

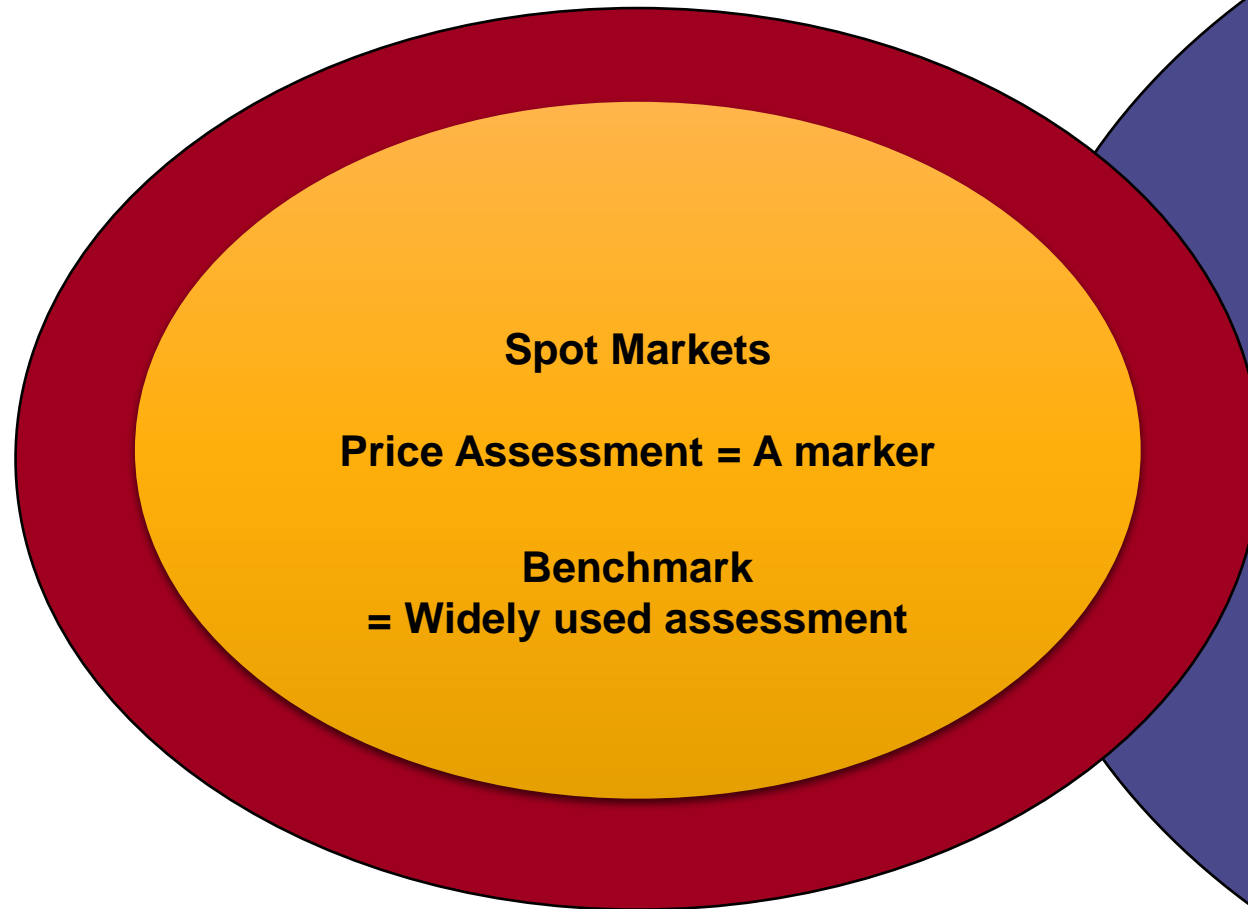
# Price formation for small crude streams

Dave Ernsberger  
Global Head of Energy Pricing  
S&P Global Platts

March 15, 2018

Producing robust price assessments for illiquid physical commodity markets

# Physical Price Assessments and Benchmarks



- *Platts produces thousands of price Assessments and Indexes for various commodity markets*
- *Only some assessments become Benchmarks*

# Platts assesses a wide variety of markets, some are very illiquid

**S&P Global**  
Platts

## METHODOLOGY AND SPECIFICATIONS GUIDE

### CRUDE OIL

Latest update: September 2017

Platts does not specify a minimum amount of transaction data, or a transaction data threshold, for the publication of its price assessments. Physical commodity markets vary in liquidity. Any particular market analyzed on its own will typically demonstrate rising and falling levels of transactional activity through time. Platts is committed to providing an assessment of value for every market that it covers, equally well in times of heightened or reduced liquidity.

