



STRATAS
ADVISORS
A HART ENERGY COMPANY



Global Oil Supply and North America Contribution

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UPSTREAM | MIDSTREAM | DOWNSTREAM | FUEL & TRANSPORT



Agenda

Introduction of Stratas Advisors

Global Oil Supply Outlook

Oil Production in North America – Canada and USA

Q&A



Introduction of Stratas Advisors

Who We Are



STRATAS
ADVISORS
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www.stratasadvisors.com

- Stratas Advisors is a **global consulting and advisory firm** that covers the **full spectrum of the energy sector** and closely linked industries
- The world's **leading businesses, governments and institutions turn to us** for data, analysis and insight (IOCs, NOCs, independents, energy consumers and financial entities)
- We help our clients achieve **tangible results** through informed strategic decision-making and implementation planning
- Key differentiators include
 - **Global** coverage with deep **local knowledge**
 - **Integrated** analysis across the entire energy value chain, including macro-level analysis (geopolitics, macro-economics, policies and regulations)
- Our research and consulting staff comprises some **60 professionals** located on the ground in key global energy market centers
- Combined, our team brings over **500 years of combined energy industry expertise**, including
 - Technical (Petroleum Engineers, Geologists, Process Engineers)
 - Economists
 - Political Scientists
 - Financial Analysts

What We Offer

Helping clients achieve tangible results

Services



An innovative online portal of data, information and insights across the oil & gas value chain and macro-level issues that includes GIS mapping and interactive data tools

Consulting



A full range of consulting support, allowing you to gain an external perspective on strategic matters and to respond proactively by implementing the appropriate initiatives for success

Advisory



Customized retainer arrangements with access to senior Stratas Advisors staff who will answer your questions about:

- Macro-level developments
- Energy markets
- Industry events and trends
- Investment risks and opportunities

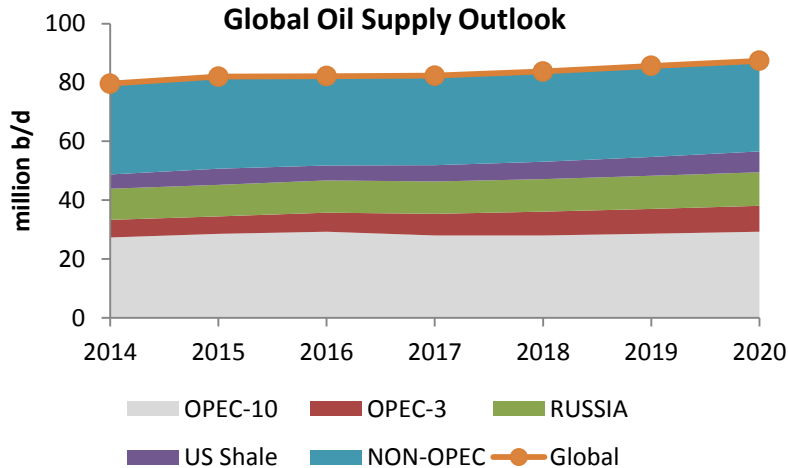
Service Matrix

| Upstream | Midstream | Downstream | Fuel & Transportation | Executive Suite | By Region | By Industry |
|------------------------------------|---|------------------------------------|----------------------------|------------------------------|---------------|------------------|
| North American Shale | North American Shale-Related Infrastructure | Global Refining & Products | Global Fuel Specifications | The Executive Dialogue | Africa | Heavy Industries |
| International Shale Service | North American Oil | North American Refining & Products | Global Alternative Fuels | Global Risk Outlook | Asia | Logistics |
| Global Hydrocarbon Supply | North American NGL | Base Petrochemicals | Global Biofuels Assessment | Macroeconomic Outlook | Europe | Power |
| Global Heavy Crude Oil Outlook | North American Natural Gas | Catalyst Market Outlook | Global Biofuels Outlook | Global Energy Scenarios | Latin America | Petrochemical |
| Global Upstream Projects Analytics | Global Natural Gas Outlook | Global Syngas Conversion | Global Automotive | Long-term Price Forecasting | Middle East | Financial |
| | Global NGL Outlook | | | Short-term Price Forecasting | North America | |
| | Global LNG | | | | Russia & CIS | |

