



**Bakken Shale  
2013 Gas/Electric Partnership  
February 6<sup>th</sup>, 2013**

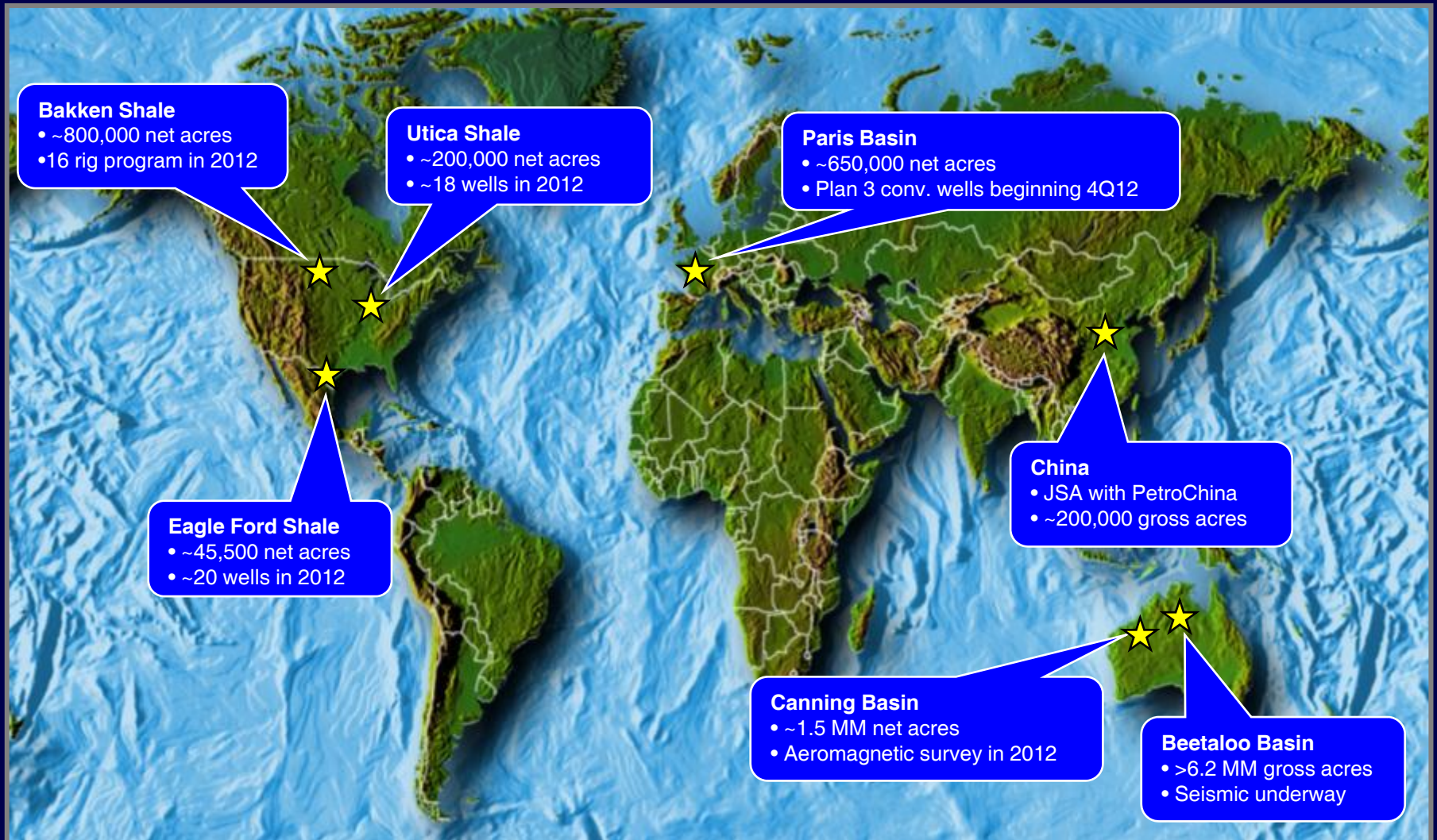
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# Hess Global Position