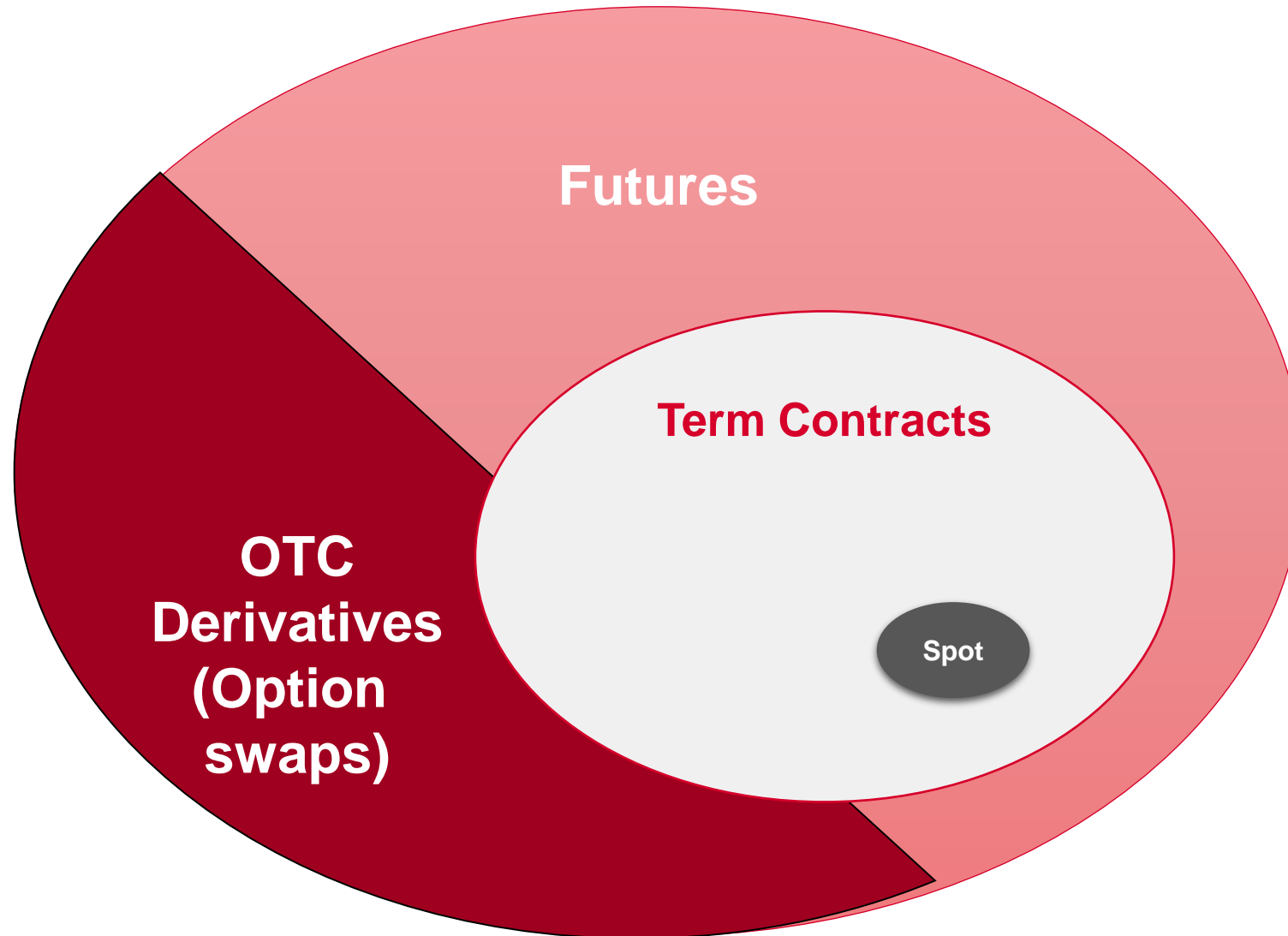
Platts seeks to receive market information from as broad a cross section of the market as possible. If a very limited number of market-makers are active in the market, or if a limited number submit data that constitutes a significant proportion of the total data upon which the assessment is based, Platts will continue to seek fully transparent and verifiable data from

