DME Oman crude in the spotlight after Aramco selection

The past, present and future of the contract

When Saudi Aramco picked the Dubai Mercantile Exchange (DME) Oman crude contract for inclusion in its Asian pricing formula, it was the equivalent of a major Hollywood director casting a little-known actor for the starring role. Fortunes can change overnight, but with the increased popularity comes greater scrutiny.

This paper looks at Aramco's decision, the key characteristics of DME Oman crude, the physical market underpinning the futures contract and the massive oil storage project underway on Oman's southeastern coast.

Saudi Aramco announced in July 2018 plans to revise its pricing formula for crude oil exports to Asia, marking the first change in benchmarks since the mid-1980s.

Aramco is still calculating the monthly official selling price (OSP) for Asian refiners as an average of Dubai crude and Oman crude plus or minus a differential.

The switch involves the source of Oman crude prices. Aramco decided to replace S&P Global Platts with the DME, effective October 2018. The new formula will take the average monthly settlement prices for Platts Dubai crude and DME Oman crude futures.

The difference between DME Oman and Platts Oman has historically been very minor, which is not expected to change.[1]

To understand why the news generated considerable buzz, it helps to know the context in which Aramco's decision was made as well as the potential ramifications.

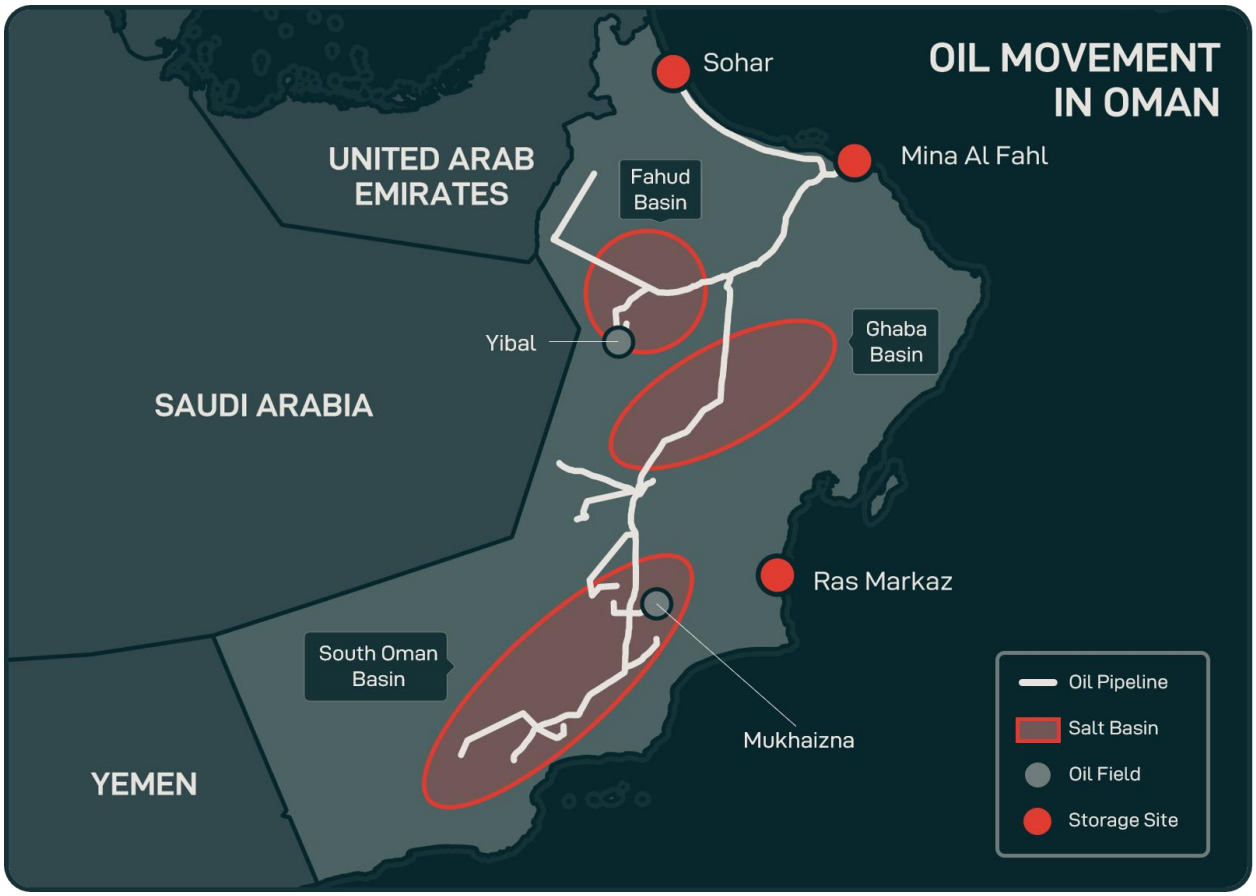
A battle for the upper hand

A longstanding debate has centered on the appropriateness of Platts Dubai/Oman as the crude benchmark for Middle East medium sour barrels heading to Asia. Critics have argued for a benchmark "closer to home," which some believe can be fulfilled by China's recently launched International Energy Exchange (INE) crude oil contract.

Whether merited or not, the perception has been Saudi Arabia and China are engaged in a tug-of-war over price control.

"Aramco's selection of the DME Oman crude for the Asia OSP formula will bolster its bona fides within the physical market."

