

*The BN*

# *Expediter*

Volume 23, Number 2

April 2015



The official publication of *The Friends of the Burlington Northern Railroad*, the historical society focused on the Burlington Northern Railroad, the Burlington Northern Santa Fe Railway, and the BNSF Railway.

# Friends of the Burlington Northern Railroad

PO Box 271, West Bend, WI 53095-0271  
www.fobnr.org

A 501(c)3 Not-For-Profit Corporation  
Registered in the State of Idaho

The Friends of the Burlington Northern Railroad (**FOBNR**) was formed to gather, preserve, and share information about the history, current operations, and future development of the Burlington Northern Railroad and its successors. It follows the evolution of the railroad from its inception in 1970 with the merger of the Great Northern, Northern Pacific, Chicago, Burlington, and Quincy, and the Spokane, Portland and Seattle Railroads.

The purpose of the **FOBNR** is educational. We wish to perpetuate the history of the Burlington Northern Railroad and its successors. We seek to collect and preserve any materials which help establish or illustrate the life, conditions, events, and activities of the railroad. We will disseminate this information through the publication of a newsletter, establishment of a web site, by maintaining an archive, and by conducting an annual convention somewhere along the lines operated by the railroad. We may also publish information in other media and may restore and operate historical railway equipment.

## Directors

John Adams, MD; John McKenzie; David Poplawski;  
Gary Seymour; Larry Stephens

## Officers

President . . . . . John Adams, MD  
Vice President . . . . . Dave Poplawski  
Secretary . . . . . Gary Seymour  
Treasurer . . . . . Jeff Hendricks

## Editor / Associate Editor

Dave Poplawski / Mark Demaline

Regular membership is \$25.00/year; Sustaining membership is \$50.00/year; Junior membership (16 and under) is \$10.00/year. The membership year is from January 1 to December 31.

*The FOBNR is not supported by, nor affiliated in any way with, the BNSF Railway, its subsidiaries or affiliates. The BNSF Railway mark, Burlington Northern marks, the Frisco mark, and the Burlington Northern Santa Fe Railway marks are licensed marks owned by BNSF Railway Company and are used with permission.*

## The BN Expediter

*The BN Expediter* is published four times a year and is included with membership in the **Friends of the Burlington Northern Railroad**. Manuscripts, photographs and information are welcome for publication. Articles are compensated at \$25/page of text; contributors of photos will receive one free copy if an **FOBNR** member, two if not.

Anything published in *The BN Expediter* (including the classifieds), must be focused on the Burlington Northern Railroad and its successors, from the 1970 merger on. Information and/or pictures that give historical perspective or context are acceptable (e.g., premerger road numbers). The disposition of a locomotive, other piece of equipment or property is also acceptable. Further information is available from the Editor.

Send material for publication to either:

Dave Poplawski, Editor	Mark Demaline, Assoc. Editor
7733 Copper Corner Drive SE	29658 Schwartz Road
Caledonia, MI 49316	Westlake, OH 44145
pop@mtu.edu	conductor7@aol.com

Copyright 2015 by the Friends of the Burlington Northern Railroad. All rights reserved.

## In This Issue

BN / BNSF Covered Hopper Photographic History . . .	4
Bakken Oil and the BNSF (part 2) . . . . .	12

## New Members

Michael Kavolius 15-006	Don Winn 15-007	Markus Lasko 15-008
address withheld by request	1604 Eagle Ridge Dr Corinth, TX 76210	address withheld by request
		Larry Spoelstra 15-009
		address withheld by request

## Financial Statement

### December 31, 2014

Balance on Hand, January 1, 2014 . . . . .	\$9,482.88
Revenue . . . . .	8,697.78
Expenses . . . . .	9,494.30
Balance on Hand, December 31, 2014 . . . . .	8,686.36

### Revenue

Dues . . . . .	6,145.00
Donations . . . . .	557.44
Company Store Sales . . . . .	353.82
Single Issue Sales . . . . .	24.00
Calendars . . . . .	155.52
Convention . . . . .	1,462.00
<b>Total</b> . . . . .	8,697.78

### Expenses

Expediter	
Printing . . . . .	2,870.00
Postage . . . . .	1,507.60
Honorarium . . . . .	800.00
Miscellaneous . . . . .	271.90
Board of Directors Meeting . . . . .	61.46
General	
Printing . . . . .	47.56
Postage . . . . .	542.01
PO Box Rent . . . . .	78.00
Supplies . . . . .	142.89
Company Store . . . . .	240.15
Election . . . . .	47.56
Convention . . . . .	1,302.35
Calendar . . . . .	546.00
PayPal Fees . . . . .	186.90
Website Provider . . . . .	107.88
<b>Total</b> . . . . .	9,494.30

### Assets

Cash . . . . .	12,770.55
Office Equipment . . . . .	243.64

### Liabilities

Unearned 2015 Dues . . . . .	3,410.00
Unearned 2016 Dues . . . . .	500.00
Unearned 2017 Dues . . . . .	325.00
Unearned 2018 Dues . . . . .	100.00

Net Worth . . . . . 8,679.19

**Cover Photo:** BN 6926 leads four other SD40-2's and a solid set of nearly new BN grain hoppers east, near Chester Montana, on June 14, 1991. R.M. Leach photo, D.P. Oroszi collection.

## Information/Photos Needed

### July, 2015

**BN Electric Trailers (ET-1, 2, 3).** BN inherited these from the NP. We need good photos (especially in BN colors) to go along with a modeling article of the ET-2.

**Locomotive Chronicles 1988.** We need photos of LMX units 8567-8599 (in their original paint scheme) and remanufactured GP39M's 2800-2805 and 2875-2878 and GP40M's 3500-3508, plus any other interesting information about the rebuilding program.

**BNSF Covered Hoppers.** We're still looking for pictures of BNSF covered hoppers for part 2 of the article started in this issue. Both roster shots and "action photos" can be used.

### October, 2015

**BN Rocky Mountain Days.** Dave Burns writes about his recollections as Division Superintendent of the Rocky Mountain Division of the Billings Region from 1972-74. We're looking for photos of the BN in the early 70's in this area to accompany the article. The lines included are the main lines from Laurel to Sandpoint, Idaho (both the river and the Evaro Hill routes), the main line between Logan and Garrison through Butte, the main line from Laurel to Casper, Wyoming, and associated branch lines (check the **FOBNR** employee timetable web pages from 1972-74 for exactly which trackage is included)

The **FOBNR** web page now has a link to all the articles that are in progress for future issues of *The BN Expediter*. Check it at [www.fobnr.org](http://www.fobnr.org) and contribute if you are able.

## Sustaining Members

The generous contributions to the finances of the **FOBNR** by the following sustaining members have helped us to continue furthering the goals of our organization.

