

The Trainmaster

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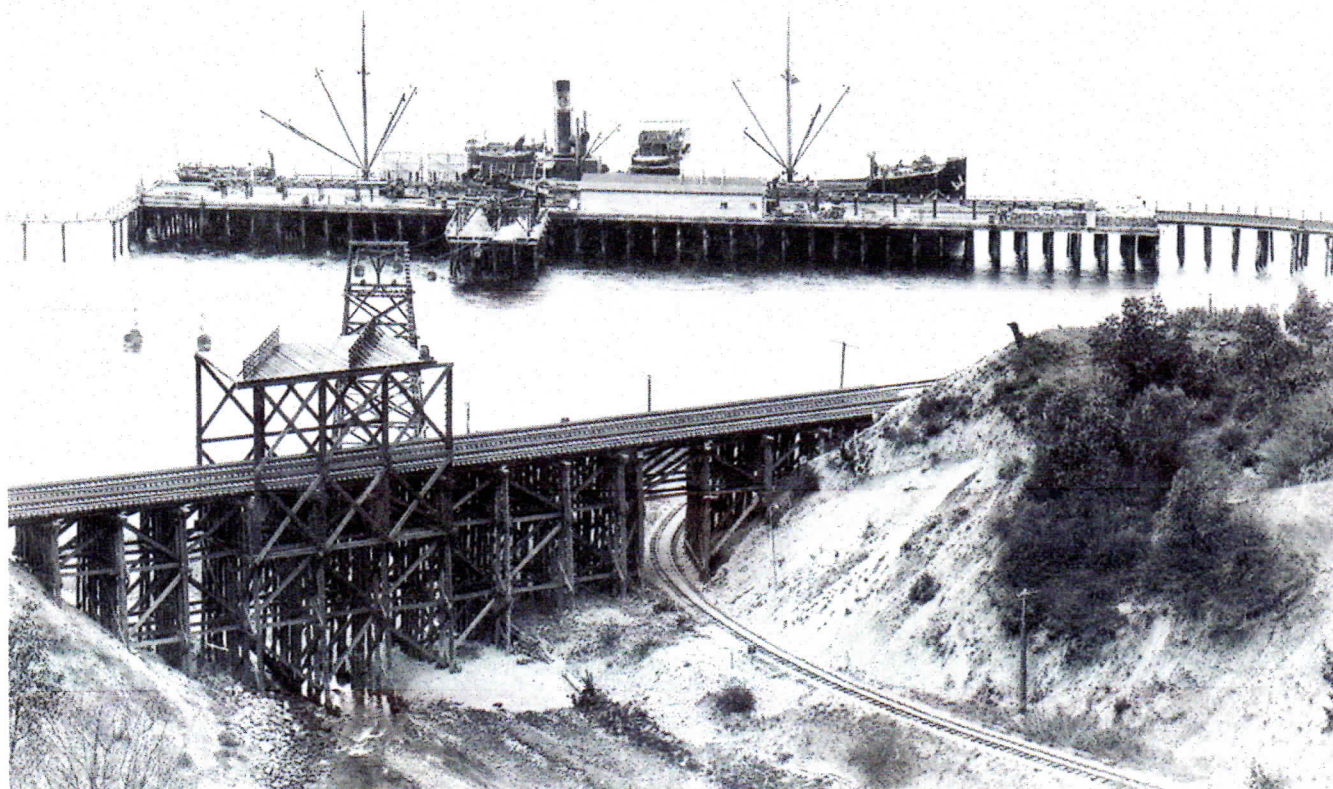


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THE DYNAMITE TRAIN

By Dan Simmering



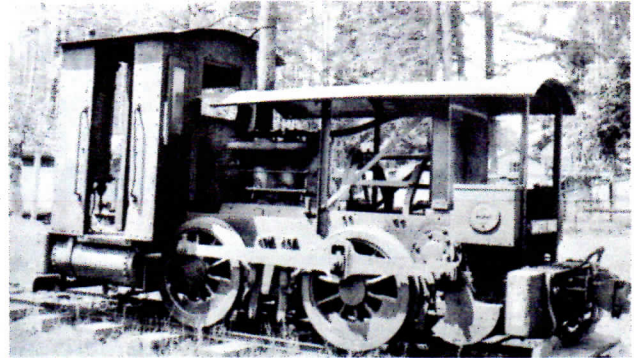
A view of the DuPont Powderworks Wharf with the NP Mainline Crossing over the Narrow Gauge Railroad.
(Courtesy of DuPont Museum; DuPont Company collection)

