



**S&P Global**

Commodity Insights

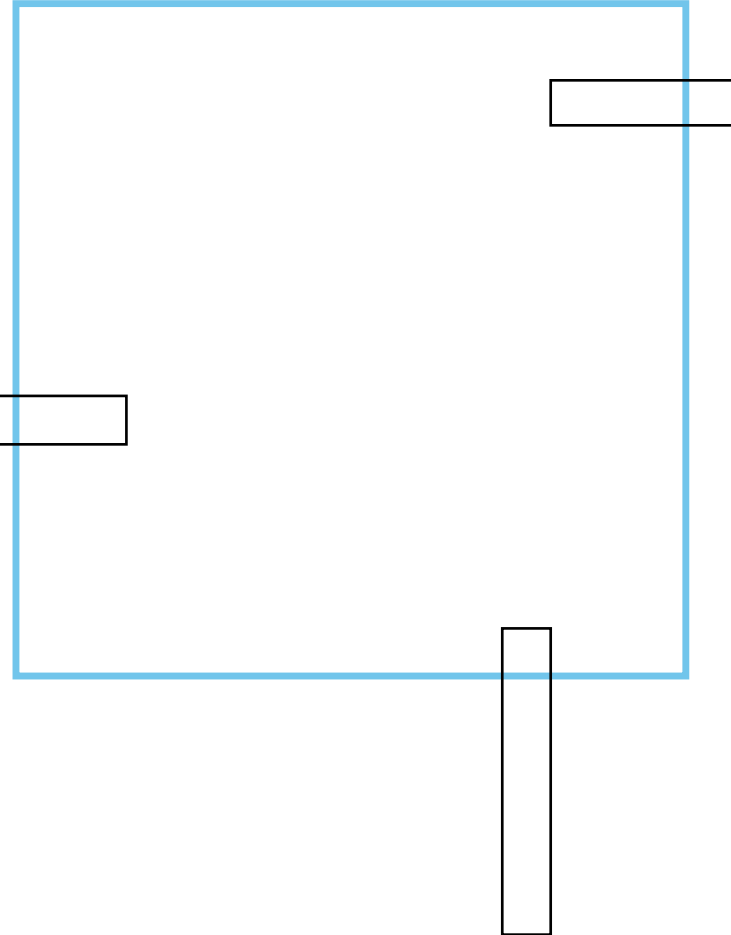
# New insights into global oil refineries

Thursday, 28 July



# Agenda

- Welcome
- World Refinery Database: Joe Pezzino,  
Senior Advisor, S&P Global Commodity  
Insights
- ICE Connect Introduction: Joshua Starnes,  
Director Business Development, ICE
- Close and Q+A





# S&P Global Commodity Insights World Refinery Database

Joe Pezzino, Senior Advisor, S&P Global  
Commodity Insights



# S&P Global Commodity Insights World Refinery Database (WRD)

The World Refinery Database provides an in-depth, historical and forward looking view of the global refining industry to help you understand evolving market dynamics and gain a competitive edge.

# WRD is a useful tool for a variety of industry disciplines

- Traders
- Strategic Planners
- Hedge Fund Analysts
- Senior Management
- Midstream and Downstream Analysts
- Industry Researchers
- Marketers

# **World Refinery Database Users Include :**

- **Integrated International Oil Companies**
- **National Oil/Gas Companies**
- **Independent Refiners**
- **Investment Banks**
- **Hedge Fund/Pension Fund**
- **Independent Oil & Gas Producers**
- **Trading Companies**
- **Pipeline Companies**
- **Midstream Operators**
- **Tech Service/Licensing Firms**
- **Government Agencies/Ministries**

# WRD Data Categories

- Capacity (Primary Distillation and Downstream Units)
- Crude Runs by Crude Category
- Product Yields
- Outages (CDU, FCC, HCU, COK, Reformers)
- Margins
- Ownership

# WRD Data Granularity

- Outages - daily
- Margins - daily
- Capacity - quarterly
- Crude runs - annual
- Product yields - annual
- Ownership – quarterly



# WRD Data Update Schedule

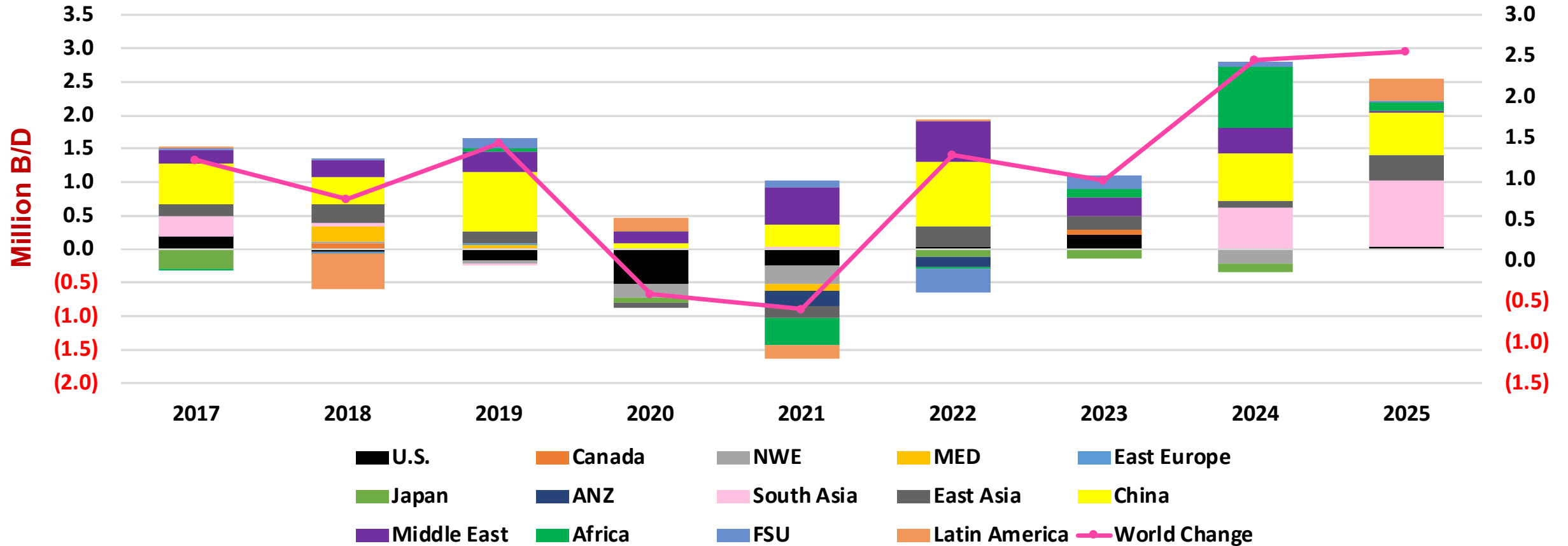
- Outages updated daily
- Margins updated daily
- Capacity updated quarterly
- Crude runs and product yields updated annually
- Ownership updated as it occurs

# Capacity Data Detail

- Capacity tracked over time from up to past 5 years of history to announced future projects up to 10 years forward
- Includes primary distillation capacity plus over 60 downstream units:
  - CDU, Condensate Splitter, VDU, FCC, HCU, COK, reforming, alkylation, isomerization, various hydrotreating units, as well as specialty processes such as lubes, asphalt, aromatics, biofuels
- Future projects are rated for likelihood: Firm, Probable, Less Likely
- Capacity available in different units:
  - thousand b/d, thousand tonnes per year, thousand tonnes per day