John Adams	Bill Harvey	Richard Rink
Doug Andreason	Mark Herrick	Kim Saign
Jim Archer	Jesper Kaae	Bob Sanchez
Joseph Beasley	Bruce Kane	Harlan Schmidt
Tom Bentley	Steve Koberstein	Gary Seymour
William Brown	James Koretsky	Brian Shedd
Jay Burkgart	James Kreger	Dennis Shogren
David Burns	Devyn Kukowski	Patrick Slater
Kent Charles	Dennis Lutz	Bryan Smith
Gayle Christen	Alan Matchett	David Smith
Kenneth Cocherell	Alan Meyer	Charles Sted
Craig Connell	William Miotek	Mark Steenwyk
Earl Currie	Allen Moore	Lawrence Stephens
Mark Dennis	David Obetz	Burr Stewart
Duane Durr	Dennis Popish	Charles Taylor Jr.
Micheal Farley	Dave Poplawski	John Tenerowicz
Peter Ferch	T. Michael Power	Galen Thomaier
Roger Field	Emery Rahm	Aric Van de Vord
Wade Griffis	Richard Rehn	Gary Wlodarczyk

## Presidents Message

First, greetings to all of you and welcome to spring! I know a lot of us have had one heck of a winter and it really is going to feel good to be getting outside and enjoying the world. Maybe that will even include some train watching!

I do want to reach out to you about two issues. The first is our upcoming annual convention, to be held this year in the Minneapolis/St. Paul area. John McKenzie and Peter Ferch are putting the final touches on what promises to be a great convention! This will be a great opportunity to visit the BNSF in what has always been a vibrant BN and BNSF territory. We look to be able to meet near the tracks, as well as be able to take advantage of the opportunity to ride on the new NorthStar commuter line as well as the growing light rail system in the Mpls/St. Paul area. We also are going to be able to visit the newly re-opened St. Paul Union Depot, which is really rich in the history of the early days of the BN. If you have not been to a convention in the past, this is often an opportunity to tour places that you would never get access to on your own, and to learn about the inner workings of many railroad-based businesses.

It is also an opportunity to learn more about the **FOBNR**, and to give your input as to what you would like to see our organization accomplish. At our annual members meeting you can share with the leadership what you would feel is a priority for the organization, and learn what you can do to make the **FOBNR** a stronger organization. You can also directly influence where we meet in future years, particularly if you are willing to do some of the on-site arrangements in your favorite BN/BNSF location. We would love to get your input and be able to make the next steps to grow our organization and at the same time find out those things you feel you want from the **FOBNR** to make your membership increasingly valuable.

Second, I want to thank those who came up with the idea for the BN Annual Calendar, as well as those who went through the submissions and decided on the format for the calendar. But most importantly I want to thank those of you who sent in pictures! For a first year effort I really think we had a quality product and one that we can be proud of. This upcoming year we will again produce the calendar, with some tweaks to make it even better. We also plan to distribute it not only to the sustaining members, but have more copies available for the rest of our members to purchase and may also try to sell it through some hobby shops. I see this as an excellent way for us to spread the word that we are here and can benefit people interested in our hobby.

We also need you to get your pictures/slides/digital images of the BN era and send them in later this year to be included in the 2016 calendar.

So, start digging through those old pictures and slides and please, save the date for our annual convention in Minneapolis June 24 – 27. Registration is available now, so take advantage and register early. See you there! *John Adams*

# BN and BNSF 3-Bay Covered Hopper Cars: A Photographic History

by Mark Demaline

Part 1:



BN, and now BNSF, has one of the largest, if not the largest, railroad-owned covered hopper car fleets in the United States. The grain hopper fleet comprises a major portion of this car type, not surprising, given the huge agricultural region and market BNSF serves.

In sharing this initial photo article, we do not intend to cover the entire roster or history in detail or by builder, car type, or roster numbers, but provide readers with a representative sample of the variety of covered hopper cars used by BN and BNSF through the years, an “evolving view” of the fleet, if you will. Also, with the following, we want to gauge our members’ interest in seeing more articles and photos on the equipment which one sees behind the locomotives (or in front of the DPUs!). Your interest, comments, and input will then be the driver for the future content of **The BN Expediter**.

Perhaps the best years of seeing BN, and then BNSF, grain trains were the two short time windows when BN was running their then-new green covered hoppers in solid unit grain trains in matched train sets and again in the early BNSF “Earthworm” unit grain train era, this time with long grainers of matched brown covered hoppers. The first new BNSF grain hoppers were delivered with the round BNSF logo, and then the current BNSF “Swoosh” logo.

Although huge volumes of grain now move primarily from fast loop loadouts to both domestic and export terminals, BNSF also still serves many traditional, smaller grain elevators and loadouts, as any of us who have followed the ex-GN and ex-NP lines across the Dakotas and Montana are familiar with. Over 50% of BNSF’s grain business moves to ports for export, and in 2007, overall Ag product shipments reached 1 million carloads.

In 1993, as the BNSF merger approached (September, 1995), BN’s grain car fleet totaled approximately 21,000 cars. Demand also caused a large number of cars to be leased between 1987 and 1989. The then-standard unit train size, for the 4750 cubic foot (cf) capacity hoppers, including 5500 Trinity-built cars delivered in 1990-95, was 104 cars.

However, advances in car construction and the new 286,000 lb (286K) weight limit brought a new generation of cars to the BNSF grain fleet, with 5500 new 5161 cf cars coming from Trinity Industries between 1998-2000. Stronger steel, center sills, and design allowed BNSF and its shippers to take full advantage of the 286K limit, and also permitted the standard unit train size to increase to 110 cars. The newest cars even hold 5188 cf of wheat, corn, or soybeans.

The current BNSF covered hopper fleet, for moving all commodities, including grains, sugars, malt, fertilizer, and minerals, is approximately 36,000 cars. This includes 16,600 4427-4750 cf, 263K capacity cars and 15,500 “jumbo” 5161-5416 cf capacity, 286K cars. These jumbo cars are used for grain, sugar, and malt movements.

Although BNSF has increased its fleet by 20%, many of the older 4750 cf grain cars have fallen out of the fleet and been retired due to condition and/or the 40-year rule. It is hard to believe some of the then-large capacity cars we saw in the 1970’s are now too old for interchange or service! However, two related elements have contributed to improved service for grain customers.

First, the evolution from the traditional, multi-car grain elevators, which at their peak might be able to handle 65-car trains, to the new large loop track, and fast capacity loadouts with the ability to load a 110 car train of 5161 cf cars in hours versus days. This greatly improved efficiency, eliminated the switching of cuts of cars, and allows the locomotives to remain with the train.

