Pebble Project Geochemical Characterization

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Anchorage

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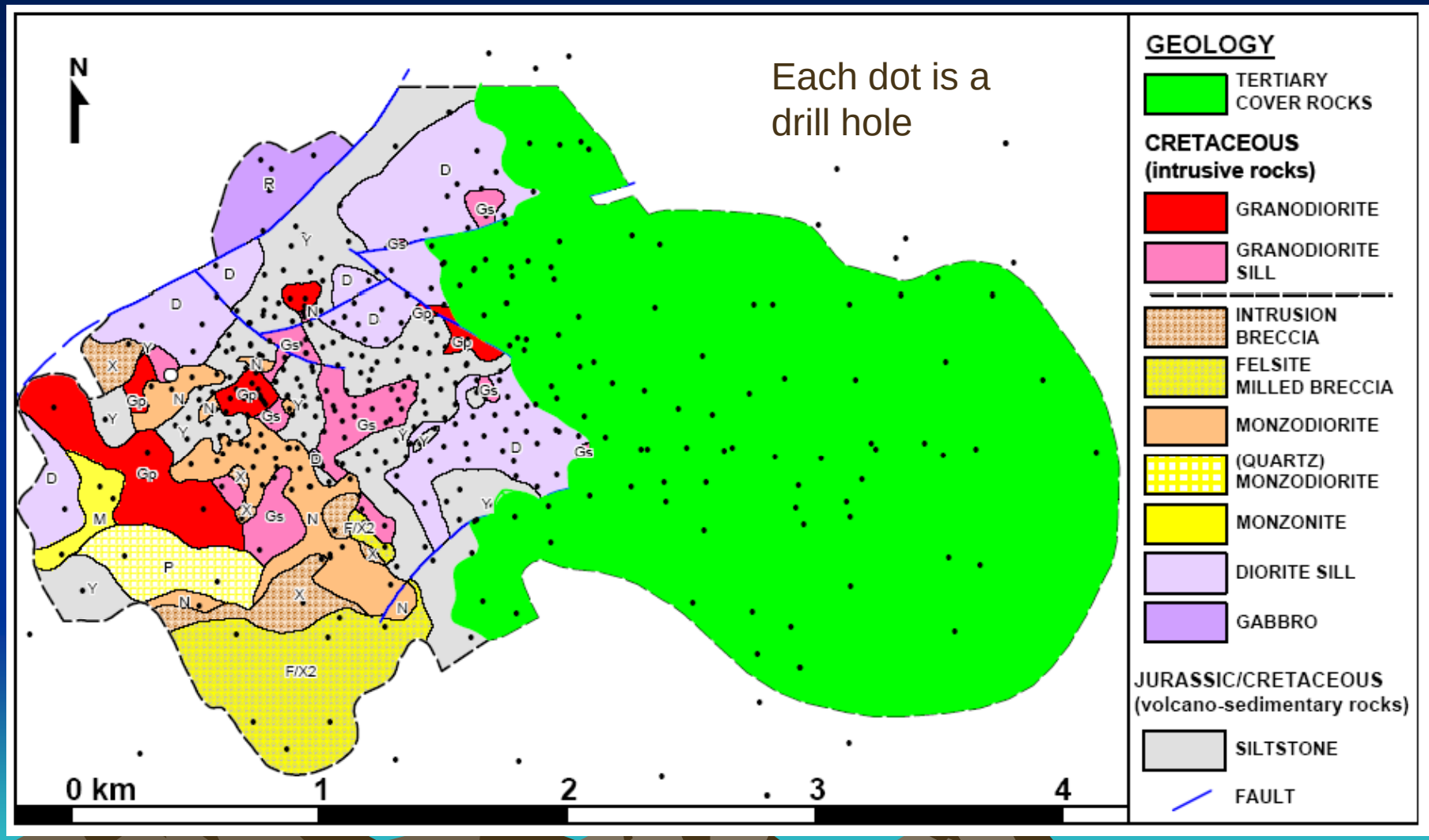
Geology Map



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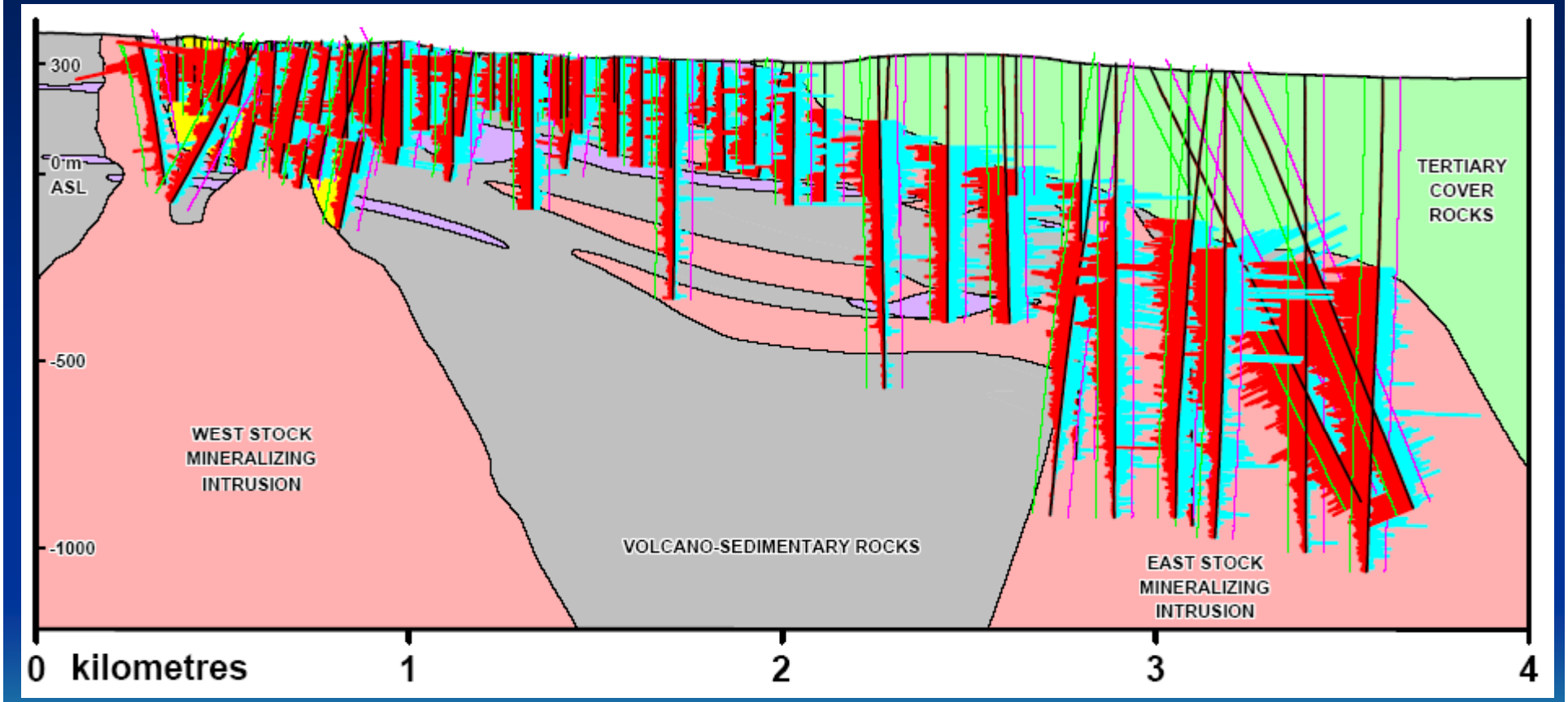
Geological Cross-Section



