

Charting in CQG

by Thom Hartle

Energy traders build up an expected scenario for the markets they track based on a combination of fundamental and technical analysis.

Once a scenario is in mind, good traders monitor the market with an eye towards the

price action unfolding within a course they expect, and if price action deviates from their expectations they have cues to alert them to a change may be at hand.

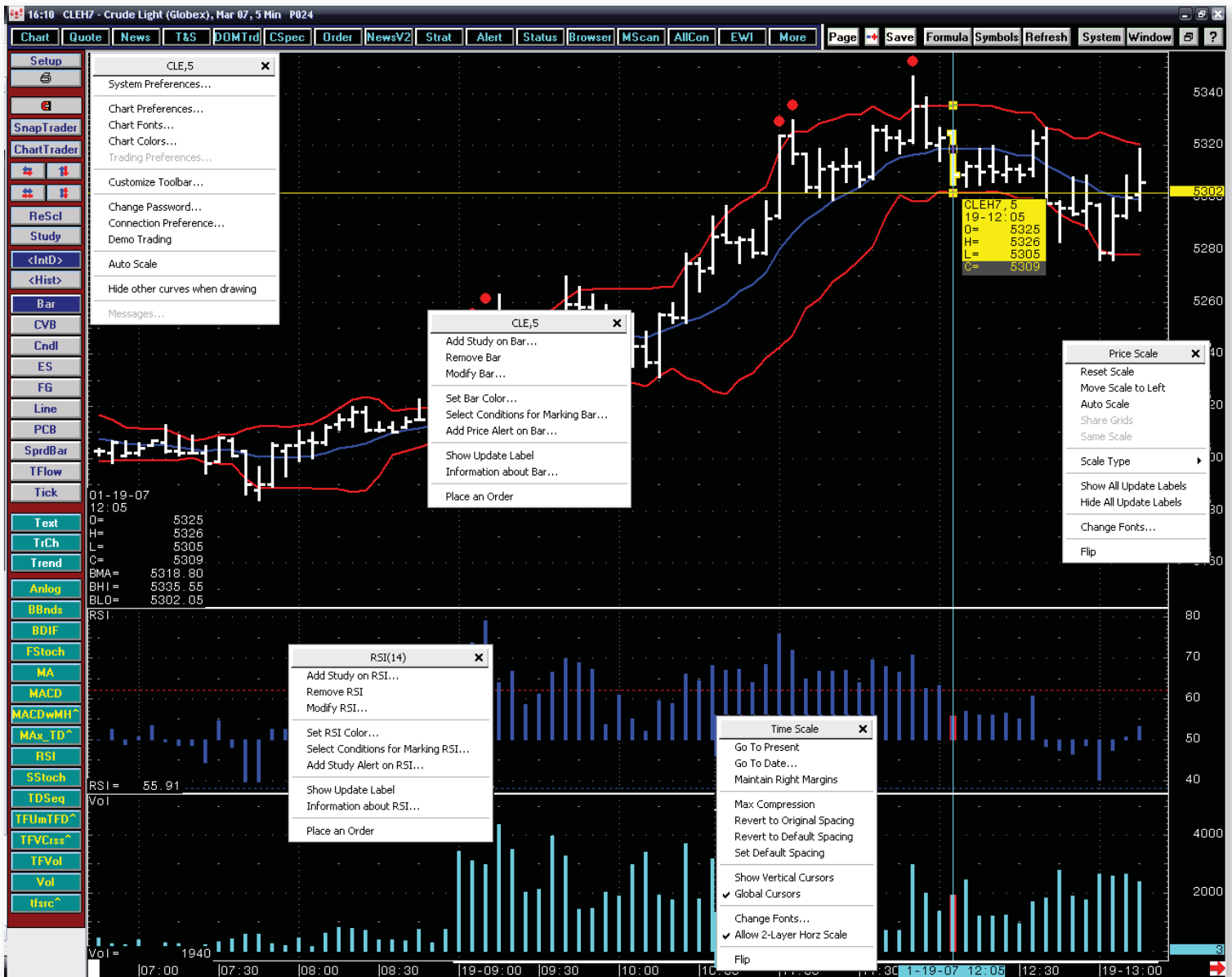
One foundation for the technical trader is the combination of charts and studies or in-

dicators. Here, we'll review CQG's collection of chart styles, fourteen in all.

