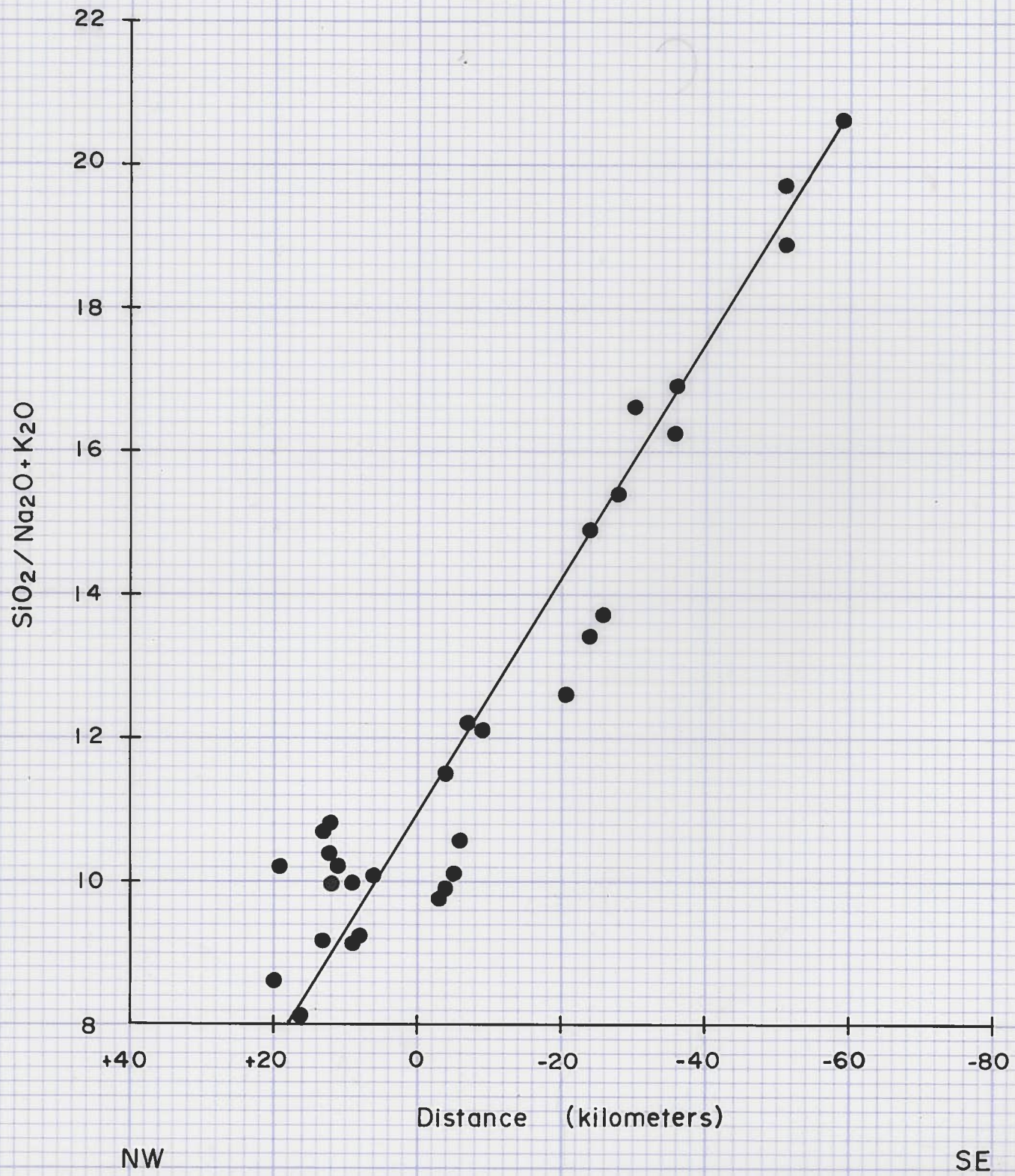
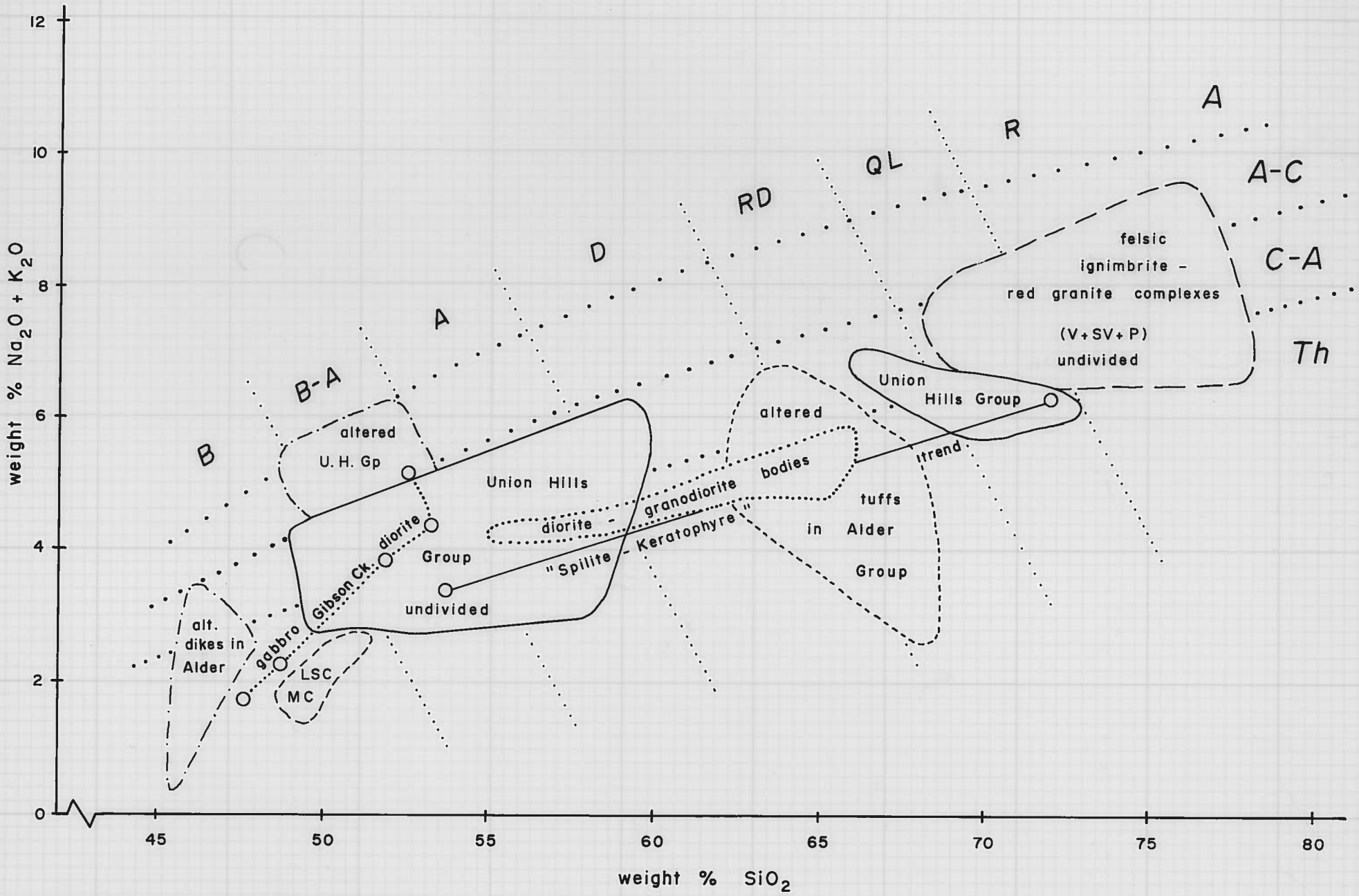
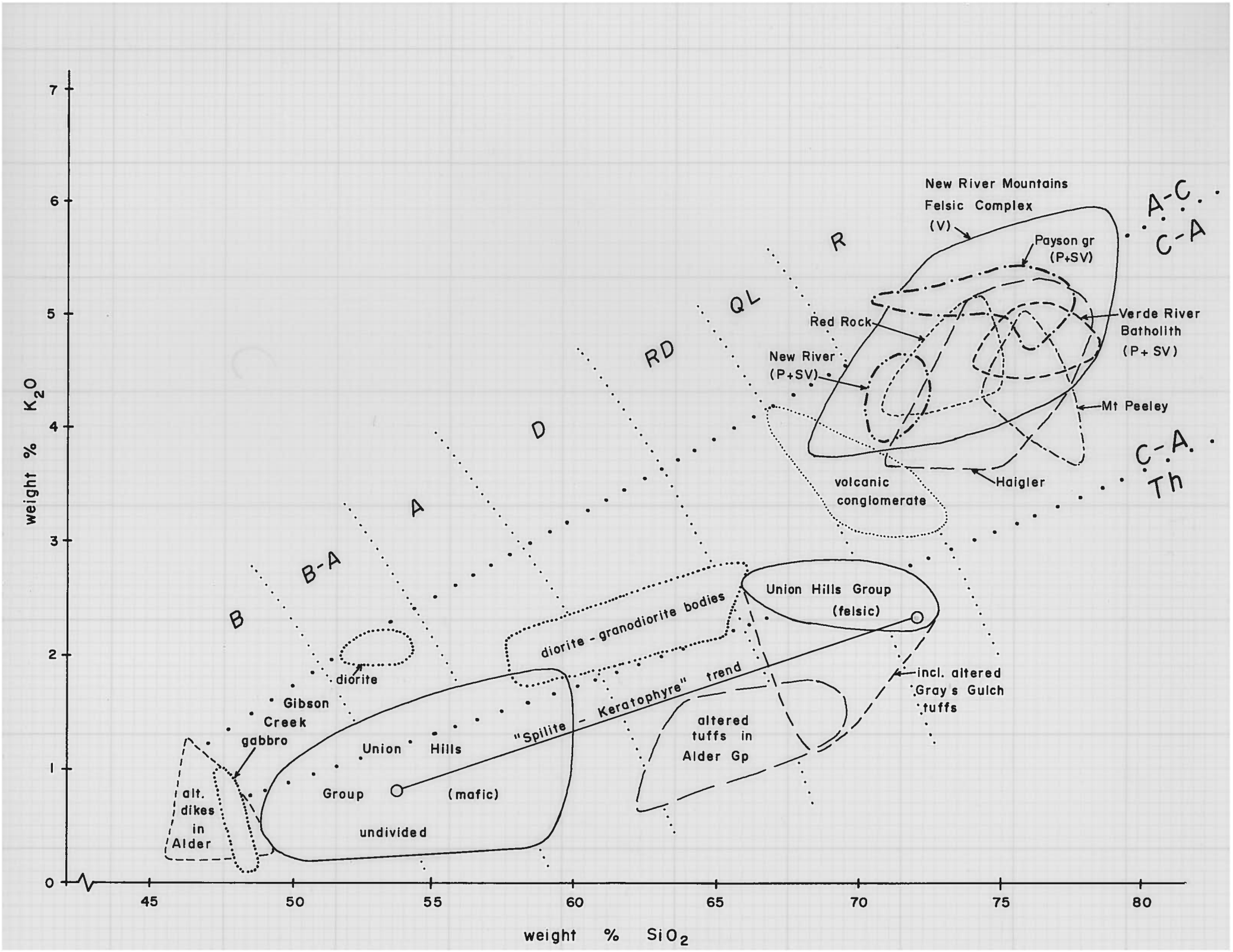
