

# Refinery Units and Streams

Jacobs Process PIT

Dave Collings

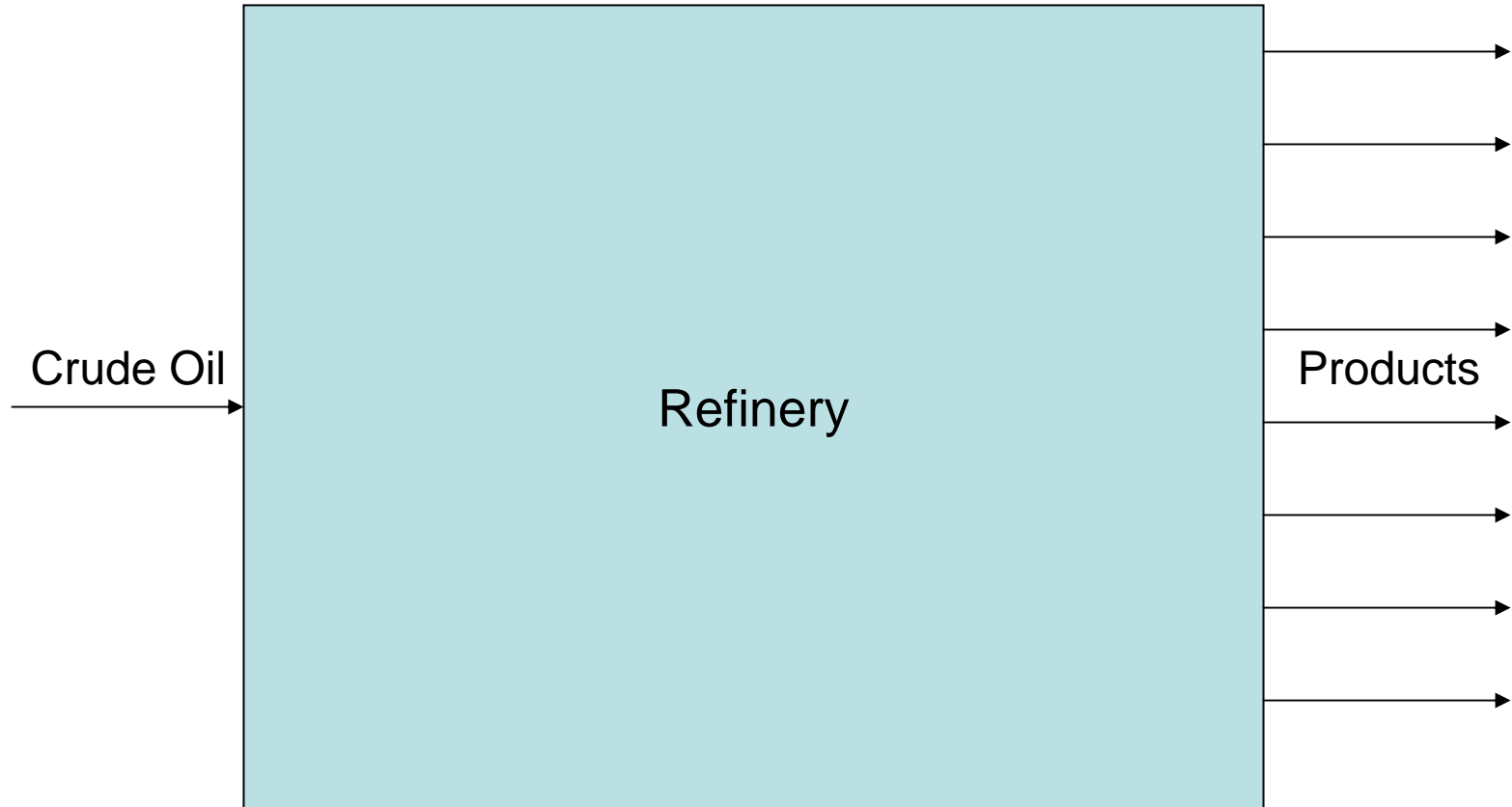
September 22, 2008

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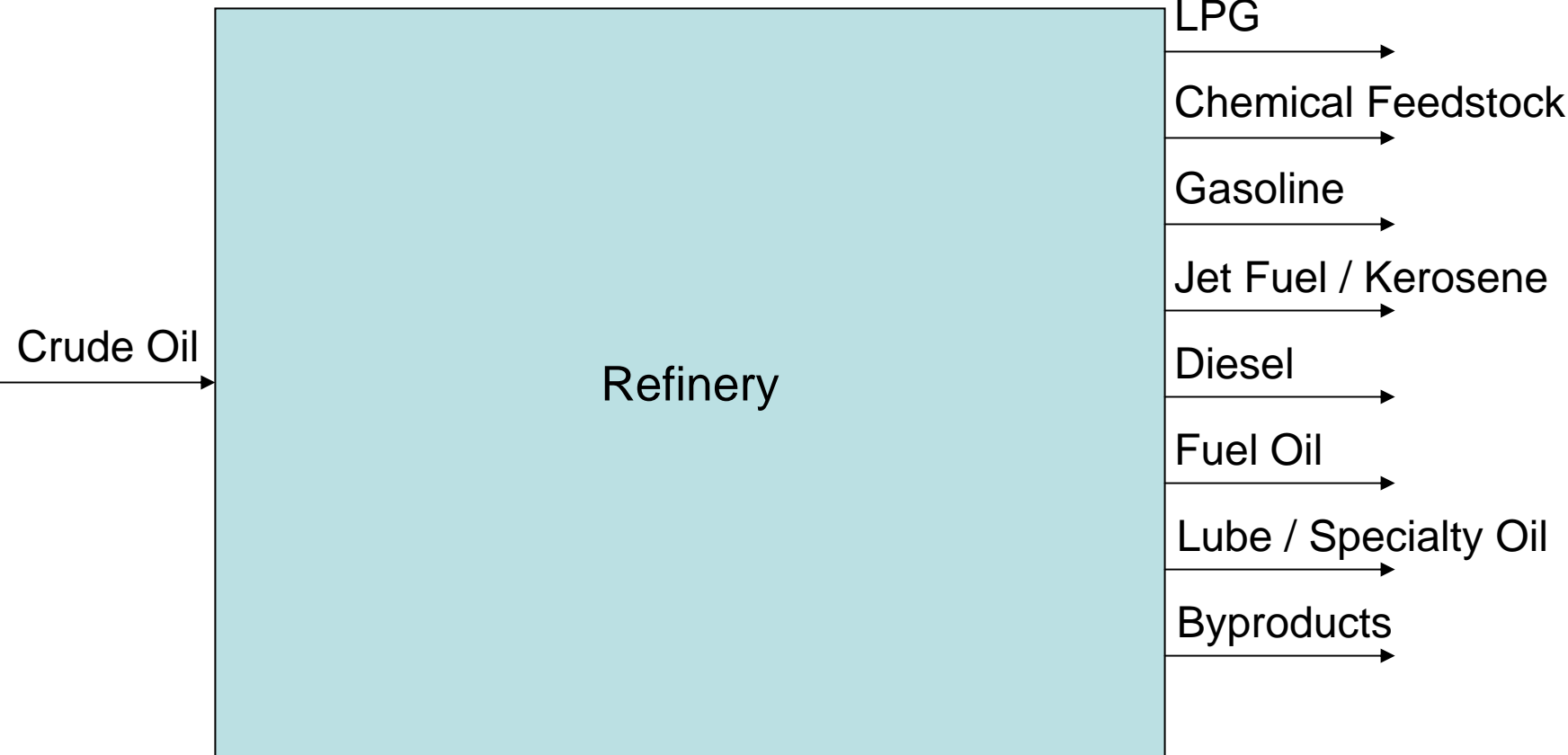
## Session Objectives

- Overall function of Oil Refinery
- Refining terminology, including Crude Oil and Product description
- Function of individual Refinery Units
- Interrelationship between Refinery Units
- Not a detailed course in Refining Technology

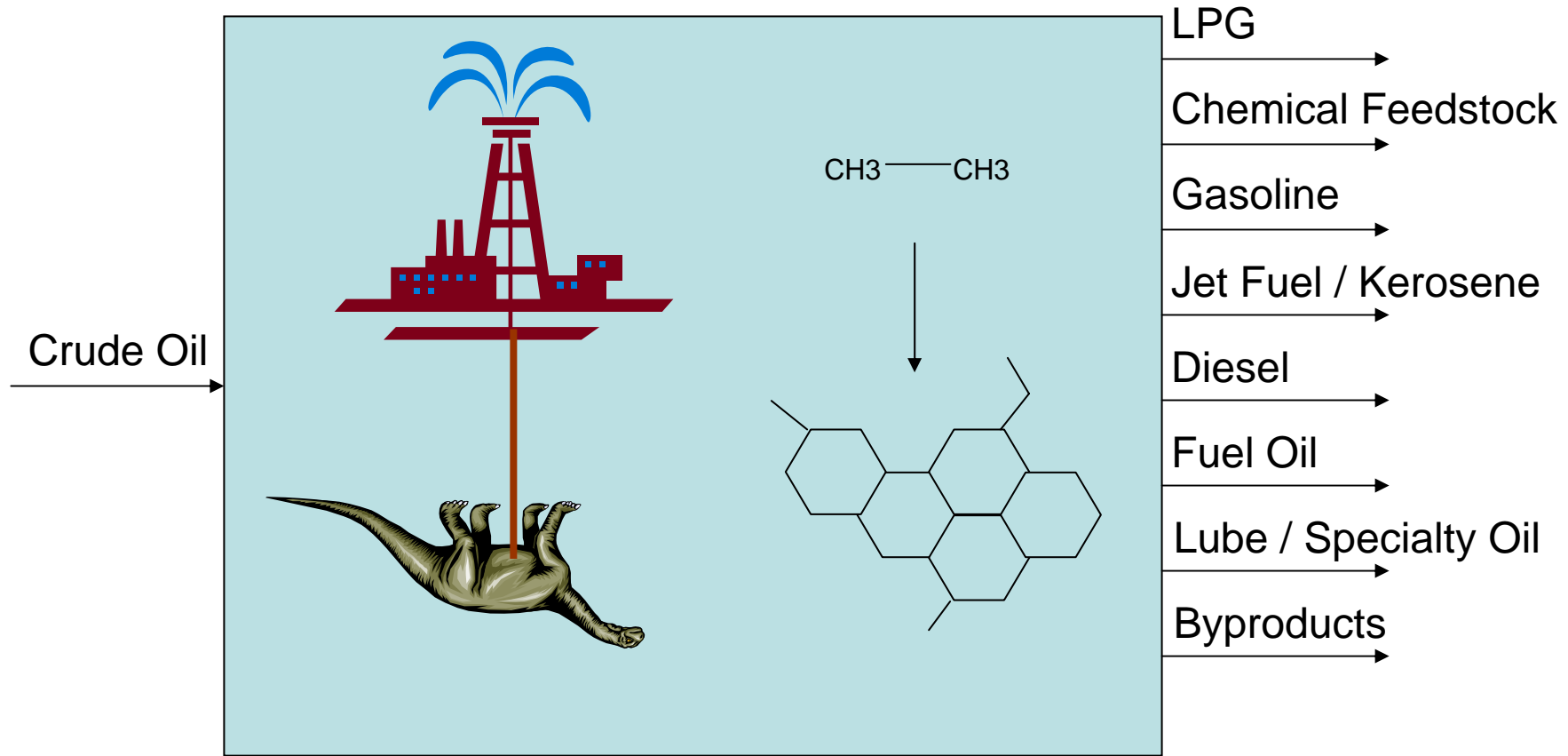
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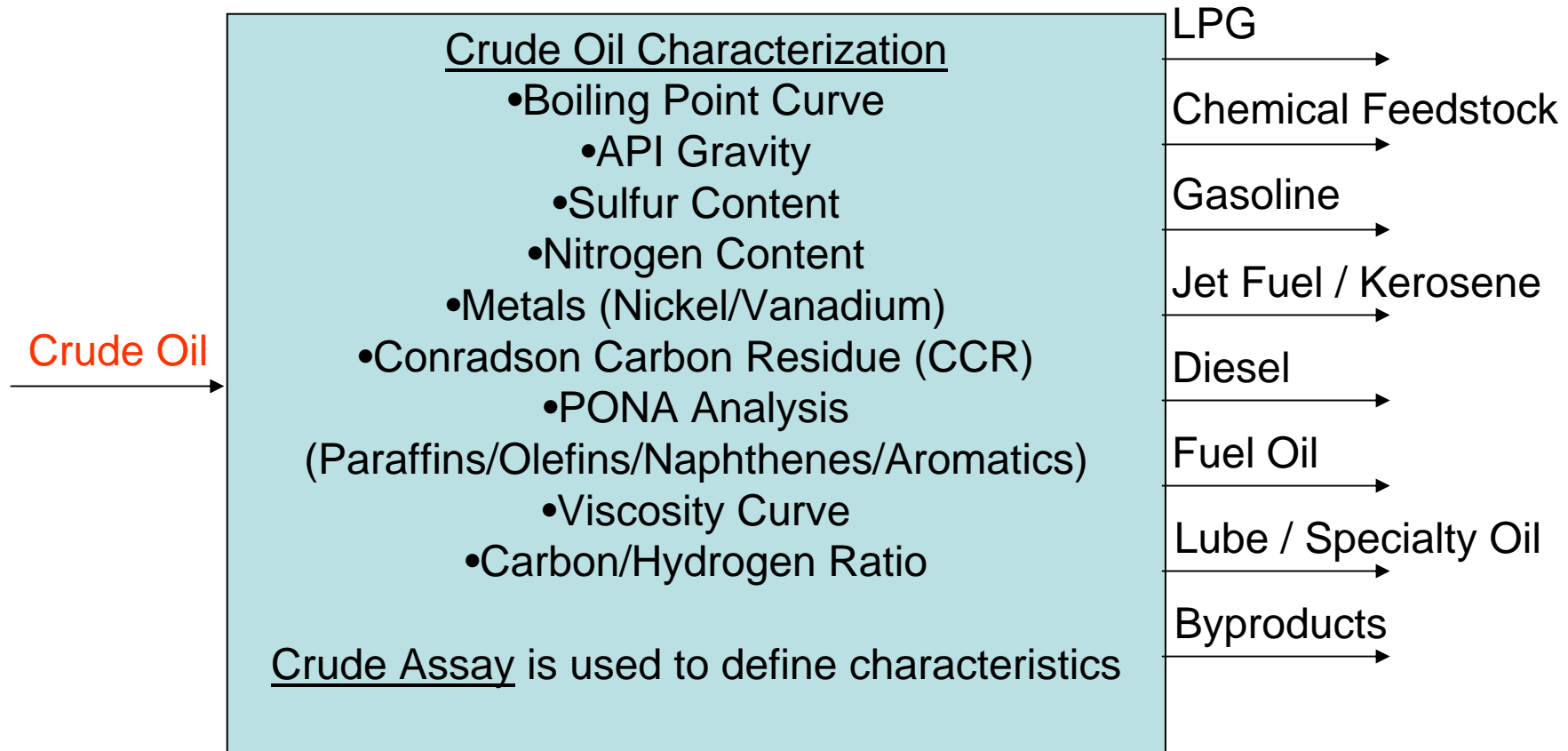
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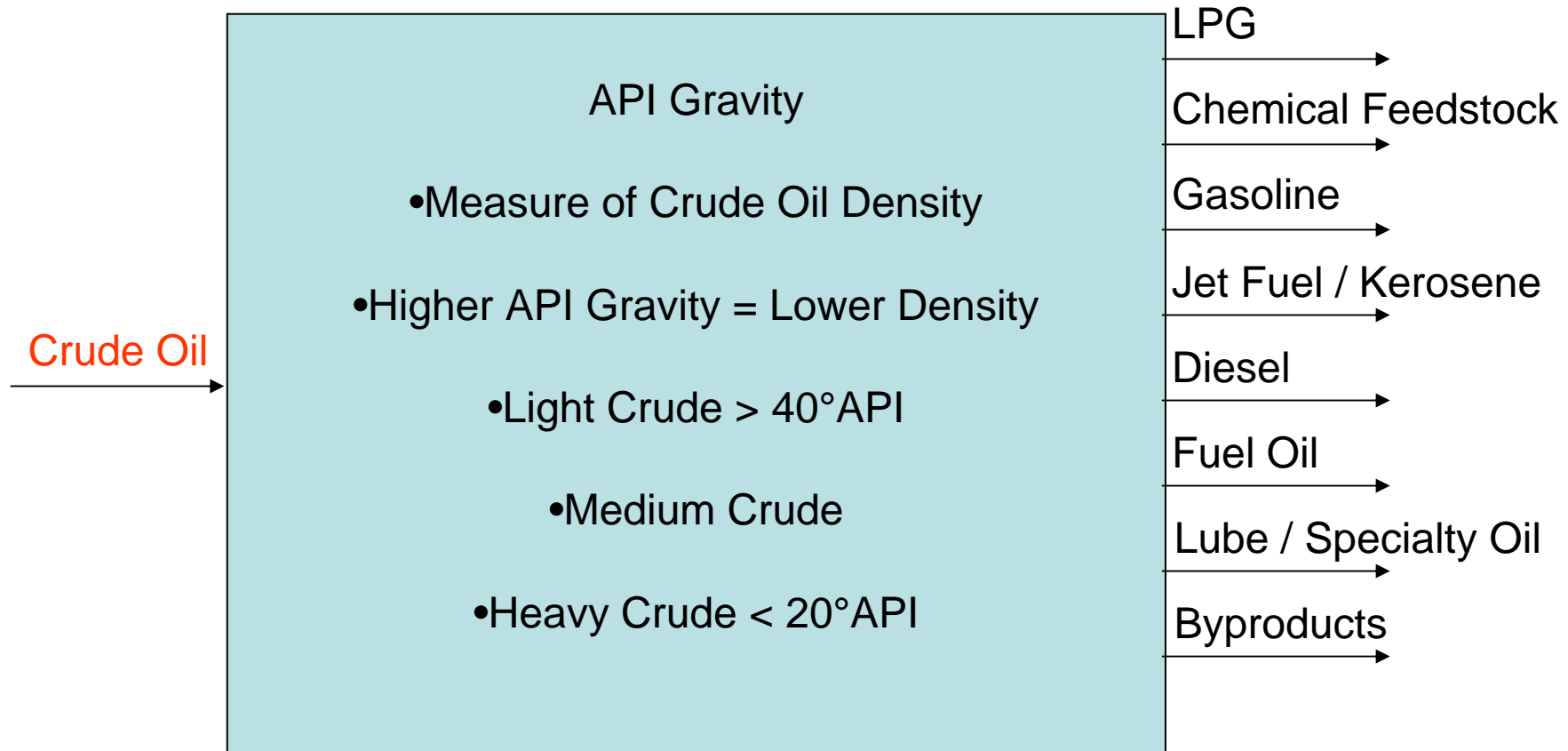


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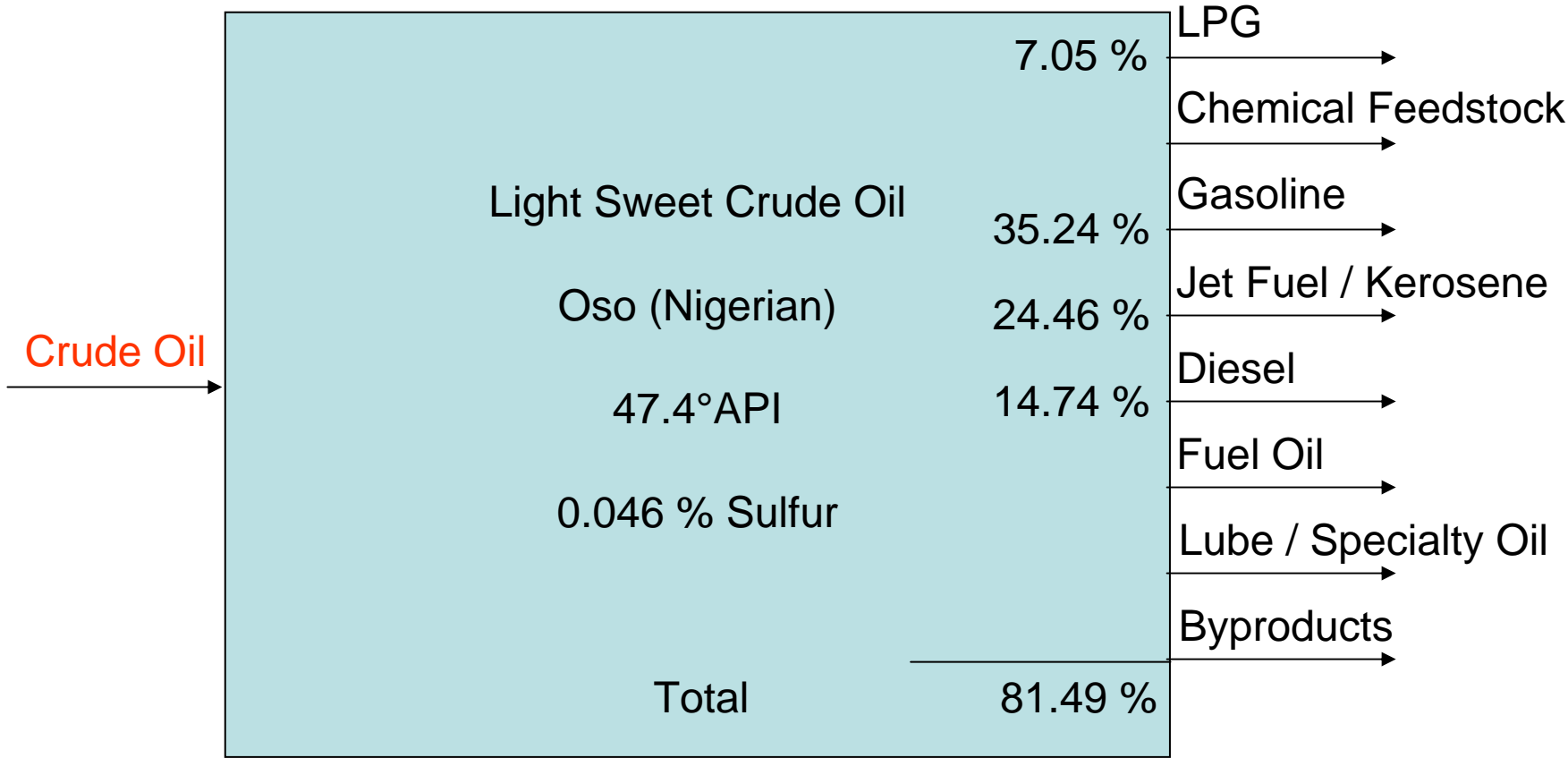