DuPont, Washington is a city that is located on the southern reaches of the Puget Sound south of Tacoma. There remnants of one of the most unknown, but longest surviving, narrow gauge railroads in Washington State can be seen in DuPont. This railroad operated at the DuPont Powderworks for nearly 66 years. Because the railroad was located within a tightly secured area, only Powderwork employees were aware of its day to day existence.

DuPont was a company town established by the DuPont Company which manufactured dynamite and other explosive materials nearby. The plant started manufacturing explosives in 1909. In its first 50 years, DuPont's Powderworks made over 1 billion pounds of dynamite. That dynamite was used in building the Grand Coulee Dam, the new Cascade Tunnel, the Alaska Railroad and the Panama Canal. Of course, its explosives were used during WWI, WWII and the Korean War. A standard gauge track was laid into the plant to allow Northern Pacific to deliver supplies and ship out final products. A wharf on the Puget Sound was also constructed to receive and ship materials

via water to ports along the Pacific Coast. The 3,200 acre facility stopped production in 1975, after which the property was sold to Weyerhaeuser in 1977. Following cleanup of the property, Weyerhaeuser constructed a golf course and an industrial complex on the site with the surrounding area becoming a planned housing community. (Weyerhaeuser was planning to install a log and cut wood exporting facility on the location and use the pier to ship its products. That never materialized. If it had, the narrow gauge railroad might still be operating today.)

To move materials among the storage sheds, production sites or the waterfront, a 17 mile narrow gauge railroad was built starting in 1906. The right-of-way was laid with mostly 30 pound rail with some 35 rail also used. The drop from the plant to the wharf was nearly 220 feet. A 1.3 mile portion of the railroad was laid to the waterfront on a 3% grade. At first, little cars loaded with explosives were gravity fed to the waterfront. A two man crew would ride the loaded 20-foot boxcars or 18-foot flatcars and use the handbrakes to slow or stop the cars. To move the cars back to the plant, horses were harnessed to pull the cars up grade. Early on, a set of cars experienced a run-away while descending the steep grade. That incident killed the two man crew when they derailed on the sharp curve at the bottom of the grade. Because of this accident, it was realized that a more reliable and safer means was required to move the products to the wharf.



DuPont No. 1 delivered from the Baldwin Locomotive Works in July 1910 for \$3,900. It is a 7-ton gasoline locomotive that was scrapped in 1921. (Courtesy of DuPont Museum, DuPont Company collection)

The DuPont Company bought four gasoline-powered, internal combustion locomotives from Baldwin starting in 1910. Even though Baldwin made remarkable steam locomotives, their gasoline engines were not reliable. In 1930, a gas, 10-ton Plymouth locomotive was moved to the plant which proved suitable for DuPont's needs. Two more Plymouths were employed soon after that. They were 8-ton, Model DLCs. A fourth Plymouth, built in 1942, was acquired that was a gas powered 12-ton, Model JLA. This locomotive became DuPont No. 4. It had a torque converter and a sprocket/chain arrangement to drive the wheels. However in 1952, DuPont replaced the gas engine with a diesel engine. The diesel was thought to be safer and more powerful than the gas fed engine. No. 4 was used to the end of the DuPont production era and later by Weyerhaeuser. All existing locomotives and rolling stock were included in the DuPont sale to Weyerhaeuser.



1941 Plymouth locomotive. DuPont No. 4

In 1919 two 8-ton, battery powered locomotives were also used in the plant area to move materials between buildings. They were equipped with the famous Edison

steel-alkaline rechargeable batteries as their electrical source.

