Act First in the Market with Accurate Insights

Leveraging our deep expertise in satellite radar imagery, Ursa is able to provide reliable measurements - not extrapolations - across global supply chains day or night regardless of clouds or fog.

For example, when Ursa Cushing measurements are compared to the Energy Information Administration's (EIA) Cushing numbers, Ursa's measurements have a 99% correlation to storage, with a >85% accurate build/draw prediction. This allows users to more confidently use Ursa's builds and draws at key terminals, like Cushing, to make smarter decisions at key times.

For week-over-week change, it is statistically reasonable to trust Ursa's weekly change measurements within 500,000 barrels (bbls), in either direction. Ursa also monitors 340 of the most material terminals around the globe, totalling over 3.6 Billion bbls weekly.

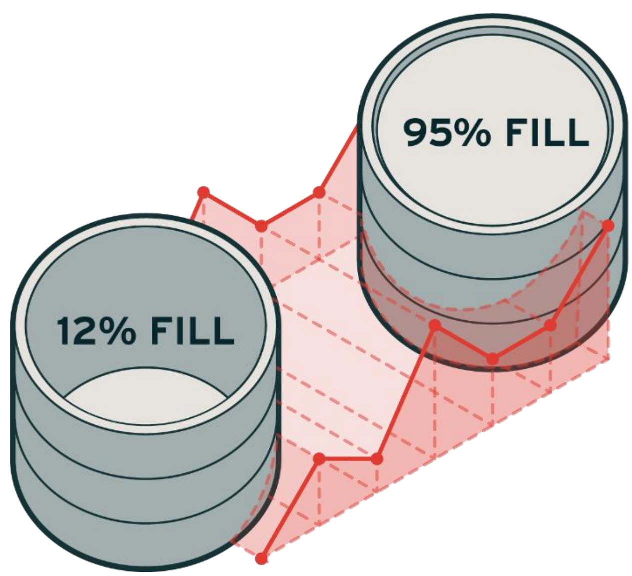
Let's focus in on a hypothetical trading scenario in Cushing.

Material Insights before API and EIA

As of October 8th, Ursa began publishing weekly Cushing measurements on Monday mornings at 9:30am EST. Prior to this date, we were publishing Cushing on Thursday mornings.

In comparison, the American Petroleum Institute (API) releases its weekly crude oil inventories report Tuesday afternoons at 4:30pm EST, and the EIA releases its weekly petroleum status report Wednesday mornings at 10:30am EST.

Clearly, timeliness and accuracy are key competitive advantages. As you can see in Figure 1 from the Ursa Portal, Cushing crude oil inventories hit 2018 lows of 23.4 million barrels in the summer and have since reversed course, increasing over 65% to 38.8 million barrels as of November month-end.