CQG offers fourteen styles of charts. The classic bar (Figure 1), line, candlestick and point & figure charts are available. In addition, a number of other charts styles are

Figure 1

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NYMEX Crude Oil traded on Globex. As with much of CQG's features, all of the attributes of the OHLC bar charts can be modified. The open menu titles refer to which chart element is to be modified and lists manageable features. The bars and studies can be marked or colored that meet a "condition."

available that aid the trader in charting markets that trade on a 24-basis and experience periods of low activity. Here is a list of charting styles available to the trader:

- Bar No gap
- Line TradeFlow™
- Tick Equalize Sessions
- Spread bar Percent bar
- Candlestick Yield bar
- Market Profile Fill Gap
- Constant Volume Bar Point & figure

TradeFlow charts (Figure 2) highlight what traders are doing: buying or selling. Other charting styles display trades as the last price. You do not know whether a trader hit the bid (sold) or paid the ask price (buy) to generate the last price. TradeFlow charts detail whether traders are lifting offers or hitting bids.

Figure 2



Globex Traded Crude Oil TradeFlow Chart. TradeFlow is CQG's innovative charting style where the TradeFlow bar is color-coded to track traded volume executed at the ask price versus the bid price. The high and the low of the TradeFlow bar is the best bid and ask prices.

TradeFlow charts highlight what traders are doing: buying or selling.

The TradeFlow bar is color-coded on a percentage basis. The green portion represents the total volume of executed trades at the ask price for the TradeFlow bar. The red portion corresponds to the percentage of volume of trades at the bid price (selling). The width and the brightness of the TradeFlow bar is based on a relative comparison of the current bar's volume to a range of volume listing in the look back period.

Wide and brightly colored TradeFlow bars indicate heavy volume of trading, while nar-

Figure 3



TradeFlow Charts and Energy Futures Trading. The TradeFlow chart is linked to the CQG DOMTrader as an aid for trading energy futures. The DOMTrader is one of CQG's order routing interfaces. The bottom chart is a 5-minute chart. You can use a multiple time frame approach by tracking the 5-minute chart and executing trades in the DOMTrader based on the action of the TradeFlow bars.

row and dark TradeFlow bars indicate low participation by traders.

The study in the middle pane is the TradeFlow Volume™ study (TFVol). This study displays the traded volume at ask price as the green histogram bars and the traded volume into the bid price as the red histogram bars. The traded volume at the bid is plotted as a negative number.

The bottom study is the TradeFlow On Balance Volume™ study (TFOBv), which is the running sum of bid and ask volume.

The default version of TradeFlow uses the inside market for the high and low of the TradeFlow bar. There is an aggregation feature available in CQG version 7.5 where the TradeFlow bars are built using a high-low price range based upon the minimum price movement (ticks), which compresses the price action and executed volume information. The tick range can be from 1-20 ticks.