Fire was a major concern at the explosive plant. Any mechanical power operated at the plant had to produce a very minimum amount of sparks. Even the earliest internal combustion engine's exhaust stacks were installed with spark arrestors. Because Northern Pacific used steam locomotives to deliver and pickup cars at the plant, special spark arrestors were placed over the smoke stack outlet before the steam locomotives could enter the property. (The DuPont Powderworks never owned or used steam powered locomotives.) In addition, deer and cattle were grazed about the plant to eat wild grass and weeds to minimize the chance of wildfires.

Two-truck, wooden 19 foot flat cars were used to haul production materials to the wharf and between buildings at the plant. When a train descended to the water front, it typically consisted of only three or four loaded cars. A 14-foot, four-wheeled spacer car was used between the locomotive and the cars carrying explosives. This flatcar was not to protect the train crew from accidental explosions as 14 feet was not far enough away from the loads for the crew's safety. Instead the spacer flat car was used to keep the locomotive and any sparks that it would make as far away from the load as possible. Dynamite caps were never hauled in the same train that carried the finished dynamite. Installed in the track that descended to the waterfront was a switch that led to a run-away train track. If the

consist was under control and could stop at the switch as the train descended the grade, the switch was realigned to allow the train to continue to the wharf.

The photograph (on page 1) of the wharf area on the Puget Sound is quite revealing. Dupont's narrow gauge railroad is seen coming from the lower right and passing under the Northern Pacific mainline. The sharp curve that was mentioned earlier can be seen under the NP trestle. Also observe the platform that was built over the NP mainline. This structure was used to protect the NP railroad from a cable and bucket system built by DuPont. Ships hauled saltpeter (sodium nitrate) from Chile and delivered it to the pier. Moving a ship load of saltpeter up grade by railroad to the plant would take a lot of time and energy. A telfer (cable and bucket system) was built to hoist the crystalline substance to the plant. It proved fast and adequate for the task. The wharf was removed about the year 2000.

After the Powderworks closed, the 1942 Plymouth locomotive was retained and operated by Weyerhaeuser until it was donated to the City of DuPont. It was moved to its current location in 2008. The original 30 pound rail manufactured in 1906 was used to build a track for the Plymouth. This location is on the previous standard gauge right-of-way to the Powderworks plant. A roofed shed to protect the train from the weather was completed in 2011.

The 12-ton Plymouth, spacer car No. 14P, flat car No. 6A and box car No. 13P are kept at the DuPont Historical Society Museum site at 207 Barksdale Street in DuPont. The Plymouth locomotive is operational and is run for special events and tours. The equipment is housed in the shed behind the museum and can be viewed there. Photography of the train is difficult when it is in the shed.



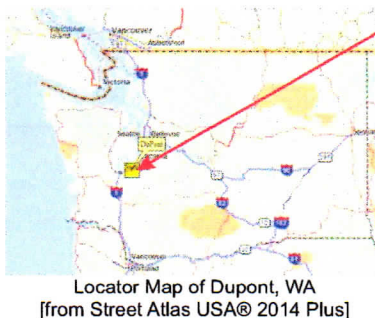
A cyclone separating spark arrestor on the Plymouth No. 4



DuPont Spacer car No. 14P

For those who want an outdoor adventure, the grade to the wharf area is now a hiking trail. That path is called the Sequelitchew Creek Trail. To find the trail head, enter the Northwest Landing entrance and follow the signs to the parking area. The BNSF mainline still passes over the lowest portion of the trail.

To learn more about the Dynamite Train, visit www.dupontmuseum.com. Then click on the "Dynamite Train" menu item. During museum hours, anyone interested can call (253) 964-2399. I would like to thank Fred Foreman and John Lewis for their tremendous help compiling this text. [Photographs by the Author unless otherwise noted]



Locator Map of Dupont, WA
[from Street Atlas USA® 2014 Plus]

DuPont, Washington has a rich history that stretches far into the past. For thousands of years Native Americans lived in the area. Hudson's Bay Company employees and American settlers came to the region in the nineteenth century. Then in 1909 the DuPont Village was established by the DuPont Company. The Village has

survived many changes over time. Today it remains the City of DuPont's historic heart. [Info from www.dupontmuseum.com]



DuPont Flat car No. 6A