Angeles and Seattle will provide the basis for operating efficiencies that will make it possible to supply improved service in other destination pairs in this Corridor, particularly Portland-Los Angeles.

Our analysis and consensus resulted in an estimate of truck diversions to intermodal in the overall Pacific Crescent or I-5 Corridor of approximately 94 units per day southbound, and 58 units per day northbound. This includes some traffic moving between Texas and New Orleans markets and California and the Pacific Northwest, routed along the West Coast Corridor. These figures, expressed in annual terms, would translate to approximately 55,500 trailer or container units and $33 million in gross revenues based on average per unit revenue figures applied by the Applicants. The Los Angeles-Bay Area traffic lane (including Stockton and Sacramento, as well as Oakland/San Francisco) was not figured into the diversion estimates due to its shorter length of haul and intense motor carrier competition.

Southern Corridor: This Corridor encompasses combinations of the Bay Area, Central Valley, Los Angeles and Phoenix in the West, and San Antonio, Houston, Dallas, New Orleans and Memphis in the South and Southwest. This Corridor holds a good amount of potential for truck diversions, as it connects Southern California with key market areas in Texas and gateways in the Southeast. Our analysis of this Corridor also included traffic originating in "extended gathering areas," in particular, Atlanta and Jacksonville, that could move to the Memphis or New Orleans gateways by truck dray or via a rail connection with an Eastern railroad, and from those gateways to destinations within the Corridor. BN/Santa Fe is acknowledged to be a strong competitor in this Corridor, and even more so since its merger.

The truck diversion study evaluated truck and intermodal flows in the traffic lanes of this Corridor, much of which is presently served by SP. UP's trackage in Texas, Arkansas and Louisiana provides several route segments and additional capacity that will aid future intermodal services of UP/SP.

The principal merger change for the Southern Corridor is the use of UP's line between El Paso and Fort Worth/Dallas. As a result, UP/SP will gain heightened competitive capabilities between California and New Orleans and Memphis.

Analysis of possible diversions to the combined UP/SP system indicates that of all the Corridors, the Southern offers the greatest potential for high-volume changes. On the one hand, both Southern California and Texas are large intermodal markets with an infrastructure of existing terminals. In addition, almost all of the lanes reviewed are in excess of 1,000 miles. Furthermore, UP and SP already have a presence in this region.

On the other hand, separately UP and SP historically have had a low penetration of these markets. The UP/SP merger will provide cost and service improvements, which should augur well for an increase in intermodal traffic. The improvements the combined system can offer shippers will be both shorter routings and improved cost structures.

Overall, this Corridor is expected to yield diversions averaging 126 trailers per day, or 46,000 per year. This traffic would provide $46 million in annual gross revenues to UP/SP. Eastbound intermodal traffic here will amount to an average of 54 trailers per day. Westbound the figure is an average of 72 trailers per day. Once again, much of the diversion is aimed at improving overall Corridor balance.

Midwest/Southwest Corridor: The focal points of this study Corridor were the Phoenix and Los Angeles markets, representing the Southwest, in relation to points in the Midwest, including Chicago, the Twin Cities, St. Louis and Kansas City. We also considered several Eastern extended gathering areas for this Corridor that could be reached through the Chicago or St. Louis gateways.

This Corridor claims one of the most successful intermodal lanes in the nation, that between Los Angeles and Chicago, where our statistics show intermodal having a 91% market share eastbound, and 93% westbound. The measure is based on a total market comprised of

"containerizable" type freight currently moving either by intermodal service or by highway. For example, in the westbound direction, from Chicago to Los Angeles, the total volume for all-highway movements is approximately 350,000 tons per year or 20,000 truckloads, as compared to rail/highway intermodal's volume of 4,600,000 tons or 270,000 loads per year. It is often referred to as an "ideal" traffic lane for intermodal because:

- it links two very large commercial areas;
- the markets are more than 2,000 miles apart; and
- they are served by the most effective intermodal rail carrier in the nation, namely BN/Santa Fe.

Statistics for this traffic lane include international containers moving to and from the port area of Los Angeles/Long Beach; however, this fact has less effect in the westbound direction than in the eastbound. That is, Pacific Rim import containers moving eastbound from Los Angeles to Chicago constitute a greater proportion of all container moves than does domestic freight moving in the opposite direction.

Even with the high degree of market penetration and the intense competition from BN/Santa Fe, our analysis demonstrated that a new, combined UP/SP intermodal system could affect a more competitive cost/service package compared to existing conditions. Thus, an increase in diverted truck traffic was assigned to this lane. The amount was modest when viewed as a percentage of the total in the lane; the newly diverted traffic amounted to approximately two ten-well intermodal carloads (double stack) per day in each direction. A significant amount of truck traffic also was estimated as diverted in the Los Angeles to/from St. Louis lane. Distinctly lesser volumes were shown to be diverted from highway in the other lanes in this Corridor, such as Phoenix-Chicago and Phoenix-Kansas City.

In total, over 34,000 units per year, or 95 per day, were shown as diverted, producing $36 million in estimated annual gross revenues.

Midwest/Texas/Mexico Corridor: This Corridor was included in the study to provide a look at potential diversions from highway to intermodal between major Midwestern markets and markets in Central and South Texas, including U.S./Mexican transborder traffic. Chicago and St. Louis were selected as the key points on the northern end of the Corridor. On the southern end of the Corridor, Dallas/Ft. Worth, Houston, San Antonio and the border point at Laredo, were used as representative market areas.

The market is a highly competitive one for over-the-road truckers. Intermodal prospects are made more difficult by the imbalance of dry van type traffic; e.g. flows are much heavier from Chicago to Texas than in the reverse direction. BN temporarily withdrew from intermodal service in this Corridor in order to focus its assets and personnel on transcontinental business, but BN/Santa Fe has indicated it intends to re-enter the market.

Our study concludes that in the southbound direction an average of 25 units a day could be diverted according to our analytical criteria, and 24 in the opposite direction. This would approximate 18,000 units, or $12 million in gross revenue per year. In the northbound direction some of the traffic would be diverted using backhaul rates, thus improving all existing corridor traffic balances. Our conclusion here is that there is divertible traffic, but that the profitability of the overall intermodal operation in this Corridor must be carefully developed and monitored to ensure long-term economic viability.

Central Corridor: The Central Corridor is at the root of the combined UP/SP system. Combining UP and SP intermodal volumes in this Corridor will help provide a stronger intermodal service. More importantly, the operations will benefit from major mileage savings over both UP's and SP's current mileages. Intermodal traffic will be handled over Donner Pass and then back to the UP mainline, saving some 189 miles over UP's current Oakland-Chicago route and 388 miles over SP's route. UP's mainline splits at Gibbon, Nebraska, yielding both Chicago and Kansas City/St.

Louis end points (terminations and gateways). Eastern markets that could serve as extended gathering areas for this Corridor through Chicago or St. Louis were also considered in our analysis.

Traffic from the Stockton and Sacramento markets, combined with the volumes from Oakland and the other portions of the Bay Area, can move to Kansas City, St. Louis and Chicago markets and points beyond. The new route will result in reduced transit times of 14 hours to Chicago as compared to the current UP route, and 22 hours as compared to the current SP route. This improvement will make UP/SP substantially more competitive than each was as a separate carrier, and very competitive with BN/Santa Fe. The UP/SP service improvement will produce significant cost advantages.

At present the Corridor to Chicago is heavily intermodal: almost 90 percent in both directions. Volumes to and from St. Louis are approximately one tenth those of Chicago, but they are still substantial.

These lanes have some imbalance, with the westbound producing nearly a third more intermodal traffic than the eastbound. New trailer loads, however, are diverted on a more balanced basis, thus the increased activity and the slight improvement in balance add up to increased overall competitiveness. Most of the diversions are to and from the three markets making up the western terminus -- Oakland/San Francisco, Sacramento and Stockton -- and with the gateways of Chicago and St. Louis. Total estimated diversions in this Corridor amounted to 74 units per day, or 27,000 units per year, worth $31 million in estimated annual gross revenues.

III. SERVICE CONSIDERATIONS

The service component of freight transportation can be manifested in numerous ways. It includes the supply of the right equipment, carrier responsiveness, ability to recover from failures, and a host of communication capabilities, as well as acceptable transit time and reliability in meeting schedules.

Typically, transit time, speed and consistency, equipment supply and shipment costs command the greatest attention, at least initially. Shippers' just-in-time strategies and their focus on the distribution pipeline are increasing the pressure on carriers to perform within established cost/service envelopes. Particularly where shipments are made by trailer, once a distribution channel is established, a carrier's basic performance must be within the trailer performance envelope. The mode of line haul is of little relevance. Increasingly, a carrier's ability to differentiate its service rests on its ability to distinguish its offering for remaining service characteristics or by providing additional functions or tasks in the distribution process.

In this analysis, the truck transit time is the sum of the pick-up time at the origin, plus loading, the line haul transit time, destination delivery time, including unloading or dropping the trailer. Sixty miles per hour was used in the calculation of the line haul transit times. Twenty-five miles per hour was used for truck local travel time.

A comparable set of time related activities is included to develop intermodal service. Time at origin includes truck drayage to the terminal and dwell time from receipt of trailer, through loading to rail car to awaiting departure. Line haul transit time for intermodal is the equivalent of the train schedule, terminal to terminal.

On the destination end, the dwell time includes unloading from the rail car to its availability for pickup. Actual statistics of origin and destination total dwell time are available but, by themselves, are not a relevant measure of competitive service performance. The shipper can elect, within bounds, to have trailers picked up to meet specific needs. In this analysis, therefore, we have developed dwell times that reflect "cut off" times and "available" times, when many of the loads are ready for pickup. In addition to those time components, a reasonable period of time for a pickup and a delivery dray is included.

One of the first steps in the diversion assessment is to make certain that the intermodal service is competitive within a half day increment to an all-truck operation. That is to say, for any given market pair, the intermodal trailer must be available on the same morning or afternoon that the truck is ready for unloading. If it is not, the likelihood of diverting additional truck traffic is slim, because the intense price competition in this business has already diverted much of the less service-sensitive freight.

In the elasticity model that we used, the resulting coefficient implicitly accounts for the sum of all the shipper's distribution cost and service considerations necessary to use intermodal as opposed to truck service.

IV. COST INPUTS

A. Intermodal Cost Inputs

The probability that UP/SP will divert truck traffic depends largely upon improvements in the new system's competitiveness in the marketplace over the long term. Thus, our analytical approach relied upon comparisons of carriers' costs and service under several scenarios. These include: present all-highway service; intermodal service by UP and SP under pre-merger conditions; intermodal service by UP/SP under post-merger conditions (which assumes that UP's cost structure would apply system-wide); and competitive service by other intermodal operators, principally BN/Santa Fe.

In our analysis, determination of the potential diverted volume was based upon an evaluation of a markup of the underlying costs for providing the purchased services. This evaluation was accomplished for both the present trucking and the possible rail intermodal service replacement. Diversions were indicated by the measurement of the differences in costs and service between present and post-merger operations of UP/SP, BN/Santa Fe and truckload carriers.

Cost Analysis Models: The diversion evaluation was conducted using inputs from reports developed by Reebie Associates Carrier Cost Line Models. These furnished a view of the modal and

carrier economics and resultant service levels. The output reports from the models also provided measurement of the fuel utilized for the services. Two separate models were used:

- Intermodal Cost Analysis Model ("ICAM"), for railroad intermodal operations; and
- Truck Cost Analysis Model ("TCAM"), for the existing trucking operations.

Intermodal Costs: ICAM is based upon the Uniform Rail Cost System ("URCS") methodology. It is updated on a quarterly basis and is provided with new carrier data files annually. Reports and data based on URCS have been used in a number of regulatory proceedings over the years, including the recent BN/Santa Fe application.

ICAM uses Commission-generated data files on rail carriers. In addition, the model allows for the insertion of specific data, where available. UP and SP files in the model were supplemented with intermodal cost items furnished by the Applicants for this analysis. Some of these items are:

- average trailer cost per day;
- intermodal car costs, per day and per mile; and
- specific terminal costs, for loading and unloading.

Average tare weights for the trailers and for the intermodal cars were also provided and used.

In addition, the Applicants supplied current terminal-to-terminal, or state-to-state volumes. These volumes were used to develop existing daily loads and also traffic-lane balance levels. Present and post-merger terminal-to-terminal carrier mileages and train service schedules were also supplied and used.

Empty-return levels were specified for both the cars and for the trailers. For the cars, a uniform level of 5.1 percent empties was used.[1] This percentage takes into account the daily and seasonal effects of traffic variations and also the impacts of various trailer lengths being loaded. Traffic lane balances were used to develop empty return factors for the trailers.

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[1] Car empty return values are based upon the ratio of loaded and empty mileages. These were taken from Schedule 755 of the 1994 R-1 Annual Reports for UP and SP.

The analyses determined terminal-to-terminal costs and service times appropriate to the carrier, volume and balance, based on Intermodal Service Code 25. The Code refers to a service arrangement whereby the railroad provides terminal-to-terminal service with its equipment, but does not furnish drayage. Drayages were inserted separately to establish door- to-door costs and times. The ICAM analyses were adjusted to fit the existing and projected service hours provided by the carriers for their intermodal services.

In intermodal there is a variety of equipment and train/service type configurations. The selection of any particular combination has a significant impact on the cost. Existing competition is based upon standard TOFC intermodal services. Although there have been many changes to the railroad intermodal business, until recently trailers have dominated domestic traffic and containers the international. The recent shift, however, has been heavily toward containers for domestic as well as overseas business. Our diversion analysis was designed to fit into the existing train types of UP and SP.

As the intermodal business grows, it is likely that future equipment purchases will further improve the railroad competitive picture. The reduced tare and aerodynamic resistance offered by newer equipment will help to lower rail linehaul costs, increase service levels and improve profitability. Competitive attainments that might result from such as these, however, were considered outside of the merger benefits.

B. Truck Cost Inputs

The truck cost model used in our analysis incorporates expense information covering driver, fuel, tractor, trailer, insurance, taxes and overhead components, as well as a variety of use patterns and operating factors. The model is updated annually, using inputs from carriers and information from trade associations, publications and government agencies.

In this study, cost levels reflect the expense and operating profiles of those truckload carriers whose long-term profits and growth have made them industry standards. Costs were viewed at both variable and full cost levels and incorporate a five percent profit. Outputs were then checked with a carrier's rate table for reasonableness. Typically, rate levels are lower where there is a surplus of empty trailers, approximating variable or even marginal costs as generated by the model.

Throughout the study the standard van size used is the 48-foot trailer. While portions of the industry press for longer and larger trailers, at present the 48-foot unit is the backbone of the industry's fleet.

The analysis assumes a 17-ton payload per trailer, which is the average per trailer for the carriers for whom we have data. Since the analysis looks at diversion from the truck market, this "typical" payload is utilized in both the intermodal and truck costing.

Truck mileages were based on specific city market pairs, the distances derived from Microsoft's Automap Pro, using their "quickest" routes. The truck service levels include allowances for movement time getting to loading point, loading time, origin stem time, line haul and destination stem time and unloading. Obviously, the extent to which each element is used in full or in part varies with each trip. We have developed a profile for the most typical sets of time. These results have been included in the diversion model.

For both the motor carriers and intermodal operators, one of the more important elements affecting shipment cost is repositioning empty trailers. Thus, part of the analysis of dry van freight must address the question of who pays for empty movement. The volume of freight moving in traffic lanes is imbalanced in varying degrees. Moreover, a variety of cyclical factors also affects traffic availability -- seasonality and day of week, to name only two. Both factors affect the cost of empty movement of equipment.

In our analysis, we account for repositioning empties by determining whether origin or destination states are "surplus" or "deficit" with respect to their interstate traffic inbound and outbound. A deficit state, in terms of trailer availability, means that outbound shipments will have to bear some of the burden of gaining an empty trailer that was not available on a local basis within a reasonable timeframe. Similarly, if trailers are shipped to destination areas that have a perpetual and significant oversupply of trailers -- that is, a surplus area -- then the shipment adding to this oversupply situation needs to shoulder a portion of the burden to move these units to their next loads, even if they are out of state. In all cases, repositioning mile-ages used in our study are represented by the weighted average of the intrastate repositioning of empties combined with the remaining interstate movement that is necessary to either obtain or dispose of empties.

Further, a typical shipment for a specific origin/destination combination has to bear half the repositioning costs at origin and half at destination. This implies that the previous load and the prior loads pick up the remaining costs plus those of the markets they serve. Arguments are made that the origin carrier should pick up the burden for repositioning its empties or that the destination markets should carry these costs. Ultimately the carriers base their approach to the market balance issues and upon their perception of how the market will respond.

Our information concerning the "surplus" or "deficit" nature of each market was based on trailer loadings by state from a number of major motor carriers. This information enabled us to spread the repositioning costs of each move using either an overall state balance or a lane balance basis.

V. MARKET SHARES AND DIVERSION ANALYSIS

There is a relationship between intermodal market penetration and the length of hauls for dry van shipments. Above a certain volume level, intermodal market share increases as the distance between markets increases. As lengths of haul increase, the intermodal cost advantage versus an all-

truck move widens. Furthermore, as length of haul increases, intermodal improves relative to truck in terms of service competitiveness.

A. Market Shares

The vast portion of freight is moved within local markets and between adjacent markets. Intermodal participation is virtually non-existent in local markets, and is less than one percent for markets under 500 miles. We drew together market volumes for freight suitable for dry van type freight by for-hire truckload, less-than-truckload and private, conventional carload and intermodal for all of the market pairs that were at least 200 miles apart. Because intermodal market volumes become distorted at distances 2,300 miles and beyond due to railroad rebilling[2] of many loads at key intermodal gateways, these longer distances were also dropped from the analysis.

The first steps in the analysis were to correlate intermodal market shares with mileage. All dry van freight was first grouped into three density categories based on the volumes of freight that moved between market pairs; under 100,000 tons per year; 100,000 to 400,000 tons; and over 400,000 tons. These three groupings relate to intermodal activity, the smaller markets generally receiving intermodal service through mixed manifest train operations, the medium ones with variations on dedicated intermodal trains and the highest at the beginning threshold for double stack intermodal trains. Of all the markets, 95.6% fell into the grouping of least density, 3.5% were in the middle category and only a relatively few, 0.8%, were in the larger category.

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[2] Rebilling distorts the apparent intermodal activity at such major gateway points as Chicago, St. Louis, Memphis and New Orleans. The system is employed at other locations as well, but it is somewhat less significant. As a result of rebilling, cars moved from the East or West Coast may show one of these mid-continent locations as the destination, but, in fact, the car and/or trailers are rebilled and moved to points beyond by rail. In the key locations, rebilling can amount up to 40 percent of the total tonnage moving through that point. Under current practices, the interruption of the through move occurs because of the physical interchanging between railroads. In Chicago, the situation was even more pronounced, as much of the traffic was drayed on local roads between carrier terminals. These same points are often the location of transfer to long-haul truck operations to points further beyond.

All 29,493 market parts containing shipments moving between 200 miles to 2,300 miles were drawn from the TRANSEARCH data base and were aggregated by mileage blocks of 100 mile intervals. For each block, the midpoint was used as the value of the observation. At the first density level, the simple Pearson correlation coefficient between intermodal market share and the midpoint of the mileage blocks was .90; it was .77 for the second density category and .81 at the heaviest. These numbers indicate a strong and positive linear relationship between distance and market share, which holds across each tonnage category.

The same Pearson correlation analysis for intermodal costs and intermodal market share was also conducted. We expected that these results would closely parallel the analysis for distance (since cost is a function of distance) and indeed the results are quite similar; a correlation of .89 for the lowest ton density, .77 for the medium and .79 for the heaviest ton density category.

Finally, we ran the above analysis on the difference between average costs per mile of intermodal versus truck. We obtained very high but negative correlations for each ton category. There were -.92, -.78 and -.84 for ton categories lightest to heaviest, respectively. The negative relationship indicates that as the relative cost of intermodal decreases, the relative market share of intermodal increases. The implications are that intermodal carriers can use their basic economic advantages to capture larger shares of the freight goods market.

B. Elasticity

The very nature of the intermodal/truck cost and market share relationship speaks to the application of price elasticity -- namely, a change in price will produce a corresponding change in quantity demanded for each mode. The elasticity orientation drives the diversion analysis. In today's deregulated environment, prices paid for transportation are not readily available. The price of the service, however, is related to a carrier's underlying costs, and that relationship allows us to develop a cost-based proxy for price.

In the situation at hand the focus is on mode substitutability. Thus, a change in price (cost) of one mode will alter the demand for that mode and for a competing mode. In general, a decrease in the price (cost) of intermodal will certainly increase the demand for intermodal service while decreasing the demand for truck. The extent of the above relationship can be measured statistically as the cross-price elasticity of demand. The elasticity measurement is a coefficient by which we can quantify the relationship between the price (cost) of intermodal and the demand for truck service.

In the transportation field, researchers have been making use of discrete choice models to measure elasticities in mode choice for both passenger and freight transportation. In our elasticity analysis we predict change in market share caused by cost change. We have employed market share, rather than use absolute volume measures such as trailerloads or tons, as market share provides a standard measure of mode participation among markets of various sizes. In order to estimate an elasticity where the variable is market share, we needed to use a market share model that restricts the estimated shares between 0 and 1. The market share model we used is of this type. It allowed us to assess the odds of choosing intermodal transportation over truck given some independent attribute. In this case, the attribute is the difference in average price (cost) between intermodal and truck. In our analysis we have assumed that this price reflects the underlying cost of providing competitive service and have used relative costs as a surrogate for price to establish market shares. We can thus predict with some degree of certainty what the market shares will look like after cost savings are achieved. The model we have described is not really a cross-elasticity model as traditionally defined. It is, instead, the elasticity of market share with respect to the difference between intermodal and truck costs.

C. Application Steps

Markets were tested with two hurdles before application of the diversion model. These two hurdles were service and cost.

Service Hurdle: New intermodal service is required to be competitive with over-the- road truck service. Allowances for drayage and terminal dwell time were added to rail transit terminal-to-terminal to produce total intermodal door-to-door service. Dwell time was set at three hours at each end. (Doubling this number to six hours made no appreciable difference in diversion results.) Drayage time was set at two hours each for pickup and delivery, and appropriately longer for extended truck drays between Mississippi gateway terminals and the extended market areas that were studied.

Door-to-door rail service was allowed to be up to one half day slower than single driver over-the-road service. (Use of one quarter day made no appreciable difference in diversion results.) Lanes meeting the half day criterion passed the service hurdle. Lanes failing this criterion diverted no traffic.

Cost Hurdle: New door-to-door intermodal costs were required to be lower than present intermodal costs as well as lower than truck costs. Lanes failing this test diverted no traffic. Rail costs were constructed from UP/SP variable costs plus a margin. Drayage individually estimated for each terminal was added to produce a door-to-door total. Truck costs were also constructed with a margin. The truck margin represented a 97% operating ratio, typical of recent performance levels. This established the surrogate for truck price in the market. It was applied discretely to truck full costs for lanes where truck rates typically are at or above one dollar per mile, and to variable costs for lanes where truck rates typically fall below one dollar per mile. Discrete application was used the better to mirror the pattern of market prices. Broadly, it produced lower truck costs in backhaul lanes.

Rail margins were set at 130% over variable costs. In lanes where this margin ultimately produced a diversion in the higher volume direction substantially larger than diversions in the lower volume direction, thus creating a potential traffic imbalance, some flexibility was allowed. In these cases, rail margins were reduced to 110% for both old and new rail costs. This was done to reflect competition with truck and at the same time to prevent traffic imbalance. Setting the price/cost relationship at this level ensures that diverted intermodal traffic will improve the profitability of the business line and will conservatively estimate the size of the available market opportunity.

Application of rail cost was modified in two ways to better account for competition with the BN/Santa Fe system.

1. Lanes where BN/Santa Fe, or its component railroads, presently are leaders in market share were identified. Prices based on BN/Santa Fe costs were used rather than those based on UP/SP costs as the basis for existing intermodal economics. The diversion model was then applied to determine whether the substitution made an appreciable difference in diversion. It did for two lanes: Dallas-Bay Area and Bay Area-Dallas. For these lanes, BN/Santa Fe's costs were retained as the present level of intermodal costs in determining diversion.
2. Lanes affected by the new BN/Santa Fe service over Avard, Oklahoma, were identified. Since this is a new service, it does not influence the present level of intermodal costs. However, the new BN/Santa Fe costs are competitive with the new UP/SP costs and the BN/Santa Fe service operates over high density main lines. Where new UP/SP costs were determined to produce diversions, the diverted volume was split 60% for BN/Santa Fe, 40% for UP/SP. Four lanes were affected: Los Angeles to and from Memphis, and Los Angeles to and from Atlanta (which routes over Memphis).

Diversion: For those markets passing the service and cost hurdles, diversion was determined in four steps:

- Categorize lane density;
- Calculate the change in differential between old rail costs versus truck, and new rail costs versus truck;
- Multiply the change in differential by the relevant coefficient from the market share model; and
- Apply the multiplied differential to present intermodal market share, yielding the new intermodal share of the market.

The volume gain represented by the new intermodal share constitutes UP/SP diversions from truck. Application of the diversion model to individual lanes required a limited set of modifications.

Modifications:

1. Intermodal market share was capped at 95% to and from Mississippi gateways, and at 90% elsewhere. The higher number was employed at gateways as an accommodation for carload rebilling, which artificially overstates market share for locally originated or terminated traffic. Lanes where current share exceeds the cap were left at current share, and saw no diversion.
2. Intermodal market share gains were capped at 15 share points. Up to 20 share points were allowed in backhaul lanes to permit achievement of better balance with the headhaul diversions. The cap amounted to our judgment about the degree of diversion that could occur in a reasonable time frame in the absence of technological innovation.
3. Where current rail share ranged from zero to four percent, a floor value of four percent was substituted to allow the application of the fourth step in the Diversion subsection above.
4. As a final step, diversions in headhaul lanes were compared to diversions in corresponding backhaul lanes. If diversions were higher in the backhaul direction, this was accepted as advantageous. If diversions were markedly higher in the headhaul direction, they were

reduced to be comparable to the backhaul figure. This step will prevent pursuit of imbalanced traffic. Eight lanes were so modified.

VI. CONCLUSIONS

Intermodal rail service is destined to be the mainstream mode for long haul, manufactured goods traffic in the future. It is already established in many key markets. Those dedicated and fully integrated intermodal systems that focus on competitive transit times and reliability, along with other supporting services, in all likelihood will achieve a solid profit footing as well. This diversion analysis has stressed the development of profitable, new intermodal business. With these advances, there will be increasing opportunities to spread the intermodal advantage to even shorter haul lanes, as well.

The UP/SP merger is a move in the right direction in terms of intermodal progress. As explained above, we estimated that UP/SP would divert approximately 180,000 trailers a year from truck to rail-intermodal service. The new, combined system will continue to be a major participant in the intermodal marketplace and will likely gain in efficiency and profitability through innovative equipment technology, operating procedures and marketing techniques. The UP/SP merger fits naturally and well into the intermodal network of the future.

VERIFICATION

STATE OF Connecticut)

) ss. Greenwich

COUNTY OF Fairfield)

Don P. Ainsworth, being first duly sworn, deposes and says that he has read the foregoing document, knows the facts asserted therein, and that the same are true as stated.

Don P. Ainsworth

Don P. Ainsworth
Principal

Subscribed and sworn to before me this 16th day of November, 1995.

Jean R. Thomson

Notary Public

JEAN R. THOMSON
Notary Public
My Commission Expires June 30, 1998

My Commission Expires:

30 June 1998

APPENDIX A

TRUCK DIVERSION ANALYSIS: CONSENSUS

TRUCK DIVERSION ANALYSIS: CONSENSUS

Pacific Crescent Corridor : Southbound

ORIGIN	DESTINATION	UNITS PER DAY
Seattle	Bay Area	9
Seattle	Central Valley	4
Seattle	LA	25
Seattle	Arizona	3
Seattle	Dallas	2
Seattle	Houston	3
Seattle	San Antonio	1
Seattle	New Orleans	0
Portland	Bay Area	10
Portland	Central Valley	3
Portland	LA	26
Portland	Arizona	1
Portland	Dallas	2
Portland	Houston	3
Portland	San Antonio	1
Portland	New Orleans	1
		94

Pacific Crescent Corridor : Northbound

ORIGIN	DESTINATION	UNITS PER DAY
Bay Area	Seattle	5
Central Valley	Seattle	1
LA	Seattle	16
Arizona	Seattle	1
Dallas	Seattle	2
Houston	Seattle	3
San Antonio	Seattle	0
New Orleans	Seattle	0
Bay Area	Portland	7
Central Valley	Portland	2
LA	Portland	16
Arizona	Portland	0
Dallas	Portland	2
Houston	Portland	2
San Antonio	Portland	0
New Orleans	Portland	1
		58

Central Corridor - Eastbound

Bay Area	Chicago	24
Bay Area	St. Louis	3
Bay Area	Minneapolis	1
Bay Area	Kansas City	1
Central Valley	Chicago	1
		30

Central Corridor - Westbound

Chicago	Bay Area	30
St. Louis	Bay Area	4
Minneapolis	Bay Area	7
Kansas City	Bay Area	2
Chicago	Central Valley	1
		44

MWSW Corridor - Eastbound

LA	Chicago	24
LA	St. Louis	7
LA	Minneapolis	2
LA	Kansas City	3
Arizona	Chicago	3
Arizona	St. Louis	2
Arizona	Minneapolis	1
Arizona	Kansas City	1
		43

MWSW Corridor - Westbound

Chicago	LA	25
St. Louis	LA	6
Minneapolis	LA	5
Kansas City	LA	4
Chicago	Arizona	3
St. Louis	Arizona	1
Minneapolis	Arizona	7
Kansas City	Arizona	1
		52

TRUCK DIVERSION ANALYSIS: CONSENSUS

MWTXMX Corridor - Southbound

Houston	Chicago	6
Houston	St. Louis	5
Dallas	Chicago	6
Dallas	St. Louis	7
San Antonio	Chicago	1
San Antonio	St. Louis	0
		25

Southern Corridor - Eastbound

Bay Area	San Antonio	4
Bay Area	Houston	9
Bay Area	Dallas	8
Bay Area	Memphis	3
Bay Area	New Orleans	1
Central Valley	San Antonio	0
Central Valley	Houston	1
Central Valley	Dallas	1
Central Valley	Memphis	0
Central Valley	New Orleans	0
LA	San Antonio	8
LA	Dallas	14
LA	Memphis	5
Arizona	Memphis	—
		54

GRAND TOTAL	EASTBOUND (or NORTHBOUND)	246

MWTXMX Corridor - Northbound

Chicago	Houston	6
St. Louis	Houston	3
Chicago	Dallas	7
St. Louis	Dallas	5
Chicago	San Antonio	2
St. Louis	San Antonio	1
		24

Southern Corridor - Westbound

San Antonio	Bay Area	3
Houston	Bay Area	13
Dallas	Bay Area	10
Memphis	Bay Area	10
New Orleans	Bay Area	1
San Antonio	Central Valley	0
Houston	Central Valley	2
Dallas	Central Valley	1
Memphis	Central Valley	0
New Orleans	Central Valley	0
San Antonio	LA	5
Dallas	LA	16
Memphis	LA	11
Memphis	Arizona	—
		72

	WESTBOUND (or SOUTHBOUND)	250

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VERIFIED STATEMENT
OF
PAUL O. ROBERTS

My name is Paul O. Roberts. I am President of Transmode Consultants, a Division of Science Applications International Corporation ("SAIC"). My business address is 3400 International Drive, N.W., Washington, D.C. 20008. My qualifications are set forth in Appendix A.