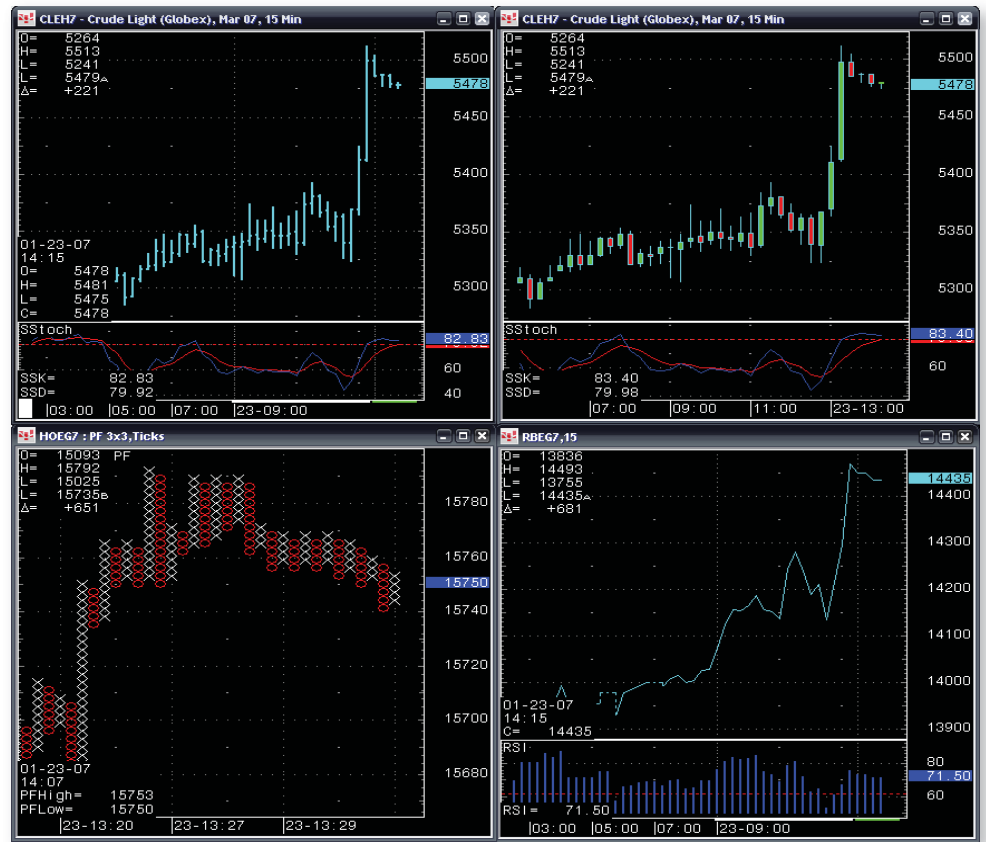
In addition, CQG traders can create custom studies based on the TradeFlow elements.

TradeFlow Charts can be attached to the CQG DOMTrader (Figure 3, previous page) as an aid to trading energy futures. The DOMTrader is one of CQG's order routing interfaces. The depth-of-market view from the Globex details the current bids and offers along with the current size. The TradeFlow chart will detail the action traders take at the best bid and ask prices. You can see whether traders are hitting bids or paying the ask price by the color-coding.

Figure 4 displays examples of standard charting types available: bar, candlestick, point & figure, and line charts. Figure 5 presents an intraday tick and one minute line charts (top charts), and the bottom two charts are a 30-minute bar chart and a 30-minute Market Profile Chart.

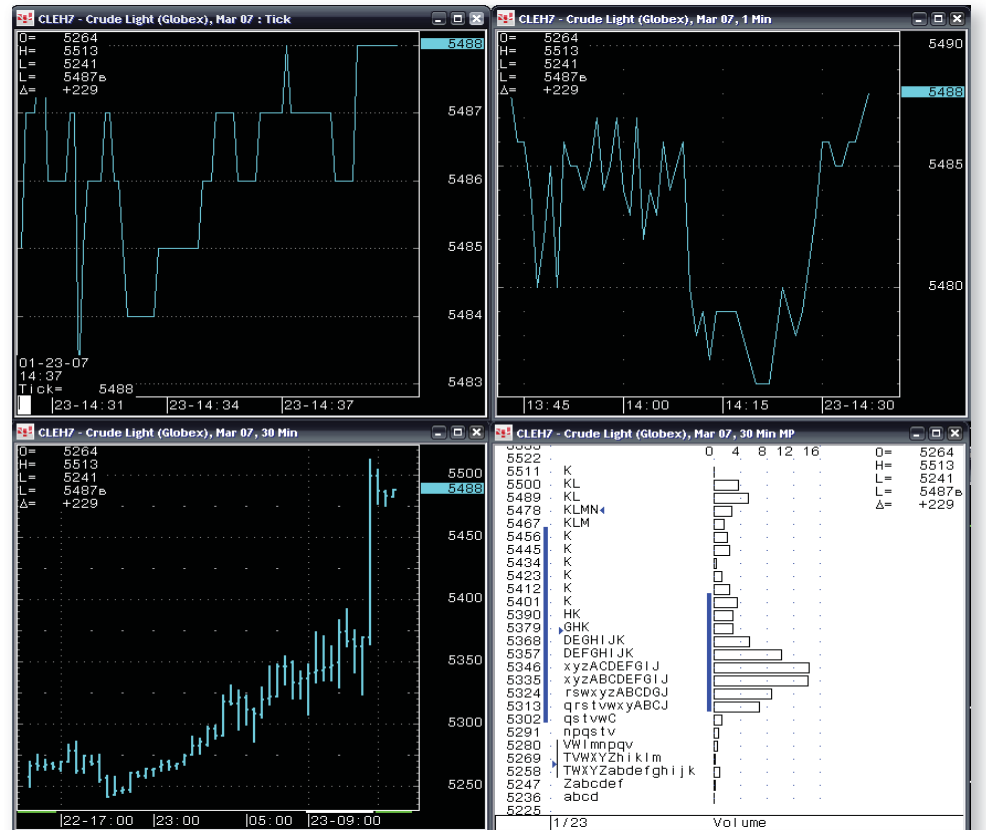
The chart on the bottom right of Figure 5 is the Market Profile Chart of the NYMEX Crude Oil traded on Globex. Developed by J. Peter Steidlmayer, the default version of the