Second, in concert with the above, is the shuttle train strategy, which allows these unit trains to move back and forth between the loadout and destination, usually a port facility, with minimal delays. Along with provisions, rules, and incentives for the customers to maintain a strict loading and unloading schedule, this allows BNSF to maximize grain car fleet, locomotive, and crew utilization, as well as better plan train schedules.

We would sincerely like to thank Mr. David G. Casdorff for his permission and assistance in this article, and use of information from his 1994 *Burlington Northern Freight Cars Today* book. It is a great source of info for BN’s pre-BNSF car fleet. Kind thanks also to all those who contributed photos.

Other sources:

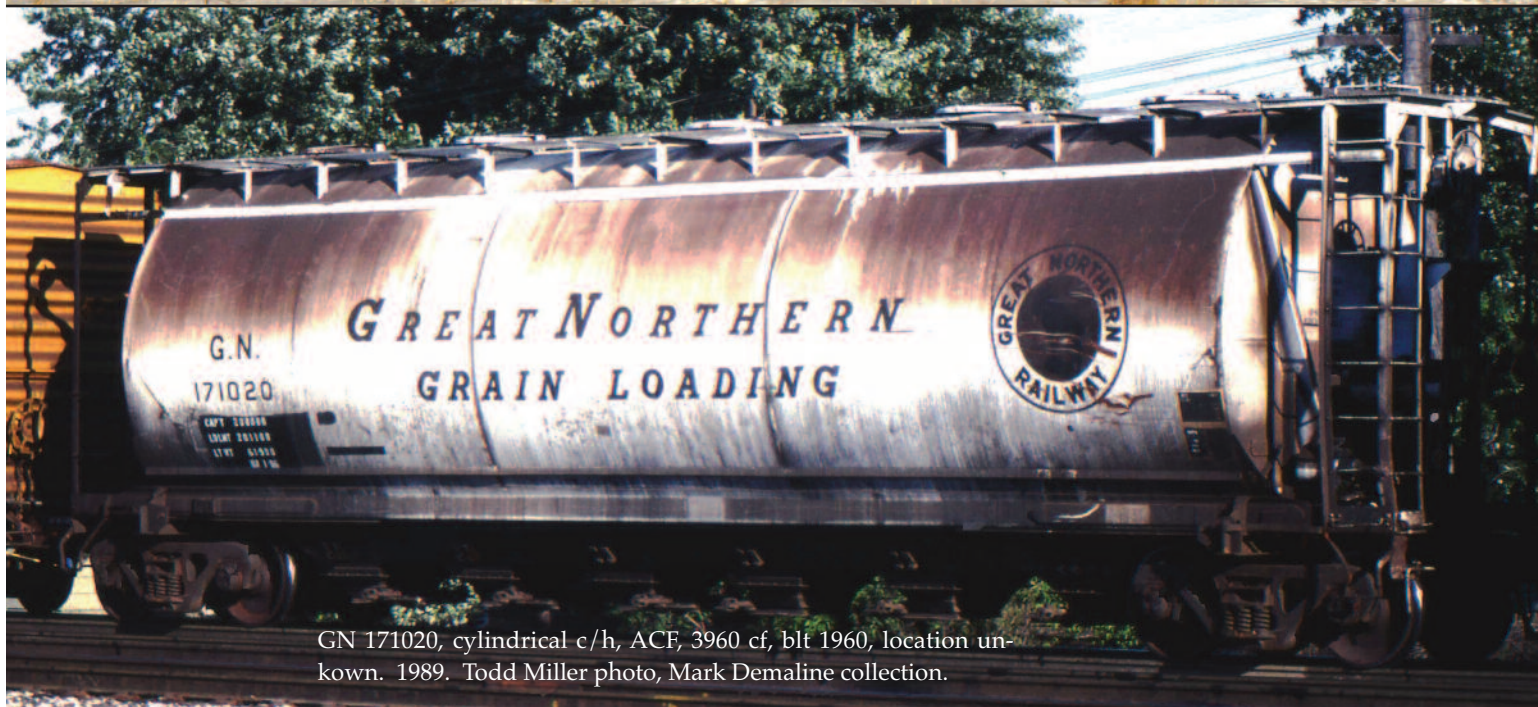
BNSF customer website, for current car fleet and Ag market data

Robert DelGrosso’s *BNSF Railway Freight Cars*, Volumes 1-3, GNP Publications.

Here then is part 1 of a “sampler” of photos of grain & Ag product covered hoppers—the BN era, for your review and enjoyment. Part 2, the BNSF era, will appear in the April issue.

If after checking this out you’d like to see us focus in on some particular car type/builder/etc., please contact the author (see page 2 for his contact information).

GN 171359, ACF, 5250 cf, blt 1965. Fon du Lac WI, on the WC, February 2, 1991. Mark Demaline photo.



GN 171020, cylindrical c/h, ACF, 3960 cf, blt 1960, location unknown. 1989. Todd Miller photo, Mark Demaline collection.