I. INTRODUCTION

Transmode was asked by the Applicants to work together with Reebie Associates to arrive at a joint best estimate of the extent of diversion from truck to rail intermodal service that will take place as the result of the merger of UP and SP. Under my direction, Transmode undertook that analysis using data on actual truckload shipments by motor carrier and a computer-based diversion model. The data we utilized were actual, observed movements by truckload motor carrier in given origin-to-destination traffic lanes. The analysis was limited to specific traffic lanes in which it is anticipated that the consolidated railroad will become more competitive with motor carriers as a result of its ability to offer improved, single-line intermodal service.

Transmode was also asked by the Applicants to calculate the benefits that would accrue to shippers as a result of the diversions from truck to intermodal service that we projected. As discussed below, Transmode's diversion model incorporates a measure of the total logistics costs to shippers of using

alternative modes of transport. Since the total logistics costs are a measure of the costs to shippers of using a given alternative, the difference in costs associated with a diversion from truck to rail represents shipper savings. Diversions thus represent benefits to shippers that can be quantified using the Transmode model.

Transmode was also asked to estimate the benefits that would accrue to shippers of carload traffic as a result of the time and mileage savings brought about by the merger. This analysis, which is based on the same principles used to calculate benefits to shippers who divert from truck to rail, is discussed in Part IV.

The data used in our diversion analysis were drawn from the North American Truck Survey ("NATS"), which is gathered and maintained by the Association of American Railroads. A description of these data and the steps required to prepare them for our diversion analysis is provided below.

The diversion model that we used is a micro-computer-based logistics cost diversion model that was developed by Transmode for the Federal Railroad Administration. This approach has been employed in numerous studies of traffic diversions and other logistics questions for rail carriers, motor carriers and others over the last several years.

II. THE STUDY PROCESS

As indicated above, the Applicants asked Transmode and Reebie Associates teams to determine jointly the amount of

traffic that could be diverted from truck to intermodal. The two teams used different methodologies to estimate diversions from truck to intermodal. The Reebie methodology examines how intermodal market share relates to costs of providing intermodal service, and projects how that share will change, given the cost savings that UP/SP will realize from the merger. Transmode's methodology compares, on a disaggregate basis, the total logistics costs to shippers of alternative transport modes and projects diversions from truck to intermodal where intermodal costs are lower than the costs of using truck. In addition, Transmode used different data sources from those used by Reebie on the volume of existing truck traffic.

By taking advantage of valuable insights that each of these approaches to the problem can provide, the Applicants sought to arrive at the best possible estimate of diversions from truck to intermodal.

Transmode and Reebie worked together with the Applicants to develop and refine the traffic corridors and market pairs for their studies. Corridors and specific market pairs were selected for study where Transmode, Reebie and the Applicants agreed that changes in rail service suggested the potential for diversions from truck to intermodal.

Transmode and Reebie also collaborated to provide the Applicants with a consensus estimate of the volume of truck-to-intermodal diversions in the traffic lanes under study. The

process of developing a consensus estimate allowed all involved an opportunity to provide input and exchange perspectives.

This opportunity for discussion was essential, because the development of diversion estimates has certain elements of the classic argument, "which came first, the chicken or the egg?" Whether traffic will divert from truck to intermodal depends, in the Transmode model, on variables related to service and costs. These variables are affected, in turn, by the number of trains to be operated, service frequency, and other factors. These operational decisions in turn depend on the amount of traffic that the trains could move -- part of which will consist of diversions from truck to intermodal. Thus, the opportunity for discussion and feedback is crucial to the preparation of accurate diversion estimates. In addition, feedback from the Applicants provided both Reebie and Transmode an important opportunity to examine more completely the type of marketing effort that would likely be mounted by UP/SP.

The consensus estimate was developed jointly with Reebie after discussing our respective perspectives on the overall size of the existing truck flows in each of the city pair markets. Then, with a mutual understanding of the estimation processes used by each of the firms, we jointly agreed on our best estimate of the diversions from truck to intermodal.

A detailed breakdown of these figures was supplied to the Applicants for use in their development of the Operating

Plan, and is contained in Appendix A to the statement of Mr. Ainsworth.

The consensus diversions estimates were also presented to the Applicants for use in calculating revenue gains, and were provided to Dames & Moore, for use in its environmental analyses.

The final results of our analysis reflect our understanding of the situation gained from discussion with those involved in preparing the Operating Plan, including discussions about the desirability of augmenting the traffic volumes in each of the traffic lanes based on capacity considerations and the impact on existing service offerings, and the further understanding that we gained of the market, as reflected in iterative calibrations of our model. In some instances, the diversion estimates that our model indicates are slightly larger than the consensus figures, and in some slightly smaller. Overall, the results developed by Transmode agree closely with the consensus figures produced jointly. We are confident that the consensus process produced a reliable estimate of diversions from truck to intermodal.

III. RESULTS OF THE ANALYSIS

Our consensus estimate predicts substantial diversions from truck to intermodal in those intermodal corridors affected by the merger, especially where high-quality, single-line intermodal service will be offered for the first time. The merger should also result in an improvement in the quality of service in many lanes where UP, SP or both already have an

intermodal product that is attracting business. Principal corridors where substantial new diversions were projected include the Southern Corridor and the I-5 Corridor, both of which include market pairs with substantial truck volumes.

High-quality, single-line service is crucial to the ability of rail intermodal to compete with long-haul truckload service. Wherever miles are roughly comparable with truck and driving time by truck exceeds one day (approximately 500 miles), high-quality, single-line service allows a railroad to compete aggressively with truckload carriers for intermodal market share.

The Pacific Crescent (I-5) Corridor. This Corridor provides a route which connects Seattle/Tacoma with California and the Southwest for the first time with single-line rail intermodal service. SP, which has traditionally served this route, reaches only as far north as Portland -- not far enough to tap, on a single-line basis, the large base of long-haul truck traffic moving up and down the West Coast. Our consensus was that UP/SP could divert 152 intermodal units per day in this Corridor, at retail intermodal prices reflective of other single-line corridors. Shipper benefits in the form of logistics cost savings amount to $10.6 million annually.

Southern Corridor. In this Corridor, UP/SP will offer much-improved intermodal routes. UP's line from Dallas to El Paso will be combined with SP's line from El Paso to the Los Angeles Basin to provide a route that is only slightly longer than the most direct truck route from Dallas to the Los Angeles

Basin. This new route will also provide improved access through the Memphis gateway to the entire Southeastern portion of the United States, and to Atlanta in particular. This Corridor also includes traffic over the New Orleans gateway to Jacksonville. Atlanta and Jacksonville are major collection points for traffic throughout the Southeast, as well as major distribution centers in their own right. While the merged system will gain much-improved routes in this Corridor, it will have to compete with the strong routes of BN/Santa Fe between the West Coast and Memphis/Birmingham. Our consensus was that truck diversion in this Corridor would amount to 126 intermodal units per day. Total shipper benefits through logistics cost savings are estimated at slightly greater than $2 million per year.

Midwest-Southwest Corridor. This Corridor carries traffic between the Los Angeles Basin, Kansas City, St. Louis and Chicago. Both Chicago and Los Angeles are extremely important distribution centers and act as the gathering points for traffic for large hinterland regions. Consensus intermodal diversions from truck in this Corridor attributable to the improved schedules and greater reliability of the merged system totalled 95 units per day. Shipper benefits through logistics cost savings are estimated to total $3.4 million per year.

Midwest-Texas-Mexico Corridor. This Corridor is the most unbalanced of those studied in terms of current truck traffic. Estimated diversions for this Corridor were 49 intermodal units per day. These diversions reflect service

improvements brought about by directional operations of the UP and SP lines, and coordinations of UP and SP terminals. Shipper benefits due to reductions in logistics costs from using UP/SP intermodal service amount to $1 million per year.

Central Corridor. In this Corridor, which runs between California's Bay Area and Chicago and the Midwest, the consensus estimate for intermodal diversions totalled 74 intermodal units per day, resulting from the reduced distance, faster scheduling, more frequent departures and improved reliability. Shipper benefits due to reductions in logistics cost amount to $3.7 million per year.

IV. SHIPPER BENEFITS

As I mentioned above, Transmode's diversion model incorporates a shipper utility function as a primary element in its decision logic. As I have indicated, the diversion model captures the total logistics costs to a shipper associated with each of the possible modal alternatives under consideration. Since total logistics costs are a measure of the costs to a shipper of using a given alternative, for that shipper who diverts to a newly available alternative, the difference in cost between the chosen alternative and the base case represents shipper savings (or shipper benefits) created by that alternative. Total shipper benefits are the difference in total logistics costs to each shipper that divert truck traffic to intermodal service, summed over all shippers in the marketplace.

The computations of shipper benefits were performed for each of the sample of movements considered, and the result summed over all movements to provide an objective estimate of total shipper logistics cost savings associated with intermodal diversion from truck. For the corridors studied the total shipper benefits amounted to $18.4 million annually.

Using a variation of the Transmode methodology discussed above, we also calculated benefits that would accrue to shippers of carload traffic as a result of the savings in time and mileage brought about by the merger. For this portion of our study, we analyzed a number of traffic flows that would benefit from time and mileage savings, and estimated the benefits that would accrue, as a result of those savings, to shippers who presently use SP carload service. These shipper benefits totalled over $72 million annually. This number significantly underestimates the shipper benefits that will result from the merger, because it includes only flows between selected Western points and does not include savings to UP shippers who will benefit from faster and shorter routes lower costs, and increase service reliability.

V. TRANSMODE'S METHODOLOGY

As discussed above, Transmode and Reebie used their own distinct methodologies as part of the process of arriving at a consensus diversion estimate. Transmode's logistics cost model seeks to incorporate all measurable factors affecting the choices of transport mode by receivers of goods. The model develops

information for the tradeoff decision that would be made by a receiver attempting to minimize the total delivered costs associated with maintaining an inventory of a product for use in manufacturing or wholesale trade. The variables used to develop each of the individual cost factors in the logistics calculation include the type of receiver, attributes of the product shipped, information on the current mode of transport and information about potential new modes.

These variables are used to write equations for each of the components of the receiver's total logistics costs as a function of the principal choice variables -- choice of supplier, choice of mode and choice of shipment size.

In the model, the person responsible for making the modal decision is assumed to select that mode and shipment size which will minimize the total logistics cost of the goods being shipped to the receiver.

A. <u>The NATS Data</u>

The data used in the study are approximately 30,000 records prepared from personal interviews of truck drivers at some 50 different interview sites strategically located across the United States and Canada during the summer and fall of 1993 and the winter and spring of 1994. These sites, typically truck stops, are selected for their strategic importance in capturing samples of truckload movements between the major population centers of the country. Each interview developed information concerning the driver and his company, the type of truck and

trailer in use, the product carried, its volume, and the origin and destination points. All of these data were gathered for two loaded trips made by the truck -- the trip the truck was currently on, and the immediately preceding loaded trip. Information was available, therefore, on approximately 60,000 loaded moves throughout North America. Based on our review of the NATS data, these surveyed movements are rich in terms of commodity mix, and generally reflect long-haul shipments in the corridors that are of interest in this proceeding.

In order to make use of the NATS data in our diversion analysis, Standard Point Location Code ("SPLC") identifications were determined for each origin and destination point. This allowed us to ascertain the distance between the origin and destination and the intermodal terminals nearest to those points.

To determine truck route mileages, the data were further processed using a program known as PC Miler, which was developed by ALK Associates and is widely used in the trucking industry to establish the practical highway route mileages between shipping points. Data on the commodity being carried was coded to one of 36 commodity categories.

B. **Steps in the Diversion Analysis**

To perform the diversion analysis, Transmode's logistics cost diversion model, originally designed to be used in conjunction with a predecessor to the NATS data base, was modified slightly to allow an analysis of each pertinent individual NATS record and to account for the exact locations of

the UP and SP intermodal terminals and the mileages between them. Once all inputs for each record were available, they were transferred from the database manager into a spreadsheet, where the diversion computations were performed. A summary of the steps performed in the process follows:

Step 1

The origin city in each NATS observation is assigned to a BEA region. For every BEA, we identify one or more possible intermodal terminals serving as access points to the rail intermodal network. The distance to each of these potential terminals from the origin city is then calculated using Transmode's road distance routine.

The same process is repeated at the destination end of the movement recorded on the NATS record.

Step 2

The routes using each of the alternative access points are evaluated to determine which of the alternative routes is the most favorable (lowest cost to the shipper) for each railroad that could potentially divert the traffic to intermodal service. The cost calculation includes drayage, linehaul and interchange. Once selected, this lowest-cost route for each of the carriers is carried forward for use in the diversion analysis.

Step 3

Level-of-service values are developed for each of the competing alternatives (over-the-road truckload, UP/SP intermodal, and other rail intermodal). These include the

service frequency, schedule time and time reliability of the movement. Service frequency is the time between intermodal departures. Schedule time includes ramp-to-ramp time as published in the Intermodal Service Guide, plus time for unloading and drayage. Drayage time is the time for the movement to and from the intermodal terminal calculated at a base speed at the end points of the trip. Schedule time also includes 24 hours for interline transfers between railroads where such connections are required. Interline transfers are assumed to take place at interchange points designated by the originating railroad. Time reliability is defined in the model as the time between the scheduled arrival and the time when 99 percent of all of the movements have arrived.

Step 4

The diversion model draws upon data regarding the receiver, the type of product (commodity code and related attributes) being shipped, the distance of the movement, and other parameters used in determining service levels for each of the alternative modes. The most important receiver attribute is the receiver's annual use (measured in tons) of the commodity under study. This number is developed by drawing from a distribution of the known use rates for truckload and intermodal shippers. Figures for the receiver's internal rate of return on investments and the average discount rate for LTL shipments are also included. Inputs to the diversion calculation include linehaul distance by truck, parameters used to model truck rates,

intermodal linehaul and drayage distances, and short term variable cost for the intermodal movement.

Step 5

The variables affecting how receivers choose among transport alternatives are embodied in mathematical functions in the logistics cost model. The model calculates the tradeoffs that receivers face when attempting to minimize the total logistics costs associated with maintaining an inventory of the product for use in manufacturing or wholesale trade.

Step 6

The winning mode, given the new service that will be offered by UP/SP, is selected, and the results are formatted and reported.

C. Comparison of Results

The diversion results developed by Transmode and those developed by Reebie Associates are in relatively close agreement overall, though the numbers in any one traffic lane can vary. At the same time, one cannot fail to notice the apparent differences between the two studies in the size of the truck traffic base between the individual truck markets. Given the differences in approach between the two studies, not only in terms of data collection but in processing and presentation, it is understandable that there would be differences in the final results.

The apparent differences between Reebie and Transmode in the size of the underlying truck markets are principally

explained by two factors. First, the Reebie numbers for market size were for dry vans only, and consequently were somewhat smaller than Transmode's. The market-to-market truck flows in the Transmode analysis were developed from the full NATS database. No traffic was eliminated from the study at the outset, though traffic which we determined would not divert to intermodal was ultimately dropped. There are many products moving in types of equipment which do not lend themselves particularly well to movement by rail intermodal. These include those commodities typically moved in tank trucks, flat beds, and to some extent refrigerated vans, and heavy haul items. The older generation of reefer equipment used by the railroads has tended to be heavier, with lower payloads and consequently it is not being replaced by the users. Refrigerated trucks, which frequently carry products with short shelf lives, have tended to remain on the highways -- proof of their better economics in most applications. I understand that Mr. Peterson evaluated the special opportunity for the transcontinental movement of California perishables in refrigerated containers.

Second, there were differences between the Reebie and Transmode approaches in the definition of the tributary areas around the individual city pair markets. In our definition of Chicago, for example, the tributary area encompassed, among other points Detroit, Cleveland and Columbus. For Atlanta, the tributary area encompassed, among other points, Greensboro, Charleston, Savannah and Macon. Individual truck movements

originate at cities and towns throughout these hinterland regions. Some truck moves originate and terminate near intermodal terminals, and for these moves the drayage is short and diversion becomes more likely. For some of these movements, the associated drayage is too long for rail intermodal to be attractive at current service and price levels. Since drayage rates are typically close to twice the cost of long-haul truck rates per mile (because of the short movements and the high percentage of empty backhauls), a move with long drayage at both ends is less likely to choose intermodal. In most cases, Reebie used only the truck traffic associated with the BEAs of the primary cities in the market pair and thus had a smaller traffic universe but a somewhat higher division percentage. Overall, Reebie's diversion figures were somewhat lower than Transmode's, but not dramatically so.

V E R I F I C A T I O N

CITY OF WASHINGTON)

s.s.

DISTRICT OF COLUMBIA)

Paul O. Roberts being duly sworn, deposes and says that he has read the foregoing statement, knows the facts asserted there are true and that the same are true as stated.

Paul O. Roberts

Subscribed and sworn to before me this 16th day of November, 1995

Notary Public

My Commission Expires 5/31/1996

APPENDIX A

QUALIFICATIONS OF PAUL O. ROBERTS

I have more than forty years of experience in freight transportation education, research and consulting practice. I hold an Associate of Science degree from Arlington State College, a Bachelor of Science in Civil Engineering from the A&M College of Texas, a Master of Science in Transportation from the Massachusetts Institute of Technology, and a Ph.D. from Northwestern University in Transportation. I have been in full-time transportation management consulting since 1980, when I joined the Transportation Consulting Division of Booz, Allen and Hamilton in Washington, D.C. Prior to that, I held appointments on the faculties of the Harvard University Department of Economics, where I taught Transportation Economics and served as the Director of Research of a major research program on the impact of transportation on economic development, and the Harvard Business School, where I taught Managerial Economics, Transportation Management and Industrial Logistics. I organized and helped teach the first Executive Program in Trucking at the Harvard Business School in 1966. I also held an appointment as a full professor in the School of Engineering at MIT, where I served as the first Director of the Center for Transportation Studies and also taught applied courses on transportation economics and planning.

I have followed the freight transportation industry closely and undertaken numerous consulting assignments in that industry throughout my professional career. Since 1983, when I established the firm that is now Transmode, I have been active in all areas of freight transportation consulting.

I have a wide range of professional experience, ranging from traffic engineering for cities and local governments in New England, to long-range port infrastructure planning for African ports, to the preparation of a twenty-year capital investment plan for the World Bank in South and Central America, to strategic market planning for freight carriers. My primary area of professional interest has been freight transportation economics, where I am well known for the development and application of models of the logistics management process and for freight demand forecasting.

I have also worked on consulting projects for many of the major motor carriers. I assisted the Burlington Northern Motor Carrier Group in preparing major computerized load planning and pricing systems, Schneider National Carriers in acquiring truckload operating rights in Texas (testifying before the Texas Railroad Commission), Whiteford with pricing and service planning, Dart Transit with network service planning, and Yellow Freight with the preparation of a Market Planning Model. I assisted Roadway Express, Consolidated Freightways and Yellow Freight in an anti-trust case brought against these carriers by Lifschultz Fast Freight. I also assisted in the preparation of

due diligence studies with investment bankers involved in the financial restructuring of Burlington Motor Carriers, Bulk Materials, Inc., Montgomery Tank Lines, Tri-State Motor Transit, PST, and McGill Specialized Carriers.

In the railroad industry, I prepared a verified statement estimating the extent of diversion from truck to intermodal in support of the BN/Santa Fe merger. I have directed studies for the intermodal groups of SP, CSX, BN, Conrail and the AAR. I have worked for major intermodal third parties, including National Piggyback (which, renamed, became a subsidiary of APL) and Mark VII Transportation Company, for which I prepared the business prospectus for its initial financing of an innovative new freight distribution system using RoadRailer equipment. I have worked with industrial logistics departments at General Mills, Westinghouse and General Foods, among other shippers, and with ProSource, the logistics provider for Burger King.

Over the course of my career, I have taught classes in transportation economics and industrial logistics to railroad marketing departments. I have also assisted foreign governments with transportation system planning projects in Colombia, Venezuela, Jamaica, Argentina, Brazil, Peru, Guatemala, El Salvador, Panama, Mexico, Taiwan, Nigeria, Algeria, Italy, Israel, Yugoslavia and Canada. In the United States I have been involved in major studies for Caltrans, PennDOT, NYDOT, New Mexico DOT, Mid Ohio RPC, Puget Sound Regional Council, Southeastern Regional Council, City of Detroit, M.O.P. of Puerto

Rico, the State of Massachusetts, and many agencies of the U.S. Government, including the Department of Transportation.

The Washington office of Transmode, a Division of Science Applications International Corporation, has undertaken assignments for more than 100 clients during the more than twelve years of its existence. As President of Transmode, I have directed the undertaking of a number of studies involving diversion analysis of intermodal traffic.

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VERIFIED STATEMENT

OF

STEPHAN C. MONTH

My name is Stephan C. Month. I am a Managing Director in the Mergers and Acquisitions department of CS First Boston Corporation, located at 55 East 52nd Street, New York, New York. I received both a J.D. and an M.B.A. degree from Harvard University in 1986.

I joined CS First Boston's Mergers and Acquisitions department in September 1986 and have been with CS First Boston since then, except for the period September 1991 to July 1993 when I was a Vice President at Lazard Freres. During the past two years, I have been CS First Boston's account officer for railroad mergers and acquisitions.

I have been personally involved in the following matters involving railroad clients for which CS First Boston has acted as financial advisors: the pending UPC/SPR transaction; UPC's acquisition of CNWT; UPC's offer to acquire Santa Fe Pacific Corporation; KCS' terminated sale to IC; various financing and advisory assignments for other railroad clients such as CSX and CN; and various railroad privatizations worldwide, including the Mexican railroad.

CS First Boston is an internationally recognized investment banking firm that regularly performs valuations of businesses and securities in connection with mergers and acquisitions, leveraged buyouts, negotiated underwritings, competitive biddings, secondary distributions of listed and

unlisted securities, private placements and valuations for estate, corporate and other purposes.

CS First Boston's Railroad Industry Expertise

CS First Boston has broad experience in performing financial services for the railroad industry, including the following:

- Lead underwriter/placement agent of railroad debt worldwide lead-managing over US$7.2 billion in private and public debt from 1982 through 1994.
- Lead underwriter of U.S. public railroad debt raising over US$5.4 billion of public railroad debt from 1982 to 1994.
- Structured and lead-managed the first railroad medium-term receivables-backed debt securities transaction, raising $200 million for CSX in 1993.
- Co-manager on a $225 million common stock offering of IC; the transaction involved dual U.S. and European tranches (1992).
- Co-manager on $1.6 billion initial public equity offering of Conrail; the transaction involved dual U.S. and European tranches (1988).
- Provided expert testimony at legal and congressional hearings related to the railroad industry (Conrail).
- Over the past 15 years, CS First Boston has been one of the leading investment banks in providing merger and acquisition, financial advisory and valuation services to the railroad industry.

CS First Boston's recent investment banking experience includes assignments involving virtually all of the Class I and many regional railroads. We have worked extensively with UPC and are particularly familiar with UPC's financial structure, operations and prospects. The following

are examples of matters in which CS First Boston had been or is presently engaged to act as financial advisor to UPC and other railroad companies:

- **UPC**: Advised UPC on the acquisition of SPR in a transaction valued at $5.4 billion; advised UPC on its acquisition of CNWT in a transaction valued at $2.3 billion; advised UPC in its bid to acquire Santa Fe Pacific Corporation in a transaction valued at $3.9 billion (1994-1995); advised and assisted UPC on various assignments involving its interest in CNWT (1989); advised and assisted UPC in its acquisition of MKT for $102 million (1980-1982); advised and assisted UPC on its $1.06 billion acquisition of Missouri Pacific Corp. (1979-81).

- **Ferrocarriles Nacionales de Mexico (FNM)**: Currently advising Mexico transport ministry on the privatization of the state-owned railroad FNM. The Government of Mexico expects to sell concessions to qualified private investors to operate the FNM.

- **Kansas City Southern Industries**: Advised and assisted Kansas City Southern Industries in the (1994) proposed spin-off of its financial service division and the merger of KCS into IC (terminated).

- **Major Railroads**: Advised on stock-split strategies for two major railroads in 1992-1993.

- **Chrysler Financial Corp.**: Advised and assisted in the 1991 sale of Chrysler Rail Leasing to GE Capital in a transaction valued at $125 million.

- **CSX Corp.**: Advised and assisted in the divestiture of CSX Energy Company (pipeline business) (1983); also advised and assisted CSX in its $1.07 billion acquisition of Texas Gas Resources Corp. (1983); and advised and assisted Chessie System in its acquisition of the Western Maryland Railway.

- **Norfolk Southern Corp.**: Advised NS in connection with its 1988 acquisition of the Wheeling & Lake Erie Railway.

- **Henley Group, Inc.**: Acted as advisor to Henley in 1988 on its $9.4 billion attempted acquisition of Santa Fe Southern Pacific Corp.

CS First Boston's Assignment and Opinion
With Respect to the UPC/SPR Transaction

As part of its ongoing work for UPC, CS First Boston had been conducting analyses of a possible acquisition of SPR starting in early 1995. By letter agreement dated July 17, 1995, UPC retained CS First Boston to act as its financial advisor with respect to the contemplated acquisition of SPR. UPC requested that CS First Boston evaluate the fairness to UPC, from a financial point of view, of the consideration to be paid by UPC in the pending transaction.

The Merger Agreement provides for a merger of SPR into UPRR (the "Merger") subject to certain conditions, including approval by the Commission. Pursuant to the terms of the Merger Agreement, UPRR (through a wholly-owned subsidiary) tendered for up to 25% of SPR stock at a purchase price of $25 per share in cash (the "Offer"). On September 7, 1995, the Offer was successfully completed for 39,034,471 SPR Shares, which are being held in a voting trust pending approval of the Merger by the Commission.

After all conditions to the Merger are fulfilled, each of SPR's stockholders will have the right to submit an election specifying the number of his or her SPR shares that he or she desires to have converted into (1) .4065 shares of the common stock of UPC per SPR share, and (2) $25.00 per SPR share in cash, without interest.

The aggregate number of SPR shares to be converted into cash at the time of the Merger, plus the shares tendered in the tender offer, are to equal as nearly as practicable 40% of all SPR shares outstanding as of the date immediately prior to the date on which the Merger becomes effective. If SPR stockholders elect in the aggregate to receive either cash or stock exceeding the specified proportions, the Merger Agreement requires that the components be prorated in order to achieve the required proportions.

At a meeting of UPC's Board of Directors held on August 3, 1995, CS First Boston rendered to the Board of Directors an oral opinion (subsequently confirmed in writing) to the effect that, as of that date and based upon and subject to certain matters, the consideration to be paid by UPC in the Offer and the Merger was fair to UPC from a financial point of view. A copy of the written opinion is attached.

CS First Boston's Analysis

In arriving at its opinion, CS First Boston, among other things, (i) reviewed the Merger Agreement and certain publicly available business and financial information relating to UPC and SPR, (ii) reviewed certain other information, including financial forecasts, provided by UPC and SPR, (iii) met with the managements of UPC and SPR to discuss the businesses and prospects of UPC and SPR, (iv) evaluated the pro forma financial impact of the Offer and the Merger on UPC,

(v) considered and relied upon the views of management of UPC concerning certain strategic implications and operational benefits which might result from the Offer and the Merger and upon the views of management of, and regulatory counsel for, UPC concerning the anticipated regulatory treatment to be accorded to the Offer and the Merger, (vi) considered certain financial and stock market data of UPC and SPR and compared that data with similar data for other publicly held companies in businesses similar to those of UPC and SPR, (vii) considered, to the extent publicly available, the financial terms of other business combinations and other transactions recently effected, and (viii) considered such other information, financial studies, analyses and investigations and financial, economic and market criteria as CS First Boston deemed relevant.

CS First Boston's opinion was subject to certain assumptions and limitations set forth in the written opinion, and was necessarily based on information available to it and on financial, stock market and other conditions and circumstances as they existed and could be evaluated as of the date the opinion was rendered.

In preparing its opinion and presentation to UPC's Board of Directors, CS First Boston performed a variety of financial and comparative analyses, including those described below. The formation of a fairness opinion is a complex

analytic process involving various determinations as to the most appropriate and relevant methods of financial analyses and the application of those methods to the particular circumstances and, therefore, such an opinion is not readily susceptible to a summary description. In arriving at its opinion, CS First Boston made qualitative judgments as to the relevance, significance and weight of each analysis and factor considered. The following is a brief summary of the analyses underlying CS First Boston's opinion and presentation to UPC's Board of Directors:

Comparable Company Analysis. CS First Boston compiled, reviewed and compared financial, operating and stock market information for UPC, SPR and the following selected companies in the railroad industry: Burlington Northern Inc.; Consolidated Rail Corporation; CSX Corporation; Norfolk Southern Corporation; and Santa Fe Pacific Corporation (the "comparable companies"). Such an analysis of comparable companies is not entirely a mathematical exercise; it involves complex considerations and judgments concerning a variety of factors, including differences in financial and operating characteristics and other factors of the comparable companies that could affect the acquisition, public trading or other values of the companies being compared.

CS First Boston compared equity market values of the comparable companies as a multiple of each company's book

value and net income for the latest available 12 months and for estimated 1995 and 1996 corresponding results. We performed a similar analysis comparing adjusted market values (defined as equity market value plus total debt and preferred stock, less cash and cash equivalents) of the comparable companies as a multiple of their revenues, operating cash flow and operating income for the latest available 12 months and for estimated corresponding results for 1995 and 1996. All multiples were based on closing stock prices as of August 2, 1995. This analysis resulted in a stand-alone per share equity reference range for SPR of approximately $10.50 to $14.00.

Comparable Acquisition Analysis. Using publicly available information, CS First Boston also analyzed the purchase prices and multiples paid or proposed to be paid in selected acquisition transactions in the railroad industry, including: UPC/CNWT; Burlington Northern Inc./Santa Fe Pacific Corporation; UPC/Santa Fe Pacific Corporation; Illinois Central Corporation/Kansas City Southern Industries, Inc. (Railway Division); Kansas City Southern Industries, Inc./MidSouth Corporation; RF&P Corporation (Railway Operations)/CSX Corporation; Canadian Pacific Ltd./Soo Line Railroad Company; Blackstone Capital Partners/CNW Corporation; and Illinois Central Corporation/Prospect Group (the "comparable acquisitions"). As with the analysis of

comparable companies described above, such an analysis of comparable acquisitions is not entirely a mathematical exercise; it also requires complex considerations and judgments concerning a variety of factors, including differences in financial and operating characteristics of the companies involved in the transactions that could affect the acquisition, public trading or other values of the companies and transactions being compared.

CS First Boston compared purchase prices in the comparable acquisitions as a multiple of book value and as a multiple of the latest available 12 months' net income. We also compared adjusted purchase prices in the comparable acquisitions (defined as purchase price plus total debt and preferred stock, less cash) as a multiple of the companies' latest available 12 months' revenues, operating cash flow and operating income. All multiples for the comparable acquisitions were derived from information that was available at the time of announcement of each transaction. This analysis resulted in a stand-alone per share equity reference range for SPR of approximately $22.00 to $26.00.

Discounted Cash Flow Analysis. In addition, CS First Boston performed discounted cash flow analyses of the projected unlevered free cash flow of SPR (i.e., cash flow before payment of debt) for fiscal years 1996 through 2002, based on certain operating and financial assumptions,

forecasts and other information provided by the management of UPC ("UPC Forecasts") and the management of SPR ("SPR Forecasts"). For purposes of these analyses, CS First Boston utilized discount rates of between 12% and 14%, based on an analysis of the weighted average cost of capital for the railroad industry. We also applied terminal year operating cash flow multiples between 5.0x and 7.0x, based on the trading multiples of railroad companies.

