

Santa Fe's Westbound Drag Freight Trains - Final Report

JThomp1945@...09/01/19 #22037

To all:

I haven't updated our report on Santa Fe's Westbound Drag Freight Trains since July 25, and there have been a ton of notes and replies posted since then. But now I will attempt to fill out the form with all the best notes we've seen and call it final for now (but these reports are never really final).

By the way, I will be busy for most of next week, so I'll skip a week again before starting on another freight train report after this one.

Train: ATSF's Westbound Drag Freights.

Direction: Westbound only. (We covered the eastbound drag freights on June 8.)

Description: "Drag" freight west to San Bernardino with mostly loads of coal for Kaiser and empty freight cars, low priority. "Drag" trains carried low-value loads (coal, iron ore, cement, salt, etc) as well as empty cars. "Drag" applied to any low priority train that was dispatched with the minimum horsepower/tonnage ratio.

Origin: Barstow and points east.

Destination: San Bernardino, and then some of the cars went to Kaiser Steel in Fontana and some to Los Angeles.

Railroads Represented: ATSF, SFRD, D&RGW, UP, MP, UCR, and others. The vast majority of empties moving west over the Pass were either home road cars (ATSF, SFRD) or empty cars to be handed over to the local connections (SP, PE, UP).

Products: Mostly loads of coal and some empties (especially empty reefers), but also iron ore (before 1948 and again in Dec. 1951-Feb. 1952), and cement and salt.

Train Length and Weight: Typical trains had around 70-90 cars and weighed around 3000-4000 tons (they were longer and heavier in the 1950s than in the 1940s). They carried more coal each year.

The westbound "drags" in 1948 vs. 1957 were completely different animals:

For 1948, 9,100 carloads of Utah coal were going to Southern California, a good chunk of it to Kaiser. That's an average of about 25 carloads a day -- substantial but not overwhelming. Add to that another 1,800 carloads coming from Arkansas, Oklahoma and minor other sources, that's another 5 cars a day, say 30 carloads a day average total. Even if these carloads were not evenly spread over the week or month, it's still a very manageable number, not requiring too many trains to take them over the Pass.

In 1950, this grows to 15,800 total carloads, or about 43 carloads a day average, still a manageable number.

For 1951, there were 17,100 carloads, 47 carloads a day average.

By 1957, following major expansions at Kaiser and elsewhere, this grew to 23,800 carloads of Utah coal (65 day average) plus another 4,200 carloads from Oklahoma, Arkansas, Kansas and elsewhere, for a total of 28,000 carloads, almost 77 carloads a day, and now it's become a challenge, eventually requiring the use of dedicated unit trains.

Car Types: Mostly D&RGW drop-bottom gons and empty SFRD reefers, but also cement hoppers, cement boxcars, salt hoppers, and (in Dec. 1951-Feb. 1952) iron ore hoppers (jennies). There's also evidence of MP and D&RGW cross hoppers in coal service. About 90% of the coal traffic was hauled in drop bottom gons and 10% in high-sided cross hoppers.

Also, there were UCR (Utah Coal Route) and Union Pacific drop bottom gondolas in the coal traffic mix. There is also photo evidence of D&RGW cross hoppers and Hart ballast cars in coal service, as well as (after 1950) Missouri Pacific three bay hoppers, both steel and war emergency (perhaps those came from farther out). There is an undated photo of ATSF emergency two-bay cross hoppers being loaded with ore at Kelso.

The UP carried Utah coal to the Kaiser steel mill in Fontana, mostly in long blocks of D&RGW, UP, and UCR GS gondolas, though UP sometimes used its ballast hoppers as well.

Both the UP and D&RGW relied mainly on GS gondolas (of which they had large numbers) for coal shipments, but a photo indicates that both roads used ballast hoppers to ship coal to the Kaiser steel plant. UP had several classes of 50 ton Hart ballast hoppers as well as the HK-70-1 class 70 ton ballast hoppers that were delivered in 1947. The UP HK-70-1s can be modeled in HO scale with the Atlas ballast hoppers.