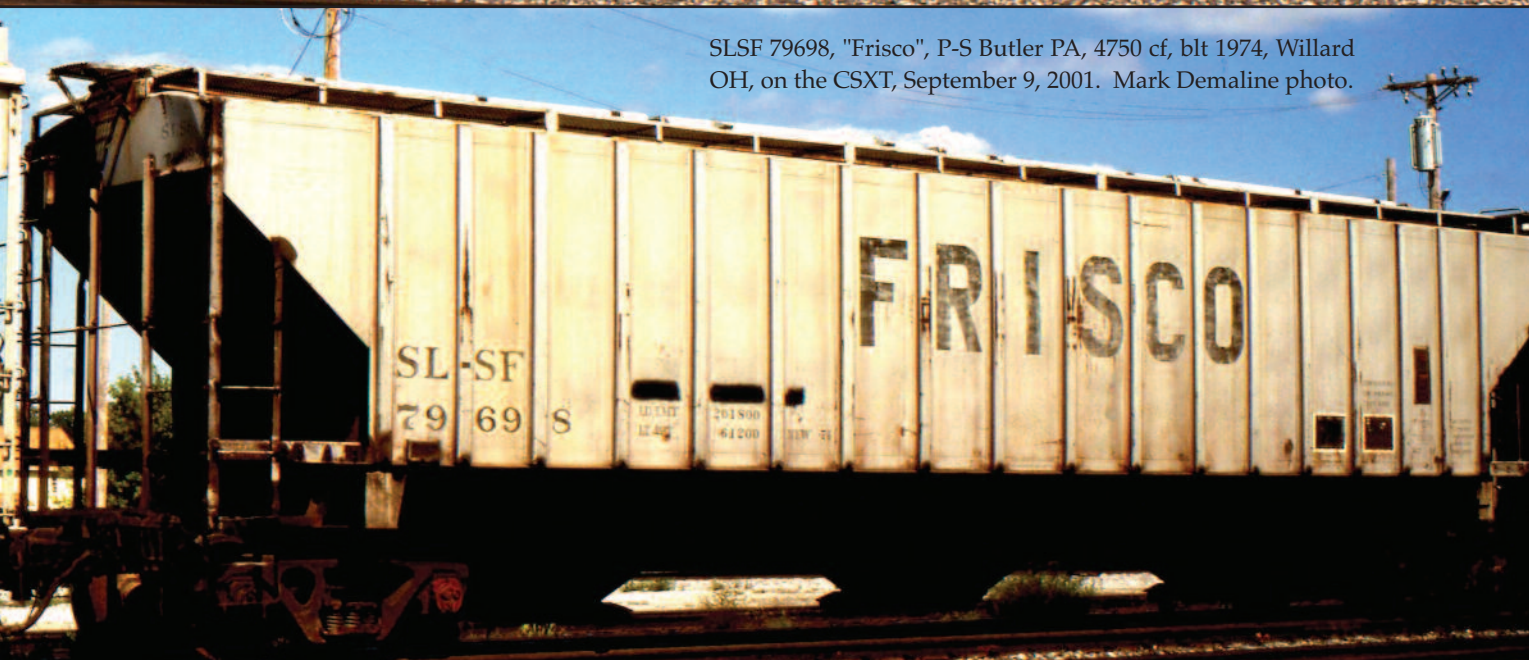


CB&Q 185096, P-S Butler PA, 4740 cf, blt 1968, Blue Canyon CO on the D&RGW, October 25, 1987. Kent Charles photo.

NP 76717, P-S, 4427 cf, blt 1967, Berea OH, on  
Conrail, June 16, 1990. Mark Demaline Photo.



SLSF 79698, "Frisco", P-S Butler PA, 4750 cf, blt 1974, Willard  
OH, on the CSXT, September 9, 2001. Mark Demaline photo.



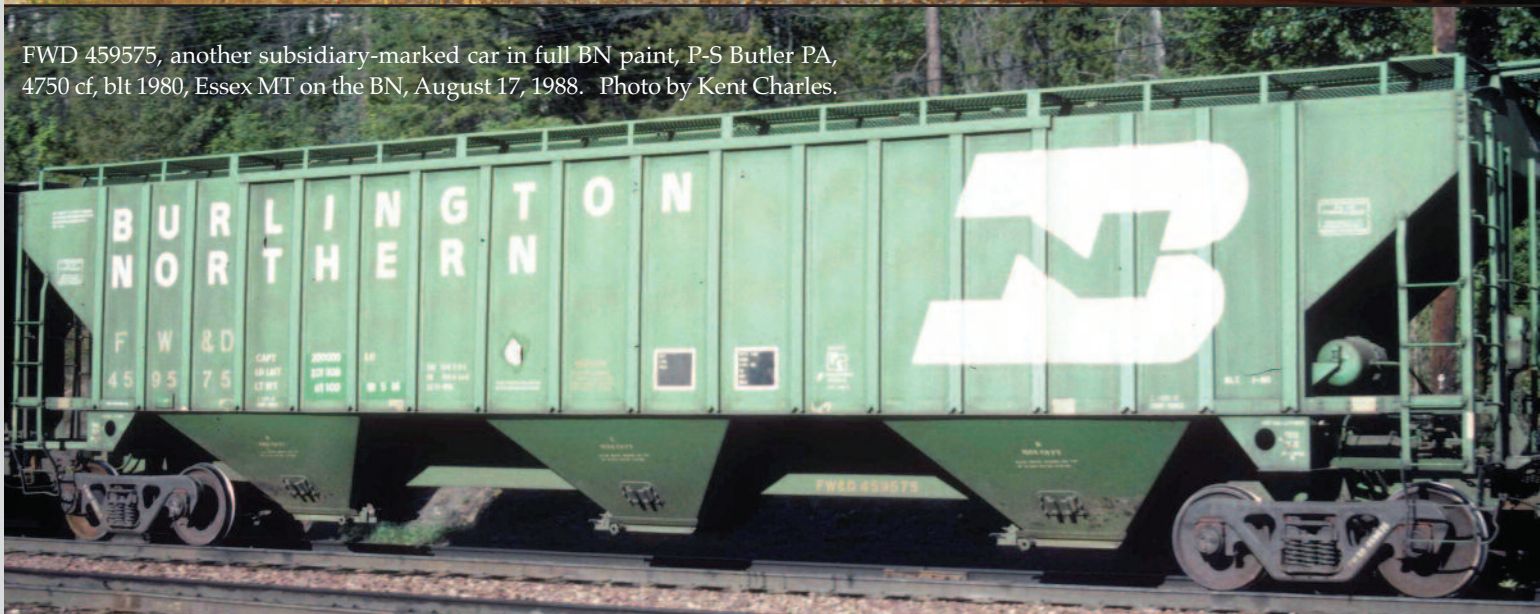
C&S 458922, with a full BN paint scheme, Gun-  
derson, Portland, 4692 cf, blt 1971, Lynn CO on  
the BN, June 20, 1988. Kent Charles photo.



BN 449220, P-S Butler PA, 4750 cf, blt 1979-80, at Savanna IL on the BNSF, February 17, 2002. Mark Demaline photo.



BN 458669, FMC, 4700 cf, blt 1980, Grafton OH, on the CSXT, September 6, 2001. Mark Demaline photo.



FWD 459575, another subsidiary-marked car in full BN paint, P-S Butler PA, 4750 cf, blt 1980, Essex MT on the BN, August 17, 1988. Photo by Kent Charles.

BN 453169, ACF, 4600 cf, blt 1966, Grafton OH on the CSXT. Date unknown. Mark Demaline photo.





BN 445879, an ex-Frisco car. P-S Butler PA, 4750 cf, blt 1977, Shelby MT on the BNSF, October 14, 2002. Mark Demaline photo.



BN 445980, note the non-standard font used for the reporting marks, P-S Butler PA, blt 1977, Huron OH on the NS, July 1, 1998. Mark Demaline photo.



BN 446440 and other new ACF cars, all 4650 cf, blt 1975 in Huntington WV. Photo at Marion OH on the C&O, October, 1975 by Todd Miller, from the Mark Demaline collection.



BN 469566 and 8 other new Trinity-built 4750 cf cars, at Youngstown OH, May 28, 1994. David P Oroszi photo.

## BN To Add 1,000 Jumbo Cars To Grain Fleet



Burlington Northern Railroad (BN) is purchasing another 1,000 jumbo covered hopper cars—C6X's—to add to its grain-hauling fleet in time for this year's peak harvest season.

The jumbo cars, which

have a 286,000 pound gross-weight capacity allowing them to carry approximately 11 tons more grain than the standard 100-ton capacity jumbo covered hopper, are scheduled to be delivered in the third and early

fourth quarters for the peak of the '93 harvest season.