Based on the UPC Forecasts, this analysis resulted in a stand-alone per share equity reference range for SPR of approximately $10.00 to $14.00. Based on SPR Forecasts, this analysis resulted in a stand-alone per share equity reference range for SPR of approximately $12.50 to $16.50. UPC advised CS First Boston that, in UPC's view, the UP Forecasts were a more realistic estimate of SPR's future performance than the SPR Forecasts.

Synergies Analysis. Based on the UPC Forecasts, CS First Boston also performed a discounted cash flow analysis of the projected net revenue enhancements and cost savings ("Synergies") anticipated to result from the Merger for fiscal years 1996 through 2002, taking into account estimates of UPC's management as to the anticipated costs of implementing programs to realize such Synergies. For purposes of this analysis, CS First Boston utilized the discount rates of 12% to 14% and terminal year operating cash flow multiples between

5.0x and 7.0x that are described above. This analysis resulted in an equity reference range for the Synergies of between $14.00 to $17.00 for each share of SPR stock, over and above the stand-alone value of the SPR stock.

Merger Consequences Analysis. Based on the UPC Forecasts (including projected synergies anticipated to result from the Merger), CS First Boston analyzed certain pro forma effects resulting from the Merger, including, among other things, the impact of the Merger on the projected earnings per share ("EPS") of UPC for the fiscal years 1995 through 2000. This analysis indicated that the Merger would augment UPC's EPS for the fiscal years ending 1998 through 2000.

Conclusion

Although CS First Boston evaluated the fairness of the consideration to be paid by UPC in the Offer and the Merger from a financial point of view, the consideration payable in the Offer and the Merger was determined by UPC and SPR through negotiation. The results of arms-length negotiations between knowledgeable parties are widely regarded as a strong indication of fairness.

In arriving at its opinion, CS First Boston did not rely on any single analysis. Rather, we considered all analyses taken as a whole, which together supported the conclusions we reached.

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VERIFIED STATEMENT

OF

JAMES A. RUNDE

My name is James A. Runde. I am a Managing Director of Morgan Stanley & Co. Incorporated ("Morgan Stanley"), located at 1585 Broadway, New York, New York.

Morgan Stanley is a wholly-owned subsidiary of Morgan Stanley Group Inc., a global firm providing financial services to corporations, governments, financial institutions and individual investors. Morgan Stanley Group's businesses include securities underwriting, distribution and trading; merger, acquisition, restructuring, real estate, project finance and other corporate finance advisory activities; brokerage and research services; asset management and merchant banking; the trading of foreign exchange and other commodities as well as structured financial products on a broad range of asset categories; and global custody, securities clearance services and securities lending.

Qualifications and Experience

I received a Bachelor of Science degree from Marquette University in 1969 and a Master in Business Administration from George Washington University in 1973. From 1969 to 1974 I was an officer in the U.S. Navy. I joined Morgan Stanley as an associate in the corporate finance department in May 1974. In 1979 I was promoted to the position of Vice President and in 1982 to the position of Principal. Since 1983 I have been the head of Morgan

Stanley's transportation corporate finance department within the firm's Investment Banking Division. In 1985, at the time of the firm's initial public offering, I became a Managing Director of Morgan Stanley.

During my tenure with Morgan Stanley, I have worked on a broad range of financial transactions for public and private corporations, including mergers and acquisitions, spin-offs, restructurings, recapitalizations and the raising of debt and equity capital, both in the United States and abroad. While these transactions have involved companies in many industries, the focus of my work has been, and continues to be, transportation companies. Most recently, I have acted as advisor to SPR, North Carolina Railroad, Arkansas Best Corporation, Fritz Companies and Ryder System.

I have also served as financial advisor and expert witness for BN in proceedings in Colorado state court. In that case I testified concerning valuation and fairness issues.

Morgan Stanley has extensive experience both as an advisor and as underwriter or placement agent of debt and equity securities for railroad and other transportation companies. Since 1993, Morgan Stanley has lead-managed approximately $2.9 billion of offerings of rail and rail-related securities. I was involved personally in each of these offerings, as well as a number of private placements managed by Morgan Stanley.

In addition, I have participated in many transactions in which Morgan Stanley acted as financial advisor to railroads and trucking companies, including the following:

Trucking:

• Arkansas Best	Advised on acquisition and tender offer of Worldway Corp.
• Ryder System	Advised on strategic restructuring including spin-off of aviation business, Avail.
• Overnite Transportation Co.	Advised on sale of company to UPC.

Rail:

• Paducah & Louisville Railway	Advised Madison Dearborn Partners on sale of company.
• Canadian National	Advised on strategic alternatives including privatization.
• North Carolina Railroad	Represented in lease negotiations with Norfolk Southern.
• Southern Pacific Company	Represented on proposed merger of SPT and Santa Fe.
• Burlington Northern, Inc.	Advised on restructuring and co-managed spin-off of Burlington Resources.
• Southern Railway Co.	Represented in merger with Norfolk and Western Railway.
• Rio Grande Industries, Inc. (Predecessor of SPR)	Represented in acquisition of SPT.
• Consolidated Rail Corp.	Organized group of investors to buy Conrail from the government and co-managed initial public offering.

Morgan Stanley's Relationships with Southern Pacific

Since 1984, Morgan Stanley has worked closely with Philip Anschutz and SPR and its predecessor, Rio Grande Industries, Inc., and has accordingly become very familiar with SPR, its performance, its financial structure, and its prospects. In 1987, Morgan Stanley was instrumental in financing the acquisition of SPT from the Santa Fe Southern Pacific Corporation. Specifically, Morgan Stanley raised $111 million of equity through the sale of SPR common stock, $88 million of which was acquired by a limited partnership organized by Morgan Stanley, The Morgan Stanley Leveraged Equity Fund II, L.P. ("MSLEF II"), of which Morgan Stanley is a 16% owner. In addition, Morgan Stanley helped raise an additional $75 million in connection with the SPT acquisition through the private placement of preferred shares.

Since the consolidation of DRGW and SPT, Morgan Stanley has performed numerous advisory and financing assignments relating to SPR. Recent services rendered by Morgan Stanley to SPR include serving as lead underwriter for the debt portion of three leveraged lease financings in 1994 and 1995 and as a co-placement agent for the equity portions of a 1994 and a 1995 leveraged lease financing. Additionally, Morgan Stanley co-managed SPR's August 1993 offering of 9 3/8% Senior Notes due 2005, lead-managed SPR's August 1993 initial public offering of SPR common stock (the "Shares") and lead-

managed SPR's February 1994 and August 1994 secondary offerings of Shares.

Through its equity investment in SPR in 1988, MSLEF II gained a 25% ownership interest in the railroad. As owner of a 16% partnership interest in MSLEF II, Morgan Stanley possessed an indirect ownership stake of approximately 4% in SPR prior to the company's initial public offering. The sole general partner of MSLEF II is Morgan Stanley Leveraged Equity Fund II, Inc. ("MSLEF II, Inc."), a wholly owned subsidiary of Morgan Stanley Group Inc.[1/]

Morgan Stanley's Engagement by SPR

Morgan Stanley was retained by SPR through a letter agreement dated November 7, 1994 (the "Engagement Letter"), to act as financial advisor to SPR with respect to its consideration of strategic alternatives. Those alternatives included a possible merger with another railroad company. Under the Engagement Letter, we advised SPR during its merger discussions with UPC and assisted SPR in structuring the financial terms of the merger agreement.

1/ As of August 3, 1995, MSLEF II was the record and beneficial owner of, and had the right to vote and to dispose of, an aggregate of 13,341,580 Shares, representing approximately 8.5% of the then outstanding Shares. Frank V. Sica, a member of the SPR Board of Directors since October 1989, is a Managing Director of Morgan Stanley and a Vice Chairman and Director of MSLEF II, Inc. In addition, Richard B. Cheney, former Secretary of Defense, is a director of both UPC and Morgan Stanley Group Inc.

Having responsibility for all analyses performed by Morgan Stanley in connection with this engagement, I oversaw the work of Morgan Stanley's Mergers, Acquisitions and Restructuring team in its analysis of the value and structure of various proposals considered during the UPC negotiations. In addition to myself, several other officers of Morgan Stanley were part of the team that was extensively involved in the SPR engagement. They included Mahmoud A. Mamdani, Principal, Nelson S. Walsh, Vice President, and Mark D. Eichorn, Vice President. Messrs. Mamdani and Eichorn conducted the bulk of our due diligence investigation with respect to UPC and SPR, including meetings with senior management of each corporation.

Terms of the Transaction

The terms of the merger agreement dated as of August 3, 1995 (the "Merger Agreement") were reached after several months of negotiations between UPC (and its subsidiaries) and SPR.

To summarize, the Merger Agreement provides for a merger of SPR into UPRR subject to certain conditions, including approval by the Commission. Under the Merger Agreement and immediately following its execution, UPRR (through a wholly-owned subsidiary) tendered for up to 25% of SPR stock at $25 per share in cash. On September 7, 1995, UPRR successfully completed that tender offer for 39,034,471 SPR Shares, which are being held in a voting trust pending

approval of the merger by the Commission. The Shares acquired by UPRR pursuant to the tender offer represented approximately 38% of the 103.5 million Shares tendered under the offer.

Upon satisfaction of all conditions to the merger, each of SPR's stockholders will have the right to submit a request specifying the number of Shares that such stockholder desires to have converted into (1) .4065 shares of the common stock of UPC ("UPC Common Stock") per Share, and (2) the right to receive $25.00 per Share in cash, without interest.

The aggregate number of Shares to be converted into cash consideration at the time of the merger, together with Shares tendered in the tender offer, will be equal as nearly as practicable to 40% of all SPR Shares outstanding as of the date immediately prior to the date on which the merger becomes effective. To the extent that SPR stockholders elect in the aggregate to receive either cash consideration or stock consideration in excess of such proportions, the Merger Agreement requires the cash or stock component to be prorated in order to achieve the specified proportions.

At a special telephonic meeting of the SPR Board on August 3, 1995, in which I participated, Morgan Stanley presented an oral opinion to the Board that the cash tender offer consideration and the cash and stock merger consideration (collectively, the "Consideration") to be received by the holders of Shares pursuant to the tender offer and the merger, taken together, was fair from a financial

point of view to such holders. Morgan Stanley subsequently confirmed its oral opinion by delivery of a written opinion dated August 3, 1995, a copy of which is attached to this statement.

Analyses Conducted by Morgan Stanley

Before rendering our opinion, Morgan Stanley, among other things, reviewed and analyzed certain (i) publicly available financial statements and other information of SPR and UPC; (ii) internal financial statements and other financial and operating data concerning SPR and UPC prepared by the management of SPR and UPC, respectively; (iii) financial projections for UPC prepared by the management of UPC; (iv) financial projections for SPR, including estimates of certain potential benefits of the proposed business combination, prepared by the management of SPR; (v) reported prices and trading activity for the Shares and the UPC Common Stock; (vi) financial terms, to the extent publicly available, of certain comparable acquisition transactions. We also (vii) discussed past and current operations and financial conditions and the prospects of SPR and UPC (and their subsidiaries) with senior executives of SPR and UPC, respectively; (viii) compared the financial performance of SPR and the prices and trading activity of Shares with that of certain other comparable publicly-traded companies and their securities; (ix) discussed with senior executives of UPC certain issues relating to the proposed

spin-off by UPC of its natural resource operations ("Resources"); (x) participated in discussions among representatives of UPC and their financial and legal advisors; (xi) reviewed the Merger Agreement and certain related documents; and (xii) performed other analyses we deemed appropriate.

As is our common practice, Morgan Stanley examined and relied upon, without independent verification, the accuracy and completeness of the information we reviewed for purposes of our opinion. We also assumed that the financial projections made by SPR and UPC managements were reasonably prepared on bases reflecting the best currently available estimates and judgments of the future financial performance of SPR and UPC, respectively. In arriving at our opinion, Morgan Stanley was not authorized to solicit, and did not solicit, interest from any party with respect to the acquisition of SPR or any of its assets.

In order to reach our conclusions and to present our opinion to the SPR board of directors, we performed the following analyses:

1. SPR and UPC Common Stock Performance

Morgan Stanley analyzed the performance of the Shares by conducting a historical review of (i) closing prices and trading volumes of the Shares from January 1, 1994, to July 28, 1995; (ii) indexed price performance of the Shares from January 1, 1994, to July 28, 1995, relative to the S&P

400 and relative to a Comparable Index, which included Burlington Northern, Inc., Canadian Pacific, Ltd., Conrail Inc., CSX Corp., Norfolk Southern Corp., and UPC; and (iii) the high and low prices of the Shares in the twelve months ended July 28, 1995. We found that the Shares have moved closely in relation to the Comparable Index since January 1994 and both the Shares and the Comparable Index had been outperformed by the S&P 400 during the same period. In the twelve months ended July 28, 1995, the Shares had reached a high of $21.38 per Share and a low of $14.50 per Share. Morgan Stanley noted that the $25.00 per share to be paid in the tender offer and as the cash consideration in the Merger represented a substantial premium to the SP Common Stock trading prices over the prior 12 months.

Morgan Stanley performed a similar analysis of the UPC Common Stock by conducting a historical review of its (i) closing prices and trading volumes from January 1, 1992, to July 28, 1995; (ii) indexed price performance from January 1, 1994, to July 28, 1995, relative to the S&P 500 and relative to a Comparable Index, which included Burlington Northern, Inc., Canadian Pacific, Ltd., Conrail Inc., CSX Corp., Norfolk Southern Corp., and SPR; and (iii) high and low prices in the twelve months ended July 28, 1995. UPC Common Stock also moved closely in relation to the Comparable Index since January, 1994 and both UPC Common Stock and the Comparable Index had been outperformed by the S&P 400 during

the same period. In the twelve months ended July 28, 1995, UPC Common Stock reached a high of $66.63 per share and a low of $43.75 per share. On July 28, 1995, UPC's common stock closing price of $66.125 was near the high end of such range.

2. Comparable Company Analysis

Comparable company analysis examines a company's operating performance relative to a group of publicly traded peers. Morgan Stanley analyzed the operating performance of SPR and UPC relative to six other North American railroad companies: Burlington Northern, Inc., Canadian Pacific, Ltd., Conrail Inc., CSX Corp., Norfolk Southern Corp., and Santa Fe Pacific Corp. (These six companies along with SPR and UPC constitute the "Comparable Companies.") Historical financial information with respect to the Comparable Companies was compiled from the most recent financial statements publicly available for each company.

Morgan Stanley analyzed the relative performance of and value of SPR and UPC by comparing certain market trading statistics for those companies with those of the other Comparable Companies. (Market information used was as of July 28, 1995.) Among the market trading information we considered in the valuation analysis was market price to earnings per share ("EPS") estimates for 1995 and 1996, which were based on estimates provided by the Institutional Brokers Estimate System ("IBES"), an organization which compiles average EPS estimates of participating equity research

analysts. As a result of the foregoing procedures, Morgan Stanley noted that the multiples for the SP and UP were generally within the range of the multiples for the selected comparable companies. This analysis reflects that the ratio of the consideration of $25/Share under the Offer to SPR's estimated EPS for 1995 and 1996 was at the high end of the range of the ratio of market price to estimated 1995 and 1996 EPS for the Comparable Companies.

Of course, none of the other Comparable Companies is identical to SPR or UPC. Accordingly, our comparative analysis required that we make a number of judgments and considerations in order to take account of the differences between UPC and SPR from one another and from the other Comparable Companies. These judgments considered among other things, differences in financial and operational characteristics of SPR and UPC and other factors that could affect the public trading value of the comparable companies or company to which they are being compared. Simple mathematical analysis (such as determining the average or median) is not in itself a meaningful method of using comparable company data because it assumes a direct comparability that does not exist.

3. Comparable Transaction Analysis

Morgan Stanley also performed an analysis of previous transactions involving North American railroad companies in order to map a valuation range for the Shares based upon selected merger and acquisition transactions. In

this analysis, we compared (1) multiples of aggregate value (the fully diluted equity value of the offer plus any debt assumed less cash and option proceeds) to be received by the stockholders of SPR in the merger to SPR's revenues, to SPR's earnings before interest, taxes, depreciation and amortization ("EBITDA"), and to SPR's earnings before interest and taxes ("EBIT") with (2) the corresponding revenue, EBITDA and EBIT multiples paid in selected merger and acquisition transactions involving North American railroad companies from December 1987 through March 1995.

Our comparison included 13 transactions: UPC and CNWT; Illinois Central Corp. and Kansas City Southern Industries, Inc. (terminated before closing); Burlington Northern, Inc. and Santa Fe Pacific Corp.; Kansas City Southern Industries, Inc. and MidSouth Corp.; Wisconsin Central Transportation Corp. (Fox Valley and Western) and Itel Corp. (Fox River Valley Railroad and Green Bay and Western Railroad); Virginia Retirement System and Richmond, Fredericksburg & Potomac Railroad; CSX Corp. and Richmond, Fredericksburg & Potomac Railroad; Virginia Retirement System and CSC Corp. (RF&P Corp.); Canadian Pacific Ltd. and Delaware & Hudson Railway Co.; Canadian Pacific Ltd. and Soo Line Railroad Co.; Blackstone Capital Partners L.P. & others and CNWT; Prospect Group Inc. and Illinois Central Transportation Co.; and Rio Grande Industries, Inc. and Santa Fe Southern Pacific Corp. (SPT).

Based on an analysis of those transactions, and after making certain judgments and considerations concerning differences in financial and operating characteristics of UPC and SPR and other factors that could affect the acquisition value of the companies to which they were compared, we derived and applied a range of 1.3x to 1.8x to Southern Pacific's last twelve months' revenue; 7.5x to 9.0x to its last twelve months' EBITDA; and 10.5x to 12.5x to its last twelve months' EBIT. These three analyses resulted in per Share equity value ranges of $16.54 to $25.65, $13.93 to $18.67, and $13.89 to $18.40, respectively. Morgan Stanley noted that the $25.00 per share to be paid in the tender offer and as the cash consideration in the Merger would be at the high end of this indicated valuation range.

4. Discounted Cash Flow Analysis

In addition, Morgan Stanley performed a customary discounted cash flow analysis as a means of evaluating per share equity values for SPR and UPC. As part of that analysis, we calculated a present value of the unleveraged free cash flows[2/] that SPR and UPC would independently generate if SPR and UPC performed in accordance with financial projections based upon forecasts prepared by their own

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2/ Unleveraged free cash flows were calculated as the after-tax operating earnings of SPR and UPC, plus depreciation and amortization and other non-cash items, plus (or minus) net changes in non-cash working capital, minus projected capital expenditures.

managements. For UPC, Morgan Stanley also analyzed a second set of financial forecasts based upon IBES earnings estimates and IBES projected earnings growth rates ("IBES Case").

To arrive at valuations of SPR and UPC projected cash flows, we discounted the estimated unleveraged free cash flows over a ten-year period ending with the calendar year 2005 using a range of discount rates of 12.0% to 13.0% based upon Morgan Stanley's estimation of SPR's projected weighted average cost of capital. Morgan Stanley added to the present values of the cash flows the terminal values of SPR and UPC, respectively, in the year 2005, and discounted the terminal value back using the same range of discount rates. We calculated the terminal value using the perpetuity method, applying ranges of perpetual growth rates for SPR and UPC that we determined to be appropriate. Based on this analysis, we calculated per share equity values for SPR ranging from $14.25 to $19.28 on a fully diluted basis. The per share equity values that we calculated for UPC ranged from $54.35 to $74.13 (based on UPC management 1995-1999 projections) and $47.87 to $66.69 (based on the IBES Case), each on a fully diluted basis. The per share equity value ranges for SPR and UPC implied by the discounted cash flow methodology were discussed with the SPR Board as one means for considering the value of the companies as going concerns.

5. Historical Exchange Ratio Analysis

Morgan Stanley also analyzed the historical exchange ratio between the Shares and UPC Common Stock over several time periods. For each time period selected, we calculated the high, average and low exchange ratios. The time periods which we selected for analysis were as follows: January 1, 1994, to July 28, 1995; last one year; last six months; last 90 days; last 60 days; last 30 days; last 10 days; and close price on July 28, 1995 (for which only one exchange ratio was calculated). The average exchange ratio for each specified time period was 0.348, 0.345, 0.318, 0.300, 0.299, 0.304, 0.317 and 0.307, respectively. Morgan Stanley observed that the 0.4065 exchange ratio with respect to the stock consideration to be received in the Merger reflected a substantial premium to the ratio of UPC to SPR common stock prices over various periods during the previous 18 months.

6. Segment Trading Analysis

Another valuation methodology employed by Morgan Stanley with respect to UPC was an assessment of the fully distributed value of UPC's transportation operations (railroad and trucking) and its natural resources operations ("Resources") following an initial public offering ("IPO") of 17.25% of Resources Common Stock and the spin-off of all remaining Resources Common Stock to UPC's shareholders (to date, UPC has completed the Resources IPO and has announced plans for the Spin-Off which is to follow consummation of the

UPC/SPR Merger). With respect to UPC's transportation operations, we applied the Comparable Company methodology described above in order to estimate a fully distributed market trading value based upon the relative operating performance of UPC versus its railroad and trucking peers. With respect to Resources, we estimated a stand-alone value based upon (i) a valuation of Resources' proved exploration and production reserves, undeveloped acreage, minerals, gas plant operations, pipeline operation sand other assets, (ii) a multiple of 1994 EBITDA based upon relative operating performance of its publicly traded industry peers, and (iii) a multiple of 1994 cash flow from operations based upon its operating performance compared to that of its publicly traded industry peers. In performing these analyses, Morgan Stanley used historical financial data from UPC's public filings and Resources' published 1994 Financial and Operating Statistics, and pro forma financial forecasts (1995-1999) provided by UPC for its transportation and Resources operations. Such financial forecasts reflected the projected pro forma impact of the IPO and spin-off of Resources.

Based upon our segment trading analysis for UPC, the per share equity values calculated for the UPC transportation operations ranged from $43.39 to $50.70 and the per share equity values calculated for UPC stockholders' post-IPO ownership interest in Resources ranged from $15.98 to $20.01 (such Resources values do not include the 17.25% stake in

Resources assumed to be held by public stockholders buying Resources stock in the IPO). This analysis was reviewed with the SPR Board in order to allow the Board to consider the potential trading value of the UPC and Resources common stock which certain SPR stockholders would ultimately hold following the announced spin-off of Resources from UPC.

Conclusion

Each of the analyses that we utilized in connection with this transaction are frequently utilized by Morgan Stanley's Mergers Acquisitions & Restructuring Department for advisory assignments involving the mergers of large, publicly traded companies. As I have described, Morgan Stanley conducted a wide range of analyses with respect to both SPR and UPC in support of our fairness opinion delivered to the SPR Board. Since every company and transaction evaluated by Morgan Stanley has certain unique elements and considerations, including the companies and transaction at hand, Morgan Stanley believes that these analyses must be considered as a whole and that selecting portions of its analyses, without considering the entirety of the analyses, would create an incomplete view of the process underlying our opinion. Moreover, we find it necessary to give various analyses and assumptions more or less weight than other analyses and assumptions in accordance with the particulars of the situation.

For the reasons I have described above, the range of valuations resulting for any particular analysis applied by Morgan Stanley were not taken by Morgan Stanley as the actual value for SPR or UPC, as the case may be. Instead, we utilized all of the data available to us including the data derived from each of the analyses performed by us in connection with this transaction to determine the fairness of the consideration to be received by the SPR shareholders. Based upon our review of all such analyses and information, we concluded in our August 3, 1995 opinion to the SPR Board that the total cash and stock consideration to be received by the holders of SPR common stock was fair from a financial point of view to such holders.

VERIFICATION

STATE OF NEW YORK)
) ss:
COUNTY OF NEW YORK)

I, James A. Runde, being duly sworn, state that I have read the foregoing statement, that I know its contents, and that those contents are true as stated.

James A. Runde
JAMES A. RUNDE

SUBSCRIBED and sworn to before me this 16th day of November, 1995.

Barbara Katz
Notary Public]

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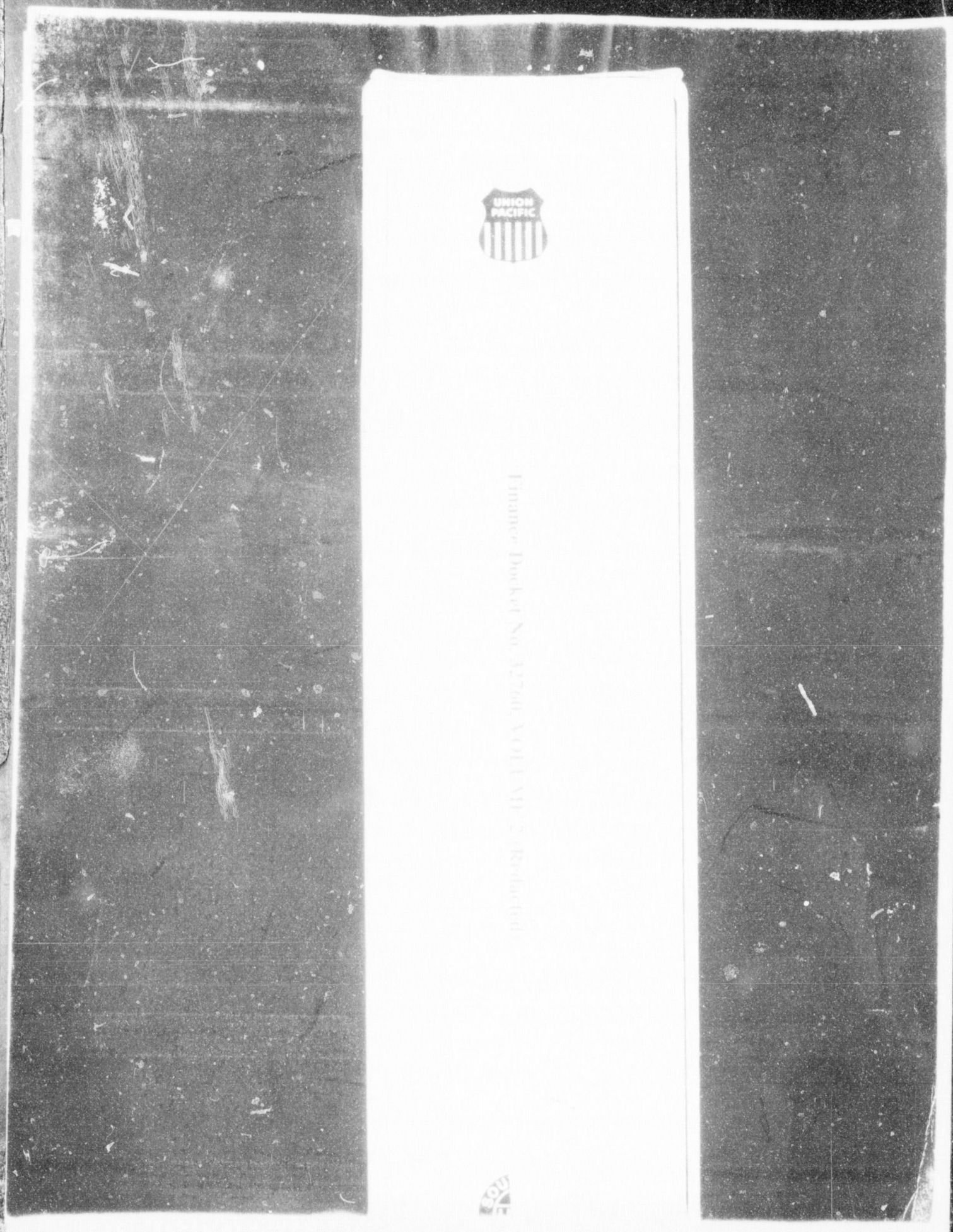
Notary Public, State of New York
No. 03-4712907
Qualified in Bronx County
Commission Expires Jan. 31, 1997


UNION
PACIFIC

REDACTED — To Be Filed on the Public Record UP/SP-23

Before the

INTERSTATE COMMERCE COMMISSION

Finance Docket No. 32760

UNION PACIFIC CORPORATION, UNION PACIFIC RAILROAD COMPANY
AND MISSOURI PACIFIC RAILROAD COMPANY
— CONTROL AND MERGER —
SOUTHERN PACIFIC RAIL CORPORATION,
SOUTHERN PACIFIC TRANSPORTATION COMPANY, ST. LOUIS
SOUTHWESTERN RAILWAY COMPANY, SPCSL CORP. AND THE
DENVER AND RIO GRANDE WESTERN RAILROAD COMPANY

RAILROAD MERGER APPLICATION

VOLUME 2

STATEMENTS CONCERNING MARKET IMPACTS, COMPETITION, AND SHIPPER BENEFITS (EXHIBIT 12)

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November 30, 1995

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VERIFIED STATEMENT

OF

RICHARD B. PETERSON

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VERIFIED STATEMENT

OF

RICHARD B. PETERSON

My name is Richard B. Peterson. I am Senior Director-Interline Marketing of UP. I received a Bachelor of Science degree in Civil Engineering from the University of Minnesota in 1968. In 1970, I was graduated from Northwestern University with a Master of Science degree in Transportation. My undergraduate and graduate studies concentrated on transportation and my thesis topic at Northwestern presented a mathematical programming approach to railroad freight train scheduling.

During my college and graduate years, I held various summer and part-time jobs with the Milwaukee Road's Engineering and Operating Departments and with the Operating Department of the Chicago, Burlington and Quincy, which subsequently became part of BN. In 1970, I was employed by UPRR as a Research Analyst in the Traffic Department. In 1974, I was appointed Assistant Manager-Service Planning, and I received a series of promotions thereafter, assuming my current position in 1988.

My responsibilities as Senior Director-Interline Marketing include strategic planning in the marketing and sales area, involvement in merger cases, routing and divisions issues, switching issues, managing UP's shortline program, abandonment matters and commuter rail issues. In carrying out these responsibilities, I work closely with marketing, sales and

operating officers throughout UP. My work over the years has dealt extensively with issues involving UP's relationship with SP, including (a) terminal switching studies in Portland, (b) developing the UP-SP "Fresh From the West" California-Midwest perishables service, (c) many projects involving Pacific Fruit Express, which was a UP-SP jointly-owned subsidiary responsible for perishables traffic, (d) planning service for UP-SP joint-line services involving steel, coal and woodchip traffic, and (e) involvement in dozens of trackage rights and other coordination issues between UP and SP.

I have presented testimony regarding competition and marketing matters and supervised or assisted in the preparation of traffic studies in a number of cases before the Commission, including the SP-Tucumcari line acquisition proceeding, the UP/MP/WP, SFSP, SP/DRGW and UP/MKT merger cases, and the UP/CNW haulage/trackage rights and control proceedings.

This statement has two parts. Part I explains why the UP/SP merger as conditioned by the settlement agreement entered into between the Applicants and BN/Santa Fe, will greatly intensify rail competition throughout the West. Part II describes the Traffic Study that we conducted to estimate the merger's traffic diversion impact.

I. THE MERGER WILL GREATLY INTENSIFY WESTERN RAIL COMPETITION

This part of my statement addresses the effect of the UP/SP merger and the settlement with BN/Santa Fe on competition.

That effect, as I show, will be a pervasive, dramatic intensification of transportation competition throughout the West.

UP and SP together will be a much stronger competitor, in numerous, interacting ways. The merged system will provide shippers with much more competitive rail service in the form of shorter routes, greatly expanded single-line service, faster schedules, upgraded track, new facilities, lower costs, greater reliability, much improved equipment supply, more efficient terminal operations, and lower reciprocal switch charges. The merged UP/SP will meet the competitive challenge of BN/Santa Fe, offering a true competitive alternative to that powerful new rail system. And the merger will provide SP shippers, who have experienced continuing service problems and uncertainties about SP's future, with the assurance of long-term, high-quality rail service.