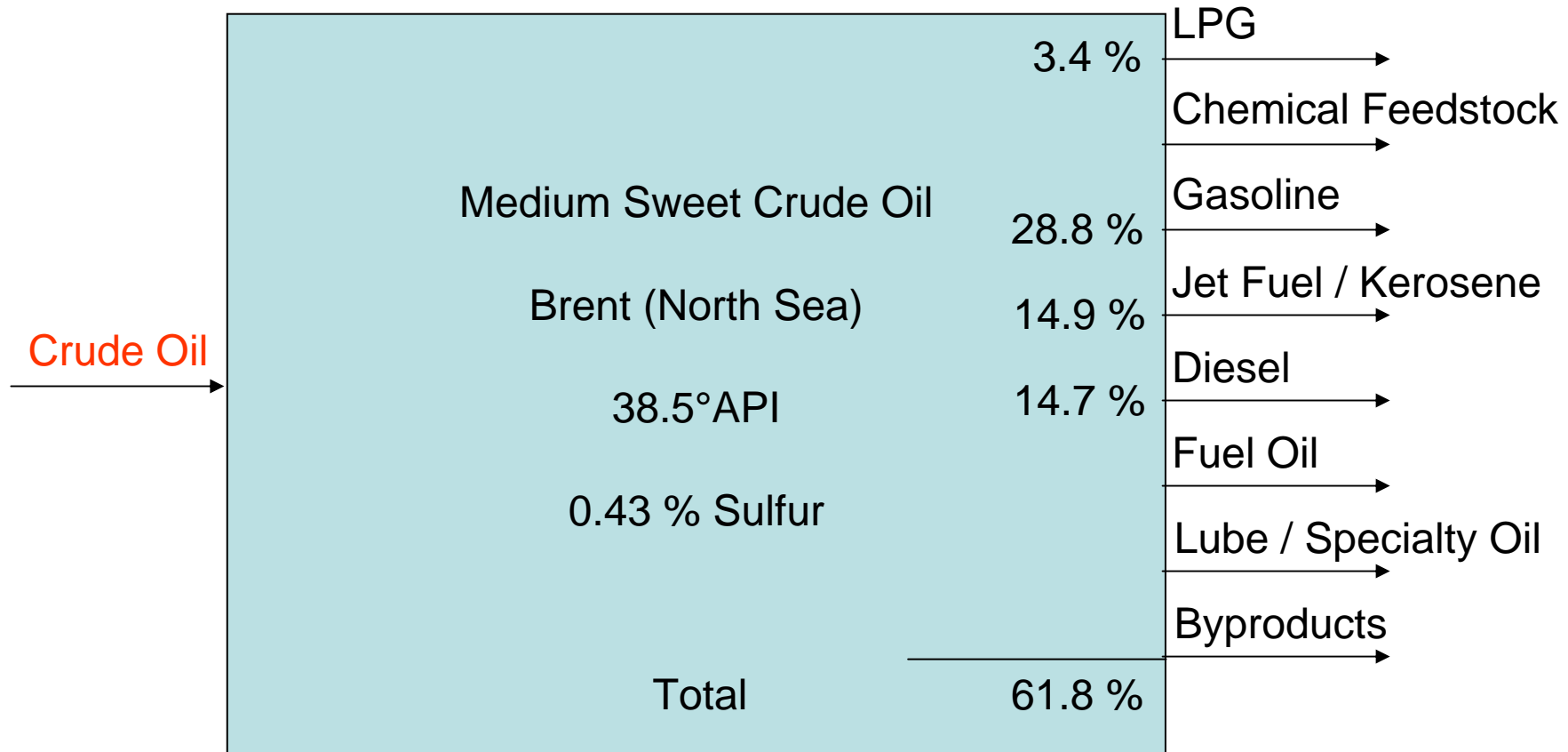
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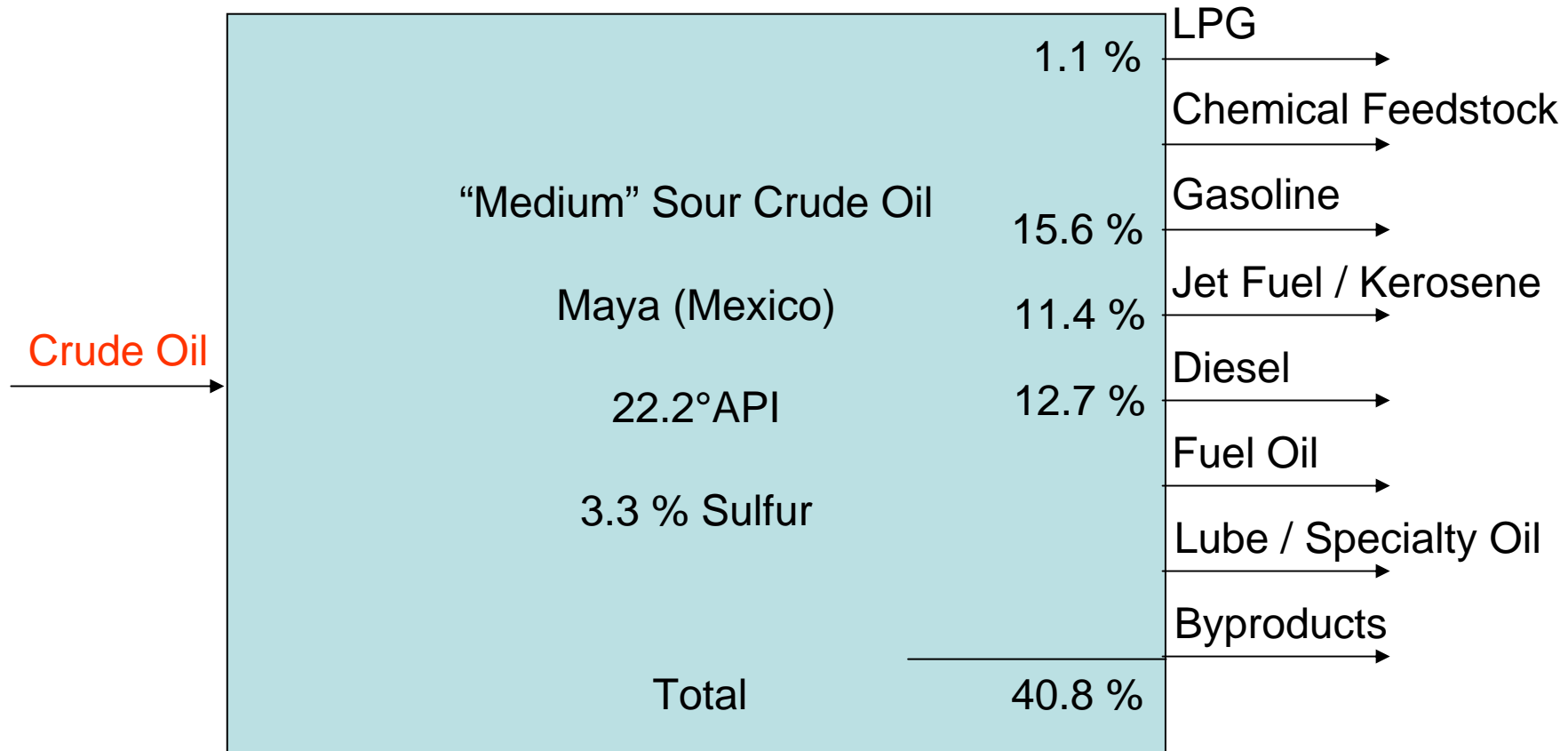
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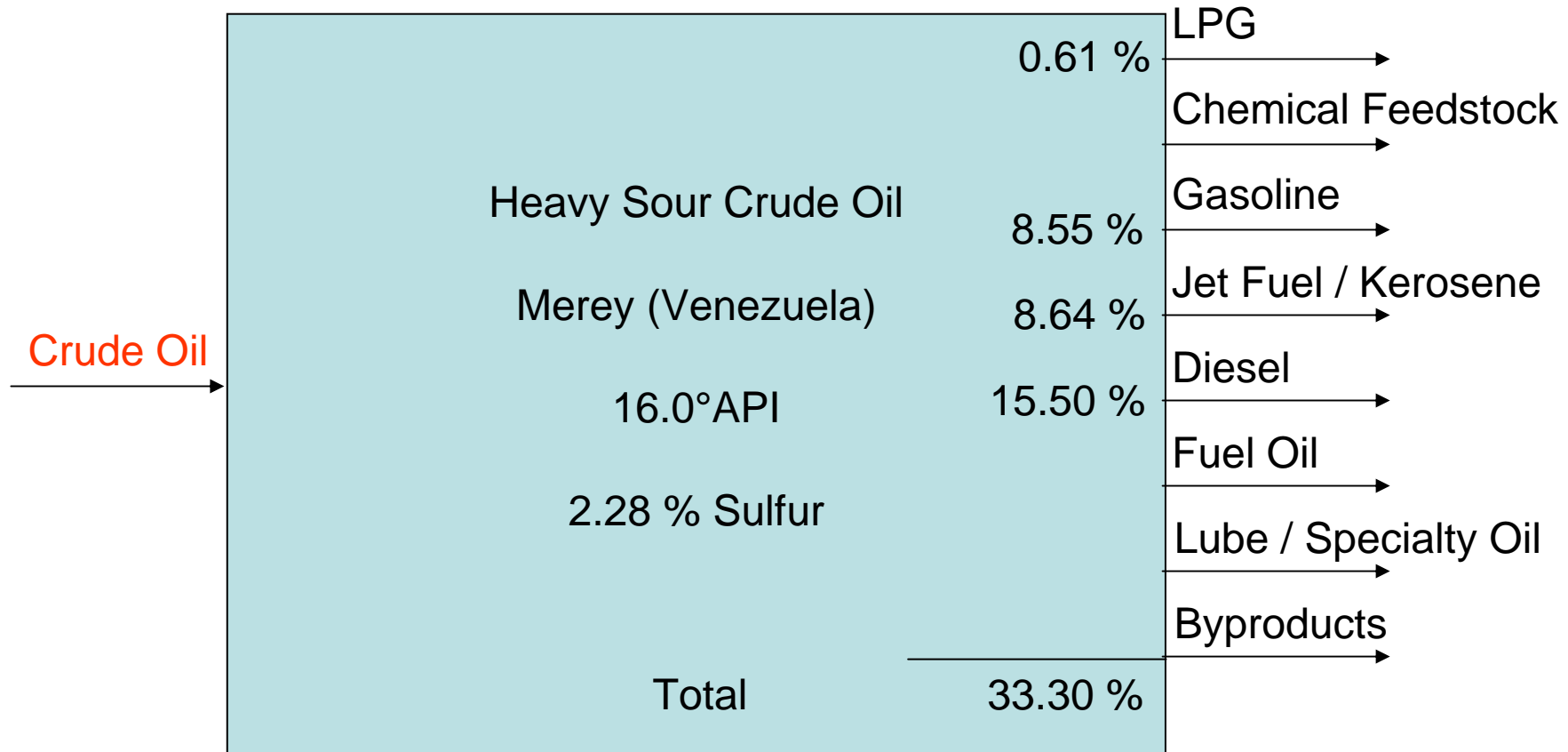
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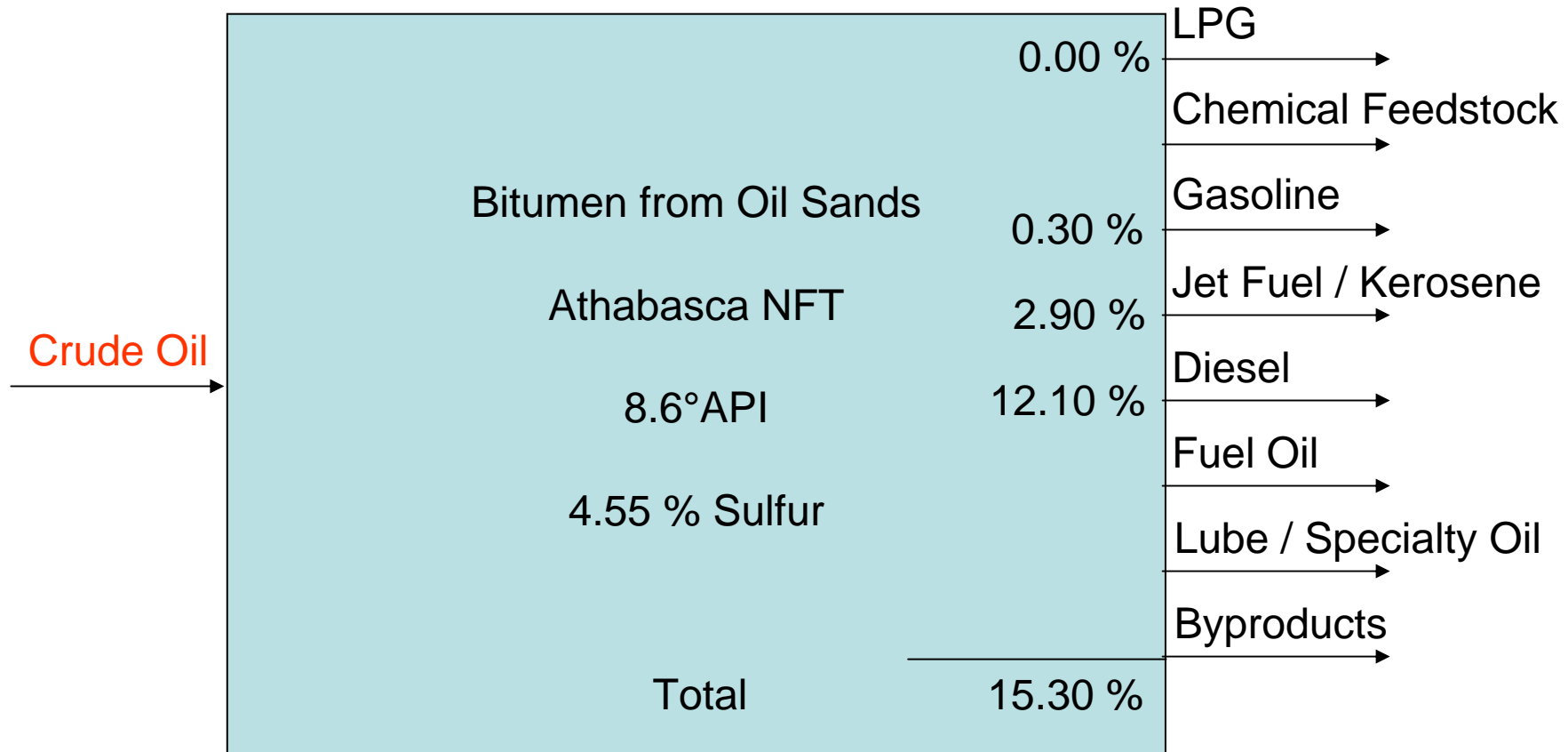
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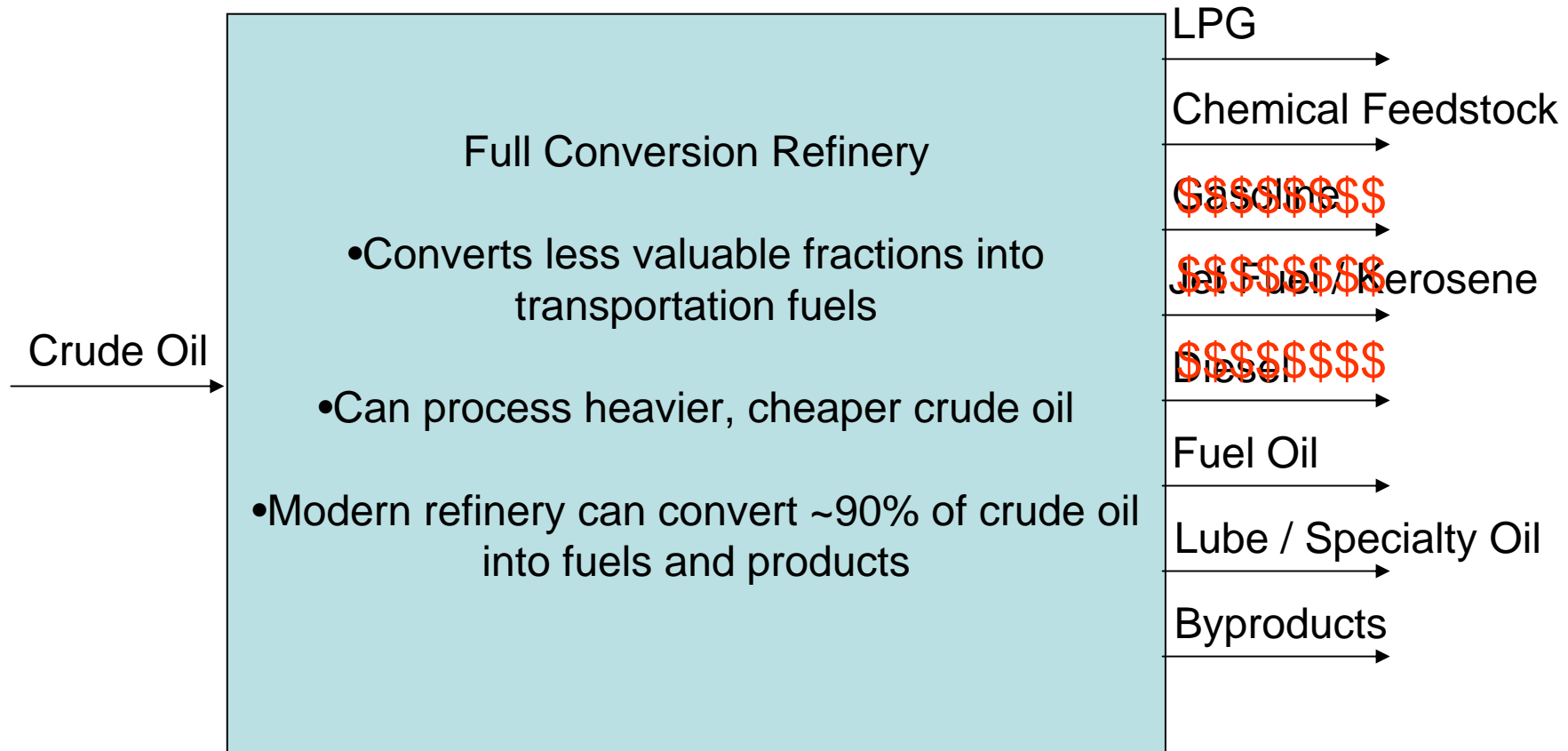
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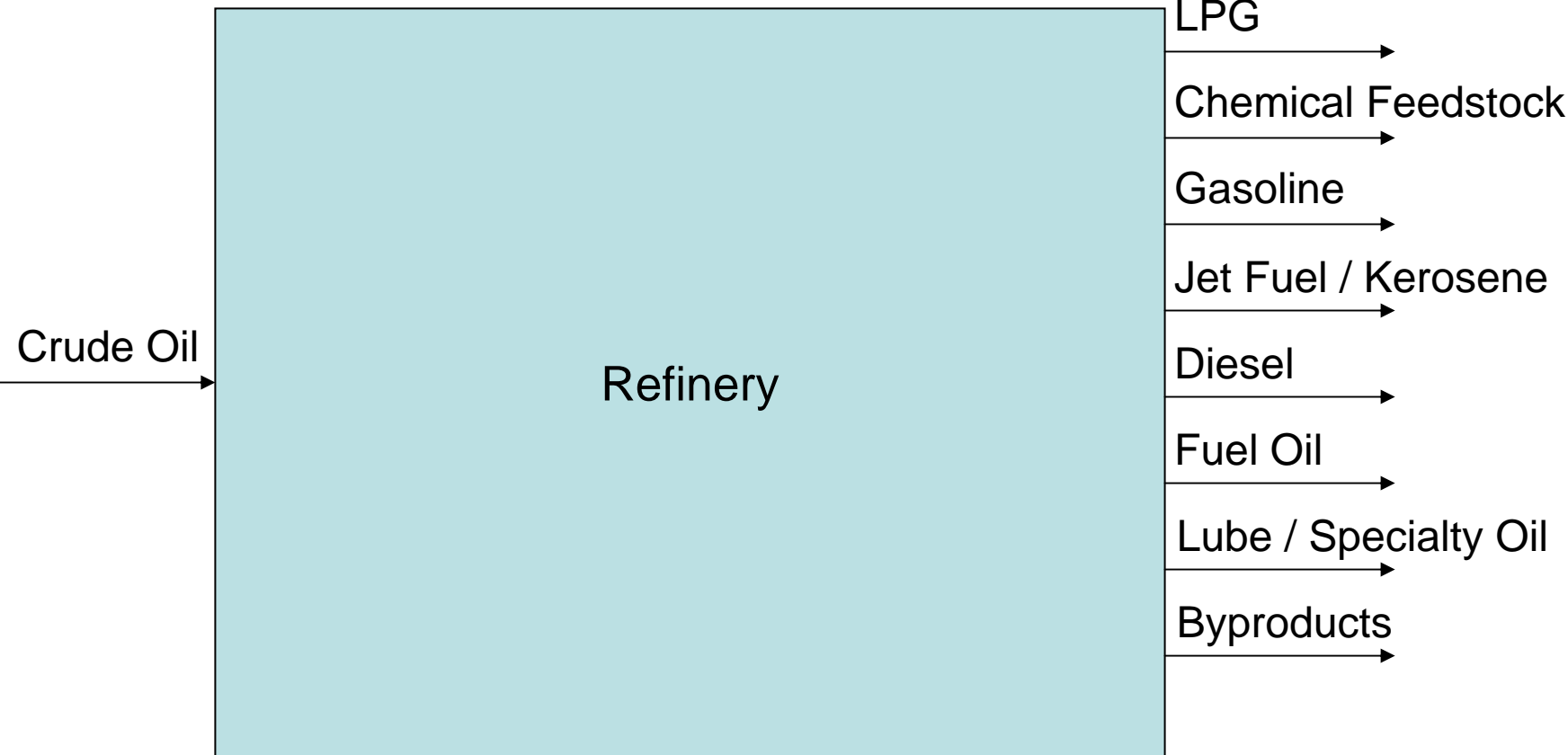
