

*NEW DATA
ON TRINIDAD OILS*



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NEW DATA ON TRINIDAD OILS



CONTENTS

- Acknowledgments
- History of Geochemical Studies
- Results of Studies
- New Oil & Gas Discoveries & Questions Raised
- Reasons for choice of Current Suite
- Results: Analyses and Interpretations
- Implications for Exploration

New data on Trinidad Oils

Acknowledgements

- Thanks to Companies who provided Oils and Condensates
- Thanks to Baseline DGSI and to Dr. Suhas Talukdar for the analyses and ideas on the interpretation respectively

New Data on Trinidad Oils History of Geochemical Studies

- 1979-80: Trinmar Study
- 1988: Rodrigues Work
- 1989: Talukdar, Dow & Persad
- 1994: Requejo et al
- 1995: Talukdar, Dow & Persad

New Data on Trinidad Oils Results of Geochemical Studies

- Trinmar Study: Identified UK as major Source
- Rodrigues Work: Confirmed UK as Source
- Talukdar et al: Identified Evaporative Fractionation and other alteration
- Requejo et al: Found S. Basin UK source rich in Type II kerogen
- Talukdar et al: Confirmed low maturity of oils and condensates by C7 analyses

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New Finds & Oils Analysed

- Oligocene Trend: Biche Seep, Angostura
- Nariva Trend: Brighton Marine
- Retrench Trend: Oropouche
- Herrera Trend: Penal Cond's, Carapal Ridge Cond. et al
- Rocky Palace: Oil and Condensates
- Parula & Osprey Condensates
- Mahogany & Amherstia Condensates

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Objectives

- Were new oils and condensates whole or fractionated?
- Were new oils and condensates mature or over-mature?
- Were there indications of terrestrial input into the source?

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Preliminary Results

- EOG condensates heavily fractionated
- Mahogany oil mildly fractionated
- Penal Condensates mixed c biodegraded oil
- C. Ridge condensate whole condensate – no fractionation

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Preliminary Results

- All oils and condensates are of normal maturity, none were expelled at more than 130 C

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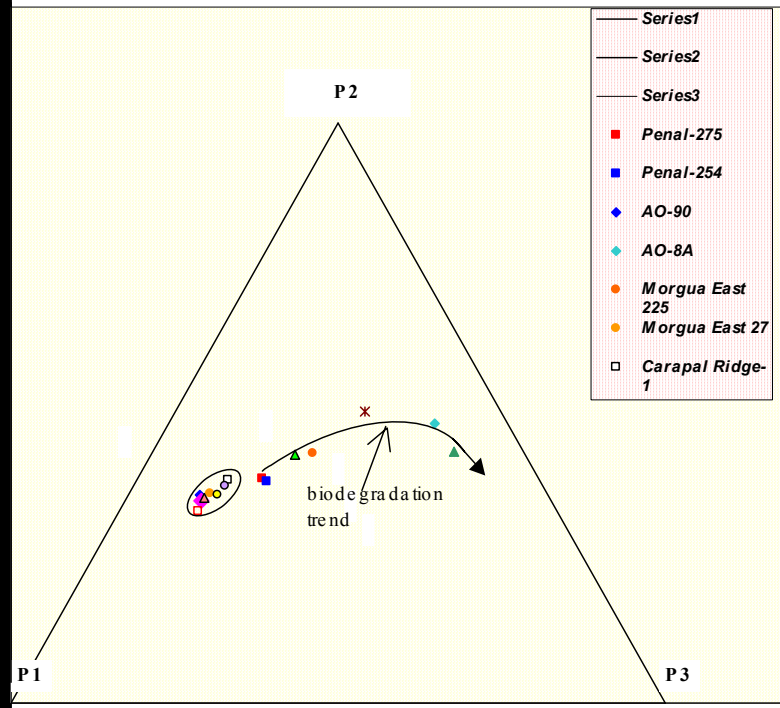
Preliminary Results

- Mahogany oil and condensates from EOG, Carapal Ridge and Penal all probably derived from source with mixed marine and terrestrial organic matter
- Conclusion UK source variable (more likely)
- or new Tertiary source (less likely)
- Will be tested by Bio-marker study

