Part I
Results of the 2015 Parameters Survey

Part II
Post Survey Trends Impacting Oil & Gas Industry
2015 SPEE Survey Price Projection Uncertainty

- WTI $/BBL
- Oil P10
- 2015 Mean
- Oil P50
- Oil P90

EU and USA Iran Sanctions

April 1, 2015
Jan 15, 2016

April 2015 Survey
EIA lowers crude oil price forecast through 2016

Crude oil prices and Nymex confidence intervals
Dollars per barrel

July 2015

West Texas Intermediate (WTI)

WTI 95% Nymex futures price confidence interval upper bound

Confidence interval lower bound

Jan 18, 2016 $29.42
SPEE Oil Price Forecasts and Historical WTI Oil Prices

Forecast: Rapid Price Increase
Actual: Modest Price Increase

Forecast: Modest Price Increase
Actual: Rapid Price Increase
SPEE Parameters Survey - 34 Ten Year Forecasts (1982-2015)

Forecast Oil Price as Percent of Actual Oil Price

- In year 5, 10% of the forecasts are 185% of actual or more.
- In year 5, 90% of the forecasts are 42% if actual or more.
In year 5, 10% of the forecasts are 100% of actual or more.

In year 5, 90% of the forecasts are 34% if actual or more.
SPEE Survey Price Projection Uncertainty

April 2015 Survey
Part II
Post Survey Trends
Impacting Oil & Gas Industry

1. Supply/Demand Balance
   1. United States – largest new supply
   2. Other countries
      1. Russia
      2. Iran
      3. Saudi Arabia
      4. China

2. International Currency
   1. Weak currencies
   2. Strong currencies
US Oil Price History – Repeating???

$ money of the day
$ value of 2013
Year


$/BBL


$ money of the day
$ value of 2013
Year
US Oil Price History – Repeating???

- $ money of the day
- $ value of 2013
- Year

- Pessimistic
- Optimistic

- $60-$90
- <$30

$/BBL

World Liquids Relative Surplus or Deficit & WTI Price 2003-2015

- EU and USA Iran Sanctions

- 2014 Oil Price Collapse

- Relative Surplus or Deficit
- WTI Price

- Global Peak of Conventional Oil
- Deep Water Production
- Global Financial Collapse
- Arab Spring

- Onset of Tight Oil Production
- Low OPEC Spare Capacity
- China Demand Expansion

- OPEC Cut Production 4.2 mmbpd
- Longest Period of Sustained High Oil Prices in History

From artberman.com
EU and USA Iran Sanctions

US Ending Stocks
Up ~100,000 BBLs in 2015

US EIA Data
US Production
Up ~4,000,000 BOPD since 2010

EU and USA Iran Sanctions

U.S. Oil Production (Oct 2015)

US EIA Data
U.S. Oil Production (Oct 2015)

US Production
Up ~8,000,000 BOPDe since 2010

EU and USA Iran Sanctions

Oil

Gas (equivalent)

US EIA Data
U.S. Oil Exports

US Exports
Up ~400,000 BOPD since 2010

EU and USA Iran Sanctions

US EIA Data
US Exports UP ~2,000,000 BOPD since 2010

EU and USA Iran Sanctions

US EIA Data
US Oil Imports

US Imports
Down
~2,000,000 BOPD
since 2010

BOPD

US EIA Data
Russia is world's largest producer of crude oil and lease condensate.

Russia Production
up ~500,000 BOPD since 2010

Russia crude oil (including lease condensate) production and exports
million barrels per day

Mexican crude oil shipments to Europe and Asia are rising as U.S. imports fall.

Source: U.S. Energy Information Administration, with data from Petróleos Mexicanos (Pemex)
Saudi Arabia & China Production
up ~1,000,000 BOPD since 2010

Million Barrels per Day

US $ is Stronger than in 2010
Except for UK Pound and EURO

http://www.federalreserve.gov/releases/h10/hist/
http://www.investing.com/currencies
US $ is Stronger than in 2014

Except for UK Pound and EURO

http://www.federalreserve.gov/releases/h10/hist/
http://www.investing.com/currencies
Brent Price is down more than WTI
(as reflected in lower price differentials)

Oil price drop is more severe for Brent priced crude than for WTI
Last year’s wells ~2,500,000 BOPD

Lower 48 oil production outlook stable despite expected near-term reduction in rig count

Monthly oil production and rig count in the Lower 48 states, 2012-16

Source: U.S. Energy Information Administration, January Short-Term Energy Outlook
Note: Graph does not include production from Alaska and the Federal Gulf of Mexico.
Finding Oil

We usually find oil in new places with old ideas. Sometimes, also, we find oil in an old place with a new idea, but we seldom find much oil in an old place with an old idea. Several times in the past we have thought that we were running out of oil, whereas actually we were only running out of ideas.

—Adapted from Parke A. Dickey
Conclusions

1. The survey reflects what respondents thought in April 2015

2. Oil pricing is impacted by the Supply / Demand Balance

3. International Currencies impact pricing

4. US Supply will drop quickly w/o drilling

5. Each of you need to complete the 35th annual survey in April 2016
Dallas SPEE Soothsayer Contest  
January 22, 2016 to March 4, 2016

WTI Cushing Oil price:  
Maximum:  _______$/BBL  
Average:  _______ $/BBL  
Minimum:  _______$/BBL  

Henry Hub Natural Gas Price  
Maximum:  _______$/MMBTU  
Average:  _______ $/MMBTU  
Minimum:  _______$/MMBTU  

Name:  ________________________________  
Email:  ________________________________  
Phone #:  ________________________________  

(Winner to be announced at the March 10, 2016 Dallas Chapter Meeting)