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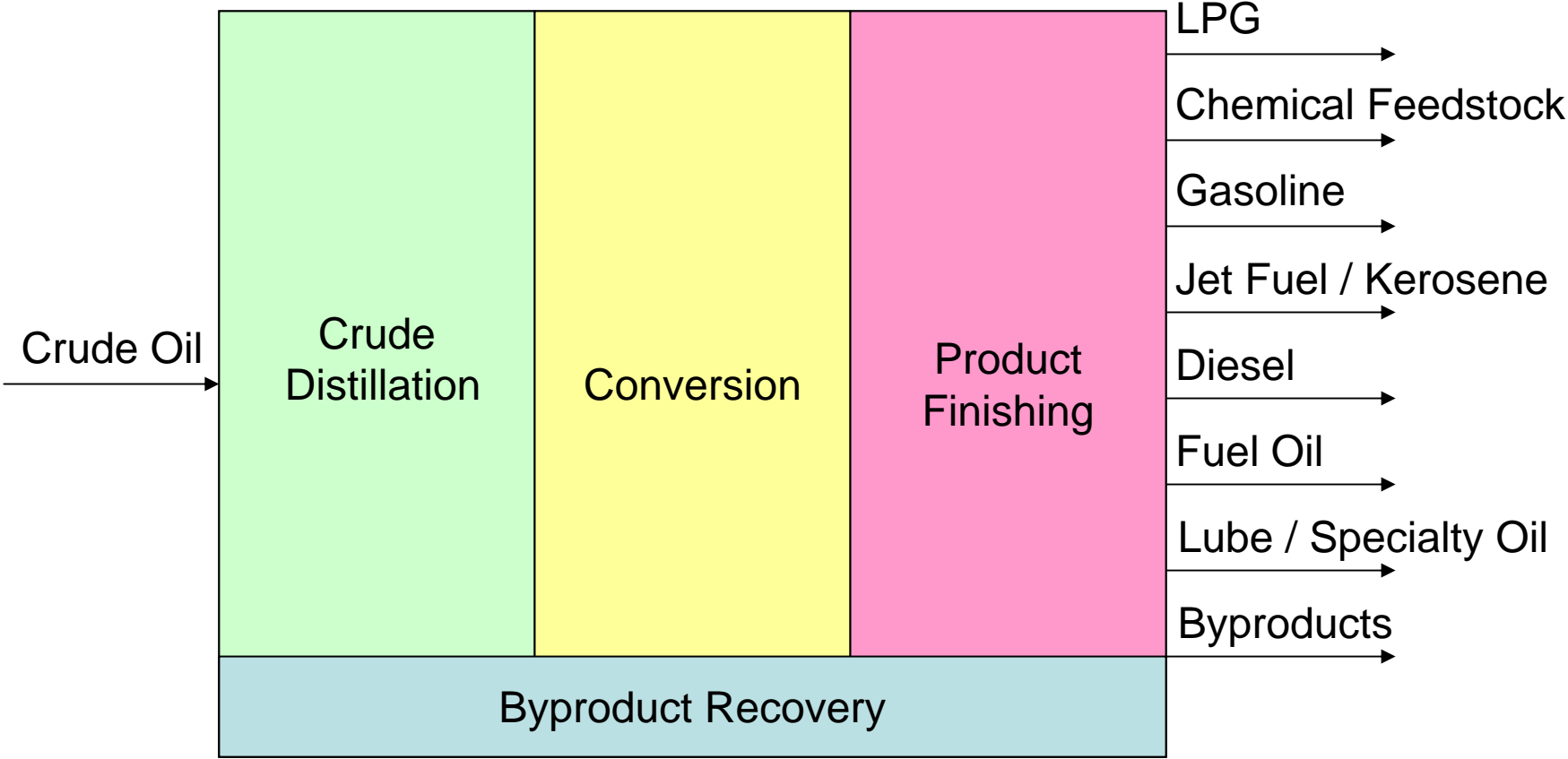
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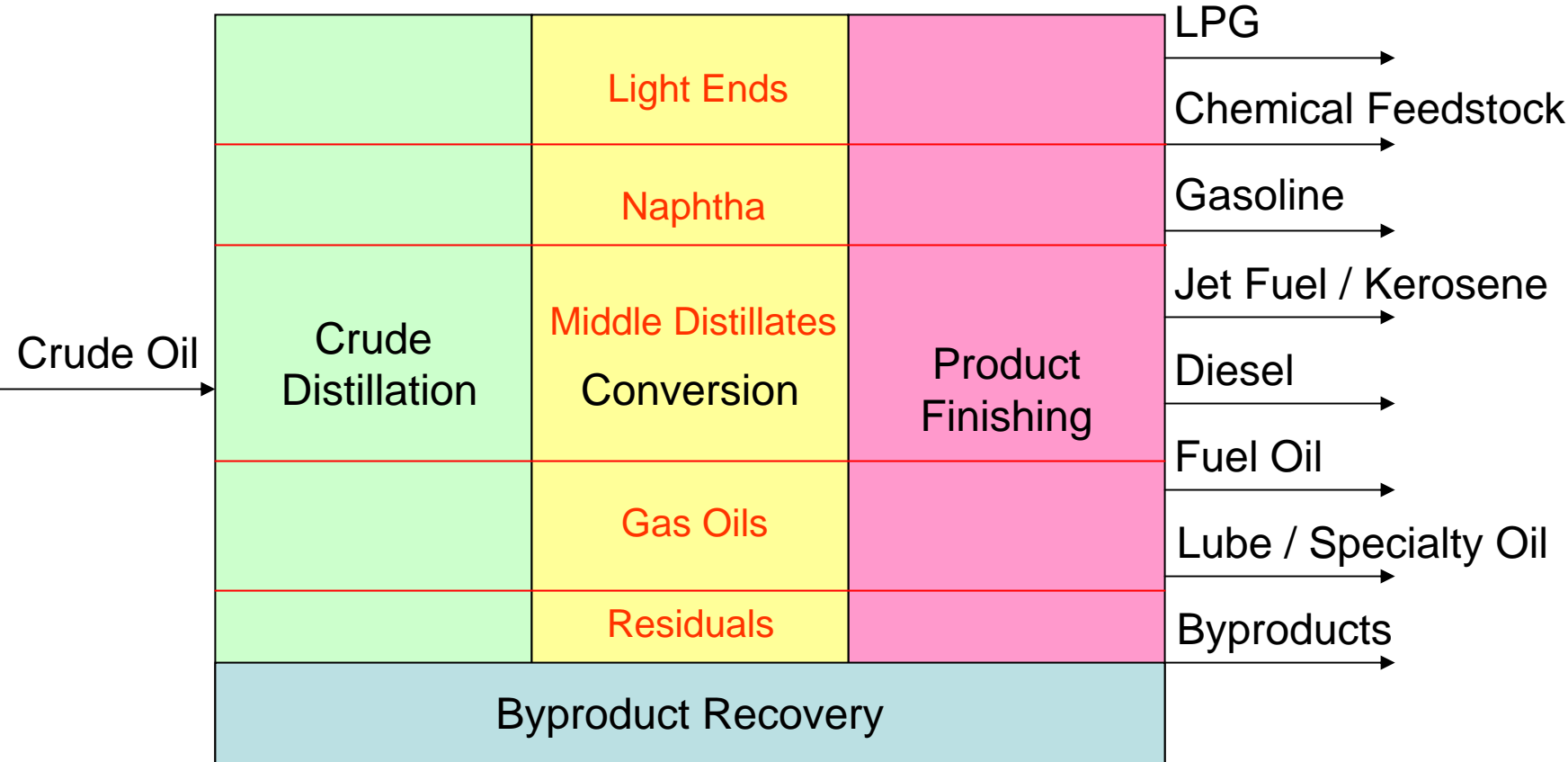
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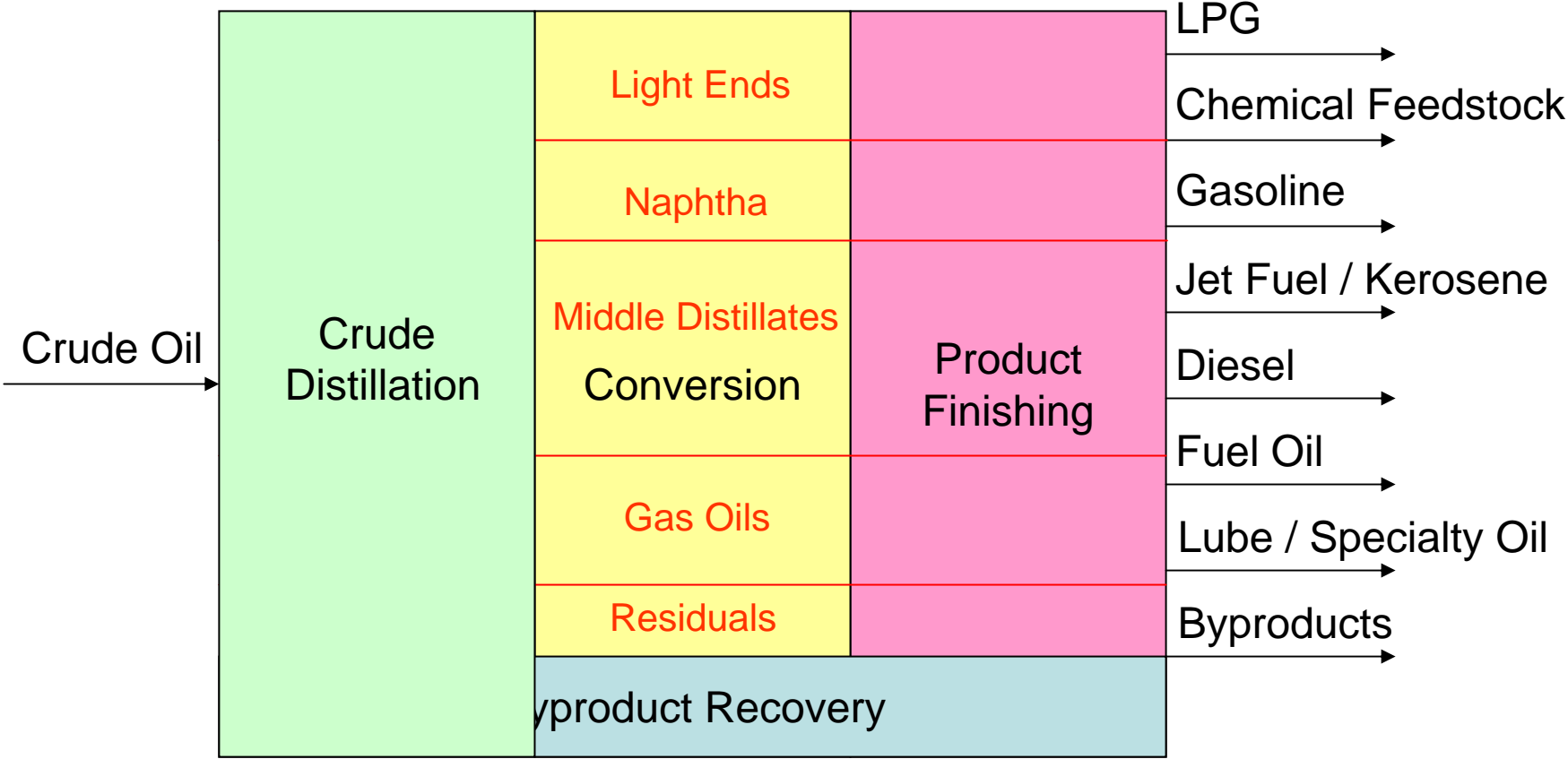
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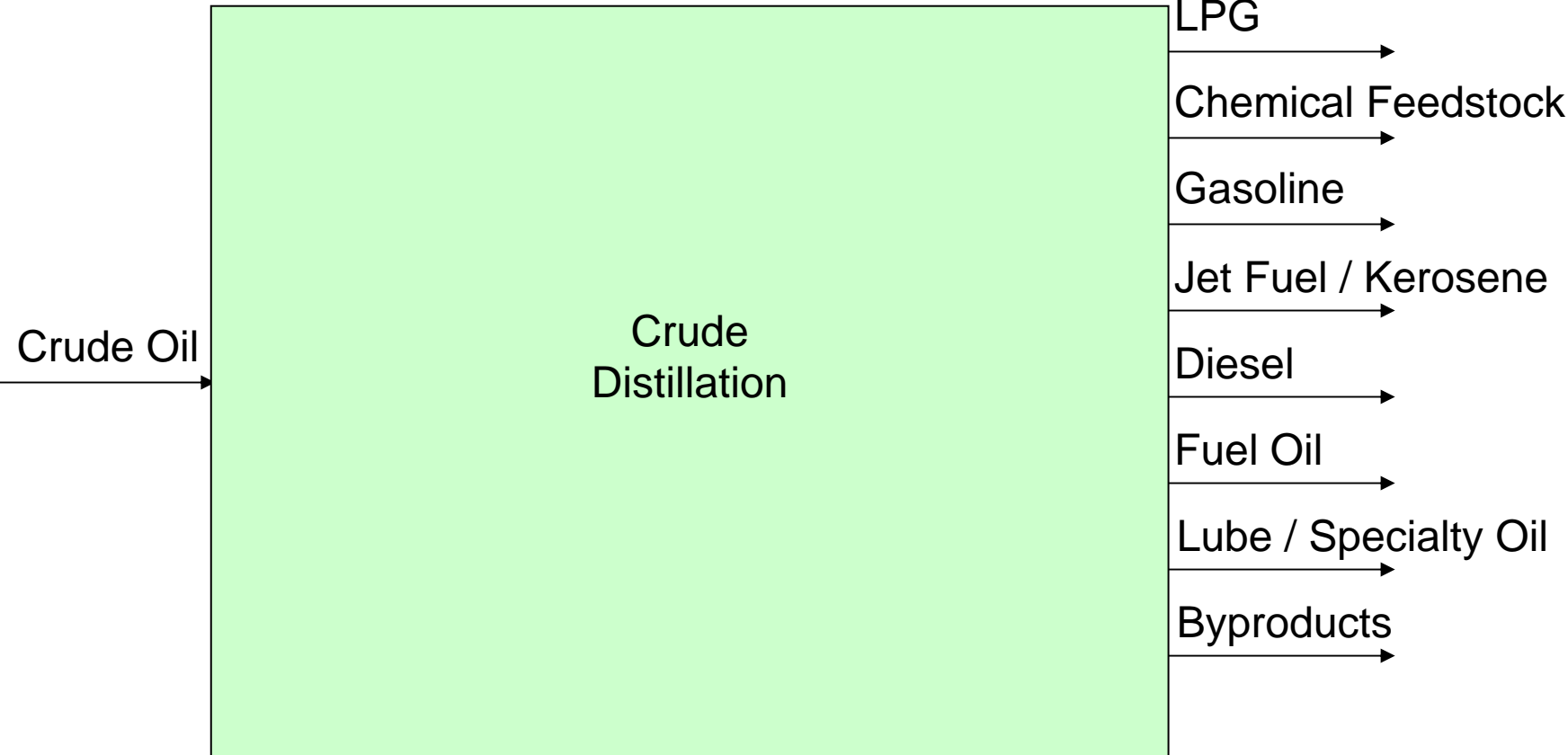
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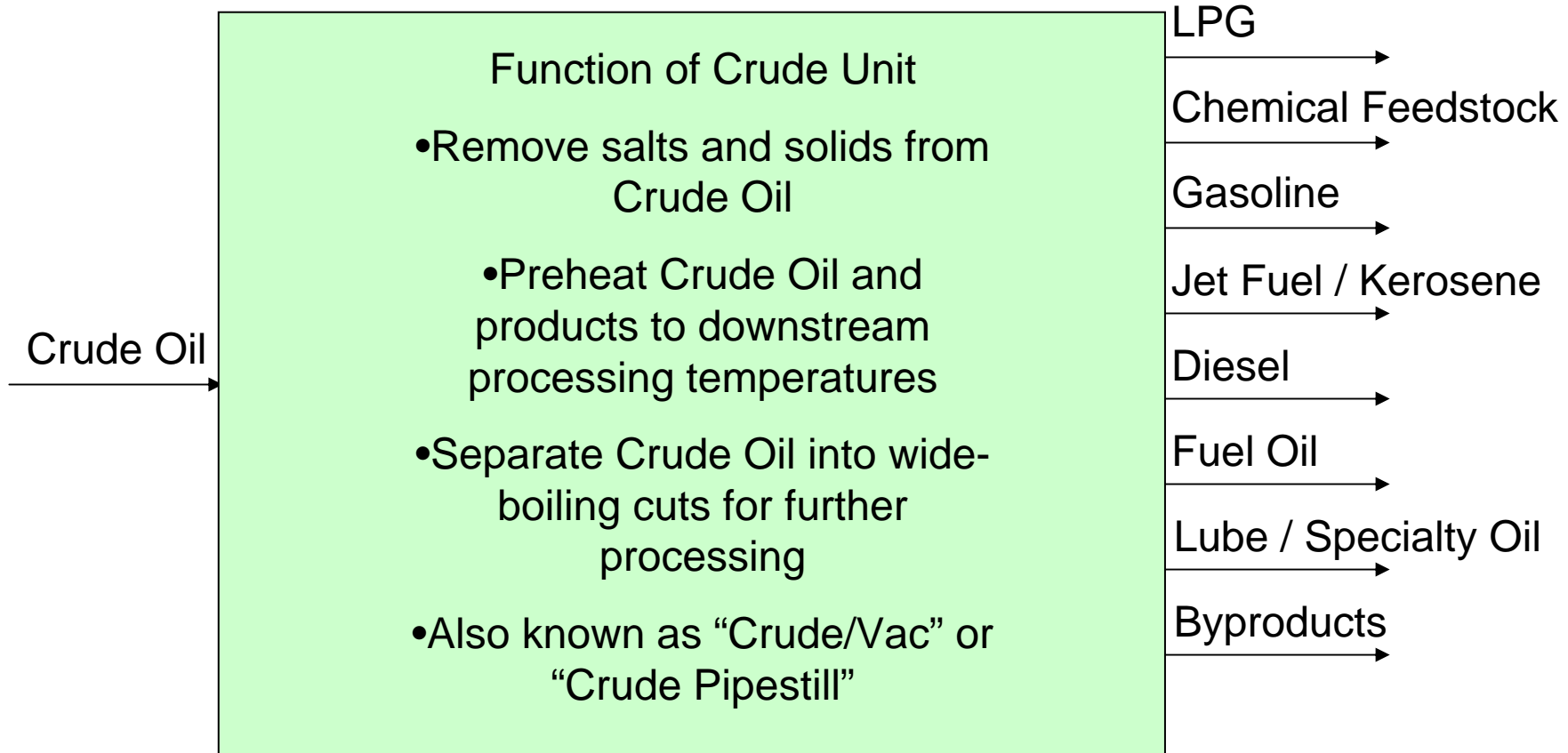