The settlement with BN/Santa Fe will <u>further</u> heighten competition, not just by providing stronger rail competition than they have now for so-called "2-to-1" shippers -- shippers that would otherwise lose a choice between two railroads in an unconditioned merger -- but by providing new or strengthened competition in such important markets as the Seattle-Los Angeles "I-5 Corridor," the Chicago-St. Louis-Memphis-Houston corridor, and the West Coast-New Orleans and Midwest-Texas-New Orleans corridors.

This part of my statement begins by reviewing the fundamentals of the merger (Subpart A) and describing the BN/Santa Fe settlement agreement (Subpart B). I then review the many dimensions of increased competition that will result from the merger and the settlement (Subpart C), discuss why the merger is needed to meet the competitive challenge of the powerful new BN/Santa Fe system (Subpart D), and explain the crucial competitive benefit for SP shippers of overcoming SP's service problems and capital limitations (Subpart E).

I then describe how the merger will provide stronger rail competition in each of the 25 states in the UP/SP service territory (Subpart F), for traffic to and from Canada and Mexico (Subpart G), for every major commodity group handled by the merging railroads (Subpart H), and in every rail corridor where they operate (Subpart I). Next, I explain how the settlement agreement will intensify rail competition for "2-to-1" shippers (Subpart J). Finally, I explain why competition will also be stronger for all other traffic, and in particular for so-called "3-to-2" traffic -- traffic that can be handled today by UP, SP and a third railroad (generally, BN/Santa Fe) (Subpart K) -- and why source competition will be stronger as well (Subpart L).

A. <u>The Merger</u>

The UP/SP merger was precipitated by the merger of BN and Santa Fe. By merging, BN and Santa Fe created by far the largest and competitively most powerful rail system in the United States, with comprehensive coverage of the Western and Central

portions of the country. BN/Santa Fe serves every Western state but Utah and Nevada. It has superb routes from all the major West Coast ports to Chicago, Kansas City, St. Louis and Memphis, as well as lines extending into the Southeast to Birmingham, Mobile and Pensacola. Its lines blanket the Upper Midwest-South Central area, the Northern Tier states and the Southwest. Its scope greatly exceeds that of either UP or SP.

It was apparent to both UP and SP that over time, this large, efficient, financially-powerful system would increasingly be able to outdo them in meeting the ever-increasing needs of rail shippers for fast, low-cost, reliable single-line service linking multiple points. SP in particular would fall further and further behind in the competitive race.

The Operating Plan and operating witnesses describe UP's and SP's routes and facilities in detail, but what is most important from a competitive perspective is two basic points.

First, UP and SP, which are parallel in some areas and end-to-end in others, fit together in a remarkably synergistic way. The competitive benefits of combining them go far beyond any seen in a prior rail merger. The resulting integrated network yields not just more single-line service (though there is much of that), not just savings from eliminating needless duplication (though there is much of that), but breakthroughs in efficiency and competitiveness in which the whole is truly far more than the sum of the parts.

Second, in nearly all the major corridors where UP or SP have routes, BN/Santa Fe is there as a powerful competitor, not only matching or exceeding the UP or SP route, but offering shippers a wider system that can put them in more markets on a single-line basis. Thus the need to combine UP and SP into a worthy rival for BN/Santa Fe.

Map #1, contained in the pocket at the end of this volume, depicts the present Western railroads.[1] The partly parallel, partly end-to-end quality of the UP/SP merger is apparent. The principal parallel lines (some via trackage rights) of UP and SP run between (a) Northern California and Chicago, (b) Chicago and Houston, and (c) Kansas City, Dallas and San Antonio. In other key areas, the two railroads complement each other on an end-to-end basis. UP has no line across the Southern Corridor linking Texas and California; SP does. UP reaches Seattle/Tacoma, Spokane, and the Canadian border at Eastport, Idaho; SP ends at Portland. UP has no north-south line on the West Coast linking Los Angeles, the Bay Area and Portland; SP does. UP, and not SP, serves the Upper Midwest, with its extensive grain and paper production, and Wyoming, with its rich coal and mineral deposits. SP, and not UP, serves California's Central Valley, Arizona, New Mexico, the Calexico and Nogales gateways to Western Mexico, and most of Colorado. UP has direct

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[1] Trackage rights and similar arrangements, which are quite extensive in the West, are separately shown with dashed lines. Points where there are "2-to-1" shippers are highlighted, and will be discussed in Subpart J below.

lines from Utah to Los Angeles and Portland; SP does not. SP has direct lines between El Paso and Kansas City, and between Kansas City and Chicago; UP does not. UP directly links El Paso and Dallas; SP does not. SP directly links El Paso and San Antonio; UP does not.

As explained below, this unique combination of parallel and end-to-end synergies produces unprecedented competitive benefits -- route and terminal flexibility that means major increases in efficiency and capacity for overloaded rail systems; opportunities to triangulate equipment and reap major gains in car utilization; shorter routes and new single-line routes that allow new and improved services, which in turn combine with existing services to create cascading gains in train frequency and reliability.

The map also shows the ubiquitous competitive presence of BN/Santa Fe. Between the Upper Midwest, Chicago and Texas, between the West Coast and the Midwest, between Canadian and Mexican gateways, between the West Coast and Texas and the Southeast, BN/Santa Fe has direct, highly competitive routes that challenge UP and SP. Often, BN/Santa Fe faces only UP or SP, and not both, and thus can offer shippers wider overall network coverage of their source and end markets than can either UP or SP. The only pieces that are missing from BN/Santa Fe's present network are a line to New Orleans, a direct route between Houston and Memphis, a route across the Central Corridor (although in fact, Santa Fe's line via Northern Arizona is the service leader

for California-Midwest traffic), and a through north-south route on the West Coast (BN/Santa Fe's lines end at Bieber, California, and Stockton, California) -- and as discussed below, every one of these missing pieces is supplied by the settlement agreement.

What this means is, quite simply, that UP and SP are a natural fit to create a second truly competitive Western rail system -- and that only a merger of UP and SP can produce a railroad that is the competitive equal of BN/Santa Fe.

B. The Settlement

When UP and SP agreed to merge last August, they announced at the outset that they would accept conditions that would preserve strong rail competition for every shipper that would lose a choice between two railroads as a result of the merger. This was the step that was needed to render the merger unequivocally pro-competitive.

UP and SP promptly set out to arrive at such conditions on a voluntary, negotiated basis if possible. Mr. Rebensdorf describes those negotiations in his verified statement. The result was an agreement with BN/Santa Fe signed on September 25, 1995 (subsequently amended on November 18, 1995 to deal with errata and points of clarification), a copy of which is attached to Mr. Rebensdorf's statement.

The settlement agreement grants BN/Santa Fe trackage rights or line purchases (or in a few cases, provides for subsequent agreements) that will allow it to serve competitively all "2-to-1" shippers. The rights efficiently tie the points

where such shippers are located into the BN/Santa Fe network. BN/Santa Fe will have the right to serve all shippers now served by both UP and SP at such points, to handle intermodal and automotive traffic to and from such points, and to serve new facilities located at such points, including transloading facilities. As a result of the merger and the settlement, every "2-to-1" shipper will have access to two stronger, broader, more efficient rail networks than serve it today.

In addition to providing for service to "2-to-1" shippers, the settlement agreement injects major new competition into key markets. This results from further exchanges of rights that UP/SP and BN/Santa Fe agreed upon in the arm's-length negotiations that led to the agreement.

The "bottom line" is to grant BN/Santa Fe competitive access to well over $1 billion in UP and SP traffic, and enormously enhance Western rail competition.

The rights granted by UP/SP to BN/Santa Fe, and vice versa, in the settlement agreement are highlighted on Map #2 (located in the map pocket). That map prominently marks, against the backdrop of Map #1, the various line segments covered by the settlement. Here, I shall briefly review the principal provisions of the agreement; full details are to be found in the agreement itself.

Central Corridor. First, the agreement grants BN/Santa Fe trackage rights between Denver and Oakland, with access to all "2-to-1" shippers in Utah, Nevada and Northern California (there

are no "2-to-1" points in Colorado). These rights efficiently tie in to BN/Santa Fe's system at Denver, Stockton and Oakland, giving BN/Santa Fe a through Central Corridor route that supplements BN/Santa Fe's present, highly-efficient California-Midwest route. Using these rights in conjunction with its own Denver-Omaha-Chicago line, BN/Santa Fe will be able to move traffic between points like Salt Lake City and Chicago more efficiently than SP, which moves such traffic via Pueblo and Kansas City, does now. Linking BN's Denver-Chicago line with the former DRGW line between Denver and Salt Lake City will reestablish an efficient route that was heavily used when DRGW was an independent railroad. UP/SP will also grant BN/Santa Fe much improved access to the planned Oakland Joint Intermodal Terminal at the Port of Oakland.

I-5 Corridor. Second, BN/Santa Fe will purchase UP's line between Bieber, California, and Keddie, California. This, coupled with BN/Santa Fe's trackage rights over the from Keddie-Stockton segment, will give BN/Santa Fe a through north-south route up and down the West Coast. This was not needed to address any loss of competition in the UP/SP merger; rather, it was a bargained-for provision that immeasurably adds to the increase in competition produced by the settlement. Its effect is to create a second new single-line rail route in the I-5 Corridor between the Canadian and Mexican borders, in addition to the new single-line route that will be created by the merger itself. Where

there is no single-line rail service today, the merger and the settlement will thus create two competing single lines.

There are two other provisions strengthening competition in the I-5 corridor. BN/Santa Fe will grant overhead trackage rights to UP/SP between Bend, Oregon, and Chemult, Oregon, giving UP/SP a 130-mile shorter route between Eastport/Spokane and California. And BN/Santa Fe agrees to provide UP/SP with proportional rates for movement of traffic via Portland in BN/Santa Fe-UP/SP joint-line service. This proportional rate agreement will cover all traffic moving between, at the north, BN stations and Canadian gateways in Washington, Idaho and Western Montana, and at the south, UP/SP stations and gateways in Oregon, California, Nevada, Utah, Colorado, Arizona, New Mexico and West Texas, and all UP/SP Mexican gateways between the West Coast and El Paso. This will give UP/SP a greater ability to compete for this traffic, most of which will also be able to move over the new BN/Santa Fe single-line route in the I-5 corridor.

Southern California. Third, BN/Santa Fe will receive short stretches of trackage rights in the Los Angeles area to allow it to serve the handful of "2-to-1" shippers in that area. UP/SP also agrees to take steps to ensure BN/Santa Fe's continued efficient access to the Ports of Los Angeles and Long Beach while the new Alameda Corridor project is being built. And BN/Santa Fe will grant UP/SP overhead trackage rights between Mojave and Barstow, thereby eliminating 128 miles and two costly mountain

crossings from the UP/SP route between the Bakersfield/Mojave area and Utah. This will be significant, for example, for shipments of Utah coal to soda ash and electric generating plants at Searles Lake, California, and the Monolith cement plant near Mojave.

South Texas. In South Texas, UP/SP will grant extensive trackage rights to BN/Santa Fe, substantially increasing BN/Santa Fe's already wide coverage of Texas points. These include trackage rights (a) from a point near Houston to Brownsville, with access to Laredo via a connection with the Tex Mex at Corpus Christi; (b) between Houston, San Antonio and Eagle Pass; (c) between Waco, Temple and Smithville; (d) between Taylor and Kerr, for connection with the Georgetown Railroad, which is owned and operated by Texas Crushed Stone Company; and (e) between El Paso and Sierra Blanca. As well as handling through business, BN/Santa Fe will serve "2-to-1" shippers at the UP-SP jointly-served points on these lines, including San Antonio, Corpus Christi, Brownsville, Waco and local stations on the UP-SP jointly-owned El Paso-Sierra Blanca segment. All of these Texas trackage rights segments tie efficiently into BN/Santa Fe's broad network to the west, north and east.

All the various Texas trackage rights points are newly served by BN/Santa Fe except Eagle Pass. In its settlement with SP in the BN/Santa Fe merger case, BN/Santa Fe secured haulage access to Eagle Pass over SP's line from Caldwell, Texas. Our

settlement with BN/Santa Fe converts this Eagle Pass access to trackage rights.

East Texas/Louisiana. BN/Santa Fe will (a) receive trackage rights between Houston and Iowa Junction, Louisiana (near Lake Charles), (b) purchase SP's line across Southern Louisiana from Iowa Junction to near Avondale, together with SP's Lafayette yard, UP's Westwego intermodal terminal and a large portion of SP's Avondale yard, and (c) receive trackage rights over the six miles of UP and SP lines from Avondale into New Orleans. This will give BN/Santa Fe a direct, highly competitive through route between Houston and New Orleans, the one midcontinent gateway that it does not serve. BN/Santa Fe will have the right to serve "2-to-1" shippers -- principally chemical plants -- at several points in East Texas and Louisiana, and both UP/SP and BN/Santa Fe will serve the numerous shippers on the line across Southern Louisiana that will be sold.

Houston-Memphis. BN/Santa Fe will receive trackage rights over UP/SP between Houston and Memphis, serving "2-to-1" shippers en route at such points as Camden, Little Rock and Pine Bluff. These rights fill a key gap in the BN/Santa Fe system, strengthening BN/Santa Fe's competitiveness between Houston and Memphis, between Houston and St. Louis, and between Houston and Chicago. In addition, BN/Santa Fe will be able to gain a significantly better route than SP has today in the New Orleans-Beaumont-Memphis-St. Louis-Chicago corridor by utilizing its existing Beaumont-Tenaha, Texas, line in conjunction with its new

route between New Orleans and Beaumont and its new rights on the Houston-Memphis line from Tenaha to Memphis.

The settlement agreement also contains a variety of other pro-competitive provisions. These include: coordinations improving the efficiency of both BN/Santa Fe and UP/SP operations in the St. Louis area; a grant of trackage rights by BN/Santa Fe to UP/SP to reach the MERC dock coal transloading facility in Superior, Wisconsin; waivers by BN/Santa Fe of substantial fees that would impede UP/SP access to terminals in Seattle and Portland and the handling by UP/SP of doublestack traffic through the Tehachapi Mountains in California; and the grant by BN/Santa Fe to UP/SP of rights to enter and exit SP's trackage rights over BN/Santa Fe's Kansas City-Chicago lines at points that will improve the efficiency of UP/SP movements of intermodal traffic to and from UP's intermodal terminals in Chicago.

The result of the merger and the settlement will be two comprehensive Western rail systems, each far more competitive and efficient than before the transaction. To portray that result in the most straightforward way, we prepared Map #3 (in the map pocket), which reflects the merger and the BN/Santa Fe settlement (as well as all merger-related abandonments). For simplicity, trackage rights and similar arrangements are not distinguished from outright ownership on Map #3, as they are on Maps #1 and #2.

C. The Many Dimensions of Increased Competition

Railroad competitiveness has many dimensions -- route structure, capacity, schedules, reliability, facilities,

equipment supply, costs, and more. The UP/SP merger, as conditioned by the BN/Santa Fe settlement, will increase competition along all of these dimensions, and it is the combined effect of all these pro-competitive elements that makes the merger truly unprecedented in its competitive benefits.

To understand that combined effect, we must first consider each element separately -- the picture must be assembled piece by piece. That is the purpose of this subpart of my testimony.

1. Shorter Routes

Few matters are more crucial to a railroad's competitiveness than the length of its routes. Rise and fall, curvature and speed are also important, but mileage is basic. Lower mileage means lower crew and fuel costs, reduced transit time, and less waste of society's resources. Shorter mileages are crucial if railroads are to be fully competitive with trucks, which generally travel over shorter routes than the railroads because of the pervasive web of the nation's highway system.

The UP/SP merger, together with the BN/Santa Fe settlement, will produce major mileage reductions in literally dozens of major rail corridors in the West. These mileage reductions well illustrate the remarkable synergies of which I have spoken.

For simplicity, I have limited myself to mileage reductions of at least 100 miles -- an improvement that is of clear competitive significance.[2]

A first category of major mileage reductions comes from combining parts of UP and SP routes to create a new route that is much shorter than either railroad's present route. Such reductions will be achieved in the Central Corridor, in the Southern Corridor, between the Northwest and the South Central and Southeast regions, and in the I-5 Corridor.

Central Corridor. UP's and SP's Central Corridor lines were originally built to be operated together. The history is familiar -- UP built across Nebraska, Wyoming and Utah; the Central Pacific, SP's predecessor, built across the Sierras, Nevada and Utah; and the Golden Spike was driven at Promontory, Utah, in 1869. The result was a direct route from Omaha to Sacramento. Later, the WP and DRGW lines were also constructed to be operated in conjunction with each other and, after many corporate and regulatory twists and turns, in the 1980s WP became part of UP and DRGW and SP were consolidated. Since the WP route is significantly longer than SP's between Oakland and Utah, and the DRGW route, together with SP's other lines and trackage rights, is significantly longer than UP's between Utah and the

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[2] The mileage comparisons I present use each railroad's shortest route that moves an appreciable amount of traffic. To best reflect long-term route potential, mileages are measured between city centers rather than from one or another suburban intermodal ramp or yard, since such facilities are often located and relocated throughout metropolitan areas over time.

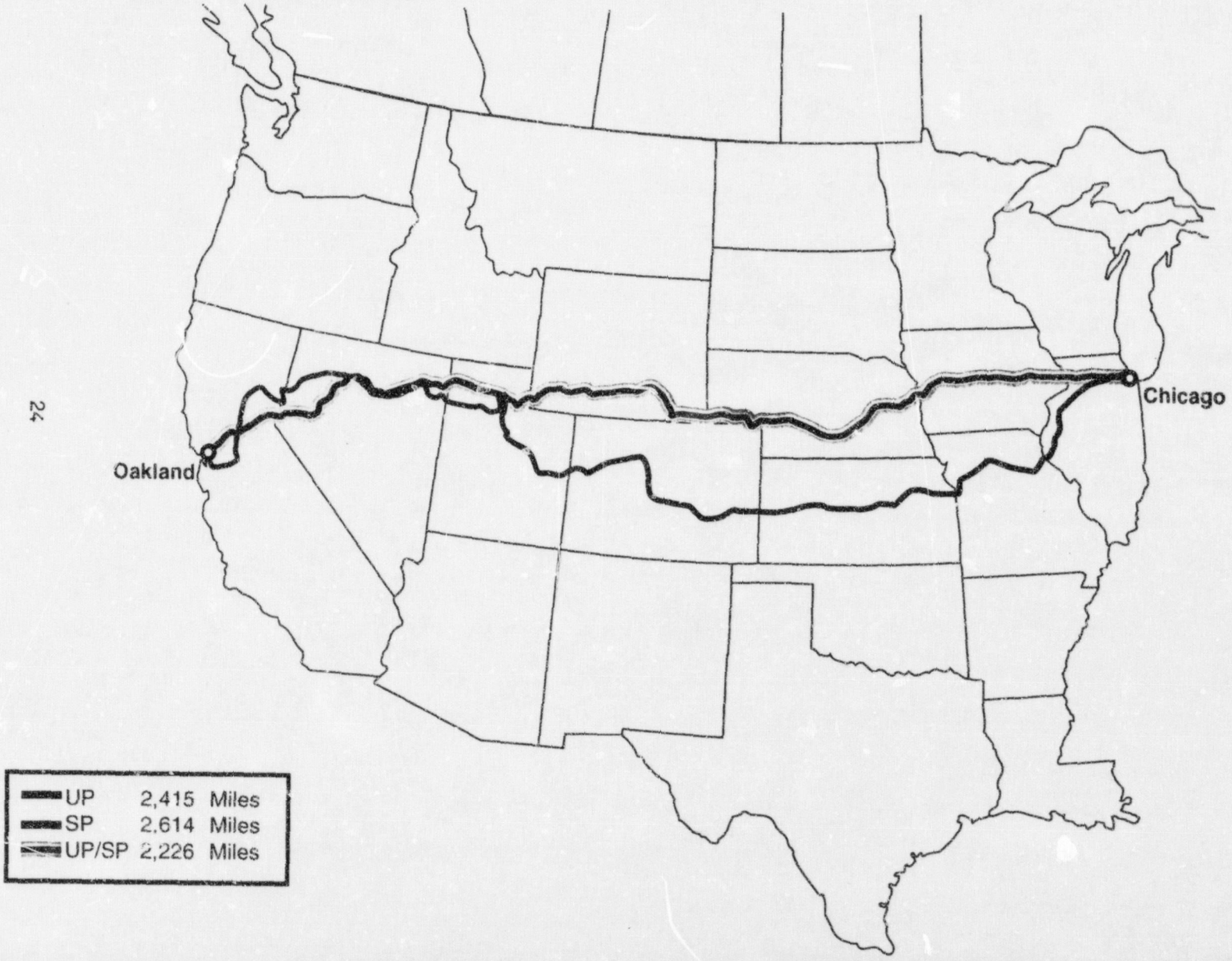
Midwest gateways, both UP and SP operate over much longer routes than the single-line route the merger will create. The merger will reduce UP's mileage between Oakland and Chicago by 189 miles and SP's by 388 miles (see Map #4). From Oakland to Kansas City and St. Louis, the reductions will be 189 miles for UP and 143 miles for SP (see Maps #5 and #6). These mileage reductions will make the merged system much more competitive with BN/Santa Fe, which is the service leader for Bay Area-Midwest traffic.

Southern Corridor. Two decades after the Golden Spike was driven in Utah, a similar joining occurred near El Paso, as SP built eastward across Arizona and New Mexico and the Texas & Pacific, UP's predecessor, built westward from Dallas. The result was, again, a direct route, from the Los Angeles Basin to Dallas and points beyond. But again subsequent events sundered this direct route. SP built a more southerly route from Sierra Blanca (east of El Paso) to San Antonio and Houston, and reaches Dallas and Memphis on a line that turns north at Flatonia, Texas, 121 miles west of Houston. This adds much circuity to SP's Los Angeles-Dallas and Los Angeles-Memphis routes. UP's line to El Paso is now a dead end which carries little traffic. With the merger, UP and SP will restore the historic T&P-SP connection and upgrade both SP's Colton-El Paso line and UP's El Paso-Dallas line to handle more traffic at higher speeds. Between Los Angeles and Dallas, the merged system's route will be 233 miles shorter than SP's present route and 999 miles shorter than UP's non-competitive route via the Central Corridor (see Map #7).

Map #4

Merged–System Route Significantly Shorter Than Present UP or SP Routes:

Oakland–Chicago



Map #5

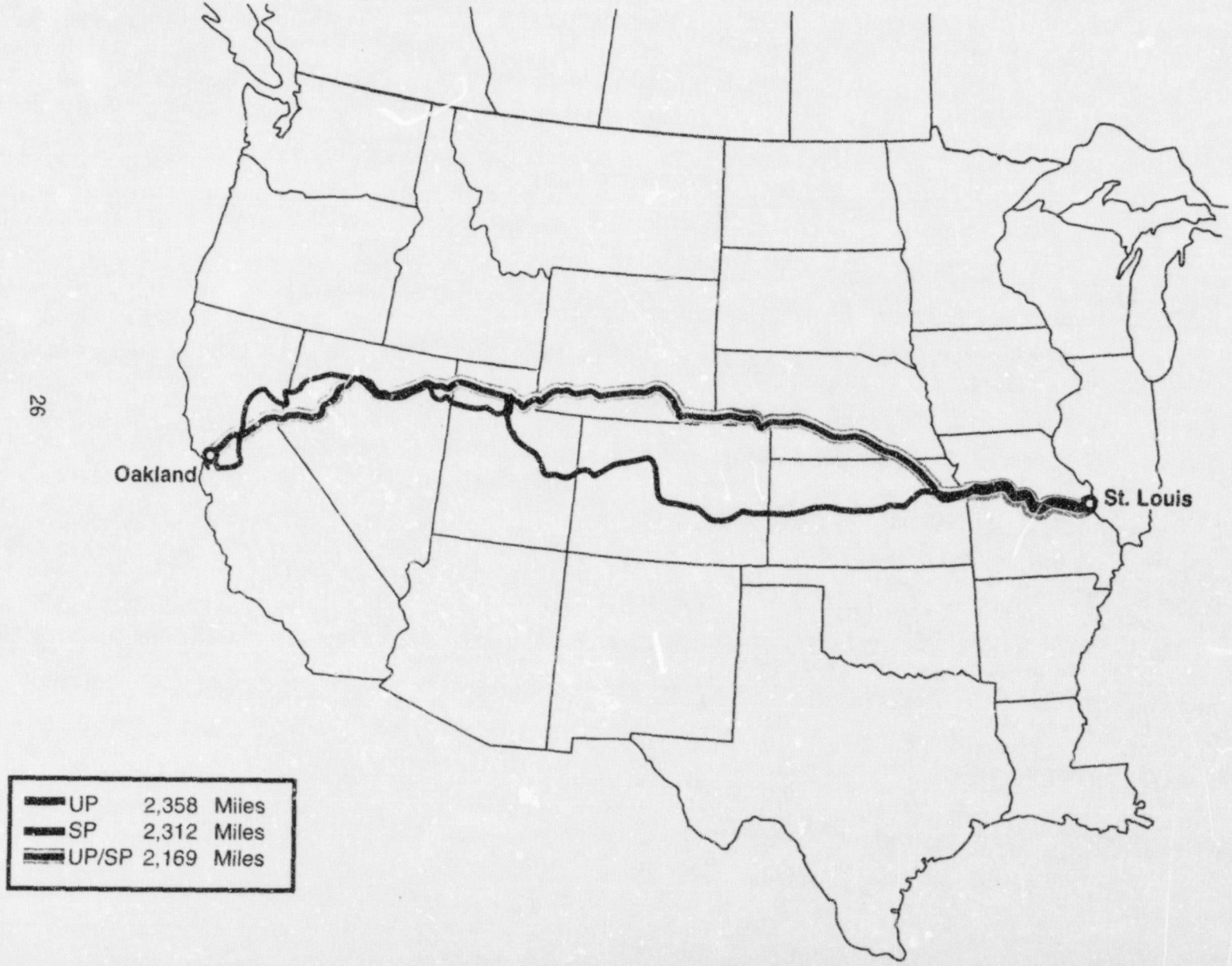
Merged–System Route Significantly Shorter Than Present UP or SP Routes:

Oakland–Kansas City

Map #6

Merged–System Route Significantly Shorter Than Present UP or SP Routes:

Oakland–St. Louis



Map #7

Merged–System Route Significantly Shorter Than Present UP or SP Routes:

Los Angeles–Dallas

Between Los Angeles and Memphis, the savings will be 283 miles over SP's present route and 580 miles over UP's non-competitive Central Corridor route (see Map #8). Similar savings will be realized between Oakland and Dallas (a 283-mile reduction for SP and a 733-mile reduction for UP) (see Map #9), and between Oakland and Memphis (a 233-mile reduction for SP and a 315-mile reduction for UP) (see Map #10).

These mileage savings will be vital to the ability of UP/SP to compete with BN/Santa Fe in these important Southern Corridor markets. By merging, BN and Santa Fe gained a direct single-line route from Los Angeles to Memphis (Santa Fe did not reach Memphis, and its efforts to work with BN on a haulage basis in competition with SP's longer single-line route, although somewhat successful, did not generate hoped-for volumes). With service en route to Tulsa and onward single-line service to Birmingham, this new BN/Santa Fe route is extremely competitive, and the BN/Santa Fe merger application projected large traffic gains from trucks and SP in this corridor. Only by merging and realizing the mileage savings just described can UP/SP meet this competitive challenge.