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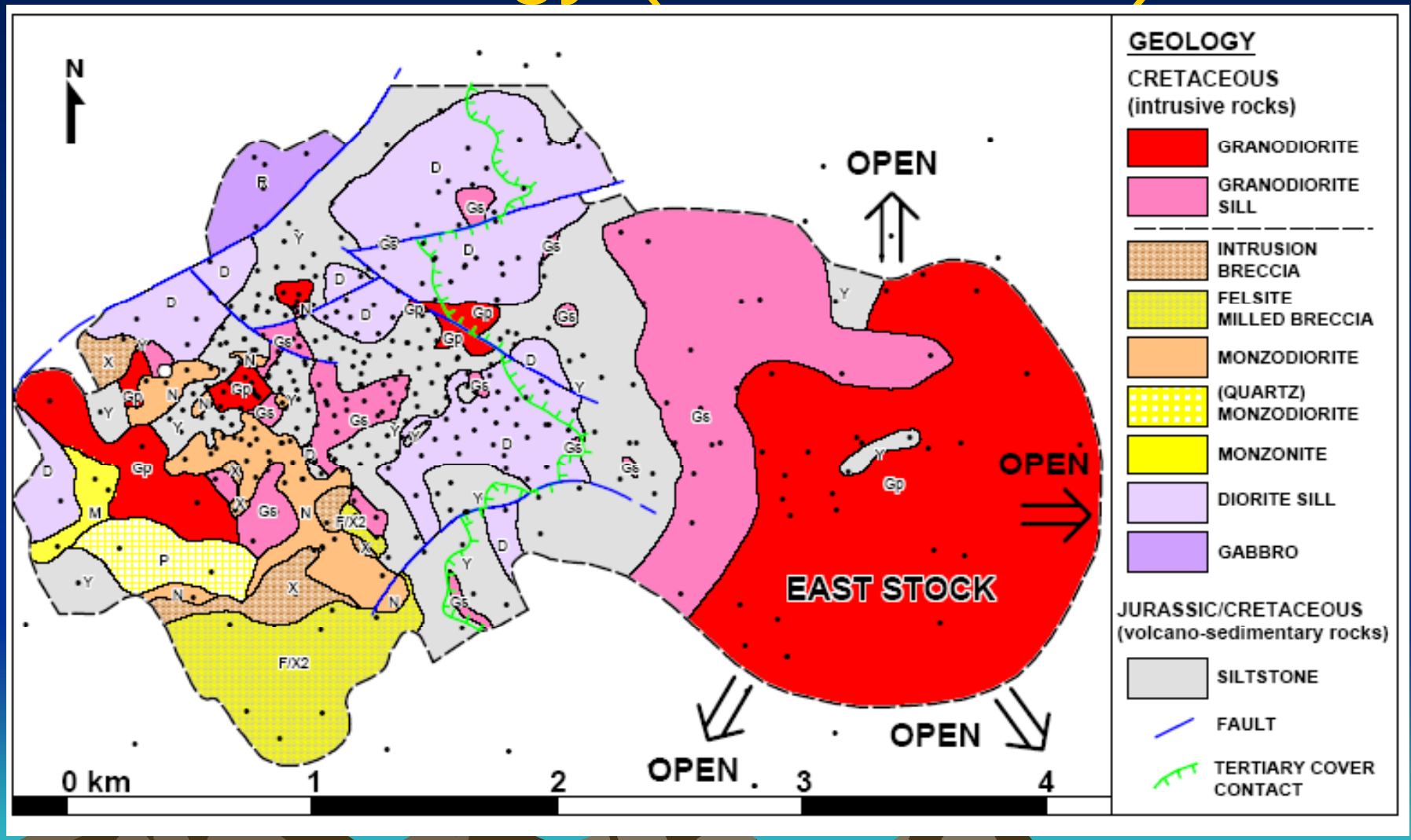
Geology (Cretaceous)



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2007 Program Objectives

- Continue characterization of West Zone.
- Characterization of East Zone.
- Evaluate leaching under non-acidic conditions from Tertiary rocks
- Characterization of tailings produced in 2007 from East Zone.

