

ISIS EXPORT GATEWAY TO GLOBAL CRUDE OIL MARKETS

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Abstract

The Islamic State of Iraq and Syria (ISIS) began to take over oil fields in late spring 2014. Since then, ISIS has expanded its operations by creating a loosely integrated and thriving black economy, consisting of approximately sixty percent of Syria's oil assets and seven oil producing assets in Iraq. The terrorist organisation has also managed to set up an extensive network of middlemen in neighbouring territories and countries, with the aim of trading crude oil for cash and in kind. Upon extraction, the commodity is first lightly refined on site and then a shadow supply-chain network takes over, to bring it to the market.

Are there any oil terminals in the South-East Mediterranean Sea used by ISIS and its shadow network as export gateways for smuggled crude? We answer this question by tapping into the proxy indicator of tanker charter rates. First, we look at the map for crude oil loading terminals that geographically fall within, or border the sphere of ISIS control. Second, for the 'suspect' terminals we take a closer look at the charter rates of tankers over a period of years, seeking to establish patterns. Third, looking for 'suspect' pattern-breaking charter rates, we narrow the time-frame down to the period from July 2014, when ISIS started off its smuggling operations, until mid-February 2015.

We conclude by offering remarks on the illicit trade, while providing insights into the criminal practices of ISIS.

Keywords: ISIS, crude oil port-terminals, smuggling, charter rates.

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1. Introduction: The Islamic State of Iraq and Syria (ISIS)

ISIS is a terrorist organisation. It is based in the Middle East and its stated goal is to create a caliphate that will merge parts of Iraq, Syria and Lebanon into one Islamic state-entity. At its inception, ISIS was a motley crew of Sunni fighters, most of them coming from Iraq's local Al-Qaeda franchise and Saddam Hussein's die-hard republican army. Head of the organisation is Abu Bakr al-Baghdadi, a well-known to the West terrorist with a background in Iraq's insurgency against the U.S. led coalition forces (New York Times 2014 I).

ISIS began to morph into a proto-state by taking advantage of Syria's civil war. Its capital is Raqqa, located on the north bank of the Euphrates River about 160 kilometres east of Aleppo. It is infamous for its brutality, which manifests itself, not least, through beheadings, rape, throwing of homosexuals off the roofs of tall buildings, enslavement of women and trafficking of children as sex-workers. Muslims are not exempt from brutalities, a fact that in February 2014 led Al Qaeda to distance itself from its new blood-brethren. Its practices of proselytization include the deft use of social media like Facebook, YouTube and Twitter. In this way, the terrorist organisation has spread its tentacles all over the globe, acting like a magnet for young aspiring jihadists. At the time of writing of this paper, ISIS boasts 3,000 foreign fighters from all over the world (New York Times 2014 II).

In the summer 2014, the international community started to react more forcefully against ISIS. On the social media front, propaganda videos were taken down and as a step further in the same direction, monitoring of material posted for reasons of proselytization became an entrenched standard practice (The Heritage Foundation 2015). In the physical world, a campaign of air bombardments, with the U.S. taking the lead, managed to slow down the precipitous development of ISIS ground troops. However, the single most important event that played the major role in the effort to mount effective resistance against the sweeping scourge was the awakening of Iraqi tribes that took the initiative and came together to fight the Islamic State.

The caliphate financially supports itself through extortion, crime syndication, hostage taking, trade of Syrian and Iraqi antiquities and donations. Additionally, it's taking advantage of hefty cashflows generated through smuggling of crude oil (CNN 2015 a). The present study represents the effort of the authors to delve into the potential integration of ISIS smuggled crude within the global oil markets.

2. The Upstream Oil Business of ISIS

Contrary to the worldwide public belief that ISIS is just another group of bloodthirsty militants, the terrorist organisation represents the next evolutionary step of Islamic militant fundamentalism. Whereas Osama bin Laden's brainchild, Al-Qaeda, still depends on international donors, ISIS managed to reactivate a long sleeping black market economy, mainly but not exclusively, over the territories it controls. At the very epicentre of this initiative lies the shadow network of crude oil smugglers that was initially set up three decades ago by Saddam Hussein, with the aim of working around the U.S. economic sanctions imposed on Iraq (Interview with Correspondent Y 2014 a). The outcome has been astonishing, given that the Caliphate's portfolio of assets now includes sixty percent of Syria's oil assets and seven oil producing assets in Iraq (Brookings 2014). At some