[1] See as an example Bassam Fattouh, 'What Next for Asian Benchmarks?', *Oxford Energy Comments*, July 2018. The author argues that Aramco's shift to DME Oman won't make much of a difference in terms of price. Fattouh says the average difference between DME Oman and Platts Oman was less than 5 cents a barrel between January and June 2018.



Oilfields are connected by pipeline to Mina al Fahl

Image credit: Lauren Baker/Ursa

After years of paying the so-called "Asian premium," China has gone on the offensive pushing back against Gulf producers to obtain better pricing terms, the story goes.

Recent examples include the listing of the INE crude contract, the outsized role of Chinese oil companies in the Platts Dubai Market-on-Close, and large reductions by state-owned refiner Unipec of monthly shipments of Saudi crude.

Against this backdrop, the revision of the Saudi OSP looks like a counterpunch against China.

Aramco presumably turned to the DME as offering the best chance of preserving its pricing clout in Asia.

In so doing, Aramco gave a major boost to the DME Oman contract which to date has lagged far behind NYMEX crude and ICE Brent in terms of open interest.

Overview of oil storage complex at Mina Al Fahl
Basemap Source: Left, Google Earth; Right, Carto
Imagery Source: Planet Labs, Inc.

Will speculators follow?

The DME Oman contract has mostly been used as a way of buying oil through physical delivery rather than for speculative or hedging purposes.

The dilemma is a familiar one. How does a futures contract become liquid?

There is no one path, but certainly Aramco's selection of the DME Oman crude for the Asia OSP formula will bolster its *bona fides* within the physical market.

If other Arab Gulf producers follow Aramco's lead, making the same revisions to OSP formulas, then even more Asian buyers will have price exposure to DME Oman, creating more incentive to use the contract for hedging purposes.

Speculators feel comfortable trading a contract after producers have begun to use it. Liquidity attracts liquidity, and so on.

This virtuous cycle will probably apply to DME Oman crude following Aramco's endorsement. The contract's larger profile on the world stage will then invite scrutiny of the physical market underpinning DME Oman crude.

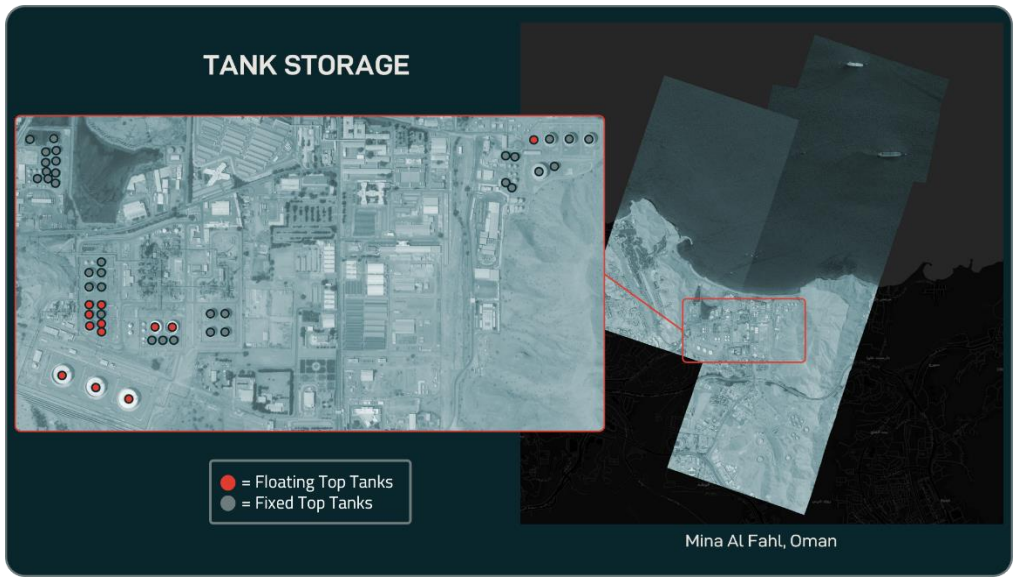
How stable is production? Is there ample crude storage? To what extent is geopolitical risk a factor?