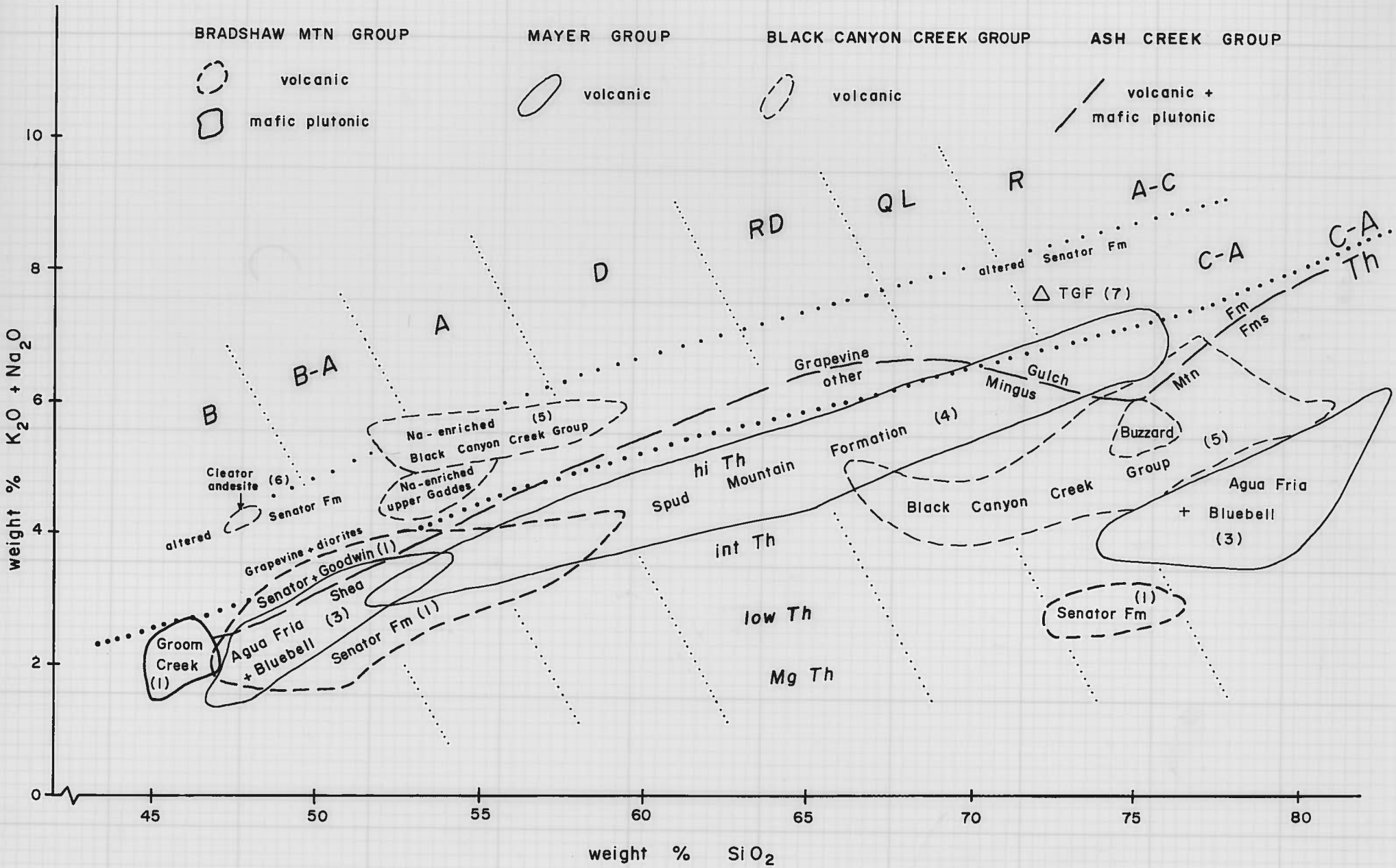
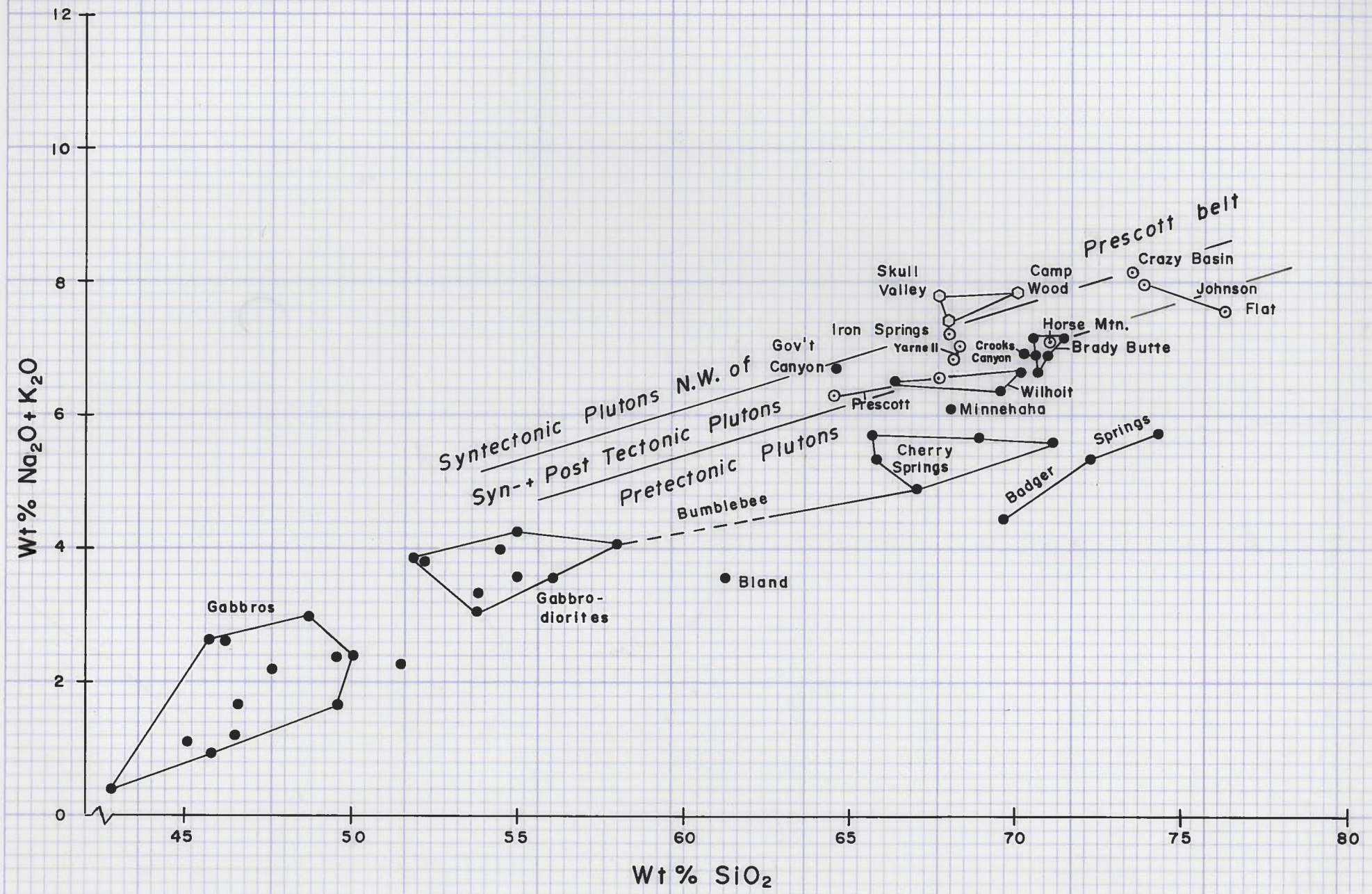
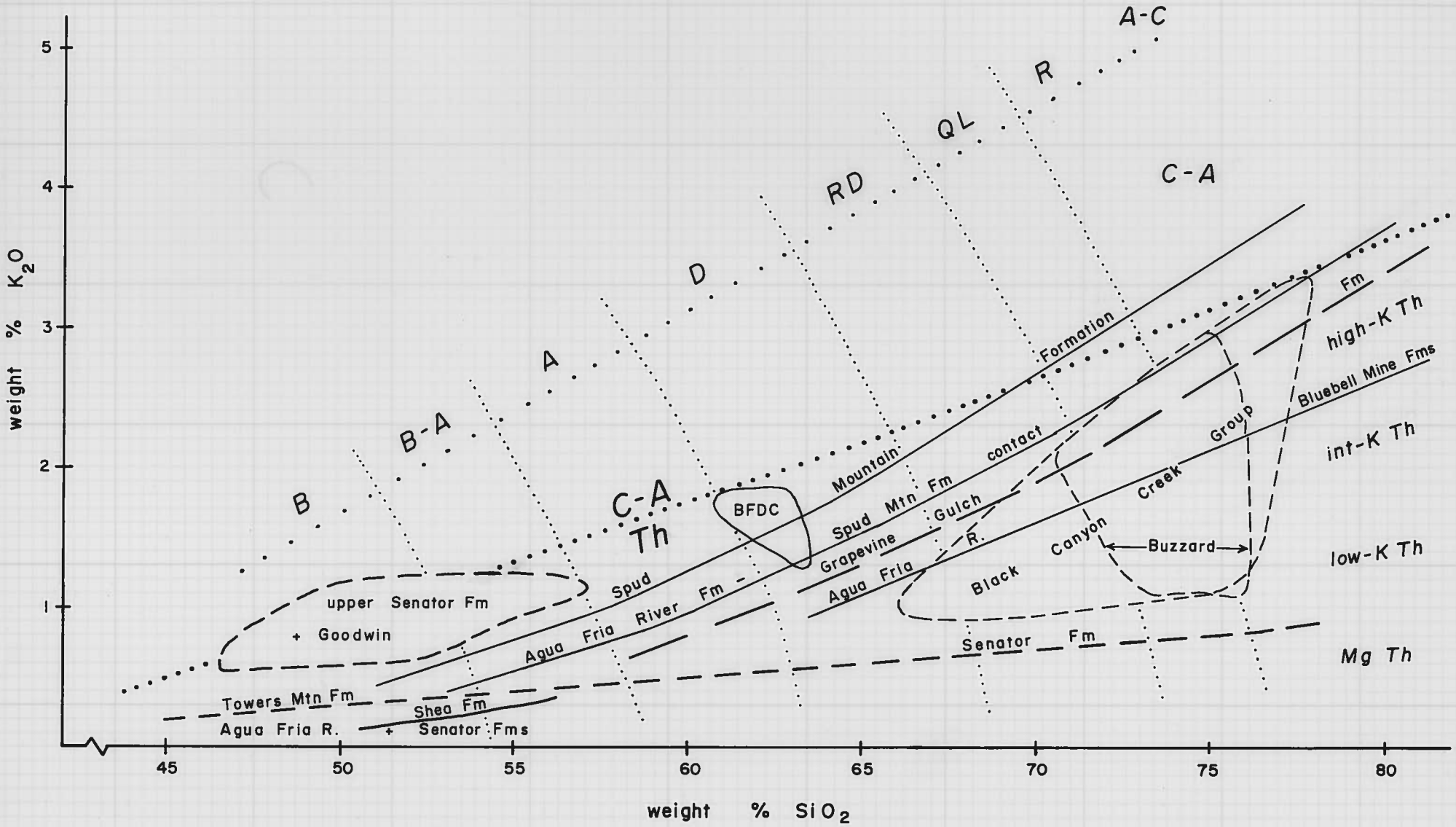

22
20
18
16
14
12
10
8
$SiO_2 / Na_2O + K_2O$
+40
+20
0
-20
-40
-60
-80
Distance (kilometers)
NW
SE


weight % $Na_2O + K_2O$
weight % $SiO_2$
0
2
4
6
8
10
12
45
50
55
60
65
70
75
80
B
B-A
A
D
RD
QL
R
A
A-C
C-A
Th
altered
U. H. Gp
Union Hills
Group
undivided
diorite
Gibson Ck.
diorite - granodiorite
"Spilite - Keratophyre"
altered
bodies
tuffs
in Alder
Group
Union
Hills Group
trend
felsic
ignimbrite -
red granite complexes
(V+SV+P)
undivided
alt.