point, immediately after the launch of its crude oil venture in summer 2014, ISIS achieved production of roughly 30,000 barrels of oil per day (CNN 2015 b). This rate has gone up, and in February 2015 reached the mark 45,000 b/d. This is a stonking statistic and it becomes almost baffling if one considers the fact that the commodity is being smuggled within a war zone. Although the price of crude nosedived in the last two quarters of 2014 (see Graph I), it is estimated that the caliphate's cash inflows reached levels between one and three million dollars per day (Vocativ 2014). Its key to success was the sale of crude oil at rock-bottom prices between \$60 and \$25, when the price of the commodity was correspondingly hovering around \$100 and \$80 per barrel. However, it has to be mentioned that since then, the series of air raids that have been launched by the U.S., with the support of a handful of other NATO and Gulf nations, effectively curtailed the ISIS oil cashflows, chiefly through the destruction of oil manufacturing facilities. An interesting point to be made is that extraction wells in the area of bombardments have yet to be targeted by the U.S. or the air-assets of its allies, a fact that can be readily attributed to the at times 'toxic' politics in the Middle East (New York Times 2014).



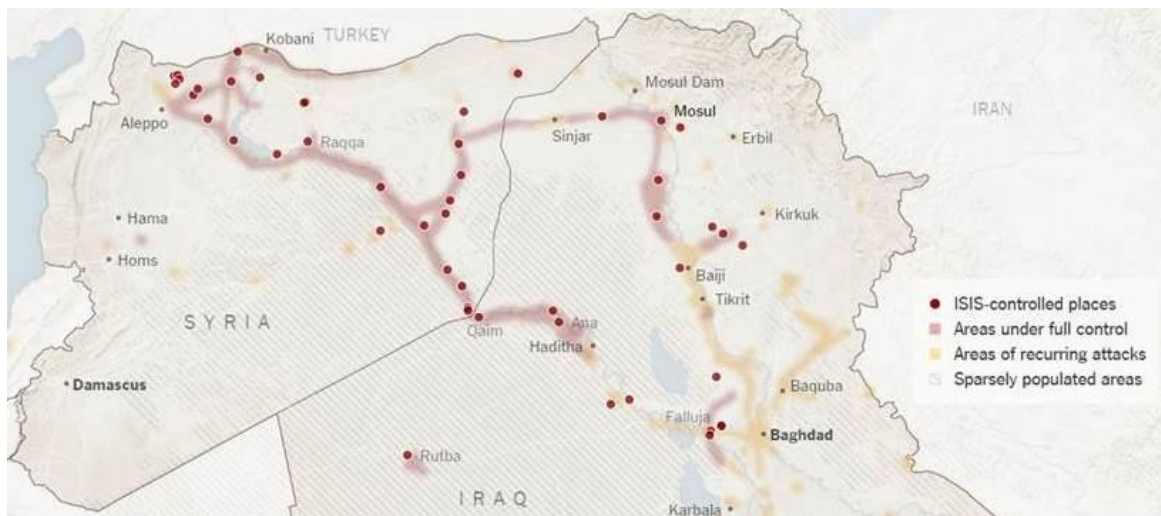
Graph I: Crude Oil Prices, (Wall Street Journal 2015)

2.1 The Geography of ISIS oil portfolio and means of oil transportation

Map I depicts the area under ISIS control (New York Times 2015). Within this vast territory, there are a number of oil fields whose control was lost by the Syrian central government soon after the break-out of the civil war. Most of these oil fields were assets in the portfolio of the Al-Furat Petroleum Company, a Royal Dutch Shell affiliate. The crude oil still produced in these oil fields is of fairly good quality, because it has low concentration in sulphur and as such, it can be easily processed. Once pumped to the surface, it is lightly refined either onsite in unelaborate facilities, or transported straightaway to Turkey on truck-lorries (World Policy Blog 2014).

The tradesmen/smugglers responsible for the transportation and sale of the black gold send convoys of up to thirty trucks to the extraction sites of the commodity. They settle their trades with ISIS on site, encouraged by customer friendly discounts and deferred payment schemes. In this way, crude leaves Islamic State-run wells promptly and travels

through insurgent-held parts of Syria, Iraq and Turkey, while at the same time, the tradeflows cover local demand. ISIS also uses its oil wealth to shore up its local tribal support-base by strengthening commercial ties with tribes in the areas under its control. It actively urges its network to build stockpiles and allows Bedouins in the Deir al-Zor province to tap wells, such as the Bar al Milh, al Kharata, Amra, Okash, Wadi Jureib, Safeeh, Fahda and other extraction assets near Jebel Bushra. At least nine major tribes have benefited out of similar regional-friendly schemes, including Iraqi ones such as the influential Jabour tribe. As a rule of thumb, a large trailer carrying 30,000 litres of crude can make \$4,000 profit in just one journey lasting a few days (Business Insider 2014). The result of this policy is soaring support for the caliphate.



