

# CargoMetrics Crude Oil Pack

Better-Built Data™



## Company

Since 2009, CargoMetrics has been a leader in the analysis of global maritime trade. Our Company has a heritage rooted in data science, financial markets, and maritime innovation. Our data power high-value applications used and trusted by some of the world's leading hedge funds, investors, and maritime shipping & logistics firms.

## Product Highlights

The CargoMetrics Crude Oil Pack measures seaborne crude oil trade and provides

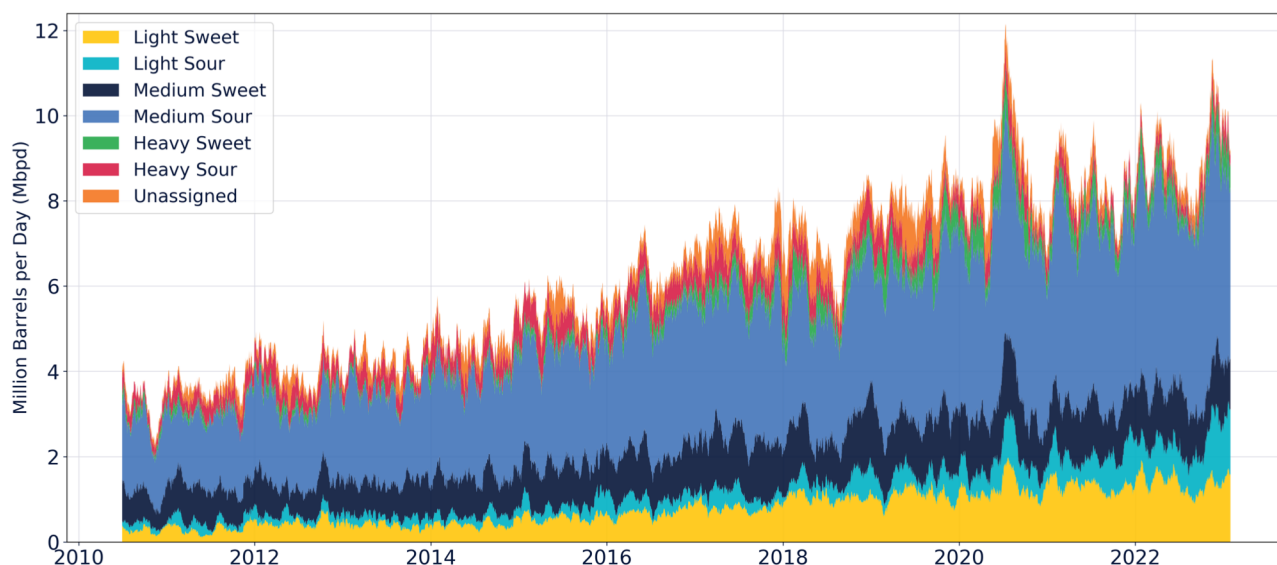
- **Global coverage** constituting > 90% of global import and export trade volume
- **Point-in-time** daily data
- **History** from January 2017 to present
- **The ability** to model, learn, train, and backtest in order to make reliable, data-driven decisions

The Company's approach to data production and monitoring is fully systematic, with an emphasis on automation.

SPECIFICATIONS	
Time Period	2017-01-01 to present*
Cargo	Crude oil, condensate
Units	Barrels
Coverage	Global imports and exports, 60+ countries
Frequency	Daily (12:00 UTC)
Data Outputs	CSV file
Data Delivery	Bloomberg DATA <GO>, AWS Data Exchange
Markets	Brent, WTI, refined products

\* Additional historical data for the period June 1, 2010 - December 31, 2016 is available for license separately.