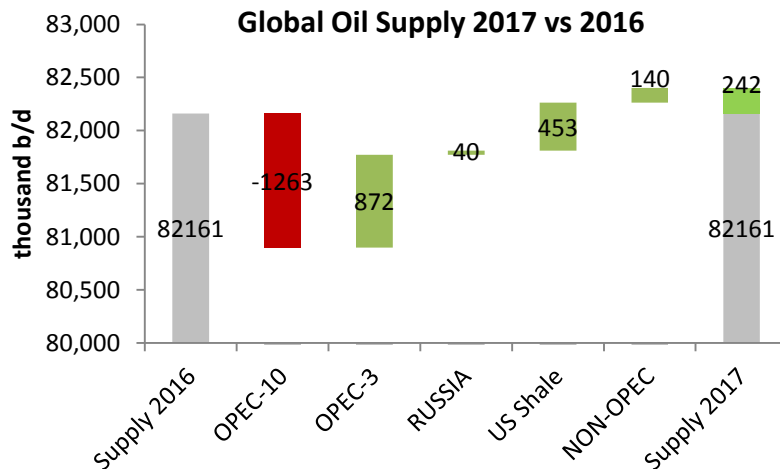


Global Oil Supply and North America Contribution

Global Oil* Supply Outlook

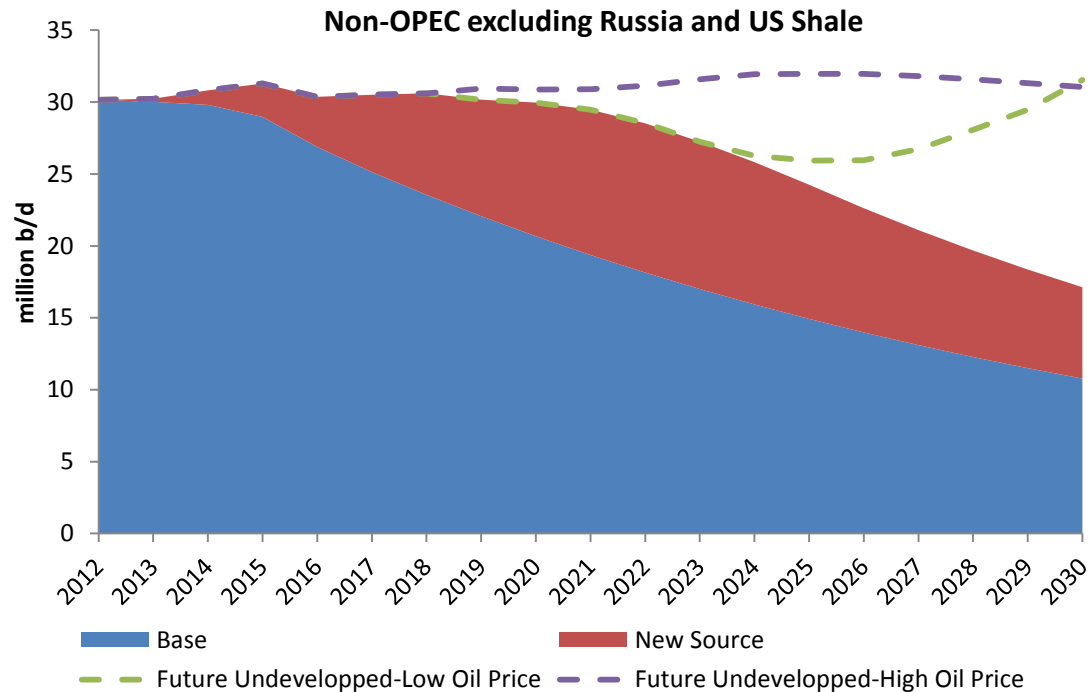


- Oil supply is very resilient 3 years after oil price collapse
- Low oil price around 50 along with OPEC cuts, have not stopped the global supply from growing
- Oil supply will continue to add about 240 Mb/d Year over Year basis in 2017
- Growth on OPEC-3 (Iran, Libya, Nigeria) together with the rise on US shale is expected to offset the OPEC cut