The UP did ship coal in its Hart Selective Ballast cars, however most coal was handled in GS gondolas - the UP owned no cross hopper cars until the H-70-1 class cars were delivered in 1948

As for the D&RGW ballast hoppers, they were significantly different in construction and appearance from the cars modeled by Atlas, with full-length drop bottom doors, 10-bay sides (rather than the 12 bay sides on the models), and clasp brake trucks with "outriggers" extending beyond the side frames to support the outboard brake beams. So there's no easy way to model them, though the old (and crude) Model Die Casting ballast hoppers might be an acceptable stand-in.

There were some ATSF War Emergency composite hoppers in So. Calif. after WW II, but they were used chiefly for water treatment salt and sulphur, not coal.

During the steam era ATSF hoppers were rare almost everywhere on the Santa Fe because there were so few of them.

Typical Schedule: Any times of day, but normally not during the parade of WB passenger trains.

In the July 1947 train sheets, most westward Santa Fe freights were run with symbols, and reefer drags were the only drags shown on the sheets except for one that was shown as just a drag. There were 0 - 3 drags (mostly 1 or 2 when drags were run). The reefer drags were mostly all empties, but there were days where loads were included (on 7/12 the reefer drags were 28-55 and 22-64).

Road Power: 4-unit freight FT sets, until 4-unit freight F3/F7 sets arrived in 1948-53. 2-10-2s during the June Spud Rush in the 1940s (when the FTs went to the Valley Div.).

Helper Power: 2-10-2s, 4-8-2s, 2-8-2s, also FT sets (full or partial), until GP7s arrived in 1950-53, and GP9s in 1956-57. The number of helpers west from Victorville depended on train weight, normally one helper.

Operations Details:

After Barstow collected enough sluff, the yardmaster would put together an "Extra South" and would probably tack on a cut of Kaiser coal. There was other traffic that accumulated at Barstow such as potash, borate, empty reefers, etc., that had to be moved south. In that circumstance, drags south made up about one quarter of the westward freight traffic.

Coal:

UP brought D&RGW gons with coal loads to Barstow, which was a designated interchange point by the ICC. Generally, the UP crew was in short turn-around service in that they originated in Yermo, hauled the coal to Barstow and returned with a train of empty coal cars. Sometimes, depending on the volume of coal traffic, through trains set out loads and picked up empties at Barstow. The Santa Fe also took the empties back to Barstow and handed them back to the UP there.

Trains arriving Barstow from the east got switched no matter what. All cabooses and power were changed in the first place. All north traffic was switched out of the trains, as were the Victorville shorts. The trains were put back together mine-run and if the train was light, a cut of Kaiser coal was added to the rear to fill the train to max tonnage. If the train was heavy and exceeded tons per operative brake, a cut of empty reefers were added for braking power down the big mountain.

The Santa Fe added the coal as fill to westbound low-priority trains and redballs that were running ahead of schedule, although usually not to the highest priority trains. These trains hauled the coal over the First District and Cajon Pass to San Bernardino.

The Rio Grande coal loads ahead of the way car in the 1949 SCX wreck appear to be a cut bound for Kaiser Steel that was added to the SCX as fill at Barstow. Three of them, 41309, 42132, and 42157, are 36-foot, 50-ton GS gons from series 40000-42500, 1429 of which were still in service in '49. The 45171 is a 42-foot, 55-ton GS gon, from the 1,000-car 45000-45499 series. The 71664, from series 71000-71999 (995 cars), is a 46-foot GS gon of 70-ton capacity. The Red Caboose (later Intermountain) HO model is an okay stand-in for the 45000 series.

Most of the coal was hauled from Sunnyside, Utah. The UP hauled the coal down from the Rio Grande at Provo, Utah, after they got it from the Utah Railway (interchange point was above Soldier Summit). Since the D&RGW drop-bottom gons were hauling coal, they would have been loaded to capacity.

In the beginning, at Barstow, coal was added as fills to westbound freight trains with low priority or running ahead of their advertised schedule. You never saw a cut of coal on an auto parts train or a Train 53.

The coal loads were picked up on drag freights from Barstow and carried to San Bernardino, where they would be consolidated into the "Turn" and moved to Kaiser Steel west of SB. When San Bdn's A-yard had enough coal on hand, a Kaiser Turn was called with a 3800 or 3900. More often than not, a switch engine would shove the train out of the yard and up the hill west off West Yard Tower. The switch engine was not permitted to go beyond the Yard Limit board because of union penalty claims. As steam engines started to disappear the Santa Fe brought in a real ugly beast. Number 2601, built by Baldwin.