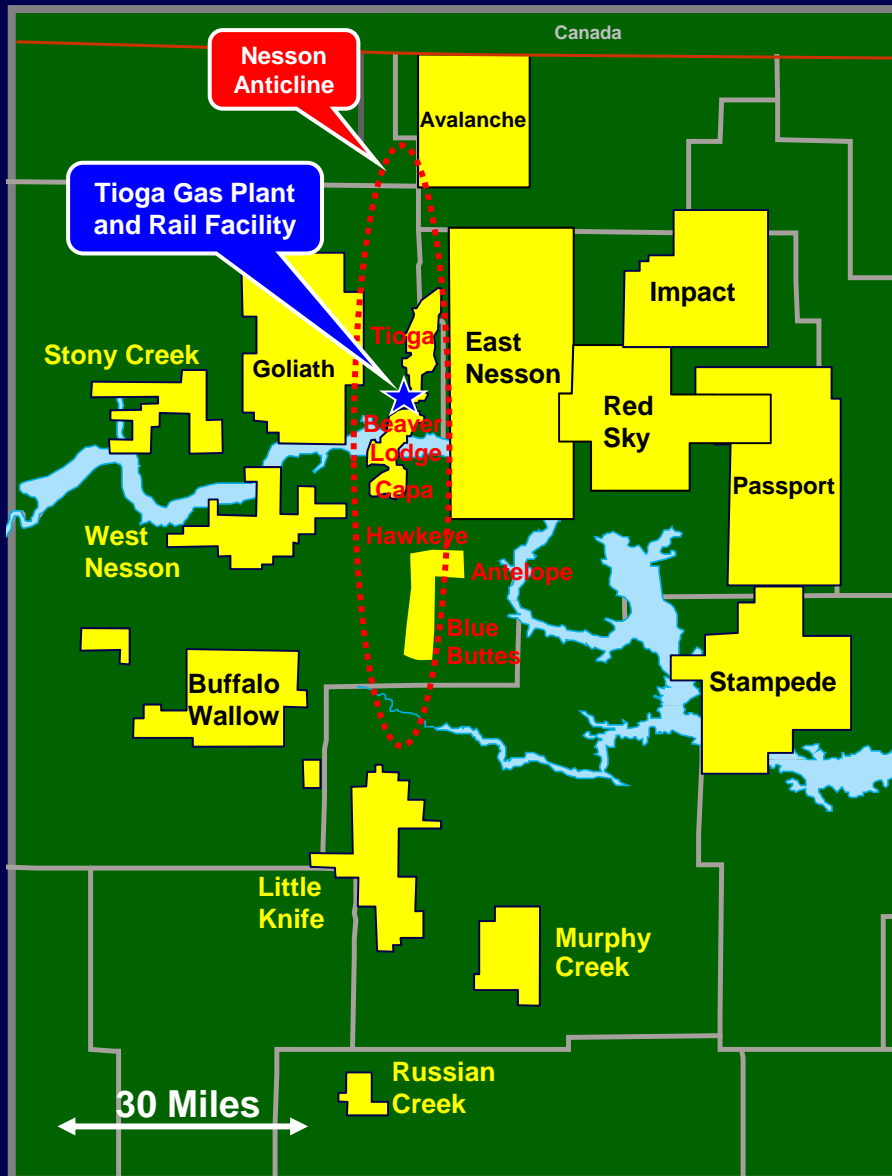




# Unconventional Portfolio



# North Dakota Bakken Shale

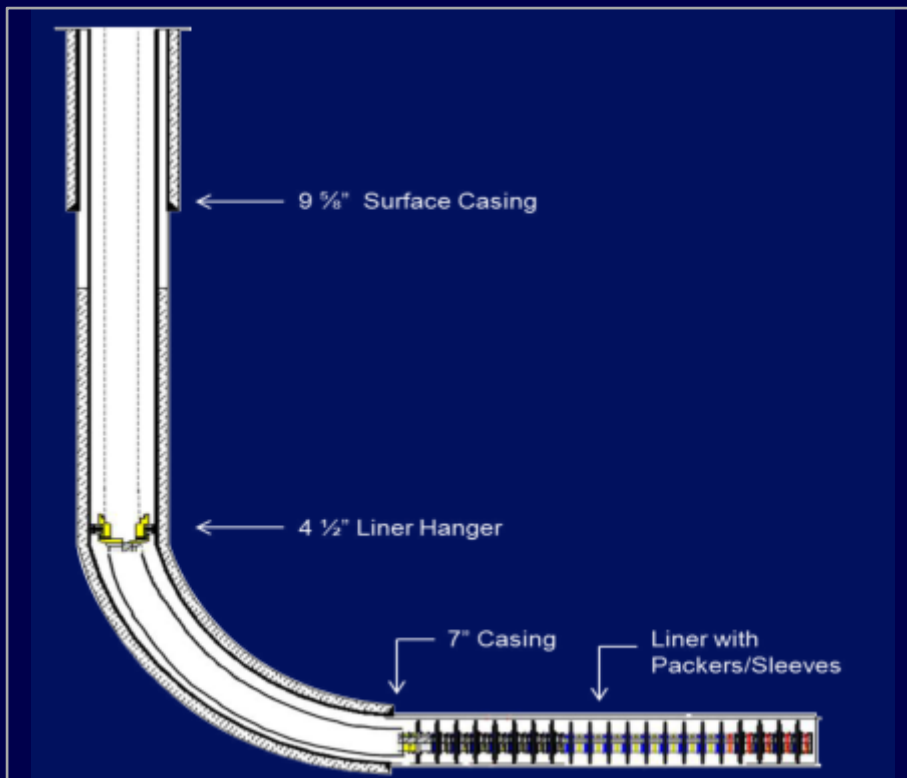


- ~800,000 net acres
- 2<sup>nd</sup> largest lease holder in Bakken
- 16 rig program targeting
  - Middle Bakken
  - Three Forks/Sanish
- Goal - 120 Mboe/d
  - Currently
    - ~75 Mboe/d
    - ~115 MMSCFD gas
- 206 wells drilled in 2012

# Drilling and Completing



## Typical Well - Drilling



- Currently drilling 10,000 ft. laterals
- 25-30 Days/Well
- Looking at 15,000 ft. laterals in environmentally sensitive areas
- Moving to pad drilling

## Typical Well - Completion



- 15 to 38 Frac Stages/Well
- 60k lbs Sand per Frac
- 7 Days per Well
- ~6000 Frac Stages/Yr



# Bakken Issues



- Traffic and Transportation
  - Spring Road Bans
  - Township Boards
  - High numbers of heavy vehicles
  - Poorly trained drivers
- Electrical Power
  - Hess utilizes 75% of the local Co-Op power capacity
  - Fleet of 500+ generators to power well sites until permanent power run
  - Traditional pay-through-rates don't work
- Land Owner Issues
  - Right of Way
    - Single Pass
  - Land Values
- Lack of infrastructure
  - Take away capacity

# The “BIG” Bakken Issues



- Flaring
  - As an industry over 20% of gas produced is being flared.
  - Not normal \$2-3/MM natural gas
  - Rich in heavy hydrocarbon \$8-10/MM
  - Regulations are coming that will limit flaring
- Fracking
  - Not enough water for everyone
    - Aquifers are at low levels
    - New water supply system being installed from Lake Sakakawea
  - Public Opinion

# Infrastructure



- \$700+ million dollar gas plant. 250 MMSCFD, with 92% ethane recovery
  - Ethane Pipeline to Calgary
  - Tioga Lateral to Alliance Pipeline
  - Existing outlets to Northern Border and WBI.
  - On-line Q4 2013
- \$200+ million in field gas processing and compression facilities in the last 3 years
  - Refrigeration units at each facility
- Over 500 miles of new pipeline installed in the last 3 years
- \$50+ million crude oil rail terminal
- NGL rail terminal
- Propane Storage Cavern at Mentor, MN.