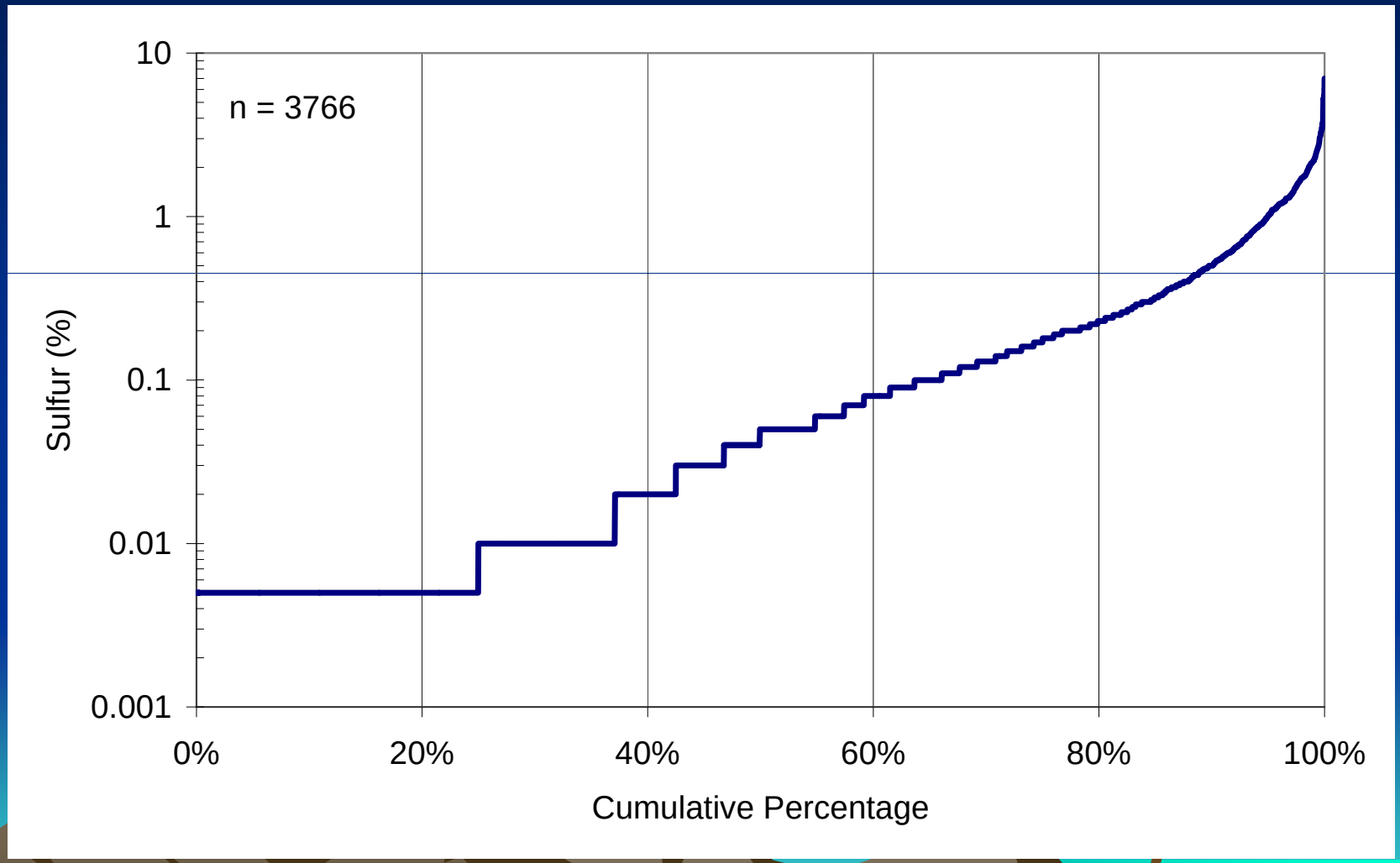
West Zone in 2007

- In-fill drilling for exploration.
- Ongoing rock humidity cells (up to 2.5 years).
  - Two Cretaceous
  - Seven Tertiary
- Four ongoing rock subaqueous columns (2 years).
- Two ongoing low-sulfide tailings columns and two humidity cells (2.5 years).

East Zone
Sample selection – Static Testwork

- Criteria designed to ensure samples covered range in:
  - Rock type
  - Spatial variability
  - Geochemical characteristics (sulfur, metal content).
  - Calcium used as a surrogate for neutralization potential.
- Cretaceous (200 samples)
  - 180 samples below copper equivalent of 0.6%.
  - 20 samples above copper equivalent of 0.6%.
- Tertiary (200 samples) – bimodal sulfur distribution
  - 180 representing typical sulfur content.
  - 20 representing higher sulfur content (>1%).