"Turning Ras Markaz into reality will greatly enhance the country's storage capacity helping grow the DME Oman contract."

Production near record high

One thing in Oman's favor is the perception of autonomy that comes from *not* being an OPEC member. Production decisions are made in Muscat, not Vienna. That said, Oman joined the coalition participating in OPEC-coordinated supply cuts effective January 2017.

Output trends have been favorable. Daily production rose from 715,000 barrels in 2007 to an all-time high above 1 million barrels in 2016 and probably would've set another record in 2017 were it not for Oman's pledge to trim output. Production averaged 970,000 bpd in 2017.[2]



Satellite photo of tank storage at Mina Al Fahl

Basemap Source: Carto

Imagery Source: Planet Labs, Inc.

Location, location, location

Petroleum Development Oman (PDO), a majority state-owned company, is responsible for more than 70% of the country's crude oil production, according to US Energy Information Administration.[3]

A healthy secondary market exists for Omani crude because exports aren't subject to destination restrictions.

Oman's location is considered advantageous because the main port – Mina al Fahl – sits outside the Strait of Hormuz in the Gulf of Oman. Therefore, Omani crude exports would be uninterrupted in the event of the strait's closure.

[2] EIA International Energy Statistics

[3] The equity owners of PDO are the Oman government (60%), Shell (34%), Total (4%) and Partex (2%), according to EIA. Occidental is the biggest foreign firm operating in Oman and second-largest behind PDO.

Floating and fixed top tanks at Mina Al Fahl

Basemap Source: Carto

Imagery Source: Planet Labs, Inc.

Minal Al Fahl terminal

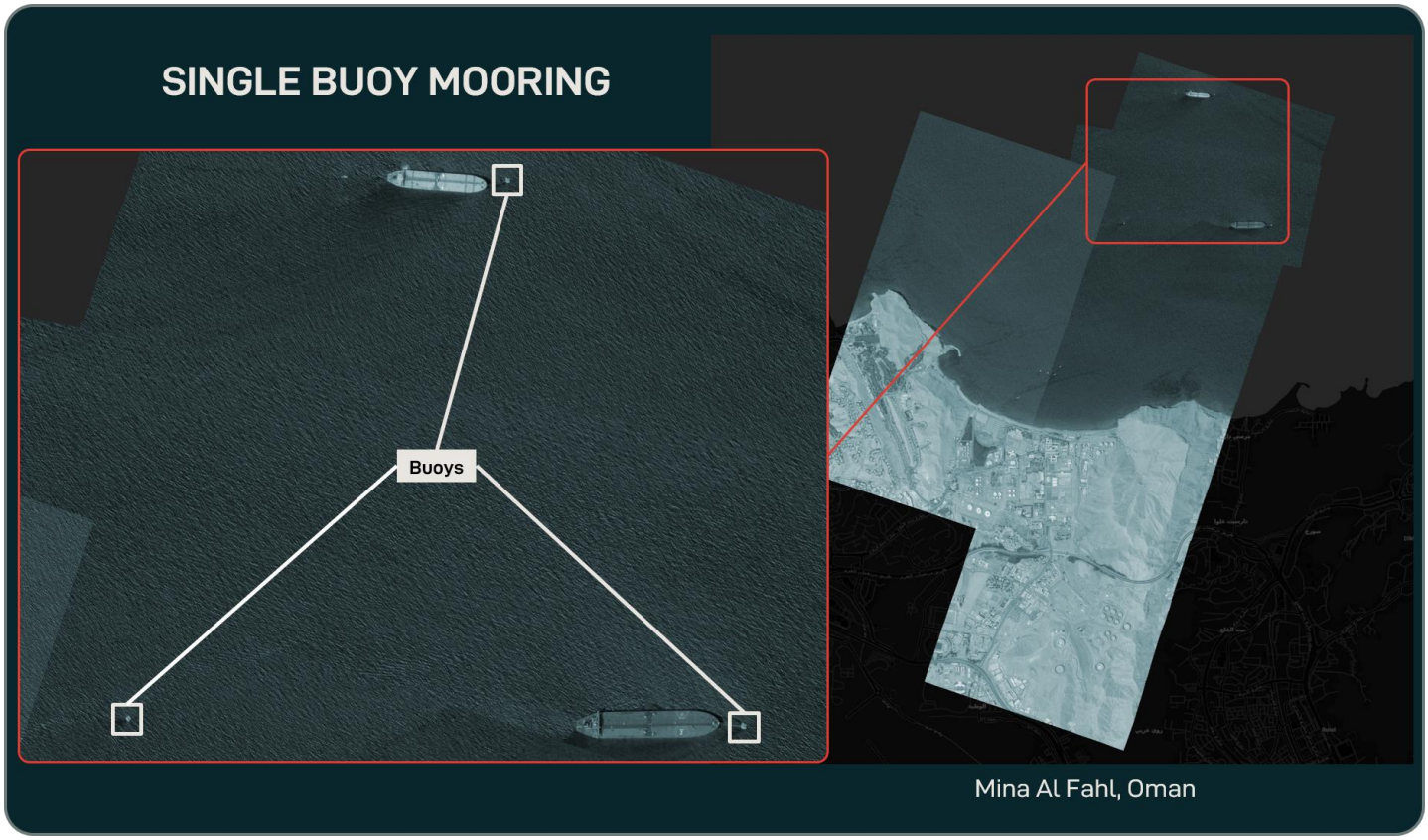
Mina Al Fahl is an oil storage and processing facility located in the greater Muscat area. The owners are Oman Oil Industries and Petroleum Industries (ORPIC), PDO and Shell Oman Marketing. ORPIC has a refinery (106,000 bpd capacity) at Mina al Fahl.