# Capacity Analysis - 2020 and 2021 - a Turning Point for Refiners

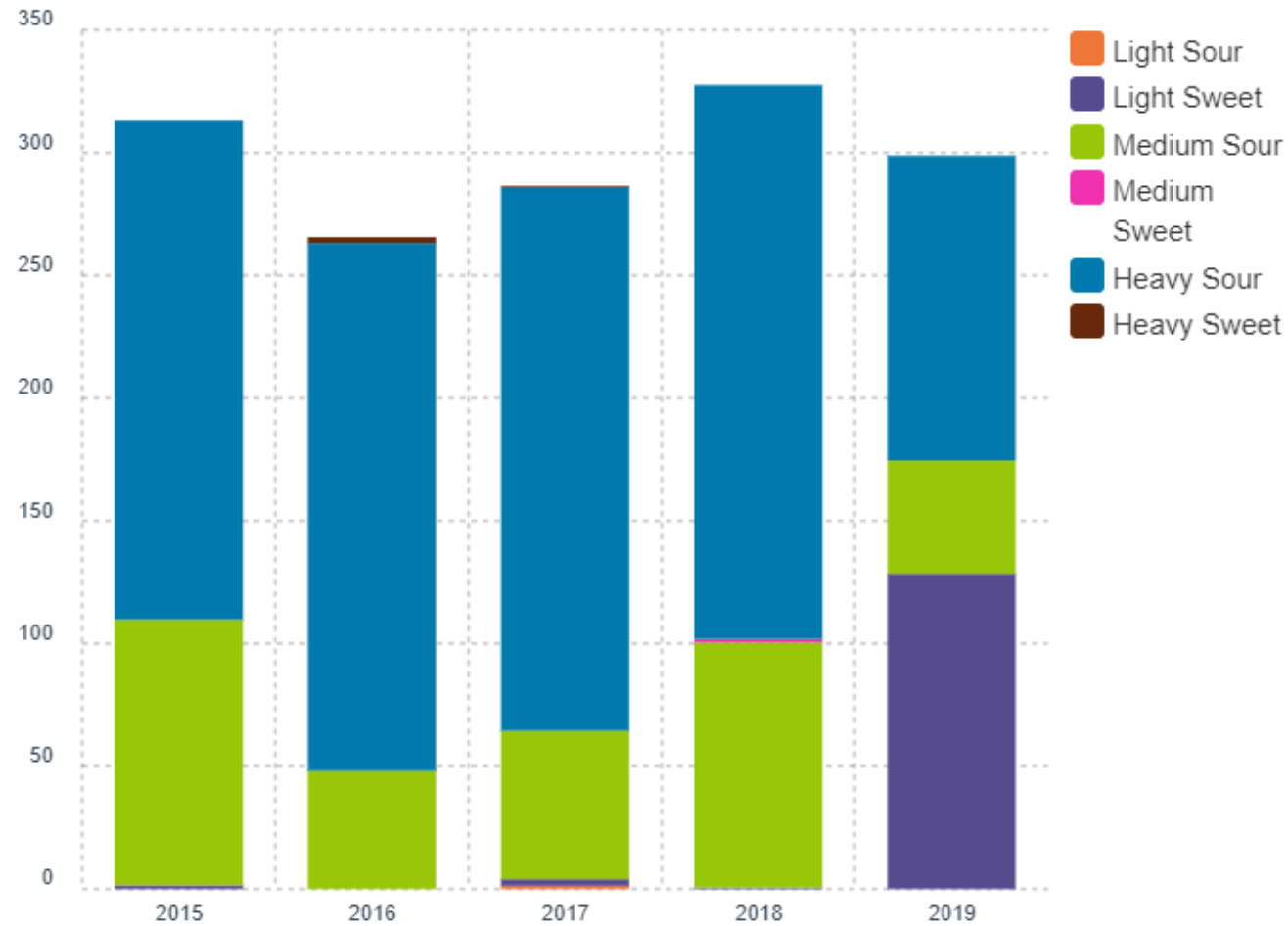
Regional Distillation Capacity Changes, Firm & Probable (2Q 2022 Update)



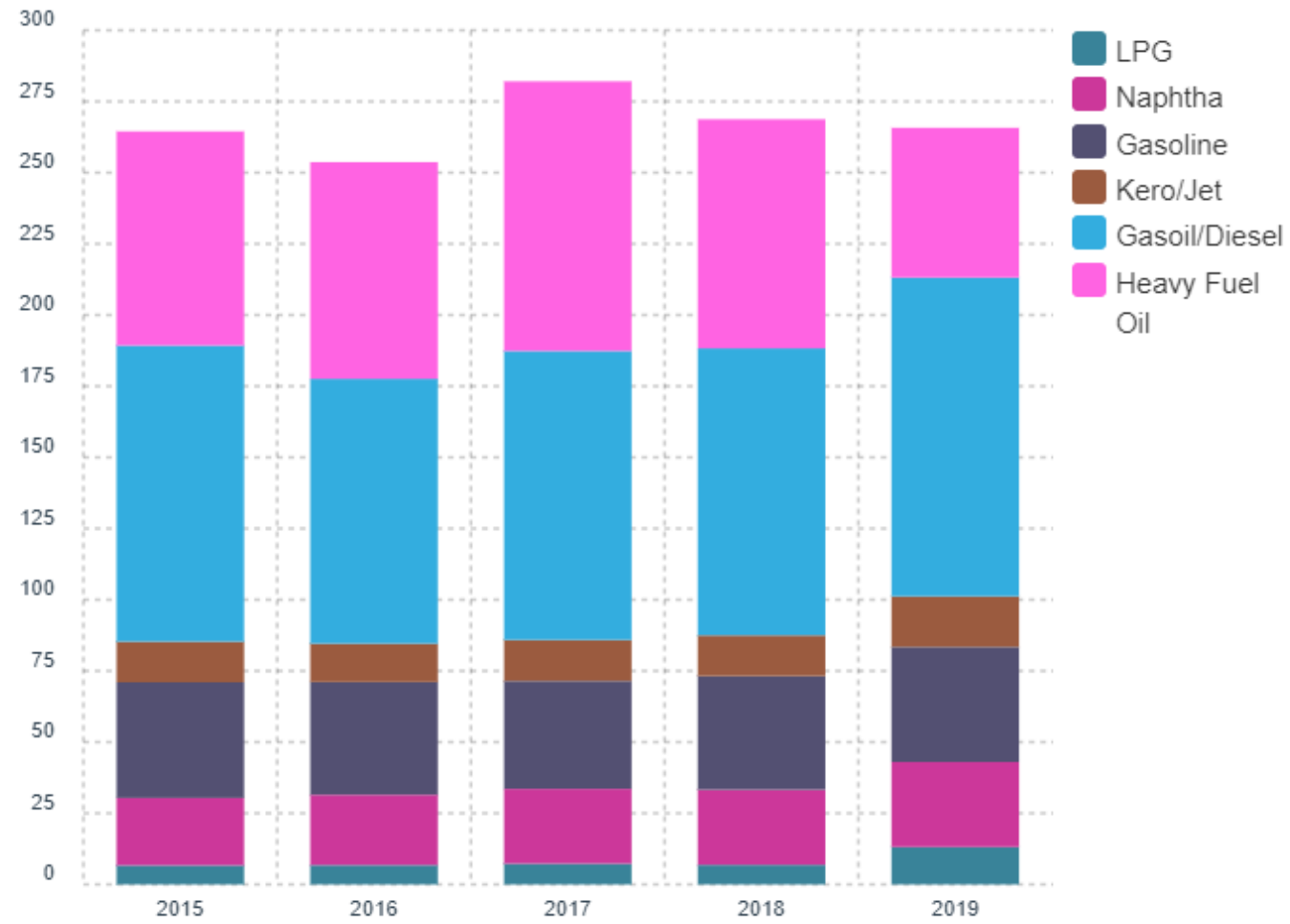
# Crude Slate & Product Yield – Data Detail

- Each refinery has historical annual data on crude runs by crude category:  
Lt Sweet, Lt Sour, Med Sweet, Med Sour, Hvy Sweet, Hvy Sour
- Each refinery has historical annual data on product yields for major products:  
LPG, naphtha, gasoline, kero-jet, gasoil-diesel, heavy fuel oil