"This investment in new covered hoppers shows BN's continued commitment to serving our grain customers and reducing our reliance on leased equipment," said Harry Baldaccini, equipment team leader for BN's covered hopper car fleet. "Our customers have responded very favorably to the 2,000 C6X's already in service and we are extremely pleased to add another 1,000 to this unique fleet."

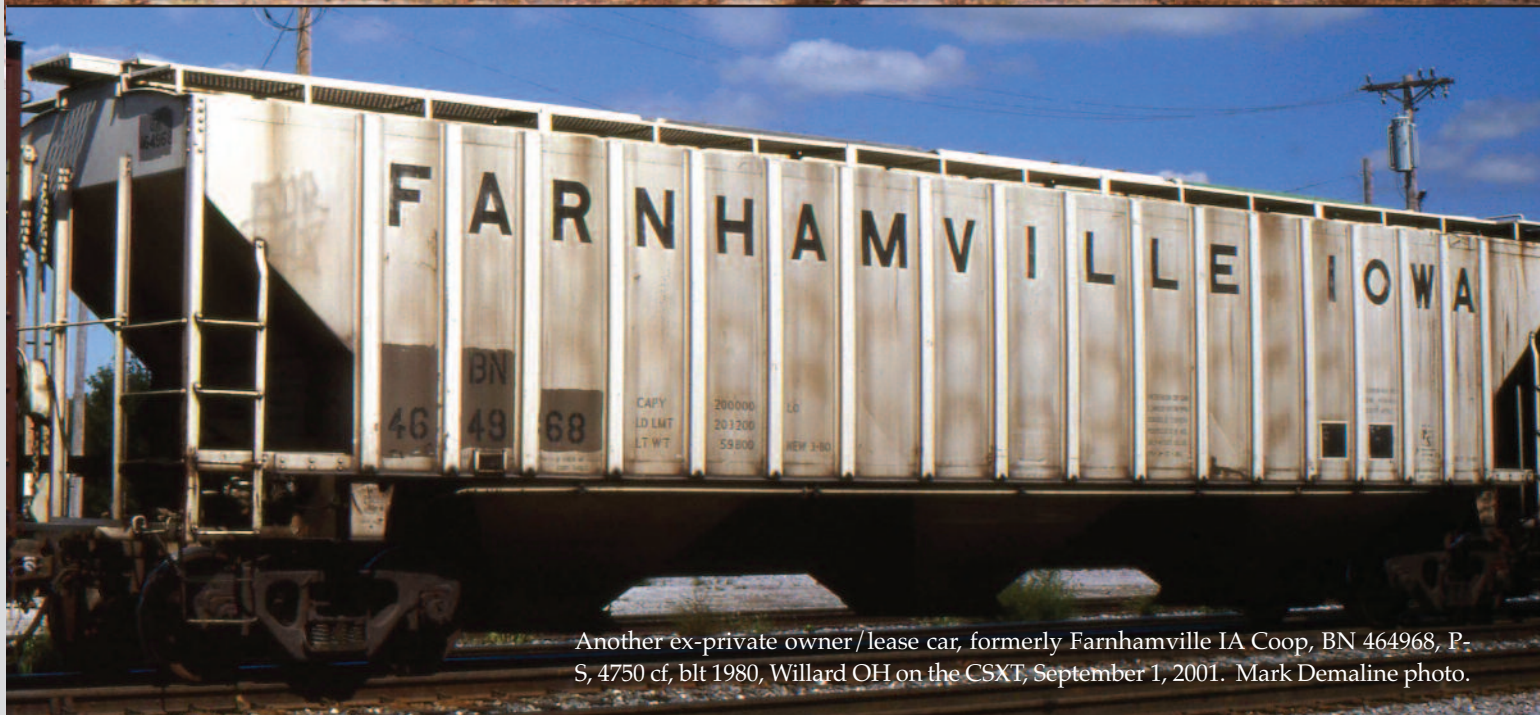
Including this latest order, BN has now purchased 3,000 of these higher-capacity cars since 1990, to add to what already was the largest grain fleet in the railroad industry. Currently, BN is operating a fleet of more than 24,000 grain cars.

The new cars, which will be built by Trinity Industries of Dallas, TX, feature the latest designs approved by the Grain Elevator & Processing Society, including:

- Access ladders into each hopper car compartment;
- Trough hatch covers that open in either direction to allow free walkway clearance;
- The stenciling of the car's cubic capacity on the under side of the end hatch cover.
- Discharge gates with improved locking devices and standardized capstans, openings meeting dimensional standards.

BN is the largest rail transporter of grain in North America, hauling more than 42 million tons in 1992.

An ex-Far-Port Coop car, BN 465274, built by Evans, 4780 cf, at Shelby MT on the BNSF, October 3,2001. Mark Demaline photo.



Another ex-private owner/lease car, formerly Farnhamville IA Coop, BN 464968, P-S, 4750 cf, blt 1980, Willard OH, on the CSXT, September 1, 2001. Mark Demaline photo.

BN 463581, an ex-Arthur Farmers Elevator car, FMC, 4750 cf, blt 1980, Eastham Jct MT on the BNSF, October 12, 1999. Mark Demaline photo.



# Bakken Oil and the BNSF

## (Part 2 - The Unit Train Loadouts)

Next to all the 100+ car unit oil trains stretched out over the prairie, probably the most visible evidence of BNSF's presence in the Bakken region are the loadouts. While not constructed or owned by BNSF, they are the starting point for all the oil unit trains leaving the area.

The map below shows the locations of BNSF's oil train loadouts scattered around the western half of North Dakota. It shows all the unit train loadouts as well as four smaller scale operations that load short cuts of cars that are picked up by passing manifest trains.

The following pages highlight the eleven facilities that handle unit trains (including "Savage Services" and "Basin Transload" that load both unit trains and short cuts for manifest train pickup). Not all the boxes, diamonds and triangles on the map are in *exactly* the right places on the map, so the write-up for each facility will give more precise location information. The map also shows two facilities are still under construction (Ceres and Phillips 66), but according to

Northstar Transload officials, it too is still under construction and not due to come on line until June 1, 2015.

