

The Railroad Week in Review

December 19, 2008

“Unlike the ‘troubled assets’ of today, the railroads of today can stimulate the kind of economic recovery America needs.” -- Michael Ward, CSX

From North Shore's Todd Hunter comes an in-depth analysis of the natural gas exploration business in the Marcellus Shale natural gas resources in Pennsylvania and adjoining states. I think it's important for WIR readers as the energy exploration and production (E&P) business represents tremendous opportunities for railroads of all sizes. Think of Alberta's oil sands region and the Bakken Formation in Montana, North Dakota and Saskatchewan, among others.

The paper from Todd is on "The Economic Impact of the Oil and Gas Industry in Pennsylvania" prepared by the Marcellus Shale Committee, an independent organization comprised of oil and gas companies actively engaged in developing natural gas resources of the Marcellus Shale. Between 2000 and 2007, the total number of new oil and gas wells drilled annually in Pennsylvania tripled from 1,354 wells in 2000 to 4,148 wells in 2007 generating an estimated annual spend of \$1.2 billion across the state on new drilling activity alone.

In 2007, there were close to 79,000 active wells in Pennsylvania, the third highest total of any state in the United States. Approximately 2,000 companies operate at least one well in Pennsylvania, with more than 200 companies operating 100 wells or more in the state. (For more on the history of oil in Pennsylvania and its railroad relationship, see my June, 2008 *TRAINS* feature, "Pennsylvania's Colorful Commerce," page 36, *An Energy Story*.)

The Marcellus Shale deposit stretches across nearly two-thirds of the Commonwealth yet the geology of the formation and a lack of critical technology made the deposit prohibitively expensive to access until recently, creating opportunities for growth in the Oil and Gas industry in Pennsylvania. So where does the railroad come in?

Once the drilling site has been identified and permitted you have to get to it. Typically a local construction company is hired to build an access road to the well's location plus a well pad for the rig (aggregates, cement in by rail). Once drilling begins, multiple strings of steel casing are cemented inside the wellbore (steel pipe, more cement by rail) to protect fresh water aquifers from contact with any drilling or produced fluids and to ensure that the gas can safely flow to the surface.

The well is completed by perforating holes through the casing and cement within the producing zone, which allows the gas to flow into the well. To increase the flow rate of a well, hydraulic fracturing ("frac" sand, which can come in by rail and transloaded to a bulk carrier for delivery to the site) is often used to stimulate the formation that contains the gas. The process also produces a type of brine that must be carried off and safely disposed of (tank trucks to the rail-head for transfer to tank cars for movement to a water purifier).

The paper concludes, among other things, "Economic and technological changes have stimulated interest in the Marcellus Shale, and based on the 2007 impact of the Oil and Gas industry, this has the potential to generate substantial positive economic impact in Pennsylvania." And on area short lines, too. The *TRAINS*

map on page 32 (see above) shows GWR's Buffalo & Pittsburgh, the Western NY and Pennsylvania, North Shore's Nittany and Lycoming Valley lines, RJ Corman's Clearfield sub, the Wellsboro & Corning (more on this one next month), the Wheeling & Lake Erie and Russ Peterson's Southwest Pennsylvania and Allegheny Valley roads to be "in the zone." Norfolk Southern is the dominant connection for most of them, straddling as they do NS' former PRR main across Pennsylvania and the old Erie "Southern Tier" route in New York.

Imagine if you will a group of twenty or so railroad management trainees and college interns boarding three immaculate passenger cars in classic Pennsylvania tuscan red tacked on the back of Amtrak's *Crescent* at Philadelphia's Thirtieth Street Station for a 100+ MPH ride to Washington. The equipment is Bennett Levin's lovingly-restored trainset -- a ten and six sleeper, a cafe-lounge car and ex-PRR Number 120, the famed observation business car that carried the body of Robert Kennedy to his final rest.

The occasion was the *Railway Age* conference on the NEW Railway Age at the Washington Marriott December 11 and 12. The theme centered on recruiting and retaining new talent who, in the words of the conference promotional material, "represent the future of our industry." Thus it was entirely appropriate that Conrail President Ron Batory should bring along his best and brightest to partake, and to do it in style with the round-trip in private varnish bringing up the markers on two of Amtrak's name trains.

The presentations and speakers ran the gamut from long-time railway observer and writer Bill Middleton (how changes in the past century set the stage for the present one) to Michigan State University's Steve Dittmeyer, himself a veteran railway operations practitioner, late of BNSF (lessons learned from today's military in extended command and control as applied to railroads).