# Refinery Analysis – change in crude slate for USG Refinery “A”



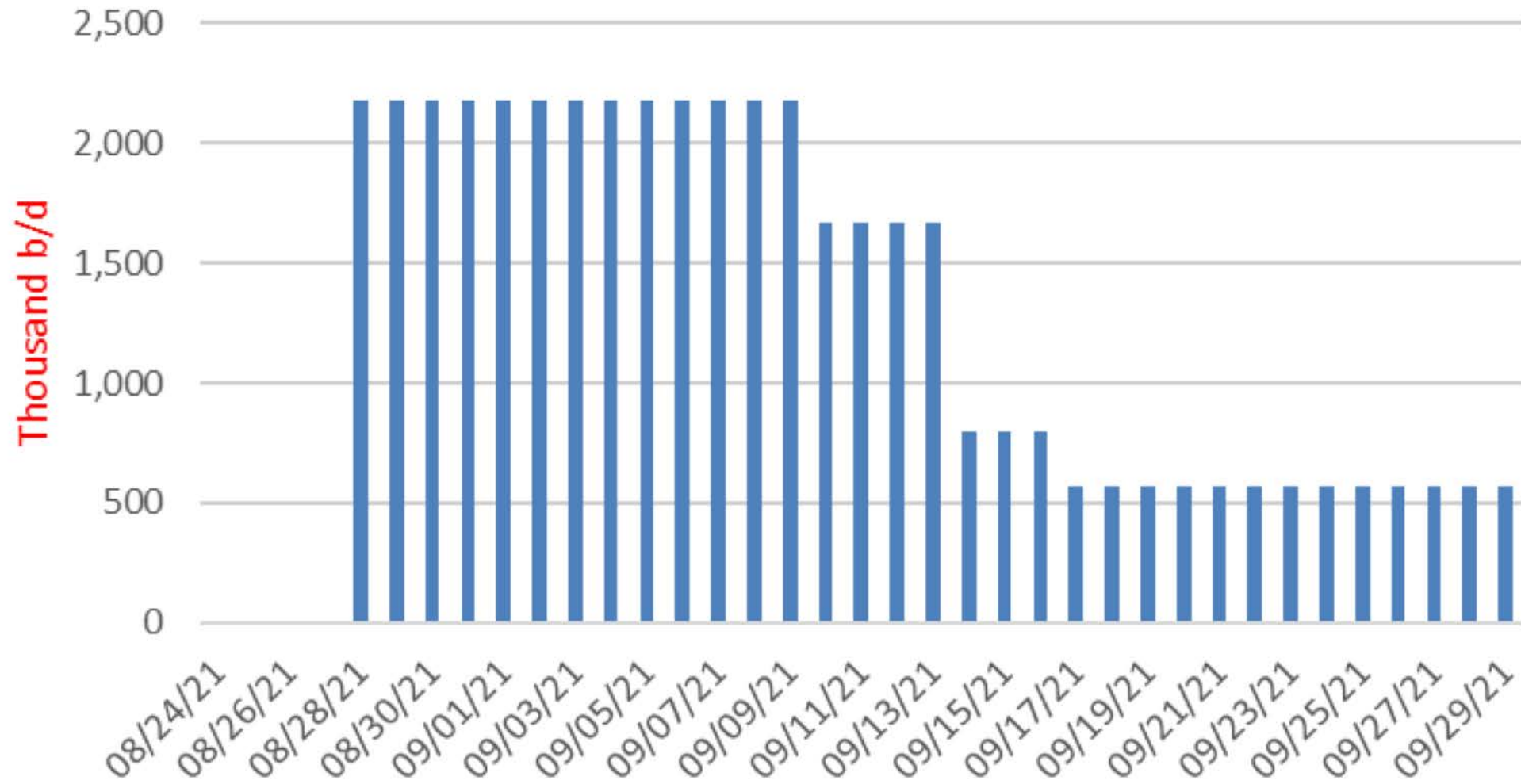
# Refinery Analysis – change in product yield for WEUR Refinery “B”



# Refinery Outages Reported Daily

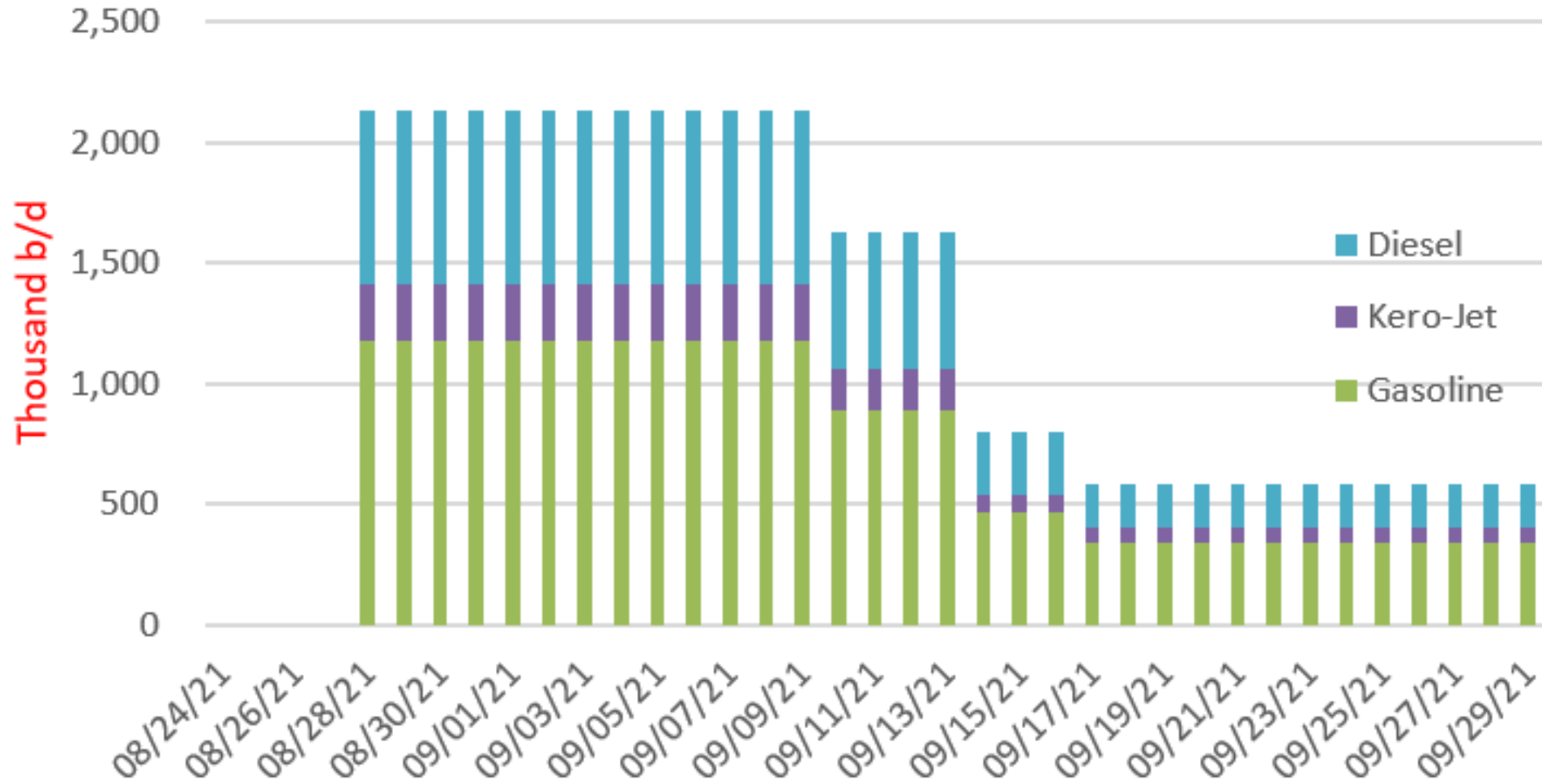
- Refinery outage alerts are delivered in real time
- Daily outages are archived end of each day
- Downtime includes CDU, FCC, HCU, COK, Reformers
- Refinery downtime is available with start/end dates
- Planned versus unplanned indicator
- Historical outages available going back 5 years

## Refinery Outage Analysis - Hurricane Ida





## Refinery Product Loss Analysis - Hurricane Ida



# Refinery margins tracked at 8 different refining centers for different refinery configurations

Proforma variable operating margins using refinery LP models:

USG – cracking, coking

NYH – cracking

Chicago – cracking

US Group 3 – cracking

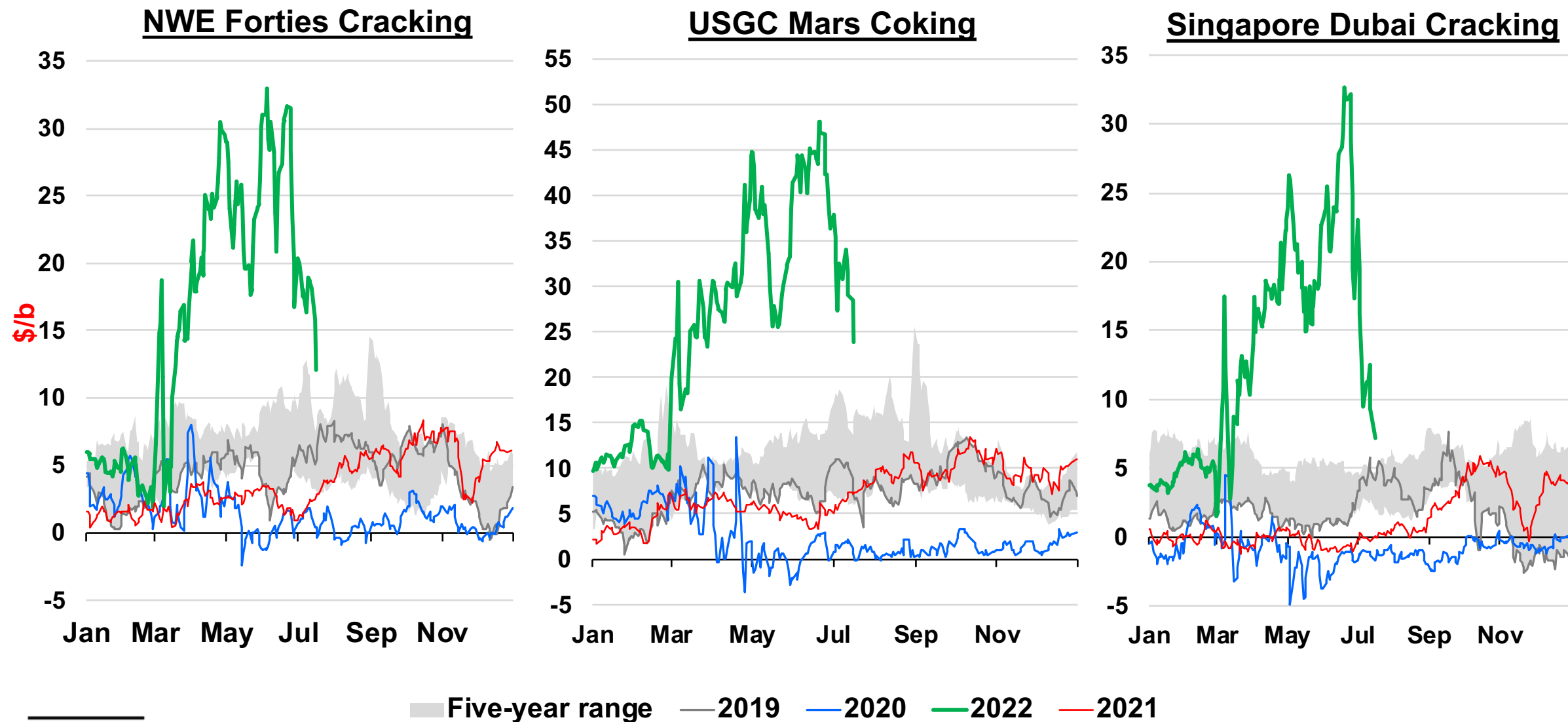
USWC – cracking, coking

NWE – hydroskimming, cracking

MED – hydroskimming, cracking