Figure 4



Bar, Candlestick, Point & Figure, and Line Charts. The energy contracts are displayed using four charting styles with studies.

Figure 5



Tick, Line and Market Profile for Globex Crude Oil. The tick chart shows (top left) every print and the line chart (top right) shows the 1-minute closing price. The bottom left chart is a 30-minute chart and the bottom right chart is Market Profile.

Market Profile chart details price action on a 30-minute basis. The Profile chart breaks down trades by price and creates a distribution curve. Figure 6 shows two views of CQG Synthetic Spread Bar Charts. Most charting applications only display spread charts as line charts. CQG will build bar or candlestick charts based on intervals, such as 30-minute bars based on 1-minute values.

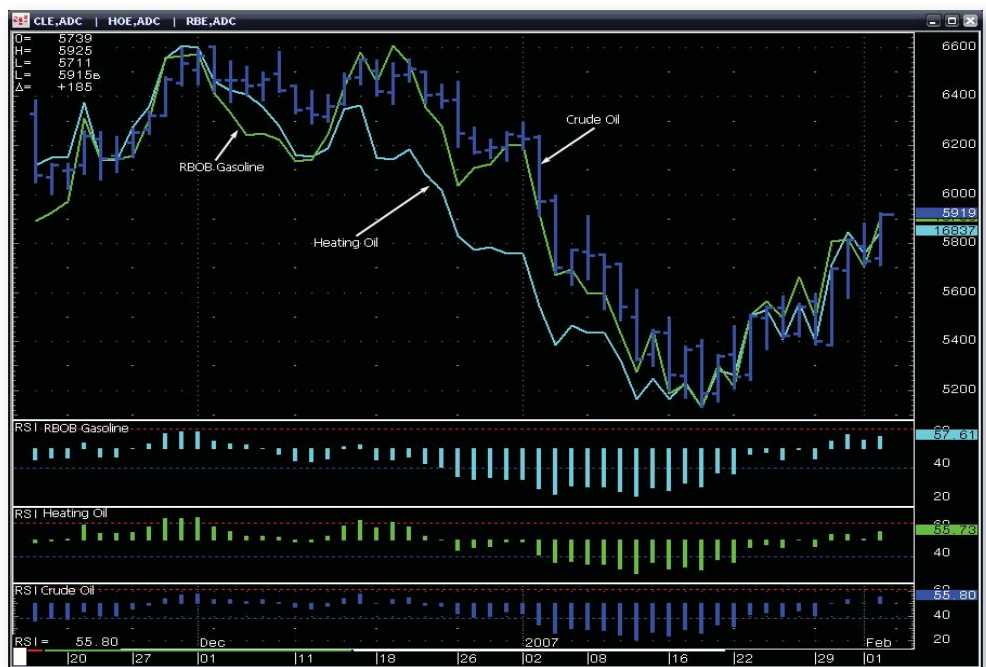
Figure 6



CQG Synthetic Spread charts. The spread bars are the open-high-low-close of the spread price. The left-hand chart is the 15-minute candlestick chart of the CLEH7-CLEJ7 spread price. The right-hand chart is the bar chart version of the same spread with Bollinger Bands.

