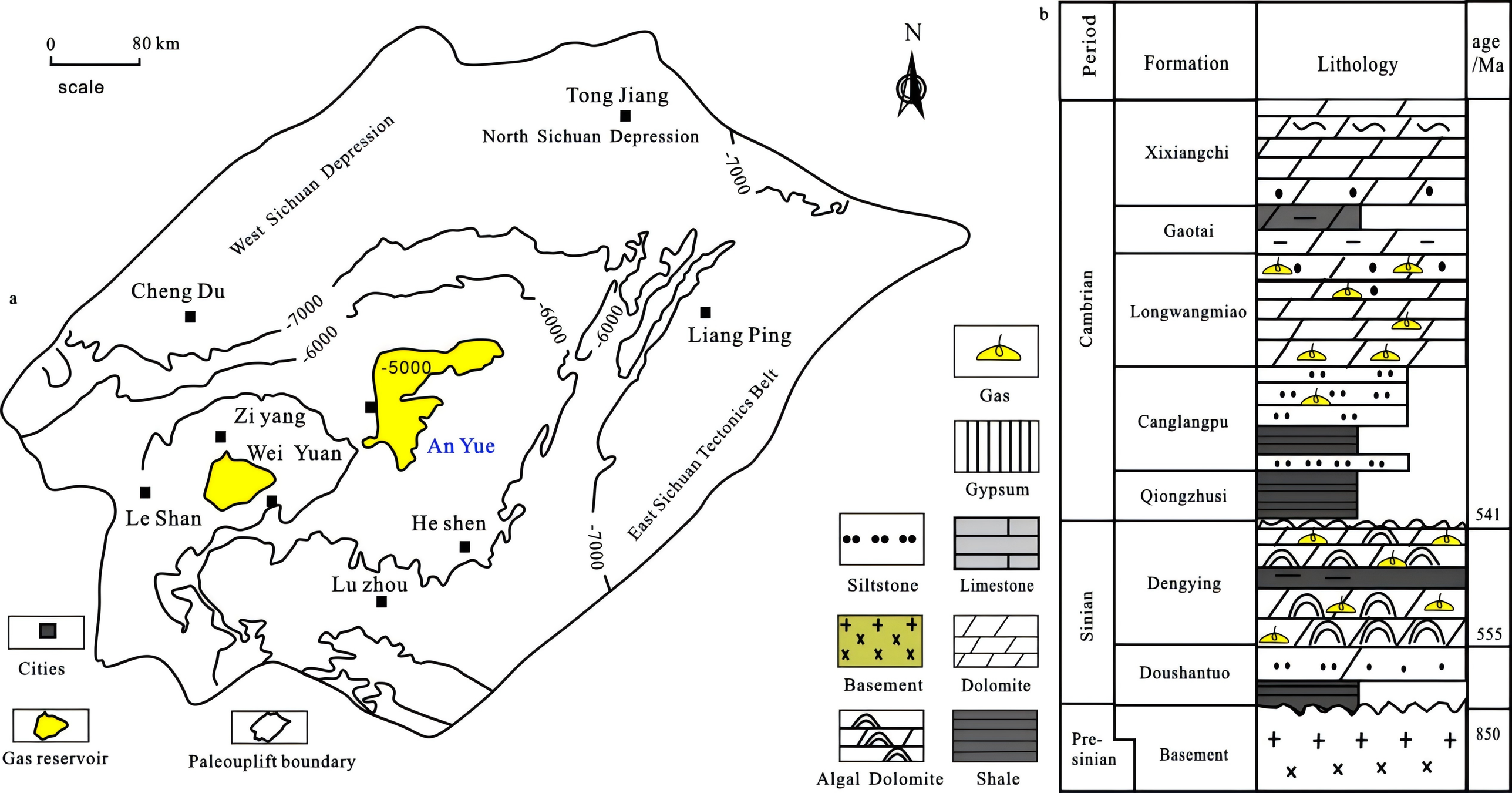
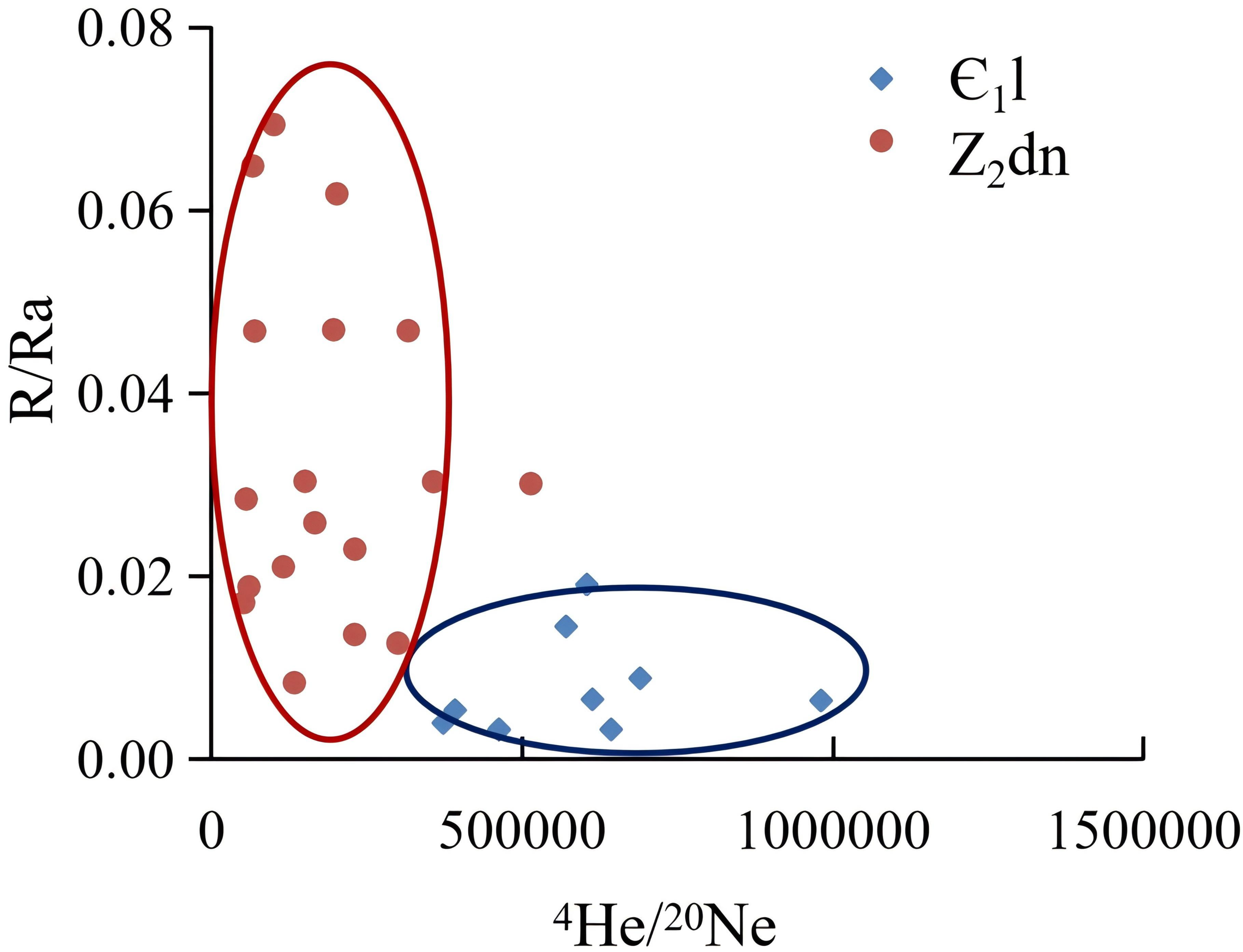
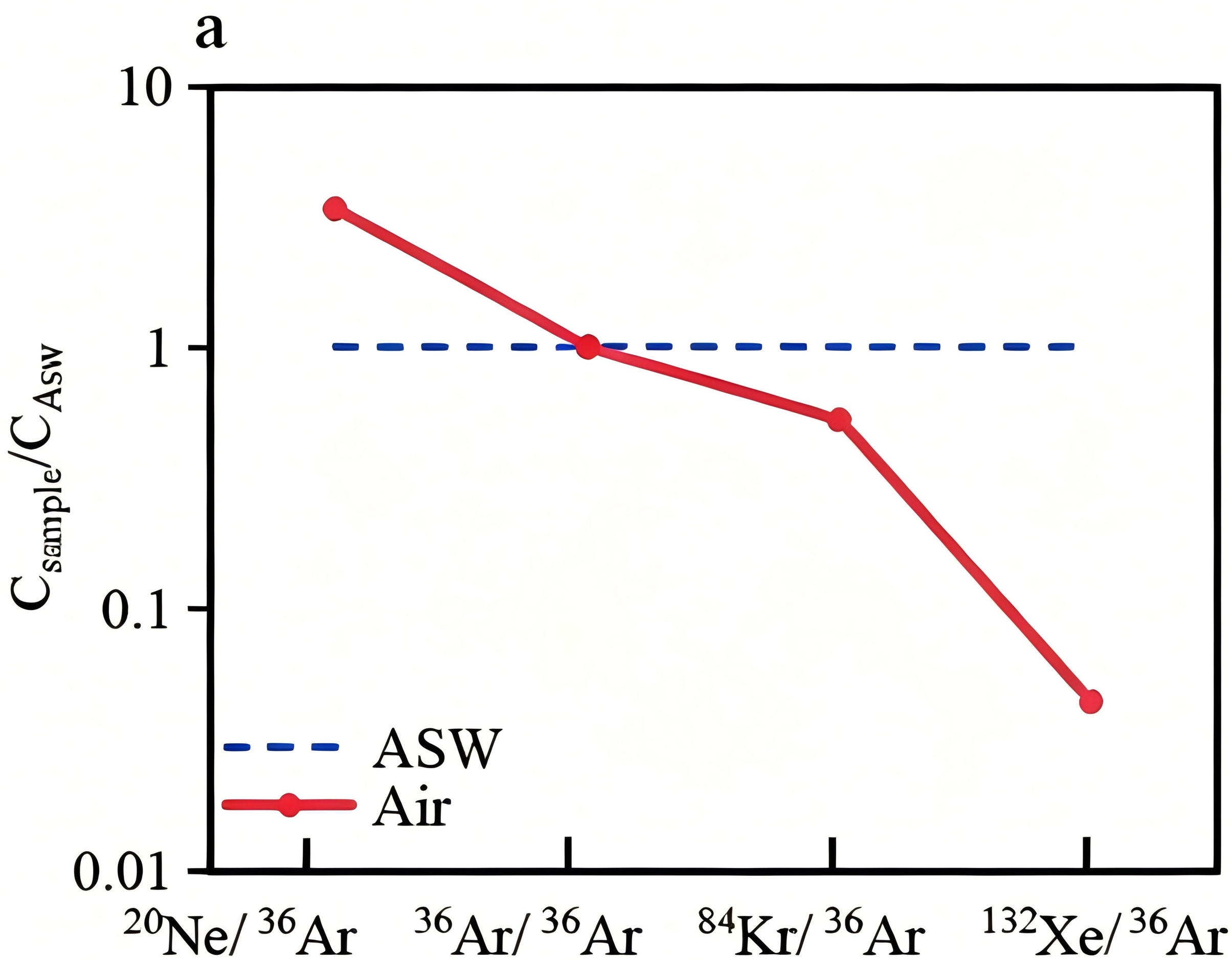
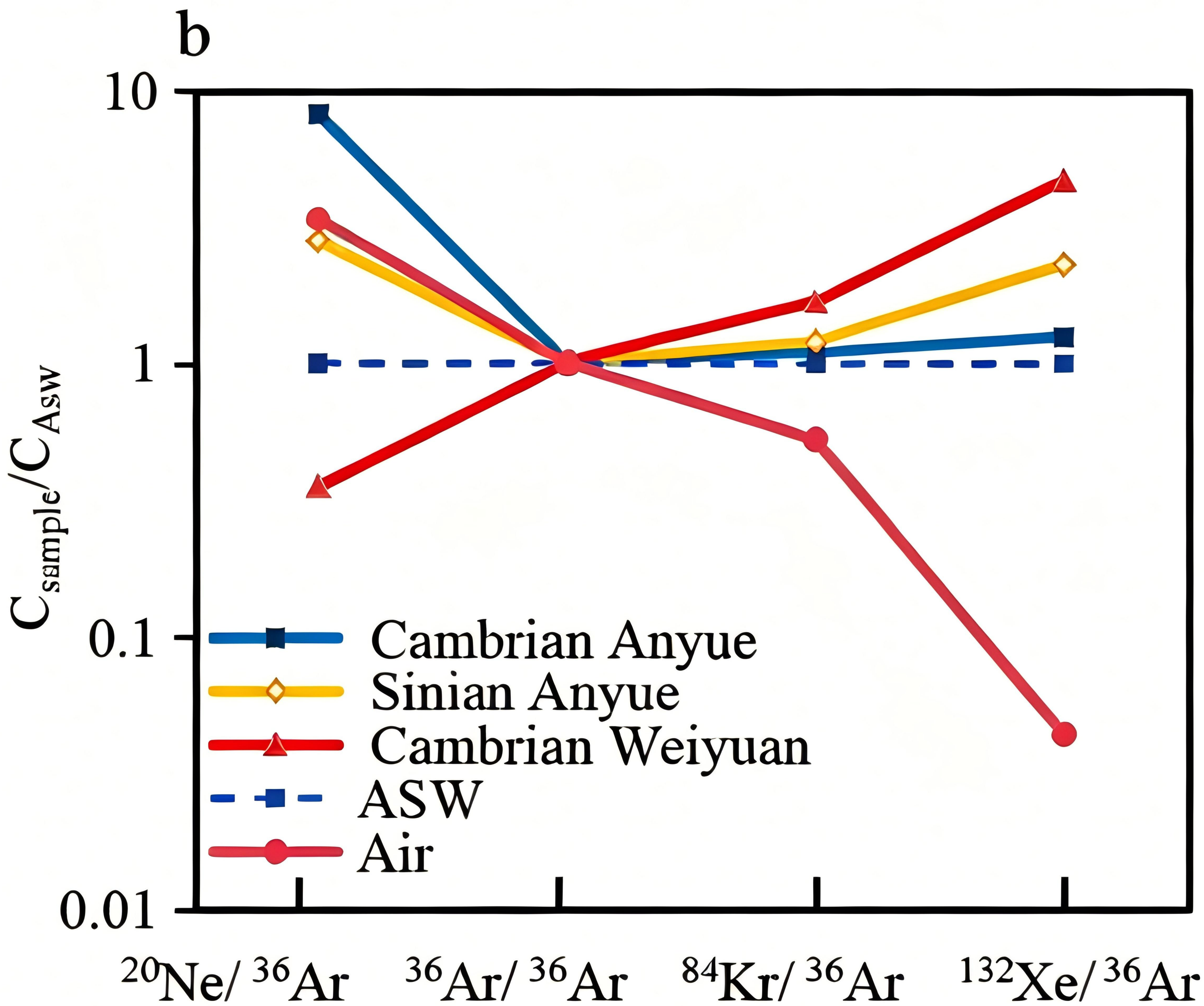
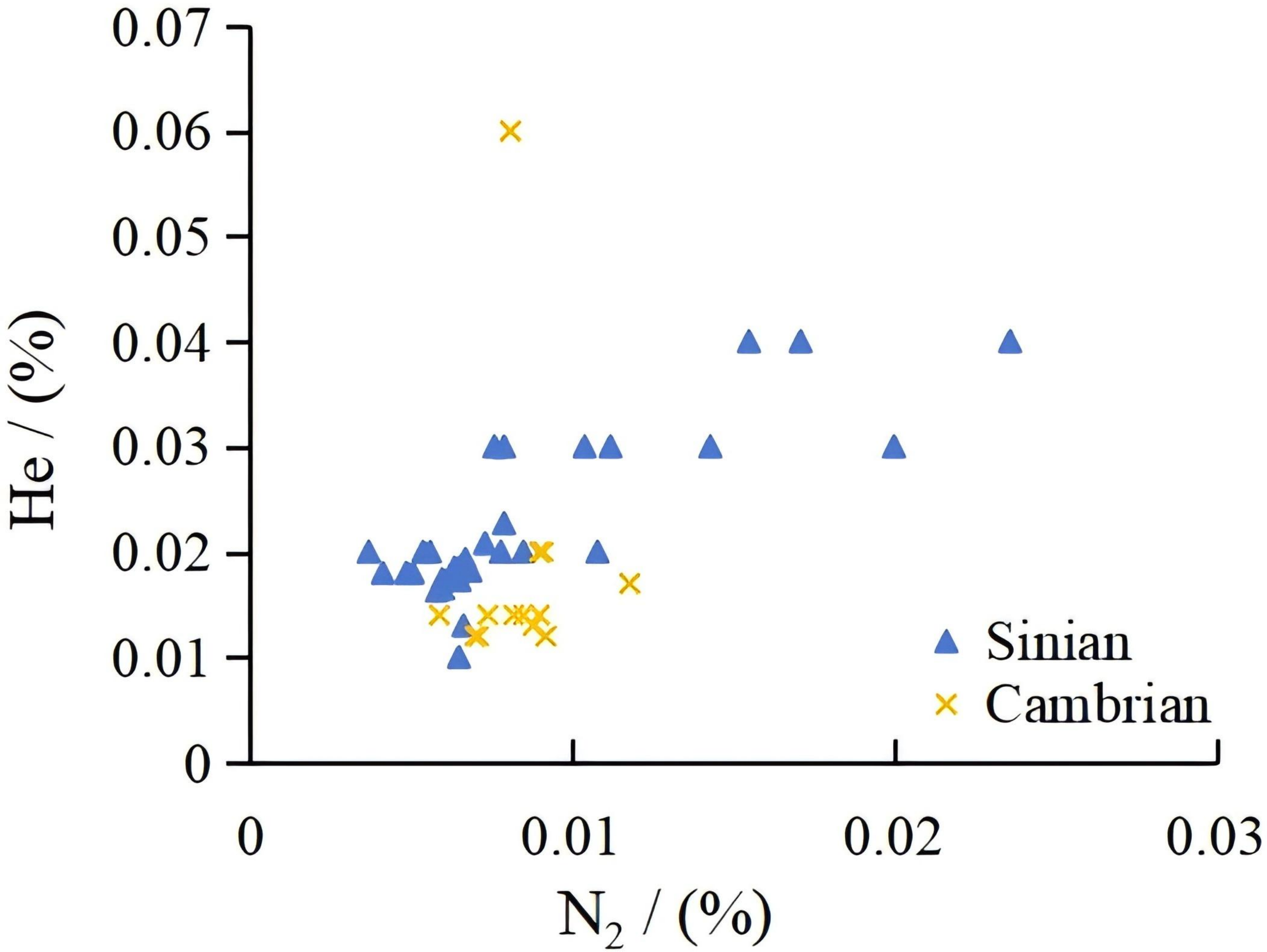
