



ADAPTING TO CHANGE

NEW RAIL REGULATIONS

SWARS FALL 2015 MEETING

Oct. 8, 2015

- Introduction to Phillips 66 rail activities.
- Areas affected by new tank car regulations.
- Strategies to adjust business to changes.





- Over 140,000 carload movements per year.
- Serves 11 refineries and over 300 additional ship points.
- 10,500 railcars in active service:
 - Approximately 4,400 (42%) affected by current regulations.
 - Businesses affected (flammable moves):
 - Crude by rail.
 - Solvents.
 - Gasoline/diesel moves.
 - Ethanol.
- Most affected activity (crude by rail) supports Phillips 66 “advantaged crude” program:
 - 3,400 CPC 1232 cars.
 - 300 DOT 117 cars.
 - No DOT 111s in crude service.

Our rail supply chains are an important part of our overall business success.

PHILLIPS 66 ADVANTAGED CRUDE



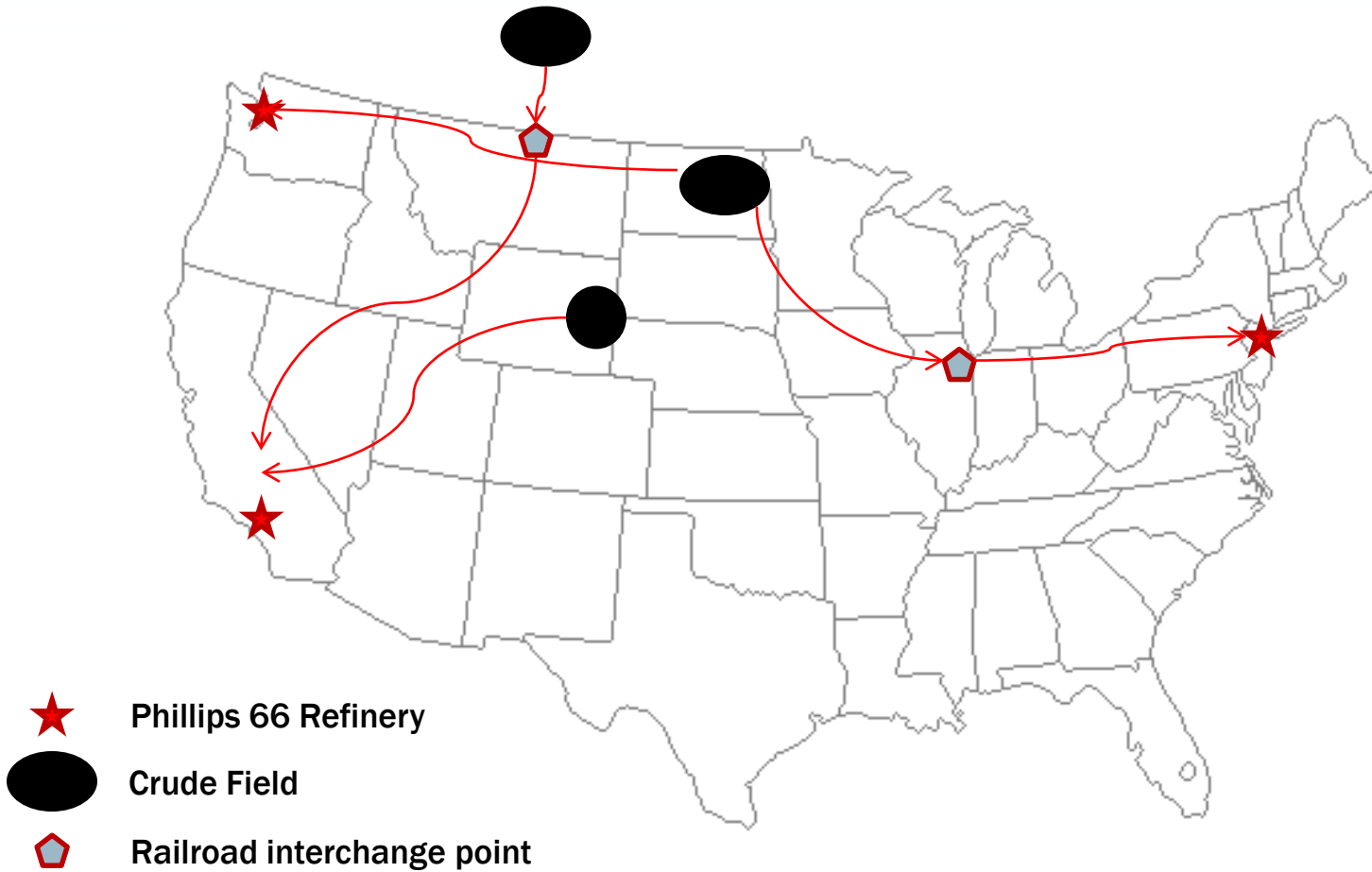
- Activity from Bakken, Niobrara and Canadian fields.
- Distribution from these fields into:
 - Ferndale, Washington.
 - Bayway, New Jersey.
 - Los Angeles, California.



