Crude Oil Markets:
Or How I Learned To Stop Worrying
And Wait For 2016!

March 2015

**Disclosures begin on page 14**
Global Oil Supply & Demand

Betting against demand is a tough bet

Source: IEA, Bloomberg
S/D Moves Out-of-whack For Long Enough And Prices Drop…

Global Crude Production

Supply Exceeds Demand  Supply  Demand

Source: IEA, TPH & Co.

“I can hardly remember how I built my bankroll, but I can’t stop thinking of how I lost it”

Mike McDermott, Rounders

Source: IEA, TPH & Co.
$50 Price Signal Drives 2015 Rig Count Down…

U.S. Land Rig Count Forecast

- **Q4’14A**: 1,856
- **Q1’15E**: 1,372
- **Q2’15E**: 1,047
- **Q3’15E**: 1,011
- **Q4’15E**: 1,050
- **FY’16E**: 1,325

Source: Baker Hughes, TPH & Co.
U.S. Rig Count

Source: RigData, TPH Energy Research
"According to this map we have gone 4 inches"

Harry, Dumb & Dumber
Impacting 2H 2015+ Supply

U.S. Crude Production Forecast

Jan'15 Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>U.S. Crude Production (kbpd)</th>
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<tbody>
<tr>
<td>2013A</td>
<td>7,550</td>
</tr>
<tr>
<td>2014E</td>
<td>8,522</td>
</tr>
<tr>
<td>2015E</td>
<td>9,010</td>
</tr>
<tr>
<td>2016E</td>
<td>8,859</td>
</tr>
</tbody>
</table>

Source: DrillingInfo, TPH & Co.
U.S. Caused This Problem…U.S. Will Fix It

Oil Production Growth by Country/Region

- OPEC (ex. Saudi)
- OECD (ex. U.S.)
- Non-OECD (ex. Russia)
- Saudi Arabia
- United States
- Russia

**U.S. is offender for global supply growth and needs to throttle back production**

Source: IEA, TPH & Co.
But Help Is On Its Way…

Global Crude Production

Supply/Demand (mmbbl/d)

Global Crude Production

“Ah... It’s a profit deal”
Navin Johnson, The Jerk

Source: IEA, TPH & Co.
U.S. Inventories – Will We Fill?

PADD 3 Gulf Coast Inventories

US Cushing Inventories

Cushing & PADD III - The proper metric

Source: EIA, Bloomberg
Gas Analogy Does Not Work

“If I had to do it all over again, I’d still hit that shot”
Roy ‘Tin Cup’ McAvoy

Source: RigData, TPH Energy Research
Excess Capacity Components
During Early 1980's

- Excess Capacity
- Non-OPEC Growth
- Demand Contraction

1985 - more than half of excess capacity was driven by non-OPEC supply growth...

“Are you suggesting coconuts migrate?”
Soldier in Monty Python

Source: IEA, TPH Research
It’s Happening Now!

January 2015

February 2015

March 2015