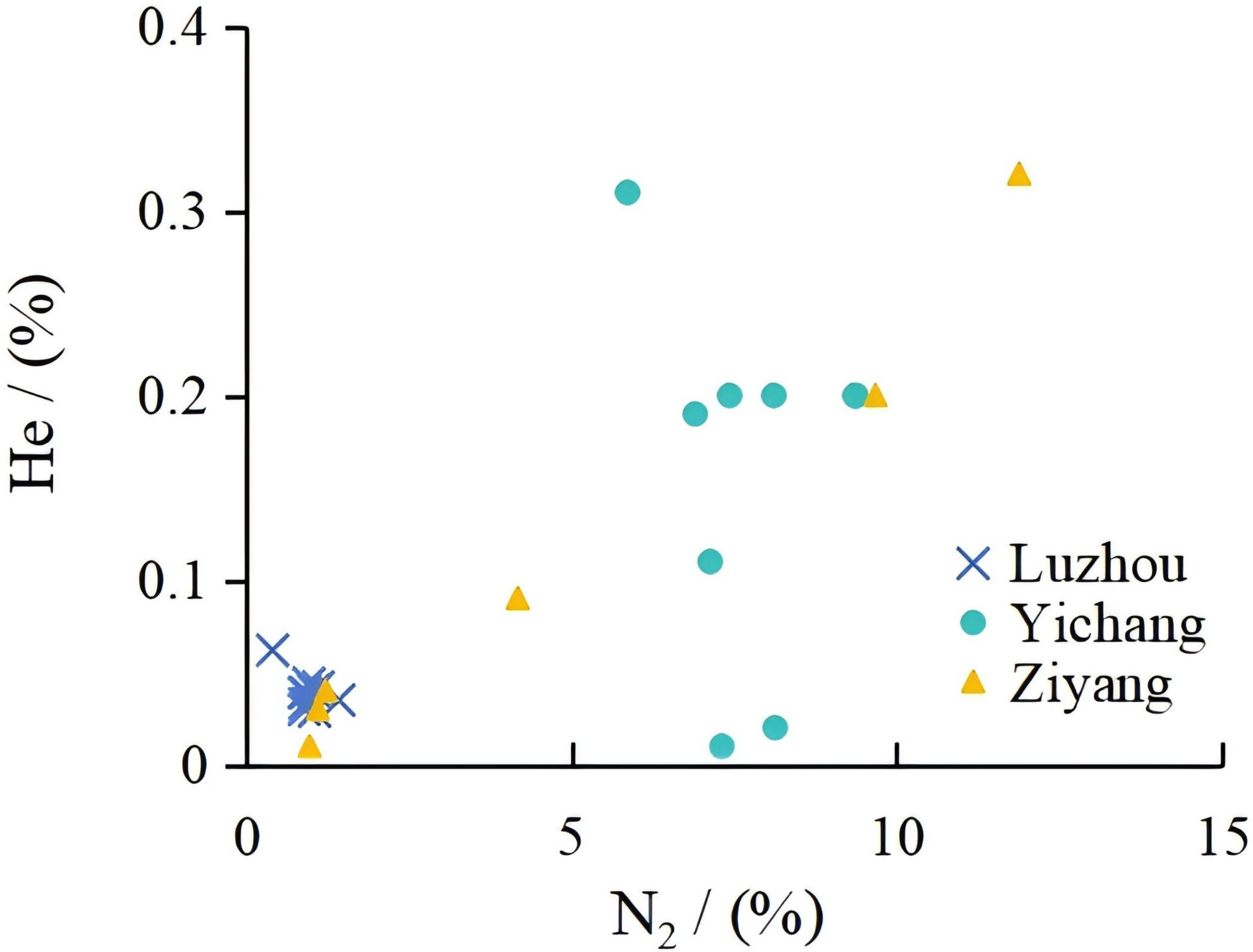

a
0
80 km
scale
N
Tong Jiang
North Sichuan Depression
West Sichuan Depression
Cheng Du
-7000
-6000
-5000
-6000
-6000
Liang Ping
Zi yang
Wei Yuan
An Yue
Le Shan
He shen
Lu zhou
-7000