SINGAPORE – topping, cracking

# Refinery Margins Analysis – margins surge higher due to Russia-Ukraine Conflict





# ICE Connect

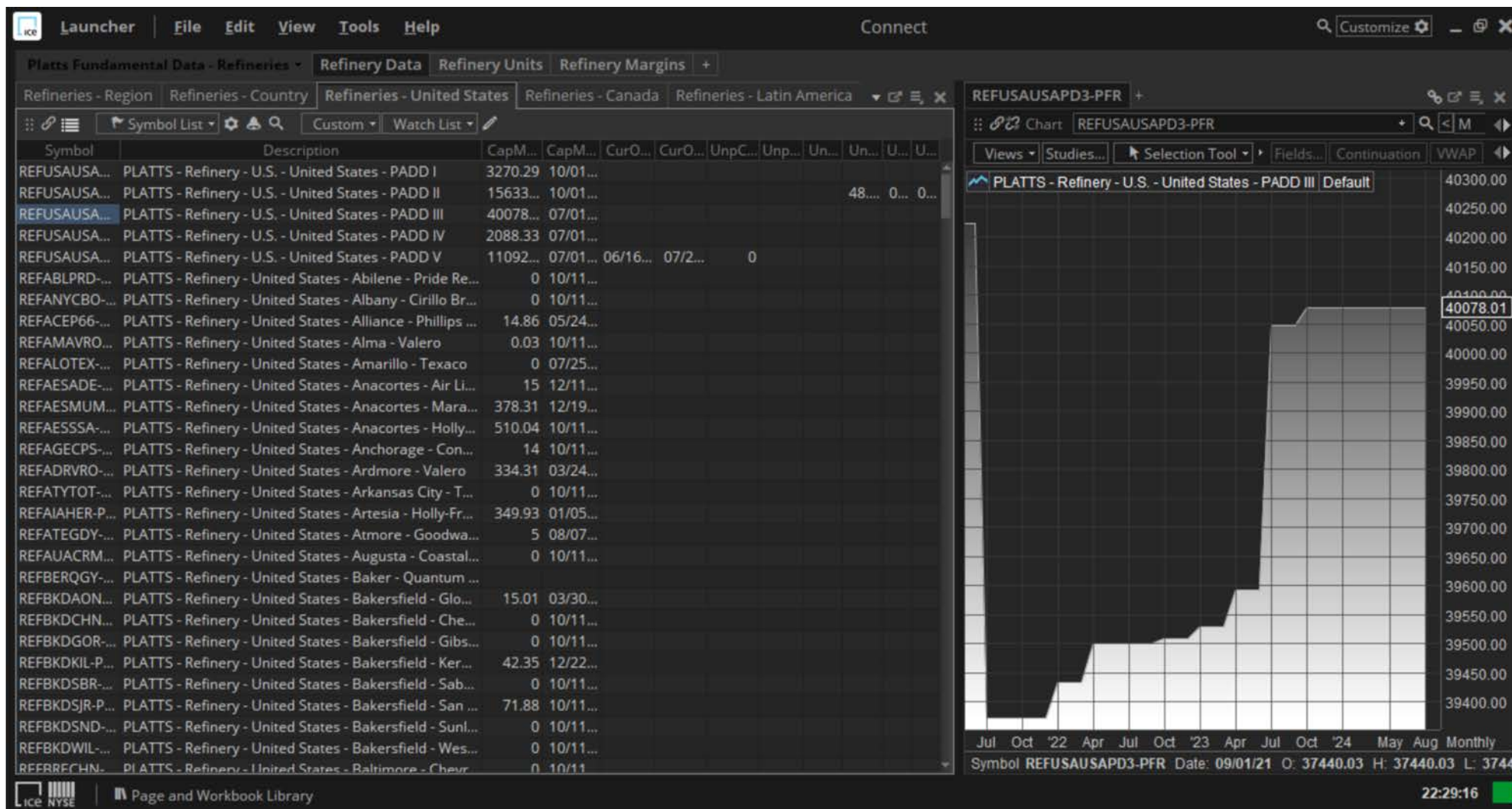
Oil Desktop

Joshua Starnes

Director, Business Development

