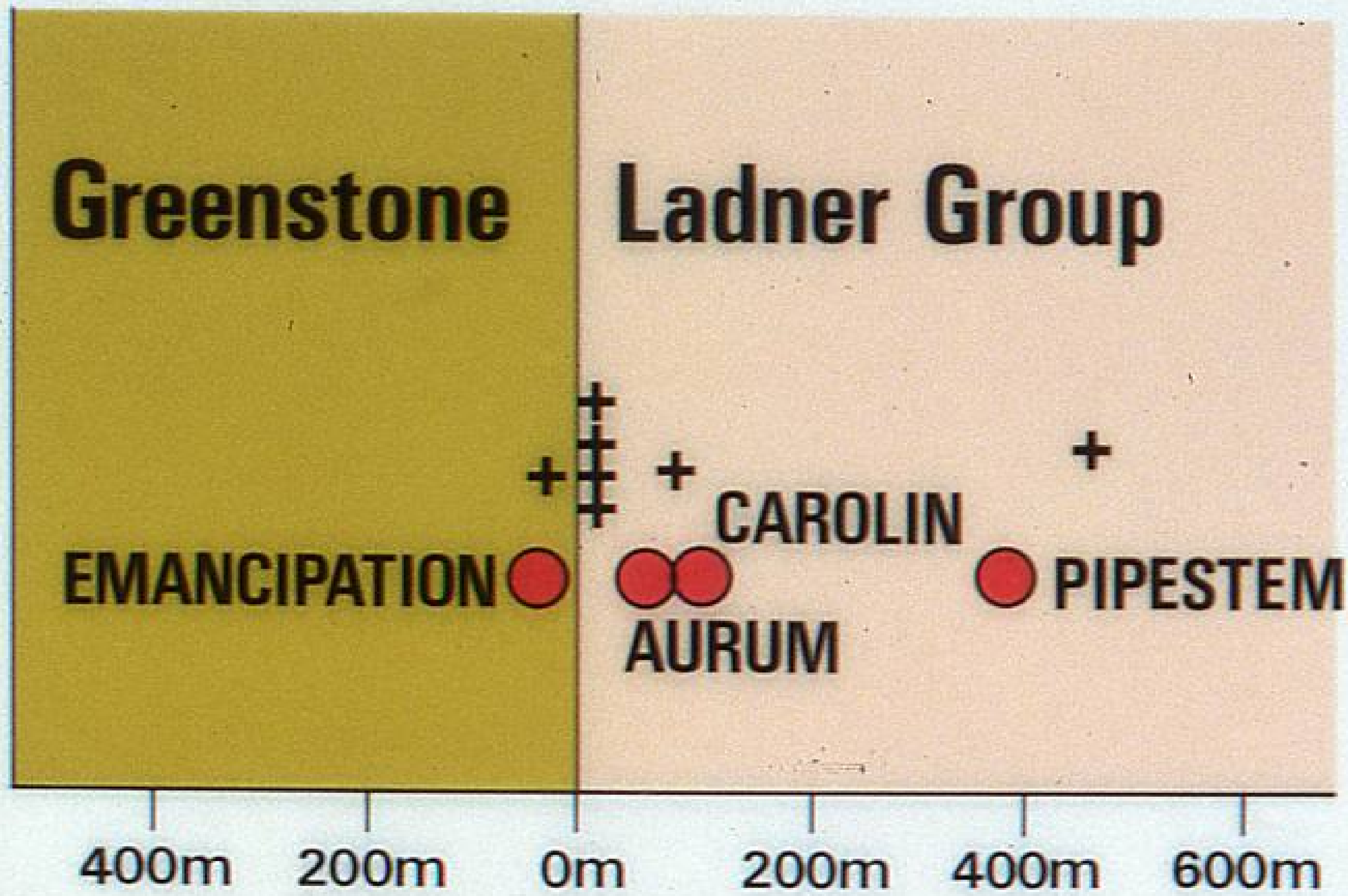
18 817 g Ag



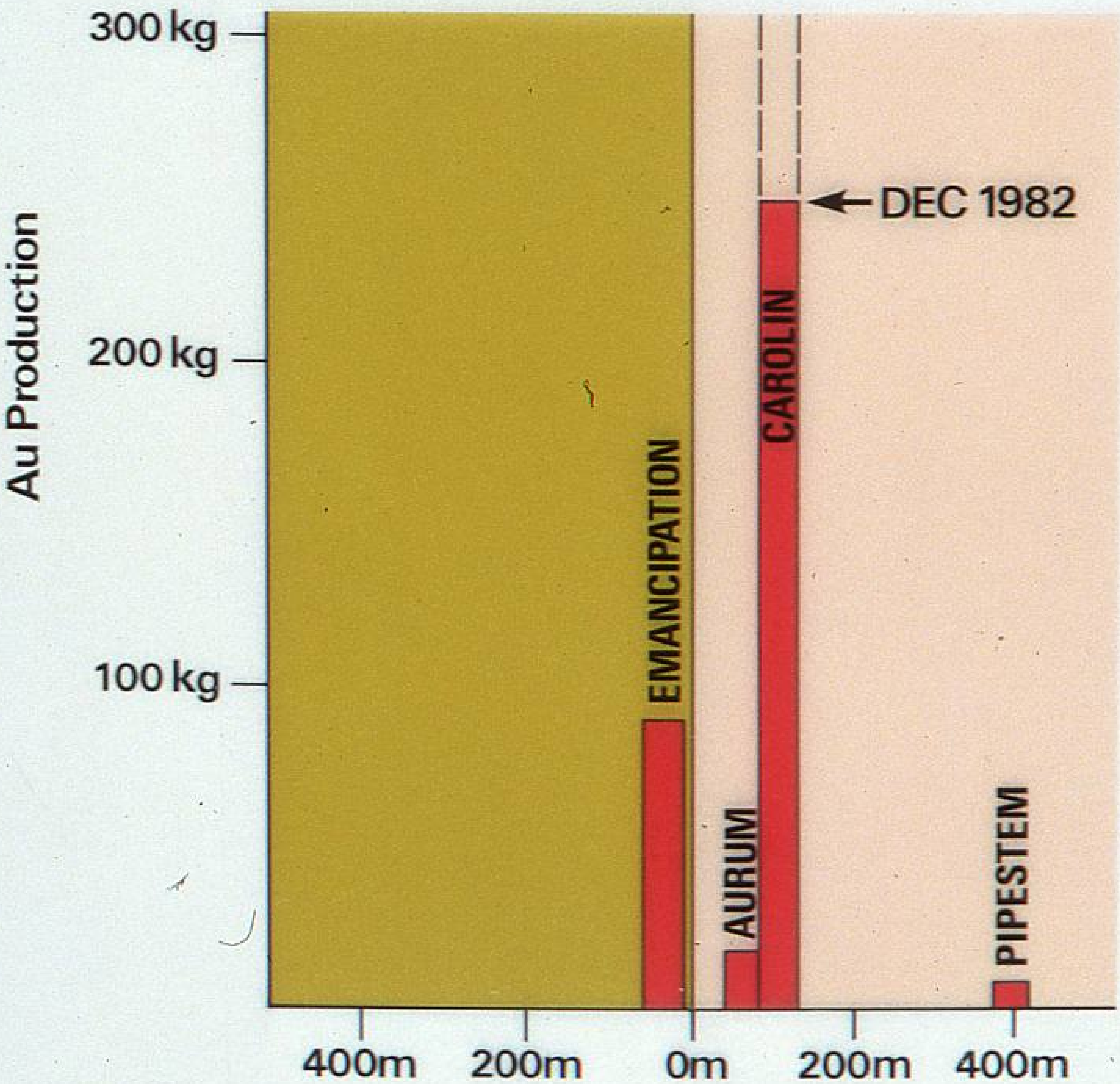
SCHEMATIC STRATIGRAPHIC SUCCESSION – CAROLIN MINE AREA



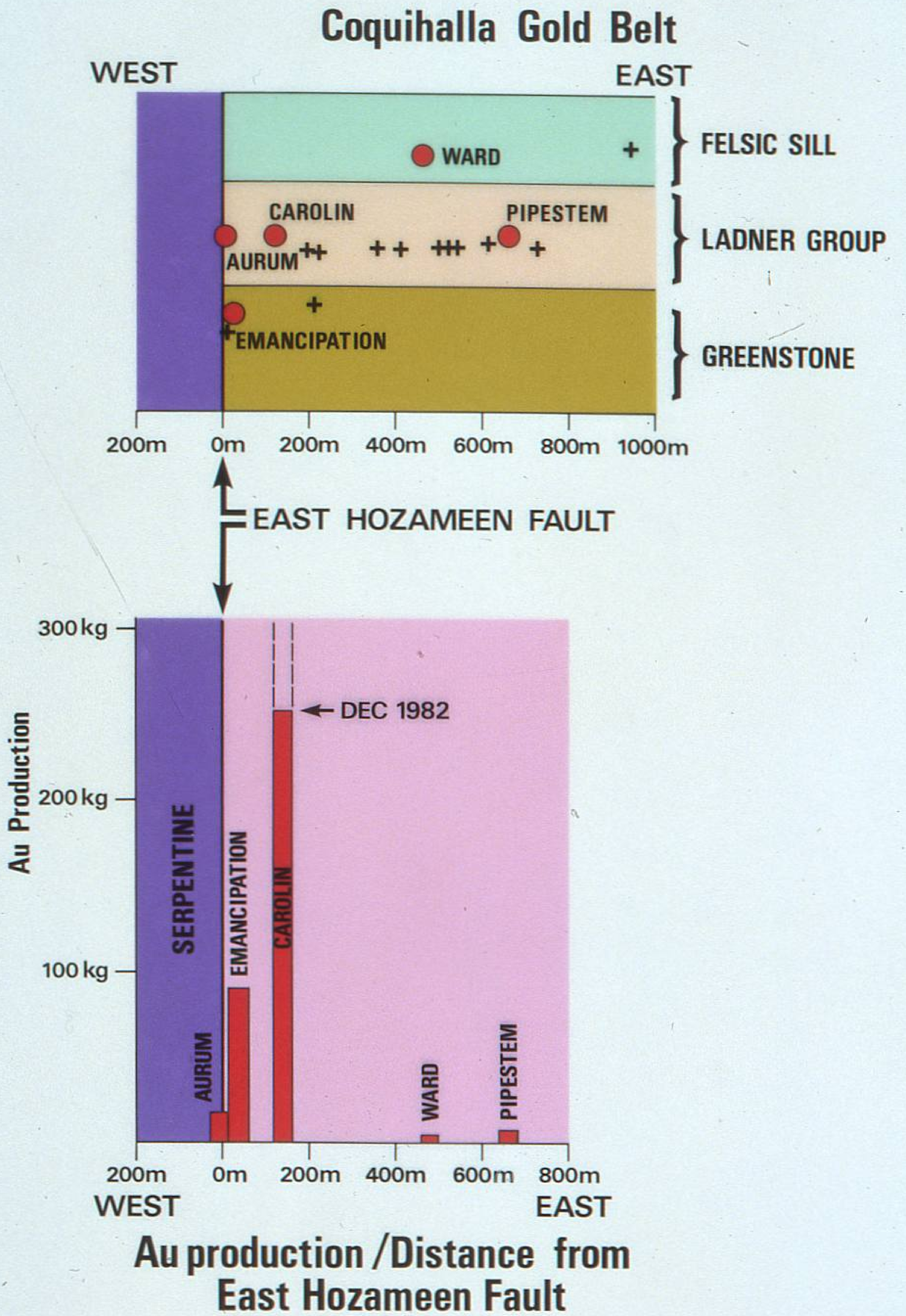
Coquihalla Gold Belt
WEST
EAST
WARD
CAROLIN
PIPESTEM
AURUM
EMANCIPATION
FELSIC SILL
LADNER GROUP
GREENSTONE
200m
0m
200m
400m
600m
800m
1000m
EAST HOZAMEEN FAULT
300kg
200kg
100kg
Au Production
DEC 1982
SERPENTINE
AURUM
EMANCIPATION
CAROLIN
WARD
PIPESTEM
200m
0m
200m
400m
600m
800m
WEST
EAST
Au production /Distance from East Hozameen Fault



Coquihalla Gold Belt



Au production / Distance from Greenstone – Ladner group contact


Coquihalla Gold Belt
WEST
EAST
WARD
FELSIC SILL
CAROLIN
PIPESTEM
AURUM
LADNER GROUP
EMANCIPATION
GREENSTONE
200m
0m
200m
400m
600m
800m
1000m
EAST HOZAMEEN FAULT
300 kg
200 kg
100 kg
Au Production
DEC 1982
SERPENTINE
EMANCIPATION
CAROLIN
AURUM
WARD
PIPESTEM
200m
0m
200m
400m
600m
800m
WEST
EAST
Au production / Distance from East Hozameen Fault

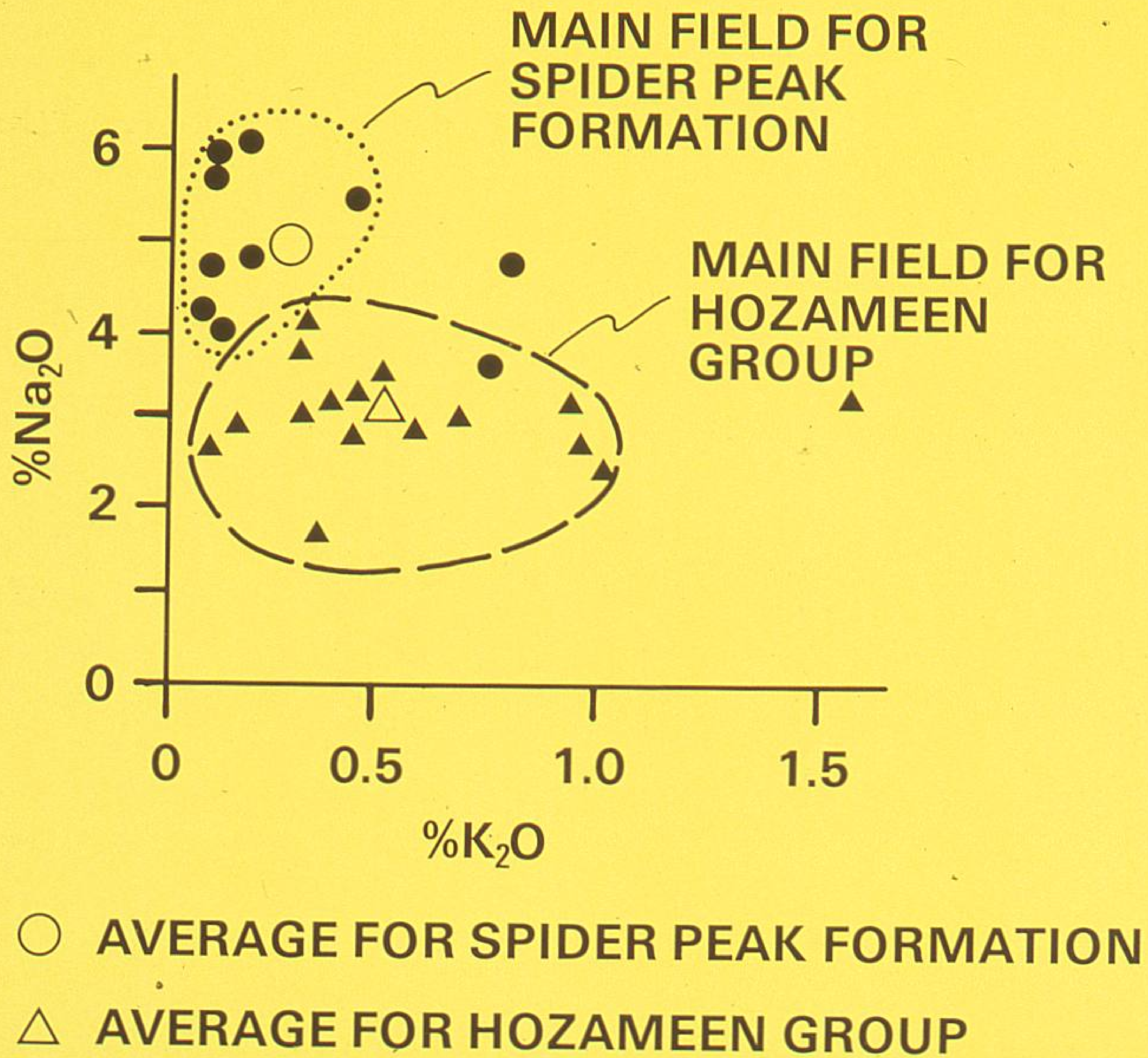
COQUIHALLA GOLD BELT
TYPES OF GOLD MINERALIZATION