Routes Via SP's Colorado-Texas Rights. Before they merged, BN and Santa Fe were the only railroads with direct lines between Colorado and Texas, and provided the only rail service at Amarillo, Lubbock and Plainview, Texas. To prevent the elimination of this competition, BN/Santa Fe granted SP trackage rights between Pueblo and Fort Worth. Combining the resulting SP

Map #8

Merged–System Route Significantly Shorter Than Present UP or SP Routes:

Los Angeles–Memphis

Map #9

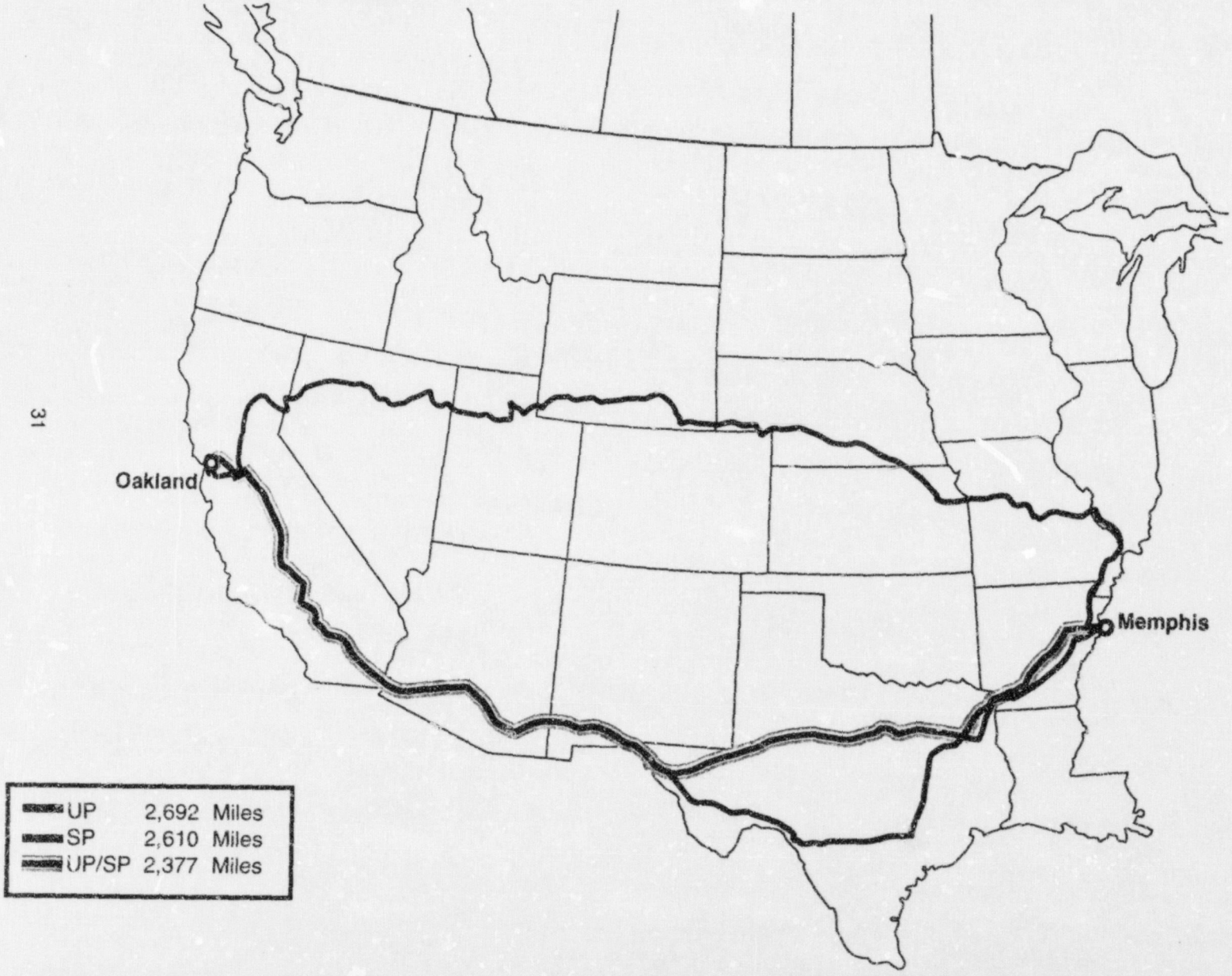
Merged–System Route Significantly Shorter Than Present UP or SP Routes:

Oakland–Dallas

Map #10

Merged–System Route Significantly Shorter Than Present UP or SP Routes:

Oakland–Memphis



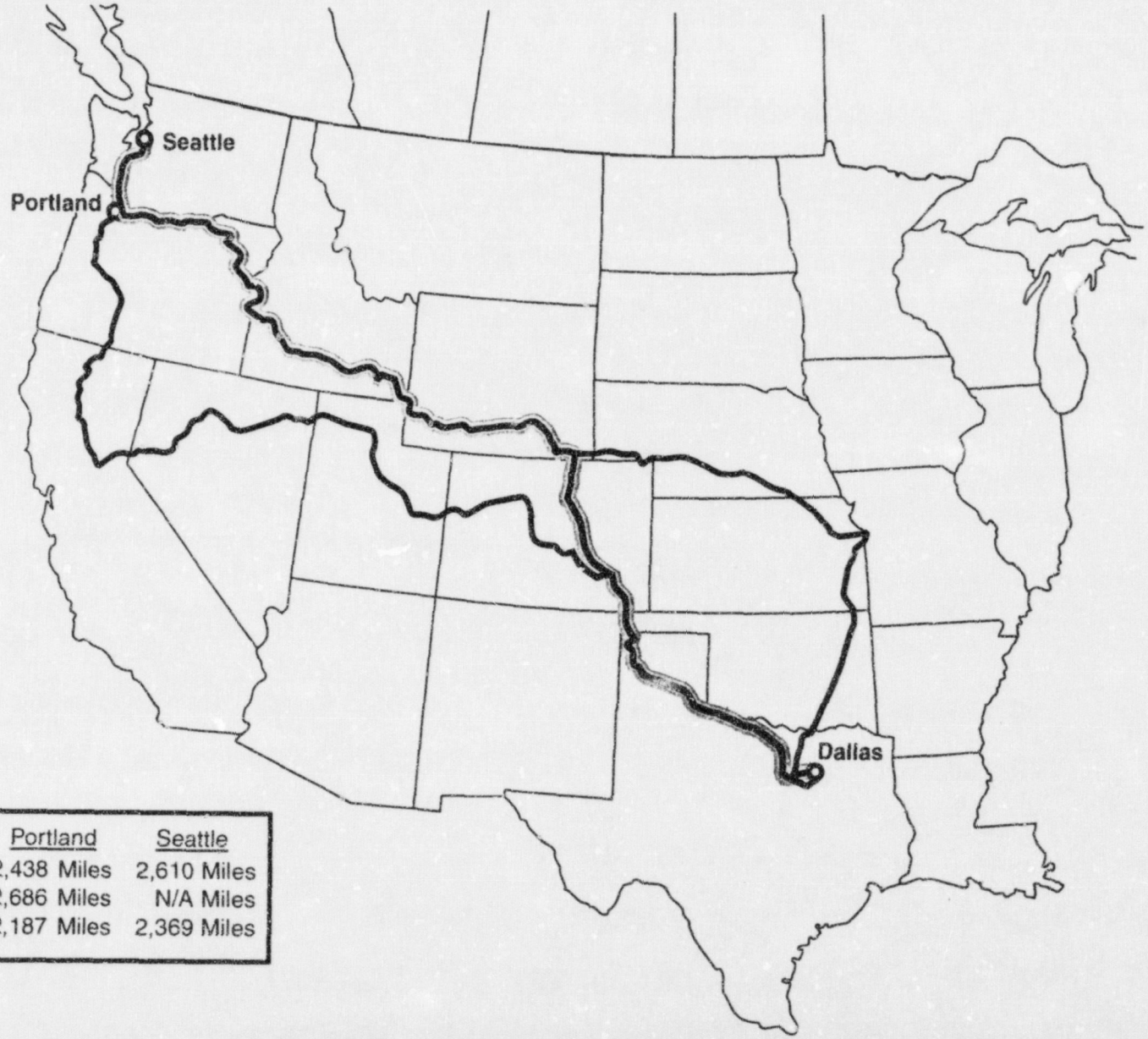
Denver-Fort Worth line with UP's Pacific Northwest-Denver and Fort Worth-Dallas-Houston-New Orleans lines will yield a number of major mileage savings. Between Portland and Dallas, SP will save 497 miles and UP 249 miles; and between Seattle and Dallas, the merged system's route will be 249 miles shorter than UP's present route (see Map #11). Between Portland and Houston, where SP's route via El Paso is somewhat less circuitous than to Dallas, the saving will be 262 miles for SP and 249 miles for UP; and between Seattle and Houston, the merged system's route will be 249 miles shorter than UP's present route (see Map #12). Between Portland and New Orleans, the savings are 353 miles for SP and 171 miles for UP; and between Seattle and New Orleans, the merged system will save 171 miles over UP's route (see Map #13). Finally, between Denver and New Orleans, the reductions will be 115 miles over SP's present route and 367 miles over UP's present route (Map #14). These mileage savings will greatly increase UP/SP competitiveness in these markets; the resulting routes will either equal (in the case of Seattle) or surpass (in the case of Portland) those of BN/Santa Fe.

I-5 Corridor. A last area of combined-route mileage savings is the I-5 Corridor. UP presently has extremely circuitous routes from Western Washington and Western Oregon to Northern and Southern California via Utah that carry little traffic. The merger, by linking SP's direct Los Angeles-Oakland-Portland line with UP's lines from Portland to Seattle and Eastport, will give the UP/SP system direct routes from

Map #11

Merged-System Route Significantly Shorter Than Present UP or SP Routes:

Pacific Northwest–Dallas



	Portland	Seattle
UP	2,438 Miles	2,610 Miles
SP	2,686 Miles	N/A Miles
UP/SP	2,187 Miles	2,369 Miles

Map #12

Merged–System Route Significantly Shorter Than Present UP or SP Routes:

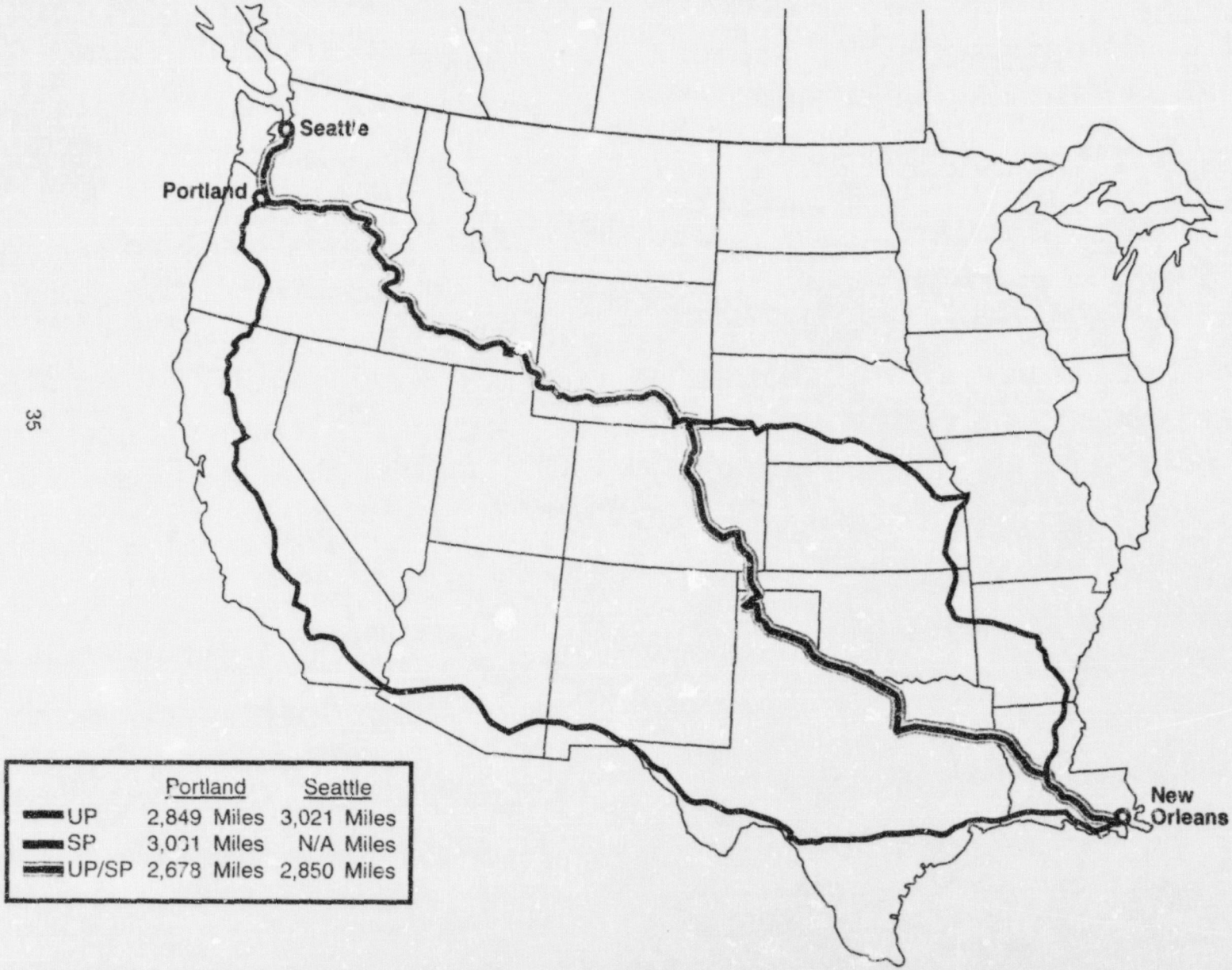
Pacific Northwest–Houston

	Portland	Seattle
UP	2,671 Miles	2,843 Miles
SP	2,684 Miles	N/A Miles
UP/SP	2,422 Miles	2,594 Miles

Map #13

Merged–System Route Significantly Shorter Than Present UP or SP Routes:

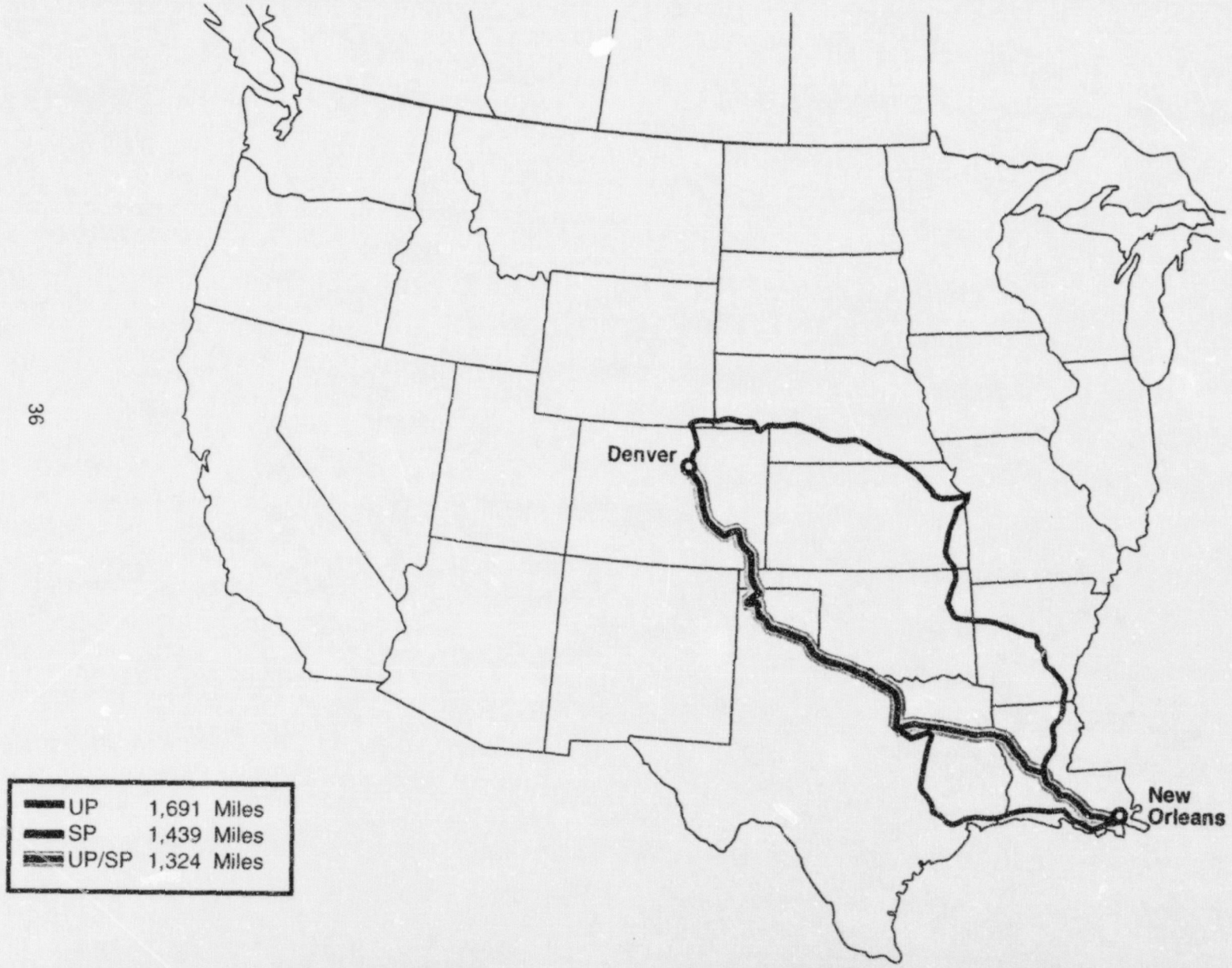
Pacific Northwest–New Orleans



Map #14

Merged-System Route Significantly Shorter Than Present UP or SP Routes:

Denver–New Orleans



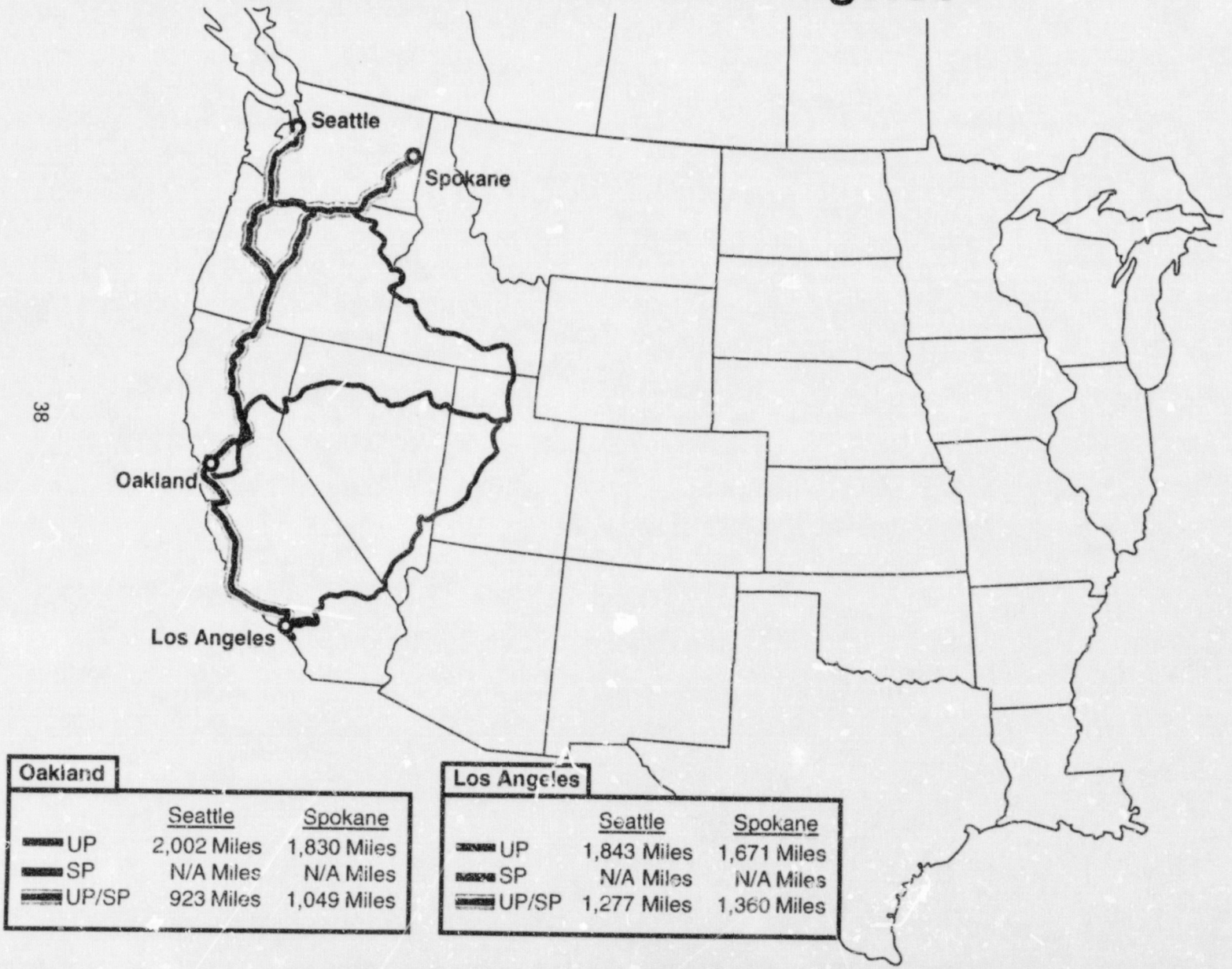
California to Washington and the Canadian border. In the case of Seattle, the mileage reductions compared with UP's present non-competitive route via Utah will be 1,079 miles to Oakland and 566 miles to Los Angeles; and in the case of Spokane, the reductions will be 781 miles to Oakland and 311 miles to Los Angeles (see Map #15). Part of the mileage savings from Spokane depends on the settlement, in which BN/Santa Fe agreed to grant UP/SP trackage rights between Bend and Chemult, saving 130 miles as against routing UP/SP traffic via Portland and Eugene.

These corridors where UP and SP together will have routes much shorter than either has separately are not the only corridors where major pro-competitive mileage savings will occur as a result of the merger. There are also a number of important corridors in which UP and SP both have routes and the route of one of the merging railroads is much longer than the route of the other. In the great majority of these corridors, the BN/Santa Fe route is (or, in the case of Oakland-Denver and routes involving New Orleans, will be with the settlement) much shorter than the longer of the UP or SP routes. The competitive significance is obvious -- without the merger, either UP's or SP's route is generally a weak third in these markets, whereas with the merger, the shippers using the railroad with the circuitous route will enjoy substantial mileage savings for their traffic, and the combined system, by unifying its traffic and exploiting the most efficient route, will be able to offer better service and compete more effectively against BN/Santa Fe.

Map #15

Merged–System Route Significantly Shorter Than Present UP or SP Routes:

Seattle/Spokane–Oakland/Los Angeles



Oakland

	Seattle	Spokane
UP	2,002 Miles	1,830 Miles
SP	N/A Miles	N/A Miles
UP/SP	923 Miles	1,049 Miles

Los Angeles

	Seattle	Spokane
UP	1,843 Miles	1,671 Miles
SP	N/A Miles	N/A Miles
UP/SP	1,277 Miles	1,360 Miles

The following is a table showing the mileage savings in these corridors and the mileages of BN/Santa Fe's competing routes:

MILEAGE SAVINGS WHERE UP OR SP ROUTE IS CIRCUITOUS

Corridor	UP Miles	SP Miles	Savings	BN/Santa Fe Miles
SP ROUTE SHORTER THAN UP ROUTE				
Los Angeles-Kansas City	1,914	1,752	162	1,767
Los Angeles-St. Louis	2,199	2,037	162	2,040
Los Angeles-Houston	2,692	1,635	1,057	1,763
Los Angeles-New Orleans	2,870	1,981	889	2,106**
Oakland-Salt Lake City	932	815*	117	815**
Oakland-Denver	1,544	1,382*	162	1,382**
Oakland-Houston	2,851	2,059	792	2,062
Oakland-New Orleans	3,029	2,406	623	2,400**
Denver-Houston	1,513	1,073*	440	1,050
Denver-Dallas	1,280	840*	440	786
Portland-Oakland	1,830	741	1,089	868**
Portland-Los Angeles	1,671	1,095	576	1,315
Oakland-Los Angeles	1,689	467	1,222	606
Chicago-Kansas City	576	466	110	450
UP ROUTE SHORTER THAN SP ROUTE				
Los Angeles-Denver	1,385	1,742	357	1,426
Los Angeles-Salt Lake City	782	1,170	388	1,301**
Salt Lake City-Chicago	1,472	1,656	184	1,587**
Portland-Chicago	2,233	2,999	766	2,231
Chicago-New Orleans	1,106	1,454	348	1,503**
Portland-Kansas City	1,893	2,557	664	2,067
Kansas City-Dallas	545	646	101	559
Kansas City-New Orleans	956	1,203	247	1,146**
Portland-St. Louis	2,178	2,842	664	2,433
Portland-Memphis	2,512	3,235	723	2,551
St. Louis-New Orleans	844	1,170	326	1,097**
Portland-Denver	1,364	1,919	555	1,654
Memphis-New Orleans	612*	903	291	799**
Dallas-New Orleans	489	603	114	607**

* Mileage shown is merged-system mileage, which is somewhat (i.e., fewer than 100 miles) less than the mileage of the indicated railroad.

** With rights granted in settlement.

A particularly striking example of these mileage savings is for SP-served shippers in California and Oregon. In this area, SP exclusively serves numerous forest products and food products shippers. All of these shippers will realize huge mileage savings for their transcontinental shipments to and via Chicago and other Midwest gateways. For Chicago traffic, these savings range from nearly 400 miles (for shippers located in Northern and Central California) to well over 700 miles (for shippers located near Portland).

This example illustrates an important point that applies to all of the mileage savings I have described. These savings do not just apply to shippers located at the major cities that I have used as concrete instances; they apply as well to all shippers using the pertinent railroad in broad areas surrounding those cities, and to many movements via those cities.[3] Thus, to cite just two examples, (a) shippers on UP throughout Washington, Northern Idaho and Northeast Oregon, and Canadian shippers interchanging traffic with UP at Eastport, Idaho -- and not just shippers at Seattle and Spokane -- will realize major mileage reductions for movements to and from California, Texas and Louisiana, and (b) the many shippers on SP's lines throughout California's Central Valley -- and not just shippers at Oakland

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[3] Indeed, depending upon the location of the particular shipper, the mileage savings may be even greater than those I have set forth.

and Los Angeles -- will realize the Central Corridor and Southern Corridor mileage reductions I have described.

Finally, it is important to note that the settlement will generate still further mileage savings. Besides the savings in UP/SP mileages resulting from the Bend-Chemult and Mojave-Barstow rights already referred to, the rights that UP/SP will grant to BN/Santa Fe will shorten the BN/Santa Fe's mileages in numerous corridors, benefitting shippers across the BN/Santa Fe system. Examples include Memphis-Houston (470-mile reduction), St. Louis-Houston (124-mile reduction), Chicago-Beaumont (101-mile reduction), St. Louis-Beaumont (212-mile reduction), Memphis-Beaumont (558-mile reduction), Oakland-Denver (343-mile reduction), Oakland-Omaha (345-mile reduction), and Oakland-Twin Cities (385-mile reduction). Again, these savings also extend to broader regions. For example, for traffic moving to and from Denver, the numerous forest products shippers on BN/Santa Fe's line between Bend, Oregon, and Bieber, California, and on connecting short lines will save between 124 miles (at Bend) and 590 miles (at Bieber). And for traffic to and from Northern California, shippers at BN/Santa Fe points in Wyoming, Northeast Colorado, Western and Southern Nebraska and Northwest Kansas will save some 350 miles.

2. Expanded Single-Line Service

If mileage is one cornerstone of rail competitiveness, single-line service is clearly another. Shippers highly value single-line service because it eliminates interchange delays,

reduces loss and damage, greatly simplifies rate negotiations and billing, improves car tracing, and quite simply results in lower rates and better service.[4] For many shippers, this in turn means the opportunity to penetrate new markets.[5] In short, expanded single-line rail service means a better integrated, more productive economy for our nation.

Joint-line service is inferior not just because of the mechanics of interchange, the delays attendant upon negotiations between two companies, and the difficulty of coordinating two billing and customer service functions, but because separate railroads inevitably and inescapably have differing priorities, often based on sharply differing lengths of haul (the so-called "gateway watershed problem"), which prevent them from agreeing on the best rate and service offering for the shipper. As I

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[4] See, for example, the statement of GMCO Corporation, a shipper of chemicals from exclusive points on UP in Utah: "The majority of the product goes to Western Colorado and has to be interchanged with the SP at Salt Lake City. This interchange generally adds 3-4 days to the shipping time of a carload of material. In addition, the interchange adds about $5.00 per ton cost to my shipping rates." See also, for example, the statements of L.G. Everist, Western Aggregates, ABC Rail Services, Cascade Steel Rolling Mills, Crestbrook Forest Industries, Pendleton Flour Mills, San Jose Distribution Services.

[5] See, for example, statements of Sierra Forest Products, Neste Trifinery, Elkem Metals, Cavenham Forest Industries, Oregon McKenzie Lumber Products, Richmond Wholesale Meat, Gifford-Hill, Keller Lumber, Adams Grain, Calaveras Cement, Craig Grain, General Mills, Grain Land Coop, Hampton Lumber Sales, United Cooperative Services, Utelite and Synergistic Transportation.

testified, and the Commission found,[6] in the UP/CNW proceeding, even when railroads have interests that are very closely aligned -- as was the case with UP and CNW -- there is still a tremendous difference in terms of competitive effectiveness between joint arrangements and true single-line service. Here, we are dealing with two railroads that have for the most part not cooperated, and the single-line service benefits of this merger are correspondingly greater.

The merger will create new single-line service between all UP shippers and gateways (for example, to Canada and Mexico) that are not served by SP, on the one hand, and all SP shippers and gateways that are not served by UP, on the other hand. This simple statement encompasses a multitude of situations. For example, a glance at the map will confirm that SP serves hundreds of points exclusively or in common with railroads other than UP in Oregon, California, Arizona, Utah, Colorado, Texas, Arkansas and Louisiana, to mention only the principal states. UP, correspondingly, serves hundreds of points exclusively or in common with railroads other than SP in Washington, Idaho, Nevada, Utah, Wyoming, Nebraska, Iowa, Minnesota, Wisconsin, Illinois, Kansas, Oklahoma, Texas, Arkansas and Louisiana, among other states. The merger will give all of these SP points new single-line service to and from all of these UP points.

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[6] UP/CNW, Decision served Mar. 7, 1995, pp. 66-68.

In addition, some of the largest mileage reductions described above are really better viewed as new single-line service situations. Thus, even though UP serves both Seattle and Oakland, there is no effective single-line rail service between those points today, because UP's route is far too circuitous to be competitive. The same is true for a shipper exclusively served by UP in the Houston area that wishes to ship its traffic to Los Angeles, or a shipper exclusively served by SP in Provo, Utah, that wishes to ship its traffic to Los Angeles.

The total rail traffic that would gain new single-line UP/SP service as the result of the merger is well in excess of 350,000 units, amounting to 26 million tons of freight, per year. This is a conservative estimate, calculated by selecting from actual UP and SP 1994 traffic data and the data for other railroads' traffic in the 1994 Waybill Sample (a) those shipments that moved between points served by UP and not SP, on the one hand, and points served by SP and not UP, on the other hand,[7] (b) traffic moving between UP points in Texas and Southern California where SP does not serve both ends of the movement, and (c) traffic moving between UP points in Western Washington and Western Oregon, on the one hand, and UP points in California, on

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[7] To be conservative, we treated all Mexican gateways and all midcontinent interchange points (such as St. Elmo, Illinois) as served by both UP and SP for this purpose, even though shippers do not always regard these points as interchangeable. Also, Canadian and Mexican traffic is understated because it is reported for the Waybill Sample only if it terminates in the United States, and not if it terminates in Canada or Mexico.

the other hand. Other traffic involving circuitous routes, and traffic involving gateways that are not interchangeable -- not to mention the very substantial traffic flows that are moving by truck or not moving at all and will be attracted to the merged system by its new single-line routes -- would increase this figure still further.

Here are some concrete examples of new single-line service that the merger will make possible:

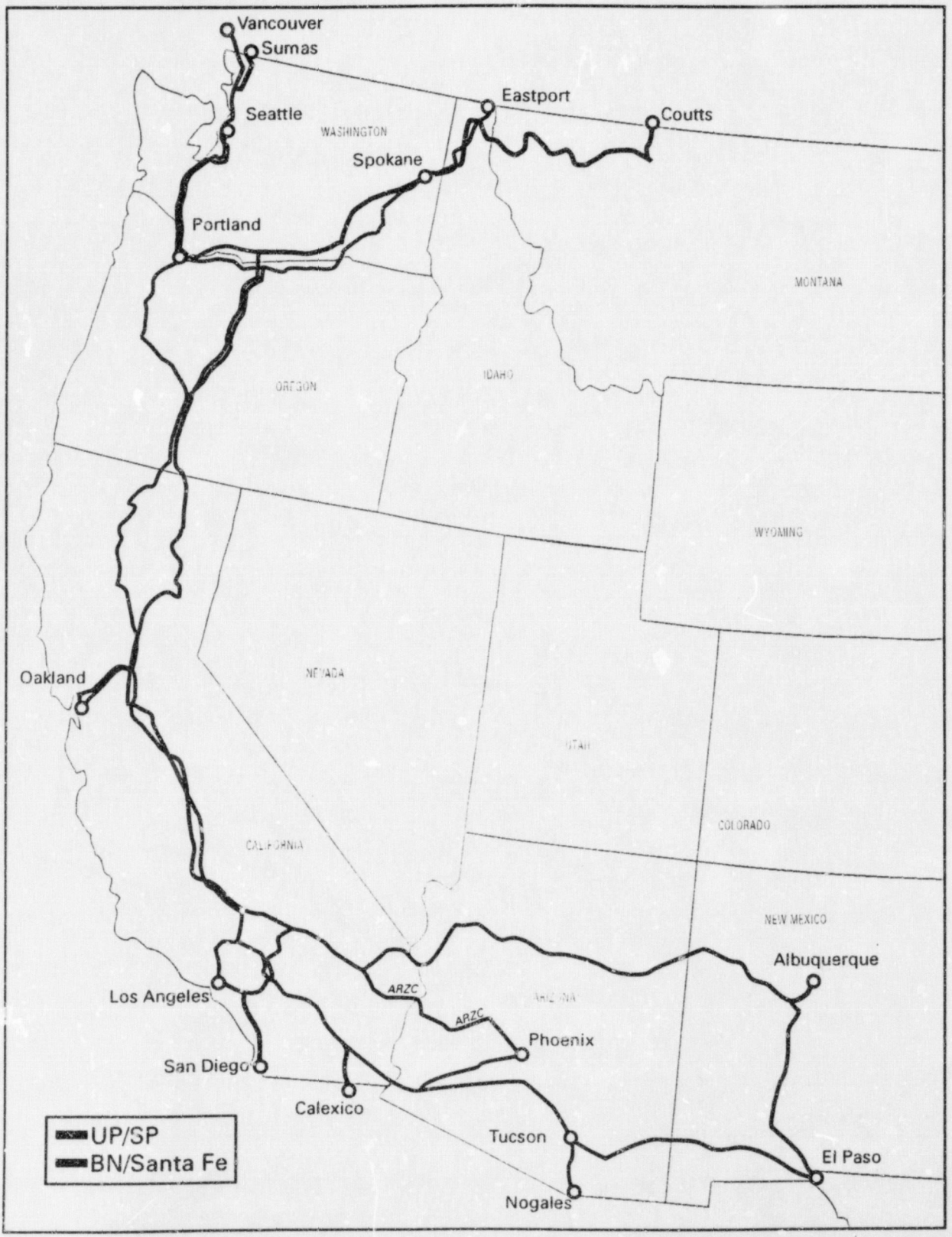
-- In the I-5 Corridor, UP/SP will offer new single-line service between many UP points in Washington, Idaho (including the Eastport connection with CP) and Northeast Oregon, on the one hand, and many UP and SP points throughout California, Arizona, New Mexico and West Texas, including the Mexican gateways of Calexico, Nogales and El Paso, on the other hand (see Map #16). Large volumes of lumber, chemicals, canned and frozen foods and other commodities move in this corridor -- and the great majority of the traffic moves by truck and water because of the absence of any single-line rail service. Between the Seattle and Los Angeles BEAs, for example, Reebie data show 30% of the tonnage moving by truck, 59% by water, and only 11% by rail. The single-line service resulting from the merger will attract substantial portions of the truck and water traffic to rail handling.