dikes in
Alder
gabbro
LSC
MC

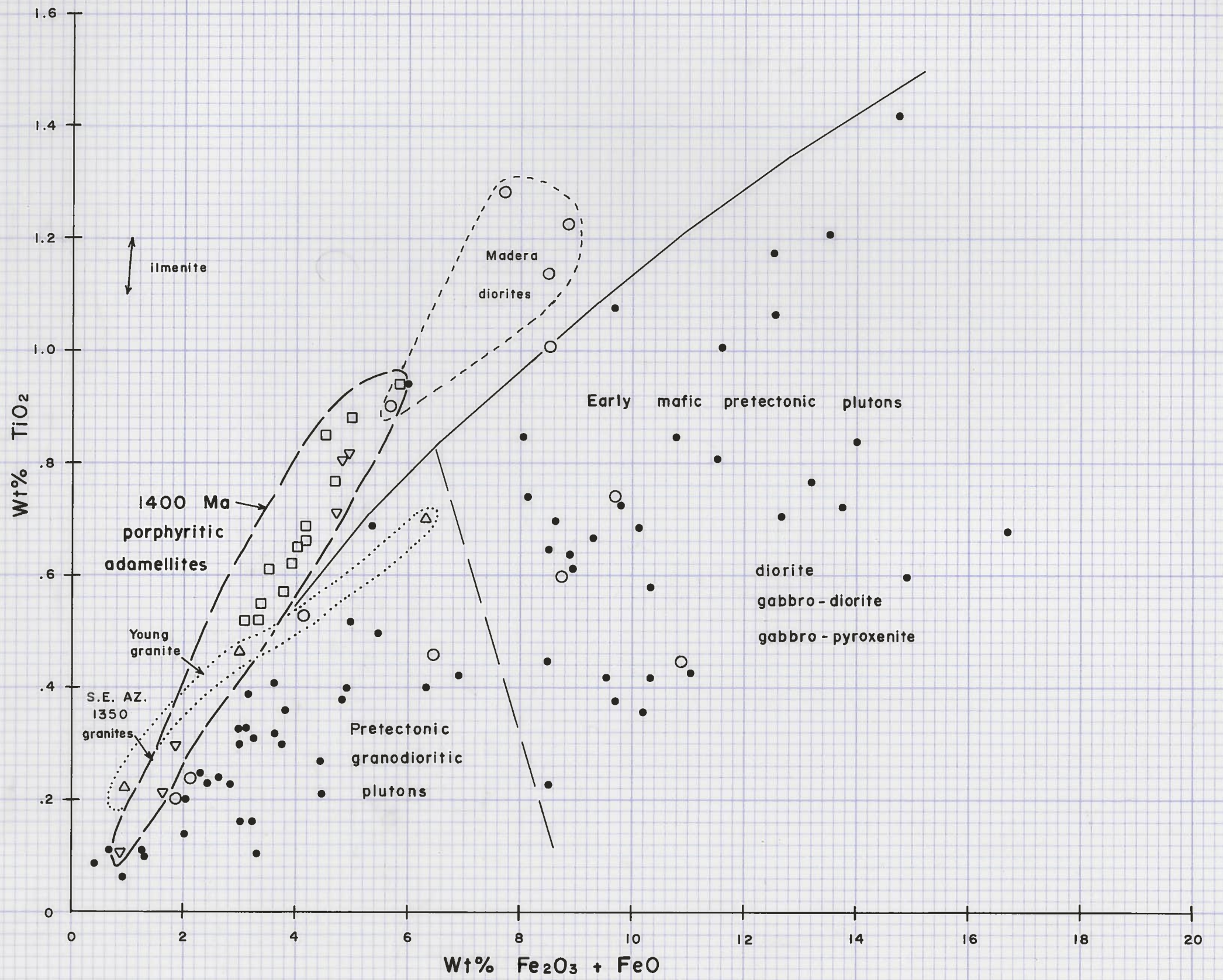

weight % $K_2O$
weight % $SiO_2$
0
1
2
3
4
5
6
7
45
50
55
60
65
70
75
80
B
B-A
A
D
RD
QL
R
A-C
C-A
C-A
Th
New River Mountains
Felsic Complex
(V)
Payson gr
(P+SV)
Red Rock
New River
(P+SV)
Verde River
Batholith
(P+ SV)
Mt Peeley
Haigler
volcanic
conglomerate
Union Hills Group
(felsic)
diorite - granodiorite bodies
diorite
Gibson
Creek
gabbro
alt.
dikes
in
Alder
Union Hills
Group
(mafic)
undivided
"Spilite - Keratophyre" trend
altered
tuffs in
Alder Gp
incl. altered
Gray's Gulch
tuffs

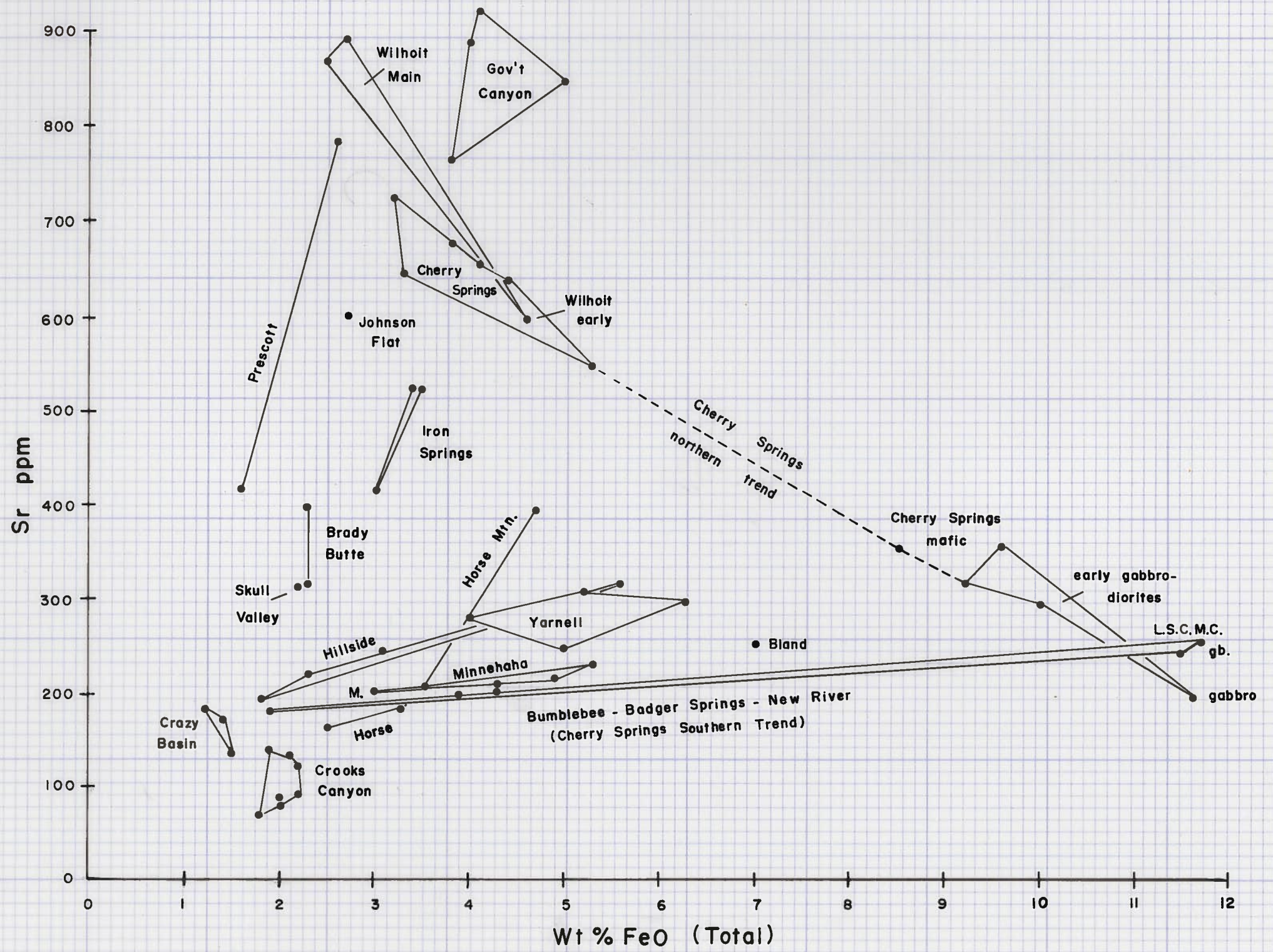

BRADSHAW MTN GROUP
volcanic
mafic plutonic
MAYER GROUP
volcanic
BLACK CANYON CREEK GROUP
volcanic
ASH CREEK GROUP
volcanic +
mafic plutonic
B
B-A
A
D
RD
QL
R
A-C
C-A
C-A
Th
altered Senator Fm
TGF (7)
Fm
Fms
Grapevine
other
Gulch
Mingus
Mtn
Na-enriched (5)
Black Canyon Creek Group
Na-enriched
upper Gaddes
Cleator
andesite (6)
Senator Fm
altered
Grapevine + diorites
Senator + Goodwin (1)
Shea
Agua Fria (3)
+ Bluebell
Senator Fm (1)
Groom
Creek
(1)
hi Th