#### What to report

- Firm bids that are open to the marketplace as a whole, with standard terms
- Firm offers that are open to the marketplace as a whole, with standard terms
- Expressions of interest to trade with published bids and offers, with standard terms
- Confirmed trades
- Indicative values, clearly described as such
- Reported transactional activity heard across the market, clearly described as such
- Other data that may be relevant to Platts assessments

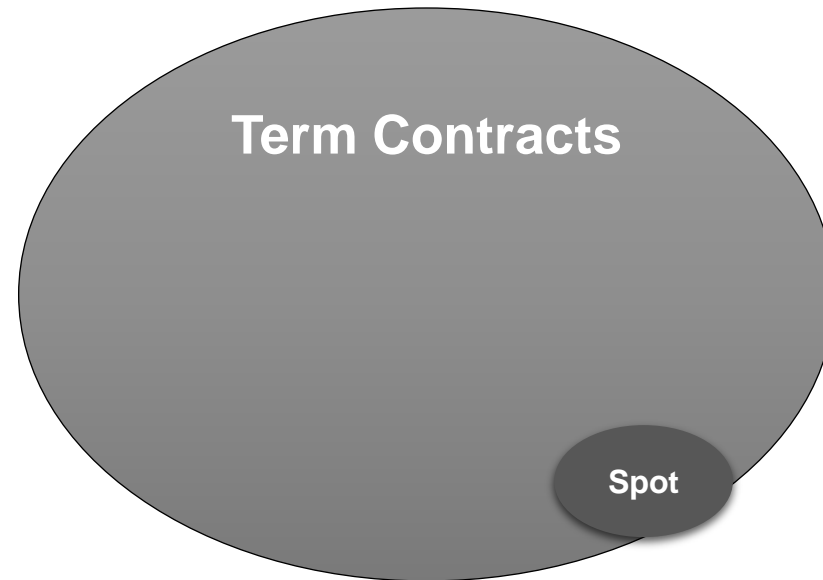
**S&P Global**  
Platts

# Types of market & relative size



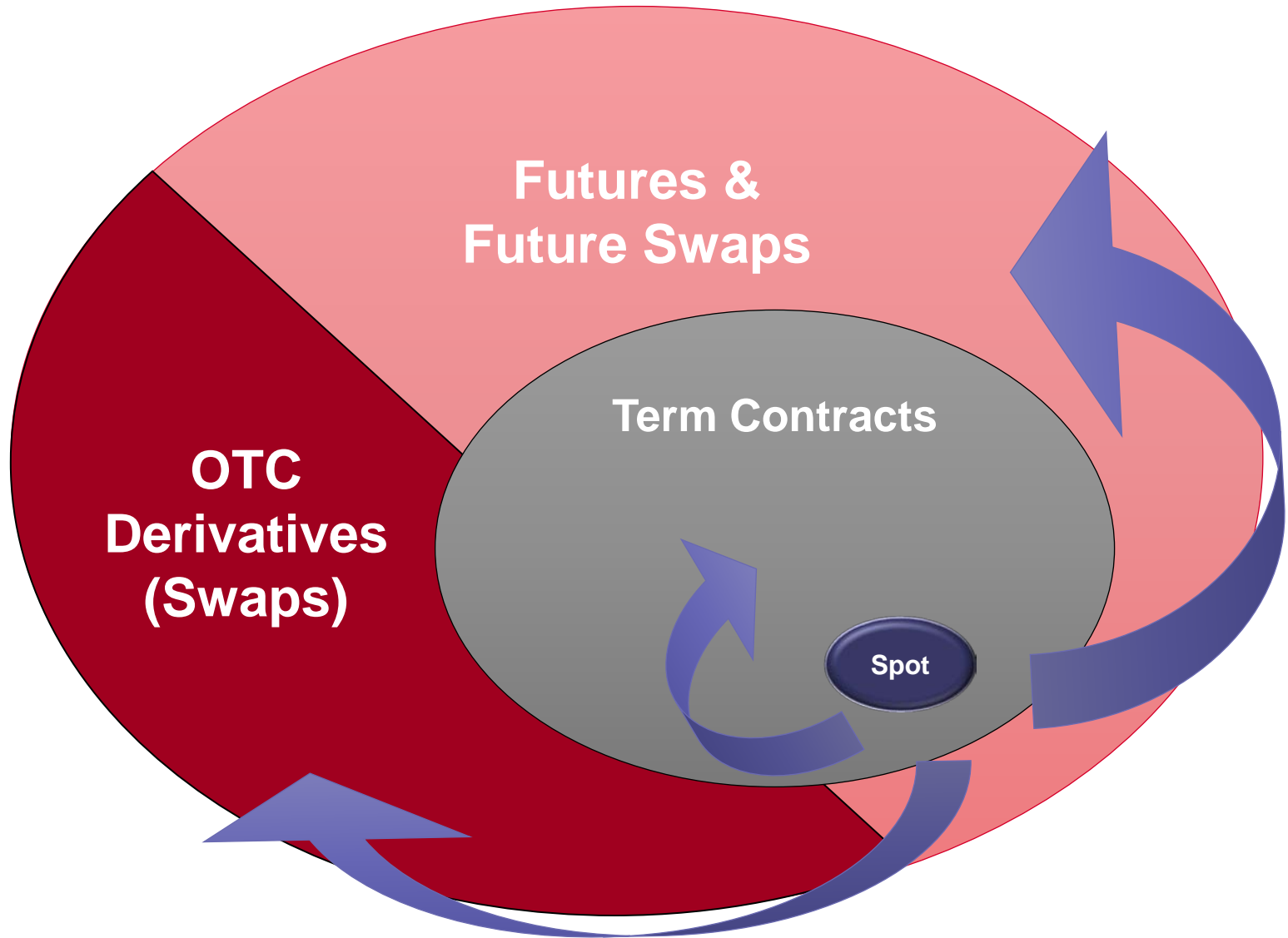
# Spot vs. Term Contracts

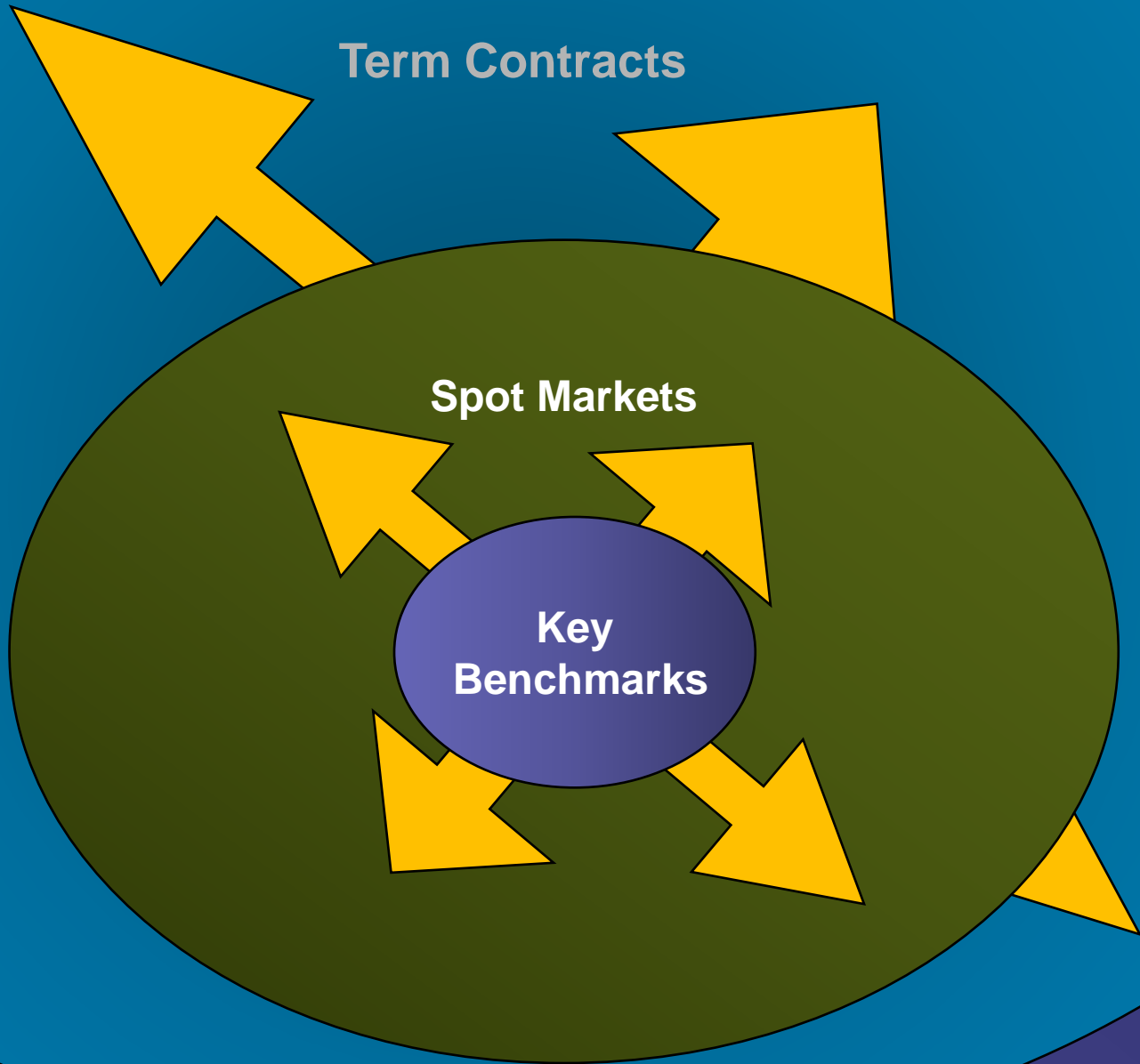
- **Spot Transaction** – one-time open market cash transaction – commodity is purchased "on the spot" at current market rates, often called "cash" market
- **Term Contract** – steady supply of product over a period of time