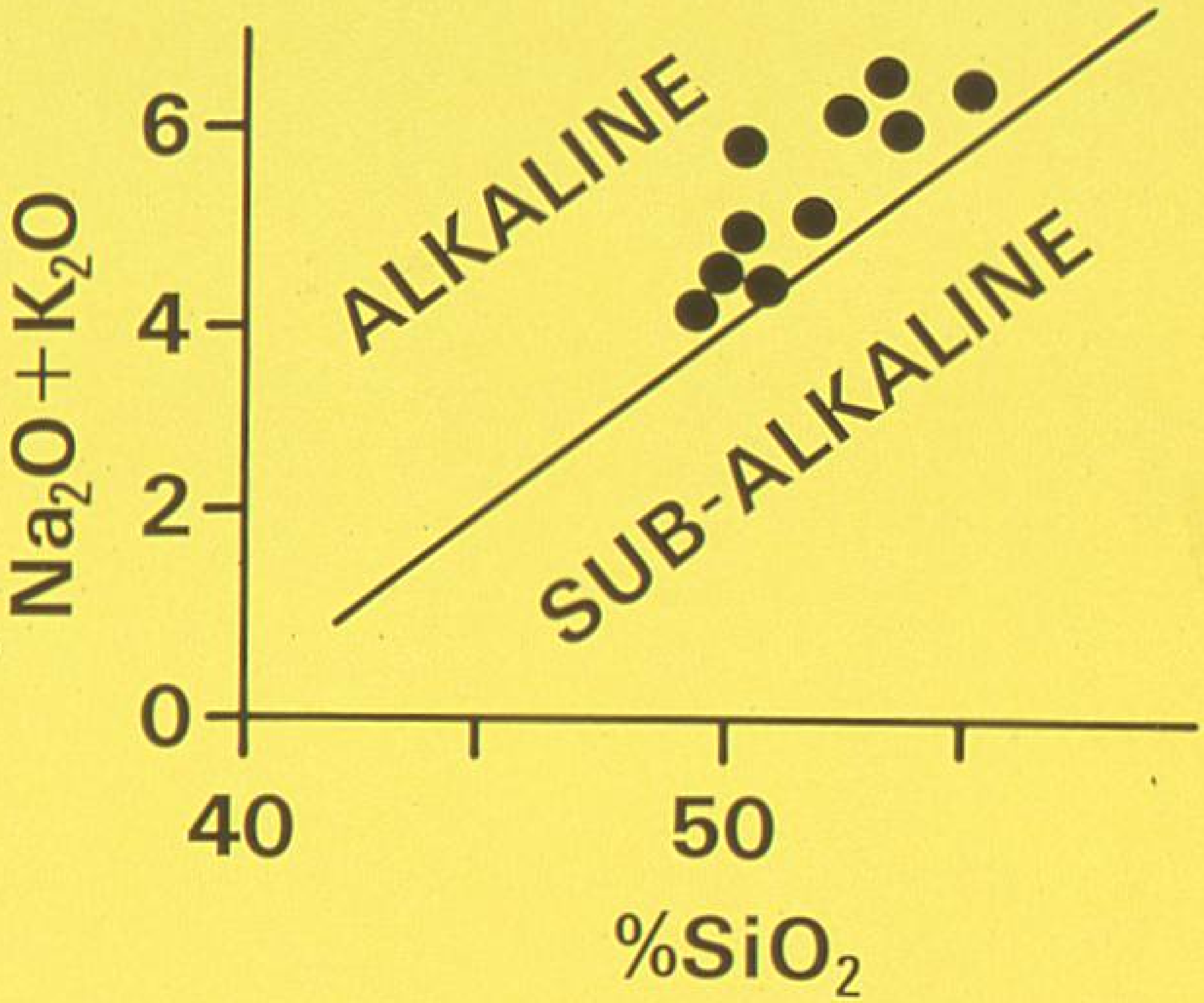
1. THIN (10–20 cm), DISCONTINUOUS QUARTZ VEINS HOSTING THE MAJORITY OF THE AU OCCURRENCES.

2. CONTINUOUS, WIDE (2 m) QUARTZ VEINS
   e.g. EMANCIPATION MINE

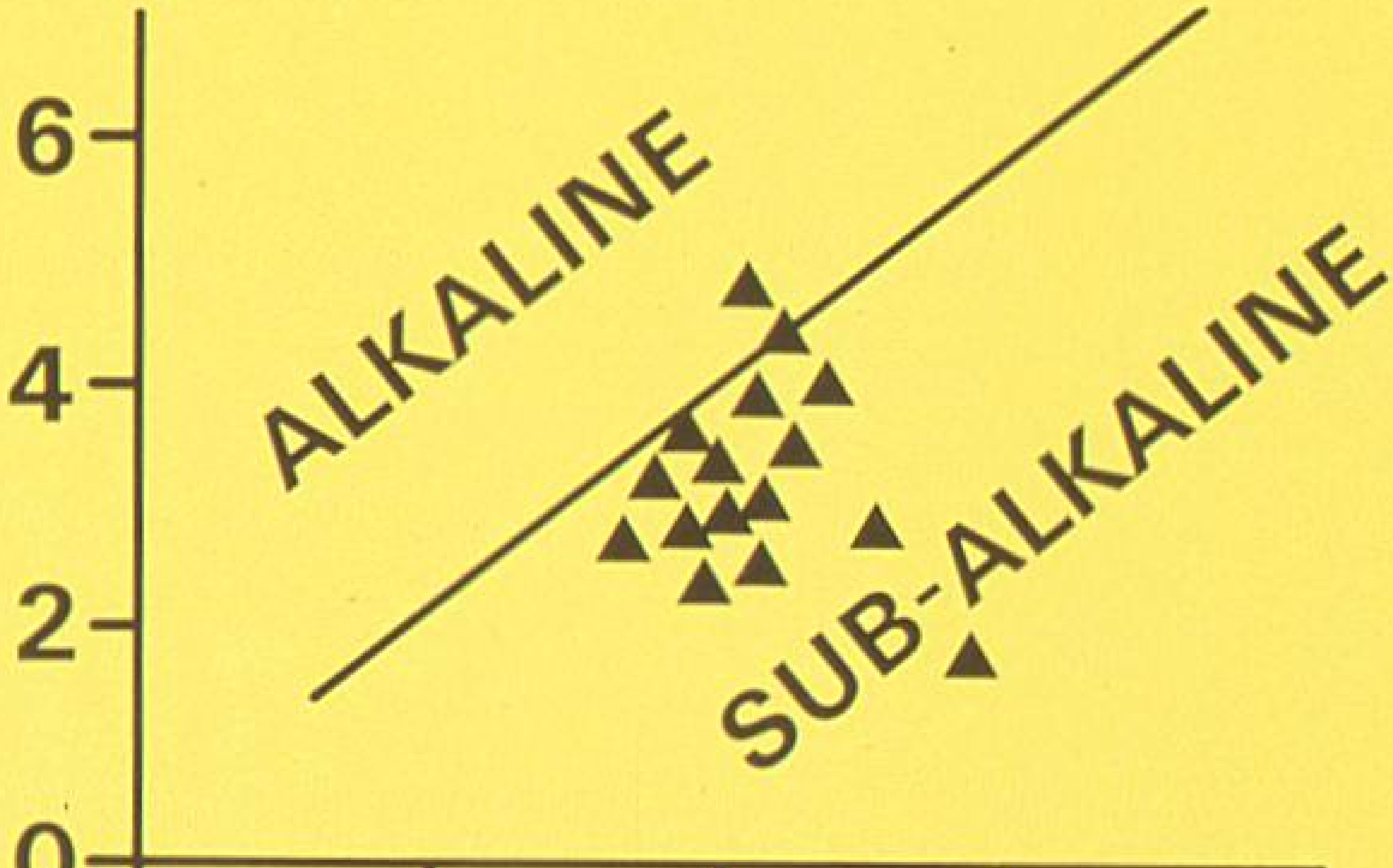
3. LARGE (10–20 m) 'REPLACEMENT' OREBODIES ASSOCIATED WITH ABUNDANT ALBITE, SULPHIDES, AND NETWORK QUARTZ VEINING
   e.g. CAROLIN MINE, MCMASTER ZONE

4. FREE GOLD IN TALCOSE SHEARS SEPARATING SERPENTINITES FROM LADNER GROUP
   e.g. AURUM

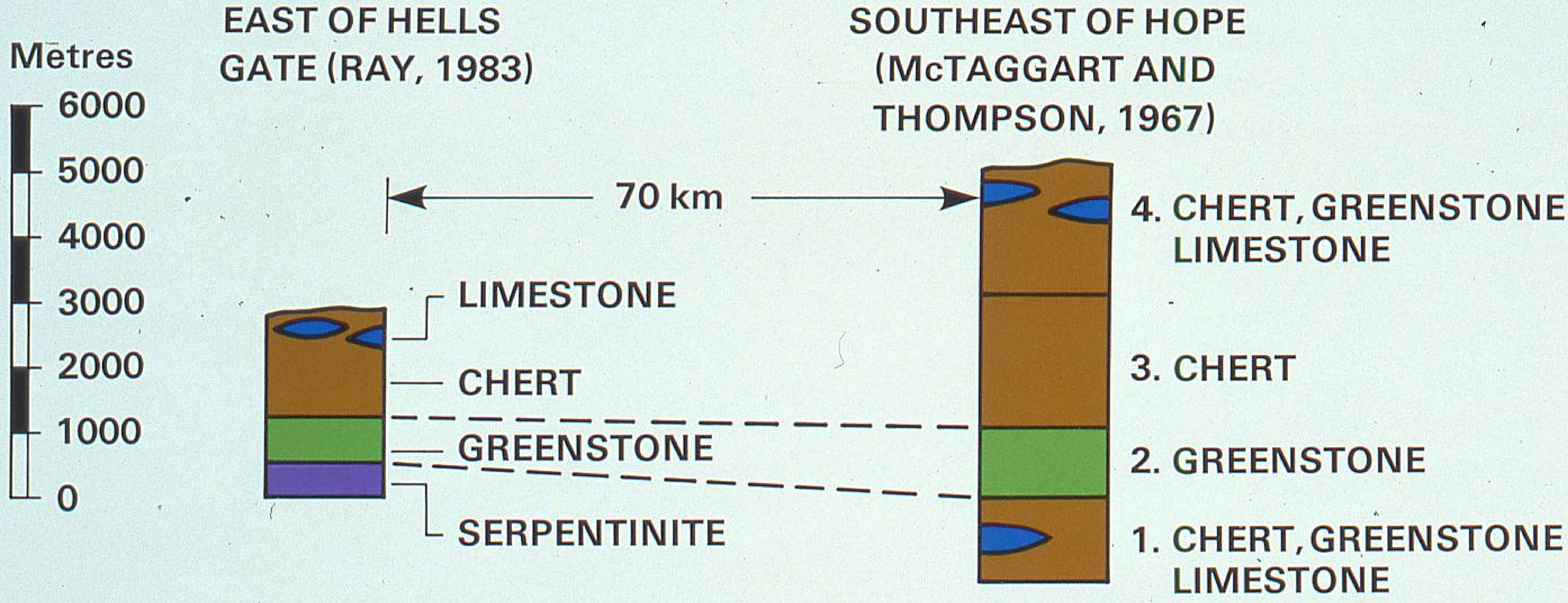

MAIN FIELD FOR SPIDER PEAK FORMATION
MAIN FIELD FOR HOZAMEEN GROUP
6
4
2
0
%Na2O
0
0.5
1.0
1.5
%K2O
AVERAGE FOR SPIDER PEAK FORMATION
AVERAGE FOR HOZAMEEN GROUP



SPIDER PEAK FORMATION

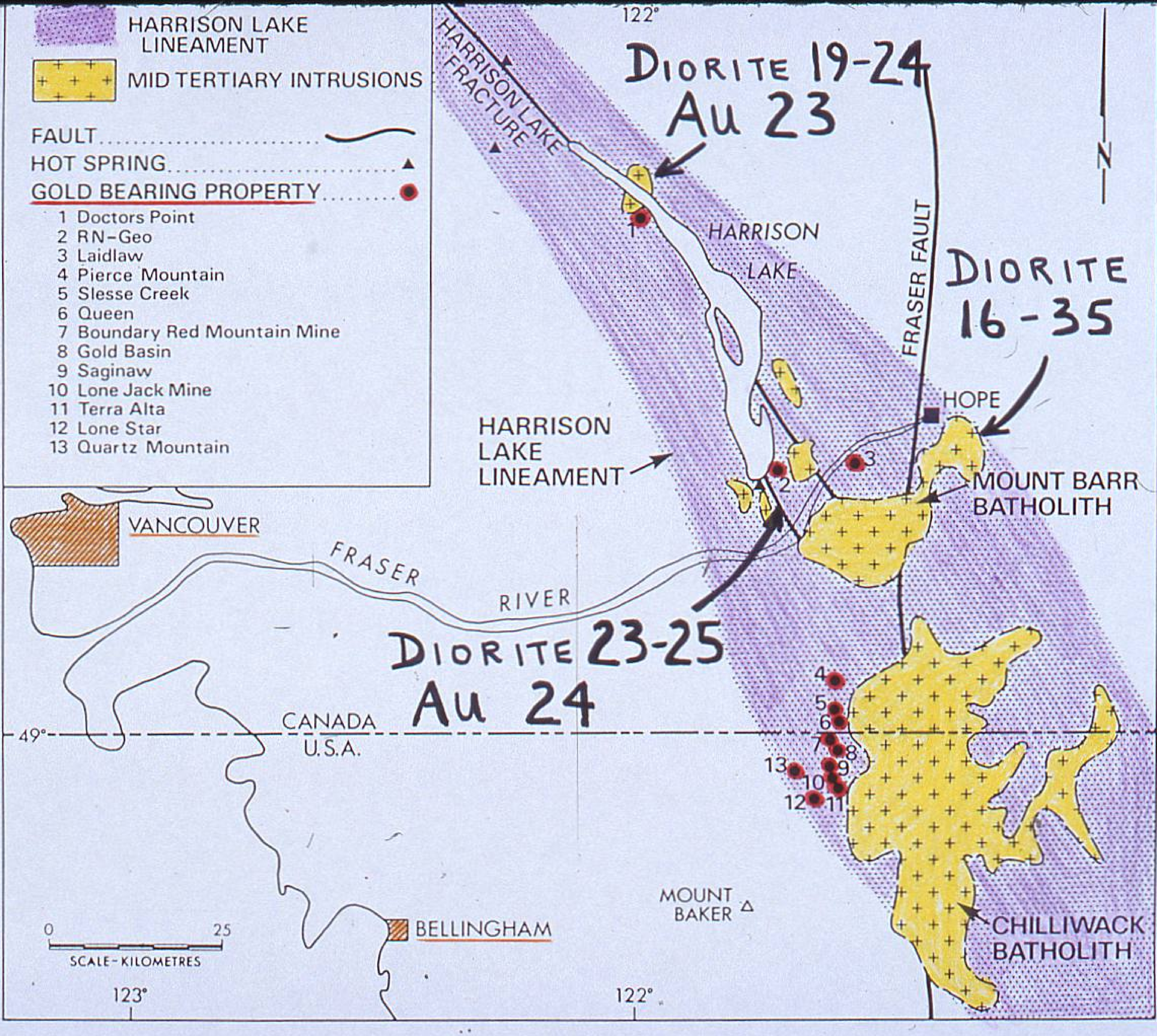


HOZAMEEN GROUP



HOZAMEEN GROUP STRATIGRAPHY

BETWEEN BOSTON BAR AND HOPE, B.C.