Map I: ISIS controlled areas, (New York Times 2015)

As an extra measure of logistical support, the militant group allows convoys to pass more quickly through its checkpoints. Moreover, since allied U.S. air-raids do not target the truck lorries out of fear of provoking a backlash from locals, the transport operations are being run efficiently, taking place most of times in broad daylight. Traders lured by high profits are active in Syria (even in government-held territories), Iraq and south-east Turkey. According to Correspondent X (1st and 2nd Interview 2014), in Turkey and along the international route E90, ISIS managed to set up a string of trading hubs as depicted on Map II. European route E 90 is an A-Class West-East route, extending from Lisbon in Portugal in the west, to the Turkish-Iraqi border in the east. The supply chain comprises the following localities: Sanliura, Urfa, Hakkari, Siirt, Batman, Osmaniya, Gaziantep, Sirnak, Adana, Kahramarmaras, Adiyaman and Mardin.

The string of trading hubs ends up in Adana, home to the major tanker shipping port of Ceyhan. In the next section 3 of the present study, the authors will try to answer the question whether a part of ISIS smuggled crude oil is being fed into the global oil markets, transported in tankers leaving the port of Ceyhan.



Map II: String of Smuggled Crude Trading Hubs in S.E. Turkey, (1st and 2nd Interview with Correspondent X 2014)

3. The Port of Ceyhan (see Map III)

Ceyhan is a city in south-eastern Turkey, with a population of 110,000 inhabitants, of whom 105,000 live in the major metropolitan area. It is the second most developed and most populous city of Adana Province, after the capital Adana with a population of 1,700,000. It is situated on the Ceyhan River which runs through the city and it is located 43 km east of Adana. Ceyhan is the transportation hub for Middle Eastern, Central Asian and Russian oil and natural gas (Municipality of Ceyhan 2015). Like everywhere else on the Turkish south-eastern Mediterranean coast, the climate is baking hot in the summer and fairly mild in the winter.