# Impact & Relevance

- Platts spot prices are used to price term contracts
- Platts prices are used to settle OTC transactions
- In oil, futures monthly settlement is often based on spot transactions
- The use of Platts pricing data to settle commodity transactions means Platts and its employees have a huge responsibility





- *Benchmarks drive other spot prices through spreads*
- *Benchmarks and spot market drive term contracts*

# How this works in practice: Latin American crude oil

## LATIN AMERICA

### Assessments

Platts assesses Latin American crude grades on a flat price basis, and publishes the differentials to their benchmarks. Most transactions are concluded on a differential to WTI, Dated Brent or Brent futures.

Platts Latin American crude assessments reflect bids, offers and trades 30-60 days forward from the date of publication.

**Escalante:** This assessment reflects barrels sold FOB Caleta Cordova, Argentina, with a typical volume of 1 million barrels.

**Roncador:** This assessment reflects barrels sold basis FOB Angra dos Reis, Brazil, with a typical volume of 750,000 barrels.

**Santa Barbara:** This assessment reflects barrels commonly sold FOB Venezuela, with a typical volume of 350,000 barrels.

**Loreto:** This assessment reflects barrels commonly sold FOB Puerto Bayovar, Peru, with a typical volume of 400,000 barrels.

**Oriente:** This assessment reflects barrels commonly sold FOB Esmeraldas, Ecuador, with a typical volume of 360,000 barrels.

**Napo:** This assessment reflects barrels commonly sold FOB Esmeraldas, Ecuador, with a typical volume of 720,000 barrels.

**Marlim:** This assessment reflects barrels commonly sold FOB Sao Sebastiao, Brazil, with a typical volume of 750,000 barrels.

**Castilla Blend:** This assessment reflects barrels commonly sold FOB Covenas, Colombia, with a typical volume of 1 million barrels.

**Magdalena:** This assessment reflects barrels commonly sold FOB Covenas, Colombia, with a typical volume of 300,000 barrels.

**Mesa 30:** This assessment reflects barrels commonly sold FOB Venezuela, with a typical volume of 350,000 barrels.

**Vasconia:** This assessment reflects barrels commonly sold FOB Covenas, Colombia, with a typical volume of 500,000 barrels.