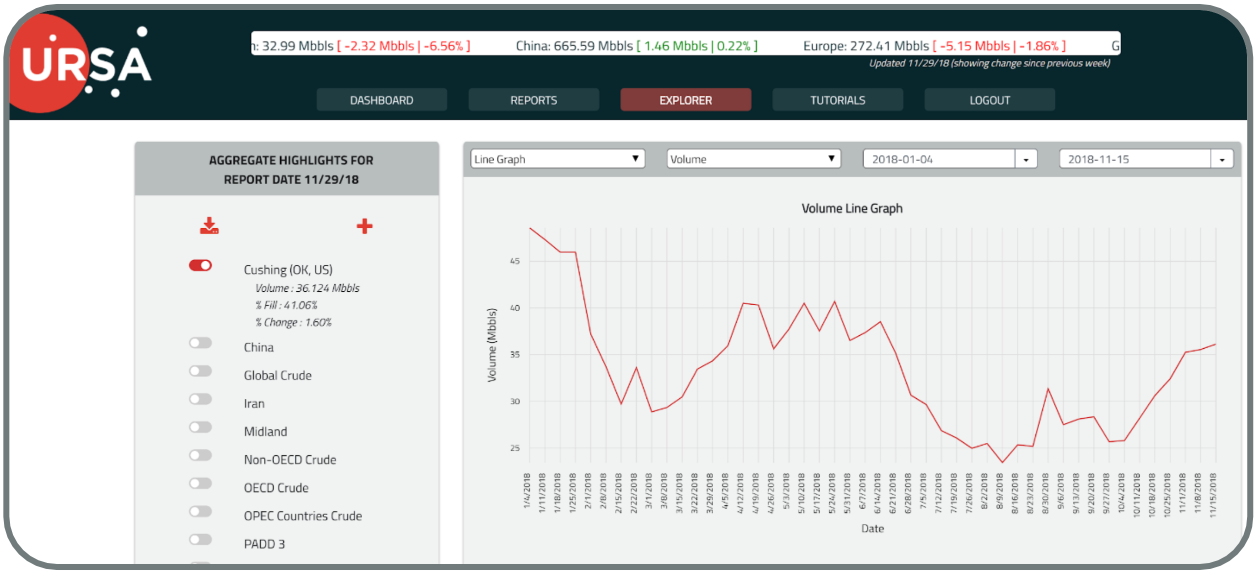


Figure 1: Ursa Cushing Inventory Data 2018. Image Source: Ursa Portal

Refinery turnaround season and the WTI forward curve shifting from backwardation (when the future price for WTI is lower than the prompt-month price) to contango (when the future price for WTI is higher than the prompt-month price) were two fundamental contributing factors to this recent inventory swing.

Storage inventories typically rise during periods of contango since market participants are incentivized to place barrels in storage and wait until a later date to sell those barrels back into the market at a higher price.

Having a leading indication of such activity in Cushing is extraordinarily valuable when making trading decisions. In future blogs, we'll take a closer look at the relationship between Cushing inventories and NYMEX WTI futures term structure, as well as its relationship to key Permian locations like Midland and Wichita Falls.

Taking a closer look at Cushing inventories over the last 6 weeks, Figure 2 indicates the fill percentage of Cushing inventories rose from 29.35% to 41.06% – an increase of 40% in just 6 weeks.

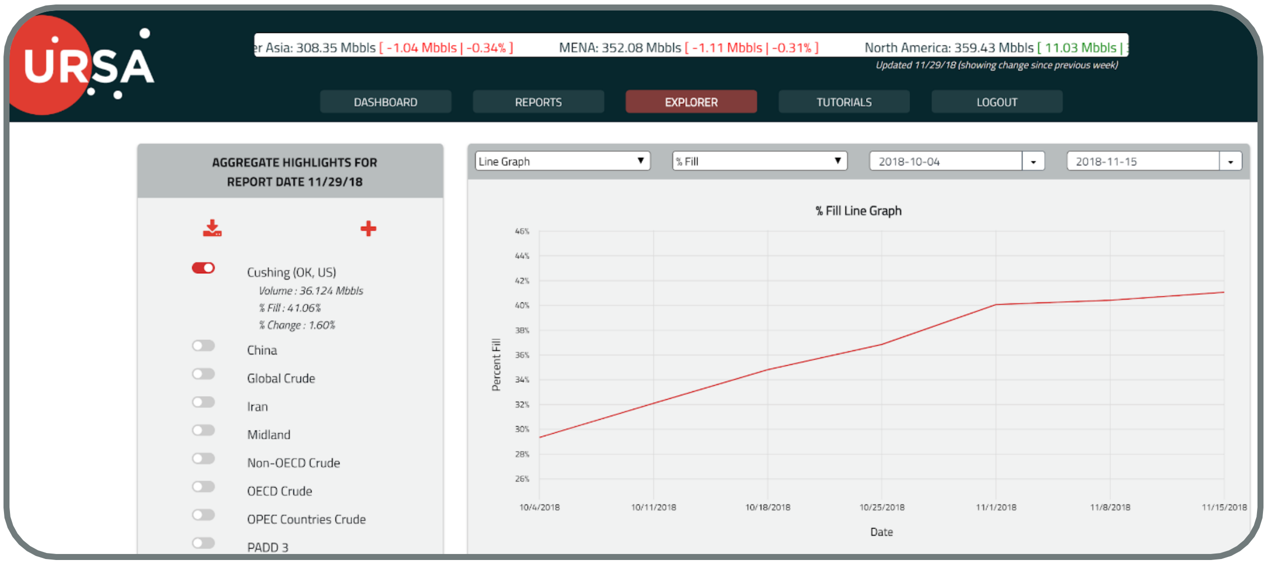


Figure 2: Cushing Crude Oil Inventory Data Fill Percentage 10/4 – 11/15

Image Source: Ursa Portal

Suppose given the timely access to rising inventory measurements, coupled with a seasonality forecast entering refinery maintenance season, you have a bearish view on the market and decide to put on a short -100mb WTI crude oil futures position on Monday Oct 8th leveraging Ursa's insights. In other words, going short 100 contracts, equivalent to 100,000 barrels.