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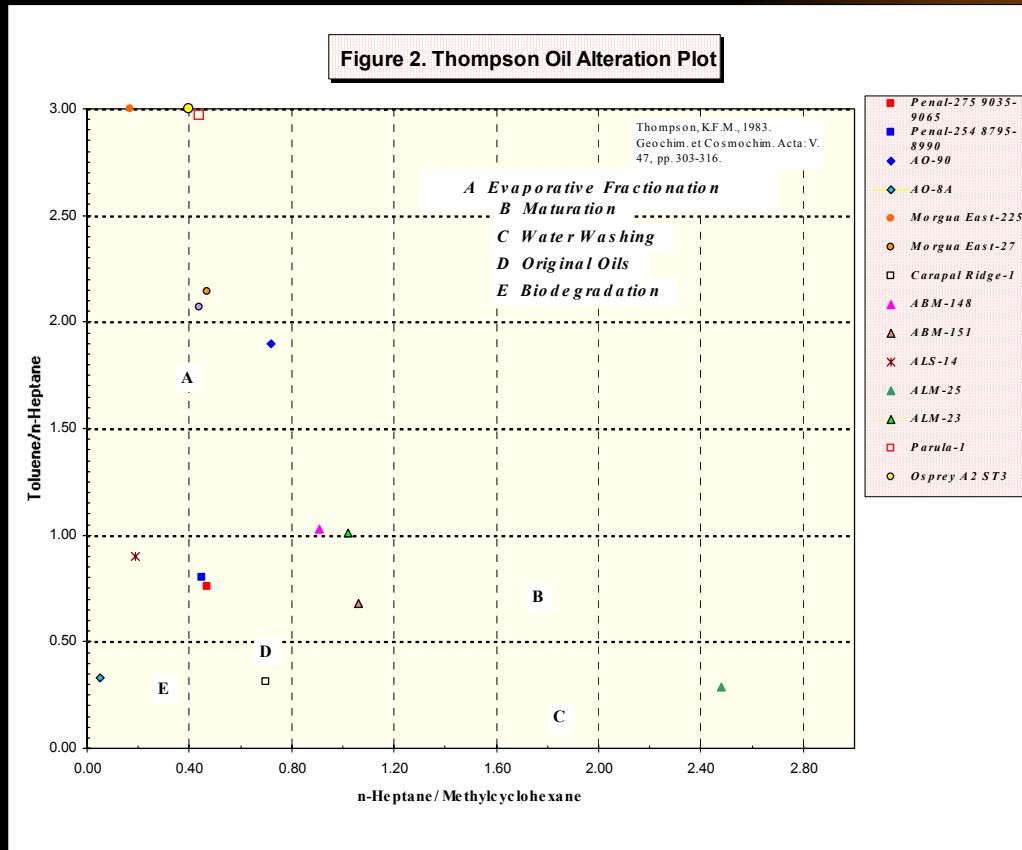
Preliminary Results

Figure 1. P1-P2-P3 Diagram
C7 Biodegradation Plot



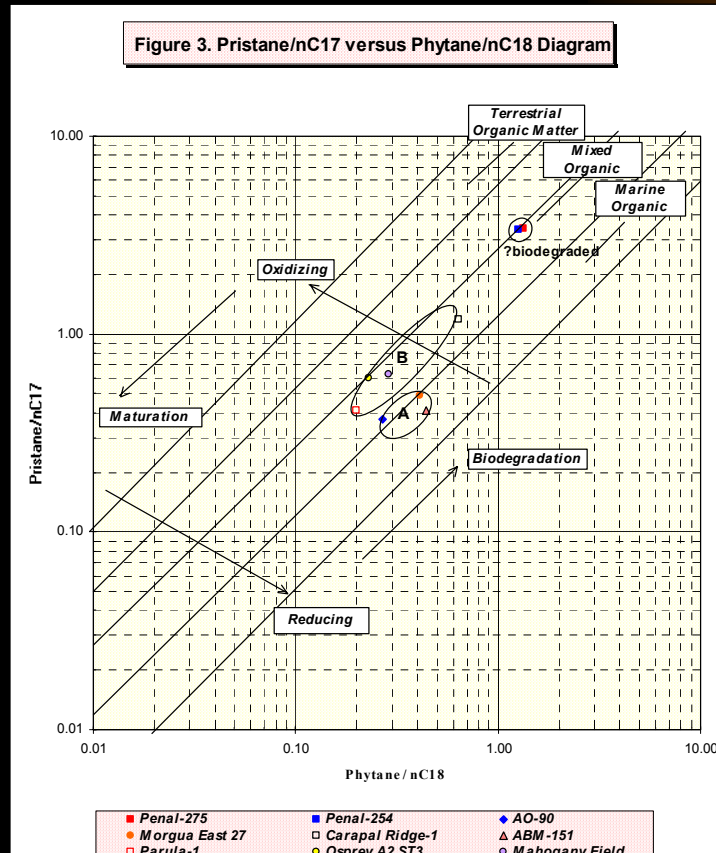
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Preliminary Results