Occasionally the Santa Fe would handle a carload of high grade metallurgical coal, usually in a hopper from one of the eastern anthracite RRs, but not very often (and hardly ever more than one car at a time).

Regarding westward coal traffic, the unit trains didn't show up until the late '50s or early '60s. Prior to that, coal moved in cuts of ten cars or so in any train that had spare power to handle it. Conductors were instructed to fill out their trains with coal loads any time their tonnage permitted. If their TPOB (tons per operable brake) was too high as a result, they would pick up empty reefers for braking power going down Cajon Pass. These empties could also be found in sidings and spurs between Barstow and Victorville.

According to Chard Walker, in the 1960s and early 1970s the coal moved in unit trains of UP and D&RGW 100-ton triple hoppers with mixed UP and Rio Grande power, but often with Santa Fe pushers out of Barstow or Victorville.

There was an excellent story in the "Warbonnet," Volume 10, No. 2, 2nd Quarter, 2004, on the Kaiser coal trains serving the steel mill in Fontana. It says that by the late 1950s the coal trains from Sunnyside were being handled as solid trains between Barstow and Fontana. First District road and helper crews moved the trains to San Bernardino and handed them off to Kaiser Turn crews at the San Bernardino yard office for movement on the Second District. Six-axle 900-class SD24s and 800-class RSD-15s were the common Santa Fe power, but photos in the article show 200-class F7 and 2650-class GP7 road and helper power in May 1963.

In 1955 Kaiser bought coal lands and mining rights in York Canyon, N.M., 36 miles west of Raton. After more than 10 years of surveys and engineering studies, the Santa Fe built a new branch line from the New Mexico Division main line, mines were developed, and unit coal trains began operating between York Canyon and Fontana in September 1967. This was an all-Santa Fe operation, using ATSF class Ga-152 rotary-dump gondolas, solid-bottom cars with a capacity of 100 tons each.

Iron Ore:

Iron ore for Kaiser Steel at Fontana, CA initially came from Kaiser's Vulcan Mine, located on the western slope of the Providence Mountains, nine miles south of Kelso, CA. From December 1942 until July 1947, the Vulcan Mine shipped 2,643,000 tons of hematite, magnetite and limonite (types of iron ore) to Kaiser, to feed the blast furnaces.

The iron ore was trucked from the Vulcan Mine over a paved company road to a transload at Kelso, on the Union Pacific. The hoppers used at Kelso were full-sized U.P. hoppers, only partly loaded to capacity due to the weight of the iron ore. There is a photo showing ore in Santa Fe Hart convertible ballast hoppers leaving Summit, loaded less than half full with something that in black-and-white looks like dirt with a few larger rocks. ATSF war-emergency composite hoppers were also used in this iron ore service.

The UP delivered the ore to the Santa Fe at Barstow. Blocks of ore cars were sent to San Bernardino on various drag freights, and often cuts of loaded ore gons were used to fill westbound trains out of Barstow. In San Bernardino, the cuts of ore cars were made into Kaiser Turns, which were operated out of San Bernardino to Kaiser.

The reason the cars of coal and iron ore coming off the UP were handed over to ATSF in Barstow rather than in San Bernardino was that San Bernardino was not an initial or final terminal for UP crews who worked out of Los Angeles to Yermo. Therefore, crews would have to be deadheaded under pay between Los Angeles and San Bernardino in both directions. As it was, UP had to operate a Barstow Turn out of Yermo to deliver the coal and ore cars to Santa Fe.

When the Eagle Mountain Mine opened in 1947, iron ore shipments over the UP and Santa Fe to Kaiser ended. Instead the ore moved over Kaiser Steel's Eagle Mountain Railroad to the SP at Ferrum, along the Salton Sea. The SP forwarded unit trains west over Beaumont Hill, to South Fontana and Kaiser Steel.