East Sichuan Tectonics Belt
Cities
Gas reservoir
Paleouplift boundary
Gas
Gypsum
Siltstone
Limestone
Basement
Dolomite
Algal Dolomite
Shale
b
Period
Formation
Lithology
age /Ma
Cambrian
Xixiangchi
Gaotai
Longwangmiao
Canglangpu
Qiongzhusi
541
Sinian
Dengying
555
Doushantuo
Pre-sinian
Basement
850

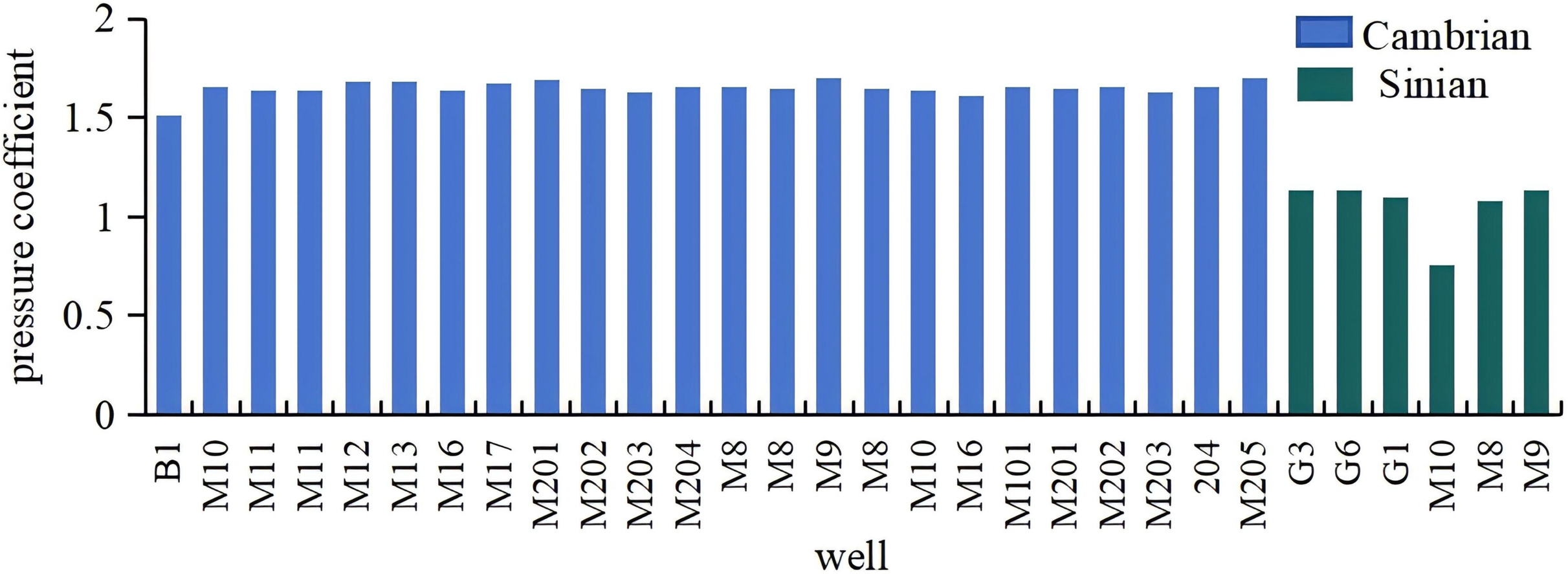

0.08
0.06
0.04
0.02
0.00
R/Ra
0
500000
1000000
1500000
$^{4}He/^{20}Ne$
$\epsilon_1 l$
$Z_2 dn$