Here's a mapping between the names on the map and the loadout names (usually the city or town they are near), and the three letter BNSF train symbol code for the facility:

**Enbridge - Berthold, BER**

**EOG - Stanley, STN**

**Plains - Manitou, MNU**

**Hess - Tioga, TIO**

**Crestwood - Epping, EPP**

**Savage Services - Trenton, TND**

**Musket - Dore, DND**

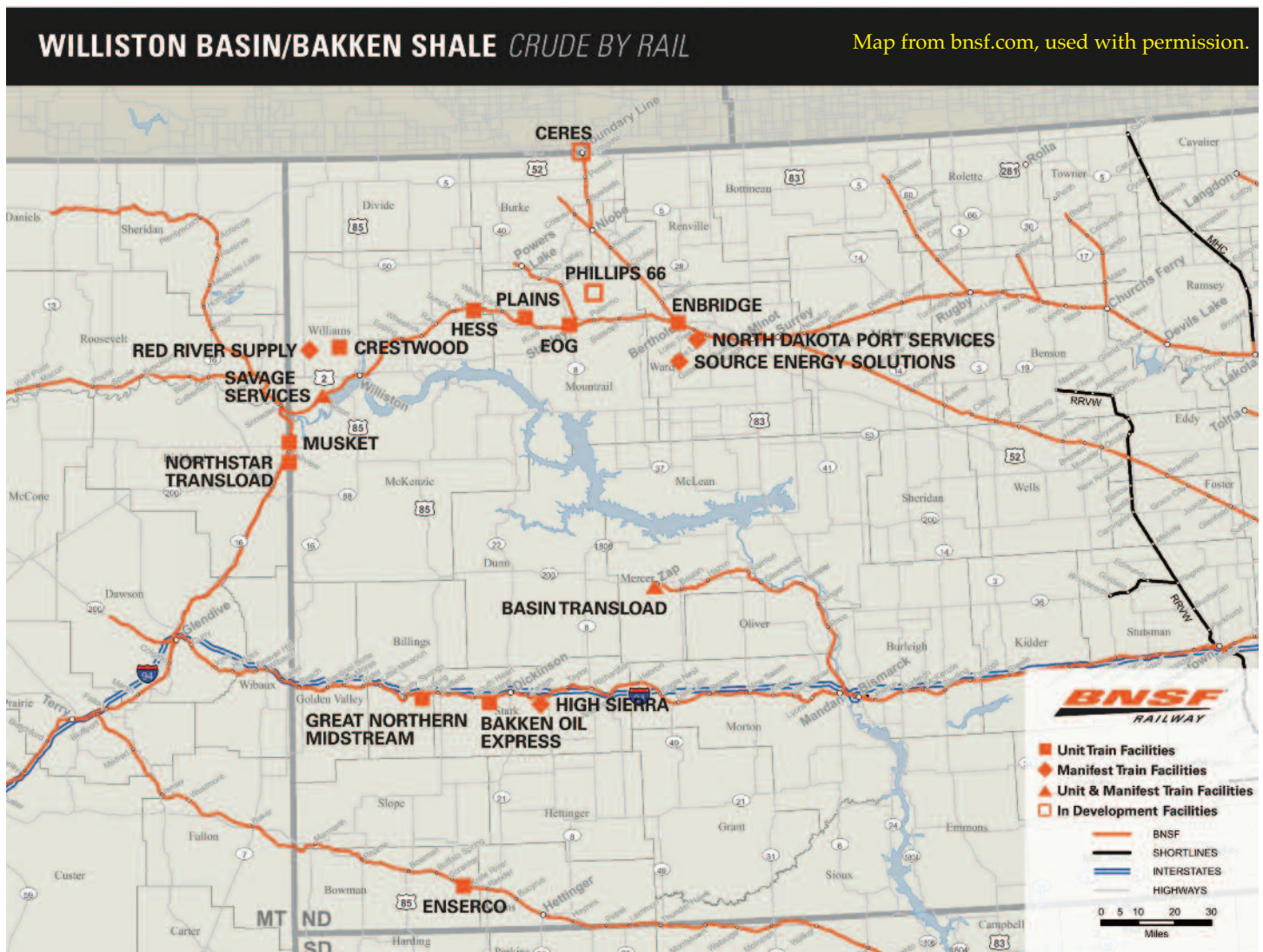
**Basin Transload - Republic (near Beulah), RPB**

**Bakken Oil Express - Eland, ELU**

**Great Northern Midstream - Fryburg, FRY**

**Enserco - Gascoyne, unknown**

*(article continues on page 23)*



# BERTHOLD

The Berthold terminal, the easternmost BNSF North Dakota oil loadout, is operated by Enbridge, Inc. headquartered in Houston, Texas. It's also the first of seven loadouts on the Glasgow Subdivision after leaving Minot and is located just west of the town of Berthold.

Before oil trains, the Berthold Terminal had been a center point of Enbridge's extensive oil pipeline system in this part of the state. In the spring of 2012 a two-phase project to construct a loadout for rail tank cars was begun and by that July a wye had been constructed where oil could be loaded directly from tanker trucks into tank cars. There was room for ten cars, but only five could be loaded at a time.

They could load 10,000 barrels of oil per day, and it took five to six days to load enough cars for modest size unit train.

Phase 2, completed in March of 2013, was the construction of a two-track loop capable of holding up to 3 unit trains of from 100 to 118 cars, loading arms and associated equipment for one of the tracks inside a 900 foot building, two additional 150,000 barrel crude oil storage tanks, and associated pipeline connections with the storage tanks. The new facility could load up to 80,000 barrels per day (or well over 100 cars) and an entire unit train in 14 hours. The first train was loaded and departed from the facility on March 18th of that year.



(above) A unit tank train passes the west end of the loadout building on the outside loop track.

(below) A close-up of the east end of the loadout building shows the elaborate stairway/walkway system that allows workers to move around the facility without crossing the tracks at grade. All photos on this page taken on July 2, 2014 by Micheal Farley.



(below) A panoramic view, looking mostly east, of the loop tracks, with the loadout at the right and the large storage tanks just visible above the trains just left of the middle. BNSF's main line can be seen exiting to the left. The Berthold water tower is just barely visible above the loadout building.



# STANLEY

The Stanley terminal, the next loadout west of Berthold on BNSF's Glasgow Subdivision, is owned by EOG Resources, Inc., headquartered in Houston, Texas but operated by Watco Services out of Pittsburg, Pennsylvania. The terminal is northeast of the town of Stanley, and technically lies parallel to the Grenora Subdivision branch line, although it is less than a mile from the main line and rail entry to the facility is just north of the wye that connects the branch line to the main.

The Stanley terminal was the first unit train loadout built in North Dakota, going into service in December of 2009. It can load up to 65,000 barrels per day (one unit train)

and includes a two-track loop, a 900 foot covered loading platform capable of filling 14 tank cars simultaneously, five large storage tanks, two 4-spot tank truck unloading platforms, and a pipeline connection to the Bridger Four Bears pipeline system for the reception of crude from remote locations.

When it first went into operation all oil was shipped to huge Cushing, Oklahoma oil terminal for movement via pipeline to various places. However oil price economics made it cheaper to send the oil even farther south. Trains now travel all the way to a terminal in St. James, Louisiana instead.



(above) Looking north the loadout building and oil storage tanks can be seen behind a unit train on the loop track.