HARRISON LAKE LINEAMENT
MID TERTIARY INTRUSIONS
FAULT
HOT SPRING
GOLD BEARING PROPERTY
1 Doctors Point
2 RN-Geo
3 Laidlaw
4 Pierce Mountain
5 Slesse Creek
6 Queen
7 Boundary Red Mountain Mine
8 Gold Basin
9 Saginaw
10 Lone Jack Mine
11 Terra Alta
12 Lone Star
13 Quartz Mountain
122°
HARRISON LAKE FRACTURE
DIORITE 19-24
Au 23
HARRISON LAKE
FRASER FAULT
DIORITE 16-35
HOPE
HARRISON LAKE LINEAMENT
MOUNT BARR BATHOLITH
VANCOUVER
FRASER RIVER
DIORITE 23-25
Au 24
CANADA
U.S.A.
49°
MOUNT BAKER
CHILLIWACK BATHOLITH
BELLINGHAM
0 25
SCALE-KILOMETRES
123°
122°
N

MINERALIZATION ASSOCIATED WITH THE HARRISON LAKE FRACTURE

(1) Au-QUARTZ VEINS, e.g., FIRE MOUNTAIN

(2) Pb-Zn-Ag QUARTZ-CARBONATE VEINS, e.g., PROVIDENCE

(3) Au-Bi QUARTZ VEINS ASSOCIATED WITH 24 Ma DIORITES, e.g., DOCTORS POINT, RN PROPERTY

(4) MASSIVE SULPHIDES, e.g., SENECA

K-Ar AGES — HARRISON LAKE

DOCTORS POINT

PLUTON	19-24 Ma
Au MINERALIZATION	23 Ma

RN PROPERTY (KERR ADDISON MINES)

PLUTON	23-25 Ma
Au MINERALIZATION	24 Ma

MINERALIZATION ASSOCIATED WITH THE HARRISON LAKE FRACTURE

(1) AU-QUARTZ VEINS, EG. FIRE MOUNTAIN

(2) PB-ZN-AG QUARTZ-CARBONATE VEINS, EG. PROVIDENCE

(3) AU-BI QUARTZ VEINS ASSOCIATED WITH 24 Ma DIORITES,
EG DOCTORS POINT, RN PROPERTY

(4) MASSIVE SULPHIDES, EG SENECA

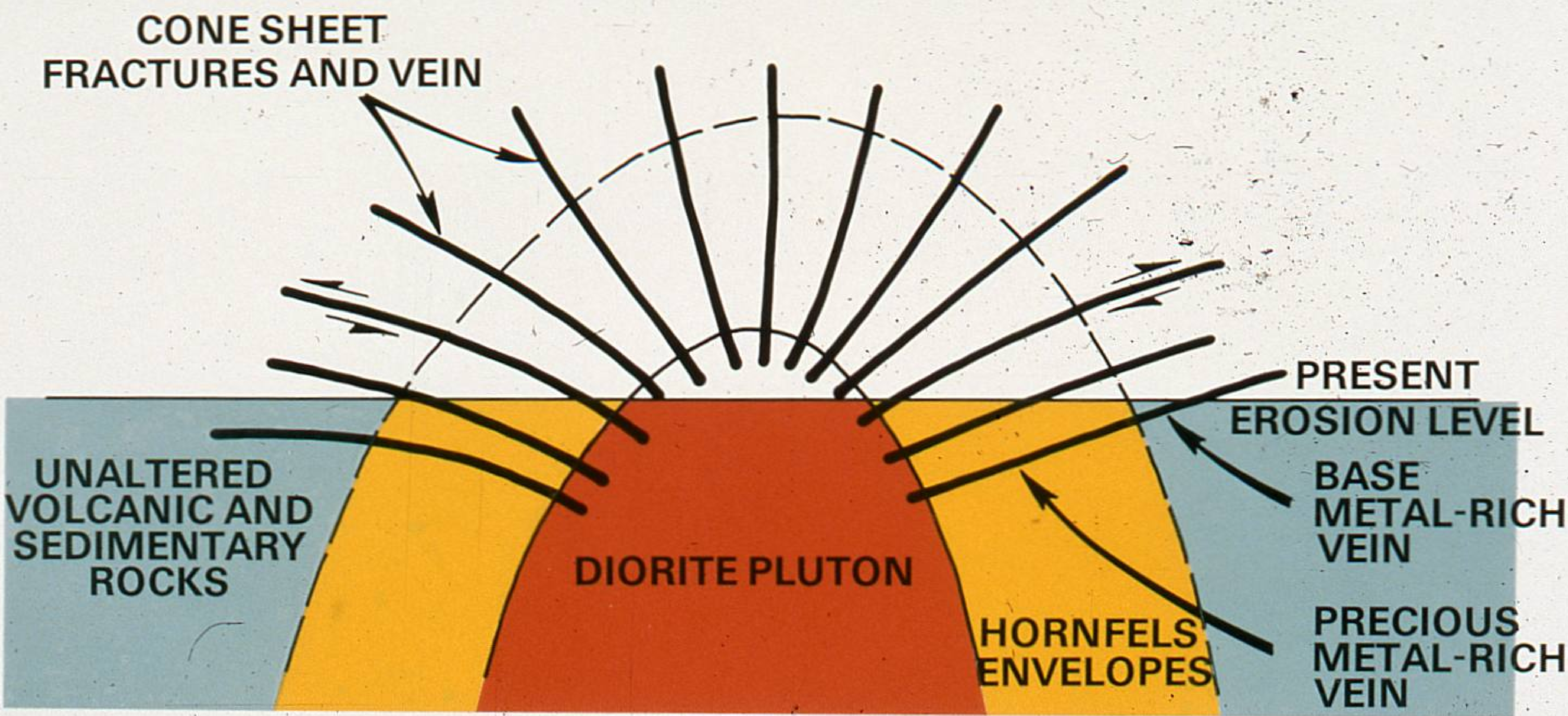
K-Ar AGES - HARRISON LAKE

DOCTORS POINT

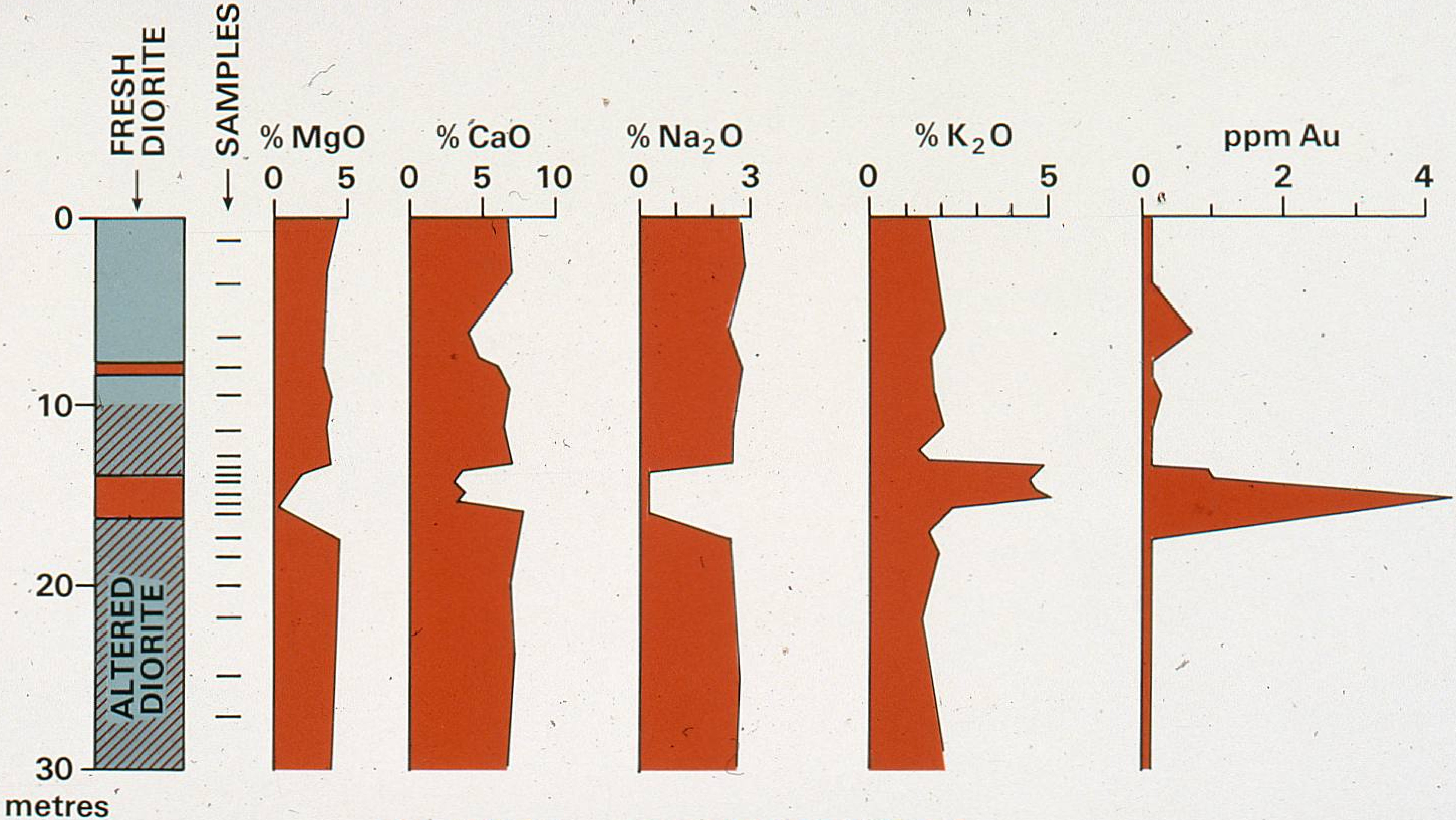
PLUTON	19-24 Ma
Au MINERALIZATION	23 Ma

RN PROPERTY (Kerr Addison Mines)