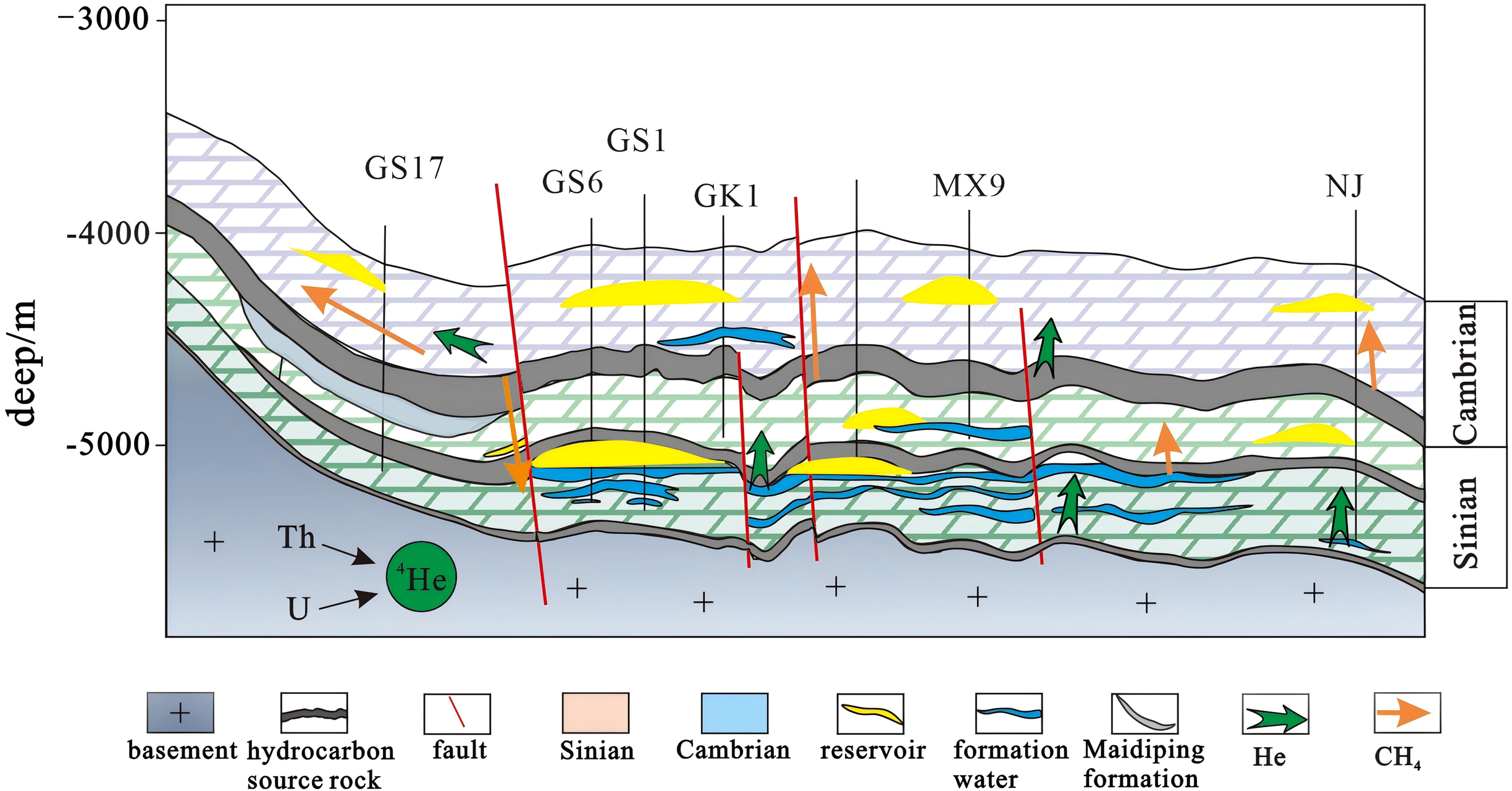

a
10
1
0.1
0.01
C_{sample}/C_{ASW}
ASW
Air
$^{20}Ne/^{36}Ar$
$^{36}Ar/^{36}Ar$
$^{84}Kr/^{36}Ar$
$^{132}Xe/^{36}Ar$


b
10
1
0.1
0.01
C_{sample}/C_{ASW}
Cambrian Anyue
Sinian Anyue
Cambrian Weiyuan
ASW
Air
$^{20}Ne/^{36}Ar$
$^{36}Ar/^{36}Ar$
$^{84}Kr/^{36}Ar$
$^{132}Xe/^{36}Ar$


0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
He / (%)
0
0.01
0.02
0.03
N2 / (%)
Sinian
Cambrian


0.4
0.3
0.2
0.1
0
He / (%)
0
5
10
15
N2 / (%)
Luzhou
Yichang
Ziyang


Cambrian
Sinian
pressure coefficient
2
1.5
1
0.5
0
B1
M10
M11
M11
M12
M13
M16
M17
M201
M202
M203
M204
M8
M8
M9
M8
M10
M16
M101
M201
M202
M203
204
M205
G3
G6
G1
M10
M8
M9
well


-3000
-4000
-5000
deep/m
GS17
GS6
GS1
GK1
MX9
NJ
Cambrian
Sinian
Th
U
^{4}He
basement
hydrocarbon source rock
fault
Sinian
Cambrian
reservoir
formation water
Maidiping formation
He
CH_4