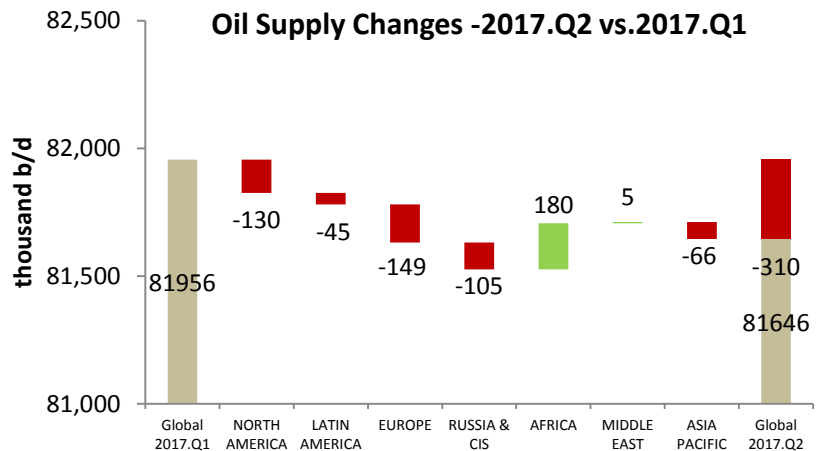
*: Include Crude Oil and Field Condensate, and it excludes other liquids such as NGL, GTL, Biofuel, and processing gains

Non-OPEC (excluding Russia and US Shale)

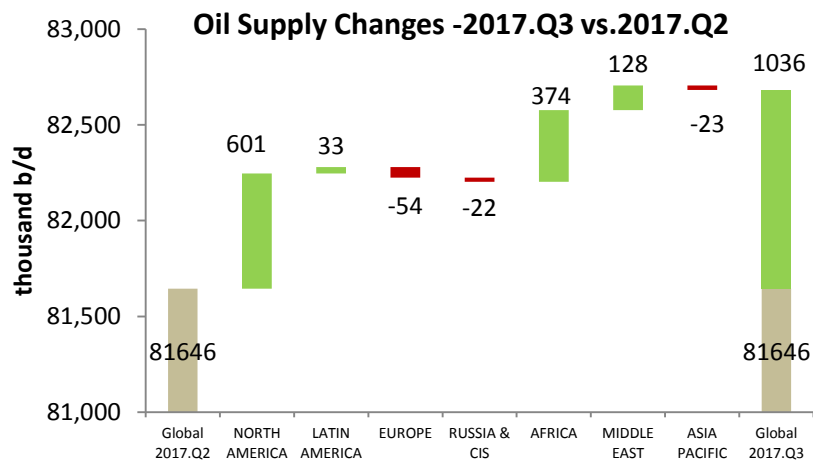


- Oil Production from Non-OPEC excluding Russia and US Shale will not decline by the end of the decade even in the low oil price environment pushed by new source developments
- If the low oil price persists, the global spending cuts will drive this production stream to decline starting the beginning of the next decade, which is likely to create a supply shock around 2023

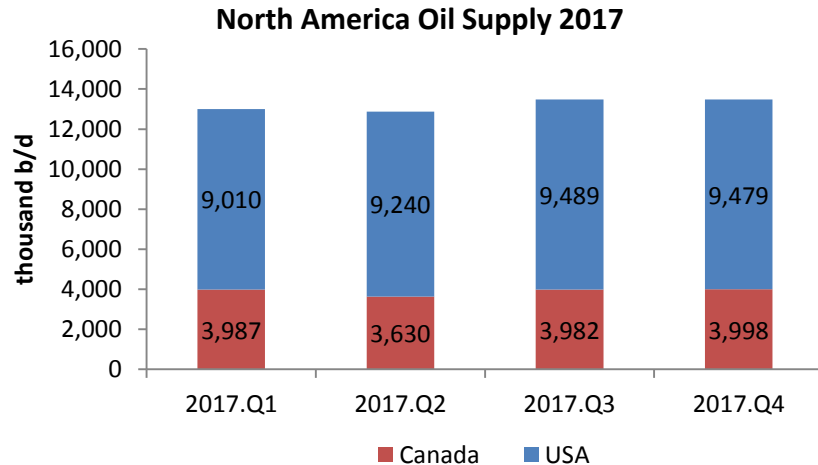
Third Quarter Supply Hike in North America