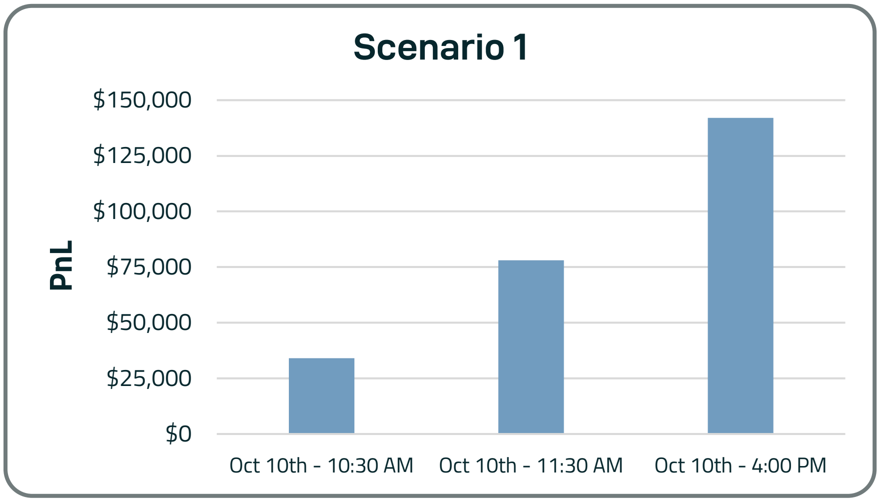
Figure 3 indicates the timeliness and accuracy of Ursa's Monday morning Cushing measurements as a leading indicator relative to API and EIA:

Week	Ursa (Mon)	API (Tues)	EIA (Wed)
8-Oct	2,400,062	2,300,000	2,359,000
15-Oct	2,420,512	1,530,000	1,776,000
22-Oct	1,794,200	971,000	1,371,000
29-Oct	1,078,922	1,400,000	1,878,000
5-Nov	2,053,924	3,070,000	2,419,000
12-Nov	570,253	720,000	1,161,000

Figure 3: Week-over-week Cushing Inventory Change

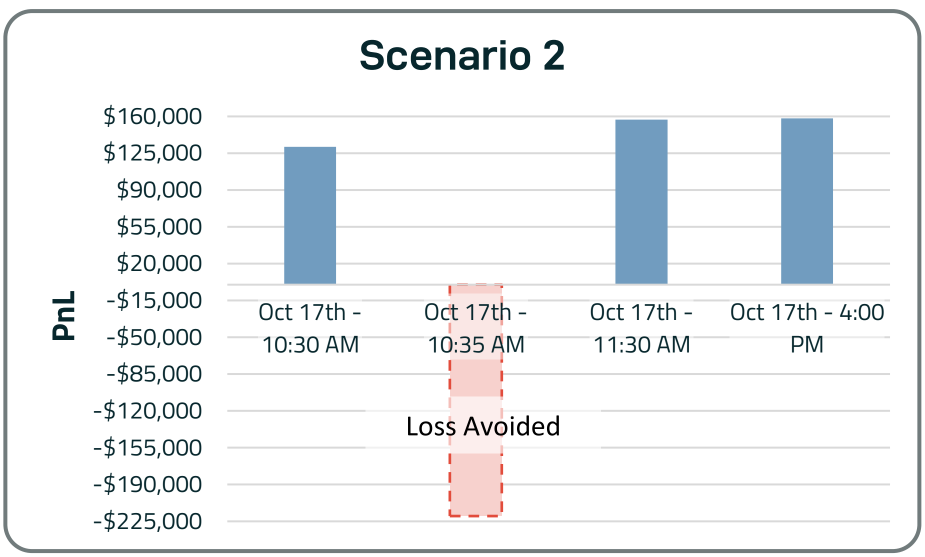
Let's see how that short -100mb WTI crude oil futures position would have performed over this 6-week period.

Scenario 1



Ursa reported at 9:30am Monday Oct 8th a Cushing build of 2.40 million barrels, and as such you enter into a short -100mb WTI crude oil futures position at the close at $74.21/bbl. Eagerly awaiting API's Tuesday afternoon release, API validates with a 2.30 million barrel build. Feeling confident, you eagerly await the EIA's 10:30am report, which came right in line at 2.36 million barrel build. At the time of the EIA's release, WTI was trading at $73.87/bbl, and you would have made a profit of $34,000 thus far. One hour later at 11:30am, WTI was trading at $73.43/bbl – your position is yielding a $78,000 profit. Closing out your position at the close of business Wednesday Oct 10th at a price of $72.79/bbl, you would have realized $142,000 – not a bad return in 48 hours.