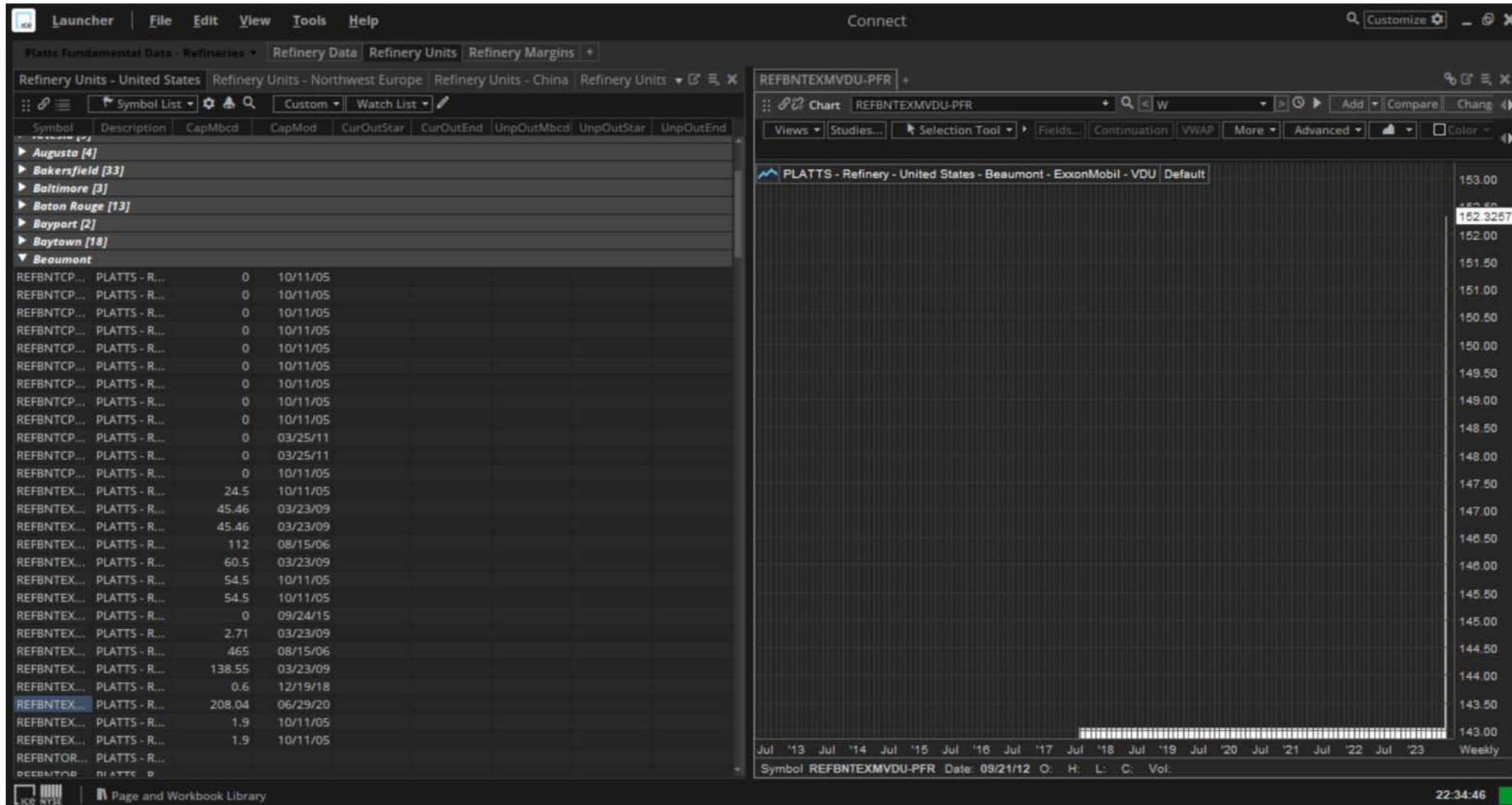


# WRD Data by Refinery

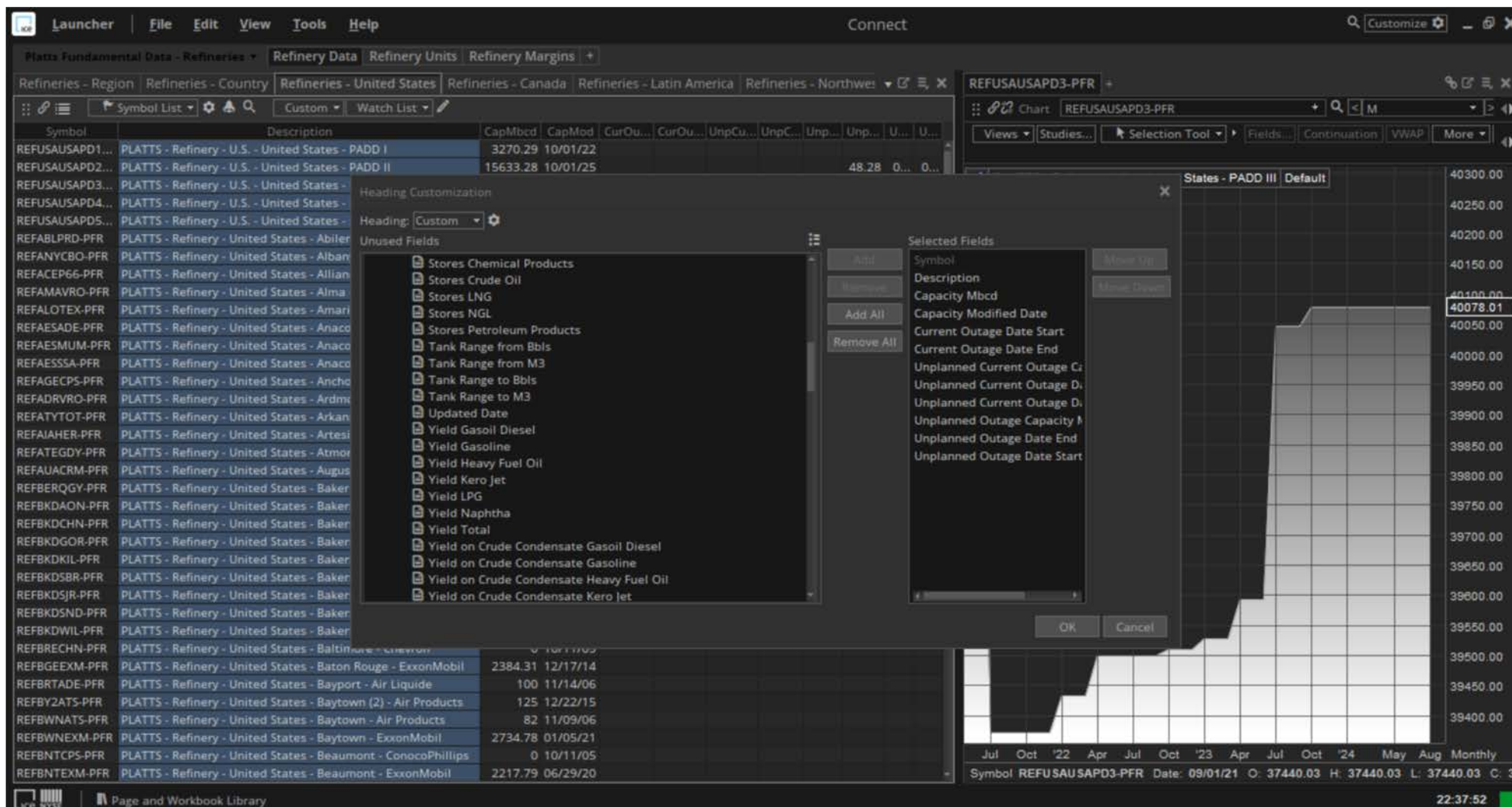




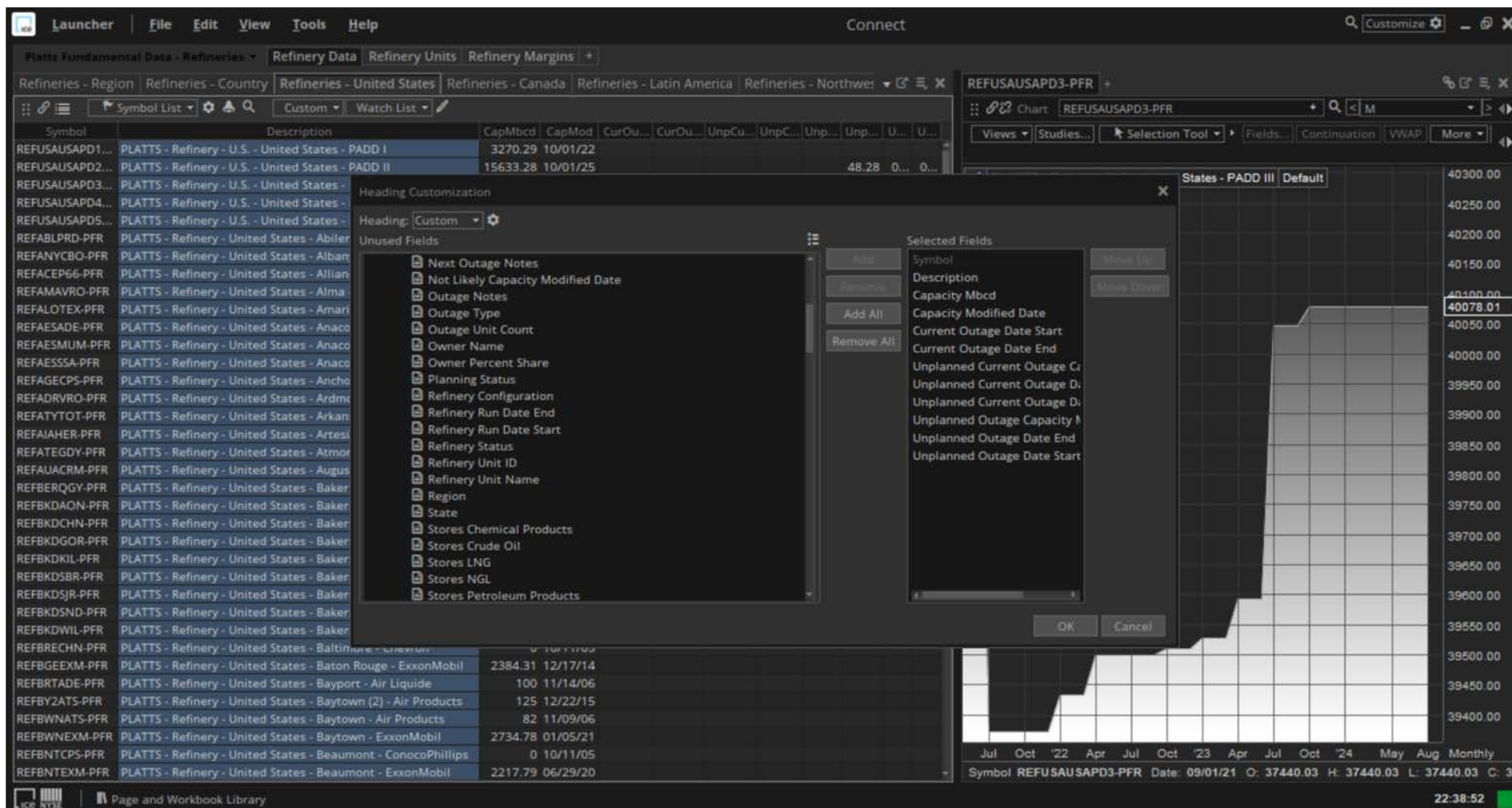
# WRD Data by Unit



# WRD Product Yield Data

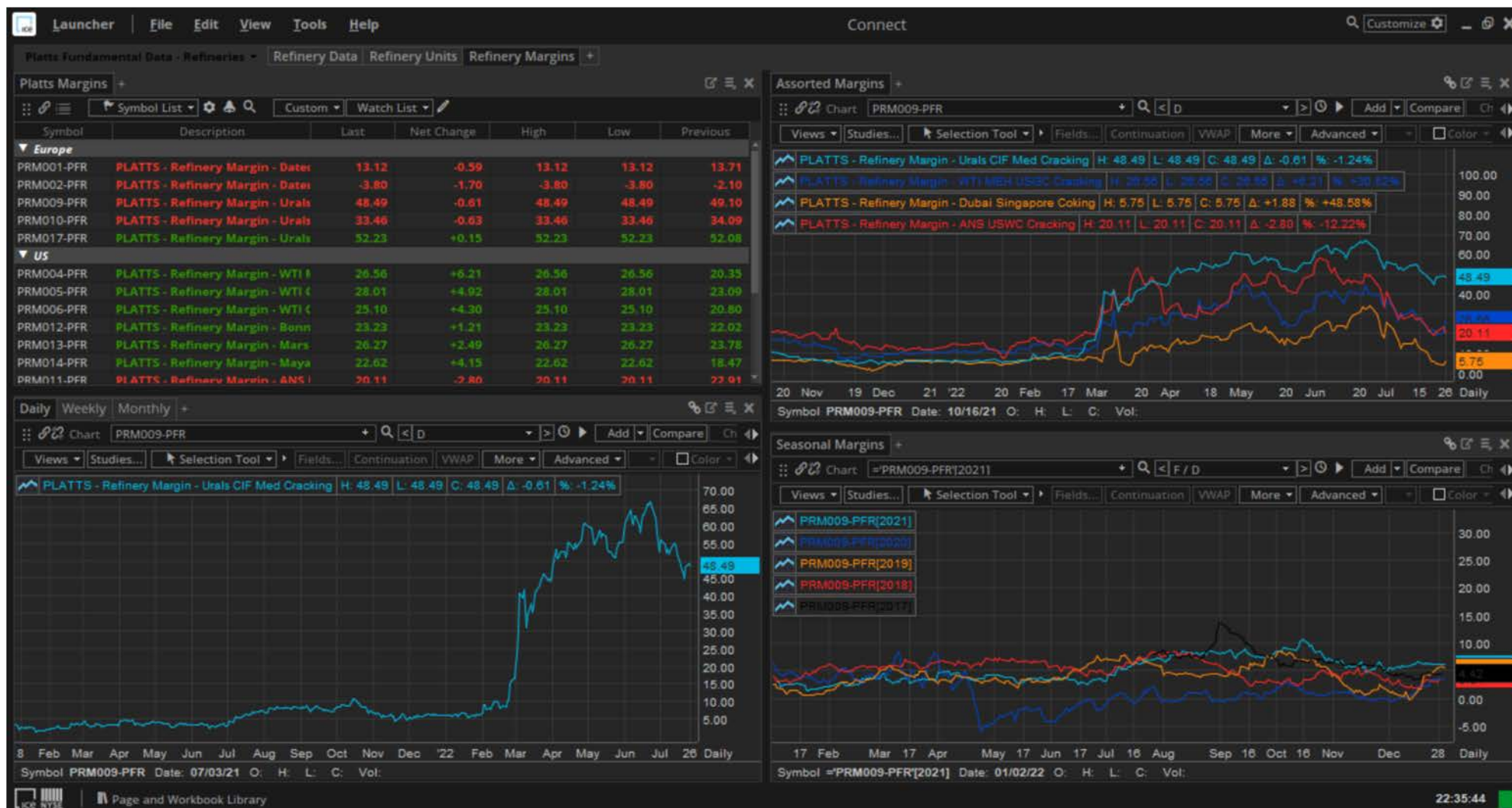