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Preliminary Results



**Figure 1. P1-P2-P3 Diagram
C7 Biodegradation Plot**

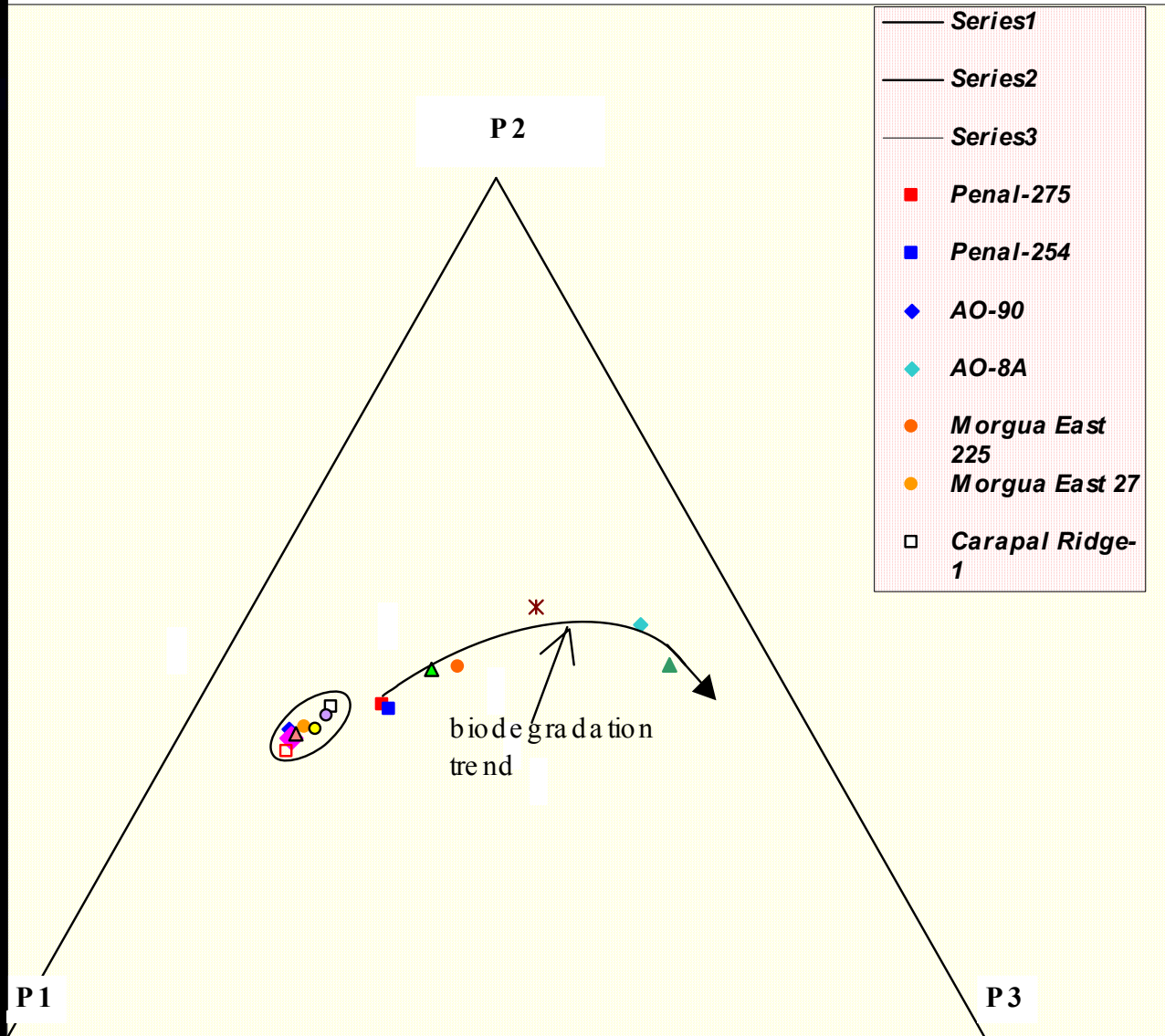


Figure 2. Thompson Oil Alteration Plot

Thompson, K.F.M., 1983.
 Geochim. et Cosmochim. Acta: V.
 47, pp. 303-316.