Sulfur in East Zone Tertiary Rocks



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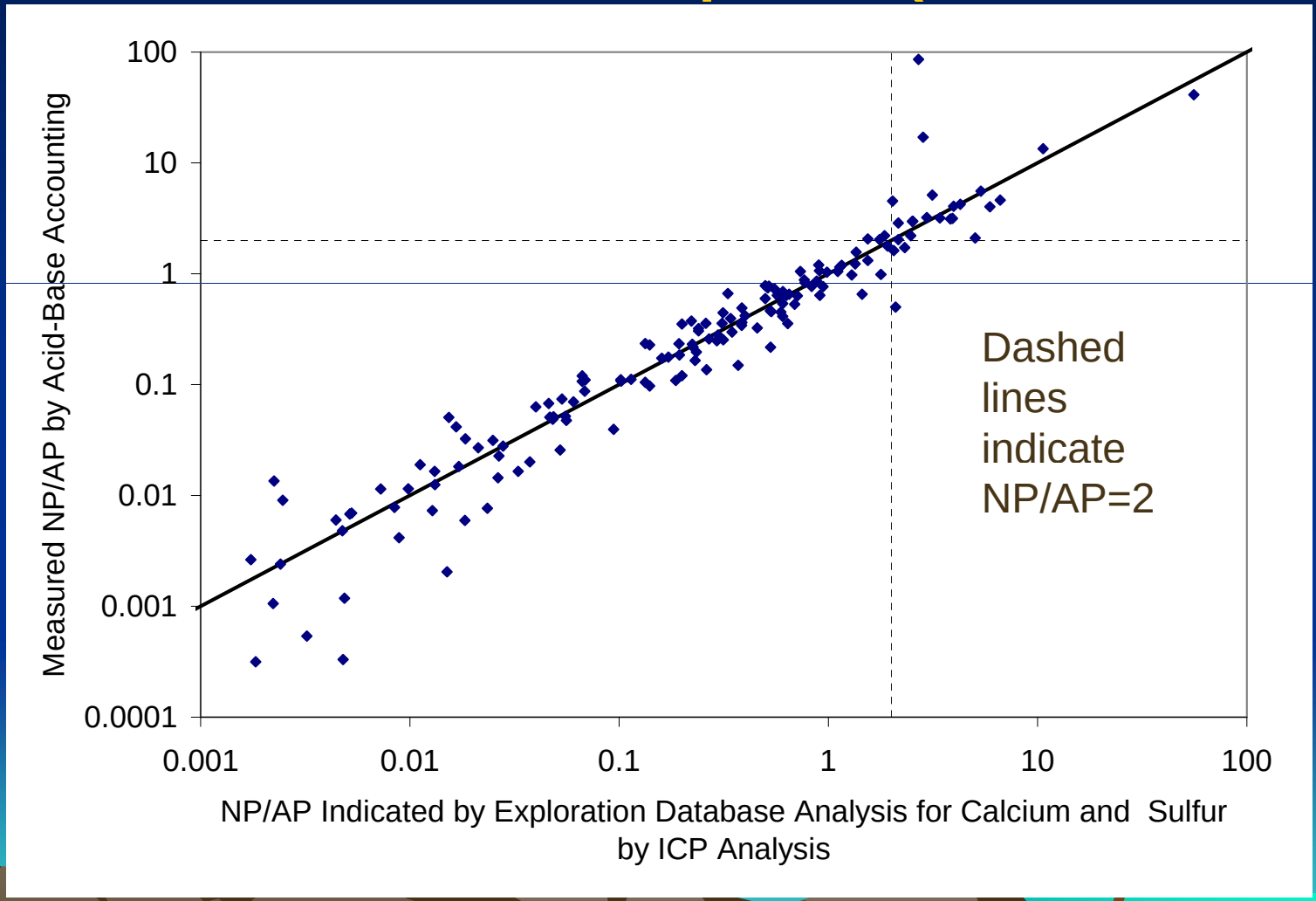
East Zone
Sample selection – Kinetic Testwork

- Humidity Cells
  - Subset of samples studied in static testwork program
    - 12 Cretaceous
    - 11 Tertiary
  - Samples selected by:
    - Ranking dataset according to sulfide-S content
    - For each lithology, selected samples with (i) low, (ii) average, (iii) high, and (iv) highest sulfide-S content

Confirmation of Analytical Surrogates Used to Select Samples (Cretaceous)



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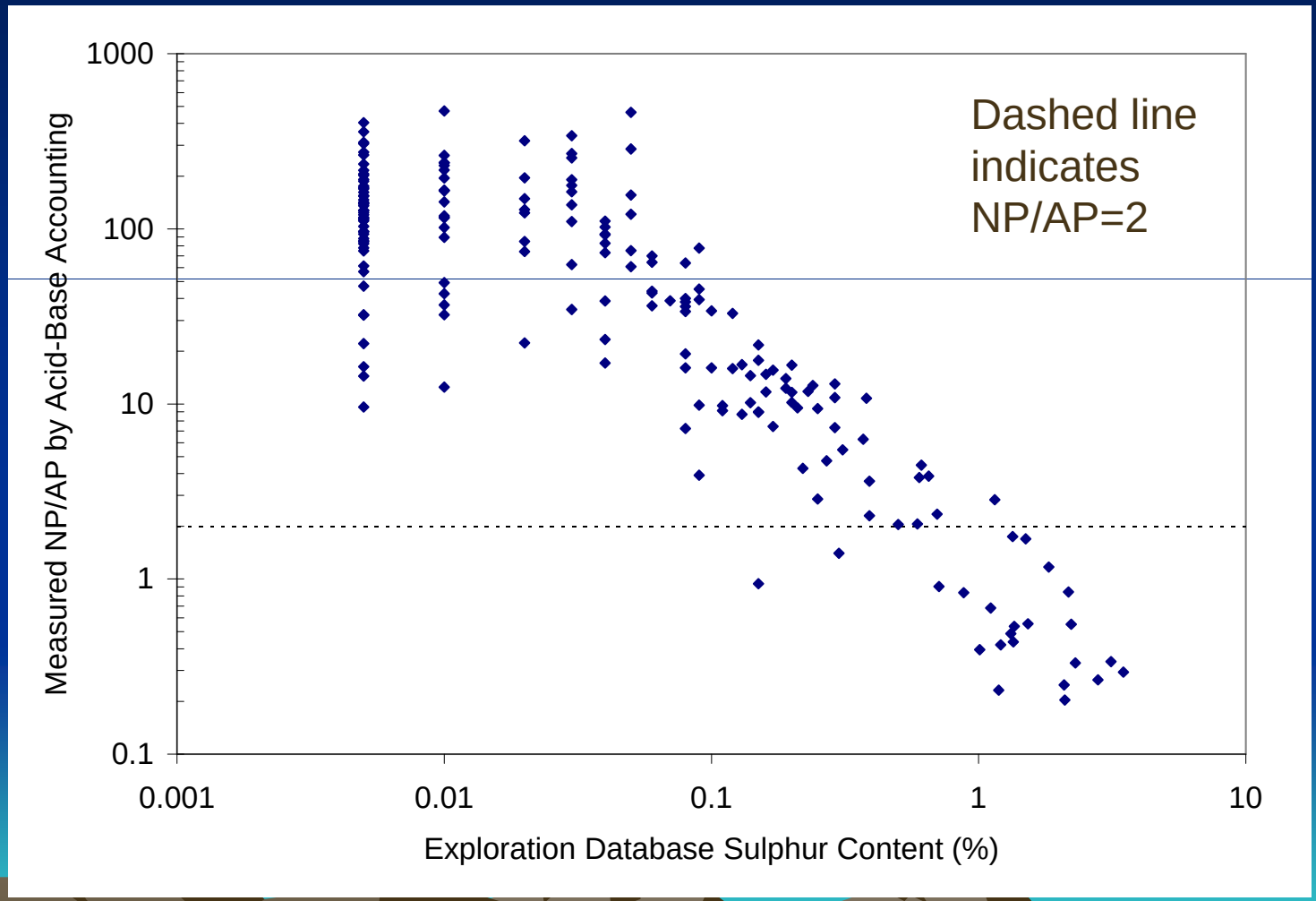
Confirmation of Analytical Surrogates Used to Select Samples (Tertiary)