After lunch the first day *Railway Age* Editor Bill Vantuono chaired a new-business panel with Tom Hobak (Indiana Railroad), Jim McClellan (SVP, NS - retired), Ron Batory and yours truly. Jim led off with some of the starker realities of today's business climate and the opportunities attendant thereto; Ron Batory batted next with an update on the close cooperation between and among Conrail and its two owners, NS and CSX.

Then it was my turn to talk about short lines in general and their role in the national rail transportation network. Tom Hobak was in the clean-up slot and he hit a homer with examples how INRD is positioning itself for the new age of railroading (more single OD-pair trains, more transloads, next-generation train control systems, and smart investment). Then came the best part: the Q&A. We must have done a good job telling our stories because the questions were still coming when we had to call time.

Then we got into the technical stuff with presentations from BNSF Chief Mechanical Officer Craig Hill, NS VP for operations Planning and Support Gerald Thelen (locos and cars) and Alan Zaremsky's highly detailed and profusely illustrated treatise on roadbed and track structure. Highlights from Day Two include discussions of Positive Train Control and braking systems, passenger equipment and operations, why one will never lose money in railroad equipment leasing (Tony Kruglinski) and the role of the railroads in sustaining "green" business practices.

Over lunch on Day Two we heard from Michael Ward, CSX Chief Executive, who showed how we have morphed the railroads of the past -- "dying, crumbling relics of the 1970s" -- into the dynamic and constantly evolving rail industry of today. His charge to the youngsters in the audience was to keep the railroads "relevant and needed" and to that end Ward offered a five-point check list. First, continue to

invest for capacity; second, work for the infrastructure tax credit to bridge the gap between the capex investments railroad can self-fund and what is needed in the future; third, support balanced regulation that does not impede the railroads' ability to self-fund the changes demanded by a dynamic economy; fourth, tell the "green" story of how the railroads can affect and support climate change policies, and fifth, seek public-private partnerships that "can enhance transportation infrastructure, create jobs, spur economic development and help achieve environmental goals."

Did the conference achieve what it set out to do? I think so. The Conrail youngsters' interest in the railroad and how it works was much more evident and animated on the cars as we zipped northward as part of the consist of Train Number 80, the *Carolinian*. The questions I heard and had the opportunity to respond to were intelligent and caring. The absolutes of the railroad business -- the train is either on time or it is not, the track alignment is proper or it is not, and so on -- obviously held special appeal for our group and this being the case I think we're well on our way to a new railway age.

Two last-minute Christmas ideas from Voyageur Press: *The Baltimore & Ohio Railroad* by Kirk Reynolds and Dave Oroszi (hardcover, 160 pp, 100 color illustrations, 50 b&w illustrations) and Mark Wegman's *American Passenger Trains and Locomotives Illustrated, 1889-1971* (hardcover, 160 pp, 9 color and 84 b/w photos, 117 full color profile renderings).

The first takes the B&O from its beginning as America's first common-carrier railroad -- a railroad mandated to operate for the public and for commerce -- though its merger with the Chesapeake & Ohio and finally into today's CSX system. A handsome and entirely readable tome, the book tells how the B&O, handicapped by its rugged route from the East Coast to the Midwest, nonetheless proved second to none in serving its customers -- whether on name passenger rains like the *Capitol Limited* and *National Limited* or on a freight network that included such notable offerings as "Sentinel Service" and the "Timesaver" freights. The railroad's story, as it unfolds in these pages, makes for an evocative journey through 160 years of railroad history.

The Wegman effort is the result of considerable homework and enterprise. The author researched original railroad drawings and in some cases even paint chips to render more than 160 detailed full-color renderings of the locomotives and rolling stock used on three dozen of the nation's most celebrated trains of the golden age. Renderings include side, front, top and rear views depicting the steam, diesel and electric locomotives as well as notable passenger cars of these great trains. Accompanying the author's drawings are histories of each train, period photographs, postcards, menus, luggage stickers, vintage print ads, detailed captions and previously unpublished archival photographs. The book is a lavishly appointed journey back in time to the bygone days of passenger train travel.

This is the final installment of Week in Review for 2008. We'll be back Jan 9 for the 2009 blow-by-blow. It's going to be fraught in the fist half with opportunities galore after that. Welcome aboard.

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