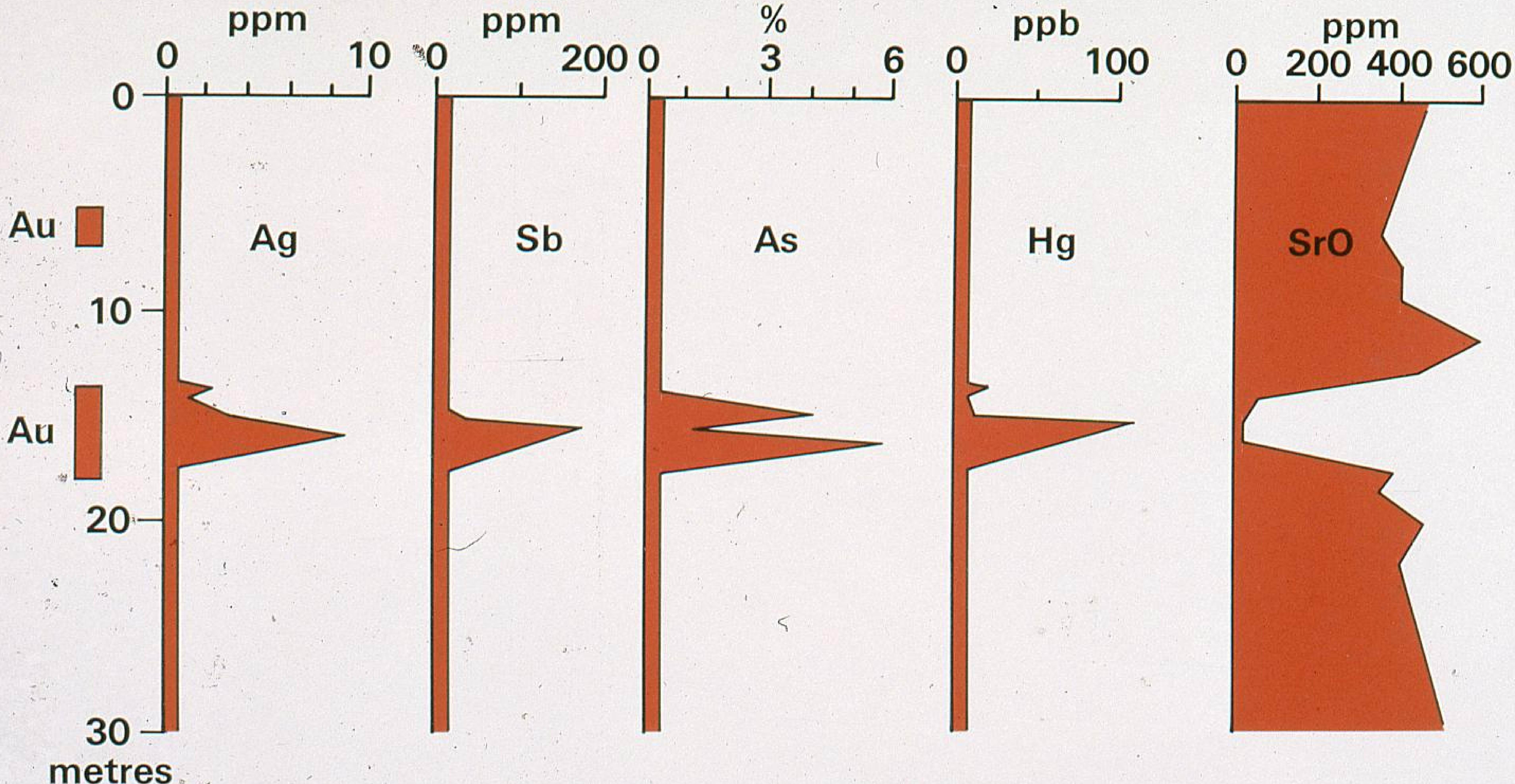
PLUTON	23-25 Ma
Au MINERALIZATION	24 Ma



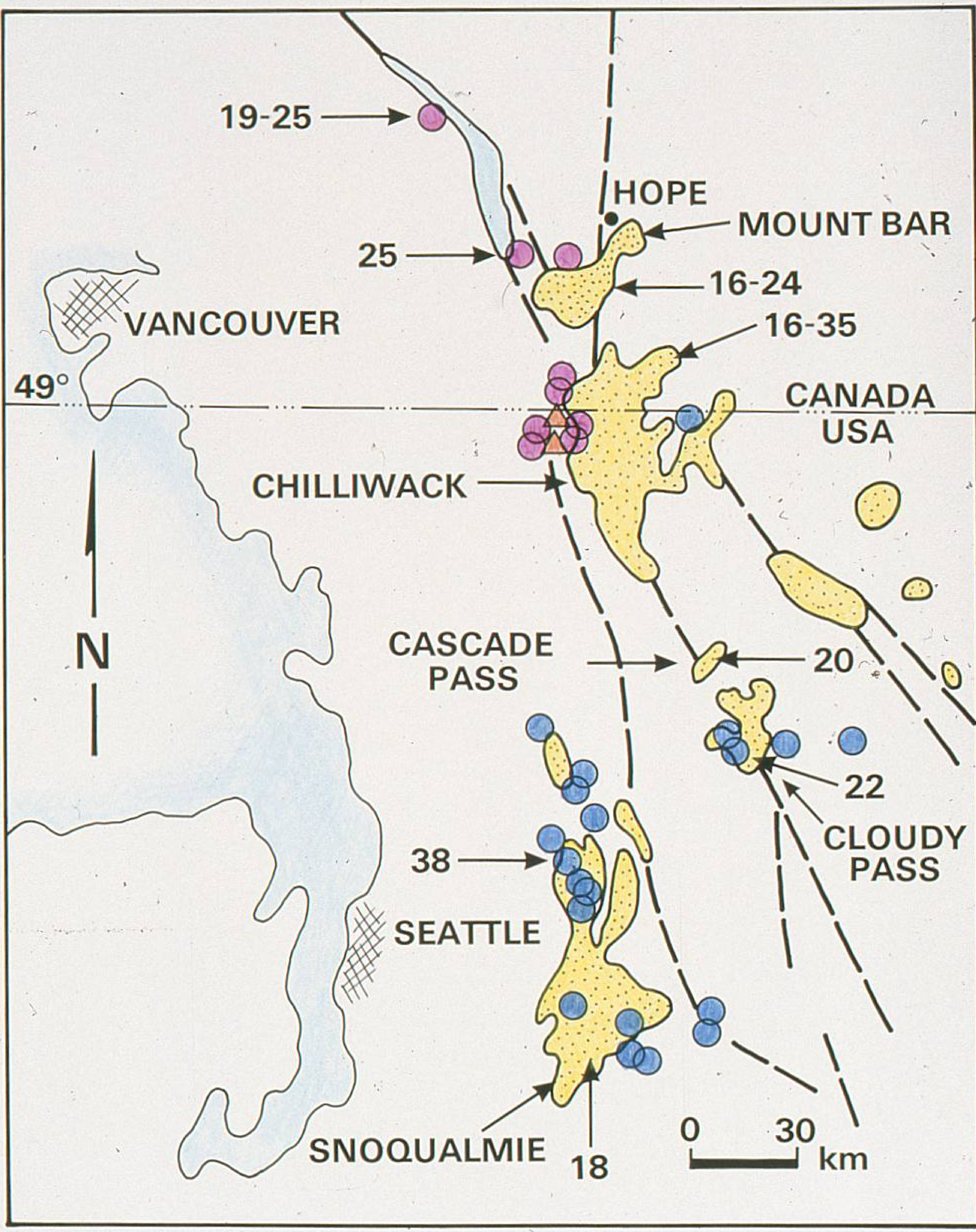
CONE SHEET MODEL AT DOCTORS POINT



HOLE 82R11 DOCTORS POINT, B.C.



HOLE 8211 DOCTORS POINT

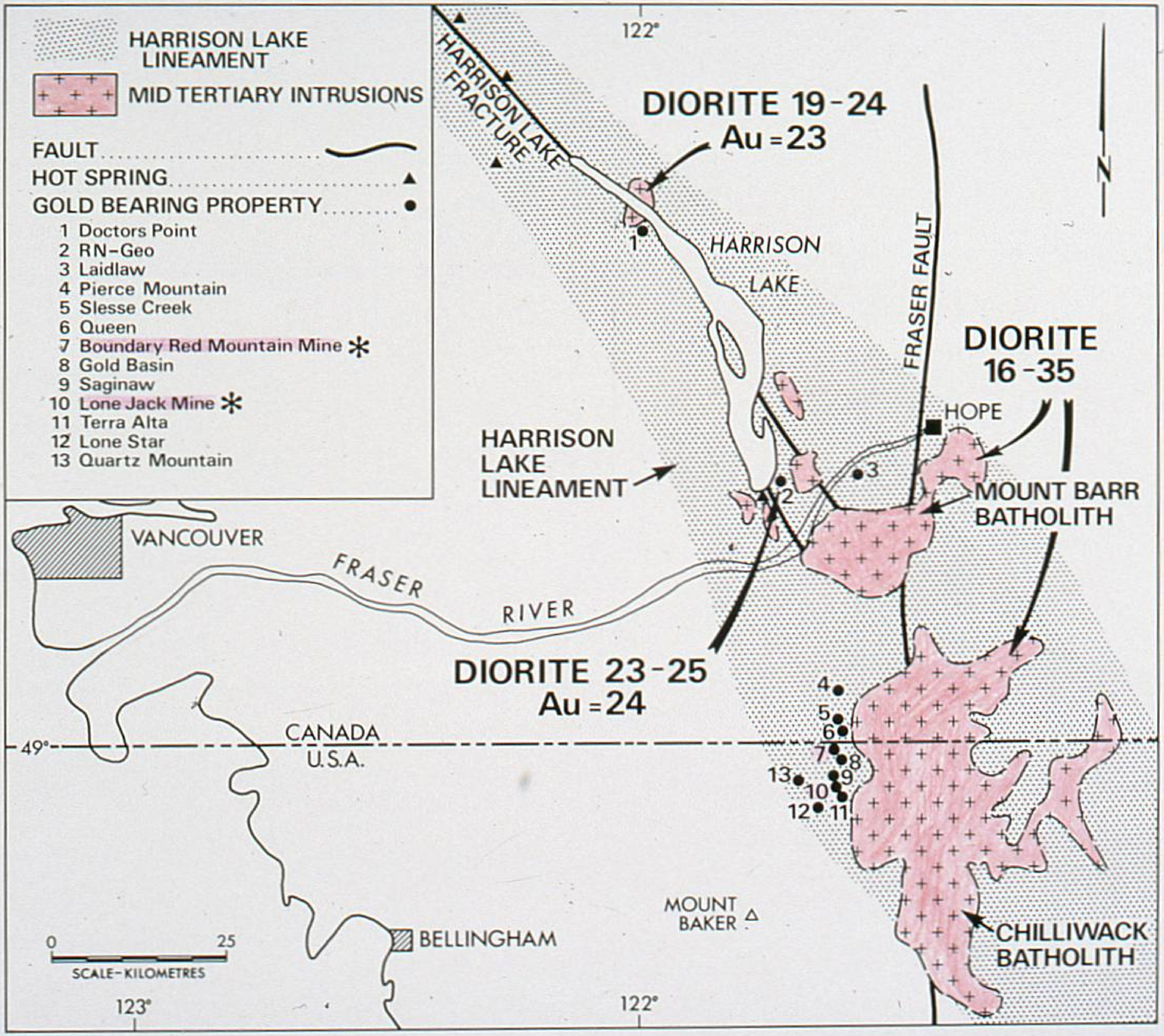


GOLD OCCURRENCE

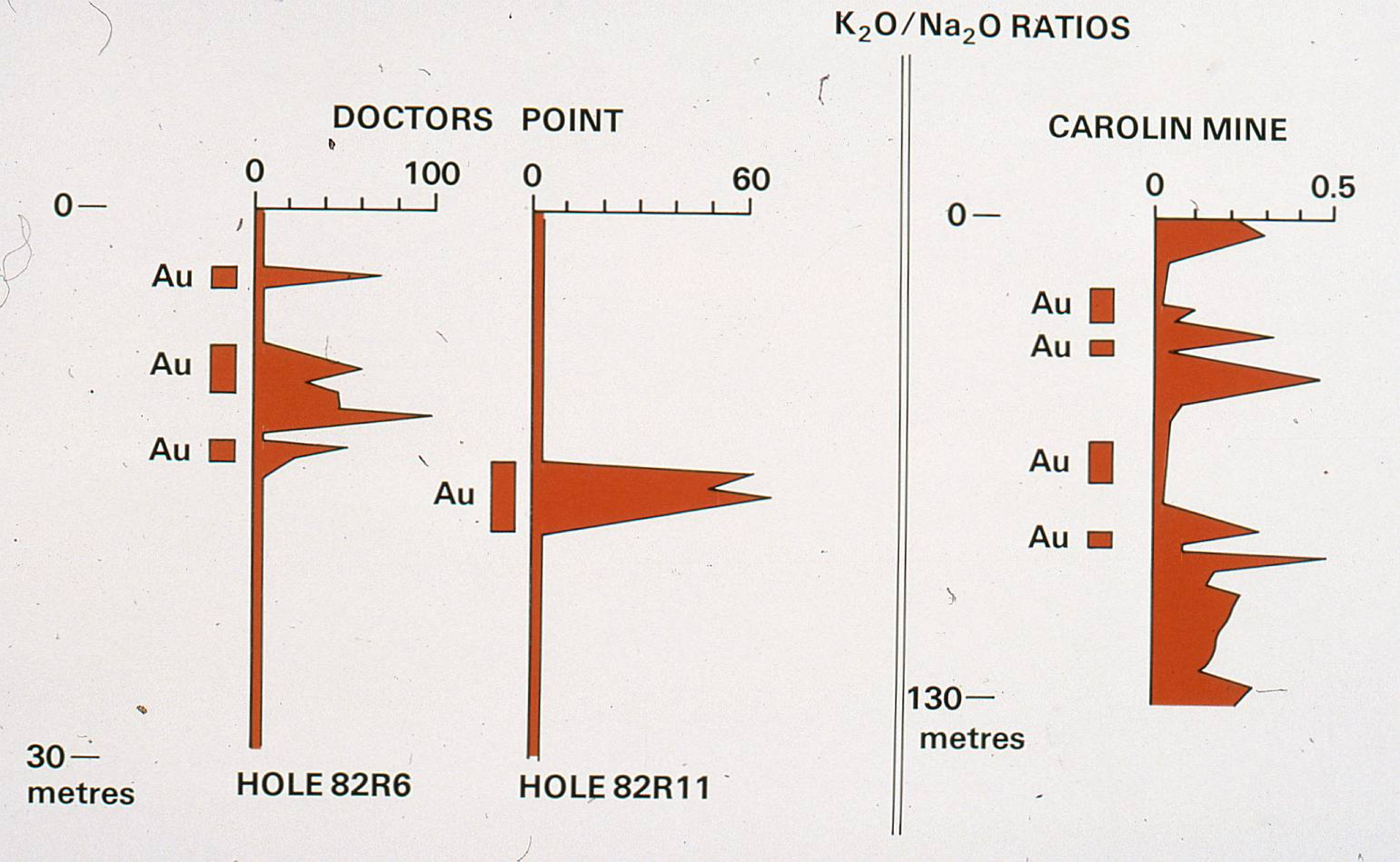
FORMER GOLD MINE

COPPER OCCURRENCE

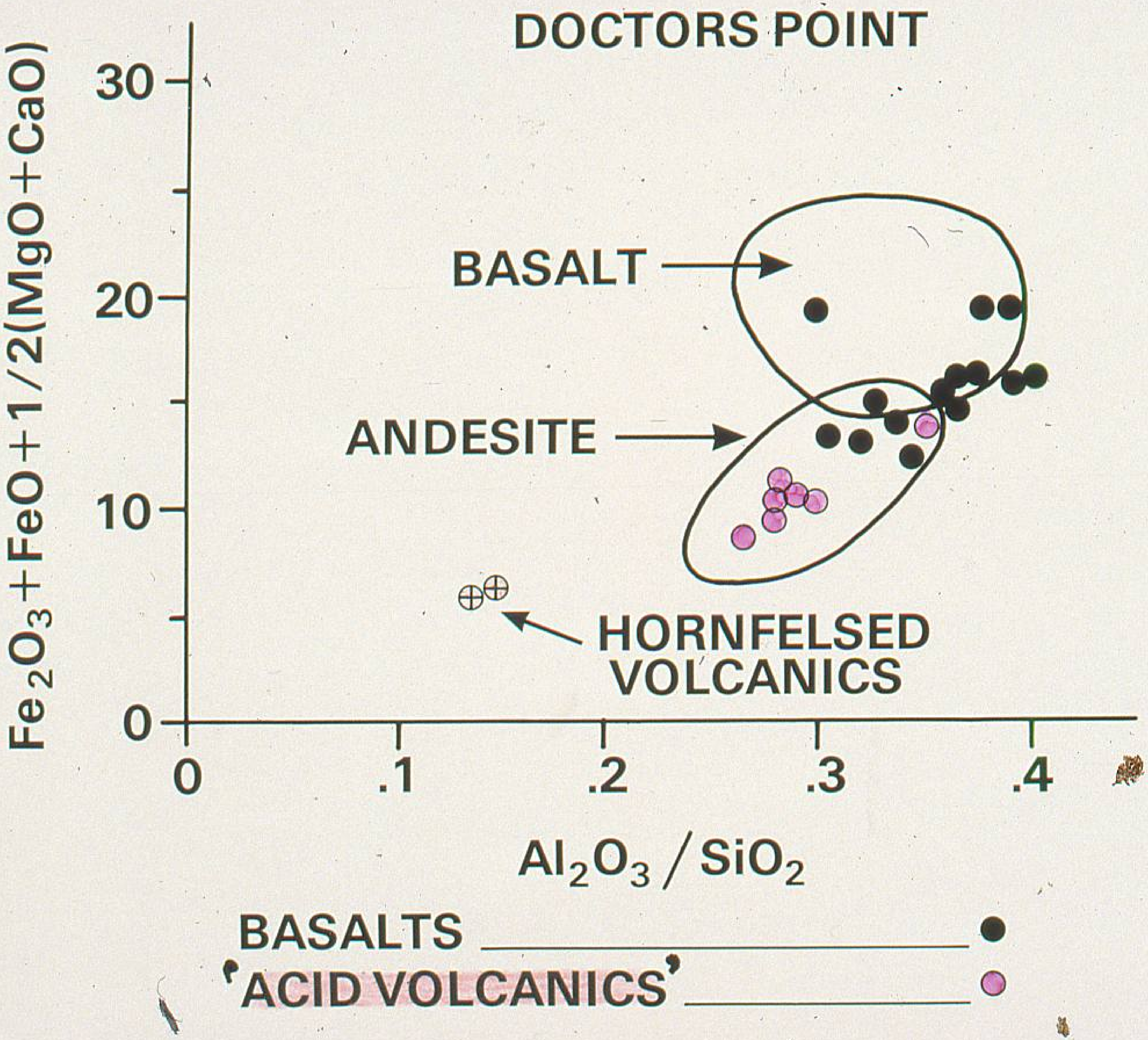
(AFTER GRANT 1969)