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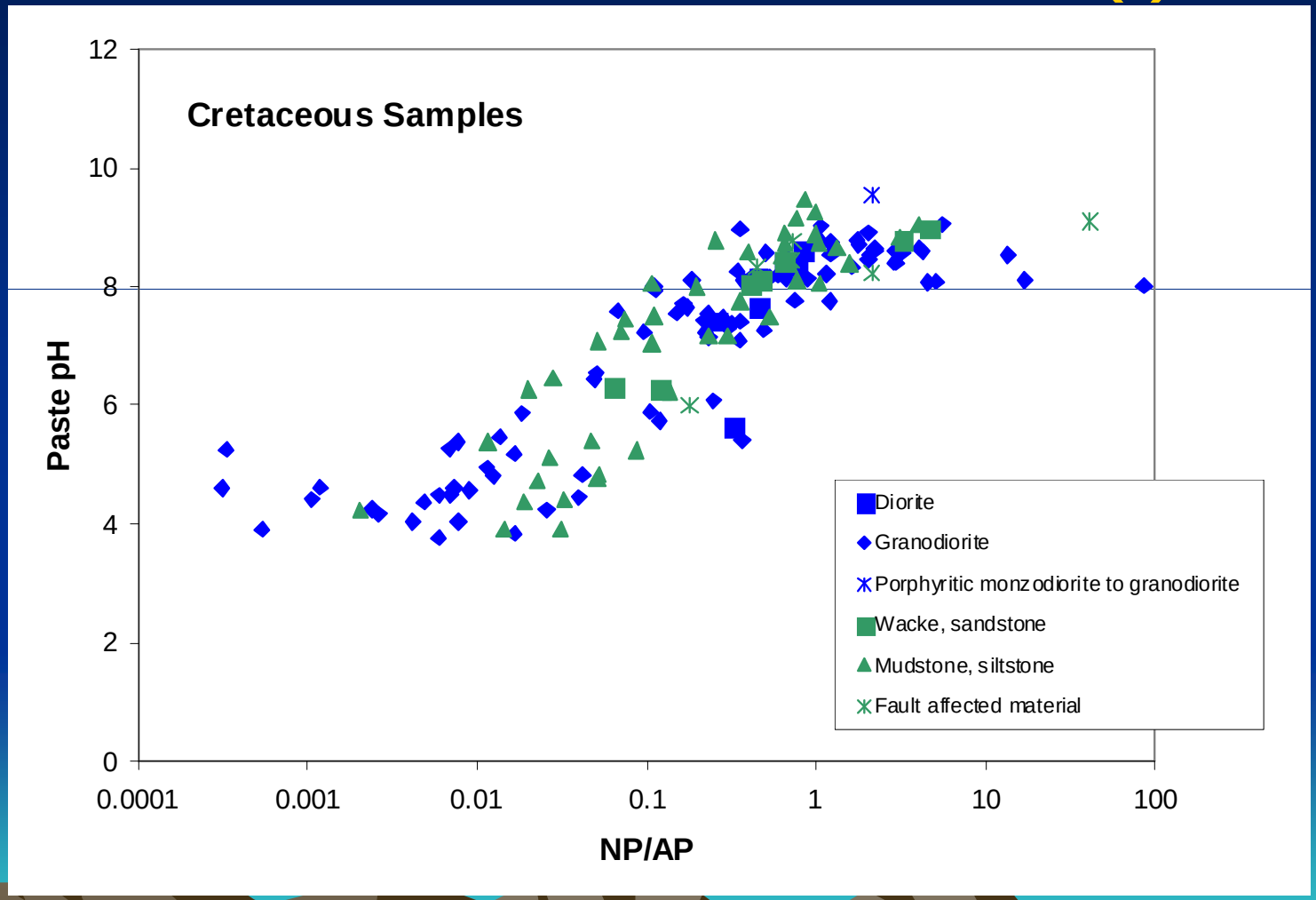
Acid-Base Accounting Results: East Zone Cretaceous (I)