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Figure 7



The Analog Chart. Multiple markets can be overlaid on the same chart. The blue daily bars is Globex crude oil. The white line is a close only chart of Globex heating oil. The light green line is a close only chart of Globex RBOB Gasoline. In addition, the relative strength study (RSI) is applied to each market and color-coded to match the coloring of the prices.

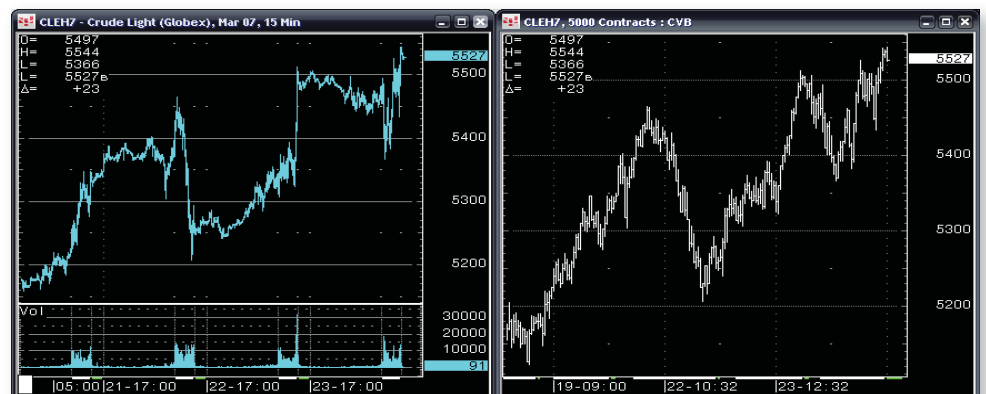
Analog or Overlay Charts

CQG's analog chart (Figure 7) offers the ability to make comparisons among different markets. Multiple markets can be placed on one chart for comparison of price action. The right hand and left hand scales can be used to compare markets' prices. The analog chart can be used with the Percent Bar chart display so individual markets can be compared on a percentage basis.

CQG Chart Solutions to 24-Hour Markets:

Today's 24-hour markets present unique problems for traders using technical analysis and studies. There are periods when low activity creates gaps in the price charts, and volume drops down to zero for extended periods. This can lead to charts displaying empty spaces and studies to exhibit unusual readings. The next series of charts details CQG's innovative charting styles that deal with these problems in the 24-hour markets.

Figure 8



Crude Oil Constant Volume Bar Chart (CVB). The left-hand is a 15-minute chart of the Globex crude oil contract and the actual volume. The chart shows periods of high trading activity with high volume and periods of low to zero activity with low to zero volume. The chart on the right is the CVB set to 5,000 contract per bar. The CVB chart is a smoother reflection of activity.

Figure 8 compares a standard bar chart and the CQG Constant Volume Chart (CVB). The CVB chart does not use time. The algorithm plots a chart when a defined number of ticks or actual contracts trade. Figure 8 uses a setting of 5,000 contracts. A new bar is plotted once the current bar's total actual volume exceeds 5,000 contracts. Time is not a factor.

The two charts cover approximately the same period. Notice how the CVB displays a more orderly trend. The standard bar chart shows extended sideways action and low volume readings during the night sessions. The CVB chart compresses these low volume periods into one bar.

Figure 9 compares the basic intraday bar chart with Fill Gap, No Gap, and Equalize Session Bar charts. The three charts are different approaches to the low activity overnight sessions.

Figure 10 displays one-minute charts of crude oil, heating oil, and gasoline traded on Globex. In addition, technical studies are added to the charts. CQG comes with over 90 basic and custom studies to aid the technically oriented trader.