There was a time in the early 50's (Dec. 1951 to Feb. 1952) when a group of GN cars, called ore jennies, showed up in brief iron ore service to Kaiser. Those GN cars were extremely unsafe to work with. They were only about 25' long with rotary couplers. The number one and number four wheel set extended out beyond the end sills so that with mated cars coupled, a trainman had difficulty going between the wheels to couple air hoses. Complaints and a resulting investigation by the Calif. PUC resulted in the cars being ordered out of Calif.

See page 101 of "Stan Kistler's Santa Fe" for a great b&w shot of FM 2808 and two sisters leading circa 25 GN ore jennies out of the SB A yard on 12-16-1951 headed for the Kaiser mill. Trains with these cars in them were limited to a 30 MPH speed limit on Cajon Pass, both when loaded and empty.

There was a message from the Santa Fe San Bernardino Freight Department dated 2-1-1952, advising that Great Northern RR had advised UP they need their ore cars back, and that the ore cars were being used by UP to transport iron ore to Kaiser from Utah. This most likely would have been iron ore mined at the Iron Mountain Mine near Cedar City. The GN ore cars were available during the winter months because the ships on the Great Lakes could not transport ore due to storms and ice during the winter.

The Great Northern ore jennies were borrowed by U.P. and used during the winter season that year because of a shortage of gondolas due to the Korean War effort and an expansion of Kaiser facilities. They were returned to Great Northern in February of 1952. They were only in use hauling ore to Kaiser during a two to three month period during that time, and did not make a reappearance after that. They were not popular with Santa Fe crews.

Why Kaiser was using Utah ore in Dec. 1951 is a question. Perhaps the shipment of ore from Eagle Mountain had been disrupted (equipment upgrades or construction possibly) or they wanted to try a different blend of iron ore in the blast furnaces, or they just needed to supplement what Eagle Mountain was producing. Kaiser, in these Freight Department communications, had indicated their concern about UP's ability to supply future material needs due to a shortage of gondola cars attributed to the Korean War effort. Kaiser at that time was in the process of constructing a third blast furnace and was concerned about its raw material supply chain to supply those furnaces.

Empty Reefers:

Empty refrigerator cars returned west in un-symbolized drag freights, or as fill tonnage in other trains. They often came over Cajon in solid trains, or in large blocks. Hatch covers were usually closed to keep the bunkers clean. It was common practice to store empty reefers on desert sidings until needed and then round them up and bring them to San Bernardino for cleaning and servicing. The Santa Fe at times issued Superintendent's Bulletins requiring hatches on westward empties to be open. However if cars were stored on a desert siding, it would be a good practice to close the hatches.

Most westbound empty SFRD reefers were set out at San Bernardino for cleaning, repair, and distribution by the local trains and fruit pickups.

Cement:

Drag freights sometimes picked up WB loads from the cement plants at Oro Grande and Victorville and took them west. The Victorville switcher put westbound loaded cars into the westward siding at Oro Grande so that westbound freights would not have to each across the mains to get the cars from the cement plant (which was on the RR east side of the mains). (But there was no westward siding to do this at Leon.)

Salt:

At Barstow, salt from Saltus was put on a drag west and set out at San Bdn'. The wooden-sided cross-hoppers were put into the 2nd Dist. Local.

Modeling the Train: It seems that a typical train would have about equal numbers of coal loads and empty reefers, with more reefers in the 1940s and more coal loads in the 1950s. It seems that the coal loads should go on the front of the train and the empty reefers on the rear.

During 1943-1947 there would also be some loads of iron ore in regular UP cross hoppers and ATSF Hart convertible ballast hoppers, and both would be loaded only partly full. During Dec, 1951 to Feb. 1952 there would be a cut of GN ore jennies loaded with iron ore.

Use a string of D&RGW drop-bottom gons for 90% of the coal loads, along with a few MP and D&RGW cross hoppers and UP and UCR drop-bottom gons and UP and D&RGW ballast hoppers at various times, all loaded with coal.

For the string of empty reefers, use SFRD reefers. There could also be a few ATSF cement hoppers, ATSF cement boxcars, and ATSF wooden-sided hoppers with salt loads.

I think this is the largest report we've ever done, due to all the interest over the years in the loads bound for Kaiser. Comments and corrections are welcome.

Thanks,
John Thompson