Spud Mountain
Formation (4)
int Th
low Th
Mg Th
Buzzard
Group (5)
Black Canyon Creek
Agua Fria
+ Bluebell
(3)
(1)
Senator Fm
weight % $K_2O + Na_2O$
weight % $SiO_2$
0
2
4
6
8
10
45
50
55
60
65
70
75
80

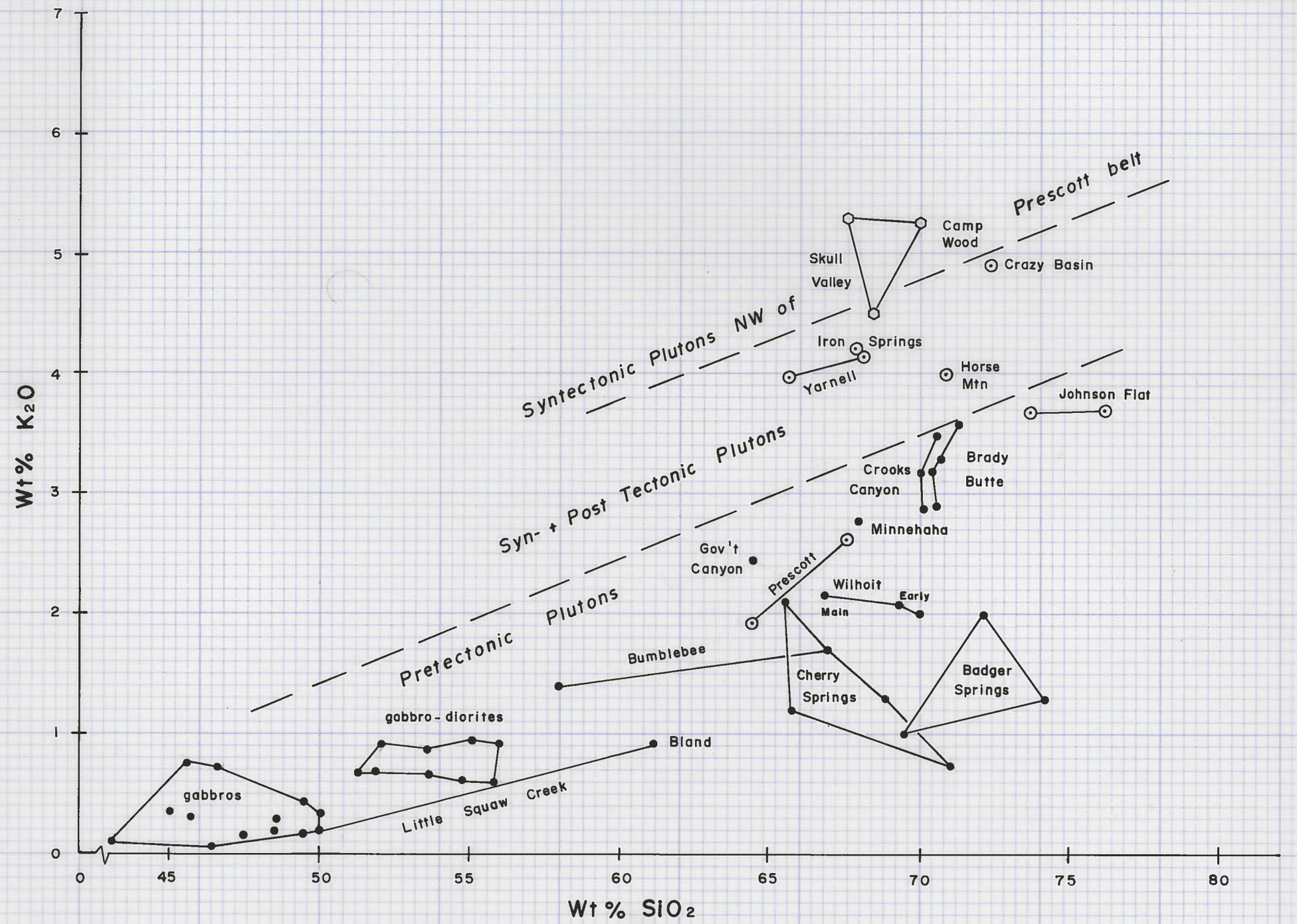

Wt % $Na_2O + K_2O$
Wt % $SiO_2$
0
2
4
6
8
10
12
45
50
55
60
65
70
75
80
Gabbros
Gabbro-diorites
Bland
Bumblebee
Cherry Springs
Badger
Springs
Prescott
Minnehaha
Wilhoit
Gov't Canyon
Iron Springs
Yarnell
Crooks Canyon
Skull Valley
Camp Wood
Horse Mtn.
Brady Butte
Crazy Basin
Johnson Flat
Prescott belt
Syntectonic Plutons N.W. of
Syn- + Post Tectonic Plutons
Pretectonic Plutons



weight % $K_2O$
weight % $SiO_2$
5
4
3
2
1
45
50
55
60
65
70
75
80
A-C
R
QL
RD
D
A
B-A
B
C-A
C-A
Th
BFDC
Mountain
Formation
Spud Mtn Fm
contact
Grapevine
Gulch
Agua Fria
R.
Black
Canyon
Creek
Group
Buzzard
Bluebell Mine Fms
Fm
high-K Th
int-K Th
low-K Th
Mg Th
Spud
Agua Fria River Fm
upper Senator Fm
+ Goodwin
Senator Fm
Towers Mtn Fm
Shea Fm
Agua Fria R.
+ Senator Fms


1.6
1.4
1.2
1.0
.8
.6
.4
.2
0
Wt% TiO2
ilmenite
Madera
diorites