-- Corn from UP origins in Iowa, Nebraska and Minnesota, and barley from UP origins in Idaho and Montana, will move in single-line UP/SP rail service to feeders in the

Map #16

New Single–Line Service:

I-5 Corridor



San Joaquin and Imperial Valleys of California, Arizona, the Texas Panhandle, Northwest Mexico via Nogales, and Eastern Mexico via Eagle Pass (see Map #17).

-- Coal from SP-served Utah and Colorado mines will move single-line to Los Angeles and Long Beach for export (see Map #18). SP's present line via Sacramento is highly circuitous.

-- UP/SP will institute new direct intermodal and carload service between California and Laredo, the premier gateway to Eastern Mexico (Map #19). Today, there is no through rail service between California and Laredo, and the little intermodal traffic that moves between these points is handled by SP to San Antonio and then trucked to the Mexican border.

Literally hundreds of other instances of significant new single-line service created by the merger could be cited (and are, in the more than one thousand shipper verified statements in the application), but perhaps the following additional examples will be indicative:

- Intermodal traffic between the Upper Midwest and Phoenix.[8]
- Fertilizer and soda ash from UP Intermountain origins, and industrial sand from UP Minnesota origins, to SP destinations in the San Joaquin Valley.[9]

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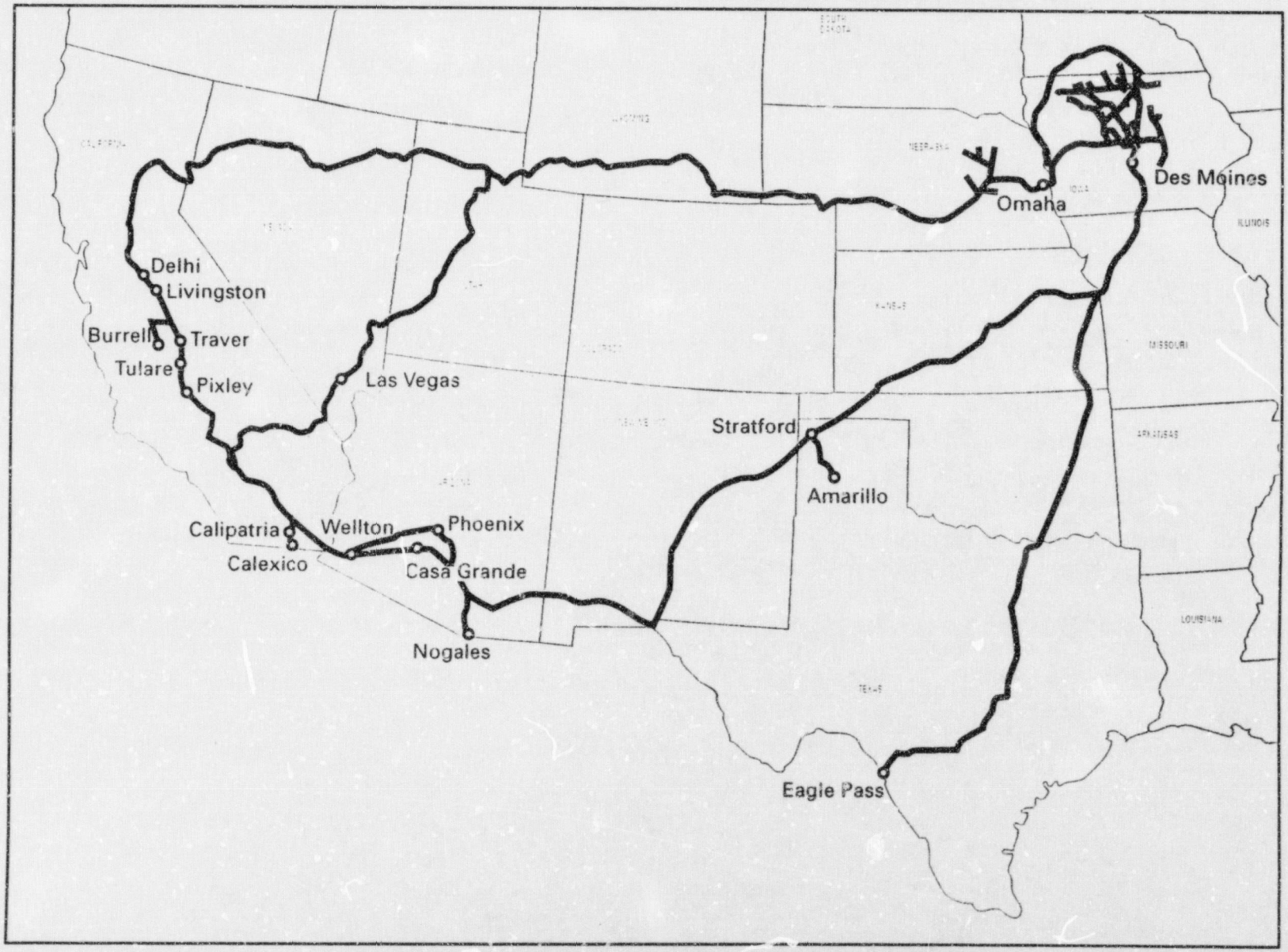
[8] See statement of Asset Based International.

[9] See statement of J.R. Simplot Minerals & Chemical Group.

Map #17

New Single–Line Service:

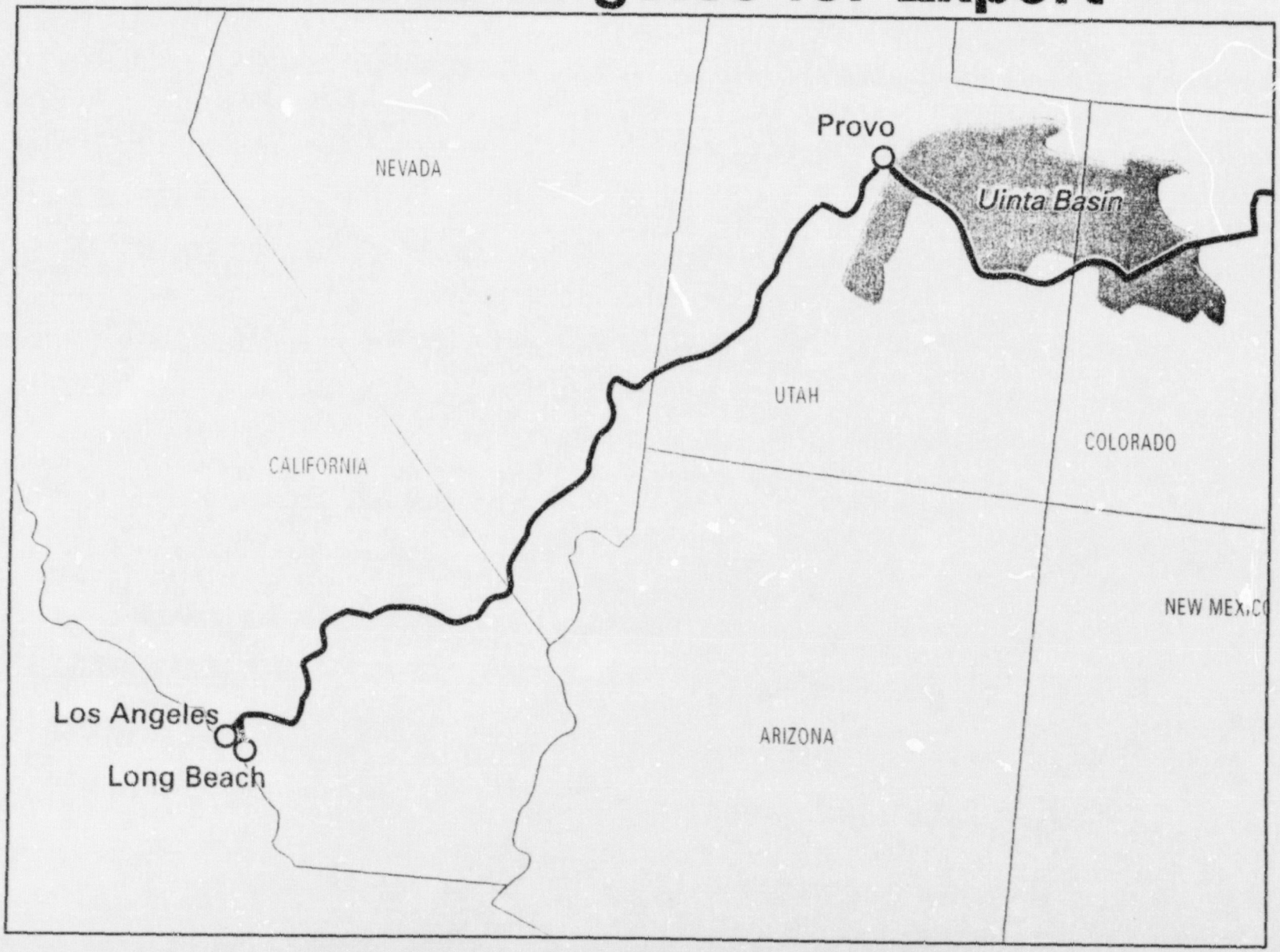
UP Grain to the West and Mexico



Map #18

New Single-Line Service:

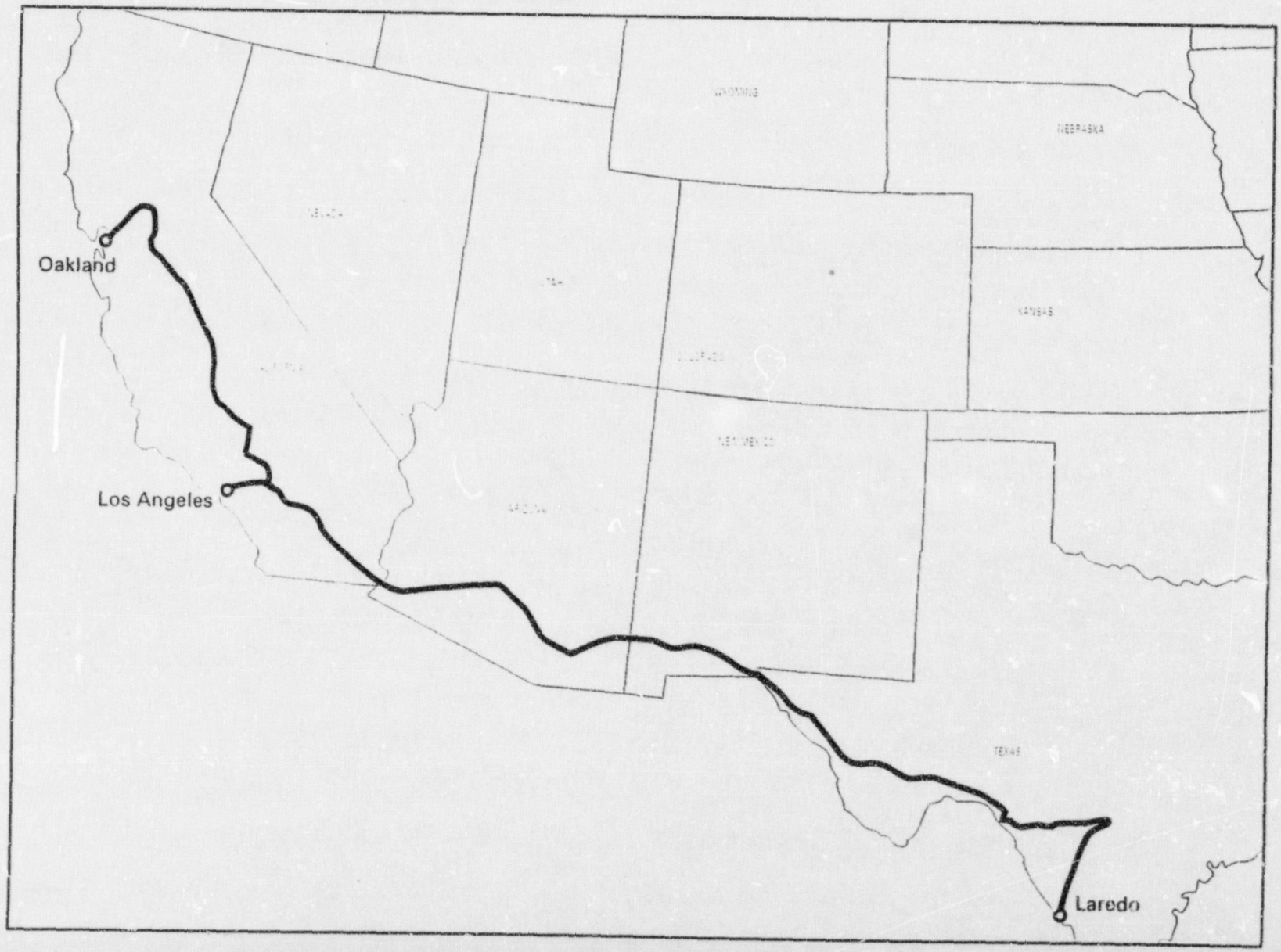
SP Coal to Los Angeles for Export



Map #19

New Single-Line Service:

California–Laredo



- Lumber from exclusively-served SP California/Oregon producers to UP destinations in the Upper Midwest.[10]

- Panel products from UP Arkansas and Louisiana producers to SP-served consumers in California, Arizona and Colorado.[11]

- Traffic between Laredo and SP points not served by UP, and between Eagle Pass and UP points not served by SP.[12]

- Texas/Southeast consumer products, cotton, furniture and appliances to many UP points in California.[13]

- Municipal waste from UP-served origins in Los Angeles and the Midwest to SP-served landfills in Arizona, the Imperial Valley, Utah and Texas, and from SP-served origins in California to the UP-served landfill in Arlington, Oregon.[14]

- Formaldehyde and acetates from a UP-served plant at Bishop, Texas, to an SP-served plant at Bayport, Texas.[15]

- Flour from a UP-served mill in Pendleton, Oregon, to SP-served destinations in the Los Angeles Basin.[16]

- Crushed stone from a UP-served quarry in Little Rock, Arkansas, to SP-served destinations in Louisiana.[17]

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[10] See statement of Hampton Lumber Sales.

[11] See statement of Hunt Plywood.

[12] See statement of American President Companies.

[13] See statement of GE Appliances.

[14] See statement of Waste Management.

[15] See statement of Hoechst Celanese Chemical Group.

[16] See statement of Pendleton Flour Mills.

[17] See statement of Mid-State Construction & Materials.

- Asphalt from a UP-served facility in Arkansas City, Kansas, to SP destinations in Phoenix and Tucson.[18]

- Fertilizer raw materials from UP-served points in Louisiana to an SP-served destination in Taft, Texas.[19]

- Petroleum products from UP-served Wyoming gas plants to SP-served Southern California points and Mexican gateways.[20]

- Building materials from a UP origin in Apex, Nevada, to an SP destination in Newark, California.[21]

- Scrap metal from an SP-served facility in Bakersfield to a UP-served facility in Long Beach.[22]

- Aluminum from Sandow, Texas, on a shortline connecting to UP, to an SP-served plant in Chandler, Arizona.[23]

- Steel from SP-served mini-mills to a UP-served fabricating plant in Oklahoma City, and from UP-served mini-mills to an SP-served fabricating plant in Lubbock.[24]

In addition, the BN/Santa Fe settlement creates a whole second category of new single-line service. Current BN/Santa Fe shippers will gain single-line access to a wide array of new

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18 See statement of Total Petroleum.

19 See statement of Terra International.

20 See statement of Centennial Gas Liquids.

21 See statement of Pacific Coast Building Products.

22 See statement of Golden State Metals.

23 See statement of Pimalco Aerospace Aluminum.

24 See statement of W&W Steel.

points,[25] and shippers at the points BN/Santa Fe will newly serve will gain single-line access to all points on the BN/Santa Fe network. Thanks to the Bieber-Keddie line purchase and Keddie-Stockton trackage rights, BN/Santa Fe will gain new single-line service all the way from Vancouver, British Columbia (interchange with CN, CP and BC Rail), Sumas, Washington (interchange with CP and Southern Railway of British Columbia), Coutts, Alberta (interchange with CP), Seattle and Spokane, at the north, to Oakland, Los Angeles, San Diego, Phoenix, Albuquerque and El Paso, at the south (see Map #16). All shippers to, from or via New Orleans will gain new single-line service to and from every point on the BN/Santa Fe system that is not served by UP or SP (see Map #20), as will every shipper at a "2-to-1" point. And single-line service to points across the entire BN/Santa Fe system will newly be available to Mexican shippers via Brownsville, Eagle Pass (on trackage rights instead of by haulage), and the Tex Mex connection through which SP now competes with UP for Laredo traffic.

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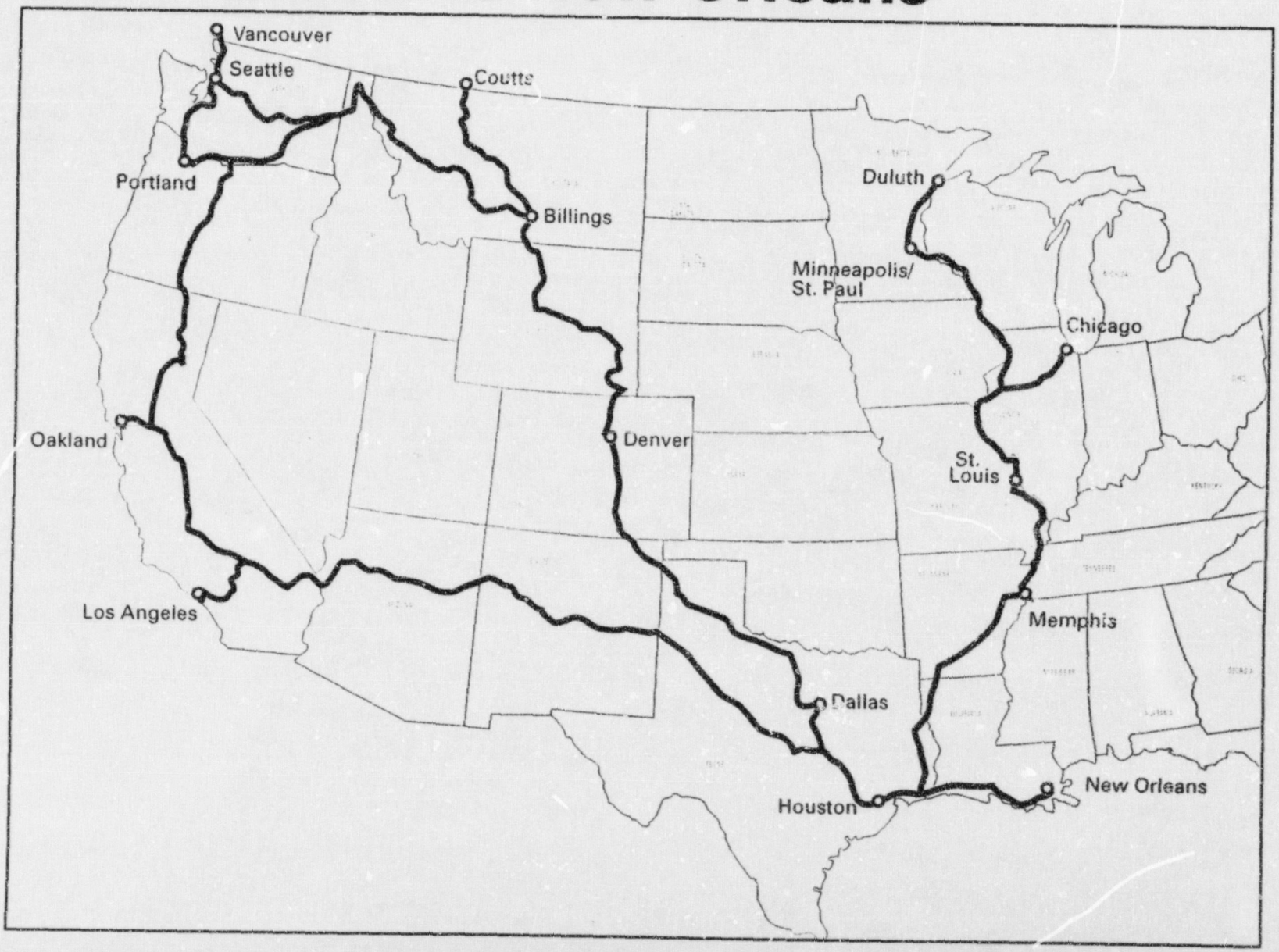
[25] See, for example, the statements of Hoechst Celanese Chemical Group, p. 5 ("Facilities served by BN/Santa Fe, such as our plants at Pampa and Bay City, will have single-line access to many new destinations on the BN/Santa Fe system.") and Chaparral Steel ("The recent agreement among the UP, SP, and BN/ATSF provides BN/ATSF with new service areas in Texas and Louisiana, including a direct route from Houston to New Orleans. This should result in freight cost savings due to additional single-line circumstances, which should increase Chapparal's competitiveness and create market opportunities.").

Map #20

New Single-Line Service:

BN/Santa Fe to New Orleans



3. Increased Capacity and Capital Investment

Railroads downsized and became more market-responsive through the 1980s and into the 1990s. In the past several years, however, intermodal, coal and grain volumes have grown and railroads have begun to recapture a small part of the huge traffic segments they lost to trucks in the decades following World War II. As a result, a number of the major railroads have faced capacity constraints for the first time in decades. UP has had to add double track at several locations on its system, and even create three- and four-track mainlines at certain locations, and to upgrade its lines and facilities in many other ways. It is a constant challenge to accommodate the mix of high-speed intermodal and auto traffic and slower coal and other bulk trains that traverse many of UP's mainlines.

SP faces even more serious capacity constraints. The Colton-El Paso line, and the Tucumcari line from El Paso to Kansas City, are single-track lines that have substantial difficulty accommodating even SP's present traffic volumes. Double-tracking these lines is not a foreseeable option for SP. Clearance problems and mountainous operating conditions across the Central Corridor route cause SP to move even more traffic over its Tucumcari route, notwithstanding congestion. SP's yards are clogged and need capital investments that SP has not been able to fit within its constrained capital budgets.

The merger will alleviate many of the bottlenecks that affect UP and to an even greater extent plague SP. The merger

will also allow capital spending to be increased and to be focused on the projects that will add the most to capacity and efficiency.

One way this will happen is through route and terminal flexibility. Stated simply, the total amount of traffic that Railroad A, with a line between Point X and Point Y, and Railroad B, with a separate line between those points, can handle between those points is significantly less than the amount that can be handled if Railroads A and B merge and operate the two lines as a single enterprise. What most retards smooth operations is having to operate fast and slower trains in both directions on single-track railroads. Under common management, trains can be concentrated on different lines based on speed and/or direction. Thus, a single-track line can be specialized to handle, entirely or predominantly, trains in one direction or trains of one speed. The effective result is to add much more real capacity -- almost as if an additional rail line had been built between Point X and Point Y -- simply by more efficiently using the same physical facilities. These benefits are enhanced even further when specialized use of yards and other facilities is possible. And consolidating traffic volumes also allows traffic to be pre-blocked and run around terminals, thus further freeing up capacity.

Route and terminal flexibility also gives operating officers more day-to-day options. If traffic falls on one line, traffic on another line can be shifted there to improve overall

efficiency. If maintenance is needed on one line or floods or other weather problems interfere with one line's operations, traffic can be shifted to another line, or trains staged on one of the two lines only, avoiding snowballing delays throughout the system.

Independent railroads simply do not agree to operate their basic routes and facilities in common. The reasons are the same as those that make joint-line service inferior to single-line service: differing priorities, railroads' desire for control of their separate destinies, and the inherent difficulty in reaching agreement on complex and ever-changing matters. The only way to realize the efficiencies of jointly operating UP's and SP's lines is for the two to merge.

Upon merger, UP/SP will gain in several major corridors the type of route and terminal flexibility that I have described. These corridors include Los Angeles-Chicago, Bay Area-Utah, and San Antonio-Houston-Dallas-Memphis-St. Louis-Chicago. Between Los Angeles and Chicago, expedited intermodal and auto traffic will be concentrated on the Tucumcari line and slower manifest traffic on UP's Central Corridor line, adding to the total capacity of both. Between the Bay Area and Utah, expedited traffic will move via SP's Donner Pass line, and the former WP Feather River line will handle the slower bulk traffic. And UP and SP mainlines in Texas and Arkansas will generally be operated

on a purely directional basis, adding greatly to effective capacity and greatly improving the efficiency of operations all the way from Chicago to Laredo.

In addition, as more fully described in the Operating Plan and the testimony of Messrs. King and Ongerth, there will be many new through blocks and carload trains that eliminate switching and terminal delays, including: (a) several trains in the Houston-Memphis-St. Louis-Chicago corridor that will bypass the Little Rock/Pine Bluff terminals, (b) new solid blocks between the Midwest and City of Industry, California (near the heart of Los Angeles) that will bypass the terminal at Colton, California, (c) a through Roseville-Chicago train that will bypass UP's classification yard at North Platte, Nebraska, (d) three new solid Little Rock-Conrail trains -- one each to Indianapolis, Pittsburgh and Columbus (the latter with a through block to Conrail's Selkirk Yard near Albany), and (e) an additional solid North Platte-Conrail train that will avoid switching in Chicago (UP runs one such train today, but SP has inadequate traffic volume and service to do so).

Capital savings made possible by the merger, together with other merger-related savings, will allow more capital to be applied where it can add major new capacity quickly. Thanks in part to the overall financial gains that the merger will generate, we project that the merged system will spend an additional $1.3 billion in capital, above and beyond combined UP

and SP 1994 expenditures, during the four years following consummation of the merger.

The merged system will invest to upgrade SP's Colton-El Paso and Tucumcari lines and UP's El Paso-Dallas line, thus adding further capacity to handle Southern California-Midwest, California-Dallas-Memphis, and California-Houston-New Orleans traffic. The merged system will also invest in upgrading the former OKT line between Herington, Kansas, and Fort Worth, so that, using a combination of UP and SP lines, heavy coal and grain trains can be run around Kansas City, relieving the congestion that plagues that terminal and UP's Topeka-Kansas City segment. As a result, capacity will be freed-up and operations smoothed on UP's line from Kansas City to Texas via Muskogee, allowing the merged system to institute much-improved Twin Cities-Texas intermodal and manifest service via Kansas City.

The merger will also alleviate congestion in Utah by eliminating the conflicting and inefficient movements of UP and SP traffic between Salt Lake City and Ogden which add unnecessary miles and hours to every UP and SP train that crosses the Central Corridor. Most UP/SP Northern California trains will be operated straight through at Ogden, as the pioneer railway builders of a century and a quarter ago intended, and BN/Santa Fe trains will be operated straight through between the former WP and the former DRGW at Salt Lake City, as also was originally intended.

In addition, the merged system will upgrade older, less efficient SP yards and, as discussed further below, will invest

heavily in new and improved intermodal facilities. At many locations, yard functions will be coordinated and streamlined, speeding the handling of traffic. For example, in San Antonio, UP's SoSan Yard will become a staging yard for Mexican traffic, which UP now stages at Ney Yard in Fort Worth. This will allow much greater flexibility in responding to changing day-to-day circumstances at the Laredo crossing and other Mexican gateways, and should save on average one day in transit time for Mexican business.

The BN/Santa Fe settlement will produce further pro-competitive benefits of the same type. Having a Central Corridor route as well as the highly efficient Santa Fe route between California and the Midwest will give BN/Santa Fe route flexibility advantages and increase its competitiveness. BN/Santa Fe will also gain route flexibility advantages in the Houston-Memphis-St. Louis-Chicago corridor.

4. Faster, More Frequent and More Reliable Service

Shorter routes, a broader single-line network that can build trainload volumes and support pre-blocking of traffic, route and terminal flexibility, improved capacity utilization, better application of capital dollars -- these in turn translate into faster, more frequent and more reliable service. Speed, frequency and reliability of service are of real, significant dollars-and-cents value to shippers. They reduce the inventory costs of shippers and receivers, reduce shippers' total railcar needs and thus equipment expense, reduce the costs of monitoring

transportation and protecting against transportation failures, and permit better-synchronized production and distribution activities. To the extent a railroad can provide faster, more frequent and more reliable service, that railroad is more competitive.

The merged system will offer improved schedules in a number of major corridors. Between Oakland and Chicago, and between Los Angeles and Memphis, the UP/SP system will do what neither UP nor SP can do separately -- equal, and in fact exceed, the speed of BN/Santa Fe's intermodal service. For example, the merged system will handle Chicago-Oakland intermodal trains in 53½ hours -- faster than BN/Santa Fe, several hours faster than UP's present schedule, and more than a day faster than SP's. The merged system's Memphis-Los Angeles schedule will cut half a day off SP's current performance, and will be run far more reliably.

Between Chicago and Los Angeles, UP/SP will be able to offer highly-reliable third-morning intermodal service -- something that neither UP nor SP can do today. BN/Santa Fe will still be the service leader, with a premium second-PM service that the merged system will not fully match, although a third-AM, 54 hour service will be offered. Without the merger, neither UP nor SP can be competitive with BN/Santa Fe's third-morning service, which appeals to a large segment of the service-sensitive intermodal market, including less-than-truckload ("LTL") and truckload motor carriers, and forwarders. Among the other major schedule improvements will be reductions of at least

16 hours in SP's Dallas-Oakland time (UP's is days longer), 13 hours in SP's Memphis-Oakland time (and more than a day in UP's), and 7 hours in SP's St. Louis-Los Angeles time (and again more than a day in UP's).

Intermodal train frequency will increase, with additional daily intermodal trains in each direction in the Bay Area-Chicago, Los Angeles-Memphis and Portland-Los Angeles corridors. New intermodal service will be established in the Seattle-Los Angeles and Seattle-Texas-New Orleans corridors. Additional manifest train service will include a new Pacific Northwest-Texas train, two new Texas trains for direct interchange with Conrail at Salem, Illinois, new through trains from the Southwest to CSX at New Orleans and NS at St. Louis, and a new North Platte-Conrail train.

The merger will also increase the reliability of rail service for UP and SP shippers, as discussed by Messrs. King and Ongerth. Route flexibility and increased capacity will enable the merged system to meet its schedules consistently, day in and day out. SP in particular suffers not only from slow service in many markets, but from unpredictable service -- which imposes real costs on shippers, who must protect themselves against risks of inventory stock-outs and sudden movements in materials prices. The benefits of the merger in terms of enhanced reliability are in many ways as important as those in terms of faster and lower cost service, if not more so.

5. Better Intermodal and Other Facilities

For many shippers, the quality of a railroad's terminal facilities -- intermodal facilities, auto ramps, storage-in-transit yards, rail-owned transloading facilities, and other specialized facilities -- is as important as the quality of its mainline freight service. In many ways, the merger will bring shippers better facilities and thus an improved transportation package.