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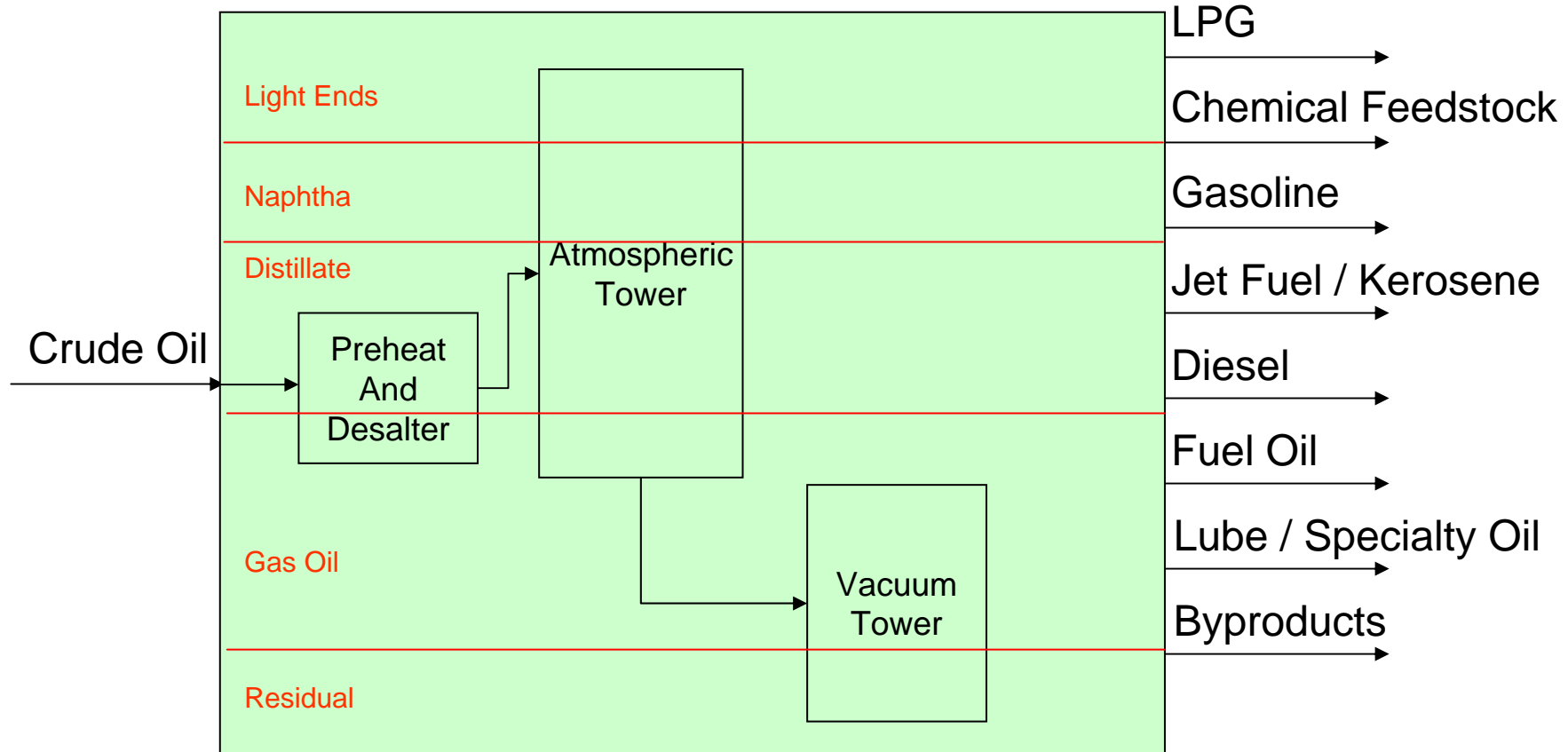
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## Crude Distillation