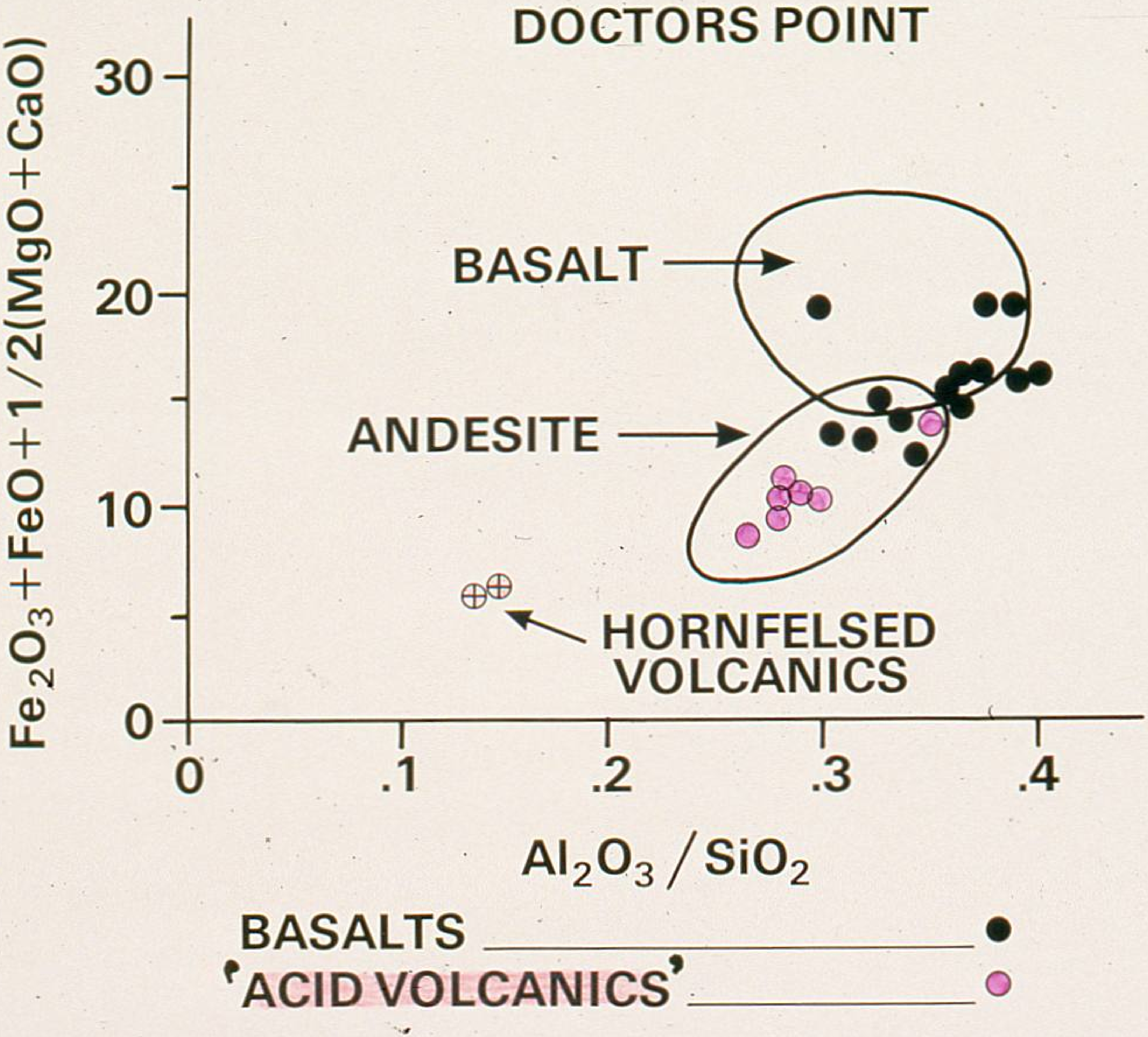
HARRISON LAKE LINEAMENT
MID TERTIARY INTRUSIONS
FAULT
HOT SPRING
GOLD BEARING PROPERTY
1 Doctors Point
2 RN-Geo
3 Laidlaw
4 Pierce Mountain
5 Slesse Creek
6 Queen
7 Boundary Red Mountain Mine *
8 Gold Basin
9 Saginaw
10 Lone Jack Mine *
11 Terra Alta
12 Lone Star
13 Quartz Mountain
122°
HARRISON LAKE FRACTURE
DIORITE 19-24
Au = 23
HARRISON LAKE
FRASER FAULT
DIORITE 16-35
N
HOPE
HARRISON LAKE LINEAMENT
MOUNT BARR BATHOLITH
VANCOUVER
FRASER RIVER
DIORITE 23-25
Au = 24
CANADA
U.S.A.
49°
MOUNT BAKER
BELLINGHAM
CHILLIWACK BATHOLITH
0 25
SCALE-KILOMETRES
123°
122°



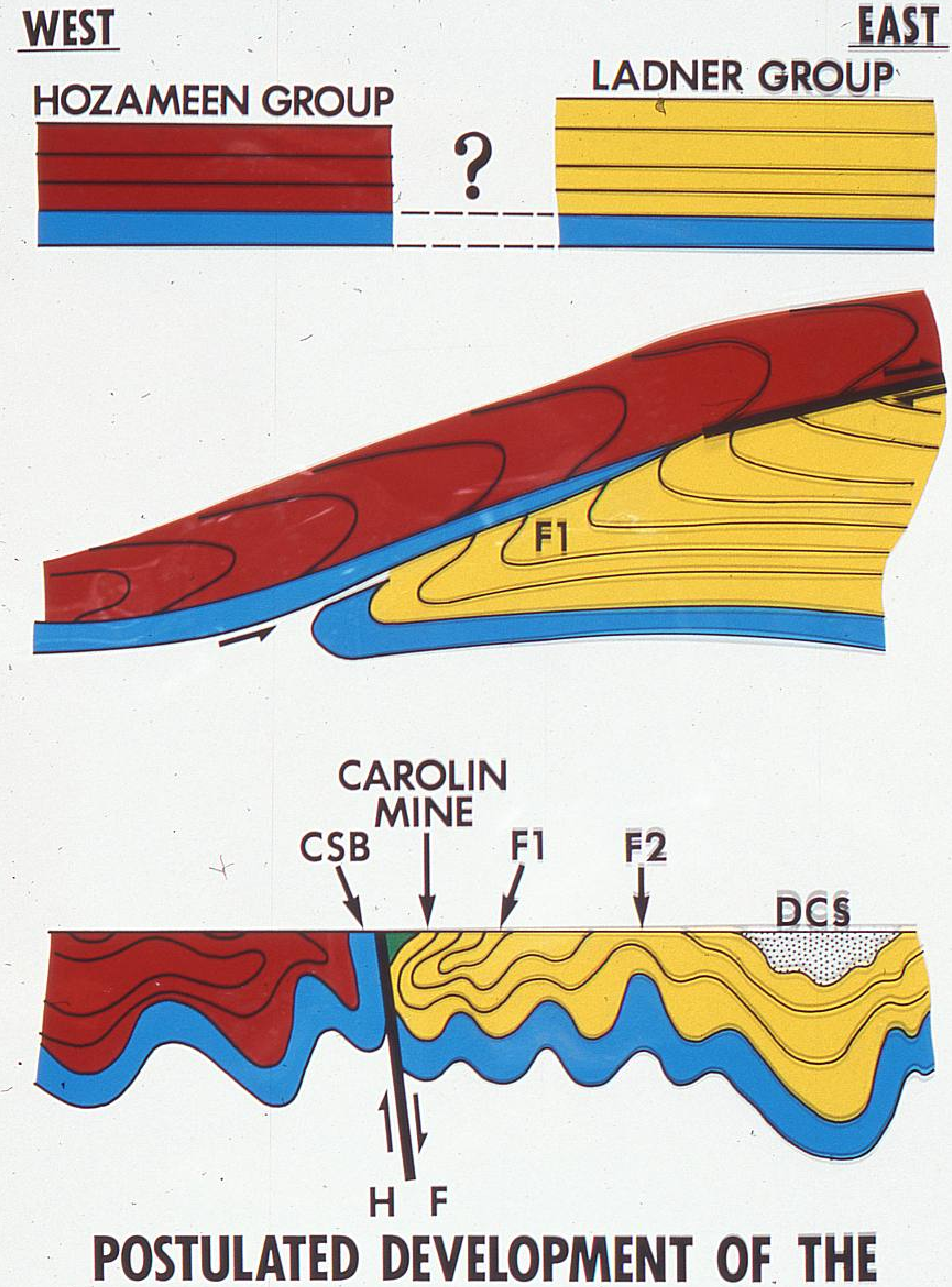
K_2O/Na_2O RATIOS
DOCTORS POINT
CAROLIN MINE
0
100
0
60
0
0.5
0—
Au
Au
Au
Au
30—
metres
HOLE 82R6
HOLE 82R11
0—
Au
Au
Au
Au
130—
metres



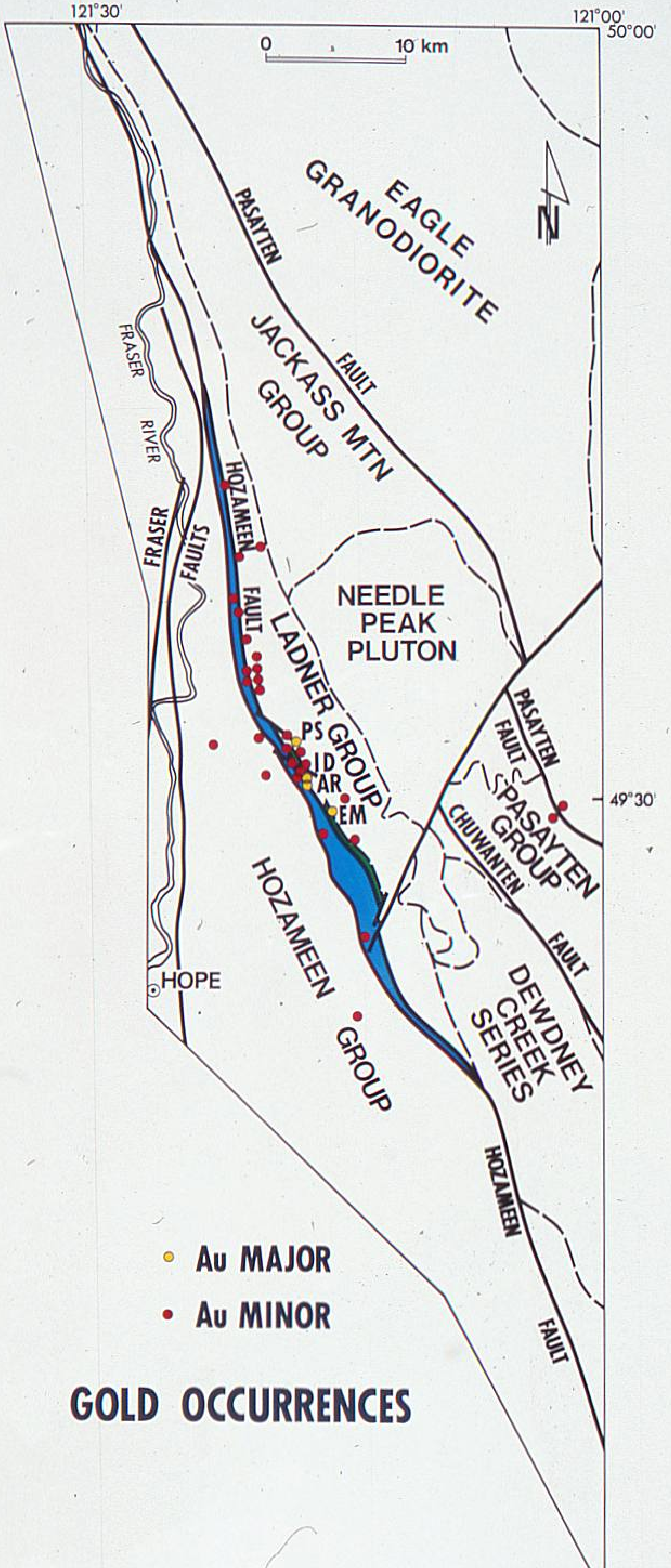
DOCTORS POINT
$Fe_2O_3+FeO+1/2(MgO+CaO)$
30
20
10
0
BASALT
ANDESITE
HORNFELSED
VOLCANICS
0
.1
.2
.3
.4
Al_2O_3/SiO_2
BASALTS
'ACID VOLCANICS'



DOCTORS POINT
30
20
10
0
$Fe_2O_3+FeO+1/2(MgO+CaO)$
BASALT
ANDESITE
HORNFELSED VOLCANICS
0
.1
.2
.3
.4
$Al_2O_3\,/\,SiO_2$
BASALTS
'ACID VOLCANICS'