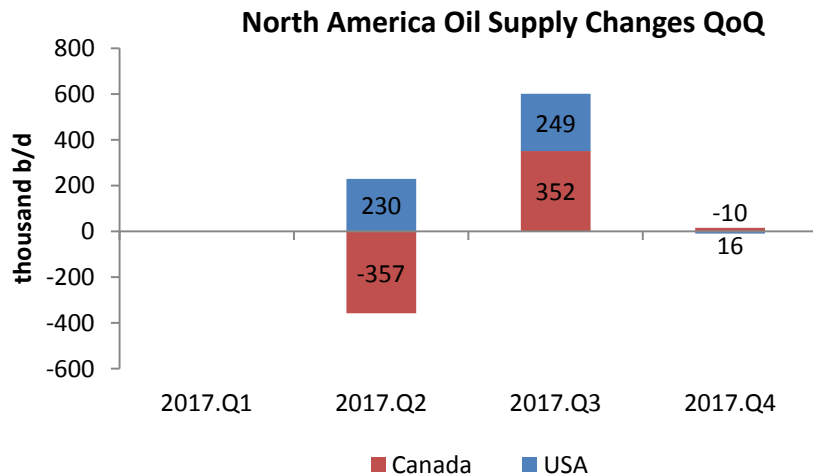
- Global Oil Supply in Q2 has dropped 310 mb/d compared to Q1
- North America Contributed 130 mb/d of the drop
- Q3 is expected to increase by 1036 mb/d, mostly contributed by North America, which is projecting to grow by 610 mb/d in the quarter
- Is that US Shale driven?



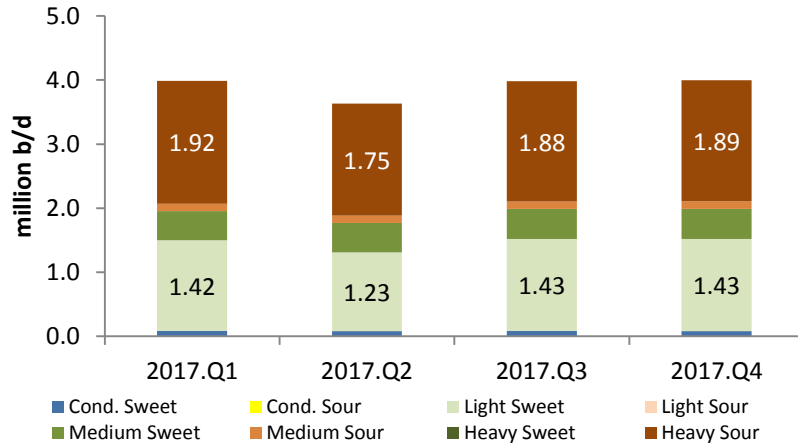
Third Quarter Supply Hike in North America



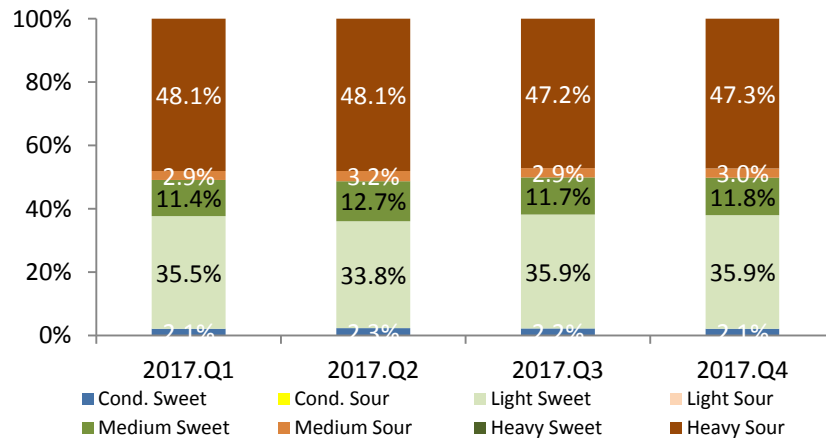
- US shale is not the one to blame on the production jump in Q3, rather it is Canada Oil Sands
- Canada oil production resume to normal production after Q2 disruption and facility maintenance which knocked off about 400 mb/d in the quarter