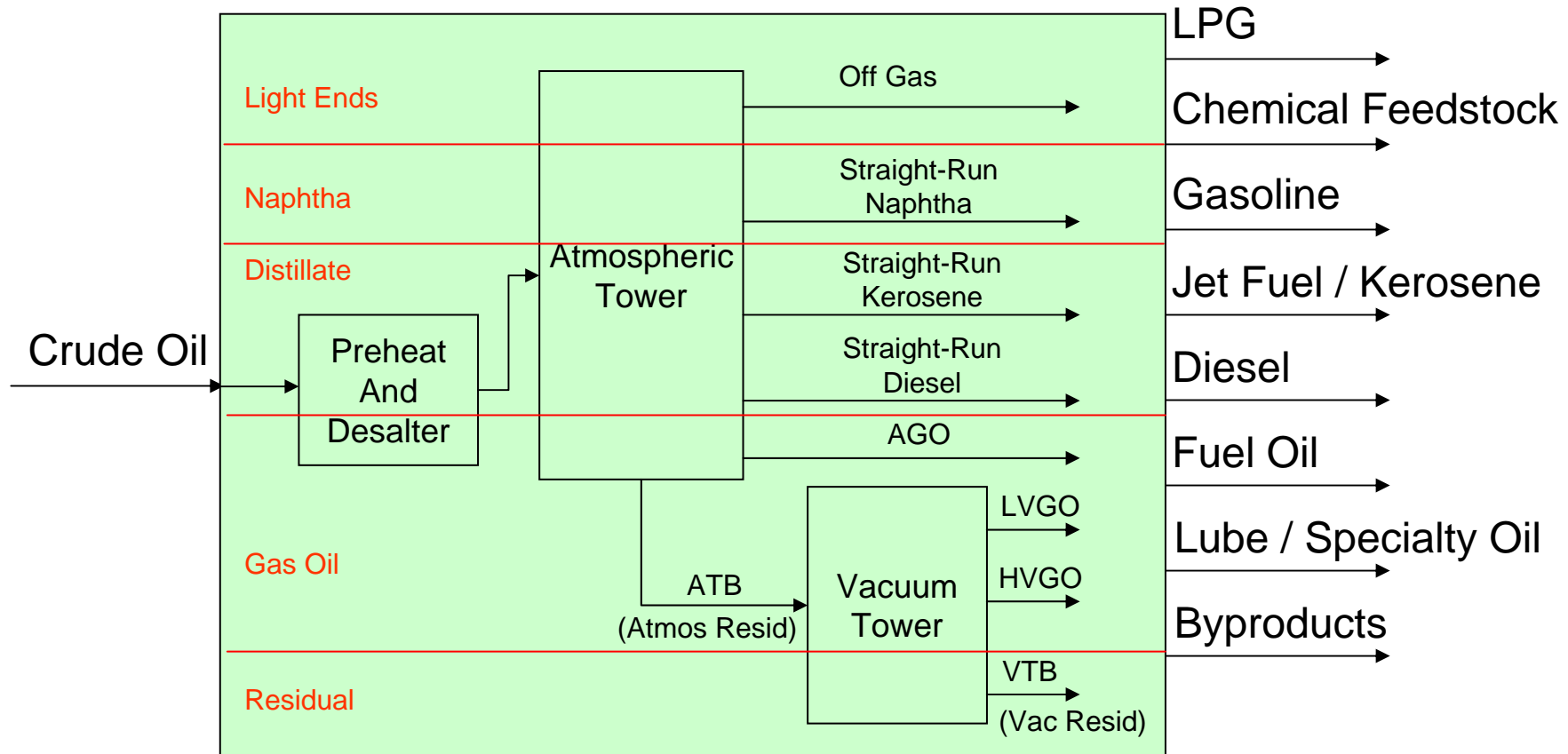
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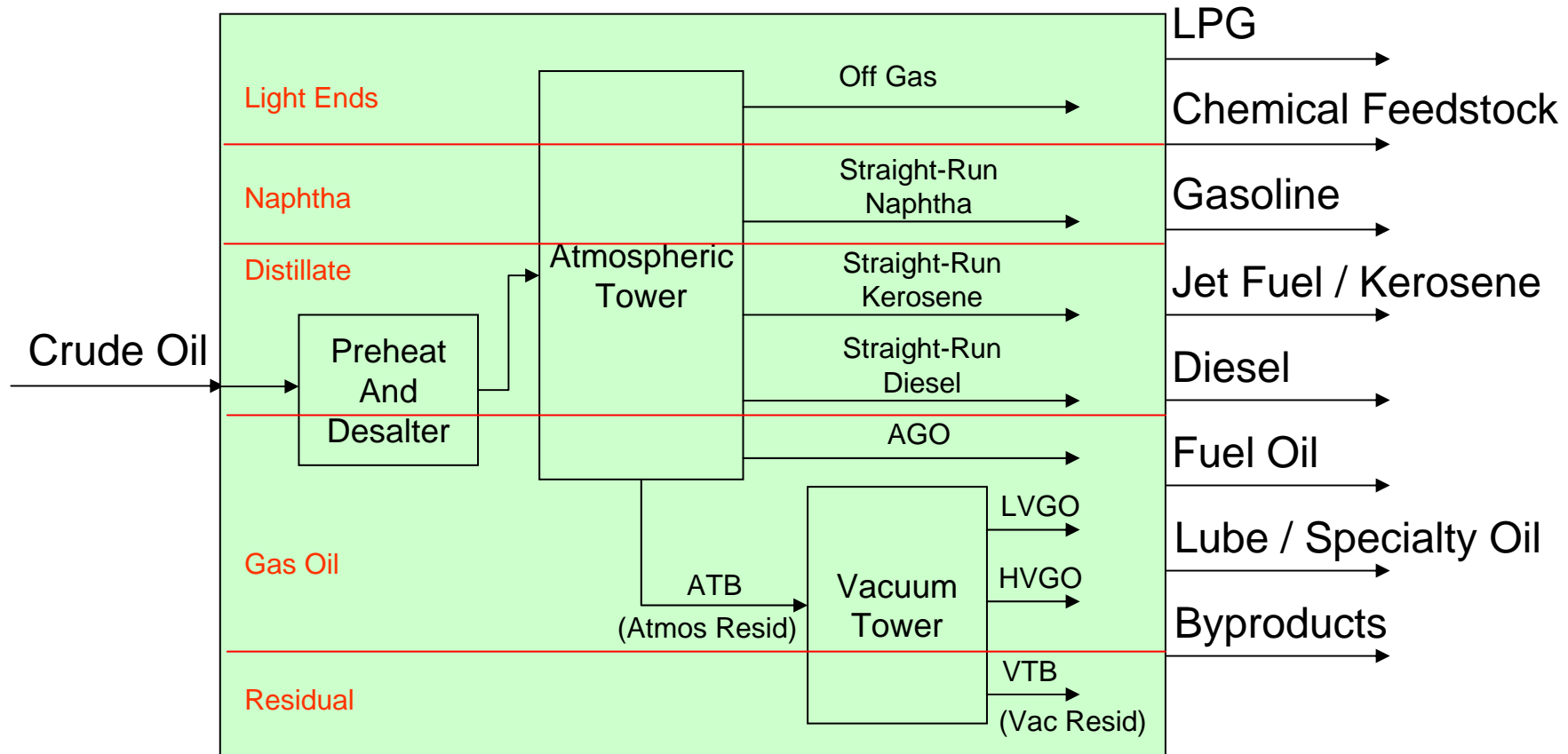
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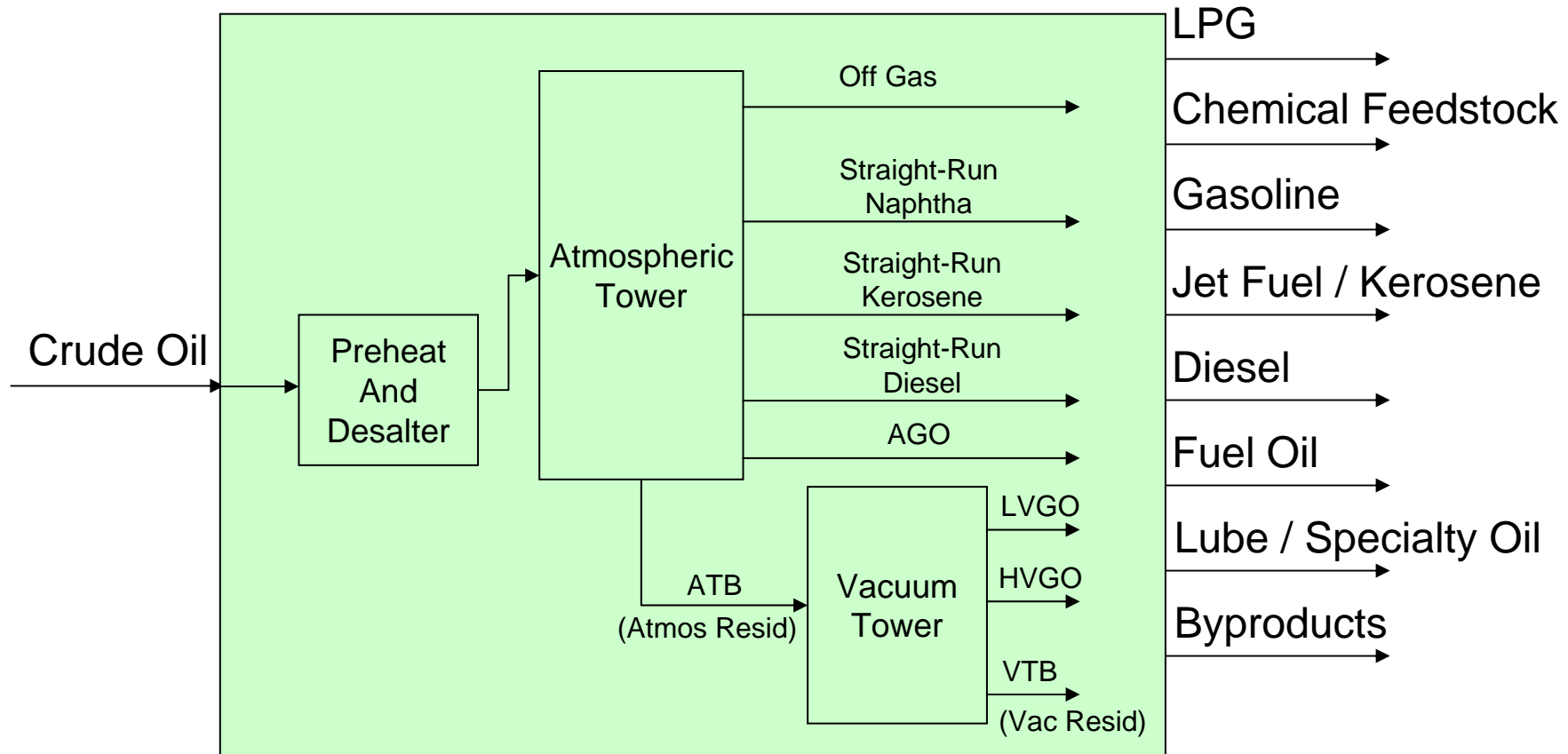
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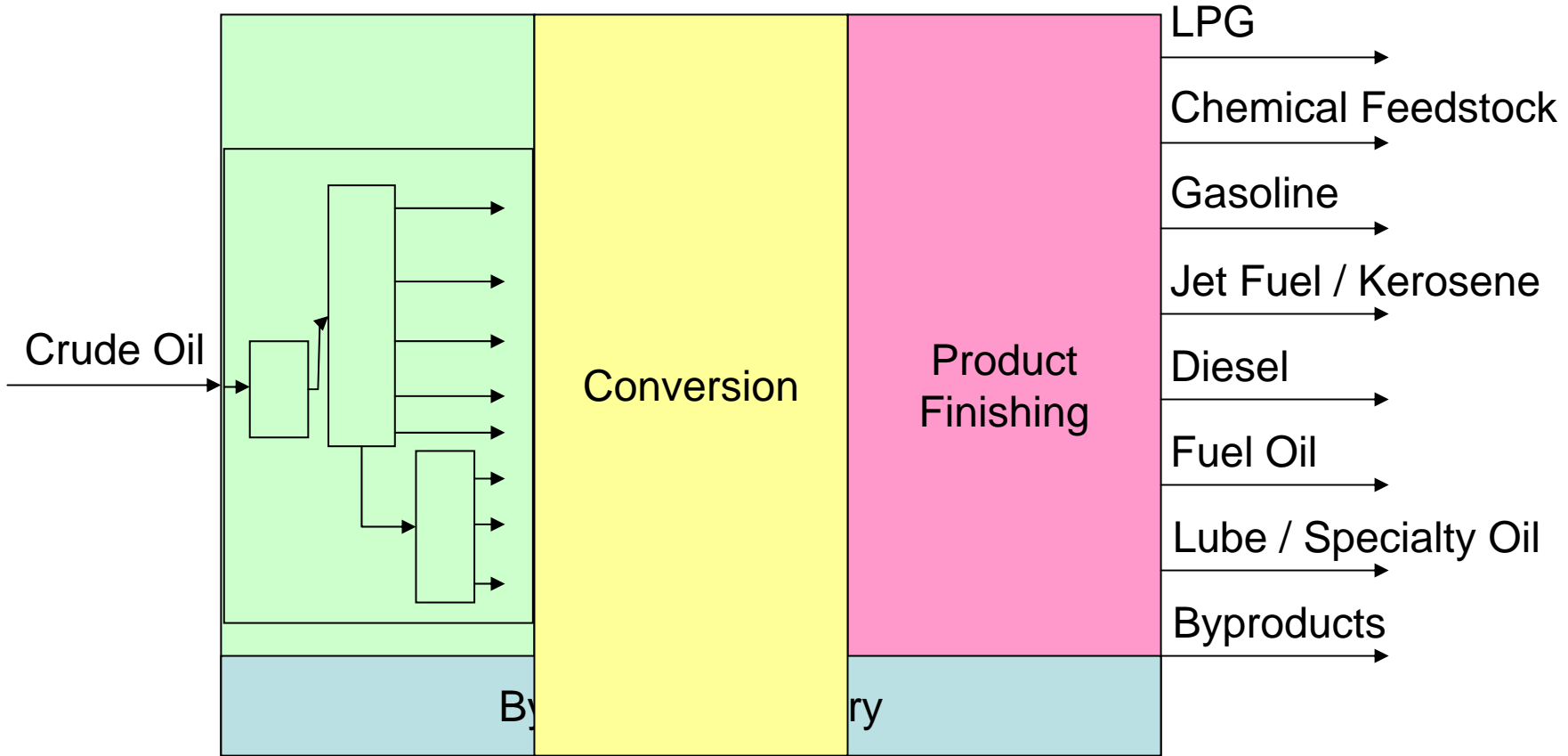
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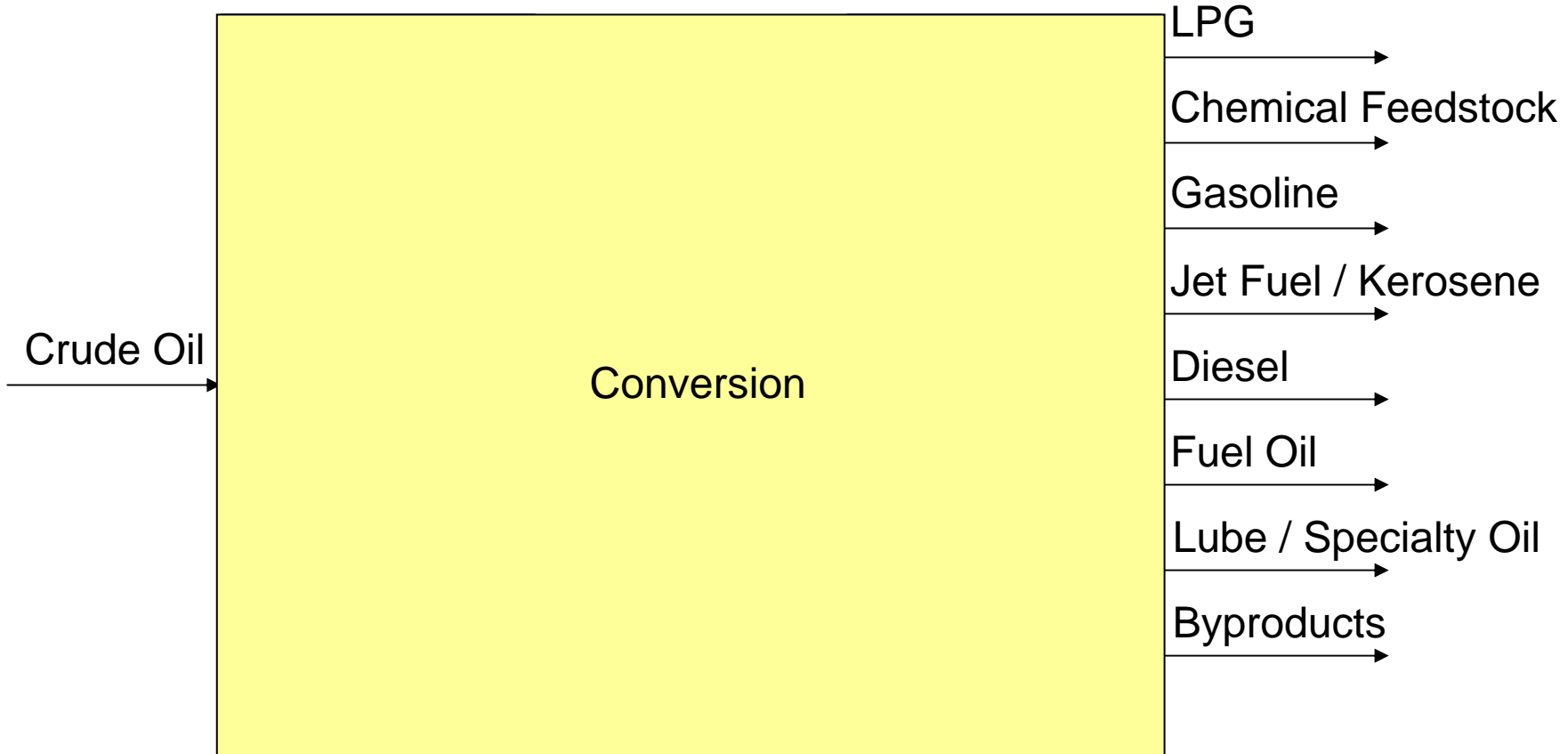
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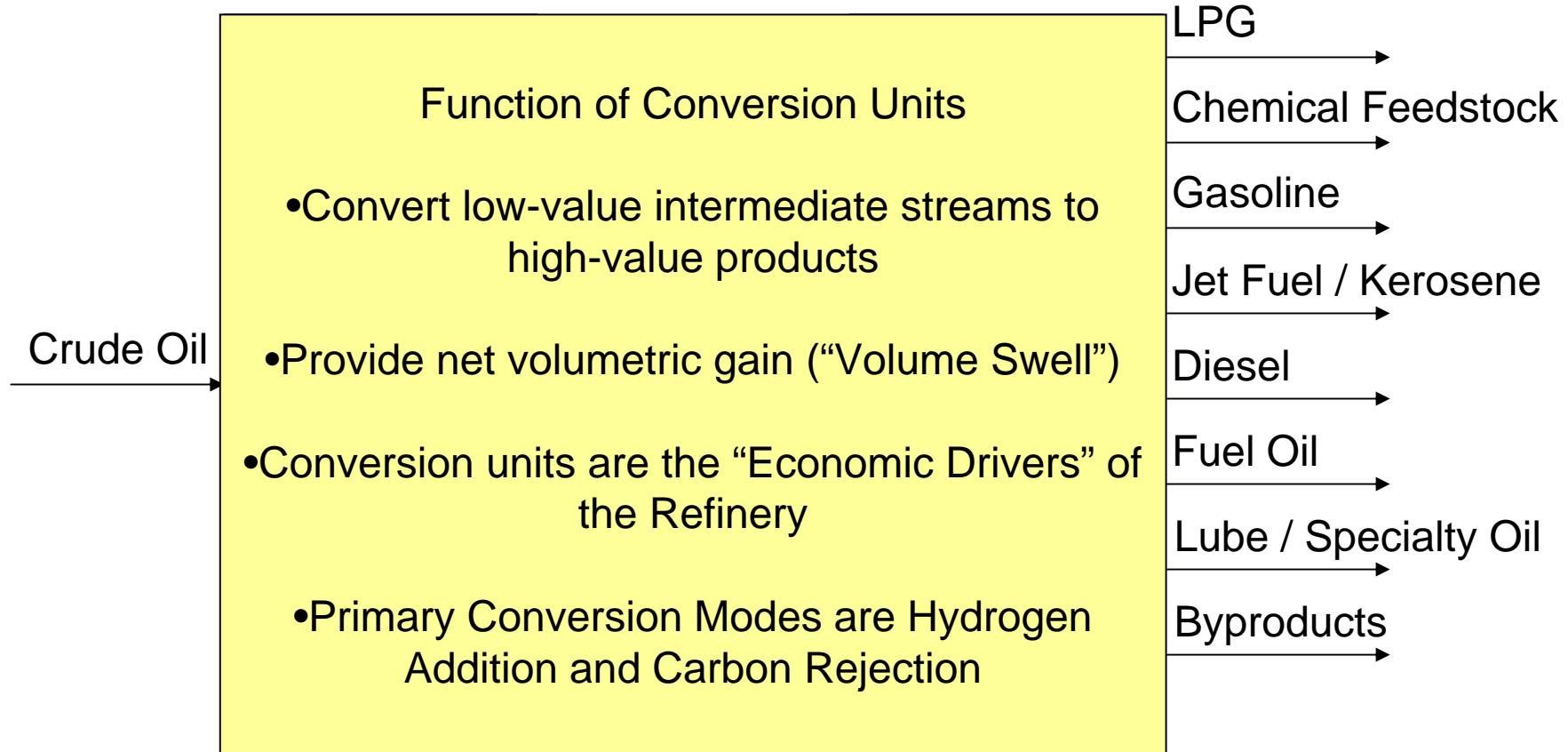
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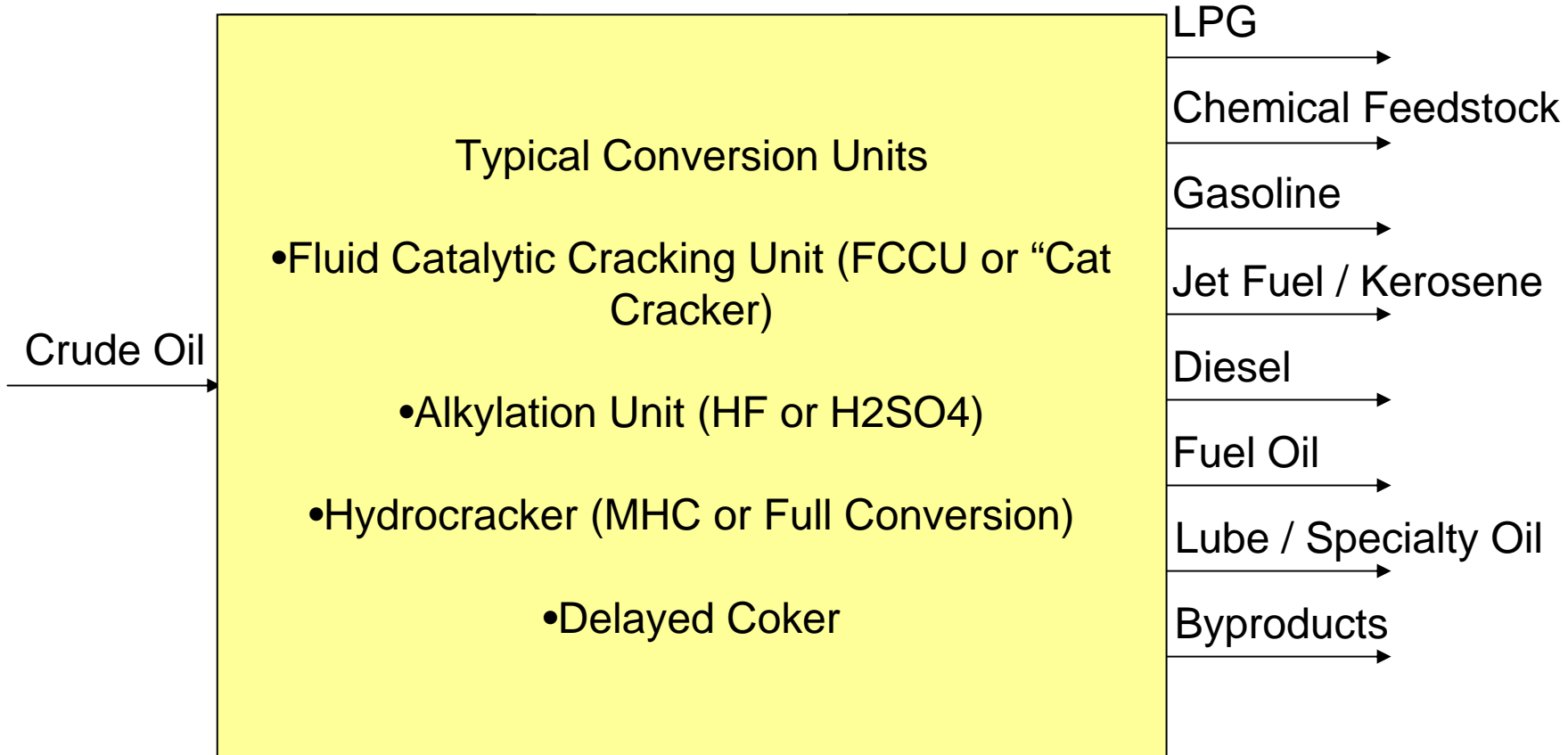
Crude  
Distillation      Conversion