(below) A unit tank train exits the facility, starting its trip long to St. James, Louisiana. Both photos taken by Micheal Farley on July 2, 2014.



# MANITOU

The Manitou terminal, the next loadout west of Stanley on BNSF's Glasgow Subdivision, is owned and operated by Plains All American Pipeline, headquartered in Houston, Texas. There is no town here, just the loadout. Its name comes from the township it resides in. It is approximately 66 railroad miles west of Minot and 5 miles west of the closest town, Ross.

Operation began in the fall of 2011 with direct truck to tank car loading of up to 15,000 barrels (roughly 20 tank cars) per day. This was expanded to 65,000 barrels per day

when in November 2012 construction was completed on a two track loop, 900 foot covered loading facility capable of loading 14 tank cars simultaneously, and two 150,000 gallon storage tanks.

Oil arrives via pipeline and tank trucks. The trucks are unloaded at a 6-spot covered unloading platform located east of the loop tracks.

The site also includes 4-track outdoor liquified natural gas (LNG) loading facility and seven 2000 foot long storage tanks.



(above) Looking due west from 93rd Ave NW we see the covered loading area and the DPU of a unit train. Both photos on this page taken by Micheal Farley on July 2, 2014.

(below) This panoramic view is looking mostly north across the BNSF main line, with the car storage yard and loadout on the right and an eastbound stack train on the main.



# TIOGA

The Tioga terminal, the next loadout west of Manitou on BNSF's Glasgow Subdivision, is owned by the Hess Corporation, headquartered in New York City but operated by the Watco Company. It is just west of town at milepost 82 on the railroad.

Operation began in November of 2011 at an outdoor loading rack that can service 21 tank cars simultaneously. It can load two 104 car trains with approximately 70,000 barrels of oil each per day. The loadout sits between the tracks of a two-track loop. There are also 3 large storage tanks at the site.

Oil arrives via pipeline from the Hess pipeline gathering system as well as from tank trucks. The trucks are unloaded at a 8-spot unloading area that can handle up to 1000 trucks a week.

Oil is shipped to St. James, Louisiana and to the east coast via CSX and NS.

Hess also operates a natural gas processing plant east of town that recently underwent a large expansion. This appears to have included the construction of a gas loadout and multiple tank car storage tracks in the middle of the loop tracks.



(above) Looking northeast from 67th St NW we see the outdoor loading racks. Both photos on this page taken by David Tengesdal on February 24, 2015.

(below) A close-up view of the loading racks shows many details of the oil transfer equipment currently in the retracted position.



# EPPING

The Epping terminal, also known as the COLT (Crude Oil Loading Terminal) Hub, is the next loadout west of Tioga on BNSF's Glasgow Subdivision. It was originally built by Rangeland Energy, which was bought out by Crestwood Midstream, headquartered in Houston, Texas in December of 2012. It is at milepost 104 on the railroad, just east of the town of Epping. The town is so small it *could* fit inside the loop track.

The facility began operation in the June of 2012 and has undergone two major expansions since. It has a two-track 8,700 foot rail loop that can handle 120-car unit trains and a 900 foot covered loadout. Initially it could load 120,000 barrels of oil a day and had six 120,000 barrel oil tanks for storage. The expansions have increased the storage capacity to 1.2 million barrels of crude and the unit train loading ability to 160,000 barrels per day. On October 27, 2014, the one thousandth loaded unit train was loaded at the facility.

The hub aggregates crude oil produced in two counties by pipeline and truck. It has pipeline connections to the Banner and Bear (Belle Fourche) pipeline gathering systems and is linked to the Dry Fork terminal at the Beaver Lodge/Ramberg pipeline hub by a 21-mile bi-directional 70,000 barrel per day crude oil "connector" pipeline. Tank truck unloading was initially provided by an 8-bay unloading dock, since expanded to twelve, and now can receive up to 64,000 barrels per day over the road.



The sign still shows the original owner.



(above) The loadout, storage tracks and part of the loop are visible in this photo looking south from just off Highway 8. Note the bright red Nordco Shuttlewaggon mobile railcar mover on the first storage track left of the loadout.

(below) This view looking southeast shows some of the storage tanks, the loadout and more of the loop. All photos on this page taken by Micheal Farley on June 1, 2014.



# TRENTON

The Trenton terminal, the next loadout west of Epping on BNSF's Glasgow Subdivision, is owned and operated by Savage Industries, headquartered in Midvale, Utah. It is about 3.5 miles west of Trenton and near milepost 138 of the railroad.

Savage purchased the terminal site in January 2011 and initially developed a manifest rail loading capability. Then in August, 2012 the facility expanded and became capable of loading two, 100+ car unit-trains at a time using 900 foot and 630 foot parallel covered loading racks. Load capacity was 90,000 barrels per day and there was about 300,000 barrels of storage on-site. It had a 8,300 foot two-track loop and ladder tracks capable of holding two 118 car unit trains. The terminal received incoming oil from six truck bays and a pipeline connection to Tesoro High Plains pipeline system.

In April of 2014 the facility expanded its loading capacity to 175,000 barrels per day, increased truck unloading bays from 6 to 12, increased on-site tank storage to approximately 450,000 barrels and added two additional unit-train staging tracks.



(above) Looking northeast from 42nd St NW shows the southwest end of the loadout. The tallest brown building at the right is the tank truck unloading area. Photo taken on March 11, 2015 by Russ Markwald.



(above) The loadout buildings, looking southwest from State Highway 1804, with the shorter one in front. Both photos on this page taken on March 16, 2015 by David Tengedal.

(below) A close-up of the northeast end of the two loadout buildings.



# REPUBLIC

The Republic terminal, one of two not on any BNSF main line (the other is the Dore loadout on the Sidney Line Subdivision), is owned and operated by Basin Transload, a subsidiary of Global Partners, headquartered in Boston, Massachusetts. It is located near milepost 78 on BNSF's Zap Line Subdivision and is about 2 miles east of the town of Zap.

The facility has a two-track outdoor loading area that can load 60,000 barrels of oil per day and several large storage tanks capable of holding a total of 280,000 barrels of crude. Two roughly 7,000 foot storage tracks can each accommodate 120 car unit trains.

The facility gets its oil from a new 4.1-mile lateral pipeline from Dunn Center Station and from tank trucks. It ships to destinations on the east, west and gulf coasts.



(above) The loadout, looking west from the Highway 20 grade crossing. Both photos on this page taken on February 26th, 2015 by Chris Erickson.

(below) Two long storage tracks each capable of holding 120-car unit trains branch to the left off the Zap Line main.



# DORE

The Dore terminal, the westernmost BNSF North Dakota oil loadout, is operated by The Musket Corporation headquartered in Houston, Texas. It began operation in 2008 and was expanded in 2011 to its present configuration.