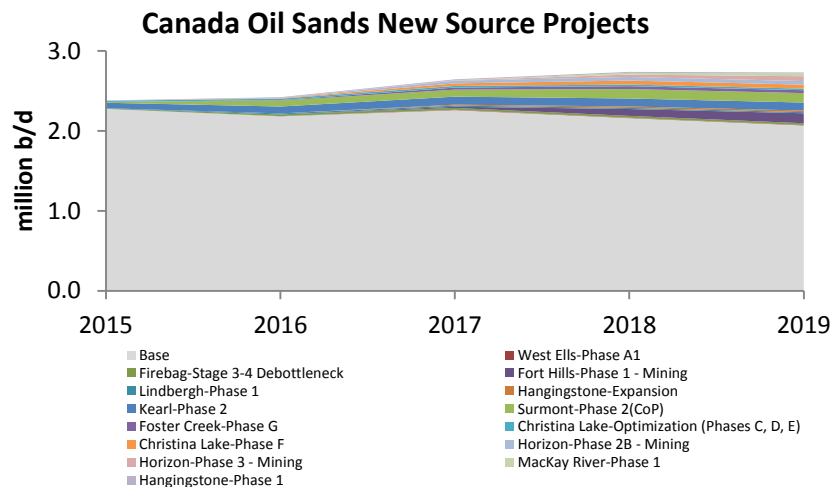
Canada Oil Supply Breakdown by Quality



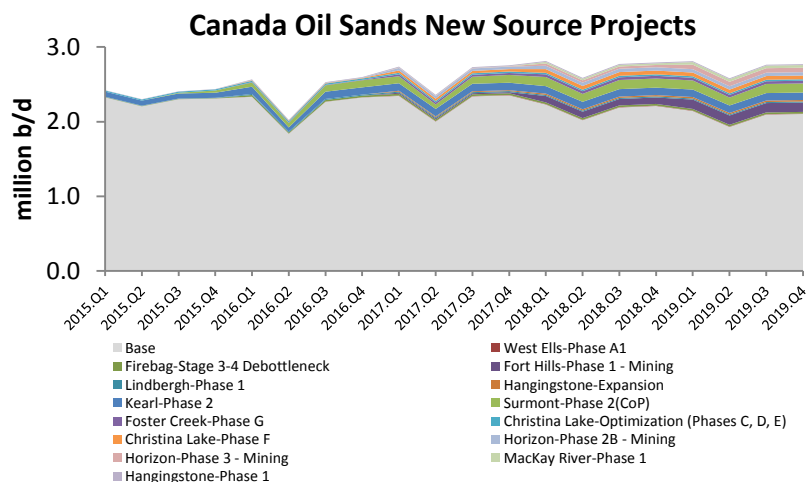
- In Canada, Light SCO was down about 190 mb/d in Q2
- ...and heavy crude oil was down 170 mb/d



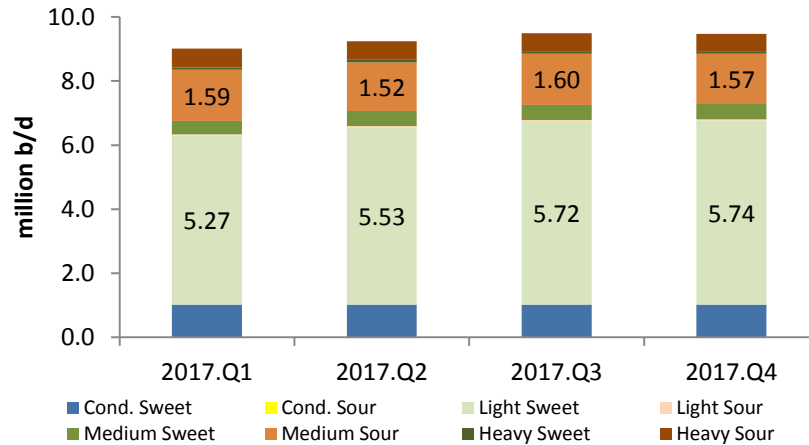
New Source Projects in Canada Contributing to the production growth in Q3