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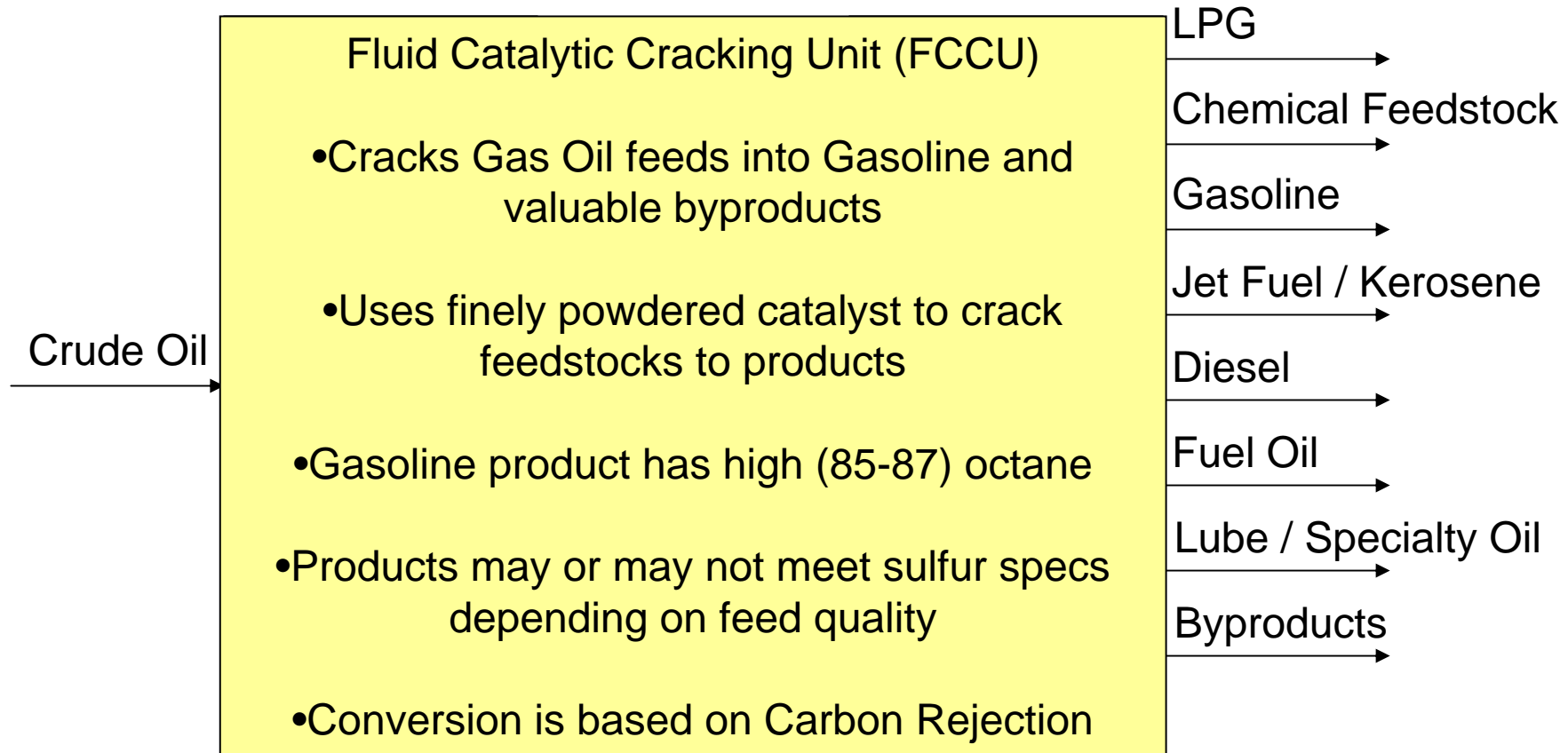
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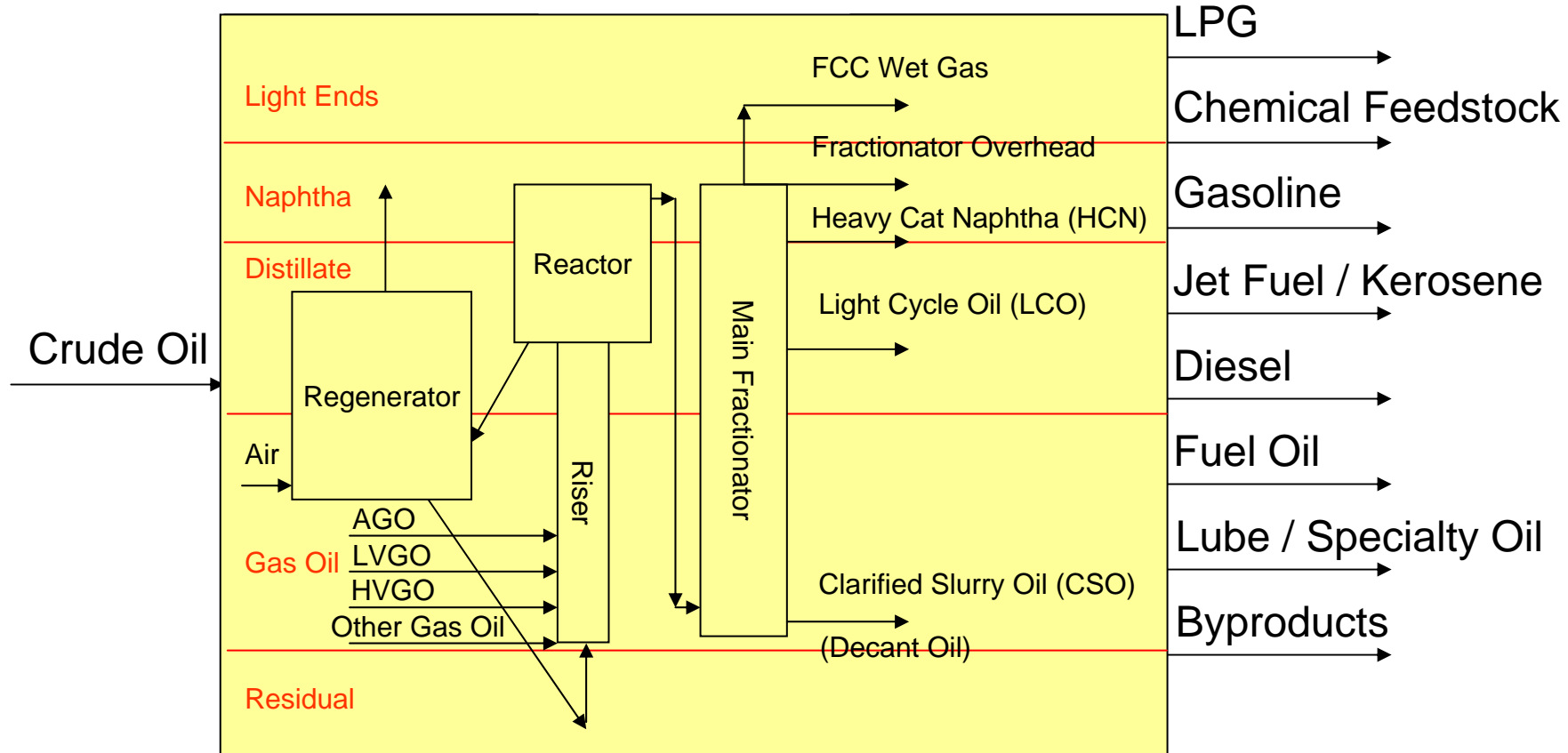
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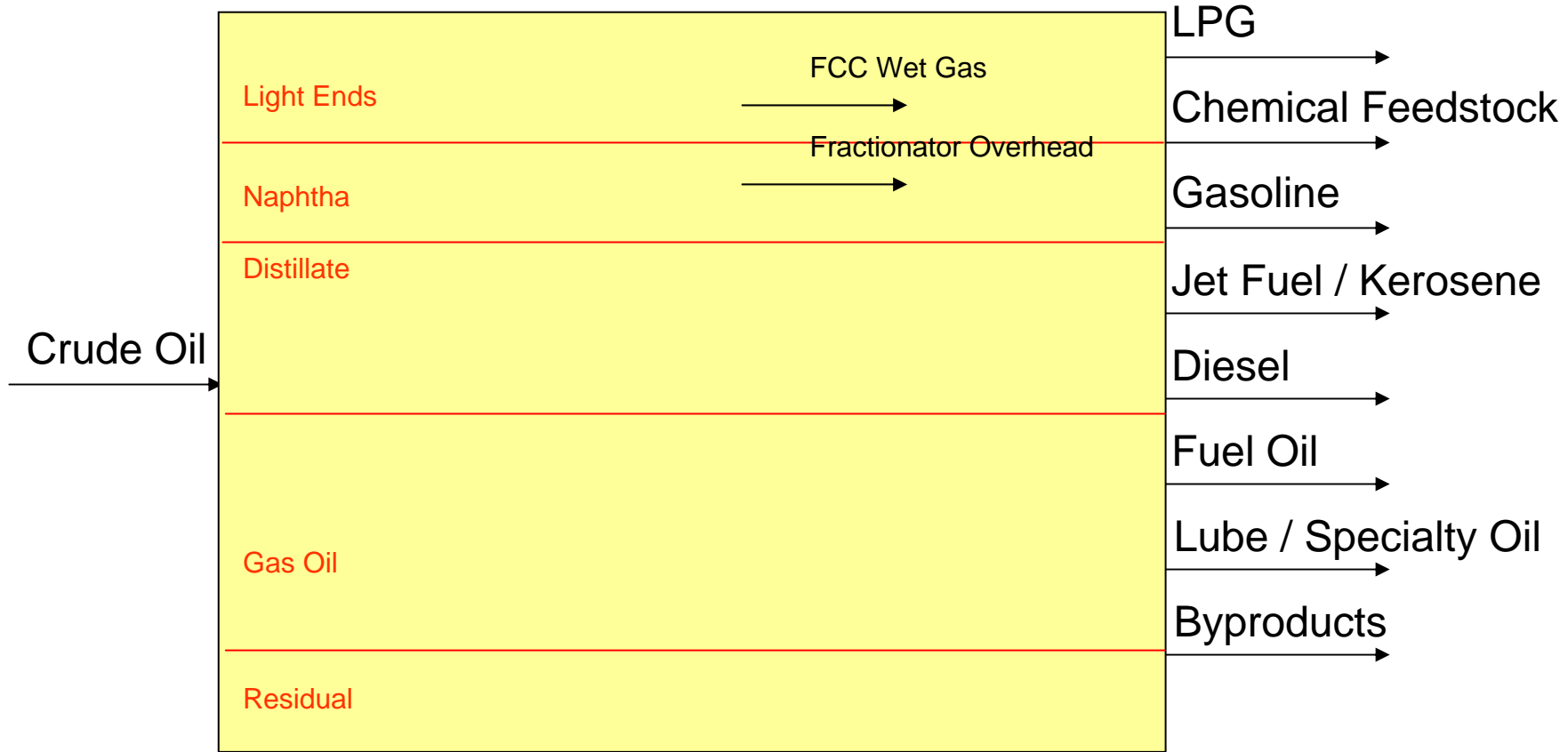
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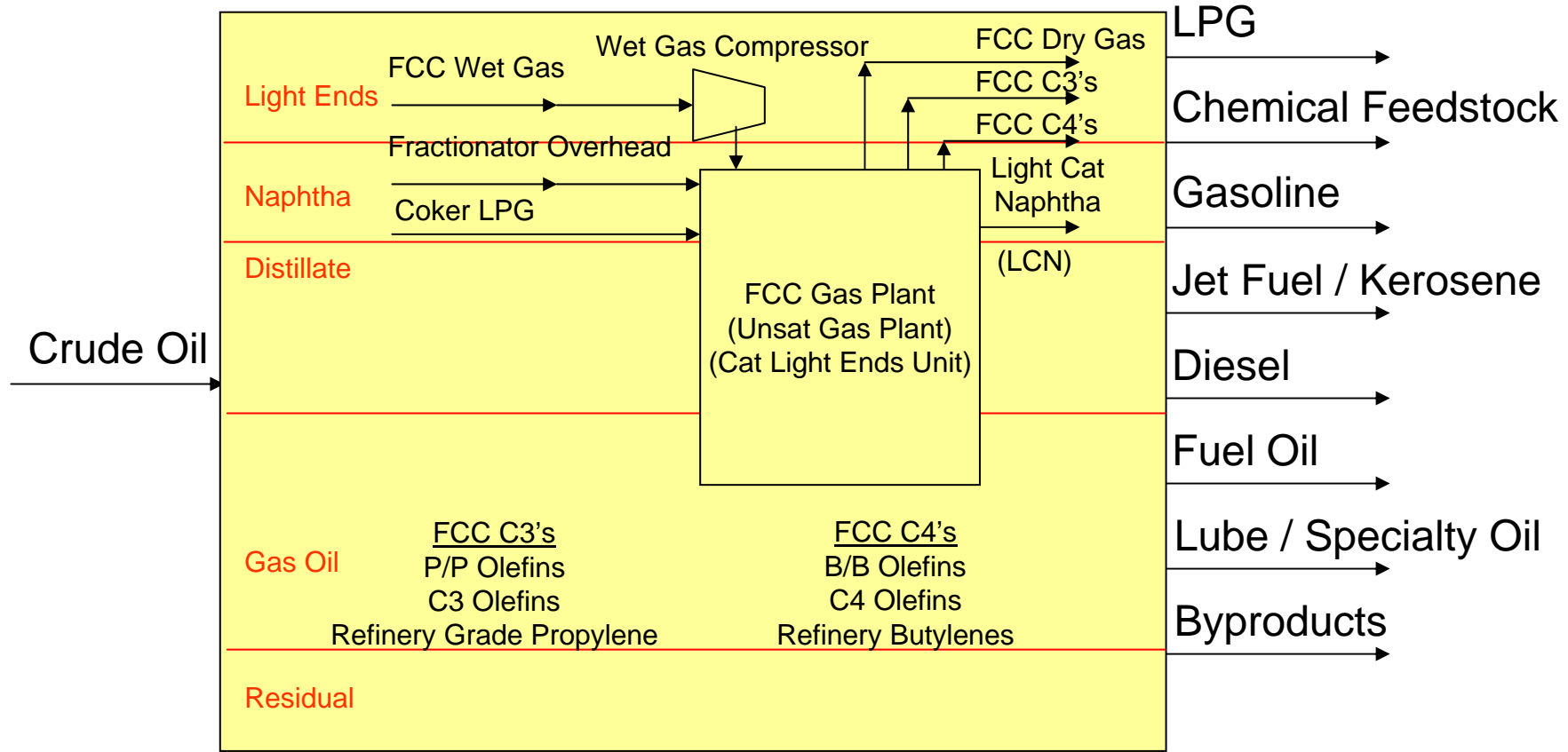
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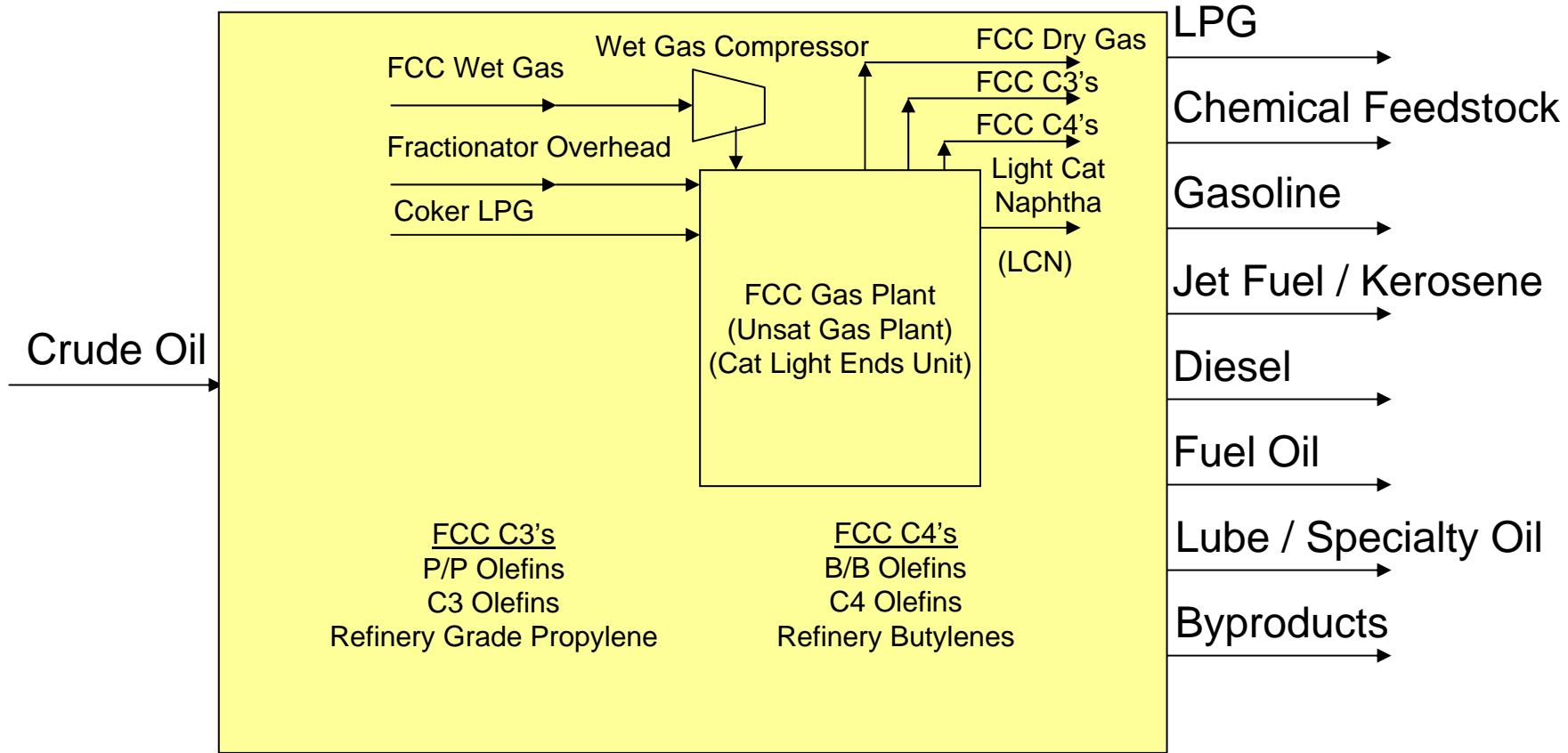
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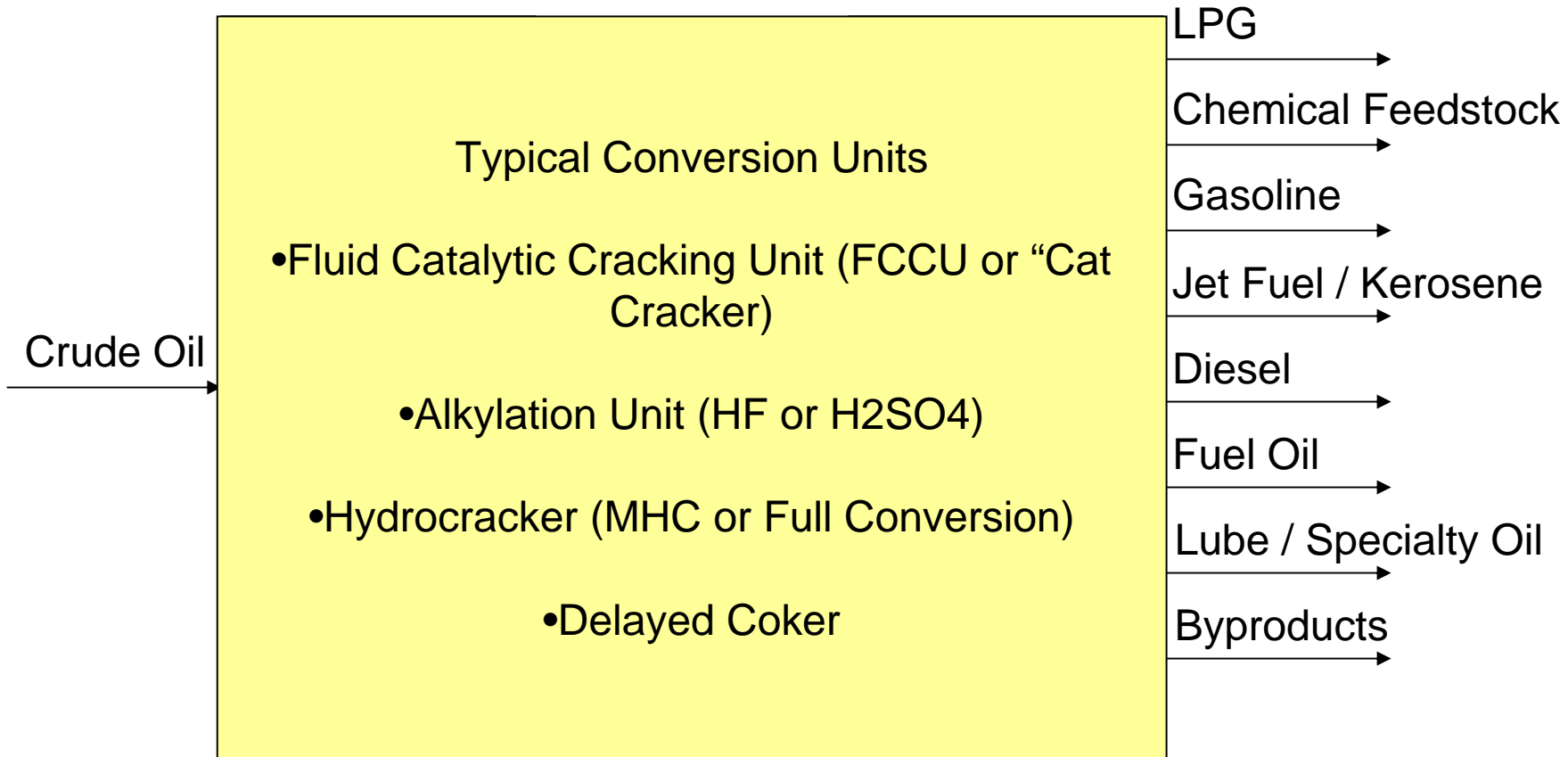
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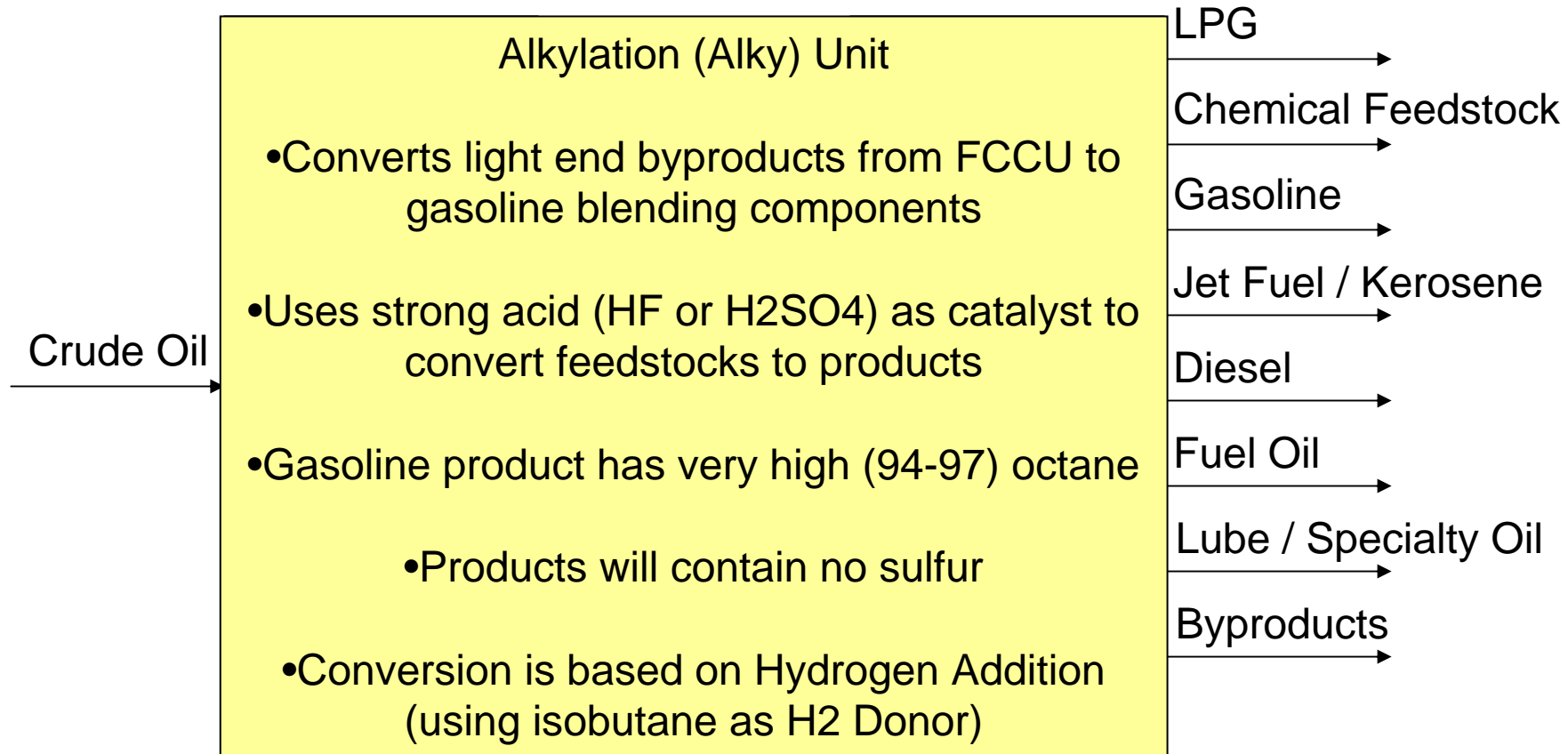
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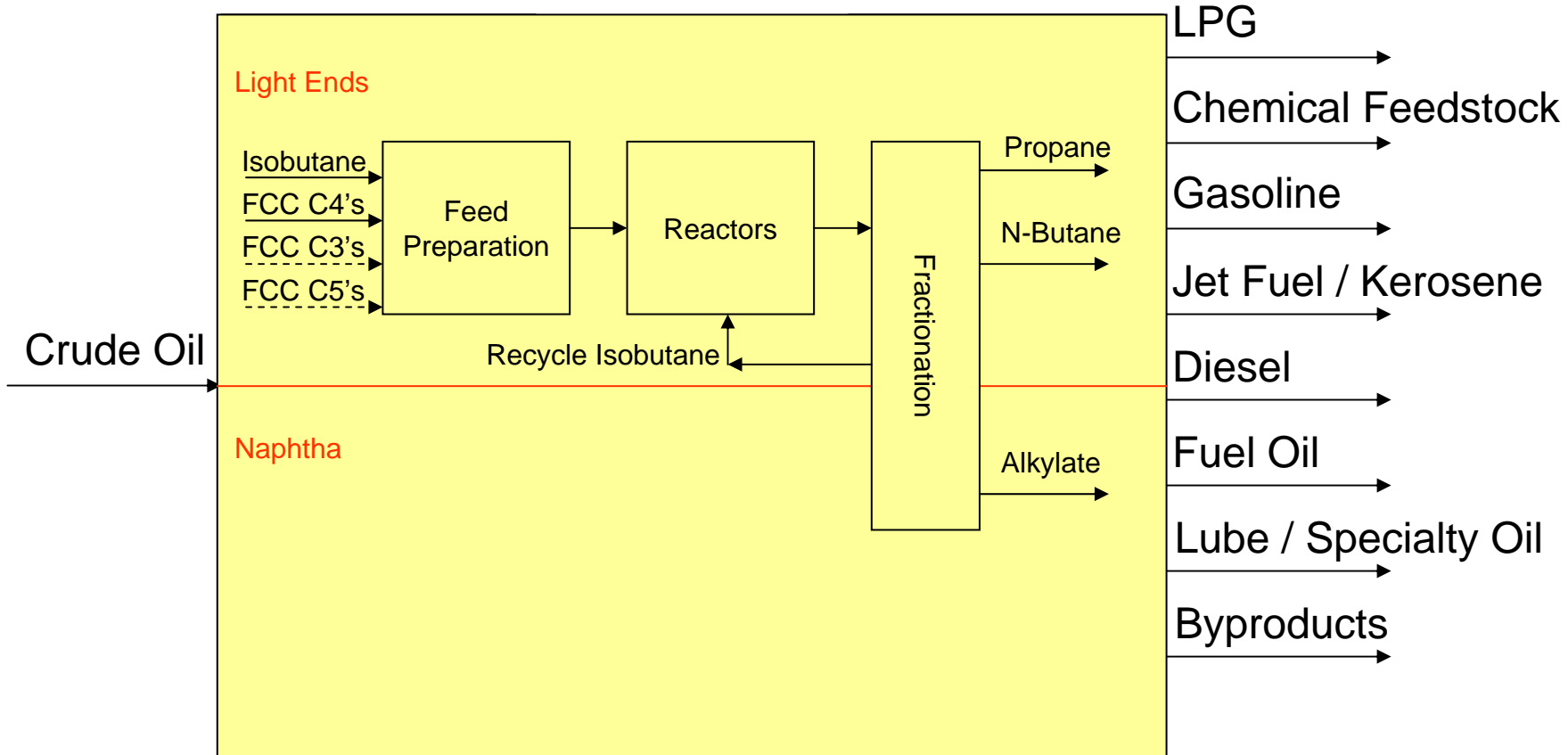
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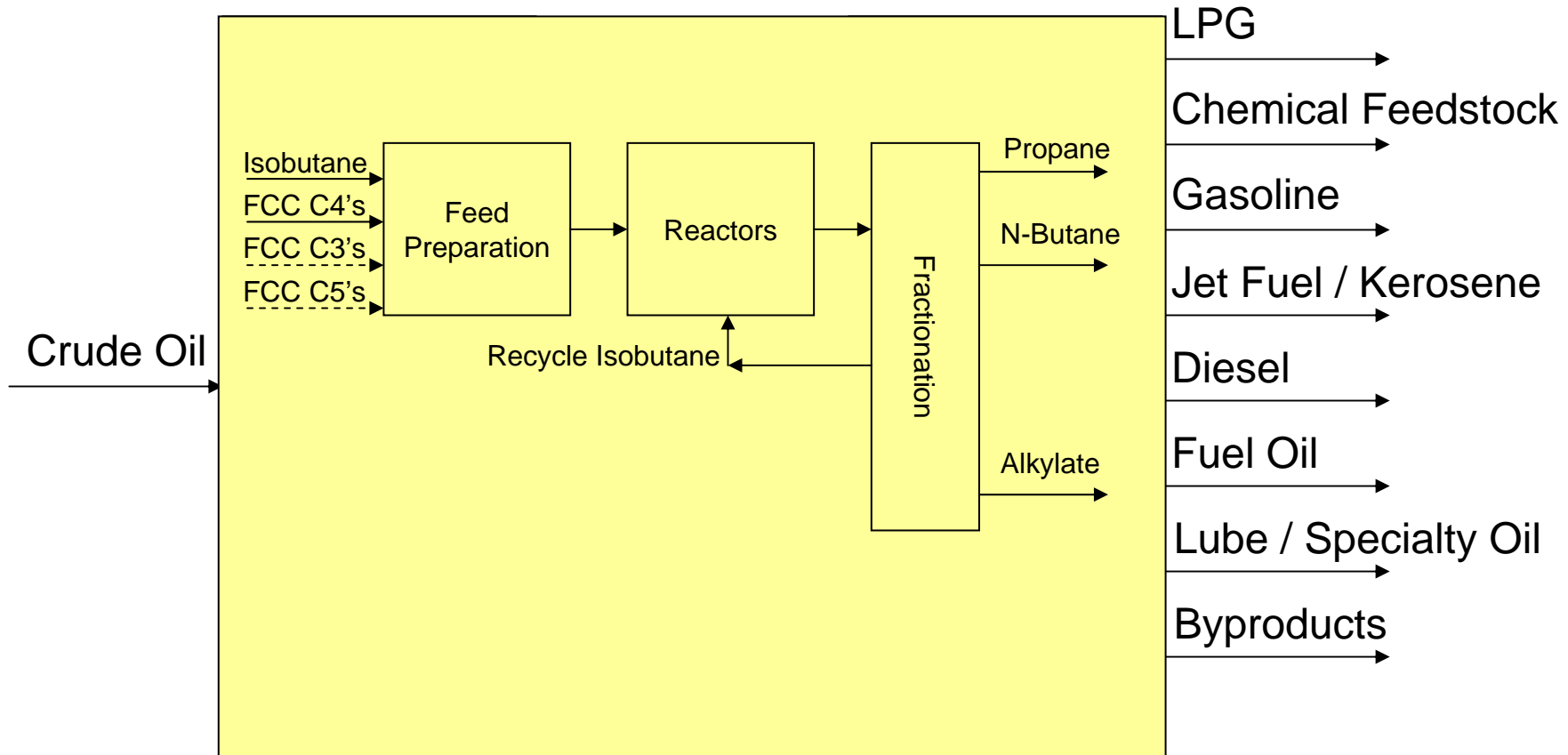
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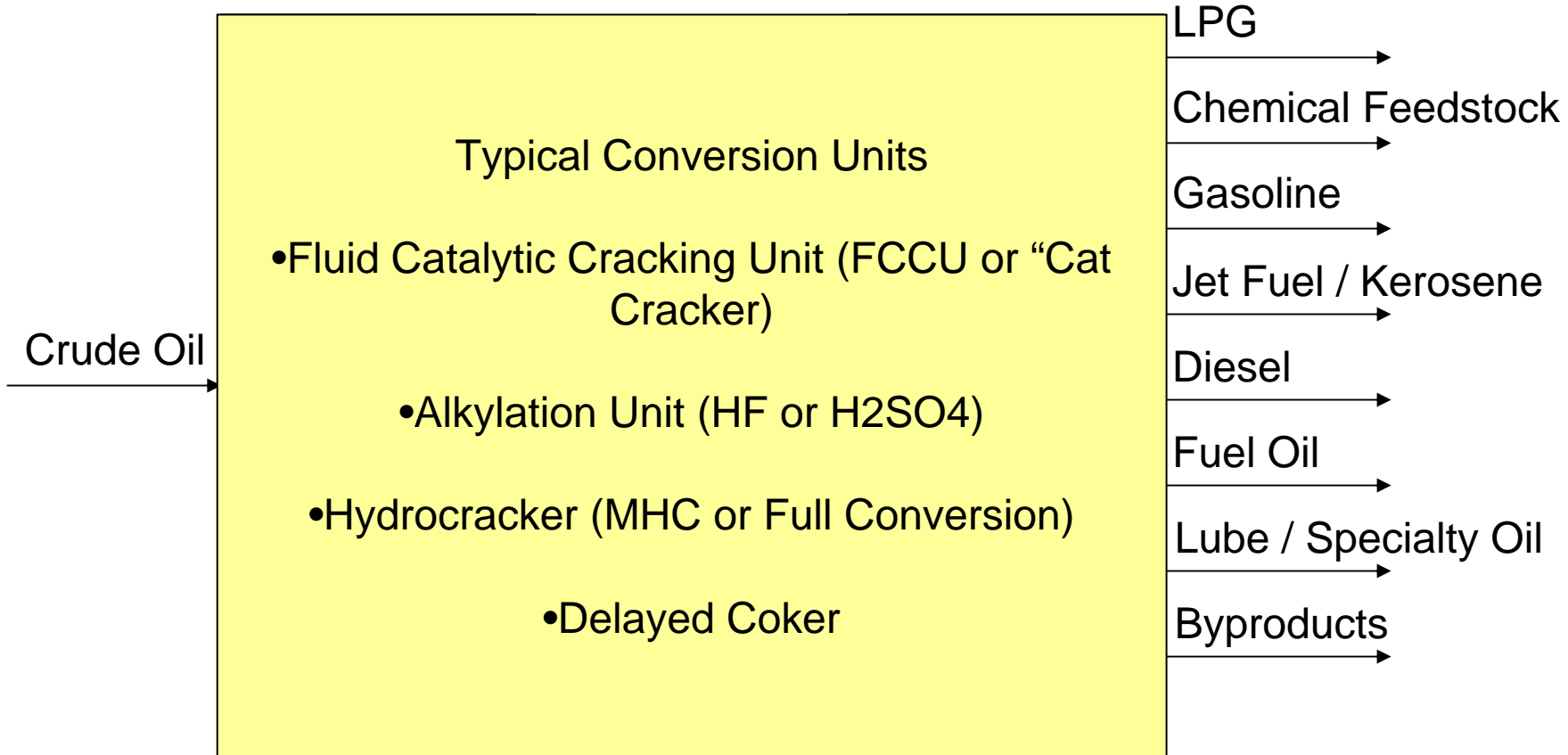
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Conversion