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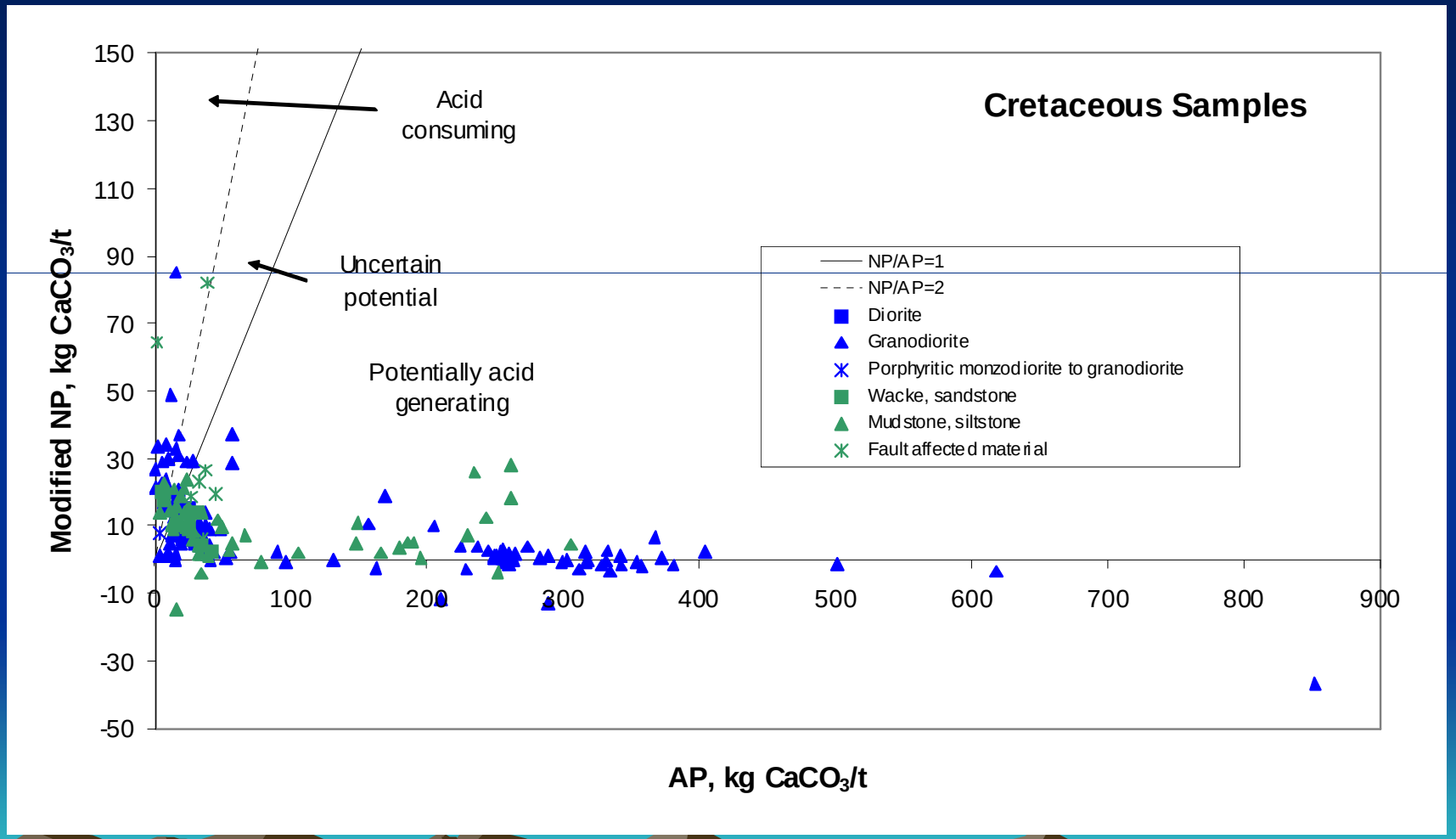
Acid-Base Accounting Results: East Zone Cretaceous (II)



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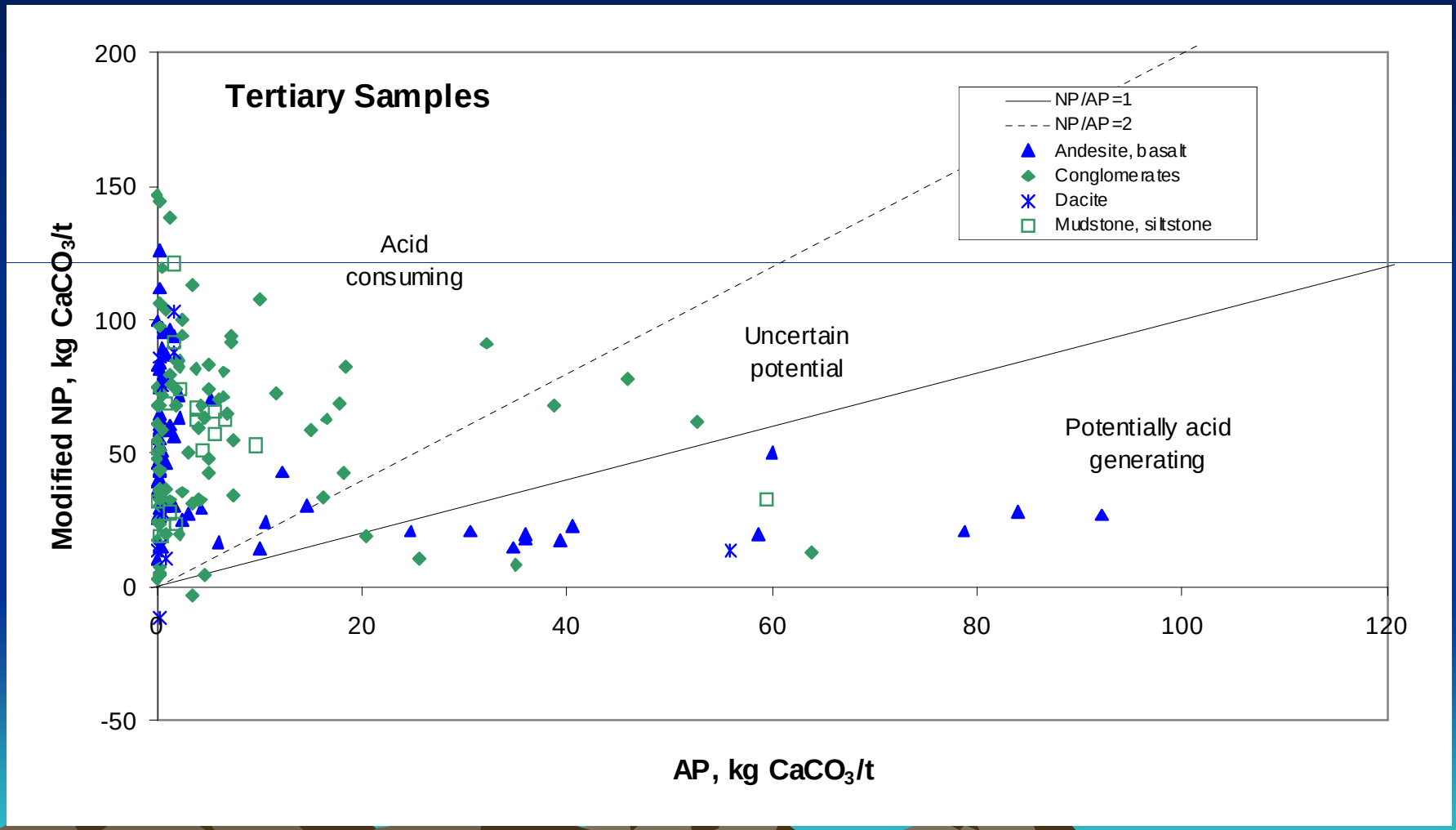
Acid-Base Accounting Results: East Zone Tertiary



