Roundtable for Unconventional Gas Projects

Logistics/Infrastructure (Shale Rail)

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Agenda

1. Overview of G&W
2. G&W’s North American Shale Capabilities
3. Case Studies
Overview of G&W
G&W Overview

- Listed on New York Stock Exchange ("GWR") with market value of ~$5.1 billion
- Run rate annual turnover of $1.7 billion
- Operate over 24,000 kilometers of track with 4,600 employees, ~1,050 locomotives and 22,000 wagons
- Provide rail service in the U.S., Canada, Australia, the Netherlands and Belgium
- Own 111 short line and regional railroads, many involving heavy-haul unit trains of coal, grain, ore or other bulk commodities
- Provide contract rail operations to industrial facilities, mine-owned railroads and municipal-owned ports
Genesee & Wyoming Australia

- 3,500+ km of owned track (2,200 km Tarcoola to Darwin)
- Accredited rail operator in six states (all but Tasmania)
- 450+ employees
- 100 locomotives and 1,000 wagons
- 40+ daily train starts across South Australia, the Northern Territory and Victoria

**Key Customers / Commodities**
- Arrium / Iron Ore
- Viterra / Grain
- Gypsum Resources / Gypsum
- Territory Resources / Iron Ore
- OM Holdings / Manganese
- OZ Minerals / Copper
- Adelaide-Darwin / Intermodal – six services round trip each week
North American Shale Capabilities
G&W lines and U.S. shale geography
Shale Gas Operations

• Crude-by-rail
  – Three significant facilities including Oregon, Florida and Ontario
  – Six developing unit-train facilities in Washington, California, Louisiana

• Natural gas liquids (NGLs)
  – Serve largest fractionation plant in Utica Shale (5K+ carloads/year)
  – Also serve major new condensate facility opened summer ‘13

• Drilling inputs (sand, pipe, water)
  – Leading player in Utica/Marcellus with ~13 sand terminals
  – Major frac sand origins in Michigan, Arkansas
Shale to Rail – What Does It Mean?

• Inputs ~ 30+ railcars per well:
  - 4-6 railcars of OCTG (pipe)
  - 15-30+ railcars of sand
  - 1 railcar of calcium chloride
  - 1 railcar of barite
  - ½ railcar of cement

• NGL Outputs ~ 10+ railcars per well:
  - 4-6 railcars of drill cuttings
  - 2-3+ railcars of liquid gases
  - Unknown brine water

• Crude Outputs:
  - Currently handling 2 to 3 crude unit trains per week – 108 cars per train)
Numerous Marcellus/Utica sand terminals
Regional Example – Marcellus Shale Facilities

- **Existing Sand Facilities**
  - Bradford, PA – Superior Well Service
  - Bradford, PA – D&I Silica
  - Sheffield, PA – D&I Silica
  - Clarendon, PA – Reliant Well Services
  - Ridgway, PA – D&I Silica
  - Dubois, PA – EOG Resources
  - Driftwood, PA – D&I Silica
  - Punxsutawney, PA – Unimin
  - Kittanning, PA – Frac Sand Sales
  - Kittanning, PA – D&I Silica
  - Butler, PA – CSX TransFlo

- **Existing Pipe Facilities**
  - Dubois, PA – Fort Worth Pipe

- **Existing Gas Facilities**
  - Worthington, PA – DuFour Petroleum
  - Falls Creek, PA – SPSI
Specific Rail Terminal - Wellsboro, Pa.

Sand unloading direct to Silos

Water tanks

Drill cuttings disposal

Sand unloading direct to trucks

Water unloading tracks
Transload
Unit Train Water Transport and Transload Operation – Wellsboro, Pa.

2 x 3 Million gallon water tanks
Utica East Ohio (UEO)

East end of rail yard. Phase II rail yard construction underway.
Press Release dated August 16, 2012:
Genesis Energy, L.P. Develops Crude Oil Unloading Terminal Along the Alabama & Gulf Coast Railway
Crude Oil Unloading Terminal Located in Walnut Hill, Fla.

- **Business Opportunity:**
  - Develop a rail-centric, cost effective, logistics solution to allow Genesis Energy to source crude oil from various shale reserves located throughout the United States and Canada.

- **Key Industrial Development Team Actions:** *(summary)*
  - Identified a location where the AGR Railway crossed Genesis Energy’s Jay Pipeline System. *(crude oil)*
  - Defined capital & infrastructure requirements for a rail unloading terminal located in Walnut Hill, FL.
  - Designed a rail unit-train service plan from origin to destination with our Class 1 rail partners. *(BNSF & CP)*
  - Provided project management services utilizing one centralized point-of-contact throughout all departments.

- **Final Product:**
  - A rail unit-train unloading terminal was constructed.

- **Project Impact:** *(estimated)*
  - Private investment of ~ $12 MM.
  - Nearly 27,000 annual inbound railcars of crude oil.
  - 30 newly created jobs in local community. *(Escambia County, FL)*
  - Local contractors participated in the construction of the new terminal.
Business opportunity:
- Support Utica East Ohio Midstream LLC in developing the largest integrated natural gas “midstream” service complex in the Utica Shale, served by a shortline railroad with multiple Class-1 rail connections.

Key Industrial Development actions: (summary)
- Helped identify key parcel in Harrison County, Ohio, to satisfy UEO’s acreage, logistics and utility requirements.
- Defined capital and infrastructure requirements for a rail-loading terminal.
- Constructed new one-mile siding and rehabilitated a three-mile storage track to handle rail traffic to/from the plant.
- Invested $2 million through a public-private partnership to expand CUOH’s yard in Newark, Ohio, to further support UEO and other Utica Shale traffic.
- Designed rate / logistics package with our Class-1 rail partners.
- Total CUOH investment was ~ $2.1 million (excluding state rail funds).

Final product:
- Midstream complex was constructed and began rail shipments in July 2013.

Project impact: (estimated)
- Private investment of ~$1 billion (includes connected gas processing plant).
- A projected 10,000 annual outbound carloads of natural gas liquids.
- Close to 100 long-term, full-time jobs in the local community of Scio, Ohio, in addition to ~1,700 short-term construction positions.