## Hydrocracker Unit

- Converts Gas Oil and other low-value Refinery streams to diesel and gasoline
- Uses hydrogen and solid catalyst to convert feedstocks to products
- Gasoline product has medium (80-85) octane - makes good CCR feedstock
- Diesel product has excellent cetane properties
  - Products will meet low-sulfur specs
- Conversion is based on Hydrogen Addition

LPG

Chemical Feedstock

Gasoline

Jet Fuel / Kerosene

Diesel

Fuel Oil

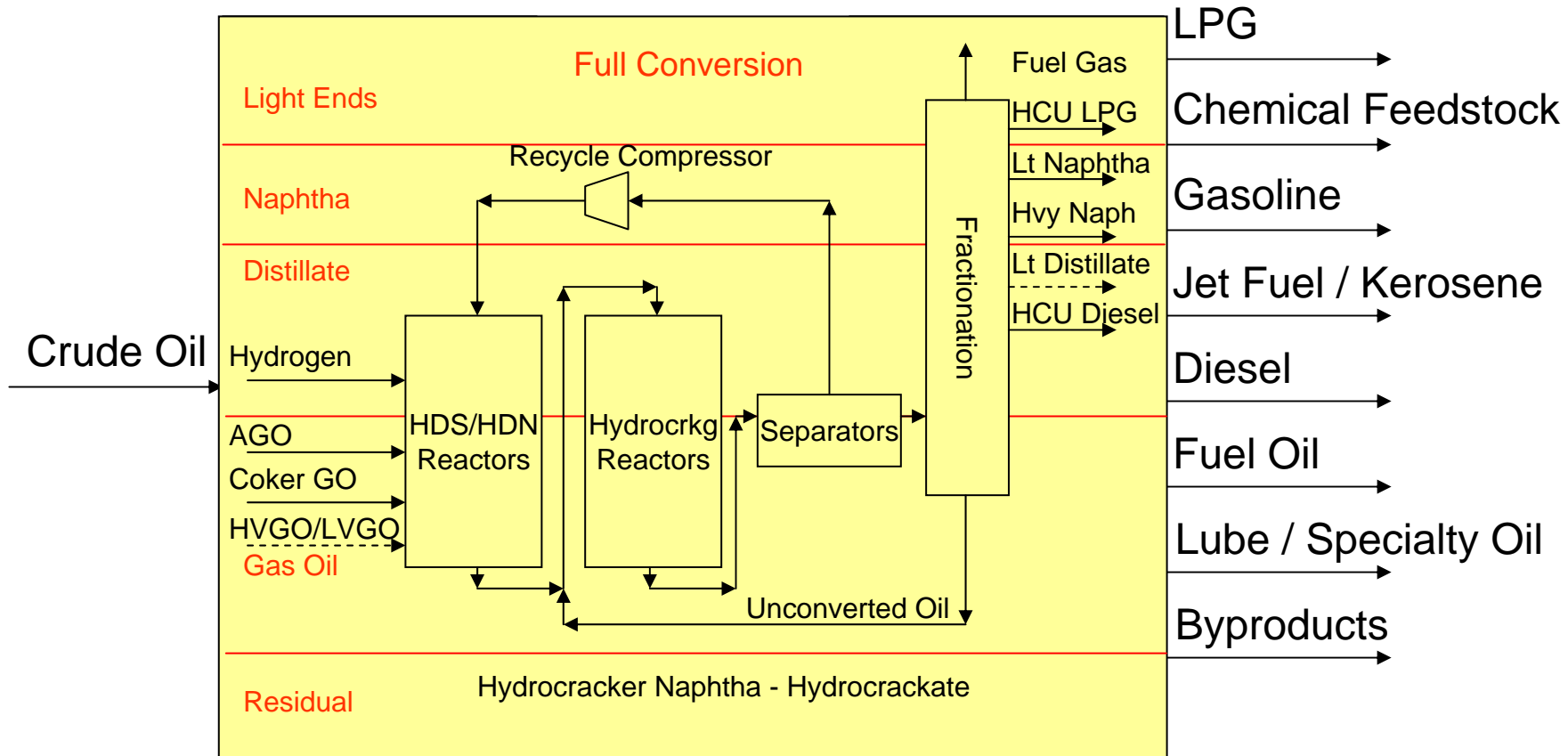
Lube / Specialty Oil

Byproducts

Crude Oil

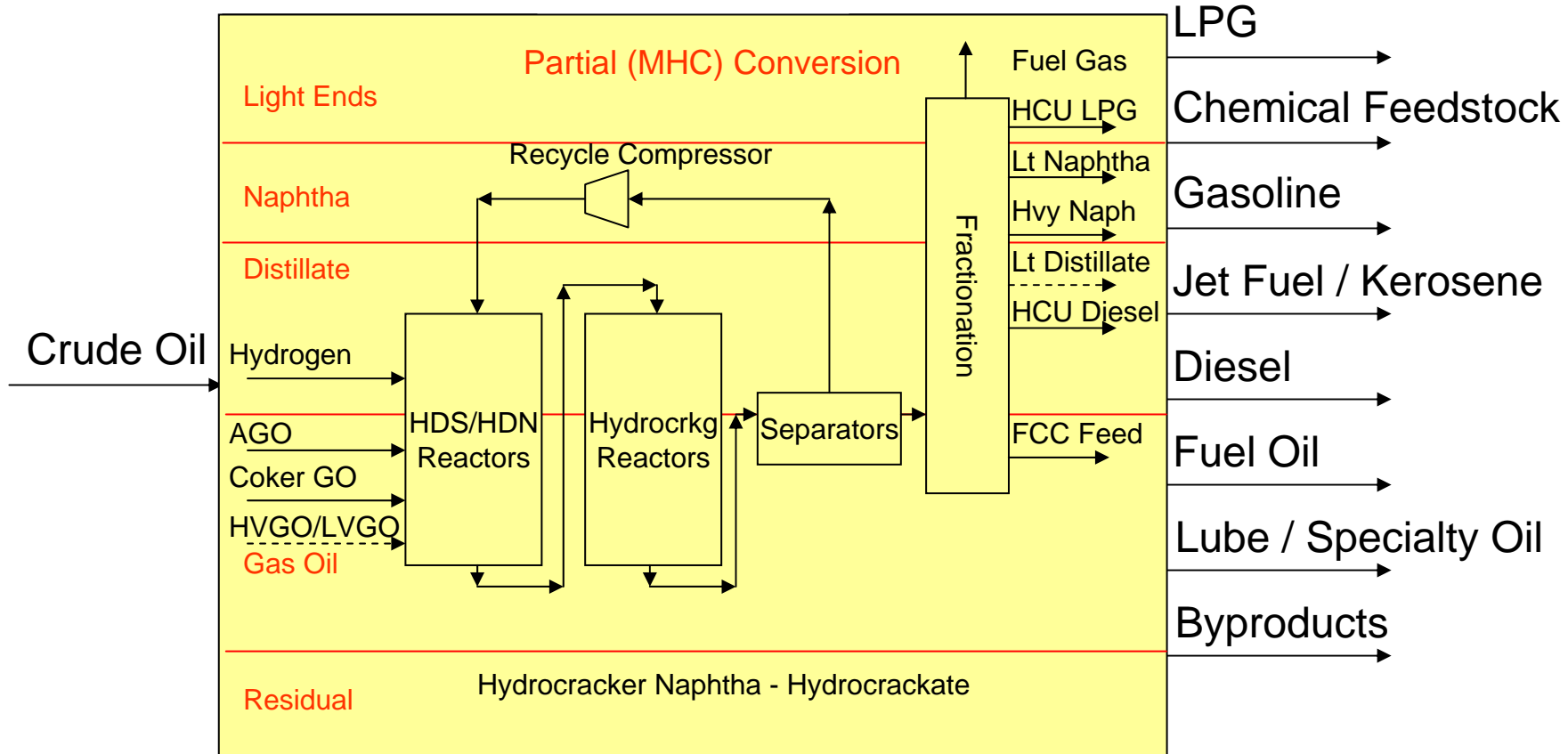
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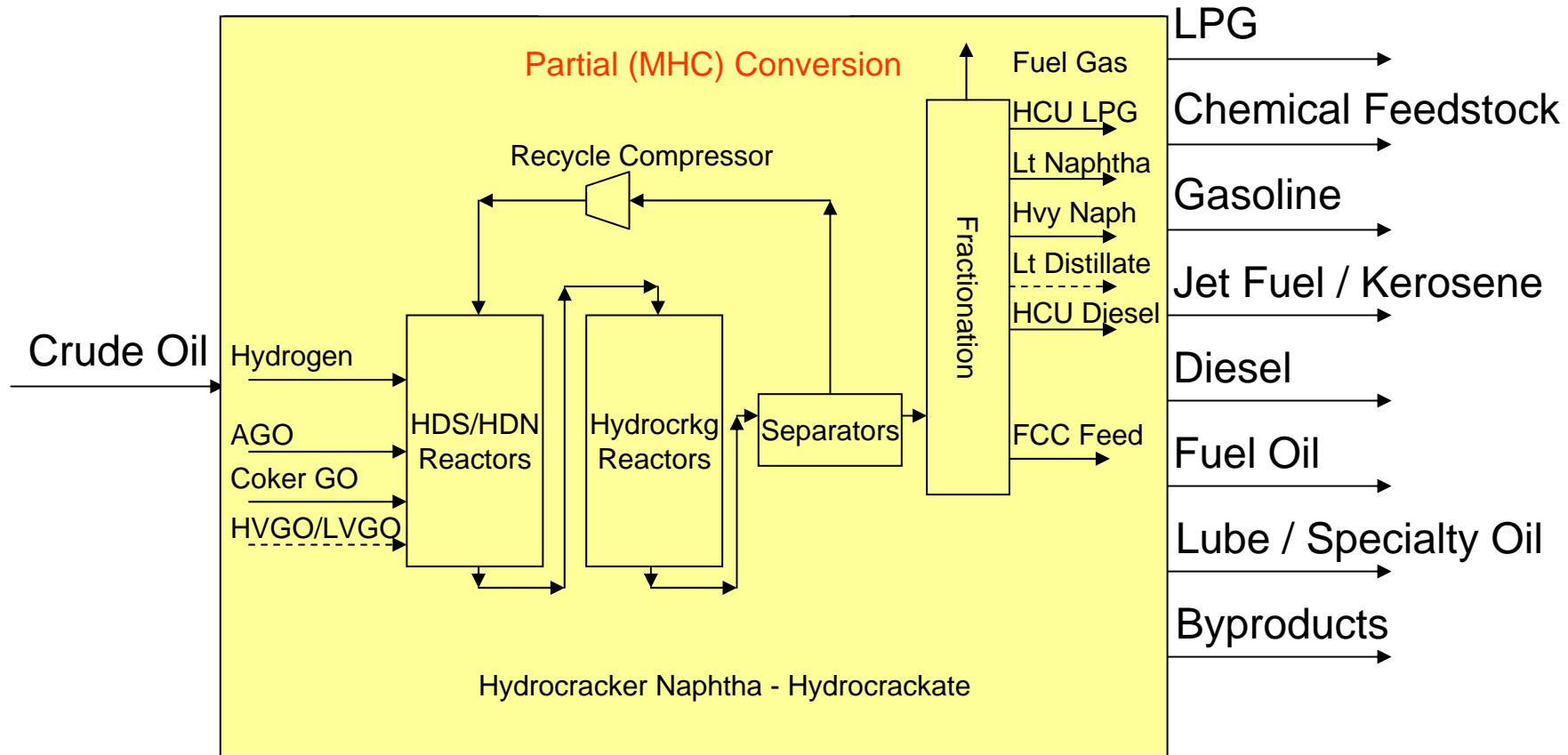
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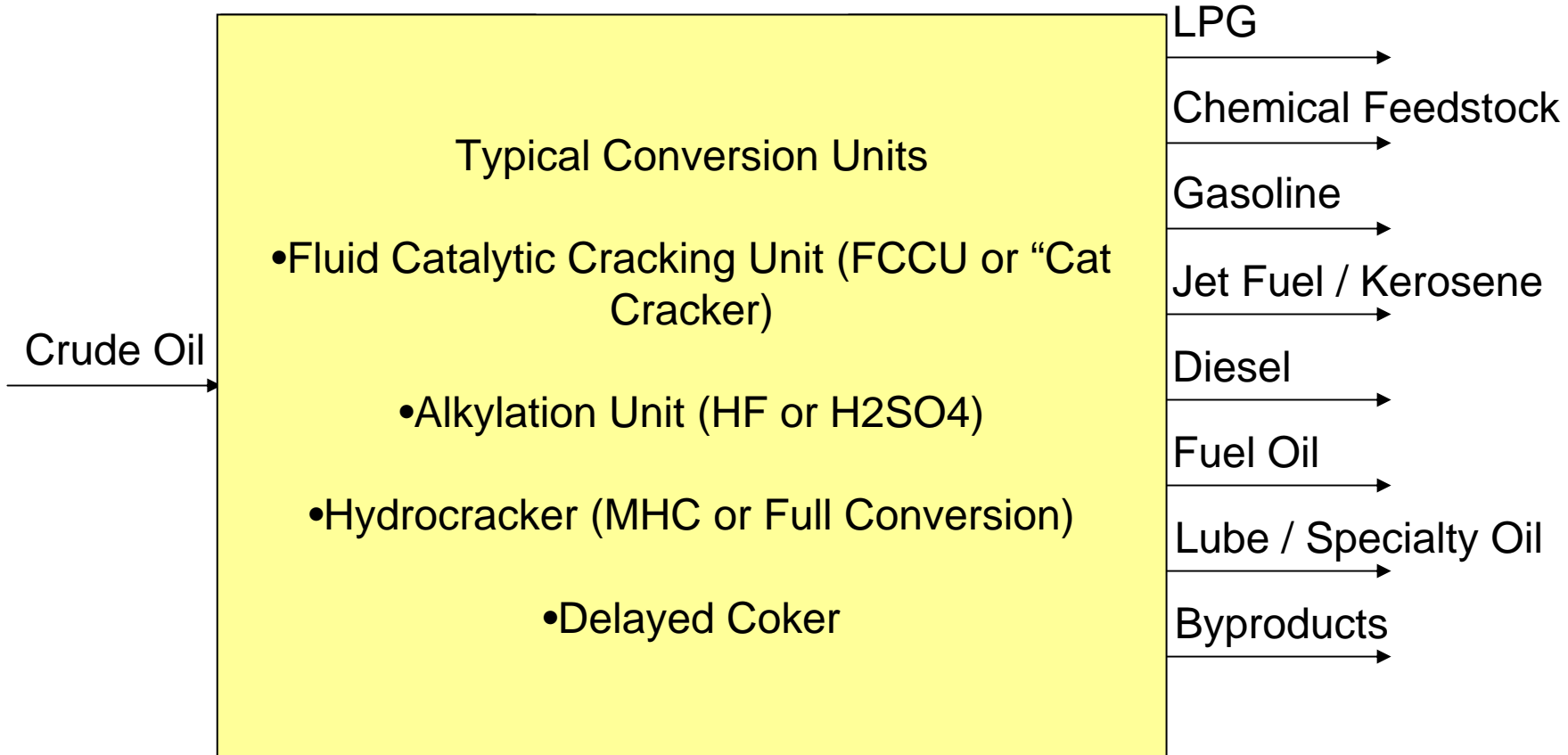
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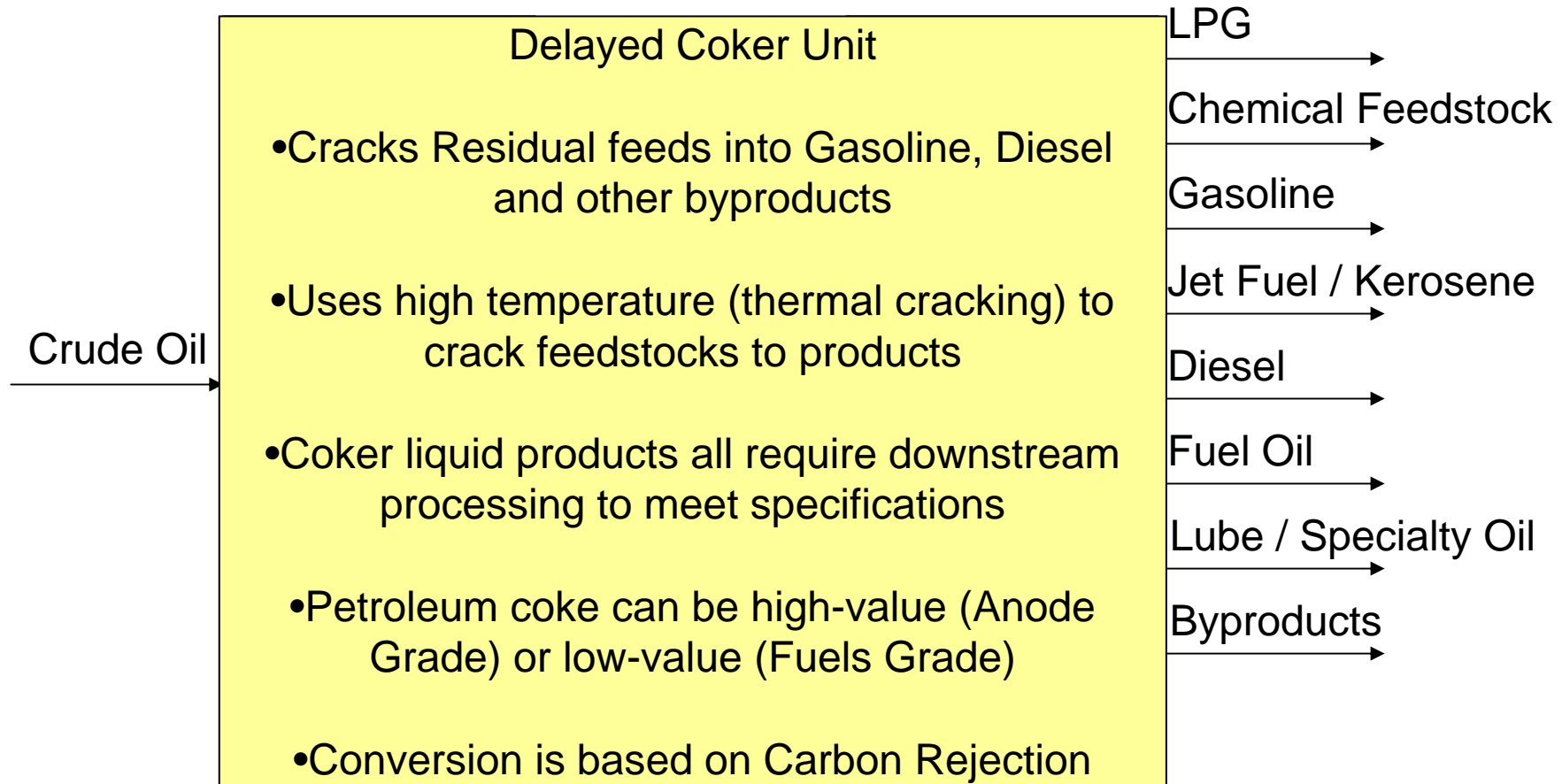
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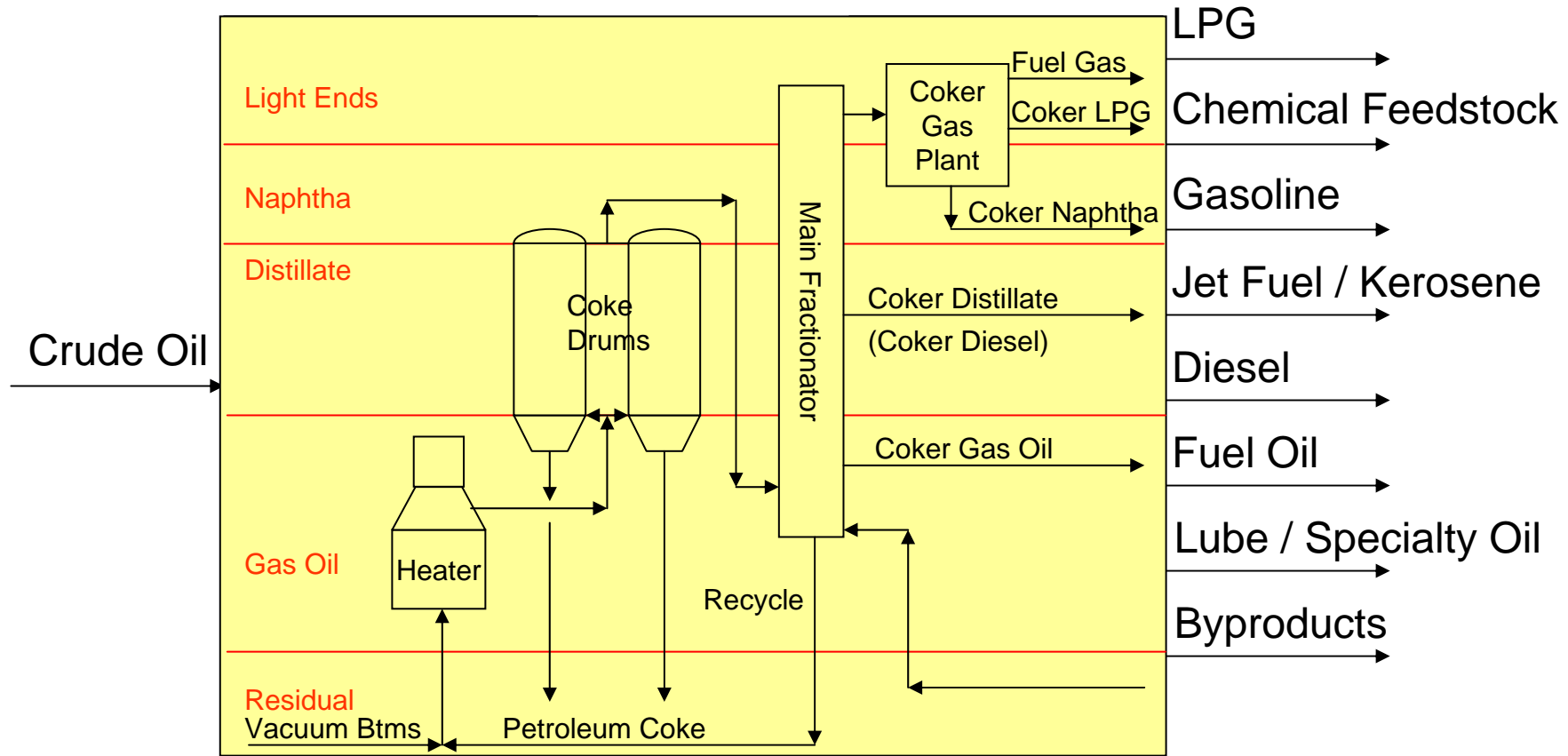
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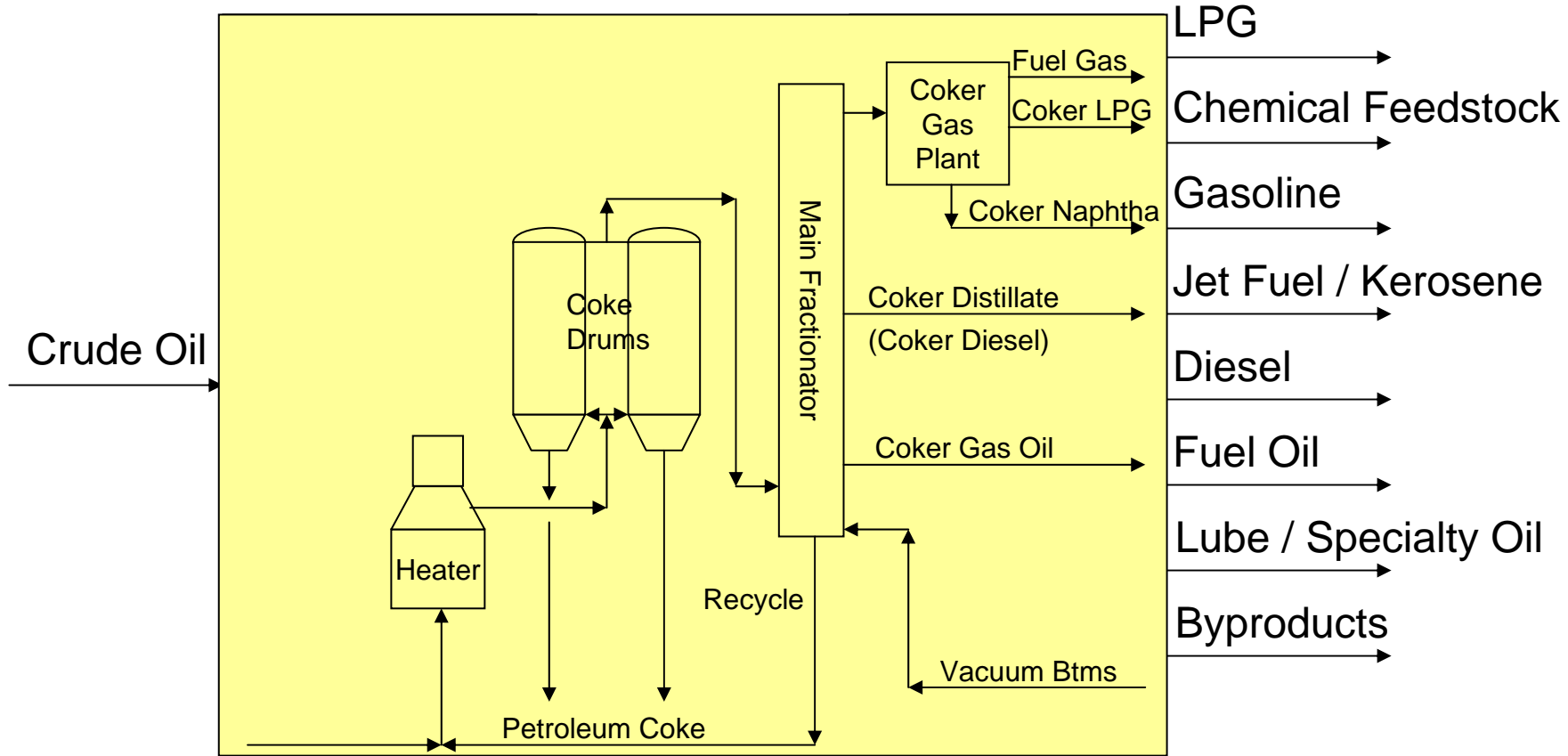
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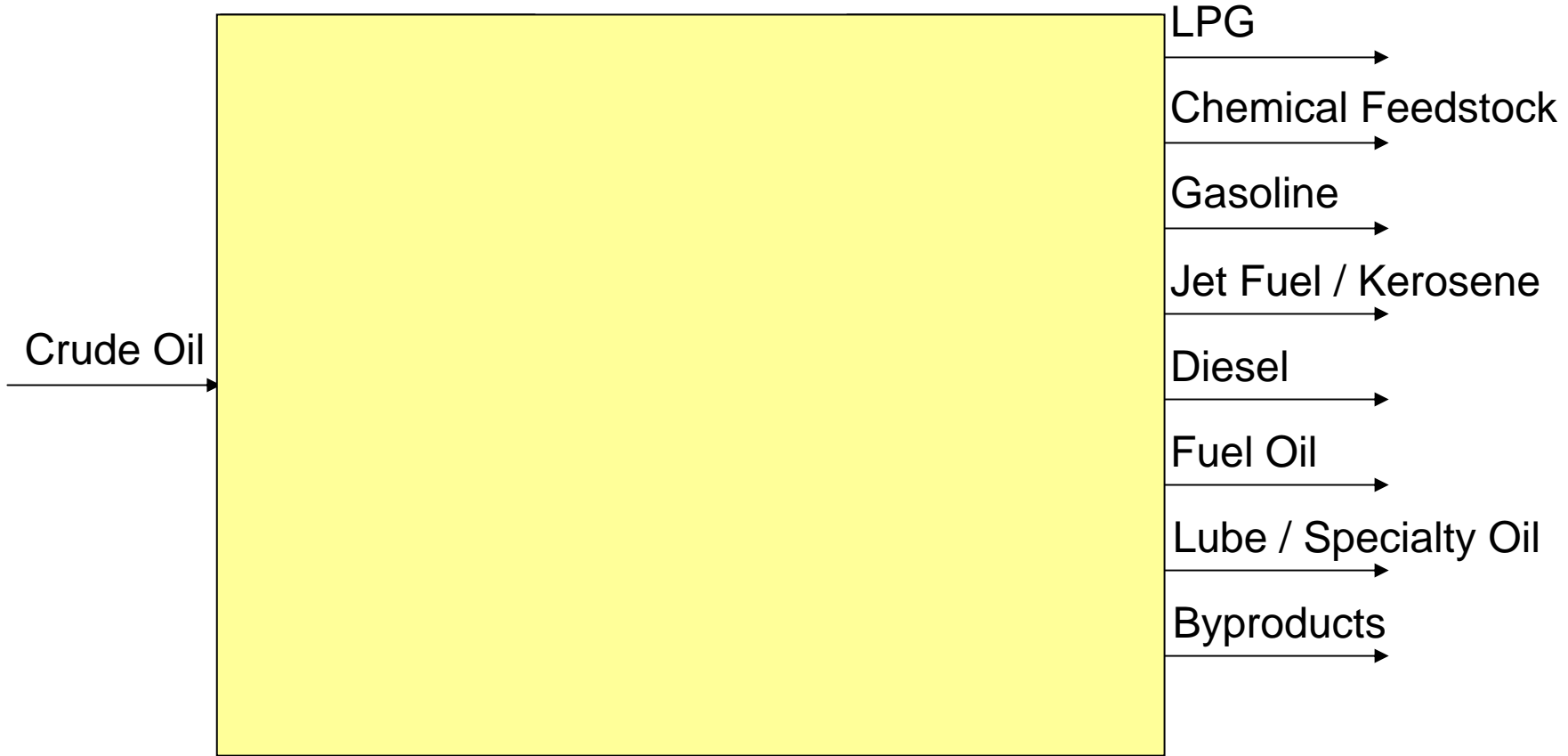
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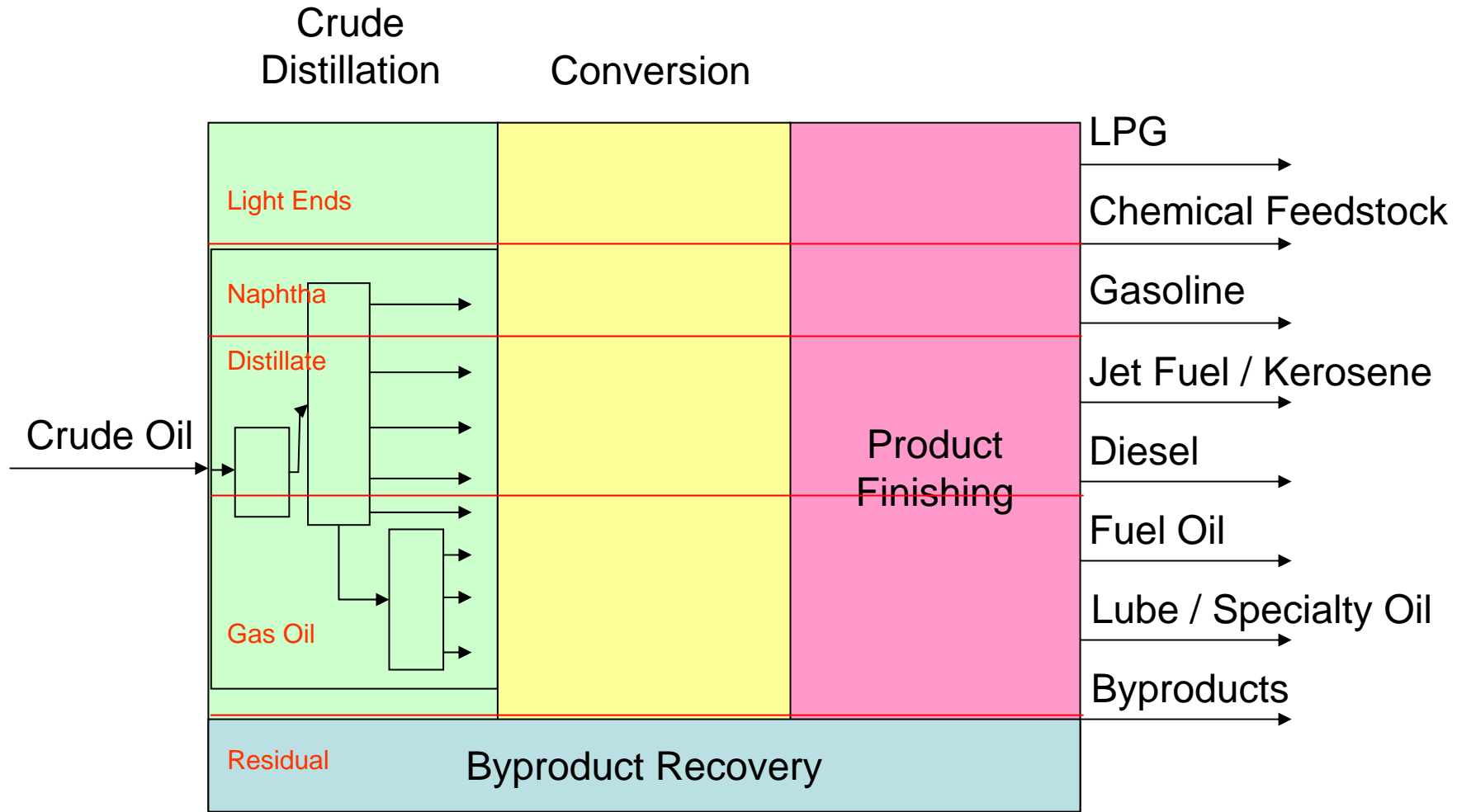