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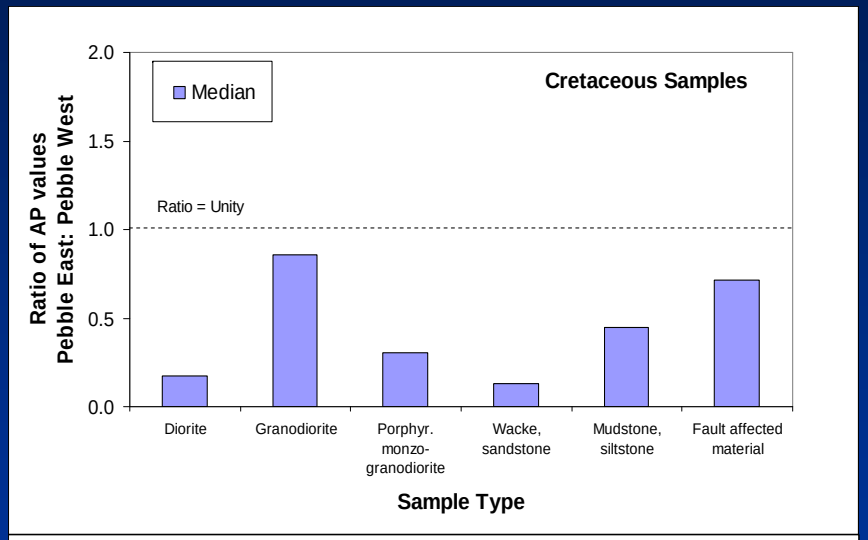
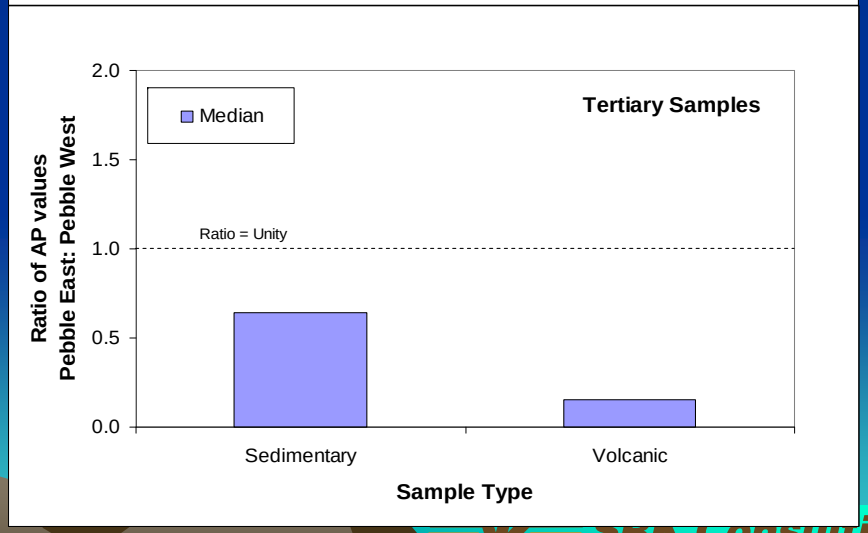
Comparison of AP results for East & West Zones