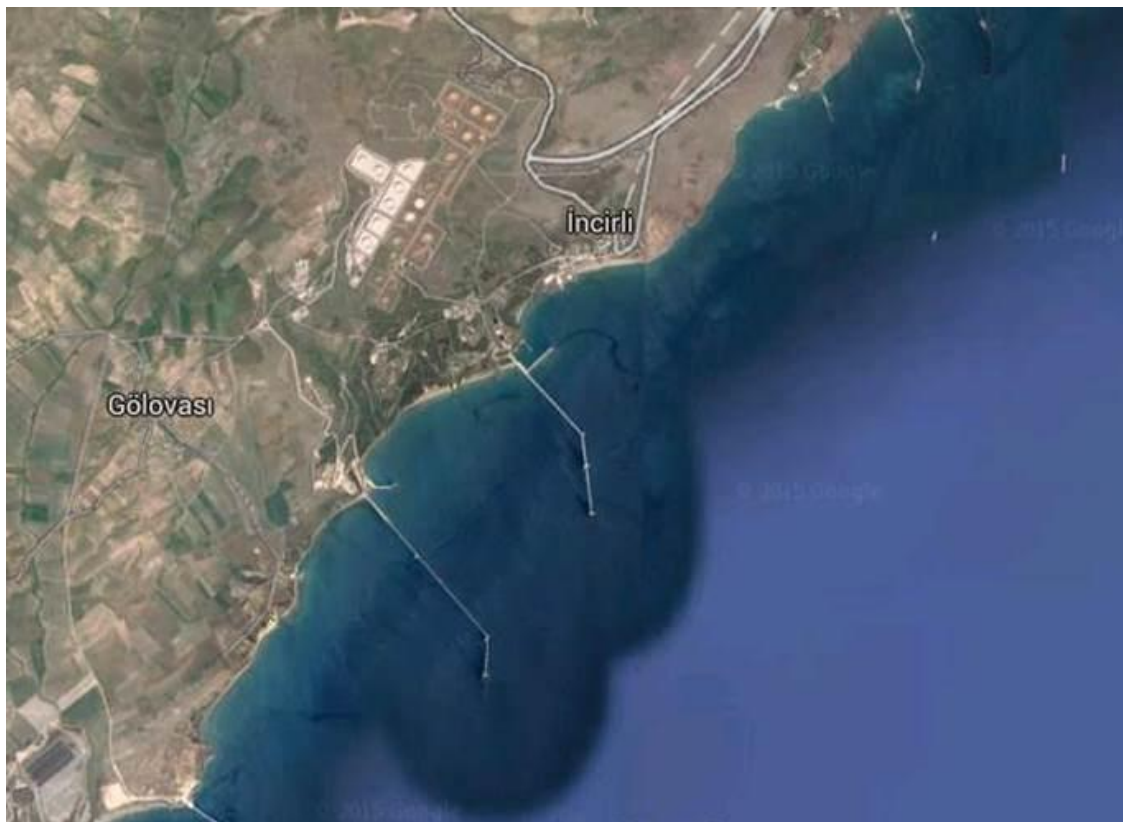


Map III: Ceyhan via Google Maps

3.1 The Port Facilities (see Map IV)

The port of Ceyhan plays host to a marine oil terminal that is situated in the Turkish Mediterranean and has been operating since 2006. It receives hydrocarbons for further loading in tankers, which carry the commodity to world markets. The terminal is the export gateway for crude from offshore assets in the Caspian Sea transported via the Baku-Tbilisi-Ceyhan oil pipeline and the new pipeline - commissioned in 2013 - coming from the Kurdish oil fields in Iraq. At times the terminal may also receive Iraqi crude via the Kirkuk – Ceyhan pipeline (SOMO Iraqi Oil Marketing Company 2015). The terminal covers an area of 144 hectares (1.44 sq. km) and houses a number of facilities (British Petroleum 2015). The latter include seven crude oil storage tanks - one million barrels each - with floating roofs, a crude export jetty - 2.6km in length - with two berths for simultaneous loading of two tankers of up to 300,000 deadweight tonnes each, a back-up system for monitoring and control of loading operations, six km of lines from oil storage tanks to tanker loading area, a Volatile Organic Compounds (VOC) incineration plant, an onsite waste water treatment plant, and accommodation facilities for management, administration and staff. Additionally, the port features a cargo pier and an oil-terminal, both of 23.2m depth that can load tankers of more than 500 feet in length (Ports.com 2015). The annual export capacity of the terminal runs as high as 50 million tonnes of oil.

The terminal is operated by Botas International Limited (BIL), a Turkish state company that also operates the Baku-Tbilisi-Ceyhan pipeline on the territory of Turkey.

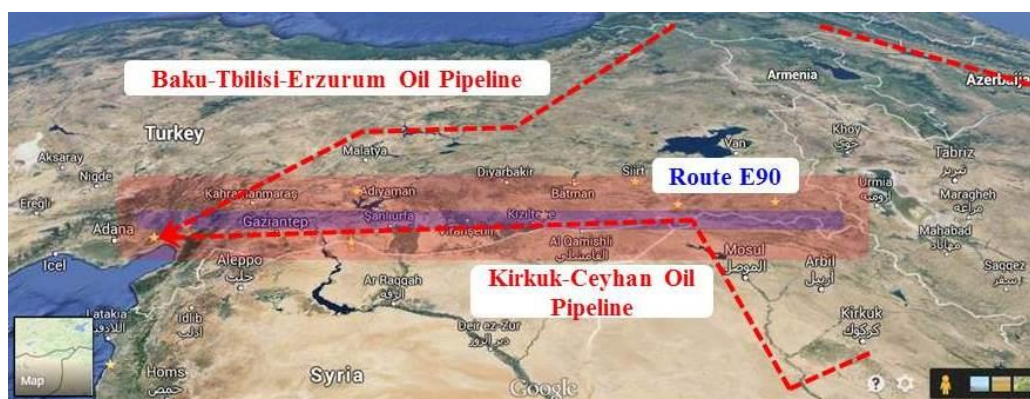


Map IV: The Port Facilities (Ports.com 2015)

3.2 Supply Statistics (volumes of crude exported via Ceyhan)

Based on the analysis in the previous paragraph 3.1, the supply of crude to the terminal in Ceyhan originates from three different sources (see Map V and Table I):

1. Offshore assets in the Caspian Sea, with crude exported via the Baku-Tbilisi-Ceyhan oil pipeline. In the third quarter 2014, these exports averaged 680,000 b/d (International Energy Association 2014 a);
2. Onshore assets in northern Iraq, controlled by the Kurdistan Regional Government (KRG), with crude exported independently of the federal Iraqi government via the KRG own regional pipeline, which was recently re-purposed to handle up to 550,000 b/d. In the third quarter 2014, these exports averaged approximately 200,000 b/d, with a very strong upward trend that ended up in December 2014 with quantities of more than 350,000 b/d. To the latter, one must add the quantities of crude exported by the federal Iraqi government via the same KRG pipeline. These quantities could average in the near future roughly 150,000 b/d, following the deal that was struck between the KRG and the federal government on the 2nd of December 2014 (International Energy Association 2014 b);
3. Onshore assets in northern Iraq, controlled by the federal Iraqi government, with crude exported via the federally-controlled pipeline to Ceyhan. In the past, Baghdad managed to ship up to 300,000 b/d from its northern fields, until its pipeline to Turkey was shut in early March 2014 due to repeated attacks by ISIS combatants. Since then, exports via this route have been intermittent (International Energy Association 2014 b).