POSTULATED DEVELOPMENT OF THE COQUIHALLA SERPENTINE BELT



GOLD OCCURRENCES

REGIONAL TARGETS FOR EPI – MESOTHERMAL GOLD

(1) FRACTURES
- SPLAYS

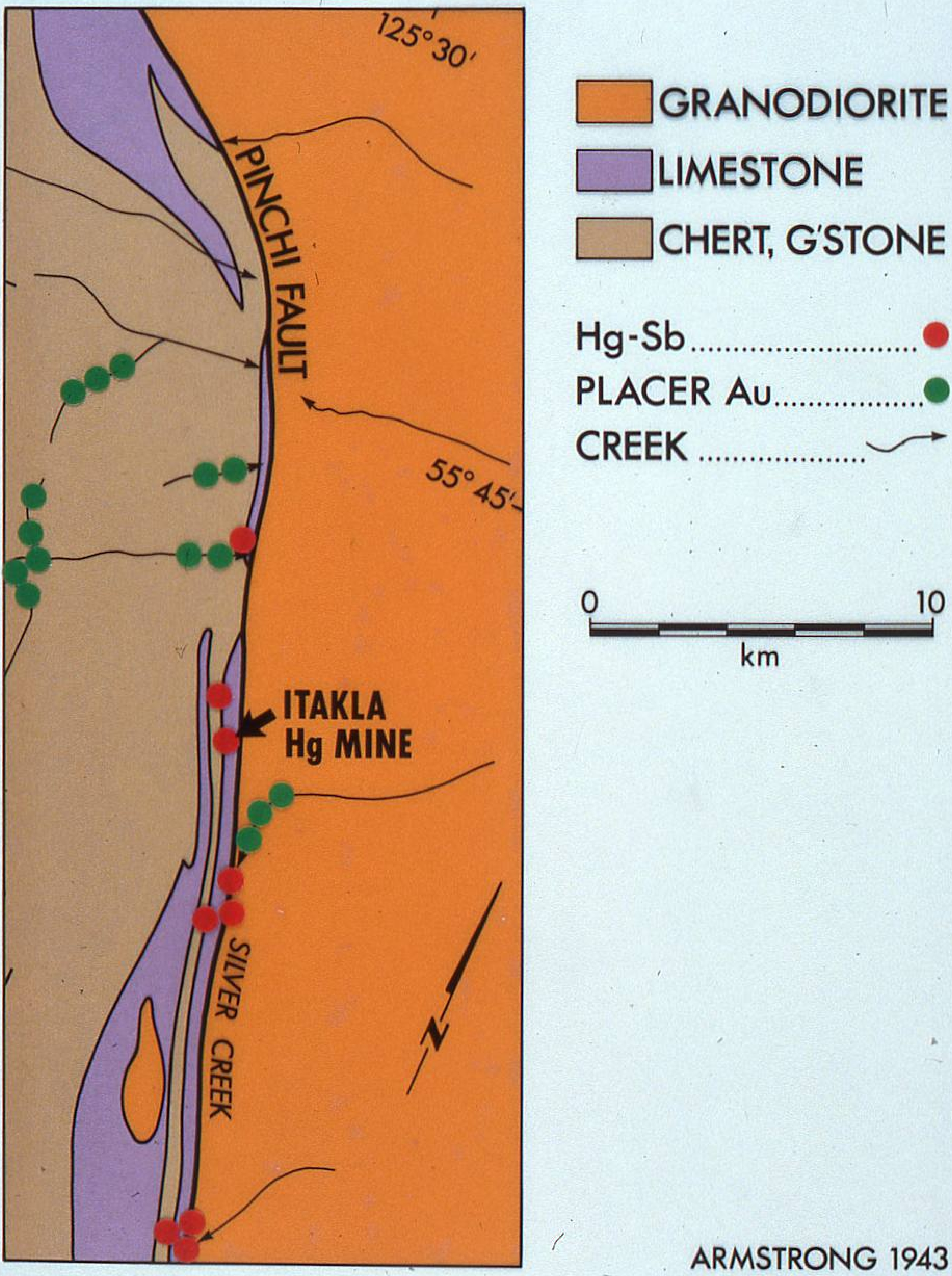
(2) HEAT SOURCE
- ACID INTRUSIONS
- ACID EXTRUSIONS
- HOT SPRINGS

(3) SUITABLE HOST ROCKS
- PERMEABLE – SEDS, TUFFS
- CALCAREOUS
- CARBONACEOUS

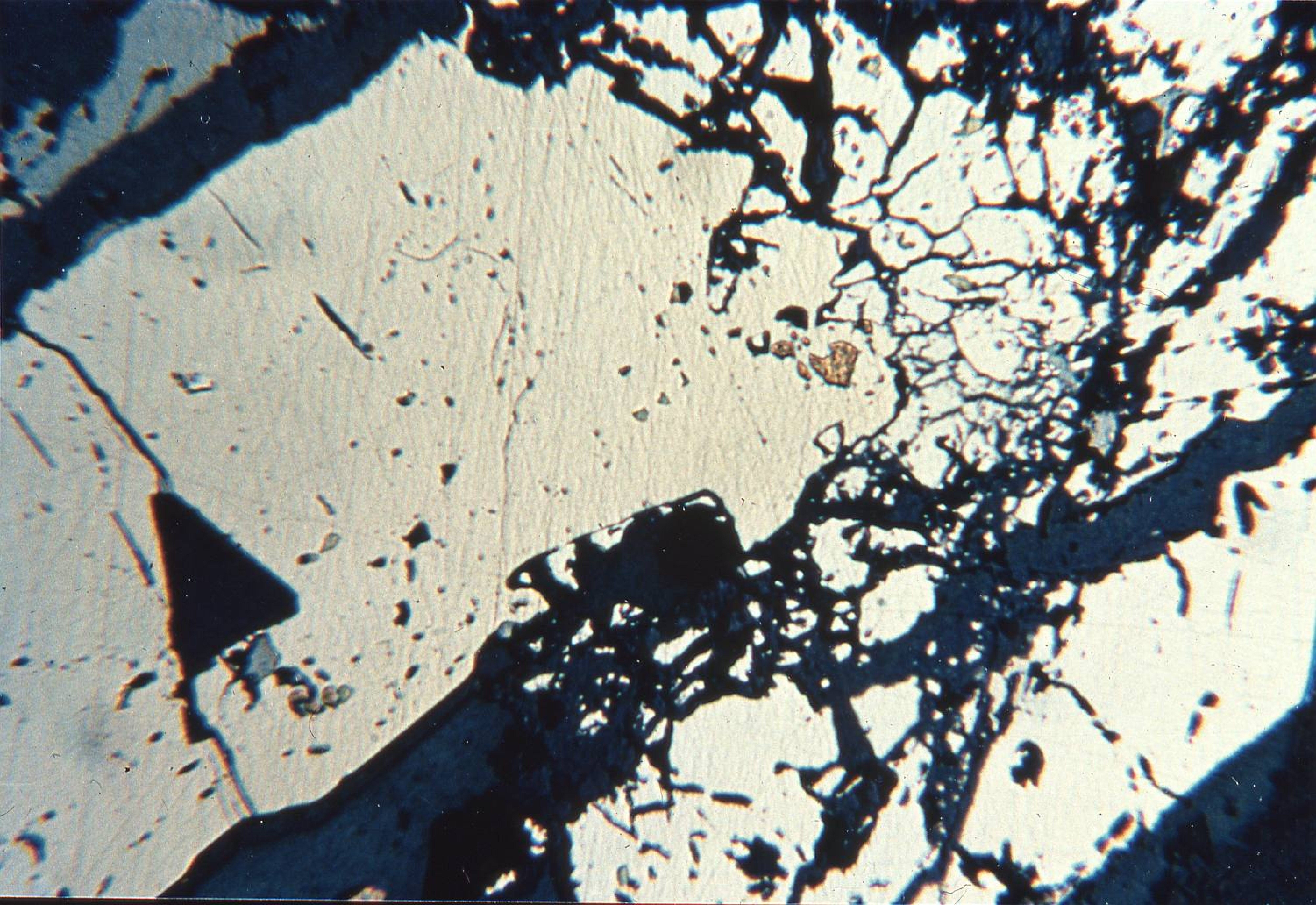
(4) ALTERATION
- SILICIFICATION
- CARBONATE
- SODIUM
- POTASSIC

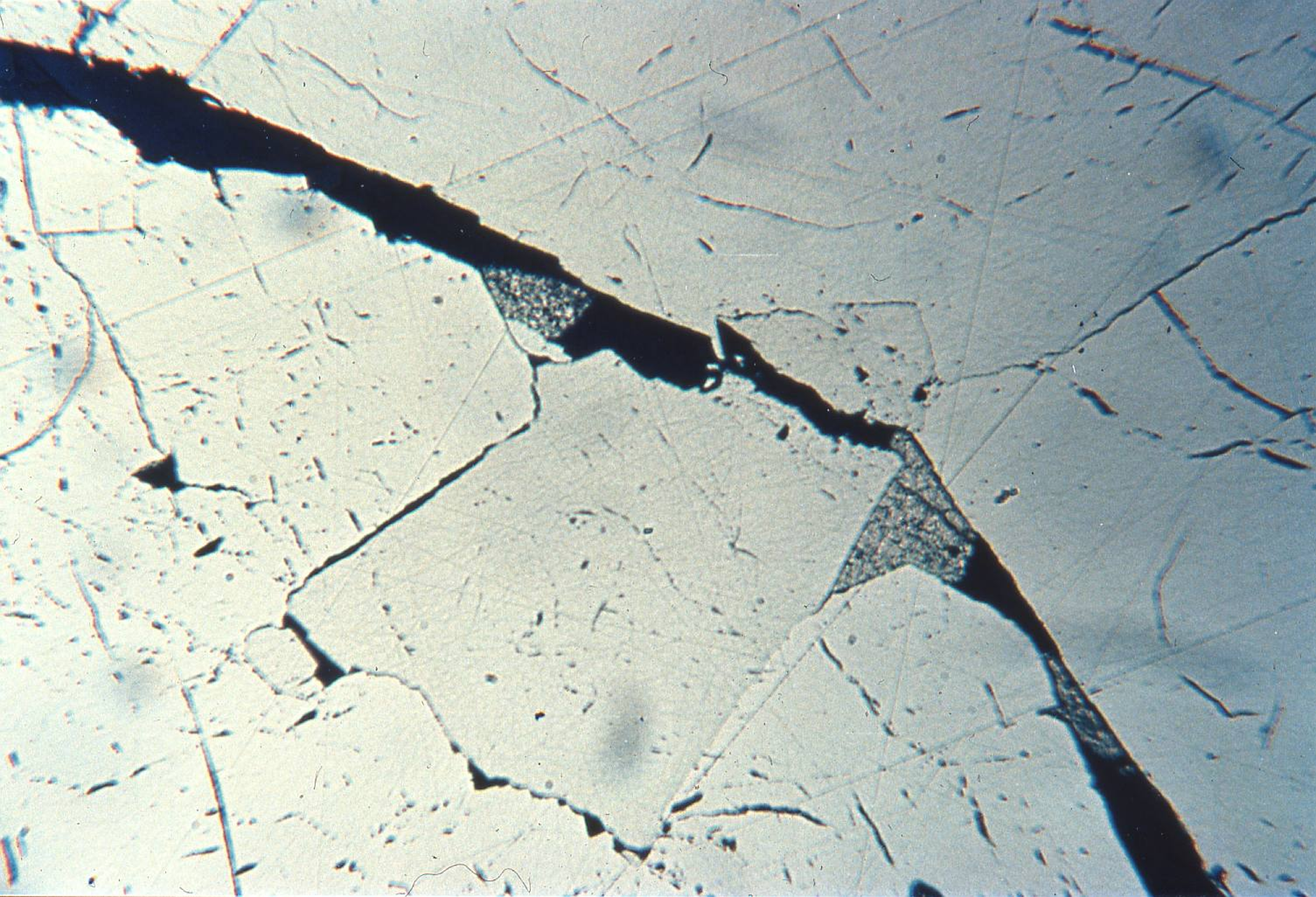
(5) MINERALIZATION
- Au, Hg, Sb, Bi OCCURRENCES
- PLACER Au – UNKNOWN SOURCE