# Price formation in action for smaller crude streams

Date/Time	Headline
13/03/2018 14:51	3--Crude 431: Americas crude oil: Oriente heard bid around NYMEX WTI minus \$0.61-4.00/b for 3.24 million barrels May-June F
13/03/2018 14:48	3--Crude 430: Americas crude oil: Oriente heard done at NYMEX WTI minus \$0.61/b for 3.24 million barrels May-June FOB [bef
13/03/2018 14:48	3--Crude 429: Americas crude oil: Oriente heard done at ICE Brent minus \$0.61/b for 3.24 million barrels May-June FOB [bef
13/03/2018 14:29	3--Crude 428: Americas crude oil: C5 EX-FORT SASKATCHEWAN: April heard offered WTI CMA +\$3.50/b
13/03/2018 14:29	3--Crn 3--Crude 431: Americas crude oil: Oriente heard bid around NYMEX WTI minus \$0.61-4.00/b for 3.24 million barrels May-June F
13/03/2018 14:29	3--Crn 13Mar18/ 251 pm EDT/1851 GMT
13/03/2018 14:29	3--Crn --Houston 1851 GMT: Americas crude oil: Oriente heard bid around
13/03/2018 14:29	3--Crn NYMEX WTI minus \$0.61-4.00/b for 3.24 million barrels May-June
13/03/2018 14:29	3--Crn FOB [before 2:30 pm EDT]
13/03/2018 14:07	3--Crn
13/03/2018 14:07	3--Crn
13/03/2018 14:07	3--Crude 430: Americas crude oil: Oriente heard done at NYMEX WTI minus \$0.61/b for 3.24 million barrels May-June FOB [bef
13/03/2018 13Mar18/ 248 pm EDT/1848 GMT	
13/03/2018	--Houston 1848 GMT: Americas crude oil: Oriente heard done at
13/03/2018	NYMEX WTI minus \$0.61/b for 3.24 million barrels May-June FOB
	[before 2:30 pm EDT]
	--Platts Global Alert--

# Price evolves over time, often in reference to variety of benchmarks

Platts on the Net - Powered by RealTick® - news - [23 Headlines: oriente \*\* PGA 3]

Page Design News Favorites Tools Platts Window Help

Keyword oriente Search

Source PGA Symbols Page 3 Categories

Date/Time	Headline
13/03/2018 14:51	3--Crude 431: Americas crude oil: Oriente heard bid around NYMEX WTI minus \$0.61-4.00/b for 3.24 million barrels May-June F
13/03/2018 14:48	3--Crude 430: Americas crude oil: Oriente heard done at NYMEX WTI minus \$0.61/b for 3.24 million barrels May-June FOB [bef
13/03/2018 14:48	3--Crude 429: Americas crude oil: Oriente heard done at ICE Brent minus \$0.61/b for 3.24 million barrels May-June FOB [bef
13/02/2018 11:42	3--Crude 403: Americas crude oil: ORIENTE: heard talked ICE Brent -\$5.00/b, FOB
13/02/2018 11:42	3--Crude 402: Americas crude oil: ORIENTE: heard talked cash WTI minus \$1.50/b, FOB
13/02/2018 11:42	3--Crude 401: Americas crude oil: ORIENTE: heard delivered USWC talked FOB +\$3.00/b
13/02/2018 11:38	3--Crude 400: Americas crude oil: ORIENTE: heard talked Napo +\$5.50/b
09/02/2018 14:16	3--Crude 534: Americas crude oil: ORIENTE heard done at around front-month NYMEX WTI plus \$1.50-2.00/b April for 760,000 ba
30/01/2018 11:10	3--Crude 176: Americas crude oil: ORIENTE heard talked at front-month NYMEX WTI minus \$1.00/b, Feb FOB
30/01/2018 11:09	3--Crude 174: Americas crude oil: ORIENTE heard talked at front-month NYMEX WTI minus \$1.50-2.20/b, Feb FOB
30/01/2018 10:54	3--Crude 158: Americas crude oil: ORIENTE heard done at front-month NYMEX WTI minus 0.18/b, Feb-Apr FOB for 3.3 million bb
30/01/2018 10:54	3--Crude 157: Americas crude oil: ORIENTE heard done at front-month NYMEX WTI plus 0.18/b, Feb-Apr FOB for 3.3 million bbl
29/01/2018 16:15	3--Crude 692: Americas crude oil: ORIENTE heard done at front-month NYMEX WTI minus 0.18/b, Feb-Apr FOB for 3.6 million bbl
29/01/2018 16:15	3--Crude 691: Americas crude oil: ORIENTE heard offered at around NYMEX WTI minus \$5.00-0.18 /b, Feb-Apr FOB for 3.6 millio
29/01/2018 16:01	3--Crude 690: Americas crude oil: ORIENTE heard offered at around NYMEX WTI minus \$5.00-0.18 /b, Feb-Apr FOB for 3.3 millio
29/01/2018 15:57	3--Crude 689: Americas crude oil: ORIENTE heard done at front-month NYMEX WTI minus 0.18/b, Feb-Apr FOB for 3.3 million bbl
29/01/2018 15:52	3--Crude 688: Americas crude oil: ORIENTE heard done at front-month NYMEX WTI plus 0.18/b, Feb-Apr FOB for 3.3 million bbls
23/01/2018 13:23	3--Crude 374: Americas crude oil: ORIENTE heard done around NYMEX WTI plus \$3.00 for mid-March, 380,000-bbls FOB
23/01/2018 13:22	3--Crude 373: Americas crude oil: ORIENTE heard done around NYMEX WTI plus \$3.50 for early March, 380,000-bbls FOB
17/01/2018 14:32	3--Crude 461: Americas crude oil: ORIENTE heard talked at NYMEX WTI -\$1.50/b, Feb, 360,000 bbls [before 2:30 pm ET]
17/01/2018 13:12	3--Crude 436: Americas crude oil: ORIENTE heard talked at NYMEX WTI -\$1.35/b, Feb, 360,000 bbls
16/01/2018 11:52	3--Crude 378: Americas crude oil: ORIENTE heard talked at NYMEX WTI -\$1.35/b, Feb, 370,000 bbls
19/12/2017 11:09	3--Crude 230: Americas crude oil: ORIENTE: February heard done at around NYMEX WTI plus 3.00/b FOB