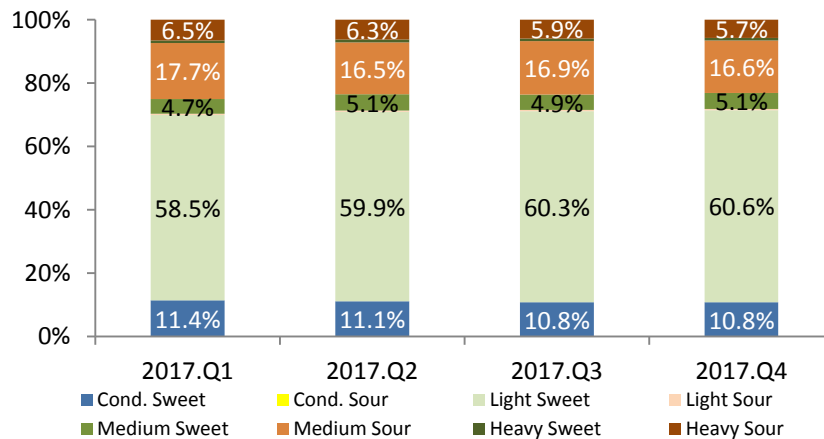
- Oil Sands New Source projects (Projects in the early stage of the production cycle which has not start to decline)
- ...continues to contribute the growth of oil sands productions in the next couple of years



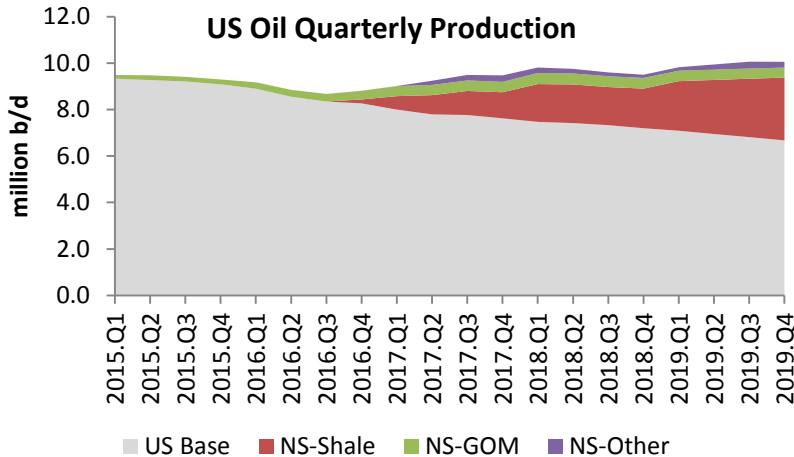
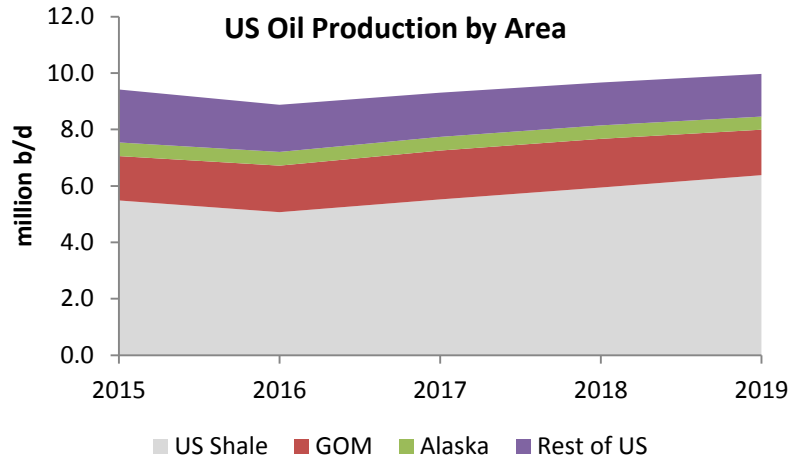
USA Oil Supply Breakdown by Quality



- In the US, light sweet production increase...
- ...mainly because shale production continued to increase during Q3



US Production Growth in Q3



- In US, shale is leading the growth with increasing drilling new wells
- It is projected to produce 5.6 million b/d of crude oil and condensate in Q3, and 5.5 million b/d on average for the year of 2017, which is about 450 mb/d increase compared to 2016
- Gulf of Mexico has contributed on its own to produce over 1.76 million b/d in Q3, and 1.73 million b/d on average for the year of 2017, a growth of 80mb/d compared to 2016



Q&A

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Stratas Advisors, a Hart Energy company, is a global consulting and advisory firm that covers the full spectrum of the energy sector and related industries. We can help you develop a deeper understanding of the developments that are shaping the future of oil & gas. Our support includes customized consulting that is focused on a client's specific strategic objectives, competitive challenges and asset base. Additionally, we offer support through subscription services and comprehensive market studies

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