GEOLOGY, PINCHI Hg BELT

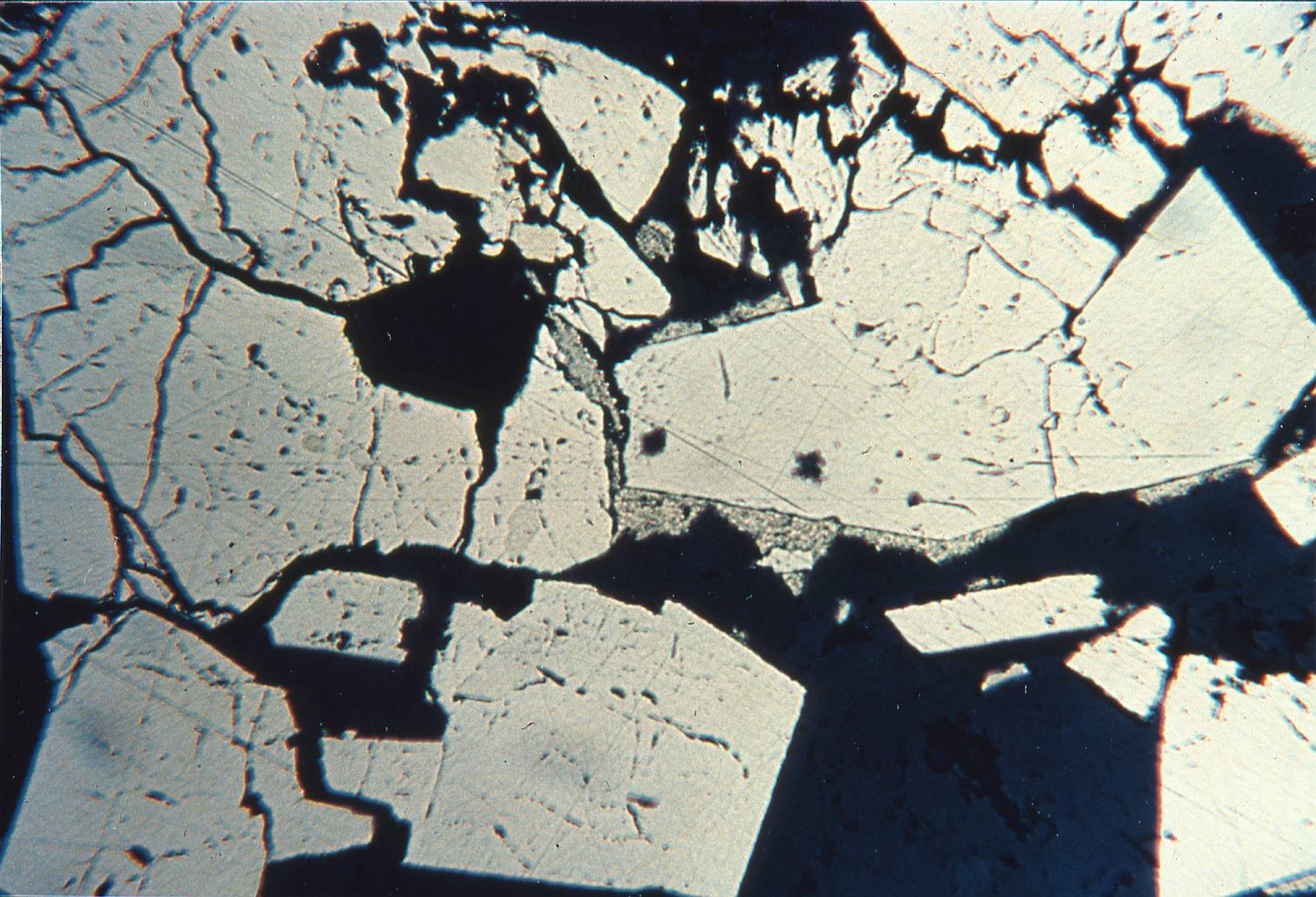


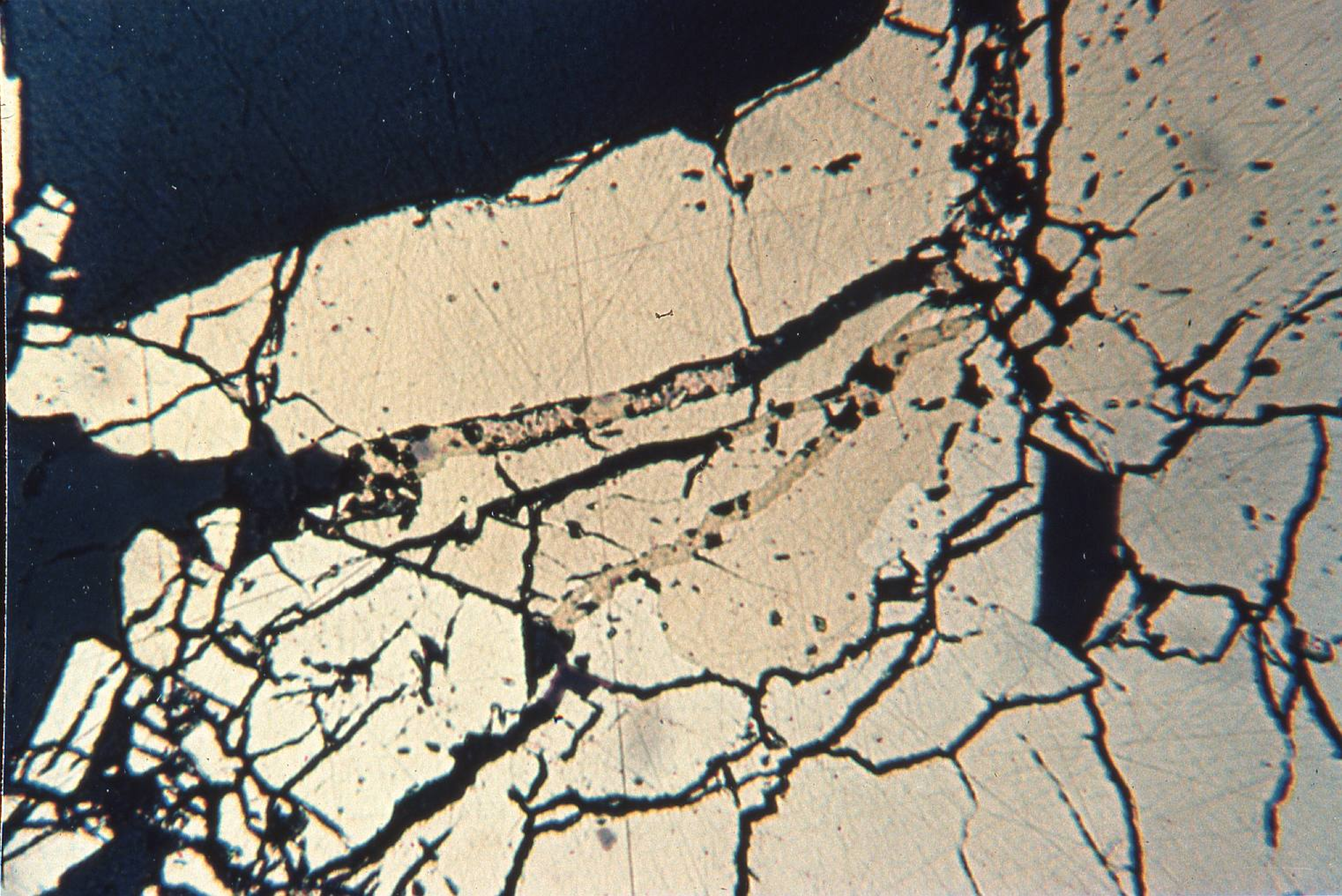
ARMSTRONG 1943





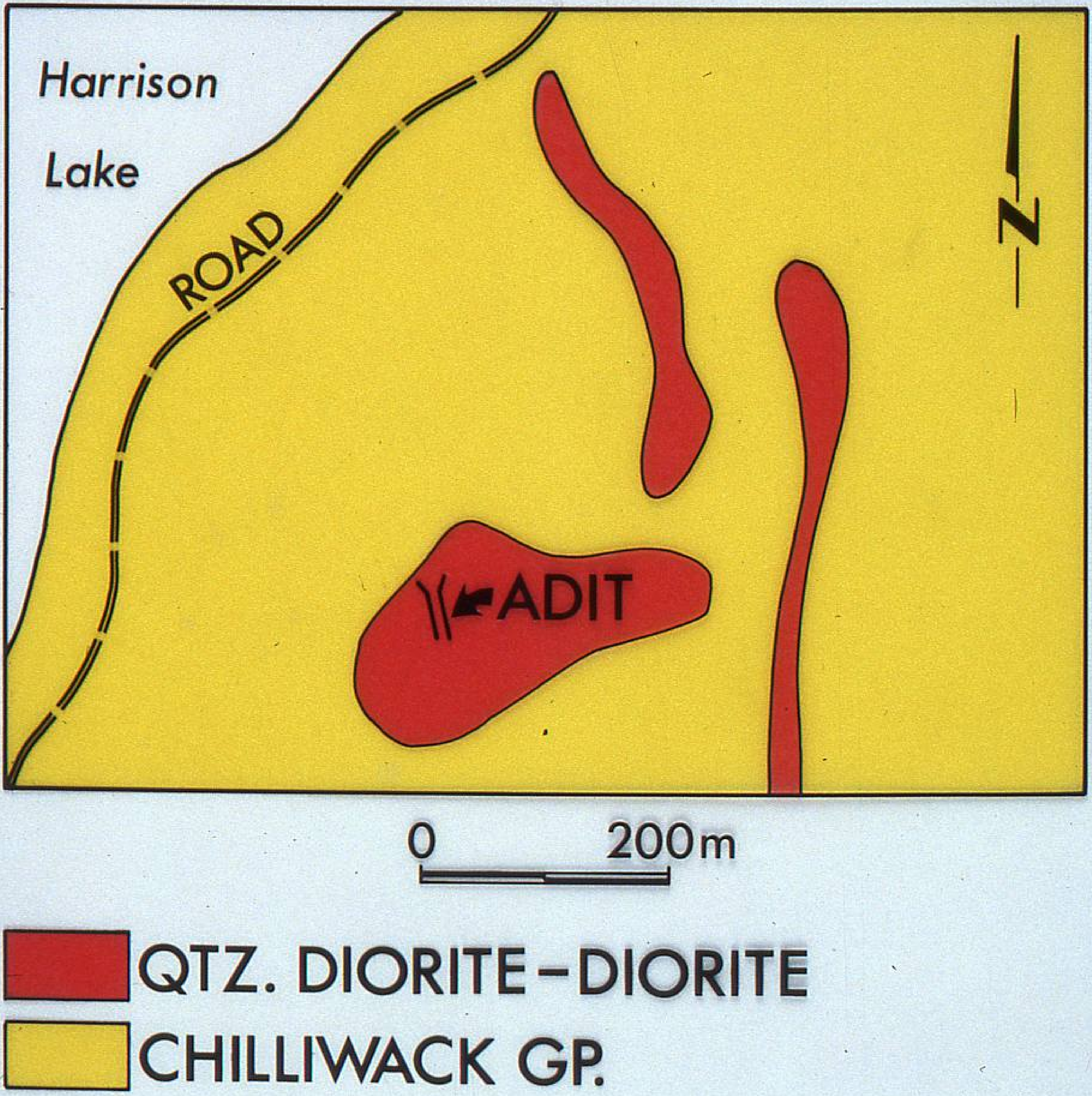

METRIC
STERLING

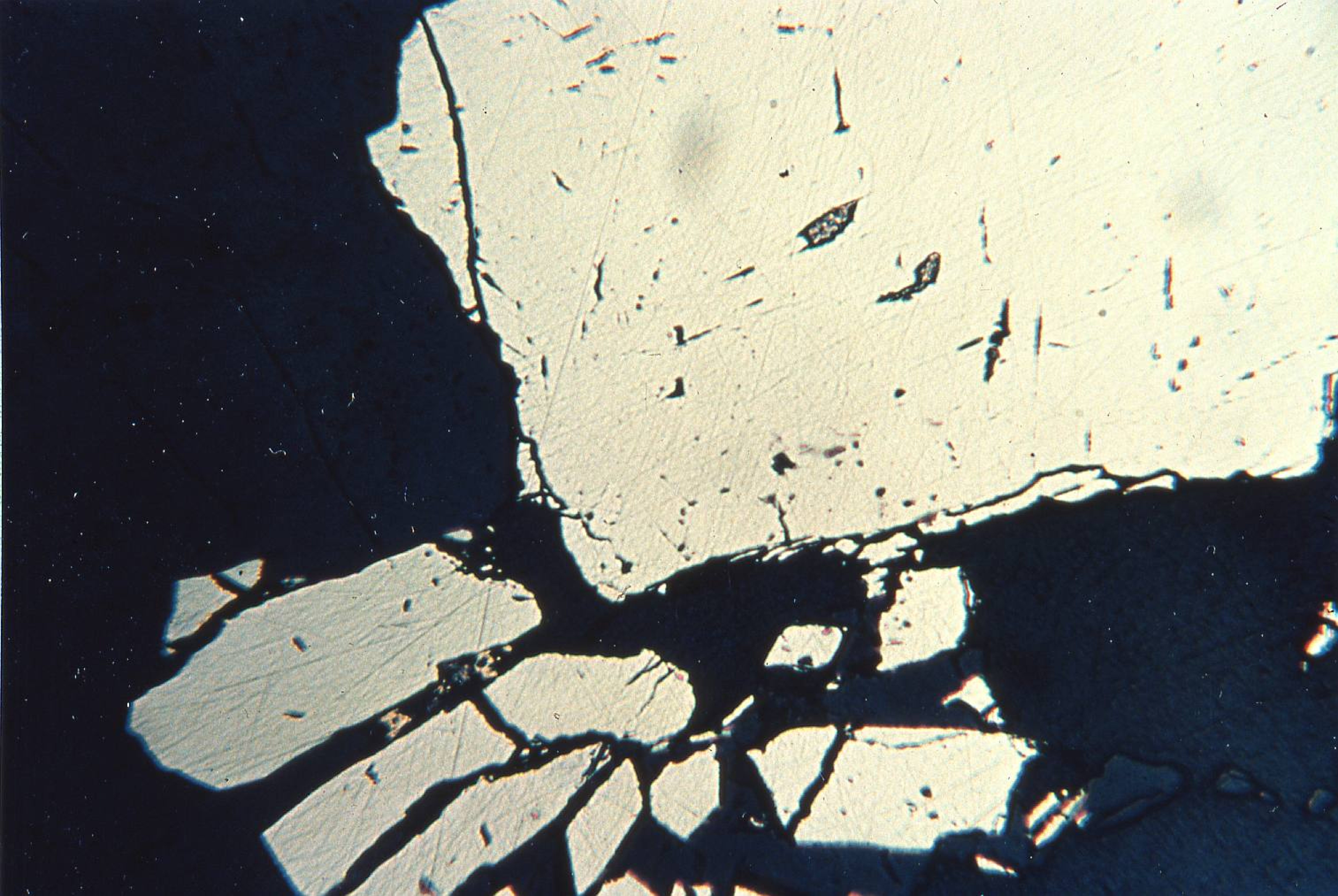


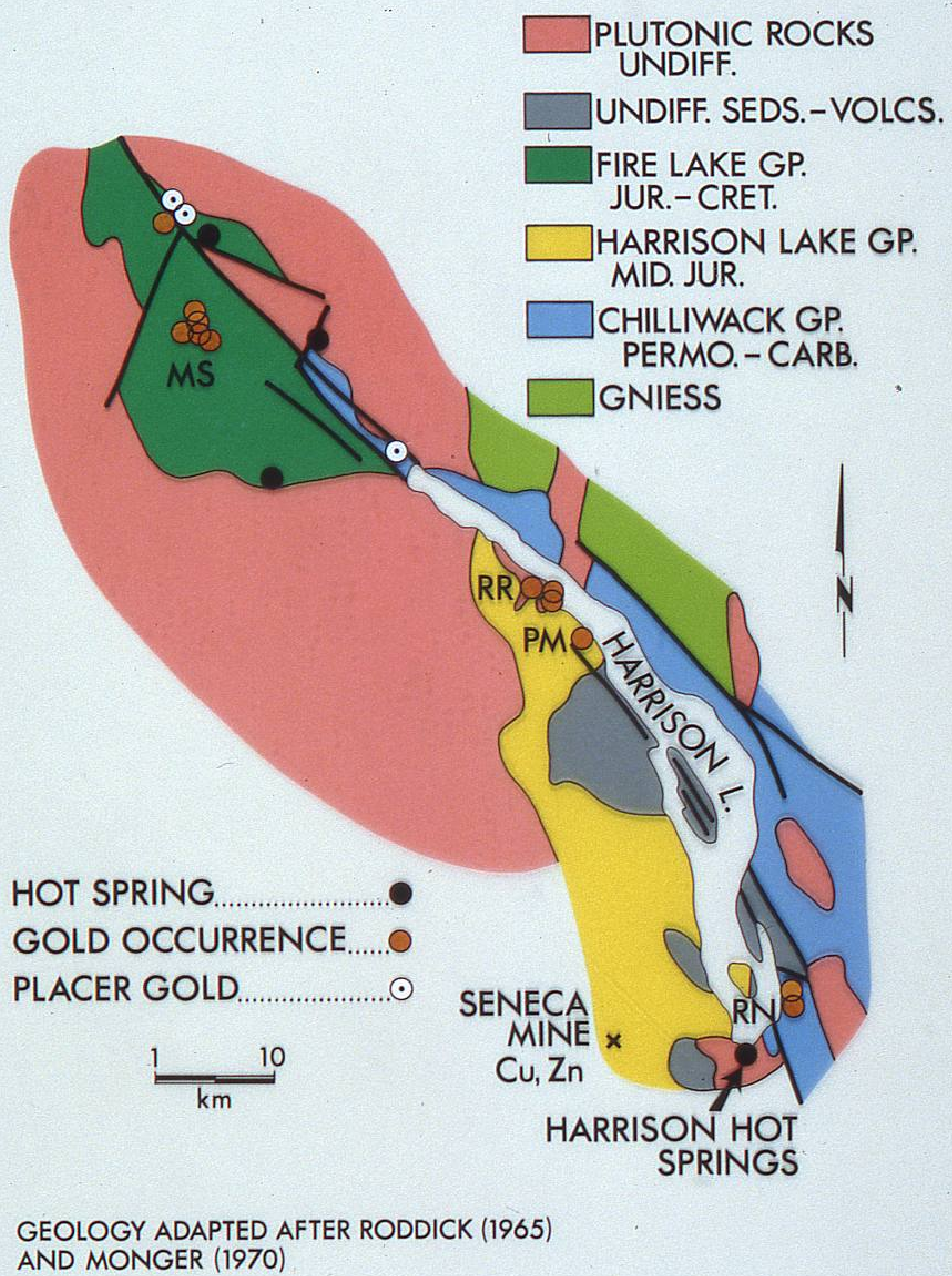



METRIC
STERLING

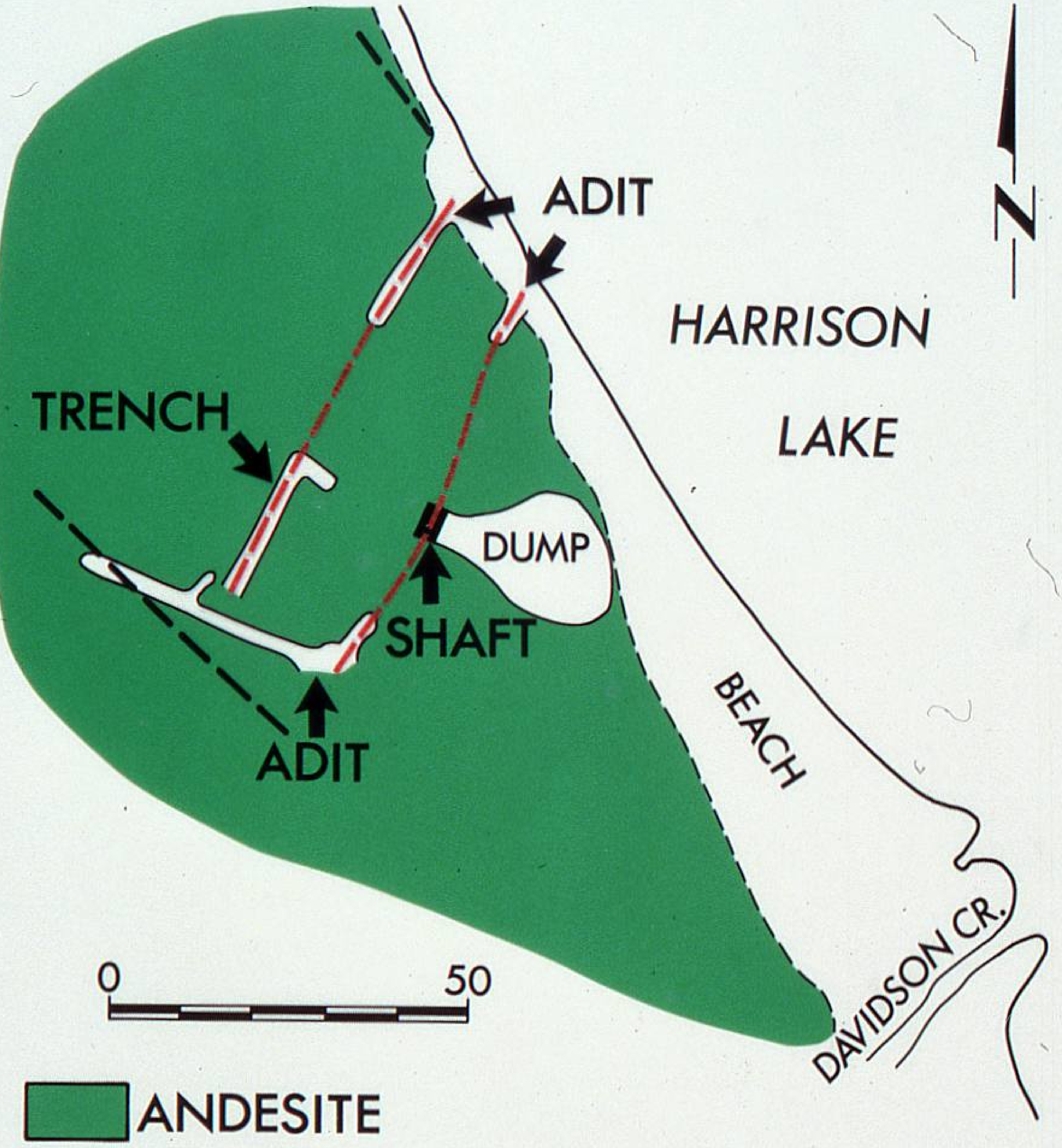
GEOLOGY – R.N. GOLD MINE






PLUTONIC ROCKS UNDIFF.
UNDIFF. SEDS.-VOLCS.
FIRE LAKE GP. JUR.-CRET.
HARRISON LAKE GP. MID. JUR.
CHILLIWACK GP. PERMO.-CARB.
GNIESS
MS
RR
PM
HARRISON L.
N
HOT SPRING
GOLD OCCURRENCE
PLACER GOLD
SENECA MINE
Cu, Zn
RN
1
10
km
HARRISON HOT SPRINGS
GEOLOGY ADAPTED AFTER RODDICK (1965) AND MONGER (1970)