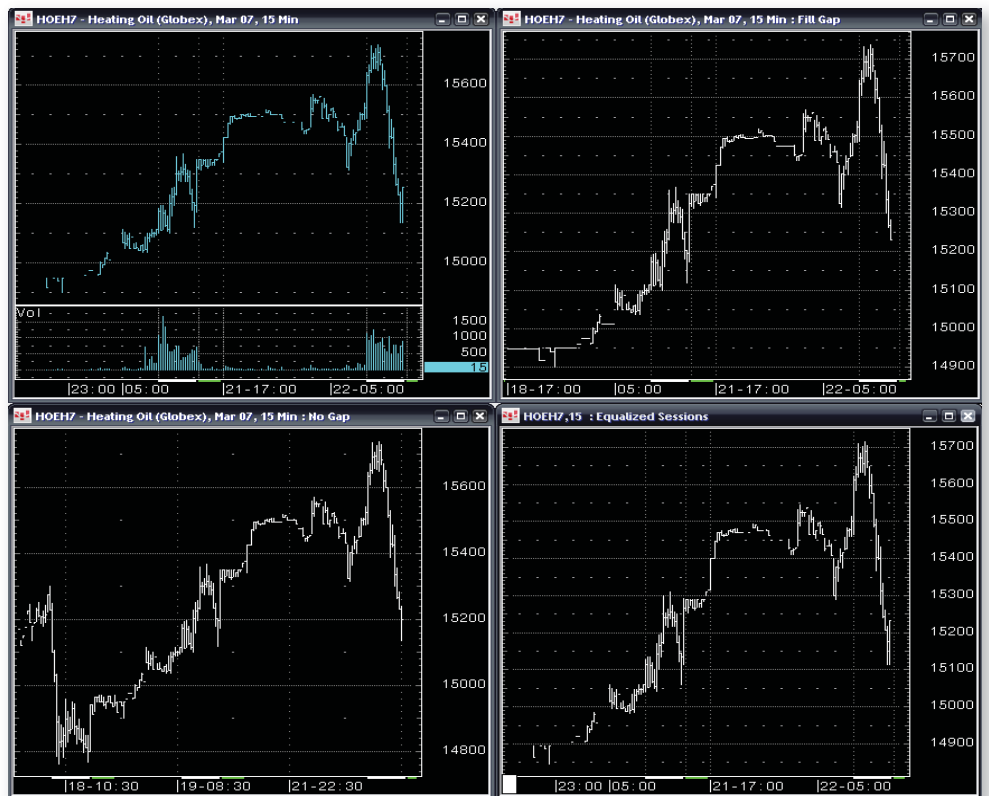
Summary

CQG's charting ranges from the innovative TradeFlow to the classic bar chart. Here, we have offered a simple overview of the various displays available. And, because virtually any element of the chart can be customized, traders can match their chart displays to their trading style. ■

Trading and investment carry a high level of risk, and CQG, Inc. does not make any recommendations for buying or selling any financial instruments. We offer educational information on ways to use our sophisticated CQG trading tools, but it is up to our customers and other readers to make their own trading and investment decisions, or to consult with a registered investment advisor.

**Learn more at Thom Hartle's Blog:
www.hartleandflow.com**

Figure 9



Basic Bar, Fill Gap, No Gap, and Equalize Session Bars. Each chart is the 15-minute bar chart of the heating oil contract traded on Globex. The chart on the top left-hand side is the 15-minute bar chart. There are periods where the chart has noticeable gaps due to no trading activity. The chart on the top right-hand side is the Fill gap chart with the last price filling the gaps. The bottom left-hand chart is a No Gap chart. The gaps are removed and time is compressed. The bottom right-hand chart uses the Equalize Sessions format. In this case, all opening and closing prices are back adjusted to remove gaps.

Figure 10



Globex traded Crude Oil and Products. Here, one-minute charts with studies are presented. Studies can be modified by right-clicking on the study. Plot studies in individual panes or with the price bars.

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