CANADIAN SYNCRUDE SUPPLY

OVERVIEW

COQG MEETING
NEW ORLEANS
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CANADIAN SYNCRUDE SUPPLY

EXAMPLES OF SOME PRODUCTION FACILITIES

→ **Syncrude**
  - Ft. McMurray, Alberta
  - 240M B/D
  - Type: Mined Oil Sands with Upgrader
  - SSB – Syncrude Sweet Blend
    - 32 Degrees API
  - Sulfur = <0.1 wt%

→ **Suncor**
  - Ft McMurray, Alberta
  - 220M B/D
  - Type: Mined Oil Sands with Upgrader
  - ½ of Production is OSA Oil Sands A (Similar to SSB)
    - 32 Degrees API
    - Sulfur = >0.1 wt%
  - ½ of production Sour Syncrude which contains
    - Distillates, Naphtha, Gasoil
    - Higher Sulfur
    - Higher Acids

→ **Athabasca Oil Sands Project (JV with Shell, Chevron/Texaco and Western Oil Sands)**
  - Mine Located North of Ft McMurray. Bitumen and sands separated at mine site and bitumen pipelined 493 km to Scotford (Edmonton for Upgrading – 150MBD gross capacity)
  - 80M B/D of Heavy Synthetic Blend is the primary product
    - Blended with Wabaca conventional heavy crude
    - 20 Degrees API
    - 2.1 wt% Sulfur
    - 0.3 TAN

→ **Husky Upgrader**
  - Lloydminster, Alberta
  - 60M B/D
  - HSB – Sweet, high Quality Syncrude
    - 32.3 Degrees API
    - 0.31 wt% Sulfur
    - 0.02 TAN
  - Utilize conventional heavy and bitumen as feedstocks
→ **Synbit**
  - Blend of synthetic and raw bitumen crude
  - Bitumen usually produced though SAGD technology (reserves are too deep to mine)
  - Raw crude is blended with sweet synthetic
  - Blend Quality
    - 20 Degrees API
    - 2.5 wt% Sulfur
    - 1.7 TAN

→ **DilSynBit**
  - Producers exploring the possibility of blending existing Cold Lake Blend (Cold Lake Bitumen and condensate) with sweet synthetic to reduce demand for tightly supplied condensate as well as making a more marketable product.

### CANADIAN SYNCRUDE SUPPLY

#### OPPORTUNITIES & ISSUES

**Opportunities:**
- New emerging crude supply for North America refiners
- In many cases suppliers can customize a blend to meet buyers/refiners requirements

**Issues:**
- Don't behave like virgin crudes (some correlations don't hold true for synthetic crudes which makes predicting properties and behavior more difficult)
- LP's and models have a hard time rationalizing property data that behave differently than expected
- Cracked material in synthetic crudes may be unstable and create concerns for Refinery processing
- Typically these crudes will be heavy, high sulfur, high acid
- Pipeline interfaces between synthetic crudes and naturally produced sweet/sour crudes