A Evaporative Fractionation
B Maturation
C Water Washing
D Original Oils
E Biodegradation

- Penal-275 9035-9065
- Penal-254 8795-8990
- ◆ AO-90
- ◆ AO-8A
- Morgua East-225
- Morgua East-27
- Carapal Ridge-1
- ▲ ABM-148
- ▲ ABM-151
- ✕ ALS-14
- ▲ ALM-25
- ▲ ALM-23
- Parula-1
- Osprey A2 ST3

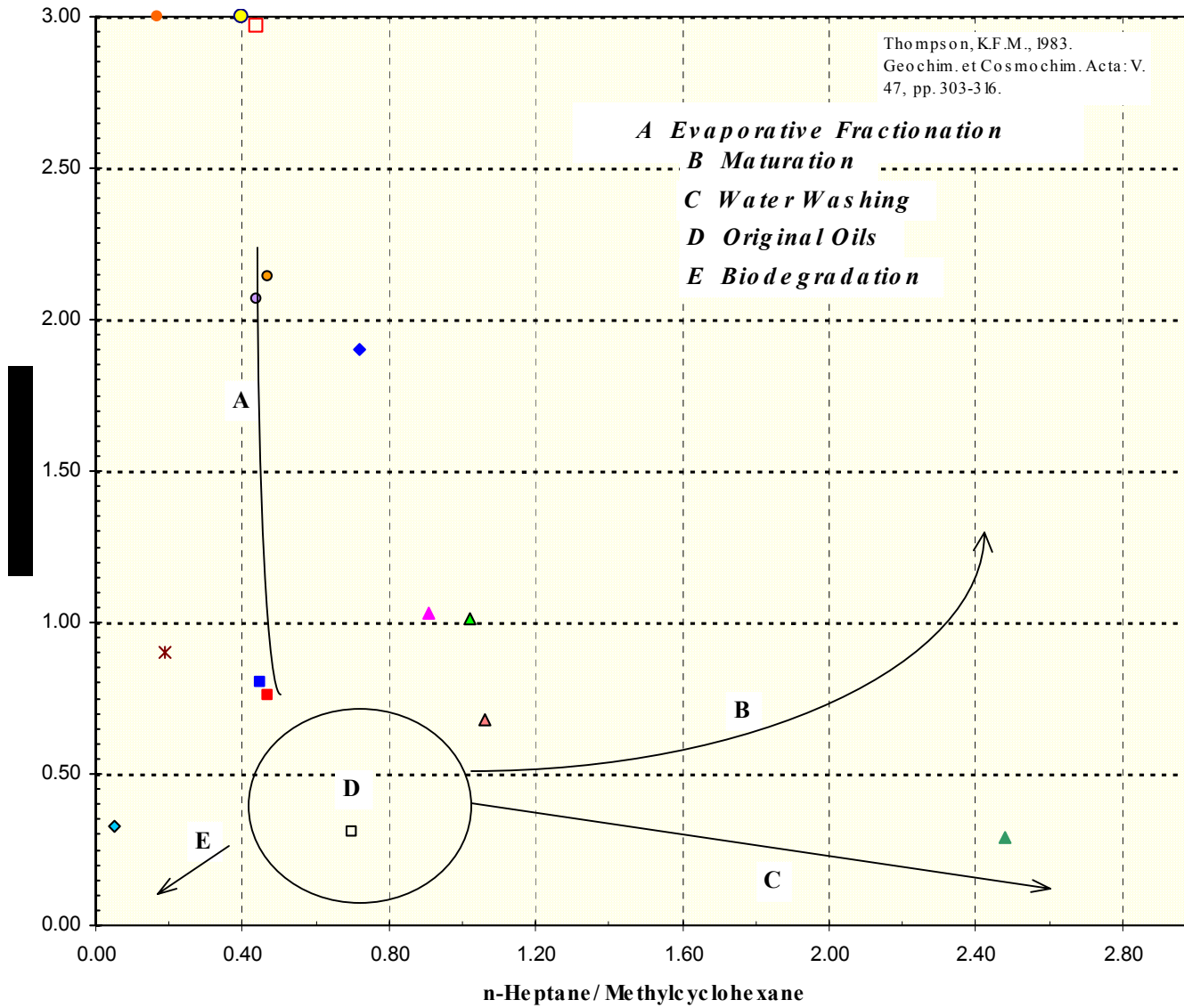
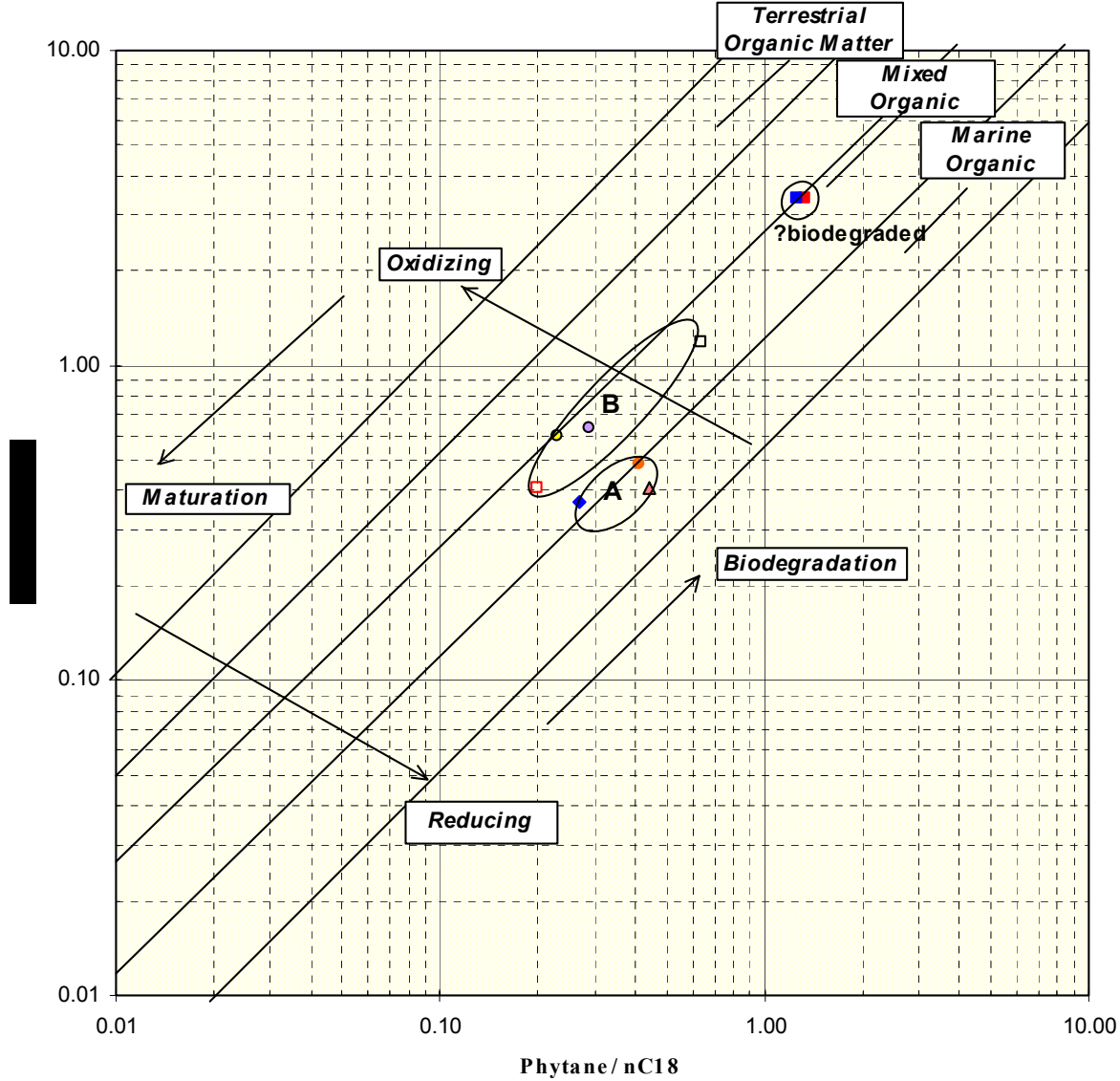
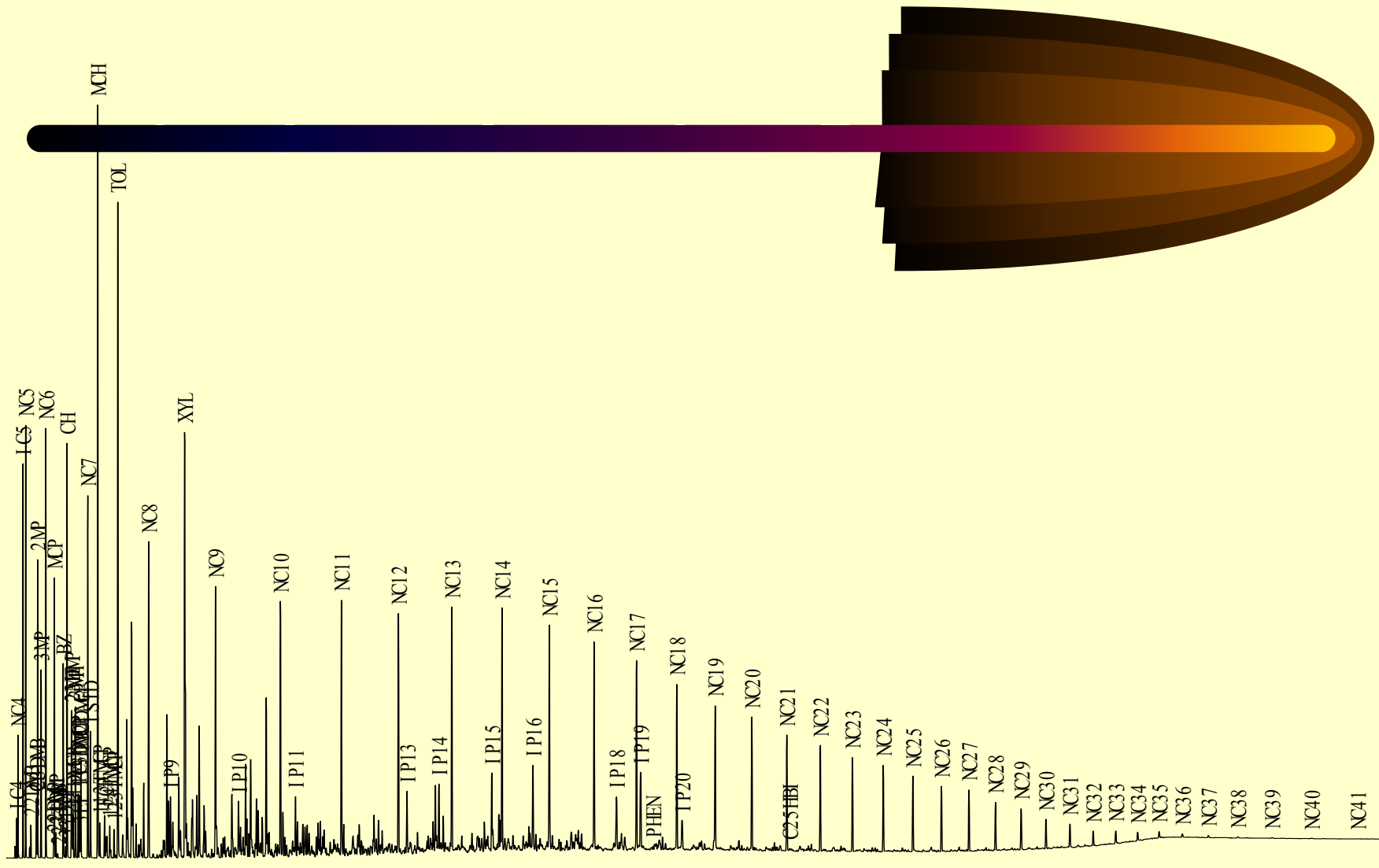


Figure 3. Pristane/nC17 versus Phytane/nC18 Diagram



- Penal-275
- Morgua East 27
- Parula-1
- Penal-254
- Carapal Ridge-1
- Osprey A2 ST3
- ◆ AO-90
- △ ABM-151
- Mahogany Field

MAHOGANY FIELD



CARAPAL RIDGE 1