Map V: Pipelines to Ceyhan via Google Maps

	Source of Crude Exports to Ceyhan	via Pipeline	Quantity (000 b/d)
1	Offshore assets in the Caspian Sea	TBC	680
2	Onshore assets in northern Iraq, controlled by the KRG	new, KRG controlled	btw. 350 and 500
3	Onshore assets in northern Iraq, controlled by the FG	FG controlled	intermittent

Table I: Pipelines to Ceyhan (International Energy Association 2014 a, b)

Based on Table I, it becomes obvious that the quantities of crude oil that are being exported to the terminal in Ceyhan, exceed the mark of one million barrels per day. Putting this number into context and given that ISIS has never been able to trade daily more than 45,000 barrels of oil (see Section 2, ‘The Upstream Oil Business of ISIS’, page 2), it becomes evident that the detection of similar quantities of smuggled crude cannot take place through stock-accounting methods. However, the authors of the present paper believe that there is another proxy-indicator, far more sensitive to quantities of ultra-cheap smuggled crude. This is the charter rates for tankers loading at Ceyhan. In the next sub-section 3.3, the focus shifts from the supply- to the demand-side, and more specifically to potentially sudden spikes of charter rates from Ceyhan that cannot be explained via prevalent trends across the global crude oil market.

3.3 Tanker Charter Rates and Regression Analysis

The Baltic Exchange (2015 a) tracks the charter rates on major seaborne trading routes of crude oil. To render its service more efficient and easily understood, it uses the system of Baltic Dirty Tanker Indices (Baltic Exchange 2015 b). One of these indices used to be the BDTI TD 11, 80,000 Cross Mediterranean from Baniyas, Syria to Laveras, France (see Map VI). Route 11 was discontinued in September 2011, due to Syria’s civil war and soon thereafter, it was replaced by BDTI TD 19 (TD19-TCE_Calculation 2015), of exactly the same technical specifications as BDTI TD 11, with the exception of the loading port of Ceyhan instead of Baniyas.



Map VI: Baniyas (Syria), Ceyhan (Turkey), Laveras (France) via Google Maps

For the Middle East, the BDTI system of Baltic Exchange also includes the following four major trading routes:

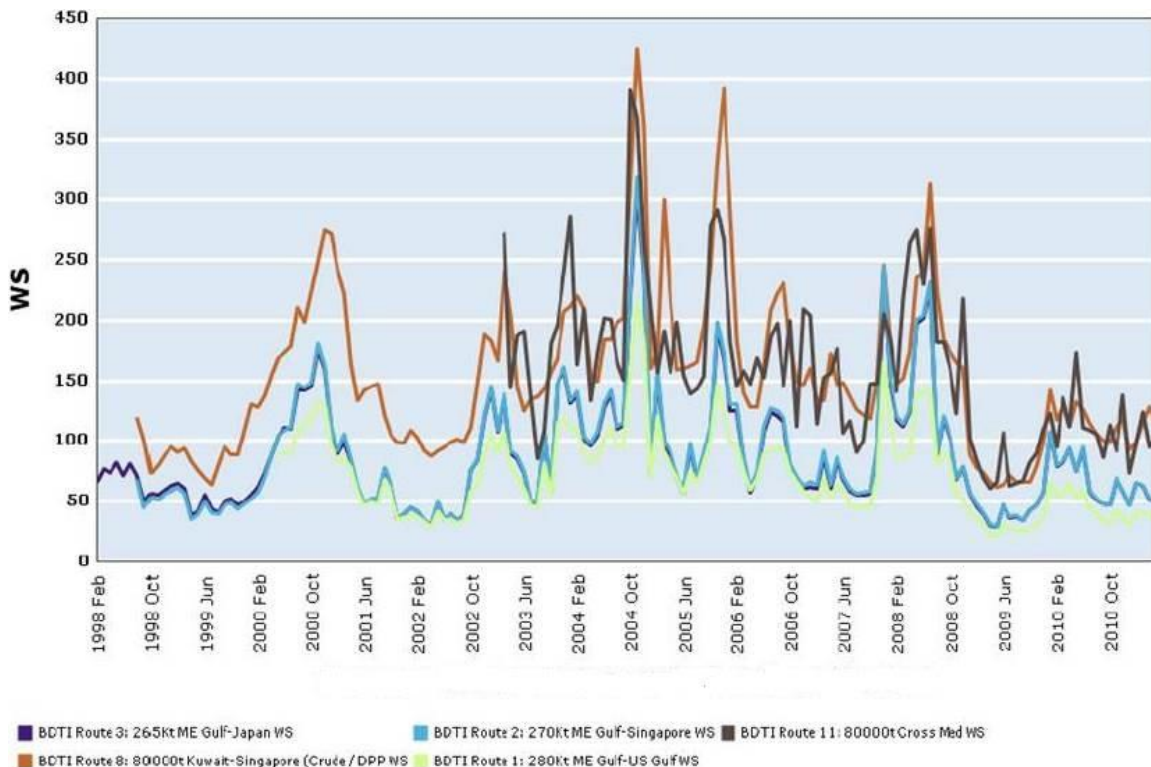
1. BDTI TD1: 280,000mt, Middle East Gulf to US Gulf (TD1-TCE_Calculation 2015);