- East Zone samples yielded lower AP values than West Zone





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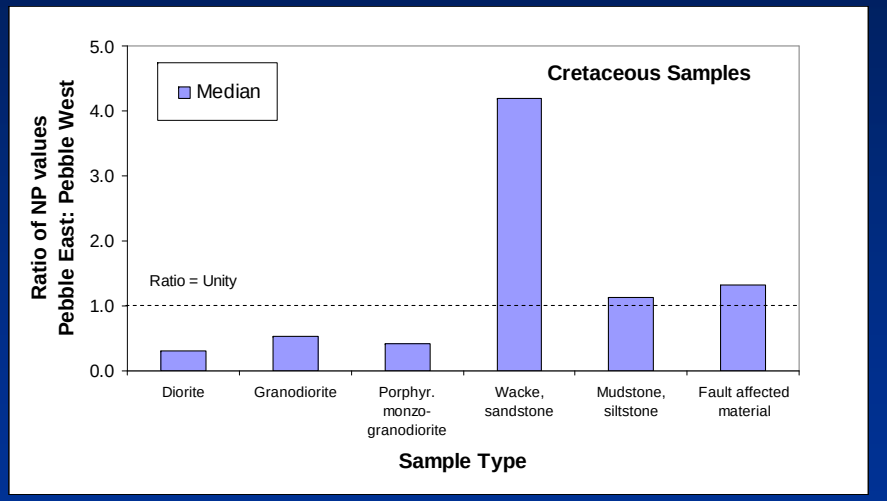
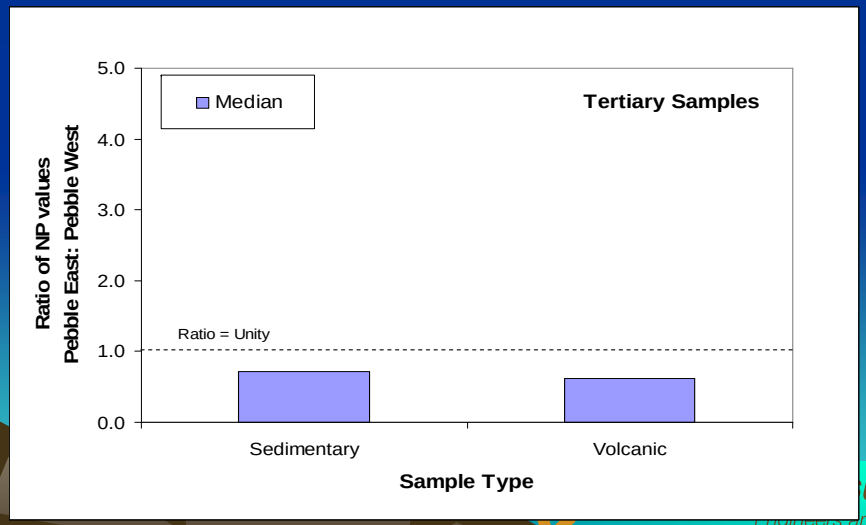
Comparison of NP Results for East & West Zones

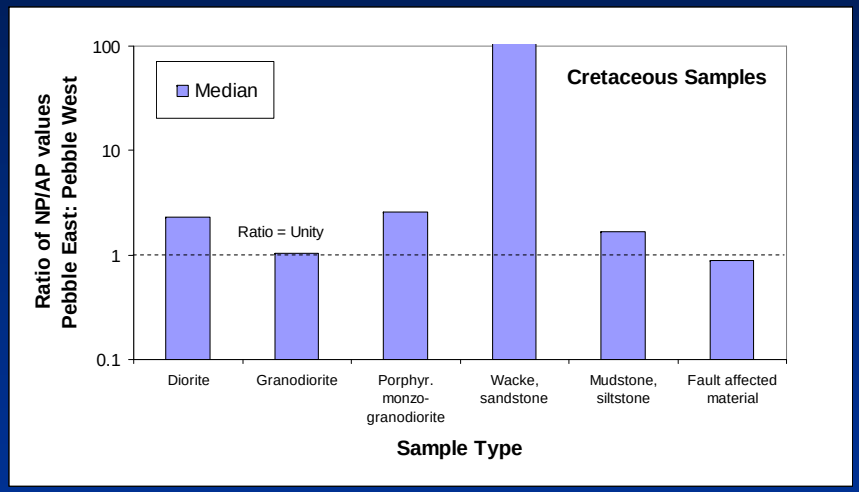
- East Zone samples either equivalent or lower than West Zone
- Some exceptions in Cretaceous samples:
  - Higher median values wacke/sandstone

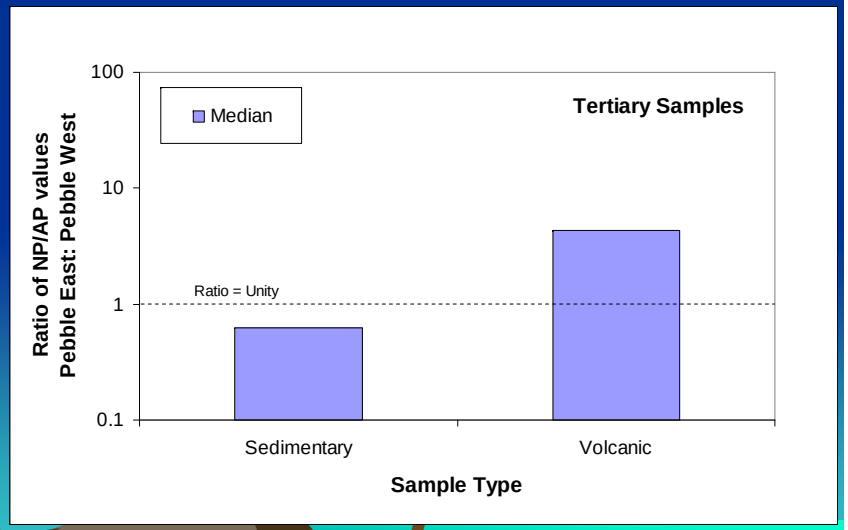




Comparison of NP/AP Results For Pebble East & West Zone

- Overall conclusions same for East and West:
  - Cretaceous mineralized rocks are mainly PAG.
  - Tertiary rocks are mainly non-PAG.
- Median NP/AP for East Zone often greater than West Zone.





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Field Weathering Tests

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Field Weathering Tests

Barrel #	Age	Zone	Rock Types
1	Tertiary	East	Andesite/Basalt
2 & 3 – Duplicates	Tertiary	West	Andesite/Basalt
4	Tertiary	East	Dacite
5 & 6 - Duplicates	Tertiary	West	Conglomerates
7	Tertiary	East+West	Wacke/sandstone
8	Tertiary	East+West	Mudstone
9 & 10 - Duplicates	Cretaceous	West	Intrusive rocks
11 & 12 - Duplicates	Cretaceous	West	Sedimentary rocks
13	---	---	Blank, left empty

Conclusions from 2007 Program

- East Zone showing similar results to West Zone
  - Cretaceous mineralized rock is mainly PAG.
  - Tertiary rock is mainly non-PAG.

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