The terminal is on the Sidney Line Subdivision, about 5 miles south of the junction with the Glasgow Subdivision main line at Snowden, Montana. It is only one of two facilities that is not on one of BNSF's three main lines through North Dakota (the other is the Republic loadout near Zap on the Zap Line Subdivision).

Loading of up to 20 cars at a time is done inside a two track 700+ foot building. Unlike many large unit-train load-

outs, Dore does not have a loop track. Instead, a 5 track yard about 2000 feet long holds cuts of cars which are switched into and out of the loading facility with Nordco Shuttlewagon mobile railcar mover. Unit trains are broken down upon arrival and re-assembled for departure.

Oil is delivered to the loadout by truck and a through crude oil pipeline gathering system and stored in two large above ground tanks and many other smaller tanks. Up to 70,000 barrels of oil, or about 95 tank cars, can be loaded at the facility per day. Destinations for Dore unit trains include sites on the East and Gulf coasts and Cushing, OK.



The two-track loadout sits just east of the 5-track yard (above), while the Shuttlewagon moves a cut of tank cars (below). The main line parallels the yard on the west side. Both photos taken on February 22, 2015 by Ellen Wznick.



# ELAND

The Eland terminal, also known as the BOE, or Bakken Oil Express, is the easternmost of two terminals on BNSF's Dickinson Subdivision. It is owned by the Globe Resources Group headquartered in Wichita, Kansas and operated by Strobel Starostka Transfer. The terminal is just west of Dickinson at a place (not a town) called Eland near milepost 114 on the railroad. By almost any measure, it is the largest load-out in the entire Bakken shale region.

The BOE began operation in 2011 and has been continually expanding ever since. It now has two intersecting loops, one with two tracks and the other with three. Loading of two sets of twelve tank cars on two different trains is done simultaneously inside a two-track 750 foot covered building. Three trains a day can be loaded, taking approximately 13 hours per 100-car unit train.

Up to 350,000 barrels of crude oil can be received at the terminal per day, with 80% of it coming from the Tosero and Four Bears/Belle Fourche pipeline systems. The other 20% arrives by truck at one of 14 unloading bays.

---

These two aerial shots, both looking essentially west, show the overall layout of the double loops and details of the loadout and storage tanks. It looks like a quiet day as no unit trains are present. The Dickinson Sub main line runs along the west (left) side of the loops. Both photos taken on February 2, 2015 by Vern Whitten.

Initially there were storage tanks for just over 200,000 barrels of oil. Capacity increases, in the form of more and more large storage tanks, has continued consistently over the past three years to almost 700,000 barrels, and current construction, slated for completion later this year, is slated to top out the BOE's storage capacity at almost 892,000 barrels of Bakken crude.

Unit trains head for destinations on the East, West and Gulf coasts. On August 14, 2014 the one thousandth unit train completed loading and left the facility.



# FRYBURG

The Fryburg terminal is owned by The Great Northern Midstream headquartered in Houston, Texas. It is at milepost 135 of the Dickinson Subdivision and just east of the tiny town of Fryburg.

The terminal has a two-track loop and a two-track 1,100 foot covered loading area. It can load up to 70,000 barrels of crude a day and has storage for 300,000 barrels of oil.

Oil arrives via the Bakkenlink crude gathering pipeline, and by truck, which is unloaded at a 6-bay unloading dock at the west end of facility.

---

These two aerial shots, both looking essentially west, show the overall layout of the loops and details of the loadout and storage tanks. The reversing loop is not typical. The Dickinson Sub main line and Frybug siding runs along the west (left) side of the loop. Both photos taken on August 9, 2014 by Vern Whitten.



# GASCOYNE

The Gascoyne terminal, the southernmost BNSF North Dakota oil loadout, is operated by Enserco Midstream headquartered in Houston, Texas. It is the only loadout on BNSF's Hettinger Subdivision, and is located about 2 miles east of the town of Gascoyne, near milepost 960 (called Buffalo Springs on the timetable).

The loadout is along a large 2-track loop off the main line that also hosts a small fracking sand unloading site. Loading of up to 5 cars at a time is done outdoors. Oil is shipped out both on unit trains and, in smaller quantities, on manifest trains.

Oil is delivered to the facility by truck and stored in a

number of small holding tanks prior to loading. Up to 10,000 barrels of oil, or about a dozen tank cars, can be loaded at the facility per day. Destinations for the oil include refineries on the East coast (via CSX).

There is one interesting oil-related sight at the facility. Inside the loop you'll find thousands of 36 inch diameter pipe in lengths up to 80 feet, piled in huge rows. It was produced, shipped and stored there in 2011 in preparation for the construction of the Keystone XL pipeline. There's enough there to construct 230 miles of pipeline (about one fourth of the total length of the pipeline), waiting for government approval that may never come.



The simple, outdoor loadout lies along the inside track of the 2-track loop. A set of hoppers with fracking sand occupy the outer track, and a simple conveyor for loading the sand into trucks to be transported to drilling sites can be seen just to the left of the hopper cars. Unfortunately there were no tank cars around when this photo was taken on February 6, 2015 by Bryce Martin.

---

*(continued from page 12)*

The non-unit train loadouts typically are in space-constrained areas along sidings where tank trucks pump oil directly into tank cars via portable loading ramps. They are:

**North Dakota Port Services - Minot**  
**Red River Supply - Williston**  
**Source Energy Solutions - Berthold**  
**High Sierra - Dickinson**

If you have Internet access, then Google Maps ([maps.google.com](https://maps.google.com)) has excellent aerial views of all the loadouts, perfect if you want to see the track arrangement and pretty good detail of the layout of roads, storage tanks, truck unloading bays, etc. Just search for the town closest to the loadout name (i.e., Berthold), except to find the Re-

public loadout, search for the town of Zap. The only problem is that the images may be a few years old (many were circa-2013) and so won't show the current configuration (unless updated by the time you read this), although many haven't changed much since then as most of the construction was completed by then.

BNSF once had a web page with aerial photos of most of the loadouts, but it isn't to be found any more. Fortunately the FOBNR saved a copy of it and you can check it out at: [www.fobnr.org/expediter/support/loadouts.pdf](http://www.fobnr.org/expediter/support/loadouts.pdf). It too is slightly dated, as not all the loadouts are shown and a couple are clearly still under construction.

That wraps up the second installment of BNSF Bakken oil business. Coming up in the July issue will be the last installment - infrastructure, including new trackage, signalling, etc. and information about BNSF inbound oil support traffic, especially frac-sand.



Just east of Thompson Falls, MT, on MRL's ex-BN/NP main, BN 8124 +3 lead a westbound grain train. The waters of the Clark Fork River are calm on this day, September 24, 1991. R.M. Leach photo, D.P. Oroszi collection.