2. BDTI TD2: 260,000mt, Middle East Gulf to Singapore;
3. BDTI TD3: 260,000mt, Middle East Gulf to Japan (TD3-TCE_Calculation 2015);
4. BDTI TD8: 80,000mt, Crude and/or DPP Heat 135F, Kuwait to Singapore (TD8-TCE_Calculation 2015);

Since late 2002 and early 2003, when data on TD 11 became available, the Route has featured a strong correlation of **58%** with the previous four major trading routes from the Middle East. (see Table II and Graph II).

Multiple R	76%
R Square	58%
Adjusted R Square	58%
Standard Error	47.2
Observations	2,125
<i>Coefficients</i>	
Intercept	36.0
BDTI TD3: 260,000mt, Middle East Gulf to Japan (WS)	2.0
BDTI TD2: 260,000mt, Middle East Gulf to Singapore (WS)	-2.3
BDTI TD8: 80,000mt, Crude and/or DPP Heat 135F, Kuwait to Singapore (WS)	0.4
BDTI TD1: 280,000mt, Middle East Gulf to US Gulf (WS)	1.3

Table II: Regression Statistics on TD 11, (Authors' Calculations)

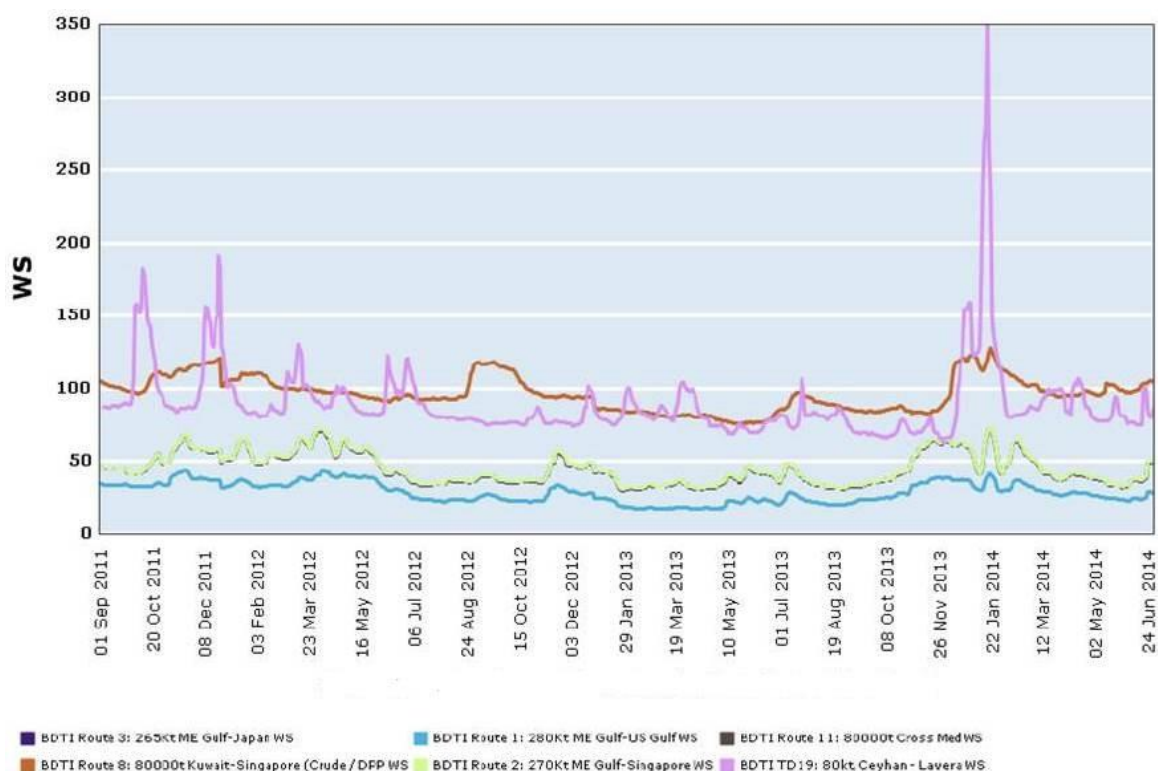


Graph II: TDI 1-2-3-8-11, (Source: Clarksons Research Services Limited)