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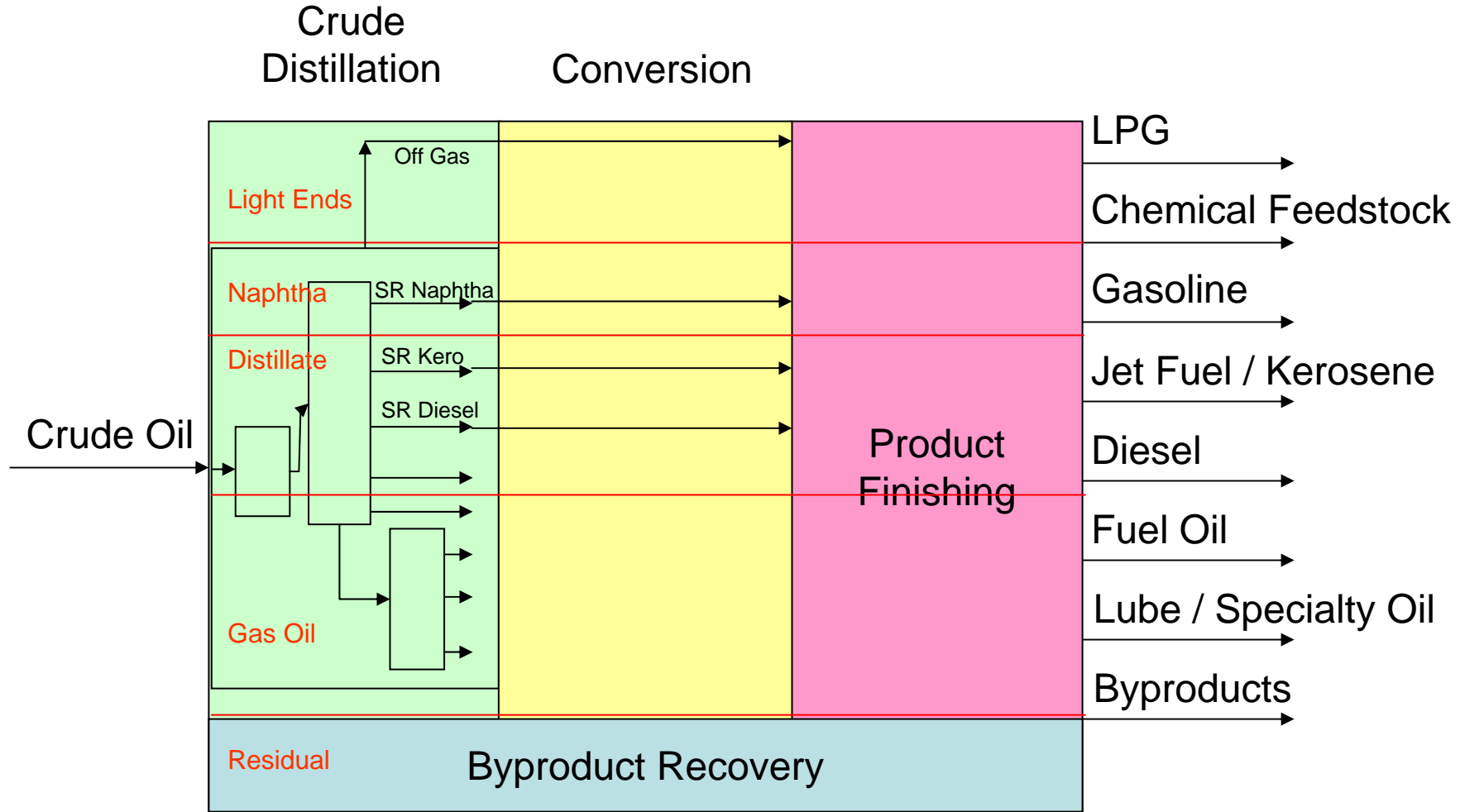
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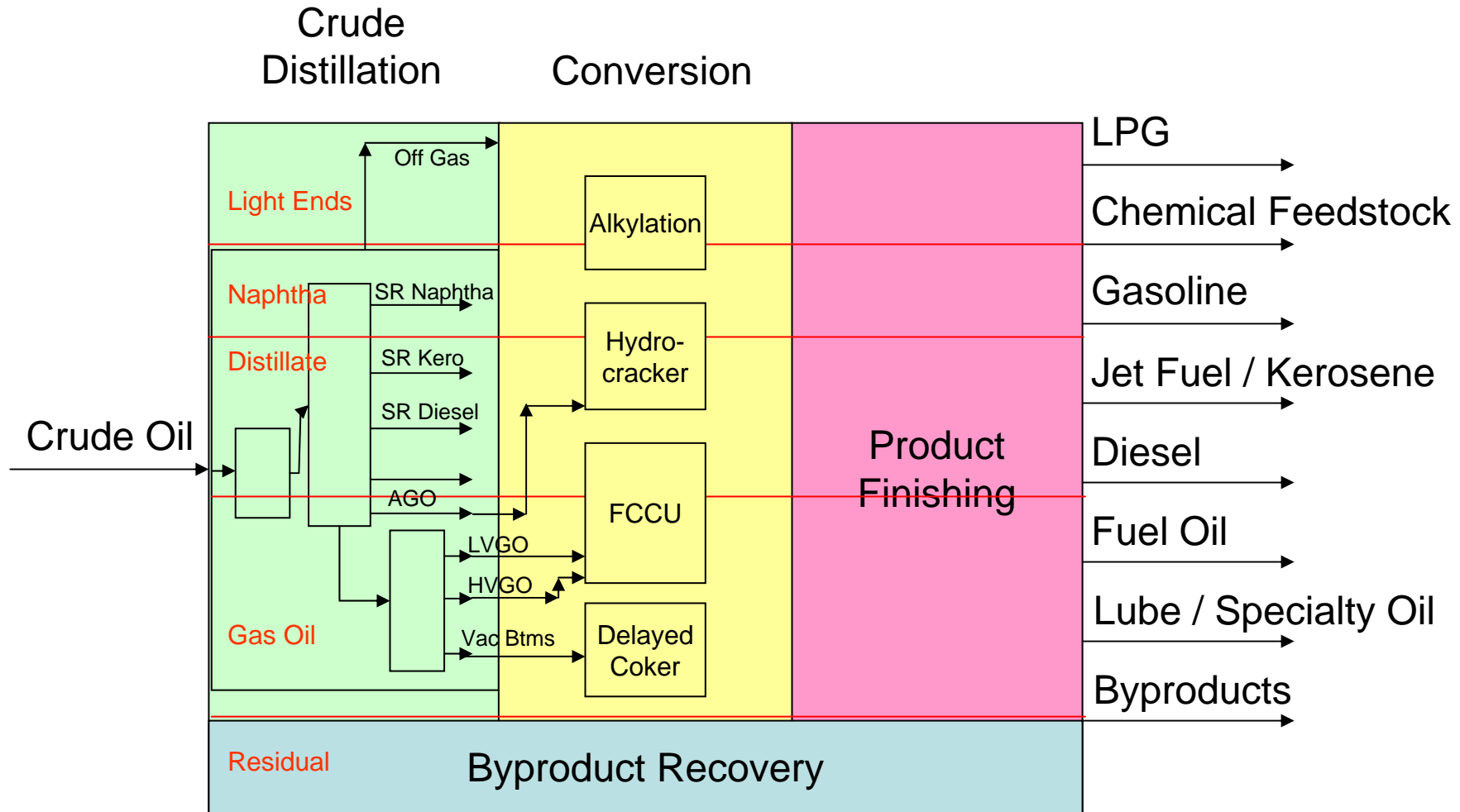
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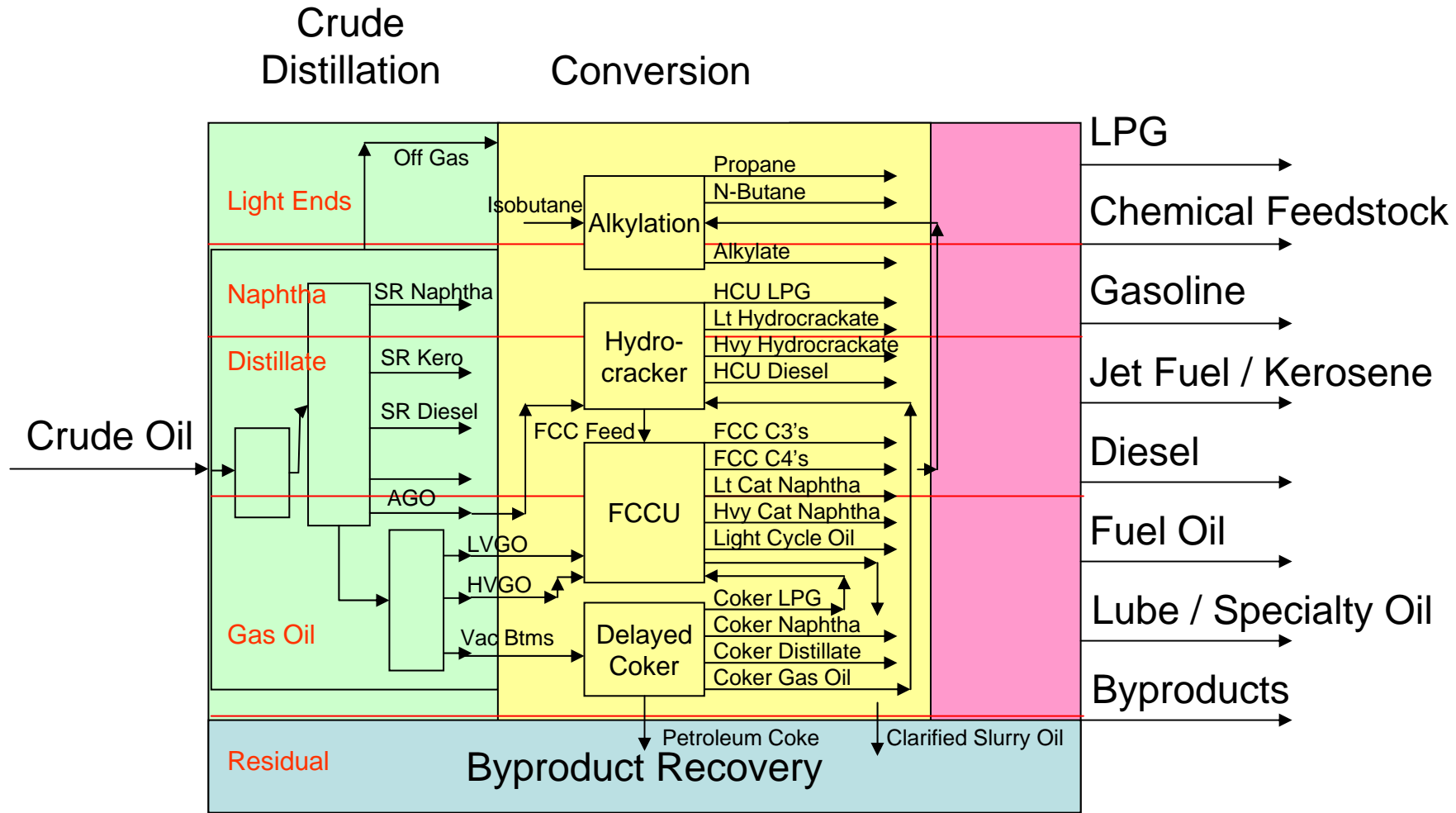
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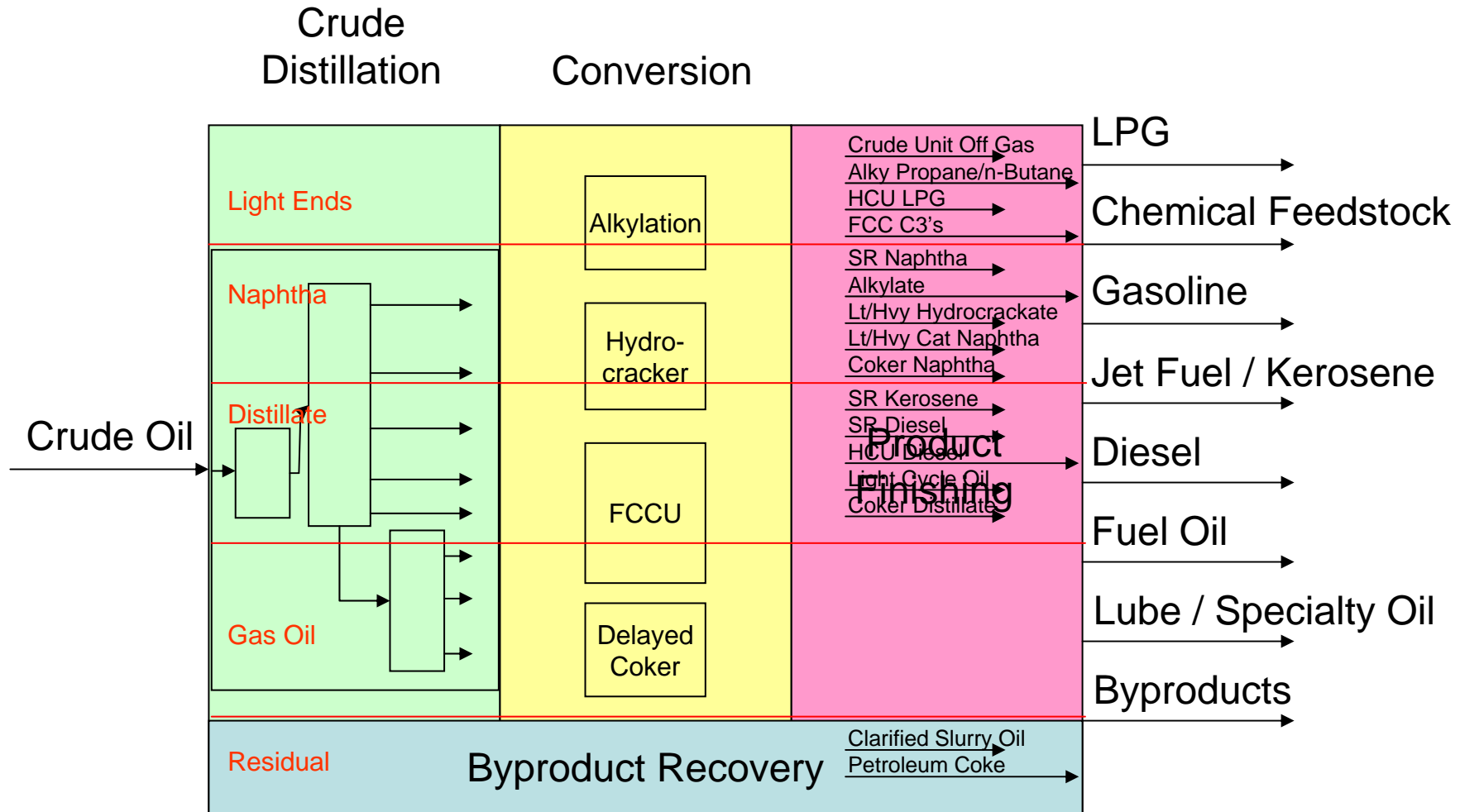
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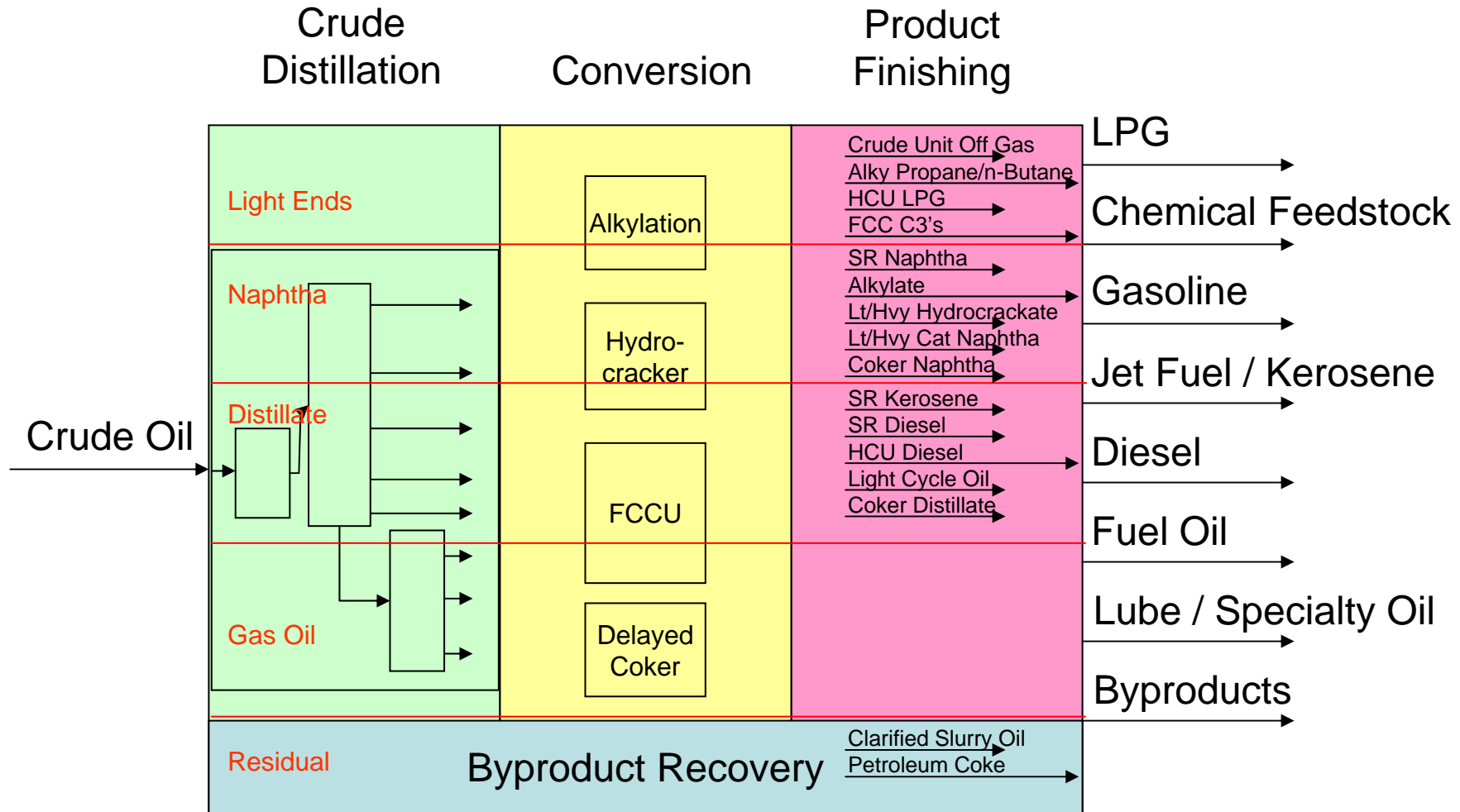
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Questions and Comments?