An Ursa analysis of satellite imagery found that Mina al Fahl has 24 floating top tanks and 35 fixed top tanks. Floating top tanks have a storage capacity of 8 million barrels.

Ursa also measured the amount of oil in storage tanks using synthetic aperture radar. We calculated storage at 2,555,861 barrels on August 9 and 3,174,696 barrels on September 6.

Crude oil and refined products are loaded onto tankers for transport via a single buoy mooring system fed by subsea pipelines. The facility currently has three buoys.

An image taken September 7, for example, shows two tankers visible mooring for cargo intake. Those tankers were Front Force (Marshall Islands) and Raysut (Panama).



Tanker loading facility at Mina Al Fahl

Basemap Source: Carto; Imagery Source: Planet Labs, Inc.

Mina Al Fahl is one of two physical delivery points allowed under the DME Oman crude futures contract. The other option is ship-to-ship transfer in Omani water. The Oman Tank Terminal Company (OTTCO) operates a VLCC that can store approximately 2.1 million barrels.

Oman dreams big

OTTCO announced the addition of floating storage in 2015 as an interim step until a massive storage project called Ras Markaz (70 kilometers south of Duqm) could be completed.

Ras Markaz is the cornerstone of Oman's ambition to become a global inventory hub. It should be considered in any discussion about the DME Oman contract.

An oil futures contract benefits greatly when there is ample storage, and vice versa. This symbiotic relationship is promising, though Ras Markaz remains at an early stage of development.

Ursa analysts examined the future site for Ras Markaz using imagery collected September 2018 by Planet Labs. At the time, no tank foundations or heavy construction vehicles were visible. Only a few incomplete jetties could be seen.

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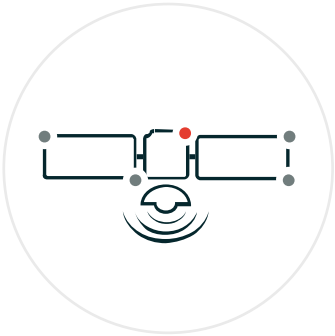
According to OTTCO,[4] Ras Markaz will be able to hold 25 million barrels in storage and could expand to hold as much as 200 million barrels.

Pipelines will connect Ras Markaz to Omani oil fields, the (planned) Duqm refinery and four single point moorings located five kilometers offshore. Subsea pipelines will be able to flow both ways, so Ras Markaz can handle exports and imports.

Ras Markaz will be part of the Duqm Special Economic Zone Authority. Customers can lease storage or own storage as a sole venture or partner with OTTCO.

The oil market has begun paying more attention to the DME Oman crude contract. Its greater relevance also places more scrutiny on the Omani crude physical market, including available storage capacity.



[4] See OTTCO website at http://www.ottco.om/site/about