PROVIDENCE MINE

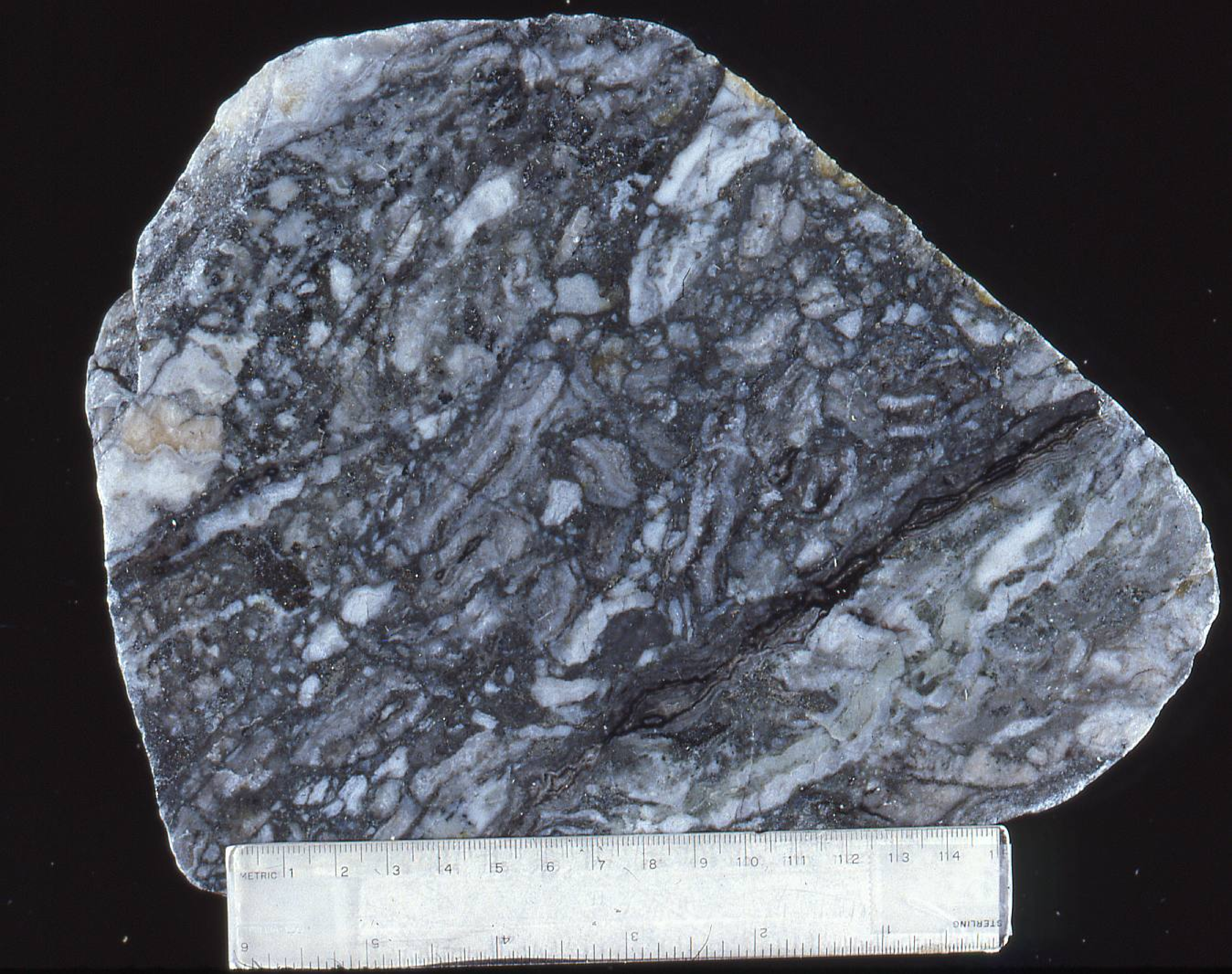


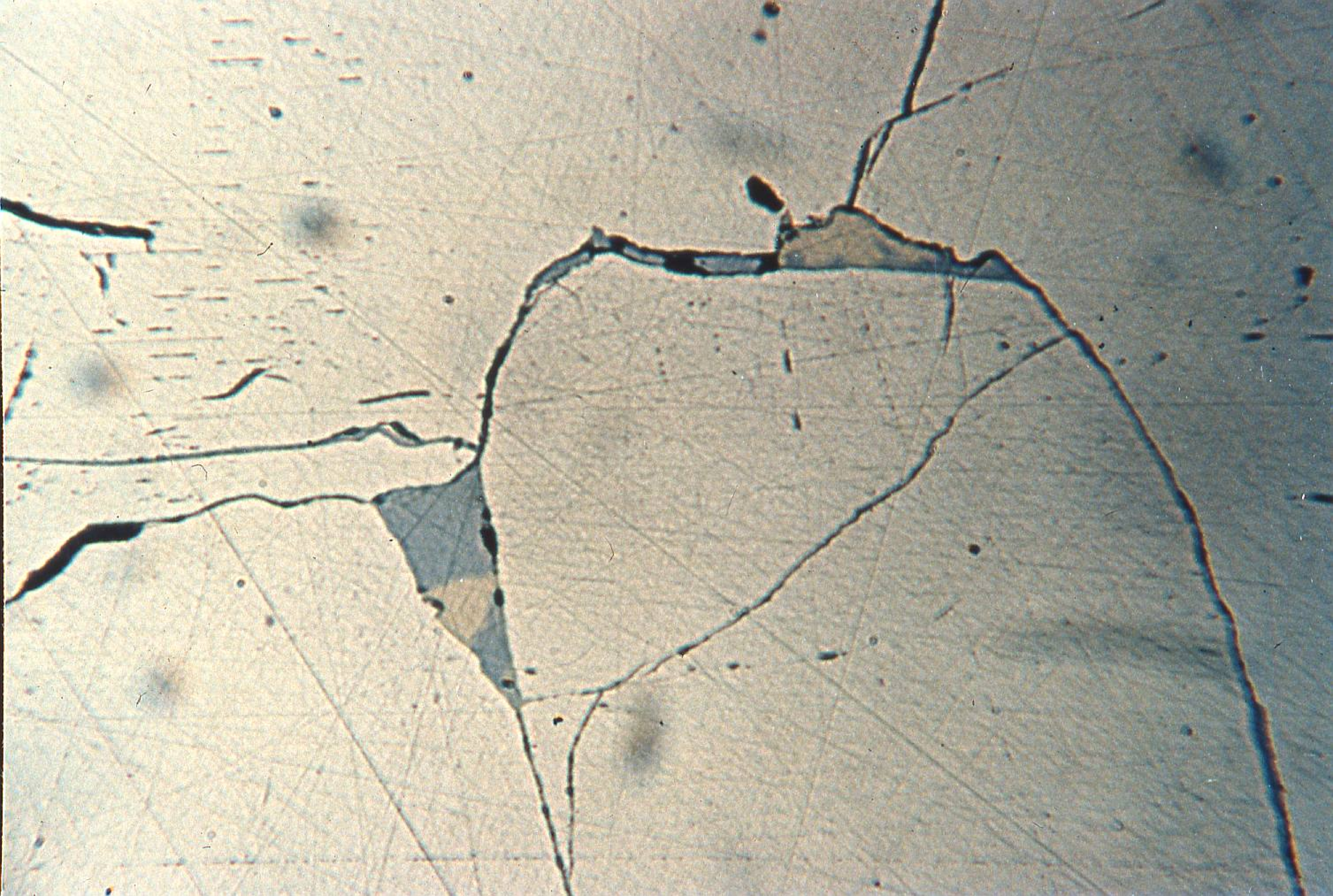
ANDESITE

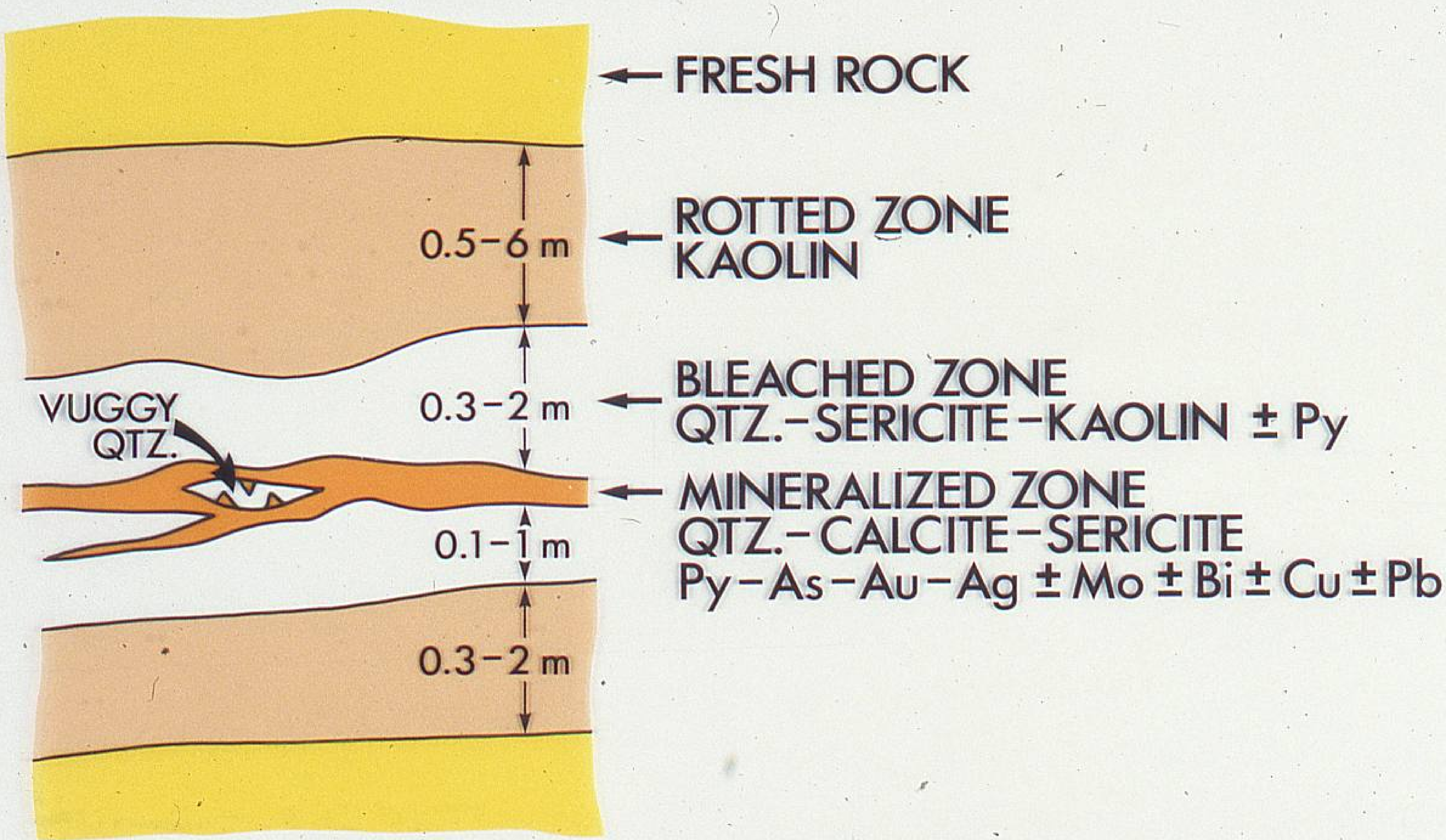
BARREN FAULT ....

FAULT AND VEINS
Pb-Zn-Cu-Au-Ag ....

G.E. RAY 1983

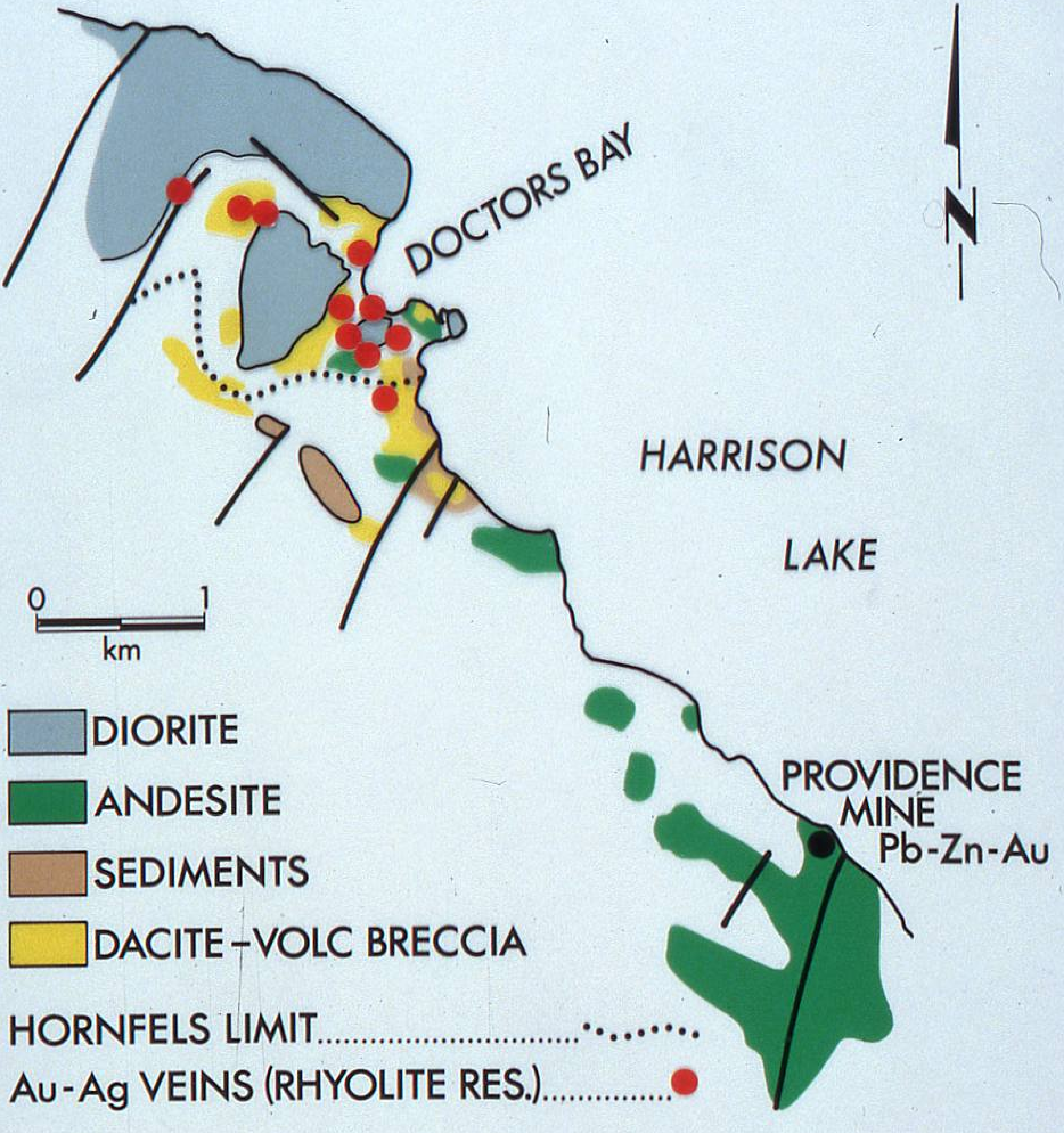

METRIC





SCHEMATIC SECTION SHOWING MINERALIZED ZONING–DOCTORS BAY, HARRISON LAKE

(G.E. RAY 1983)


DOCTORS BAY
HARRISON
LAKE
N
0
1
km
PROVIDENCE
MINE
Pb-Zn-Au
DIORITE
ANDESITE
SEDIMENTS
DACITE – VOLC BRECCIA
HORNFELS LIMIT
Au-Ag VEINS (RHYOLITE RES.)


METRIC 1 2 3 4 5 6 7 8 9 10 11 12 13 14 1
STERLING