After September 2011, when TD 19 (from Ceyhan/Turkey to Laveras) replaced TD 11 (from Baniyas/Syria to Laveras), the former ‘decoupled’ from the four major Middle East trading routes and its correlation with the latter fell to a meagre **22%** (see Table III and Graph III).

Multiple R	47%
R Square	22%
Adjusted R Square	21%
Standard Error	22.9
Observations	703
<i>Coefficients</i>	
Intercept	2.3
BDTI TD3: 260,000mt, Middle East Gulf to Japan (WS)	13.6
BDTI TD2: 260,000mt, Middle East Gulf to Singapore (WS)	- 13.1
BDTI TD8: 80,000mt, Crude and/or DPP Heat 135F, Kuwait to Singapore (WS)	0.8
BDTI TD1: 280,000mt, Middle East Gulf to US Gulf (WS)	- 0.4

Table III: Regression Statistics on TD 19, (Authors’ Calculations)

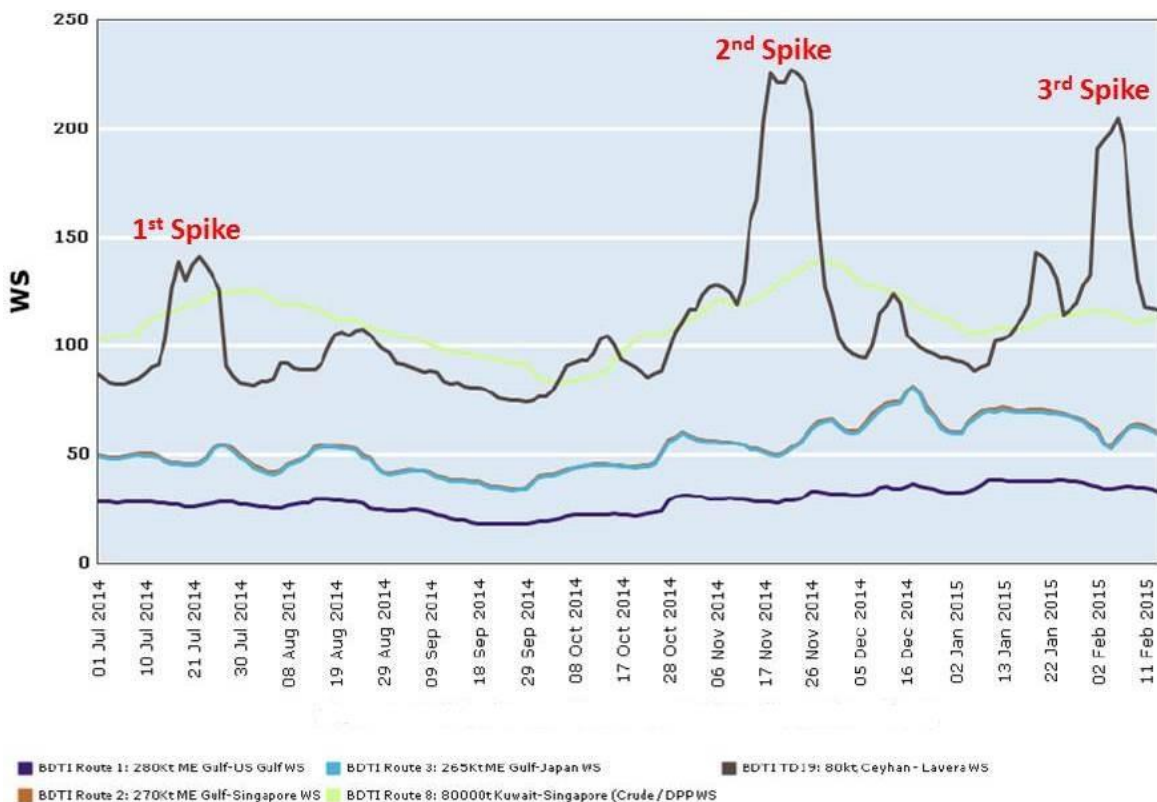


Graph III: TDI 1-2-3-8-19, (Source: Clarksons Research Services Limited)

However, from July 2014 when ISIS launched its crude oil venture, until February 2015, TD 19 ‘re-coupled’, up to a certain degree, with the four major Middle East trading routes, featuring this time a correlation of **34%** (see Table IV and Graph IV).