Combining the best of UP's and SP's intermodal facilities, for example, will distinctly improve the merged system's intermodal service. Los Angeles-Chicago is by far the highest-volume intermodal lane in the country. SP's International Container Transfer Facility ("ICTF") in Los Angeles and UP's Global I and II facilities in Chicago are top-quality doublestack container facilities that play a significant role in attracting international and domestic doublestack business for each railroad. Combining these terminals on one rail system will greatly enhance UP/SP's competitiveness. UP also has good conventional TOFC terminals at Canal Street and Yard Center in Chicago and East LA in Los Angeles, and SP, though hampered by leasing others' facilities in Chicago, has a good facility at City of Industry near Los Angeles. Here again, combining these facilities on one system will enhance competitiveness. Today, neither UP nor SP, as separate railroads, can match the array of excellent intermodal facilities operated by BN/Santa Fe in Los Angeles and Chicago, including the San Bernardino, Barstow, San

Diego and Hobart facilities in Los Angeles and the Corwith, Willow Springs and Cicero facilities in Chicago.

The merged system also plans to build an "Inland Empire" intermodal facility in the Colton area, which will compete with BN/Santa Fe's San Bernardino facility and be oriented toward the business of the LTL and truckload carriers, virtually 100% of which is now handled by BN/Santa Fe. These steps will allow UP/SP to come closer to rivalling BN/Santa Fe as the Los Angeles-Chicago service leader.

As another example, in Northern California, BN/Santa Fe's intermodal facilities, at Richmond, North Bay, Stockton, Modesto, Fresno and Bakersfield, far outstrip those of UP or SP separately. Combined, however, UP/SP will be more competitive with BN/Santa Fe, with intermodal facilities at Oakland, Roseville, Lathrop and Fresno. (Under the settlement, BN/Santa Fe will also gain equal access to the planned Oakland Joint Intermodal Terminal.)

The merged system will also upgrade and better coordinate a variety of existing intermodal facilities, and yard operations all across the combined system will be improved, as Messrs. King and Ongerth describe.

The merger will produce synergies in the area of auto ramps as well. SP's under-utilized on-dock Benicia auto ramp in the Bay Area is a fine facility for both domestic and import traffic. SP also has other good-quality auto facilities, including the Marne and Valla ramps in the Los Angeles Basin and

the Midlothian facility near Dallas. Combining these facilities with UP's outstanding auto ramps at a number of points throughout the West, including the Mira Loma facility in the Los Angeles Basin, the Rolla facility in Denver, the Barnes facility in Portland, the Kent facility in Seattle, the Mesquite facility near Dallas and the Westfield/Candleridge facilities near Houston, will make UP/SP more competitive for the business of the automobile companies, which are constantly pressing for service quality improvements.

Shippers of some bulk commodities such as plastic pellets often need in-transit storage of their product in shipper-owned railcars on railroad yard tracks. Storage in transit ("SIT") allows plants to be run at capacity and product to be readily available for prompt movement to various end markets as product price and demand change. The UP/SP merger will make new SIT yard capacity available at UP's Amelia Yard (near Beaumont) and in St. Louis, which will importantly increase the competitiveness of the merged system for these commodities. Also, UP's more extensive Gulf Coast SIT capabilities will be made available to SP shippers.

The merger will also make a variety of UP transloading facilities available to SP shippers, including UP's Sarpy Avenue perishables facility in St. Louis, steel facilities in Los Angeles and Stockton, and bulk commodity facility in Dallas.

6. Improved Equipment Utilization and Supply

Equipment supply and cost fundamentally affect a railroad's competitiveness. Obviously, the more equipment a railroad can supply and the lower the rate it can charge for the use of that equipment, the more attractive the railroad is as a transportation alternative. The more efficiently a rail system is operated -- the shorter its routes, the faster and more reliable its schedules -- the more rapidly it can cycle railcars. Faster cycle times mean that the railroad can recover its investment in equipment with lower charges, and effectively can offer shippers more total cars. The same applies to privately-owned cars: the faster and more reliably the railroad can turn them, the fewer cars the shipper must own and the lower are the shipper's overall transportation costs.

The UP/SP merger will yield improved equipment utilization and supply in multiple ways. The singular competitive benefits of this merger become apparent in considering these cumulative sources of equipment gains.

First, the shorter routes, faster schedules, reduced delays and greater reliability that will result from the merger will improve equipment utilization. Cars will carry more loads per year, which is the equivalent of adding more cars to the fleet. Shippers will be able to reduce the number of cars that they own, or to move more product in the same number of cars. The designers of the Operating Plan have estimated that equipment savings from this source alone will total over 1 million car-days

per year, or the equivalent of some 3,000 additional railroad-owned and private cars.

Second, the merger, because of the way it meshes the UP and SP systems into an integrated network, will greatly increase opportunities to reposition equipment efficiently. Today, UP is fundamentally hampered in repositioning equipment because of its route structure. From Utah, UP's lines extend like three fingers to the Pacific Northwest, the Bay Area and the Los Angeles Basin, and UP has no lines connecting the fingers together at their ends. SP's Portland-Bay Area-Los Angeles lines provide the missing connections, allowing empty equipment to be repositioned up and down the West Coast for reloading. UP is also missing a Southern Corridor line, and thus cannot reposition equipment between Texas and California. SP too suffers from repositioning limitations. For example, as we have already seen, it has circuitous routes in a number of markets (e.g., Portland-Midwest), which add to repositioning costs, and its service and capacity problems have reduced the effectiveness of the Southern Corridor for repositioning.

Third, and related to repositioning, the merger will greatly enhance opportunities for triangulation and backhauls. Truckers can move from point to point on the dense highway network, maximizing the miles that they travel under load and minimizing their empty miles. Railroads, because of the limitations of their networks, have more difficulty avoiding

empty backhauls of equipment. Creation of a comprehensive UP/SP network spanning the West -- as the BN/Santa Fe network does now -- will allow more triangulation (movement from Point A to Point B to Point C, and so on, with every leg, or at least most legs, under load) and backhauls (movement from Point A to Point B and back, with both legs under load) of both UP/SP and shipper-owned equipment.

A few examples of triangular movements made possible by the merger are: (a) movement of Florida citrus to Southern California, repositioning of the empty refrigerated equipment to Idaho, and movement of potatoes or frozen foods back to Florida; (b) movement of lumber in centerbeam flatcars from the Pacific Northwest to Chicago, reloading with steel products for handling to Los Angeles, and repositioning of the empty equipment back to the Pacific Northwest; and (c) handling of loaded intermodal trailers or containers from the Midwest to Portland, followed by a loaded or empty movement to Northern California, and return under load to the Midwest.

Fourth, there will be opportunities to make better use of equipment by combining and jointly managing the UP and SP car fleets. Where one railroad has surplus equipment, that equipment will be used to exploit business opportunities at points on the other railroad. Examples include (a) UP refrigerator cars, which can be used to handle perishables and frozen foods from SP origins, (b) SP high-cube boxcars, which can be used to handle paper from UP origins, (c) UP 60-ft. RBL insulated boxcars, which

can be used to handle canned goods from SP origins, (d) UP gondolas, which can be used to handle metals from SP origins, and (e) UP centerbeam flatcars, which can be used to handle lumber from SP origins. Also, as quantified in the Operating Plan, the differing seasonal patterns of use for each equipment type by UP and SP will create opportunities to load one railroad's cars at points on the other railroad.

Fifth, faster turnaround times and improved empty-return ratios will increase the attractiveness to the merged system and shippers of investing in more cars. The result -- as with many of the matters I have discussed -- will be more, and more efficient, economic activity, producing increased economic welfare for the entire nation.

Finally, another important specific equipment-related benefit of the merger will be a new capability to handle 286,000-lb. cars between Fort Worth and points south. These heavy-loading cars are much more cost-effective for grain and coal movements. At present, bridge restrictions prevent UP from moving 286,000-lb. cars south of Fort Worth to points such as Houston, but the merged system will be able to assemble routes using SP and UP line segments that can accommodate such cars. This will benefit Kansas wheat shippers moving their product to Houston, Galveston and Beaumont for export, and coal users such as the Lower Colorado River Authority at Halsted, Texas, and City Public Service of San Antonio at Elmendorf, Texas, moving coal from the Powder River Basin in Wyoming.

The settlement will also give BN/Santa Fe shippers equipment benefits. For example, purchase of the Bieber-Keddie line and associated trackage rights will allow BN/Santa Fe to reposition empty equipment between the Pacific Northwest and California, which it presently cannot do (its only line is via Denver). And the shorter BN/Santa Fe routes and greater BN/Santa Fe route flexibility made possible by the settlement will reduce turnaround times for equipment on the BN/Santa Fe system.

7. Lower Costs

The UP/SP merger will give rise to many efficiencies that will reduce the costs of the merged system, ranging from the elimination of redundant corporate overheads to the consolidation of mechanical facilities to the coordination of terminals to more economical purchasing. These cost savings are quantified and discussed in detail in the Operating Plan and the Summary of Benefits Exhibit and related verified statements. Lower costs mean increased competitiveness, through greater productivity, greater capital investment, and better rates and service for shippers. Conversely, a high-cost operation, such as SP's chronically has been, ultimately means an inability to be competitive and stay in the race against more efficient rivals, such as BN/Santa Fe.

The merger will produce cost reductions in multiple ways. Some, as I have said, will flow from cutting duplicative functions such as computer systems and corporate staff. Some will flow from the overall synergies of the integrated network --

shorter routes save crew, locomotive and fuel costs; less switching saves switch engine hours; better repositioning saves costs associated with locomotive and car imbalances. Some will result from adopting "best practices" on the entire merged system -- the most efficient way that either railroad has developed of performing mechanized track maintenance, calling crews, minimizing loss and damage, repairing car wheels, or handling a particular customer service function. The net result will be hundreds of millions of dollars in annual savings -- $508 million per year once the merger's effects are fully phased in. This translates directly into stronger competition, because it will allow the merged railroad to invest more in better services and offer more attractive rates and service to shippers.

8. Reduced Switch Charges

In 1988, SP almost doubled the reciprocal switch charges that it requires other railroads to pay when SP switches an open industry. (The increase did not apply to DRGW points.) Before the increase, these charges had long been under $100 per car, and had then increased to $250 per car in the mid-1980s. After the increase, the charges were $450 per car, and they have since escalated to $495 per car. Other Western railroads, including BN, Santa Fe and UP, responded by similarly increasing their switch charges vis-à-vis SP (but not vis-à-vis each other).

Upon merger, UP/SP will significantly reduce these switch charges. We would expect BN/Santa Fe to make similar reductions in its "mirror image" charges. This might well occur

through negotiation between UP/SP and BN/Santa Fe of a standardized systemwide reciprocal switch charge agreement, such as UP negotiated in recent years with Santa Fe ($100 per car for non-grain and $60 for grain) and BN ($130 per car for non-grain and $60 per car for grain). This will produce a real benefit for shippers.

The existence of switch charges between UP and SP means that the merger will be pro-competitive in a further important way. The merger will of course completely eliminate all UP-SP switches, and thereby produce new single-line access for the shippers of each merging railroad that currently must pay the charge to ship to or from points on the other merging railroad.[26]

Under the BN/Santa Fe settlement agreement, "2-to-1" shippers will also benefit from reduced switch charges. Virtually all of the UP-SP "2-to-1" shippers now have access to a second railroad only through reciprocal switching; only a tiny handful have direct service from both UP and SP. Under the settlement agreement, BN/Santa Fe can elect whether to serve each "2-to-1" shipper directly or via reciprocal switching, and if reciprocal switching is chosen, the charge will be far below the $495 charges now generally in effect.

9. Benefits for Connecting Railroads' Shippers

It is important, finally, to note that the pro-competitive benefits I have described will accrue not only to

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[26] See, for example, statements of Arkansas River Terminal Company (Ryan-Walsh, Inc.) and Strickland Trading.

UP/SP (and BN/Santa Fe) shippers, but to shippers located on other railroads.

Shippers on the three major Eastern railroads, the two Canadian systems (including their subsidiaries such as Soo and GTW), other Class I railroads such as KCS and IC, and regional railroads all will have a wider array of choices as a result of the merger and the settlement. Shippers on CSX and NS in Mississippi, Alabama and Florida, for example, will now be able to route their traffic via New Orleans in conjunction with two much stronger and more comprehensive Western systems (in addition to KCS and IC). Shippers on the Canadian roads will have access via the Washington, Idaho and Montana gateways to two new single-line service networks in the I-5 Corridor, and direct access via Duluth/Superior (CN) and the Twin Cities (CP) to SP points. KCS and IC shippers will gain direct access to many new points via KCS' and IC's current junctions with the merging railroads and BN/Santa Fe. KCS shippers, for example, will now be able to reach Arizona, New Mexico and California much more effectively via Dallas/Fort Worth, and IC shippers in Louisiana and Mississippi will now be able to reach many points newly served by BN/Santa Fe under the settlement via IC's new interchange with BN/Santa Fe at New Orleans. Shippers on regional roads will gain similar benefits. At present, for example, shippers on CCP and IAIS in Iowa can only reach SP Western points not served by UP efficiently on a three-carrier basis. After the merger, they will be able to reach those points on a two-carrier basis. And

shippers on those railroads (and others, such as WC) will also be able to reach Salt Lake City/Ogden, Reno, San Jose, and a variety of other points via connections with BN/Santa Fe at the Twin Cities, Council Bluffs, Sioux City, Des Moines or other junctions.

Competition will also be enhanced for shippers on the many shortline railroads that connect to UP and SP (and BN/Santa Fe). For access to end markets and supply sources, shippers on shortlines depend on fast, efficient, single-line service by the Class I railroad or railroads with which those shortlines connect. Both shortlines[27] and shippers served by shortlines[28]

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[27] See the statements of RailTex Service Company and RailTex's 25 Subsidiary Railroads, Louisiana & Delta Railroad, Port of Tillamook Bay Railroad, Angelina & Neches River Railroad, Stockton Terminal & Eastern Railroad, Kyle Railroad, Georgetown Railroad, Brownsville & Rio Grande International Railroad, Nebraska Central Railroad, Hampton Railway, Southeast Kansas Railroad, Blue Mountain Railroad, Eastern Idaho Railroad, Osage Railroad, Palouse River Railroad, Klamath Northern Railroad, Iowa Northern Railway, City of Prineville Railway, Buckingham Branch Railroad, Columbus & Greenville Railway, South Kansas & Oklahoma Railroad, Yreka Western Railroad, Winchester & Western Railroad, Willamette & Pacific Railroad, Washington Central Railroad, Vision Transportation Technologies, Tulsa-Sapulpa Union Railway, Texas South-Eastern Railroad, Texas, Gonzales & Northern Railway, San Pedro & Southwestern Railroad, Sierra Railroad, Shortline Services, Santa Maria Valley Railroad, Santa Cruz, Big Trees & Pacific Railway, San Joaquin Valley Railroad, Pioneer Railcorp, North Coast Railroad, Ironhorse Resources, East Camden & Highland Railroad, California Western Railroad, California Northern Railroad, Austin, Todd & Ladd Railroad, Arizona Eastern Railway, and Pend Oreille Valley Railroad.

[28] For example, Dyno Polymers, Pictsweet Frozen Foods, Mountain River Produce, Van Den Bergh Foods, Ingomar Packing, Keller Lumber, Pacific Lumber, Regulus Stud Mills, Blue Lake Forest Products, Eugene F. Burrill Lumber, Hanel Lumber, Hi-Ridge Lumber, Medply, TreeSource, Mid-Willamette Precut, Ocean

(continued...)

support the UP/SP merger because of the many competitive benefits it will bring, including shorter routes, expanded single-line service, better equipment supply, a system that can match BN/Santa Fe in its scope, and a solution to SP's service problems and capital constraints.

D. Meeting the Competitive Challenge of BN/Santa Fe

As I have said, the merger of BN and Santa Fe precipitated the UP/SP merger. BN/Santa Fe's President, Robert D. Krebs, acknowledged following the issuance of the Commission decision approving the BN/Santa Fe transaction that BN/Santa Fe is "in a position to be the dominant carrier in the West, or certainly the strongest carrier in the West."

At nearly 32,000 route miles, BN/Santa Fe's physical scope far exceeds that of UP (fewer than 23,000 route miles) or SP (fewer than 17,000).[29] BN and Santa Fe had nearly 46,000 employees in 1994, compared with UP's 36,000[30] and SP's 18,000.

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[28](...continued)
Terminals, San Joaquin Refining and NuChem Industries.

[29] After the merger and settlement, the BN/Santa Fe and UP/SP systems will be closely comparable in mileage. BN/Santa Fe's mileage will be 35,800, and UP/SP's (including merger-related abandonments) will be 36,200. This reflects, under the settlement, the sale to BN/Santa Fe of UP and SP lines, the granting to BN/Santa Fe of trackage rights over UP and SP lines, and the granting to UP/SP of trackage rights over BN/Santa Fe lines. Because UP and SP have substantial distances of trackage rights over each other and of joint track, the combined UP/SP will have substantially fewer miles than the sum of UP and SP miles.

[30] UP financial data in this and the following paragraph include CNW and CNW's WRPI subsidiary. SP data include SSW, DRGW
(continued...)

BN and Santa Fe tons originated were 366 million in 1994, UP 293 million, and SP 104 million. In revenue ton-miles, the combined BN/Santa Fe figure for 1994, 361 billion, was well in excess of UP's 289 billion and SP's 139 billion. With the gains from its merger, BN/Santa Fe's gross freight revenues will be $7.8 billion in contrast to UP's 1994 figure of $6.2 billion and SP's of $3.1 billion. With merger gains, BN/Santa Fe's net railroad operating income will be $1.3 billion, compared with UP's 1994 figure of $1.3 billion and SP's of $226 million (which is sharply off in 1995).

As for capital expenditures, BN and Santa Fe spent $1.3 billion in 1994, and the merged BN/Santa Fe has announced that it will spend $3 billion over the next two years on capital projects. UP, in contrast, spent $928 million in 1994 (which at the time was the highest capital outlay ever by a railroad, but now will be dwarfed by BN/Santa Fe outlays), and SP $553 million (a level that could be difficult to sustain if SP's 1995 downtrend in earnings persists). Even before their merger, BN and Santa Fe were leaders in technology in many areas, including motive power (e.g., through the use of AC locomotives), freight cars (e.g., through the use of a trough train for major coal shipments), and train management (e.g., through the use of satellites for tracking and controlling train operations). And the combined operating ratio of BN and Santa Fe had declined from

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[30](...continued)
and SPCSL, as well as SPT.

88.4 in 1990 to 83.5 in 1994, and was projected, based on 1993 data, to decline further with merger benefits to 79.3, far below the 83.5 1994 operating ratio of UP and SP combined.

BN/Santa Fe is moving very rapidly to implement its merger. As noted, it has announced dramatic increases in capital expenditures. It has already instituted greatly improved intermodal service between California and Memphis, with onward single-line service to Birmingham and expedited connecting service to Atlanta. Double-tracking of BN/Santa Fe lines in New Mexico, Texas and Oklahoma is being accelerated. The new company has announced that it will lay off some 1,600 non-agreement employees, sharply reducing overhead expenses. And shippers are already beginning to divert traffic to BN/Santa Fe under contracts that anticipate the competitive benefits of the BN/Santa Fe merger. When SP's President, Jerry Davis, announced that SP had earned barely $1 million in the third quarter 1995, compared with $33.5 million in the third quarter of 1994, he stressed that the "pressure from the BN/Santa Fe" was already being felt.[31]

Where, concretely, does the BN/Santa Fe merger confront UP and SP with a much stronger competitor that they must merge in order to compete with effectively? Here are some examples:

-- Between Los Angeles and Memphis, neither BN nor Santa Fe had a single-line route. UP also lacks a direct single-

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[31] SPR Press Release, Oct. 24, 1995, p. 1.

line route (as already noted, its route via Utah is highly circuitous). SP had the only single-line route in this important corridor, but its line is congested west of El Paso and its route is circuitous, since it goes through San Antonio. By merging, BN/Santa Fe gained a single-line route that is more direct and faster than SP's, and as already mentioned BN/Santa Fe has acted promptly to implement new intermodal service in this corridor that surpasses SP's. The UP/SP merger meets this competitive challenge with a new, shorter route, 135 miles shorter than BN/Santa Fe's, over track that will be upgraded for faster service. Much the same is true between Oakland and Memphis, and between Phoenix and Memphis -- BN/Santa Fe gained new single-line routes that far surpass either UP or SP, and here, by merging, UP and SP will gain routes that are the close equivalent of BN/Santa Fe's.

-- Between Oakland and St. Louis, and between Los Angeles and St. Louis, BN and Santa Fe again separately had no single-line route. By their merger, the BN/Santa Fe system gained shorter, highly competitive single-line routes in both corridors. The UP/SP merger meets this competitive challenge by (a) creating a new Oakland-St. Louis route that is 143 miles shorter than SP's and 189 miles shorter than UP's, (b) concentrating UP/SP-system Los Angeles-St. Louis traffic on SP's Tucumcari route, which is 162 miles shorter than UP's route, and (c) giving the merged system route and terminal flexibility in both corridors.

-- The BN/Santa Fe merger created new, direct single-line routes between Washington, Idaho and Western Canada gateways, on the one hand, and Texas, Central Mexico (via El Paso) and Eastern Mexico (via the Eagle Pass haulage rights that BN/Santa Fe secured from SP in their BN/Santa Fe case settlement), on the other hand. BN/Santa Fe stressed the importance of these new routes to the development of the North American common market under NAFTA and to greater economic development within our own nation, and the Commission concurred.[32] The UP/SP merger meets this competitive challenge by creating new UP/SP single-line routes between Seattle/Spokane/Western Canada and El Paso/Eagle Pass.

-- BN and Santa Fe, by merging, created the only single-line route between SP/Santa Fe common points such as Phoenix, Fresno and Bakersfield and (a) BN/UP common points in the Upper Midwest such as Sioux City, the Twin Cities, Des Moines, Omaha and Duluth/Superior, (b) BN/UP common points in the Pacific Northwest such as Seattle, Tacoma, Spokane, Coeur d'Alene, Idaho, and Lewiston, Idaho, and (c) Western Canada. Again these new single-line routes were highlighted by the Commission in approving the BN/Santa Fe merger.[33] The UP/SP merger meets this competitive challenge by creating competing single-line routes linking all these points.

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[32] BN/Santa Fe, Decision served Aug. 23, 1995, pp. 60-61.

[33] Id., p. 60.

-- BN and Santa Fe had parallel high-speed mainline routes between Chicago and Kansas City, Kansas City and Dallas, and Dallas and Houston. Between these points, BN/Santa Fe gained significant route and terminal flexibility advantages by merging. For example, one of their merger-related construction projects was building a connection at Galesburg, Illinois, to facilitate the flexible use of their two Kansas City-Chicago lines. These Chicago-Kansas City operating benefits improve BN/Santa Fe service in both the Chicago-Houston corridor and the California-Chicago corridor. The UP/SP merger meets this competitive challenge by creating similar route and terminal flexibility benefits in both the Chicago-Houston and California-Chicago corridors.

More generally, what these two mergers, plus the settlement with BN/Santa Fe, do is to create two comprehensive, evenly-matched, extremely competitive Western rail systems. This not only greatly intensifies intramodal rail competition. Perhaps even more importantly, it greatly enhances the competitiveness of the rail mode against other transport alternatives, particularly over-the-road truck. After decades of losing a larger and larger share of all surface freight to trucks, the railroads' share has slightly improved, but further gains against other modes are crucial to rail's long-term viability and full development of the potential of the rail mode. Only the UP/SP merger will allow this further forward leap for the competitiveness of railroads.

On the other hand, without the UP/SP merger, there will be only one comprehensive Western rail system, BN/Santa Fe. While lacking the further new coverage that it will gain through the settlement agreement, it will outstrip UP substantially and SP by far. As I next discuss, the resulting competitive disequilibrium will leave SP severely imperilled.

E. Overcoming SP's Service and Capital Constraints

As related by Messrs. Gray and Yarberry, SP requires substantial improvements in its service and capital resources. SP has a good franchise -- many direct routes; many on-line shippers in California, Oregon and the Texas/Louisiana/Arkansas area; service to more Mexican gateways than any other railroad. It has embarked on programs to improve its service. But its capacity to generate necessary capital from operating income has been marginal for years.

Among the steps that SP needs to take in order to overcome these problems are: (a) purchases of new equipment; (b) increases in the clearances on its Donner Pass and Moffat Tunnel routes so that it can handle high-cube doublestack traffic across the Central Corridor; (c) upgrading of its Roseville Yard, its Colton-El Paso line, its Tucumcari line and its Houston-Shreveport line; and (d) installation of advanced operating systems and technology that will allow it to plan daily operations, handle traffic more efficiently, calculate its costs accurately, trace cars better and bill customers more accurately. The BN/Santa Fe merger, by heightening the competitive pressures

on SP, has accelerated the need for these improvements, and merger with UP is clearly the best way to accomplish them.

One of the basic sources of SP's service problems and capital constraints is the fact that SP's traffic densities are modest compared to other Western railroads. Its revenue ton-miles per route mile are less than 10 million, compared with 12 million for BN/Santa Fe (before merger benefits) and 13 million for UP. Its freight service revenues per route mile ($214,000) are far below those of BN/Santa Fe ($251,000, before merger benefits) and UP ($271,000). SP has both Central Corridor and Southern Corridor transcontinental routes, each largely single-track, difficult to operate and costly to maintain, and the distribution of its traffic is such that it cannot eliminate either of those routes without losing more than it would gain.

Again, with respect to these issues, the only certain solution for SP is a merger with UP. My review of the relevant traffic suggests that the trackage rights conditions that SP negotiated over BN/Santa Fe in the BN/Santa Fe merger case are not, of themselves, a sufficient answer. The right to move intermodal and auto traffic over BN/Santa Fe's line between Hutchinson, Kansas, and Chicago will improve SP's California-Chicago service, but it will not overcome the capital constraints and operating problems that limit the potential of both SP's Tucumcari and El Paso-Colton lines (and its Central Corridor lines as well). The trackage rights between Pueblo, Colorado, and Fort Worth will attract Texas Panhandle and overhead traffic,

but they do not open up or improve the efficiency of any major existing traffic flows. And the trackage rights from Kansas City to Fort Worth are likely to move modest volumes of grain traffic, but will face formidable Kansas City-Texas grain competition from BN/Santa Fe, UP and KCS.

Instead, the BN/Santa Fe merger casts SP's future competitive capability into question.[34] Only a merger with UP will meet the competitive challenge of BN/Santa Fe, complete SP's network, diversify its traffic base, or so certainly solve SP's capital constraints.

For this reason, the biggest winners in the UP/SP merger will be SP's shippers, who have experienced ongoing service problems and worries about SP's investment limitations. SP has hundreds of carload lumber and food products shippers local to its lines in California and Oregon who have long experienced two- or three-week delivery times to the Midwest, cars lost and untraceable in terminals, inaccurate bills, and unavailable equipment.[35] Some have limited or eliminated their

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[34] SPR's Form 10-Q for the third quarter of 1995 states (p. 20): "If the Company's proposed merger with UPRR were not completed, management now believes the Company would have to shrink its service. After several years of extraordinary capital expenditures to rebuild its locomotive fleet, the Company will not be able to match the financial resources of BN/ATSF or UP going forward to provide the facilities and other service enhancing investments necessary to be fully competitive on a stand-alone basis."

[35] See, for example, statements of Hirt & Wood Lumber, Crown Pacific Lumber, J.H. Baxter, Keller Lumber, San Joaquin Valley Dairymen, Golden Aluminum Company, Fought & Company, (continued...)

carload rail shipment and are paying more to move their goods by truck or BN/Santa Fe intermodal or transload service -- and would return their traffic to rail if SP could provide adequate service.

These shippers, and other shippers who are dependent on SP throughout the West,[36] will gain from a UP/SP merger the

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[35](...continued)
Cascade Empire, Compass Consolidators, Consolidated Oil, Crown Pacific, FMC, Giglio Distributing, Hannibal Industries, ICI Paints North America, Keystone Terminals, MACSTEEL, MBT Fertilizers, Owens-Illinois, Piggyback Plus, Pioneer Chloali, Premier Juices, Rexene, Terminal Consolidation, USA Industries and Western International Forest Products.

[36] The statement of Navajo Western Asphalt is representative of many others:

> "We have had hundreds of thousands of dollars in additional costs as a result of service problems on the SP railroad in the past three years. It became necessary for us to move from a plant location serviced by the SP to another location in Phoenix being served by the Santa Fe railroad in order to remain competitive in our industry and give the service that our customers expect from us.
>
> Unfortunately, the situation is not the same in Tucson where we have no alternative but to remain on SP tracks. It has been my experience working with the SP personnel that they are bright, hard working, energetic people who are simply not able to maintain the railroad they operate to the standards they themselves would like to be able to achieve. The frustration I have felt with these poor individuals who are responsible for maintaining this railroad is genuine. I know they would like to fix the problems if they had the equipment and finances available. It is obvious they do not have this because their railroad would not be in the shape it is in presently.
>
> It is evident to me that the SP does not have the finances to make these repairs and I am under the impression if this merger is approved, the UP will do an excellent job as they have on their railroad. Those of us in Arizona desperately need the finances and expertise of the Union
>
> (continued...)

assurance of long-term, high-quality rail service. SP's transcontinental service time will be reduced from weeks to days; service in other markets will similarly improve; reliability will be vastly increased; and cars will once again be available. This, as much as the multiple other pro-competitive aspects of the merger that I have discussed, is a crucial improvement in competition: it means that for the first time in many years, rail will be a real competitor for these shippers' business. Affected communities will see a major increase in output, and the entire Western, and indeed national, economy will benefit.

F. Every State in the UP/SP Service Territory Will Enjoy Stronger Competition

It is also useful to review the competitive impacts of the merger and the BN/Santa Fe settlement on a state-by-state basis. Many of the merger's pro-competitive effects, such as cost reductions and better equipment supply, will be felt in all states. But highlighting the state-specific effects provides a further understanding of the strengthening of rail competition that will occur throughout the 25 states in the West where UP and SP operate.[37]

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[36] (...continued)
Pacific in order to bring the Southern Pacific up to UP standards. Without this possibility, I am afraid my business and many others will be in serious jeopardy if things continue as they are."

[37] The only Western state that UP/SP will not reach is North Dakota. With the settlement, BN/Santa Fe will serve every state in the West as well as Mississippi, Alabama and Florida. Both UP/SP and BN/Santa Fe also serve Memphis, Tennessee.

California. California will benefit from a remarkably long list of pro-competitive effects of the merger and settlement. California shippers will enjoy two new truck-competitive single-line routes in the I-5 Corridor, shorter UP/SP routes in both the Central and Southern Corridors, better access to Laredo, a new BN/Santa Fe Central Corridor route, a new BN/Santa Fe single-line route to and from New Orleans, access to BN/Santa Fe points in the Pacific Northwest under the proportional rate arrangement, and better BN/Santa Fe access to the Ports of Oakland and Los Angeles. The many exclusively-served SP shippers of such commodities as perishables, canned goods and lumber throughout California will enjoy much-improved rail service and new single-line access to numerous UP points (e.g., in the Upper Midwest and the Intermountain region). Perhaps most important of all, these shippers will be freed from continuing worry about SP's service.