- Crude decisions are based on economics and make sense when differentials (price plus logistics costs) create an advantage for crude by rail versus other crude supply options.
- Ongoing work building alternate logistics options.
- Crude price drops introduce a challenging environment for CBR activity.

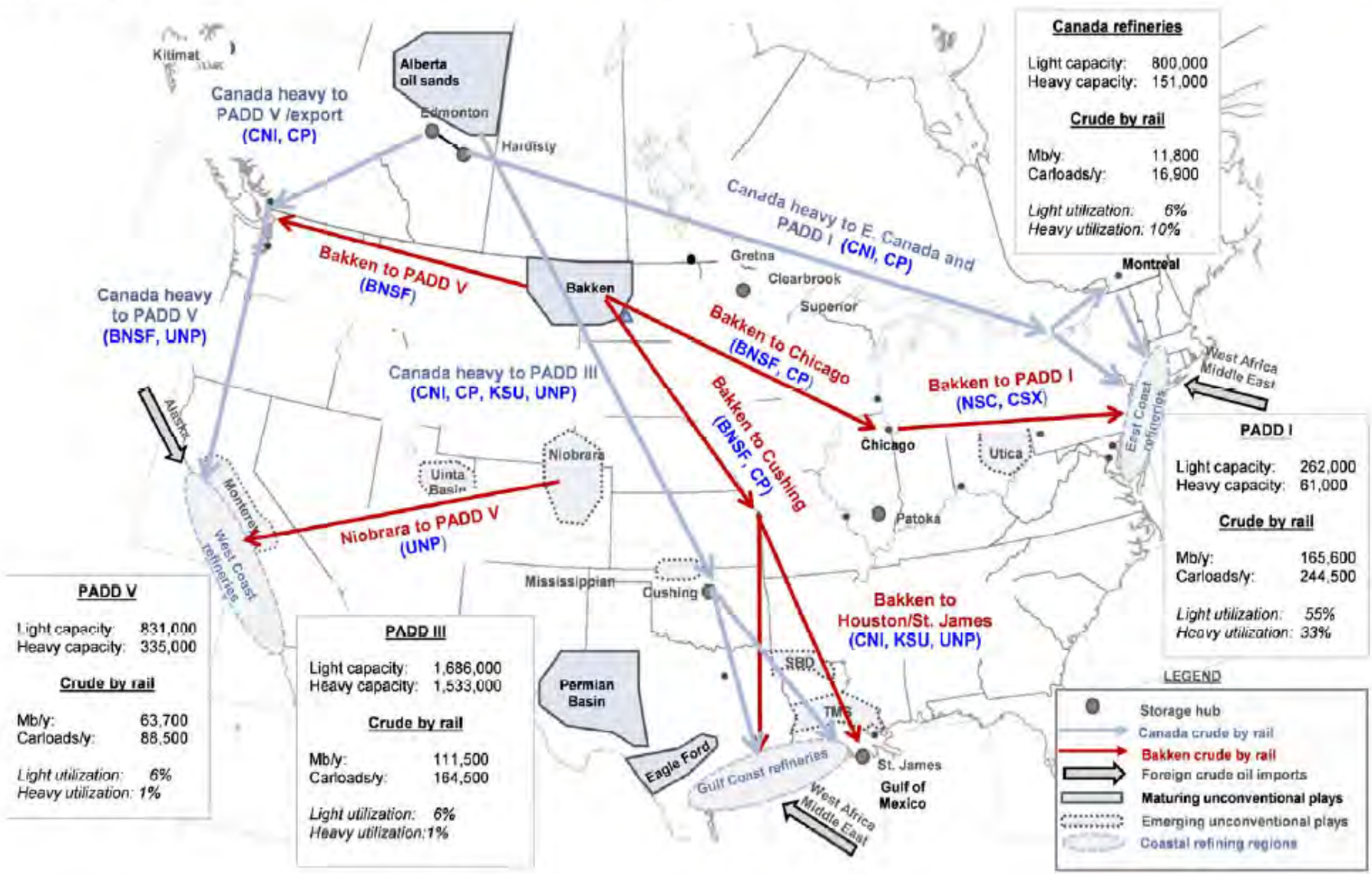
Rail logistics costs are a major factor in overall supply chain decisions.