## CHINA CRUDE OIL IMPORTS BY GRADE (30-DAY AVERAGE)





## Use Cases and Market Applications

The Crude Oil Pack's long history and point-in-time structure make the data well suited for a wide range of applications, including:

- Constructing robust systematic, quantitative trading strategies
- Researching the relationships between global crude oil trade and some of the world's deepest financial markets including:
  - Oil futures and spreads (including Brent, WTI, Dubai, RBOB, ULSD, Gasoil)
  - Equities (energy sector ETFs, individual oil equities)
  - FX pairs (petrocurrencies vs. oil-consumer currencies)
- Enhancing existing fundamental models and price forecasts
- Measuring national and global trade volumes, changes, and trends
- Monitoring the impact of trade disruptions and geopolitical events (e.g. sanctions)

## Methodology

Products are derived from our patented maritime system that has been powering high-value applications for more than a decade. The system is a comprehensive spatial-temporal graph of maritime trade with visibility to all dimensions of the trade – all vessels, voyages, cargoes, and geographies throughout time. Our perspective is global and our approach is fully systematic with true point-in-time organization of data and deployment of physical modeling, statistical modeling, and machine learning techniques. Our methodology reflects an emphasis on trustworthiness, consistency, and repeatability.

## Select System Inputs



Satellite and terrestrial receiver data – including 1 billion ship position messages received daily



Vessel data – specifications on more than 100,000 ships



Port data – intelligence on 6,000 ports including 45,000 berths in 150+ countries and territories



Pricing data – freight and financial instrument prices



Training and validation data





## Data Snapshots

A sample of the Crude Oil Pack data is shown below, covering all Nigerian crude oil exports loaded onto tankers on May 28, 2017, and all crude oil imports unloaded from tankers in China on that same date. These data were made available for use four days later, at 12:00 UTC on June 1, 2017.

### NIGERIA EXPORTS (2017-06-01)

availableDate	observationDate	ISOcountry	direction	grade	barrels
2017-06-01	2017-05-28	NG	exports	heavy sour	0
2017-06-01	2017-05-28	NG	exports	heavy sweet	0
2017-06-01	2017-05-28	NG	exports	light sour	0
2017-06-01	2017-05-28	NG	exports	light sweet	0
2017-06-01	2017-05-28	NG	exports	medium sour	0
2017-06-01	2017-05-28	NG	exports	medium sweet	484429
2017-06-01	2017-05-28	NG	exports	total	484429
2017-06-01	2017-05-28	NG	exports	unassigned	0

### CHINA IMPORTS (2017-06-01)

availableDate	observationDate	ISOcountry	direction	grade	barrels
2017-06-01	2017-05-28	CN	imports	heavy sour	0
2017-06-01	2017-05-28	CN	imports	heavy sweet	0
2017-06-01	2017-05-28	CN	imports	light sour	0
2017-06-01	2017-05-28	CN	imports	light sweet	427223
2017-06-01	2017-05-28	CN	imports	medium sour	4020368
2017-06-01	2017-05-28	CN	imports	medium sweet	2497249
2017-06-01	2017-05-28	CN	imports	total	6944840
2017-06-01	2017-05-28	CN	imports	unassigned	0

The time series in Tidy Data format enable subscribers to easily and consistently research, model, run backtests, and unlock alpha and insight using combinations of countries, trade direction, and grade.





## Crude Oil Grades

The Crude Oil Pack categorizes imports and exports by grade according to the definitions below, adding a valuable dimension for research and industry analysis. API gravity and sulfur content are assigned to cargoes based on vessel load location and informed by historical oil assays and bill of lading data.

		DENSITY (API GRAVITY)		
		Greater than 34	26° to 34°	Below 26°
SULFUR CONTENT (% WEIGHT)	Less than 0.6%	Light Sweet*	Medium Sweet	Heavy Sweet
	More than 0.6%	Light Sour	Medium Sour	Heavy Sour

\*light sweet includes ultra-light crudes and natural gas condensates.

## Geographic Coverage

### EXPORTERS

Algeria	Chad	Iraq	Norway	United Arab Emirates
Angola	Colombia	Kuwait	Oman	United Kingdom
Australia	Congo	Kazakhstan	Qatar	United States
Azerbaijan	Ecuador	Libya	Russia	Yemen
Brazil	Equatorial Guinea	Mexico	Saudi Arabia	
Brunei	Gabon	Nigeria	Sudan and South Sudan	
Cameroon	Indonesia			

### IMPORTERS

Australia	Denmark	Ireland	Portugal	Sweden
Belgium	Finland	Italy	Romania	Taiwan
Bulgaria	France	Japan	Singapore	Thailand
Canada	Germany	Netherlands	South Africa	Türkiye
Chile	Greece	New Zealand	South Korea	United Kingdom
China	India	Poland	Spain	United States