# WRD Crude Runs Data

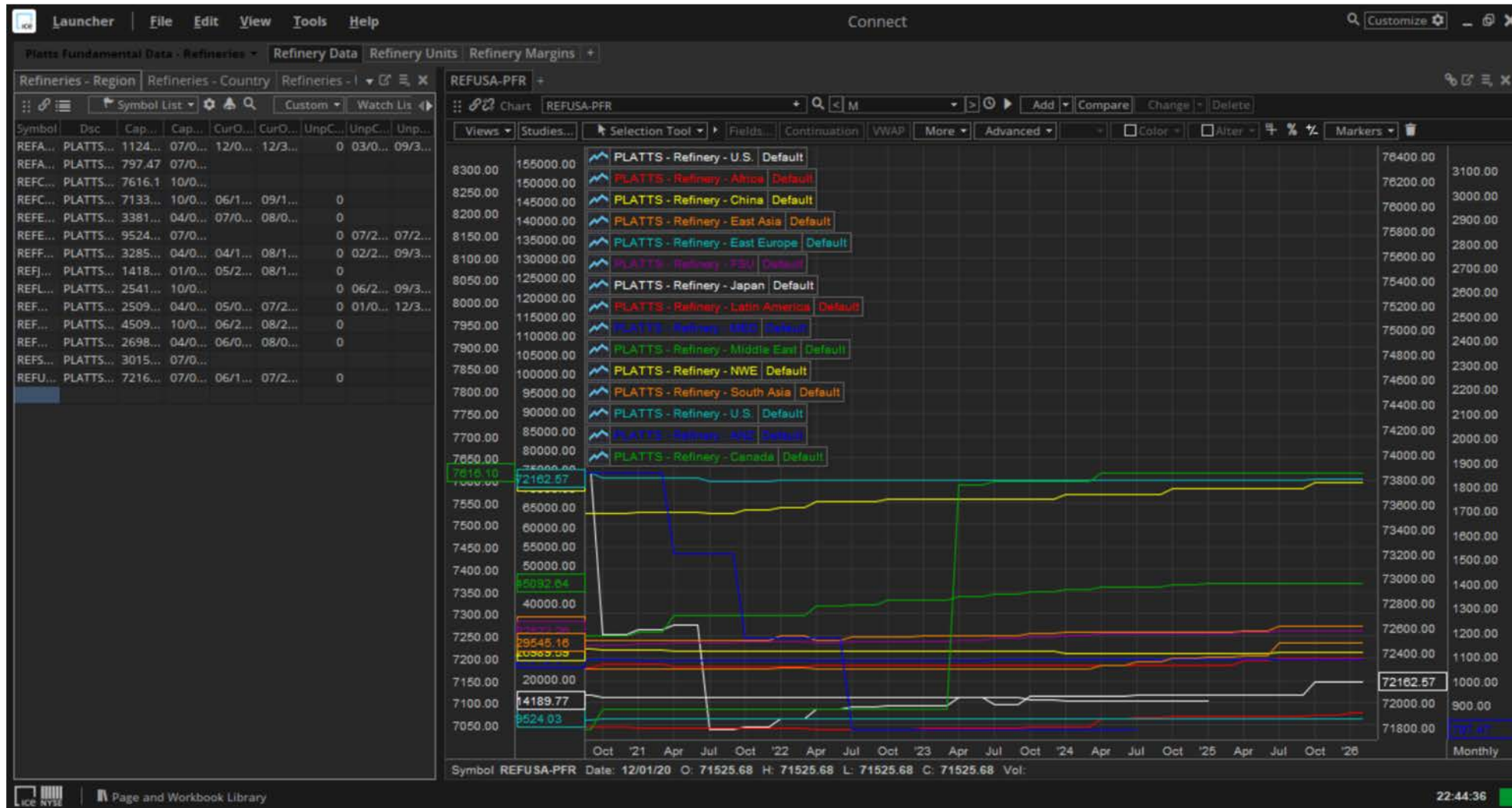




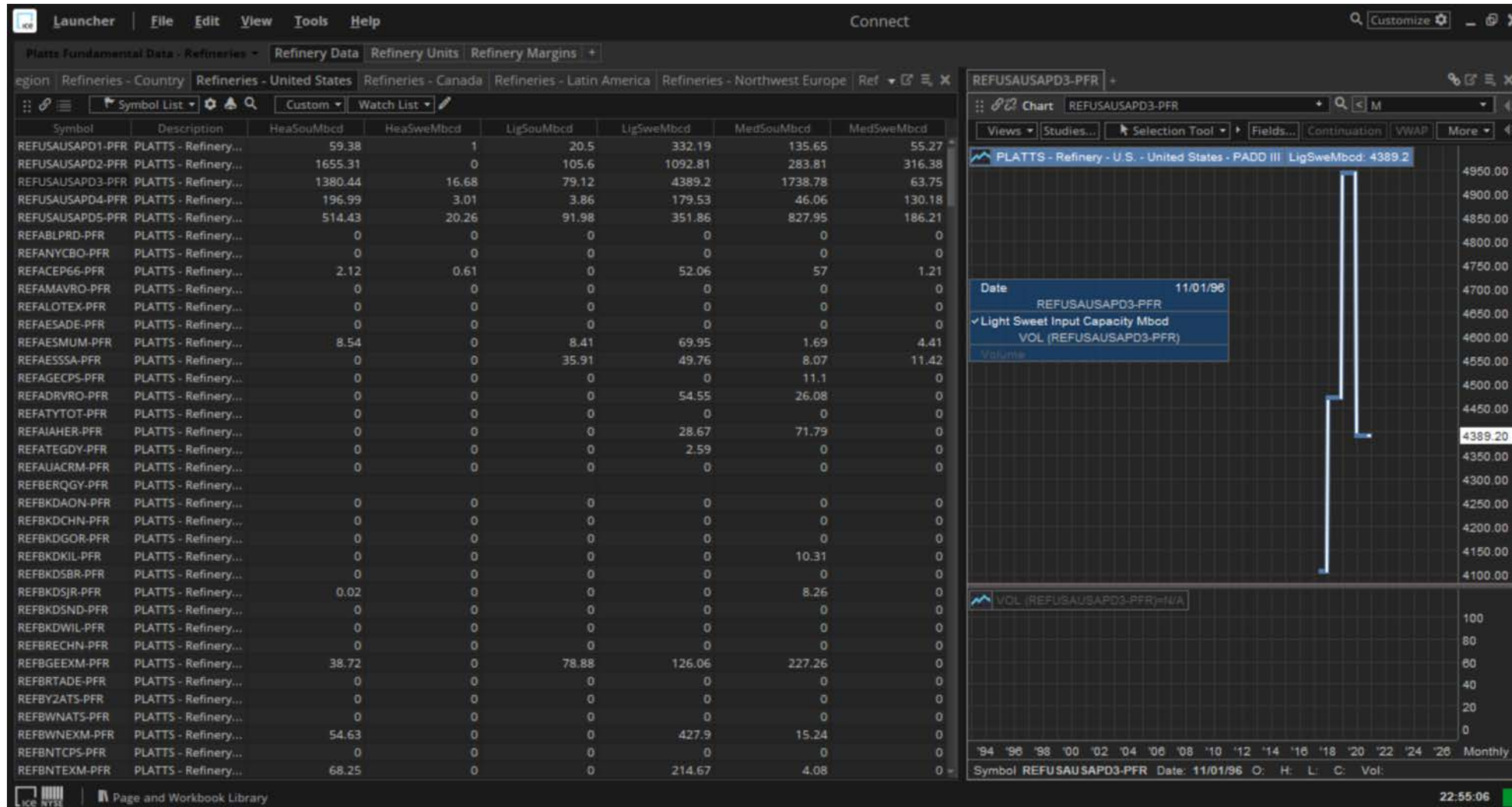
# WRD Margin Data



# WRD Distillation Capacity Changes

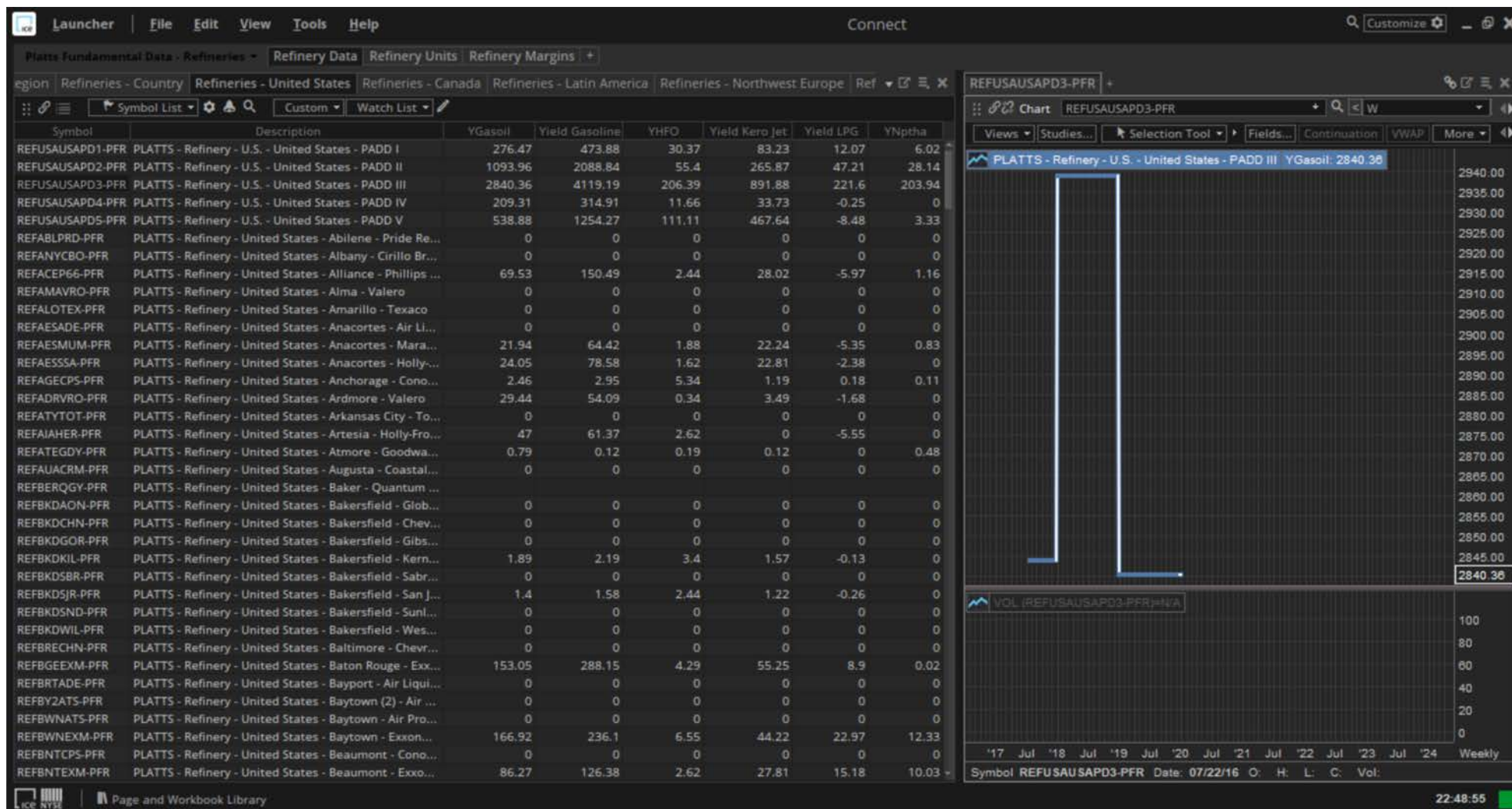