PHILLIPS 66 CRUDE BY RAIL MOVES



North America crude by rail map

Exhibit 7: Rail provides flexibility to ship oil from unconventional resources to refining centers in the US and Canada, as well as to key Canadian ports for export
Crude by rail map



Source: Goldman Sachs White Paper, "Crude by Rail Conundrum," May 28, 2015

EFFECTS OF NEW REGULATIONS

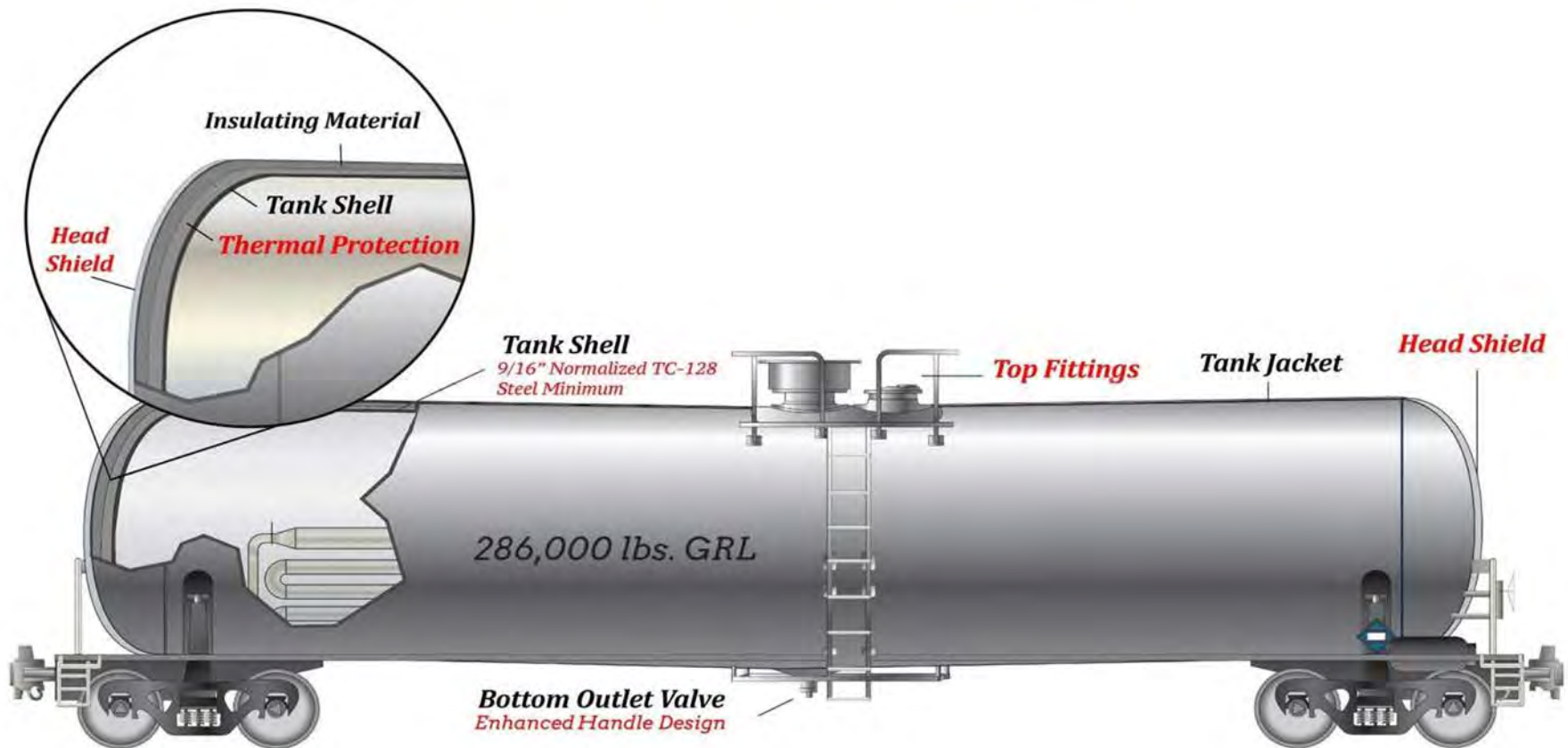


- **Added cost:**
 - Retrofit costs.
 - New equipment where required.
 - Less payload (estimated added weight – 13,000 pounds per car).
- **Other supply chain effects:**
 - Ethanol – unidentified.
 - Crude – capacity and agility concerns.
- **Routing and speed reductions:**
 - No foreseen material effects.
- **ECP brakes:**
 - Concerns about effectiveness of program.
 - Cost and supply chain uncertainty.



Cost plus capacity challenges raise concerns in this market environment.

DOT 117 Specification Car



Safety enhancements of DOT Specification 117 Tank Car:

Full-height ½ inch thick head shield

Tank shell thickness increased to 9/16 inch minimum TC-128 Grade B, normalized steel

Thermal protection

Minimum 11-gauge jacket

Top fittings protection

Enhanced bottom outlet handle design to prevent unintended actuation during a train accident



- **Cost management:**
 - Apply best practices to rail car maintenance.
 - Improve supply chain models to drive rail optimization.
 - Optimize rail's role as part of full value chain.
- **Enhanced safety initiatives:**
 - Rail terminal assessment program.
 - Maintenance program.
- **Drive agility:**
 - Assess intermediate storage options.
 - Develop increased logistics capabilities within Phillips 66 businesses.
- **Strengthen partnerships:**
 - Work with railroads on operational improvements, including:
 - Operational flexibility.
 - Root cause analysis of derailments.
 - Continue work with industry groups on common goals in this space.
- **Reassess current supply chain activities.**

Phillips 66 believes that flammable products can be transported safely by rail.

QUESTIONS?