Scenario 2



Since you made $142,000 on this trade last week, suppose you put on the same position the next week. Ursa reported at 9:30am Monday Oct 15th a Cushing build of 2.42 million barrels, and you decide to enter into a short -100mb WTI crude oil futures with a Monday close price of $71.65/bbl. However, the following afternoon the API reports a surprise *draw* in total US crude stocks, sending the market into panic, causing the price of WTI to quickly rise and reversing the day's declines to close at $72.27/bbl.

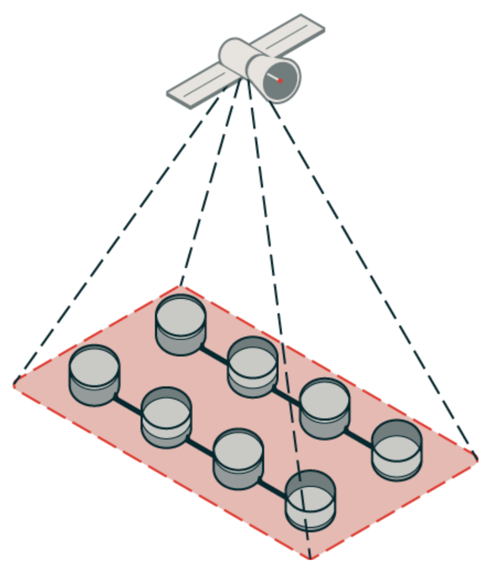
So far this week you've had 2 dislocated data points, and the market is eagerly awaiting the EIA's report. Wednesday morning's EIA release reports a 1.78 million barrel *build* at Cushing, refuting the temporary bullishness from the API's surprise draw in total US crude stocks and causing the market to instantly reverse course and plummet. By 10:30am the price of WTI has dropped over 2.5% since the API's release to a price of $70.34/bbl, and your position is in the money $131,000. One hour post the EIA's release, WTI is trading even lower at $70.08, and you're up $157,000 so far. Taking advantage of the market's dislocation of information, you close your position at Wednesday's closing price of $70.07/bbl, realizing $158,000 in PnL.

Suppose you weren't receiving Ursa's Monday Cushing measurements and you had been swept up on the market's surprise bullishness post API's surprise draw reported on Tuesday afternoon. You decided to enter into a *long* 100mb WTI crude oil futures position at $72.27/bbl. Assuming you reacted quickly enough once the market had moved swiftly away from you and closed your position 5 minutes after the EIA's release (when WTI was trading at $70.13/bbl), your position would have lost over 3% or $221,000.

Thankfully, you already had an accurate measurement days ago. Instead of being caught up in the volatility and realizing a $221,000 *loss*, you realized a $158,000 *profit*.

Scenario 3

Finally, let's continue with our first example. Inventories are rising, the market is entering refinery maintenance season, and you have an overall bearish market view. Ursa reported at 9:30am Monday Oct 8th a Cushing build of 2.40 million barrels, and as such you enter into a short -100mb WTI crude oil futures position at $74.21/bbl.



Let's assume you're a longer-term trader or portfolio manager – you minimize portfolio turnover and have a longer-term holding period in line with your market view. Each of the following Monday mornings, Ursa reports Cushing builds, reinforcing your bearish market view and validated by rising inventories and declining WTI prices. By Nov 15th, you've held this short -100mb WTI crude oil futures position for nearly 6 weeks while WTI had declined nearly 24%, and you decide to liquidate the position at the close price of $56.44/bbl. Accounting for negative roll yield in a contango market of -$20,000, you've realized a $1,757,000 profit.

With growing concern of an oversupplied US and international market, backwardation may soon return. Having a timely pulse on that inflection point will prove valuable to traders, expecting to see Cushing inventories start to fall again. While there are many factors that impact crude oil prices (production, exports, geopolitics, etc.), inventories are a key fundamental driver of overall pricing sentiment in the market.

[Maximize your return on investment from Ursa reports by clicking here to sign up for an Evaluation]

Daniel Baruch is the Director of Global Energy Markets & Business Development at Ursa. His background is across energy commodity markets with experience in crude oil & NGLs at Glencore, natural gas & power at Morgan Stanley, and alternative investments portfolio management at AllianceBernstein.