Multiple R	58%
R Square	34%
Adjusted R Square	32%
Standard Error	29.1
Observations	161
<i>Coefficients</i>	
Intercept	- 49.0
BDTI TD3: 260,000mt, Middle East Gulf to Japan (WS)	15.9
BDTI TD2: 260,000mt, Middle East Gulf to Singapore (WS)	- 17.7
BDTI TD8: 80,000mt, Crude and/or DPP Heat 135F, Kuwait to Singapore (WS)	1.2
BDTI TD1: 280,000mt, Middle East Gulf to US Gulf (WS)	4.6

Table IV: Regression Statistics on TD 19 (after July 2014), (Authors’ Calculations)



Graph IV: TDI 1-2-3-8-19 (after July 2014), (Source: Clarksons Research Services Limited)

3.4 Spikes of Charter Rates from Ceyhan and Timeline of ISIS Activities

From July 2014 until February 2015, the curve of TD 19 features three unusual spikes that do not match the trends featured by the rest of the Middle East trade-routes (see Graph IV):

- i. The first spike develops from the 10th of July 2014 until the 21st, lasting approximately ten days. It coincides with the fall of Syria's largest oil field, the Al-Omar, in the hands of ISIS (Reuters 2014);
- ii. The second spike takes place from the end of October until the end of November 2014, lasting one month. It happens at the same time with fierce fighting between fundamentalists and the Syrian army over the control of the Jhar and Mahr gas fields, as well as the Hayyan gas company in the east of Homs province (International Business Times 2014; Albawada News 214);
- iii. The third spike lasts from the end of January 2015 until the 10th of February, stretching roughly ten days. It happens simultaneously with a sustained US-led campaign of airstrikes pounding ISIS strongholds in and around the town of Hawija east of the oil-rich Kirkuk (Rudaw 2015);

4. Conclusions

The authors of this paper would like to make it clear from the very beginning that this has not been the case of a 'smoking gun'. The evidence has been inconclusive. But even if volumes of ISIS crude found their way, beyond any reasonable doubt, to the international crude oil markets via the Ceyhan terminal, this fact would not conclusively point to collusion between the Turkish authorities and the shadow network of smugglers, let alone ISIS operatives.

However, having clarified such a politically sensitive issue, the authors believe that there are strong hints to an illicit supply chain that ships ISIS crude from Ceyhan. Primary research points to a considerably active shadow network of crude oil smugglers and traders (see section 2.1, page 3), who channel ISIS crude to southeast Turkey from northeast Syria and northwest Iraq. Given the existence of Route E 90, the corresponding transportation of oil poses no unsurmountable geographic and topological challenges.

Moreover, since the launch of the ISIS oil venture in summer 2014, tanker charter rates from Ceyhan re-coupled up to a degree with the ones from the rest of the Middle East (see section 3.3, page 11). This partial realignment may be attributed to additional Kurdish crude, whose export via Ceyhan coincided with the rise of ISIS and its oil business. Alternatively, it may be the result of boosted demand for ultra-cheap smuggled crude, available for loading from the same port. At this point the authors cannot be categorical. Nevertheless, primary research (Interview with Correspondent Y 2014 b) points to the latter scenario, while making clear that the same oil traders/shippers who used to ship oil from Baniyas, moved to Ceyhan, once Syria's civil war brought all its seaborne trading activities to a grinding halt.

An additional manifestation of the invisible nexus between Ceyhan and ISIS became evident through the concurrent study of the tanker charter rates from the port and the timeline of the terrorists' military engagements (see section 3.4 on this page). It seems that whenever the Islamic State is fighting in the vicinity of an area hosting oil assets, the

exports from Ceyhan promptly spike. This may be attributed to an extra boost given to crude oil smuggling with the aim of immediately generating additional funds, badly needed for the supply of ammunition and military equipment. Unfortunately, in this case too, the authors cannot be categorical.

If there is a certainty within the context of this paper and given the clear and present danger of terrorism, it is the urgent need for further research. The focus should be on the criminal ventures of ISIS and particularly on those that can potentially integrate it within the global economy. As implausible as it may sound, it invokes the known adage that 'where imagination stops, reality begins'.

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Key Participant Interviews

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