# WRD Change in Crude Slate

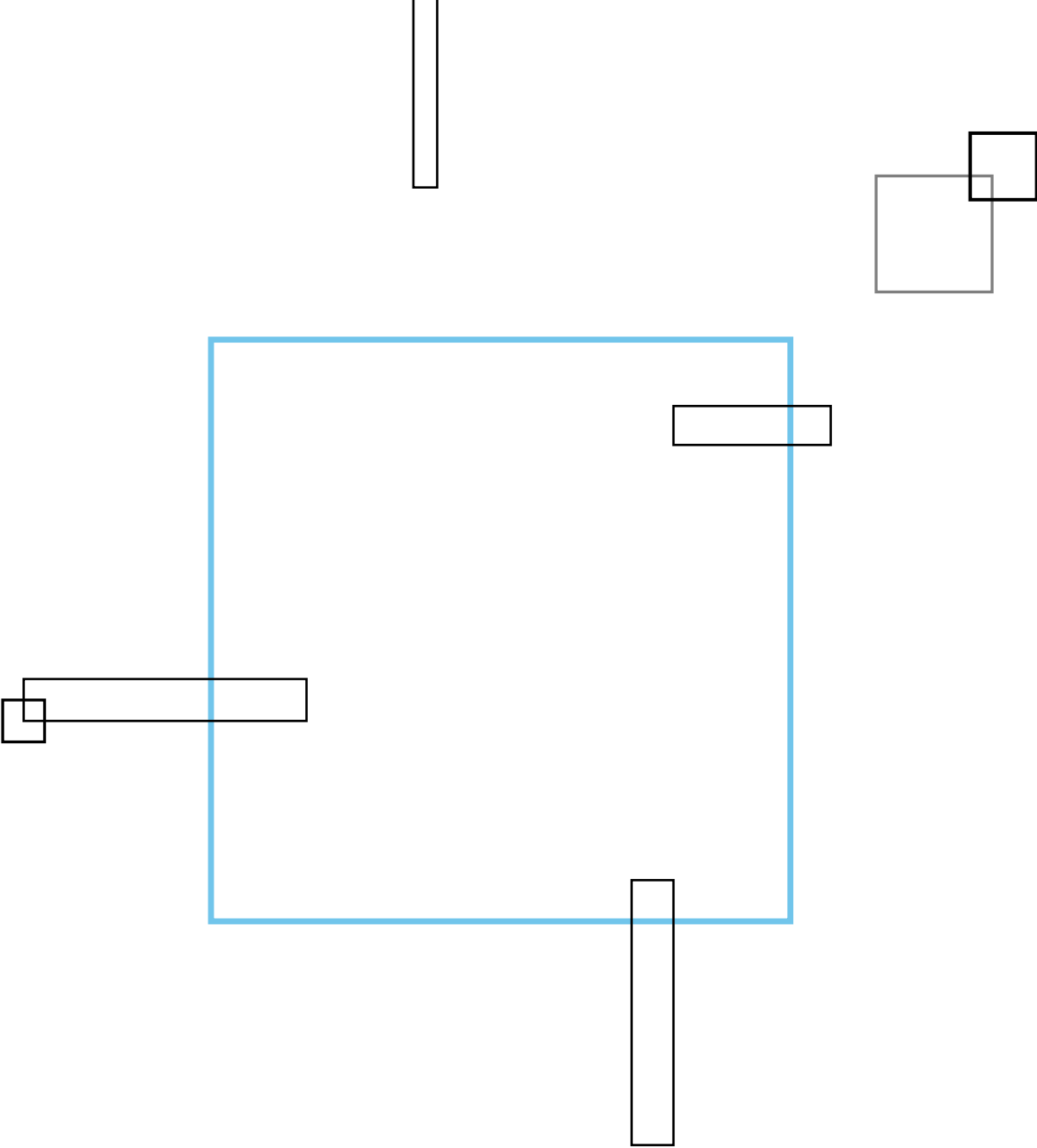




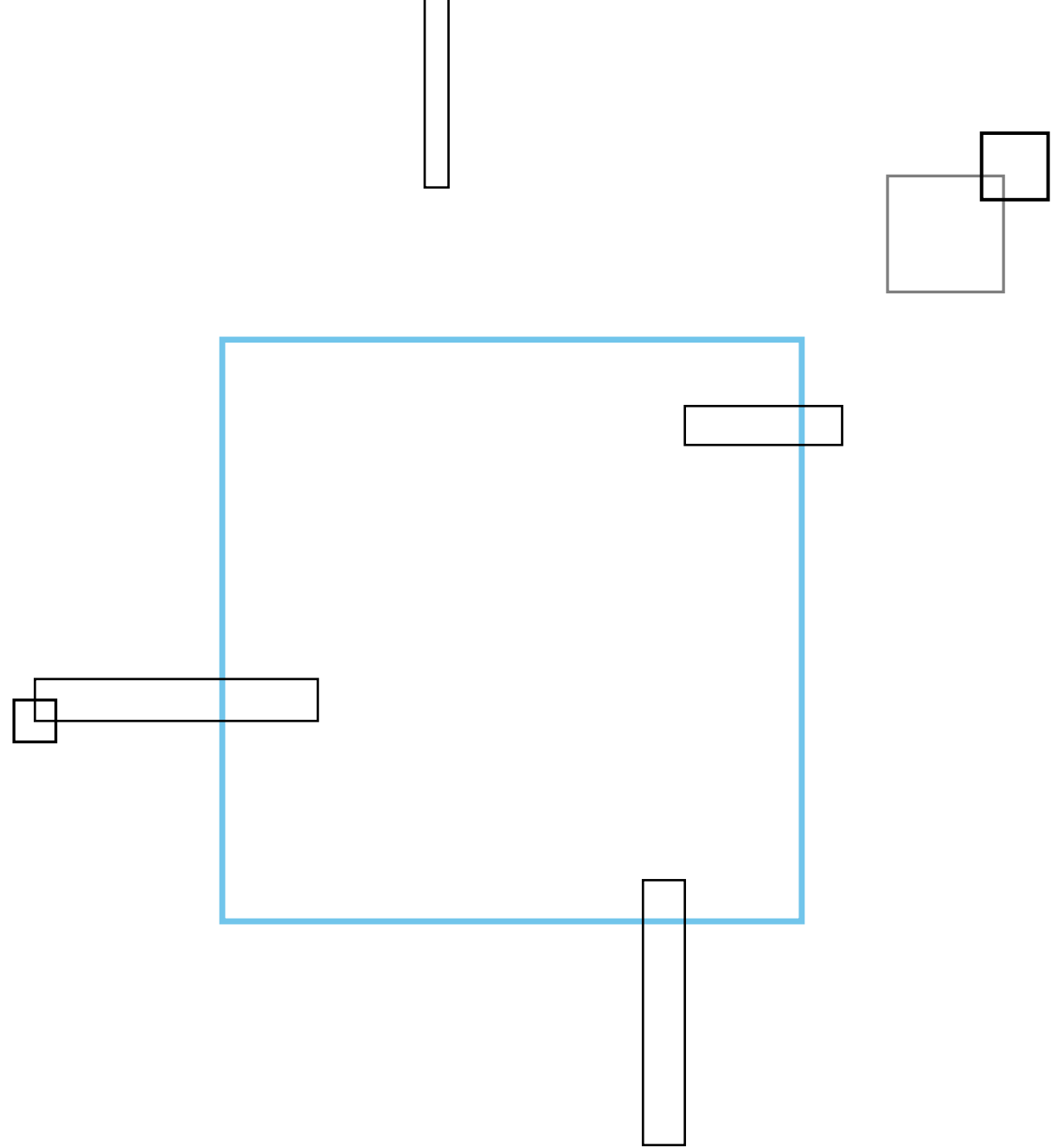
# WRD Change in Product Yield



Q&A



Thank you



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