# Different price dynamics: in isolation and as part of a complex

**S&P Global**  
Platts

## LATIN AMERICAN WIRE

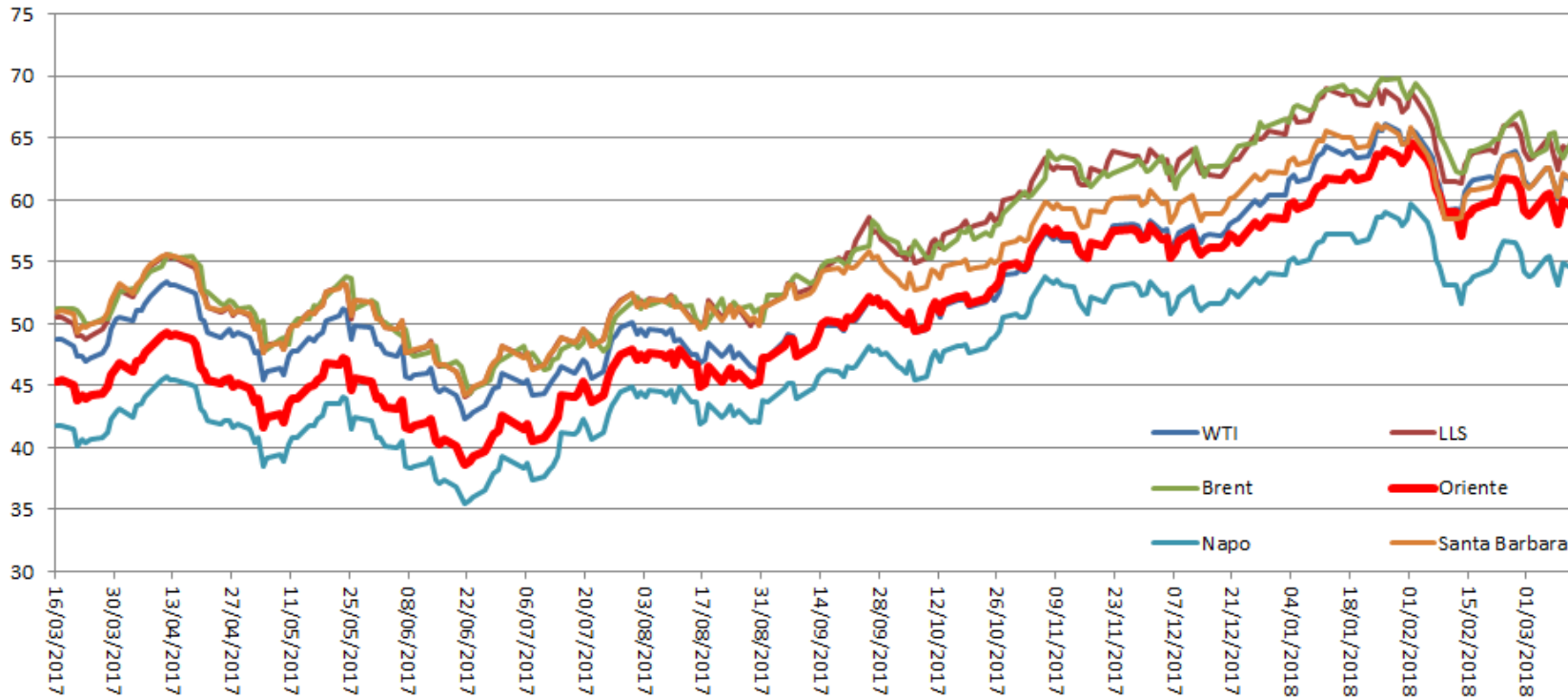
Volume 24 / Issue 48 / March 12, 2018

CRUDE (\$/barrel) (PGA page 280)

		FOB Crude	Mid	Change		Diff to WTI strip	Diff to Futures Brent strip	Diff to Dated Brent strip
Escalante	PCAGC00	61.49–61.53	61.510	-0.420	PCAG000	0.265	AAXB500 -3.250	AAXAX00 -3.175
Roncador	AAQTL00	60.64–60.68	60.660	-0.020	AAQTK00	-0.585	AAXB700 -4.100	AAXAY00 -4.025
Santa Barbara	AAITD00	61.52–61.57	61.545	-0.625	AAITJ00	0.300	AAXB000 -3.215	AAXAZ00 -3.140
Loreto	PCAGH00	57.22–57.27	57.245	-0.375	PCAGQ00	-4.000	AAXBV00 -7.515	AAXBG00 -7.440
Oriente	PCADE00	59.32–59.37	59.345	-0.575	PCAGU00	-1.900	AAXBW00 -5.415	AAXBH00 -5.340
Napo	AAMCA00	54.32–54.37	54.345	-0.575	AAMCD00	-6.900	AAXBX00 -10.415	AAXB100 -10.340
Marlim	AAITF00	60.74–60.78	60.760	-0.020	AAITL00	-0.485	AAXBY00 -4.000	AAXB300 -3.925
Castilla Blend	AAVEQ00	55.99–56.03	56.010	-0.020	AAVEQ01	-5.235	AAXBZ00 -8.750	AAXBK00 -8.675
Magdalena	AAWFR00	56.14–56.18	56.160	-0.020	AAWFS00	-5.085	AAXCA00 -8.600	AAXB400 -8.525