Early mafic pretectonic plutons
1400 Ma
porphyritic
adamellites
Young
granite
S.E. AZ.
1350
granites
Pretectonic
granodioritic
plutons
diorite
gabbro - diorite
gabbro - pyroxenite
0
2
4
6
8
10
12
14
16
18
20
Wt% Fe2O3 + FeO


Sr ppm
900
800
700
600
500
400
300
200
100
0
Wt % FeO (Total)
0
1
2
3
4
5
6
7
8
9
10
11
12
Wilhoit
Main
Gov't
Canyon
Cherry
Springs
Wilhoit
early
Johnson
Flat
Prescott
Iron
Springs
Cherry Springs
northern trend
Brady
Butte
Horse Mtn.
Cherry Springs
mafic
early gabbro-
diorites
Skull
Valley
Yarnell
Hillside
Bland
L.S.C.M.C.
gb.
Minnehaha
M.
gabbro
Bumblebee - Badger Springs - New River
(Cherry Springs Southern Trend)
Crazy
Basin
Horse
Crooks
Canyon


Wt% K2O
Wt% SiO2
0
1
2
3
4
5
6
7
0
45
50
55
60
65
70
75
80
Prescott belt
Syntectonic Plutons NW of
Syn- + Post Tectonic Plutons
Pretectonic Plutons
Camp Wood
Skull Valley
Crazy Basin
Iron Springs
Yarnell
Horse Mtn
Johnson Flat
Brady Butte
Crooks Canyon
Minnehaha
Gov't Canyon
Prescott
Wilhoit
Early
Main
Bumblebee
Cherry Springs
Badger Springs
gabbro-diorites
Bland
gabbros
Little Squaw Creek