Vasconia	PCAGI00	61.14–61.18	61.160	-0.020	PCAGR00	-0.085	AAXCB00 -3.600	AAXBN00 -3.525
Mesa 30	AAITB00	60.24–60.28	60.260	-0.720	AAITH00	-0.985	AAXCC00 -4.500	AAXB000 -4.425
Latin America WTI strip	AAXBP00		61.245					
Latin America Futures Brent strip	AAXBQ00		64.760					
Latin America Dated Brent strip	AAXBR00		64.685					

# Physical markets tend to demonstrate relationships to each other

Selected Platts Crude Oil Assessments  
March 2017-March 2018 (\$/b)



## AMERICAS CRUDE QUALITY

API gravity (degrees) Sulfur content (%)

### Canada crude cargo assessments

Hibernia	34.4	0.406
Terra Nova	34.2	0.520
White Rose	31.0	0.310

### Latin America crude assessments

Castilla Blend	19.1	1.811
Escalante	24.1	0.190
Isthmus	32.9	1.400
Loreto	18.1	1.300
Magdalena	19.4	1.650
Marlim	20.1	0.750
Maya	21.8	3.300
Mesa 30	30.7	1.090
Napo	19.2	1.980
Olmecca	40.1	0.737
Oriente	24.1	1.510
Roncador	19.8	0.935
Santa Barbara	40.4	0.452
Vasconia	24.3	0.833

# Q & A

email: [dave.ernsberger@spglobal.com](mailto:dave.ernsberger@spglobal.com)