Thanks to shorter mileages, route specialization, the new Inland Empire terminal, and the synergies of combining the best UP and SP intermodal facilities, BN/Santa Fe will for the first time face a real competitive challenge to its California-Midwest intermodal service leadership. International trade will be stimulated by better intermodal service, better BN/Santa Fe access to the Joint Intermodal Terminal at the Port of Oakland (which strongly supports the merger), and direct single-line access to the Ports of Los Angeles and Long Beach for Utah coal exporters. San Joaquin Valley feeders will gain single-line

access to UP grain origins, and shippers to and from the Bakersfield/Mojave area will benefit from UP/SP's Barstow-Mojave rights over BN/Santa Fe. All California shippers will benefit from better equipment supply, in important part because UP will overcome its inability to reposition equipment between Northern and Southern California and between California and the Pacific Northwest and Texas. And the "2-to-1" shippers in the Bay Area and the Los Angeles Basin will have two stronger rail options than before the merger.

Oregon. SP shippers all through Oregon, from Portland to Eugene to Klamath Falls to the California border, will receive greatly improved service and huge mileage savings for their transcontinental traffic, as well as single-line access to Washington, Idaho and the Eastport gateway to Canada. All SP and UP shippers in Oregon will benefit from more frequent and dependable UP/SP service in the I-5 Corridor, substantial mileage savings to Texas and Louisiana, and more competitive access to BN/Santa Fe points and gateways to the north under the proportional rate arrangement. The settlement will provide UP/SP with better access to the Port of Portland. BN/Santa Fe shippers in the state will gain single-line access to California, the Southwest and Mexico. And common fleet management will allow UP/SP to make more boxcars and centerbeam flatcars available to move Oregon forest products.

Washington, Idaho and Montana. Both UP/SP and BN/Santa Fe shippers in Washington, Idaho and Montana will enjoy a

tremendous increase in single-line rail service, with new UP/SP and BN/Santa Fe single-line routes to Oregon, California, the Southwest and Mexico. The proportional rate arrangement will provide a second competitive alternative to BN/Santa Fe shippers in these states moving traffic to and from Oregon and points south. Washington, Idaho and Montana shippers will gain shorter routes to Texas and Louisiana. More efficient UP/SP operations via the Central Corridor will benefit Seattle/Tacoma intermodal shippers and shippers of forest products, perishables, minerals and other commodities in this area.

Utah and Nevada. The substantial numbers of "2-to-1" shippers in Northern Utah and on the UP-SP paired track between Weso (near Winnemucca) and Alazon (near Wells), Nevada, will have service from two stronger, broader rail networks than they have today. Coordination of UP and SP routes and facilities in the Central Corridor, and rationalization of operations in the Provo/Salt Lake City/Ogden area, will yield better service to and from the Bay Area, Denver, the Midwest and the South Central region. Mileages will be shorter to the Bay Area and, for SP shippers, to the Midwest. And Utah coal producers served by SP will gain much shorter routes to Los Angeles/Long Beach for export, to Bakersfield/Mojave area cement and trona facilities, and to the Pacific Northwest, and single-line access to new destinations all across the UP system.

Colorado and Wyoming. UP-served shippers in these states, such as Wyoming coal and soda ash producers and

Northeastern Colorado agricultural producers, will gain shorter routes to Northern California, Texas, Louisiana and Mexico. SP-served Colorado shippers will gain shorter routes to Southern California, Northern California, the Pacific Northwest and most points in the Midwest, as well as new single-line access to UP points in the Upper Midwest, the Pacific Northwest and the South Central region. BN/Santa Fe shippers in both Wyoming and Colorado will gain a new, direct single-line route to California via BN/Santa Fe's Denver-Oakland rights. And SP-served Colorado coal mines will gain new access to UP coal users and transshipment facilities.

Arizona and New Mexico. As a result of the merger, SP-served shippers in Arizona and New Mexico will gain single-line access to UP points all over the West, and a much shorter route to Dallas and Memphis. BN/Santa Fe-served shippers in these states will gain a new single-line route to New Orleans. UP/SP will upgrade SP's east-west line across Arizona and New Mexico and SP's Tucumcari line running from El Paso northeast across New Mexico, improving service for SP shippers in both states. Both SP and BN/Santa Fe shippers in Arizona and New Mexico will gain new single-line access to the Pacific Northwest and Western Canada. Copper producers will gain a much shorter single-line route between their Arizona and New Mexico facilities and their facilities in Utah, and single-line access to many new destinations on UP for their metals and the chemical byproducts of their smelting operations. And Arizona feeders will be able

to source grain on a single-line basis from UP origins in the Midwest and Intermountain states.

Texas. Texas shippers will gain shorter routes to and from the Pacific Northwest and between Dallas/Fort Worth and Los Angeles. Shippers throughout North Texas will benefit, for their traffic to and from points to the west, from the upgrading of the former T&P line. Service between all major Texas points and Memphis, St. Louis and Chicago will be greatly improved by directional operation of UP and SP lines in Texas and Arkansas and coordination of associated terminals. The Port of Houston, seventh-largest port in the world, will gain improved service and stronger competition in all directions -- to and from California, the Pacific Northwest, the Midwest and the Southeast. As the Port of Houston Authority says in its support statement, "the merger will stimulate vigorous rail competition in many existing and new markets, which will benefit both the import and export trade."

The merged system's ability to handle 10% more grain in each car by using a combination of UP and SP lines will enhance exports of Midwestern grain through the Texas Gulf ports. Texas utilities will receive similar benefits with respect to their coal traffic. Gulf chemical manufacturers will benefit from the upgrading of SP's Southern Corridor route, stronger competition between UP/SP and BN/Santa Fe to and from the entire range of midcontinent gateways from Chicago to New Orleans, new SIT yard facilities, and faster turn times for expensive shipper-owned

equipment. BN/Santa Fe will receive extensive trackage rights in Texas, strengthening competition for shippers at San Antonio, Corpus Christi, Brownsville, Baytown, Orange and many other points, including two major power plant locations near San Antonio. BN/Santa Fe's new access to New Orleans will give Texas shippers two stronger single-line routes to that important gateway to the Southeast. Competition at Mexican gateways will be strengthened as a result of BN/Santa Fe trackage rights access to Eagle Pass, Brownsville and the Tex Mex at Corpus Christi. Texas has many SP shippers not served by UP and vice versa, and all of these shippers will receive wide new single-line service to points on the other merging railroad. The numerous Texas shippers served by UP and not SP will gain new single-line service across the Southern Corridor. And the many shippers dependent on SP in Texas will receive the assurance of long-term, high-quality rail service.

Louisiana. Louisiana shippers will gain competitively in many ways. The UP-served shippers in the northern and central portions of the state will secure a new single-line route across the Southern Corridor and single-line access to a wide range of SP points not served by UP. SP-served shippers will gain much shorter north-south routes (since SP reaches Memphis, St. Louis and Chicago only via Houston), and single-line access to numerous UP points not served by SP. All UP/SP shippers in the state will gain shorter routes to and from the Pacific Northwest. Sale of SP's east-west line across the state to BN/Santa Fe, with UP/SP

retaining local-service trackage rights, will create new competition, with local shippers on the line having two serving railroad instead of one. New Orleans, as well as all points on the Southern Louisiana line to be sold to BN/Santa Fe, will be linked on a single-line basis with the entire BN/Santa Fe system and the entire UP/SP system.

Arkansas and Tennessee. There will be significant mileage savings between Memphis and California. These mileage savings -- ranging from 233 to nearly 600 miles -- will accrue not just to shippers routing traffic to, from and via Memphis, but to every UP and SP shipper in Arkansas. California service will be greatly improved as a result of these mileage reductions and the upgrading of the Colton-El Paso-Dallas lines. In Arkansas, the "2-to-1" shippers at Little Rock, Pine Bluff, Camden and other points, and on short lines connecting to UP and SP, will gain two better rail alternatives. North-south service through Arkansas to Memphis, St. Louis and beyond will be greatly improved by the directional operation of the merged system's lines and the coordination of its terminals. Arkansas lumber will move single-line to SP points, and SP-served grain receivers in Arkansas will be able to source grain single-line from UP origins.

Illinois and Missouri. Rail service to, from and via Chicago, St. Louis and other points in Illinois and Missouri will become more competitive, with shorter, faster routes to and from Northern California and SP points in Oregon, and better-

coordinated operations to Southern California and to Arkansas, Texas and Louisiana. There will be several new run-through trains that avoid switching in the congested Chicago and St. Louis terminal districts. And as a result of the merger, there will be, for the first time, a real challenge to BN/Santa Fe's dominance of service-sensitive intermodal traffic between the Midwest gateways and California.

Kansas and Oklahoma. Moving heavy coal and grain trains over the merged system's new bypass route via Topeka and Wichita will relieve congestion in the Kansas City terminal. The upgrading of the OKT line from Herington to Fort Worth will benefit shippers in both Kansas and Oklahoma. All shippers in these states will gain shorter routes to Northern California and SP points in Oregon, and UP shippers in Kansas and Oklahoma will also gain shorter routes to Southern California. And the merger will make possible heavier axle loadings for Kansas and Oklahoma grain destined to Texas Gulf ports.

Nebraska, Iowa, Minnesota, Wisconsin, South Dakota and Michigan. Finally, shippers and receivers in the Upper Midwest states that are served by UP and not SP -- Nebraska, Iowa (SP only touches the state at Fort Madison), Minnesota, Wisconsin, South Dakota and Michigan -- will gain single-line service to and from a wide range of SP points and gateways not served by UP, including Eugene, Klamath Falls, Fresno, Bakersfield, Phoenix,

Calexico, Nogales and numerous Gulf Coast chemical plants.[38] Grain from these states will move on a single-line basis to SP-served feeders in California, Arizona and Texas and to SP-served Mexican gateways. Wisconsin paper and food products will move single-line to SP destinations. And SP-originated products such as Oregon lumber, California perishables and canned goods, and Colorado coal will move more efficiently to these states.

G. There Will Be Stronger Competition for Traffic to and from Canada and Mexico

Just as the Commission found with respect to the BN/Santa Fe merger,[39] the UP/SP merger will foster the goal of North American economic integration embodied in the NAFTA agreement by greatly strengthening competition for traffic to and from both Canada and Mexico.

Canada. As already described, Western Canada will receive much-improved rail links with the United States and Mexico. The merged system will have new single-line routes from Eastport, Idaho, to Oregon, California, the Southwest and the Western Mexico gateways. Eastport traffic will also gain a shorter route, via Colorado and the Texas Panhandle, to Dallas, Houston and New Orleans. The proportional rate arrangement will allow UP/SP to compete via Portland for traffic to and from

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[38] UP's lines in South Dakota and Michigan are disconnected from the rest of the UP system, but there too shippers will benefit from better access to markets that they now cannot reach because of the need for multiple interchanges.

[39] BN/Santa Fe, Decision served Aug. 23, 1995, pp. 60-61.

BN/Santa Fe's Western Canada gateways, including lumber originating on BC Rail and Alberta grain and chemicals originating on CN. BN/Santa Fe will have new single-line routes from the Vancouver and Sumas gateways to California, the Southwest, and the San Diego and El Paso gateways to Mexico. Competition will also be stronger for traffic moving in interchange with CN via Duluth/Superior and CP via the Twin Cities, because all SP points will now be accessible on a single-line basis from those interchanges.

Strong support for the merger from shippers to and from Canada reflects these pro-competitive benefits for Canadian traffic.[40]

Mexico. There will be stronger rail competition at every UP and SP gateway to Mexico as a result of the merger and the BN/Santa Fe settlement.

BN/Santa Fe will gain trackage rights access to Brownsville, and shippers via that gateway, rather than having single-line access only to UP and SP points, will have single-line access to BN/Santa Fe points as well. UP/SP and BN/Santa Fe

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[40] See, for example, the statements of Exxon Chemical Canada, Crestbrook Forest Industries, Repap Enterprises, James Maclaren Industries, Interamerican Logistics, Donohue, Inc., Canbra Foods, West Fraser Timber, Sinclar Enterprises, Kruger, Inc., Sunac America, Byers Transport, Tolko Industries, ICI Explosives, Agrium, NGL Supply, Canada Colors & Chemicals, Neos Forest Products, Pas Lumber, Wheels International Freight Systems, CanAmera Foods, International Forest Products and Crystal Forest Industries.

will be two much stronger competitors for Brownsville traffic than UP and SP are today.

The same will be true at Eagle Pass, where the settlement will convert BN/Santa Fe's access from haulage via a Caldwell junction to more direct trackage rights efficiently linking Eagle Pass with all points on the BN/Santa Fe system, including New Orleans. BN/Santa Fe will also serve San Antonio en route to Eagle Pass, which will allow it to mount a more effective operation.

Shippers via Laredo -- the premier Eastern Mexico gateway because of its excellent infrastructure and customs facilities -- will gain single-line access to SP points, and a new, stronger[41] competitive alternative, in the form of BN/Santa Fe, for Laredo-Tex Mex-Corpus Christi routings.[42] Thanks to the merger, there will for the first time be single-line intermodal and carload service between Laredo and the West Coast.

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[41] See the statement of LMS International, a Laredo warehousing and distribution company: "We began our rail transload activities on the Tex Mex. We were forced to locate another facility on the Union Pacific due to continued customer disgust in the Southern Pacific Railroad service."

[42] BN/Santa Fe will have the same strong incentive to work with Tex Mex to handle Laredo traffic that SP has today. SP cooperates closely with Tex Mex, despite the fact that SP has direct access to Brownsville and Eagle Pass (and to El Paso, Nogales and Calexico further west), because many shippers prefer Laredo and a substantial segment of Mexican shippers prefer to route traffic via Tex Mex. SP's Laredo volume in conjunction with Tex Mex in 1994 was compared with via Brownsville and via Eagle Pass.

Shippers via El Paso will have two greatly-strengthened rail alternatives, with UP/SP and BN/Santa Fe single-line service to the Pacific Northwest and Western Canada, upgrading of the SP lines west to Colton and northeast to Kansas City, new BN/Santa Fe single-line service to New Orleans, and shorter routes for Southern Idaho grain, Wyoming soda ash and other products.

Finally, shippers via the Western Mexico gateways that are solely served by SP -- Nogales and Calexico -- will gain single-line access to hundreds of UP points, including Midwest grain origins, Pacific Northwest points and Canada gateways.

Overall, BN/Santa Fe's much-expanded access to Mexico, as well as within Texas and at New Orleans, will bring greater balance to the competition for Mexican rail traffic, which at present is largely handled by SP to and from points to the west and UP to and from points to the north and east.[43] The more efficient Mexican routings for both UP/SP and BN/Santa Fe will

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[43] In 1994, based on actual UP and SP data and Waybill Sample data for other railroads, SP originated and terminated at the Texas end of the movement moving between the West Coast and the four BEAs surrounding Eagle Pass, Laredo and Brownsville; and UP originated and terminated at the Texas end of the movement moving between those four BEAs and the Midwest gateways (Memphis, Kansas City, St. Louis and Chicago), the Upper Midwest, the Northeast and the Southeast. BN/Santa Fe's wider access to Mexico will create more balanced competition for these flows. (It should also be noted that although the South Orient Railway, which has a line from Fort Worth to the Mexican gateway at Presidio, was a minor factor in 1994, it will become a stronger competitor thanks to the recent upgrading of the FNM line from Presidio south and an agreement that South Orient arrived at with BN/Santa Fe in the BN/Santa Fe merger case that allows interchange between South Orient and other railroads, including KCS, at Fort Worth.)

help improve the rail share of traffic to and from Mexico. Today, trucks dominate this traffic. Even at Laredo, the most efficient Mexican rail gateway, trucks handle 86% of the cross-border traffic.[44] Upgrading the Southern Corridor lines, instituting new Laredo-California intermodal service, and greatly improving the efficiency of operations in the Laredo-Memphis-St. Louis-Chicago corridor will give rail a much better ability to capture a larger share of this market.

There will be a number of other pro-competitive benefits for Mexican traffic as well. Both UP and SP shippers will be able to choose among the full range of Mexican gateways that the two railroads serve today. The directional operation of UP and SP lines in the San Antonio-Memphis-St. Louis corridor will allow faster and more reliable handling of Laredo traffic. The merger will allow UP and SP equipment to be reloaded in Mexico and returned to whatever gateway is most efficient, whereas today UP equipment must be returned to a UP gateway and SP equipment to an SP gateway. UP has led the way in improving the flow of rail traffic to Mexico with its "Despacho Previo" process, under which Laredo traffic is pre-blocked and pre-cleared, its pre-waybilling process, and its bi-lingual International Customer Service Center in Laredo; these systems will be extended to SP gateways and shippers. Finally, the much wider access to Mexico that BN/Santa Fe will gain from the

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[44] Mexican Customs data.

settlement will give BN/Santa Fe a stronger incentive to bid on concessions as the Mexican government proceeds with plans to privatize and introduce competition into the Mexican railway system.

As with Canadian traffic, scores of shippers of traffic to and from Mexico recognize these competitive benefits in supporting the merger.[45]

H. Every Commodity Group Will Enjoy Stronger Competition

Another important perspective on the competitive impact of the UP/SP merger and the settlement with BN/Santa Fe is in terms of the major commodity groups handled by UP and SP. A review of those commodity groups shows the uniformly pro-competitive effect of the merger and the settlement. As appropriate, I will cite a small sampling of the more than 1,000 statements that shippers have filed in support of the merger.[46]

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[45] See, for example, the statements of TransMex/USA, Arenas y Barros, Alex Trading, Grupo Cydsa, Jacob Hartz Seed, Deacero, Armando Garza & Sons, Cementos Mexicanos, Celanese Mexicana, Bayer de Mexico, Vitro Corporativo, Thomson Consumer Electronics, Barton Beers, Tallow & Oil Products, Pyosa, North American Chemicals, Greenwood International, Bachoco, Colgate-Palmolive, Purina, and Allied Vista.

[46] The following discussion covers most, but not all, of the categories of traffic that will benefit from the UP/SP merger and the settlement BN/Santa Fe. Others include distribution, warehousing and transloading (e.g., statements of Ventura-Lesbro, Hawkins Freight Services, Distribution Services of America, Inland Empire Distribution Systems, Mid-South Terminal Company, Texas Warehouse Association), oversized loads (e.g., Tranco, Bechtel Corporation, Thiokol Corporation Space Operations, Ralph M. Parsons), municipal waste (e.g., Rabanco), and general consumer goods and manufactured items (e.g., GE Appliances,

(continued...)

Food Products. Competition will be stronger for food products shipments throughout the West. California and Pacific Northwest perishables, frozen foods, canned goods and other food products will move over shorter, faster routes to the Midwest, and on new north-south single-line routes in the I-5 Corridor. Equipment supply, which is crucial to food products shippers, will be greatly improved. With the rectification of SP's inadequate service and the institution of new carload train services such as a new direct Roseville-Chicago carload train and a second daily North Platte-Conrail run-through train, large volumes of food products will return to boxcar handling on the merged system. Upper Midwest food products producers will gain single-line access to SP markets in the West and Southwest, and to additional Mexican gateways. Also, BN/Santa Fe, which is already a very strong competitor for this traffic, will be even stronger after the settlement, with new I-5 and Central Corridor routes.

These competitive benefits have led scores of food products shippers to support the merger, including producers and consumers of West Coast food products;[47] shippers and receivers

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[46](...continued)
Cooper Tire & Rubber, Lever Brothers, Singer Furniture, Fisher-Price Toys).

[47] For example, ConAgra, the California Farm Bureau Federation, the California Grape & Tree Fruit League, Pacific Coast Producers, Northwest Packing, Kroger, Spreckels Sugar, Imperial Holly, Aunt Nellie's Farm Kitchens, Patterson Frozen Foods, the Idaho Grower Shippers Association, M.R. Swanson, Van
(continued...)

of Midwest food products;[48] shippers of meat, meat products, poultry and dairy products;[49] and a variety of other food products shippers.[50]

Forest products. Lumber and wood products originate heavily in the Pacific Northwest and Western Canada, and in the Southeast. Canadian product, handled to the Midwest by CN, CP and BN/Santa Fe, has increasingly been eclipsing Pacific Northwest product. South Central and Southeastern output has also been making inroads against the Pacific Northwest. SP's service in Oregon and Northern California has deteriorated, and much SP volume has been lost to reload centers and trucks.[51]

The merger will greatly benefit lumber and wood products producers. SP Pacific Northwest producers will gain

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[47] (...continued)
Den Bergh Foods, Sun Garden Packing, Reddy Raw, Fleischmann's Yeast, Commercial Distribution Center, California Oils and The Wine Group.

[48] For example, Stroh Brewery Company, Coors Brewing, Schreier Malting, Rahr Malting, Synergistic Transportation, E. Boyd & Associates and Papetti's.

[49] For example, DairyAmerica, Inc., E.A. Miller Company, Richmond Wholesale Meat, A&F Exports, Conex Freight System, Nebraska Turkey Growers Cooperative, Townsends, Inc., United Refrigerated Services, San Joaquin Valley Dairymen and AJC International.

[50] For example, Westway Trading, C&J Refinery, Rio Grande Valley Sugar Growers, National Fruit Product Company, M.A. Patout & Son, Golden Peanut Company, Wasatch Distributing, CanAmera Foods, Blanfort and Allen Canning.

[51] For examples of shipper diversion of traffic from SP to reload centers and trucks for service reasons, see the statements of Roseburg Forest Products, Midstate Lumber, Grove Lumber, Crown Pacific and Timber Products.

much shorter routes to the Midwest and the South Central region, and single-line service to UP destinations in the Midwest and elsewhere. UP Pacific Northwest producers will gain new access to California and Arizona, a shorter route to Texas, Louisiana and Eastern Mexico, and single-line access to SP receivers. SP's poor service and equipment supply problems will be remedied, enabling lumber shippers to avoid the added expense of truck-rail reload programs. South Central and Southeastern producers will gain shorter routes to Southern California, better service in the Houston-Memphis-St. Louis-Chicago corridor, better equipment supply, and wider access to end markets. The BN/Santa Fe merger will further strengthen BN/Santa Fe's already very strong position as a competitor for lumber and wood products traffic, and the merged UP/SP will meet that competitive challenge.

There will be a similar enhancement of competition for paper and paper products traffic. New paper production tends to be concentrated in the South Central and Southeast regions (where KCS, IC and BN/Santa Fe, among others, are strong competitors) and in the Upper Midwest and Canada. South Central and Southeastern paper mills will enjoy the same service and equipment benefits as lumber producers in those regions -- and "2-to-1" mills, such as International Paper's mills in Camden and Pine Bluff, will receive stronger competition from UP/SP and BN/Santa Fe as a result of the settlement. Upper Midwest paper producers will have shorter, faster routes to Northern California and better service to the South Central region. Scrap paper

moves in a variety of markets, and will benefit from the elimination of interchanges between UP and SP and better equipment supply.

These benefits have led scores of Pacific Northwest[52] and South Central/Southeastern[53] lumber and wood products producers and consumers, as well as numerous paper producers and consumers,[54] to support the merger.

Intermodal. Intermodal traffic has exploded in recent years, and is the leading edge of greater railroad competitiveness against trucks. The merger and the settlement will create a constellation of competitive benefits for intermodal shippers: third-morning services that will for the first time challenge BN/Santa Fe's dominance in the Midwest-California markets; the ability of both UP/SP and BN/Santa Fe to link all the West Coast ports with short, fast routes to all the midcontinent gateways from Chicago to New Orleans; construction of a new Inland Empire terminal east of Los Angeles; two new truck-competitive single-line services in the I-5 Corridor from

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[52] A few examples are Keller Lumber, Hampton Lumber Sales, Pope & Talbot, Rayonier, Pacific Lumber, Manke Lumber, Hager Group, Louisiana Pacific, Logan Lumber, Furman Lumber, Las Plumas Lumber, Idaho Veneer, Collins Pine, Western Lumber, Springfield Group, Hoquiam Plywood and American Wood Products.

[53] For example, Georgia-Pacific, Hunt Plywood, Anthony Timberlands, Pallet Pallet and Marks Forest Products.

[54] For example, Consolidated Papers, Stone Container, Repap Enterprises, Simpson Paper, Ponderosa Fibres of America, James River Corporation, El Paso Disposal, Kruger, Omnisphere, Crockett Container, Alabama River Pulp, James Maclaren Industries and Tharco.

Seattle/Tacoma to Los Angeles, where none exists now; new Pacific Northwest-Phoenix-El Paso-Texas service, made possible in part by the ability to support train connections at the new Inland Empire terminal near Colton rather than at Los Angeles; better terminal access for UP/SP in Chicago, Portland and Seattle, and for BN/Santa Fe in Oakland and Los Angeles; better equipment availability, thanks to new repositioning capability and other efficiencies; new California-Laredo service; much-improved Twin Cities-Kansas City-Texas service; new Upper Midwest-Phoenix service; faster and more frequent Los-Angeles-Dallas and Los Angeles-Memphis service; higher-quality service in many lanes as a result of combining and improving UP and SP terminals; and improved schedules, train frequency and reliability in virtually every rail corridor in the West. As I discuss in Part II of this statement, these many pro-competitive improvements will attract substantial additional intermodal business to the merged system.

Intermodal is perhaps the area where BN and Santa Fe gained their greatest competitive advantage by merging, and where a UP/SP merger is most needed to meet the competitive challenge of the new BN/Santa Fe system. By merging, BN/Santa Fe created a rail system that serves all major West Coast ports, with superior service to Chicago, Kansas City, St. Louis, Memphis, Dallas and Houston, onward single-line service to Birmingham, outstanding terminals at all of those points (e.g., the new Santa Fe Alliance terminal near Dallas/Fort Worth), and the financial strength to invest in further technological and service improvements.

Neither UP nor SP can match these capabilities separately, and only the merger can create genuine two-railroad competition for this traffic. As one intermodal marketing company says: "The main benefit of the UP/SP merger . . . will be the creation of a railroad that is competitive with the Burlington Northern/Santa Fe for intermodal traffic."[55]

SP is especially vulnerable. Because of its service weaknesses, it has been unable to compete for high-end transcontinental intermodal traffic. In part because of the advantageous location of its ICTF facility in Los Angeles, SP has held on to a large share of its international container business, particularly in the Southern Corridor, but now the major shipping companies (such as K Line, COSCO, Maersk, OOCL, APL, Hanjin, NYK, and Evergreen) have created or are in the process of creating on-dock loading capability at the Ports of Los Angeles and Long Beach, which will undercut the advantage that the well-located, state-of-the-art ICTF has conferred on SP since it opened in 1984. Already SP has lost important international, as well as domestic, business for service reasons, even in corridors such as Los Angeles-Memphis where it has long had the only single-line route. A concerted effort by BN/Santa Fe, backed by its new route and network advantages and its very substantial investment capabilities, to capture international business from SP could

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[55] Statement of Worley Enterprises, p. 1.

cause SP devastating losses.[56] We only recently saw this pattern, when Santa Fe, by committing to build the costly new San Bernardino auto facility, won away SP's Southern California auto business.

The many competitive improvements that the merger will bring to intermodal traffic, and the need for a meaningful competitive alternative to BN/Santa Fe in the intermodal area, have led literally hundreds of intermodal shippers and service providers, large and small, to support the merger. Among these are major ocean shipping companies that operate doublestack service, such as American President Companies (UP's largest single customer), CSX Intermodal (SP's largest single customer), NYK Line, Mitsui OSK Line, Hanjin, OOCL and Hyundai; intermodal marketing companies, freight forwarders, consolidators, brokers and other TOFC/COFC third parties;[57] specialists in refrigerated intermodal traffic;[58] trucking companies that ship their trailers

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[56] See statement of Riss Intermodal, pp. 3, 6-7.

[57] See, for example, the statements of Riss Intermodal, ITG Transportation Services, Alliance Shippers, Bay Area Piggyback, COFCO, Compass Consolidators, Crossroads Carriers Intermodal, Danzas Corporation, FDSI Management Group, GST Corporation, Genex, Independent Dispatch, Interdom, Keystone Terminals, Manufacturers Consolidation Service, National Intermodal Services, Target Transportation, Tennessee California Express, Terminal Consolidation, Trailer Transport Systems, Transnet, United States Shippers, Vanport Express and Wheels International Freight Systems.

[58] See, for example, the statements of Crete Carrier Corporation, KLLM, C.H. Robinson, Asset Based Intermodal and Stevens Transport.

and containers by rail;[59] and the great range of shippers who use intermodal service.[60]

Autos. Two decades ago, SP was the dominant automotive carrier in the West, with large volumes to Portland, the Bay Area, Los Angeles, Phoenix and Texas and direct service to and from four automobile assembly plants in California. Since then, SP has fallen to a very small share of Western rail-handled auto movements (automotive business handled by Western railroads in 1994) as a result of the closure of three of the four California plants, deregulation (which has allowed for more creative contracting by the auto companies), the general decline in SP's service levels, and its financial inability to make major investments in new auto facilities and auto-handling freight cars.

As already mentioned, Santa Fe captured General Motors' Southern California business with what was reported to be very aggressive pricing and the construction of the costly new San Bernardino automotive facility. SP's does handle Ford's Northern California business, but when the contract comes up for renewal

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[59] See, for example, the statements of Yellow Freight, Werner Enterprises, Chemical Leaman Tank Lines, Swift Transportation, Anderson Trucking, Gordon Trucking, Harbor Express and Hill Brothers.

[60] See, for example, the statements of WOSCA Shippers Cooperative, Baxter Healthcare, Nalco Chemical, Multi-Modal Technologies, James River, Rabanco, Alpha/Owens-Corning, Great Lakes Chemical, Potomac Foods of Virginia, S.E. Rykoff, Kroger Company, Golden Peanut, Atlantic Food Services, CWS and Greenwood International.

that traffic is vulnerable to BN/Santa Fe, which has much faster and more reliable service to the Midwest and could well pursue the same strategy it did in Southern California. Santa Fe has traditionally given a top priority to service-sensitive automobile business -- and BN/Santa Fe will do the same. Additionally, the auto companies place a high premium on the ability -- which BN/Santa Fe now has, and SP lacks -- to offer service to all major points, with high-quality terminals at each. BN/Santa Fe has the further advantage of the best route in the key Kansas City-Los Angeles lane (important flows from various Midwestern auto plants are routed via Kansas City) and efficient service in the corridor between Kansas City, Oklahoma City (site of a major General Motors plant), and Texas.

As in the intermodal arena, the UP/SP merger will create a real competitive contest of equals for automotive traffic, rather than one in which BN/Santa Fe is dominant and SP is third. UP/SP will be able to tie points such as Seattle and Phoenix into an efficient, comprehensive transportation network for auto shippers, as BN/Santa Fe already can. Shorter routes and expanded single-line service will speed the handling of motor vehicles, yielding major savings in inventory and equipment costs.[61] For example, UP/SP will run a

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[61] General Motors, for example, notes in its statement in support of the merger (p. 2) that the UP/SP route between Chicago and UP's Milpitas facility in Northern California will be 180 miles shorter than either UP's or SP's route. "These shorter mileages will reduce transit times, improve service reliability

(continued...)

new through 70-hour auto train from Chicago to the merged system's Milpitas facility in the Bay Area, with blocks of automobile-carrying freight cars for Denver, Salt Lake City, Martinez (to serve the Benicia facility) and Milpitas, and a similar through train from Kansas City to the Bay Area.

The upgrading of the Tucumcari line, and of the Colton-El Paso line, will make UP/SP more competitive in the key Kansas City-Los Angeles corridor, with new through auto trains both from Kansas City to Southern California and from Chicago to Southern California. There will also be dedicated auto trains from Dallas/Fort Worth to Conrail destinations; from Chicago to San Antonio, including Mexican business; and from GTW at Chicago to the major auto facilities at Reisor, Louisiana, and Arlington, Texas.

The merged system will be able to offer the combined strengths of UP's and SP's auto ramps, and will have the financial wherewithal to make improvements in those ramps and to invest in new ones. The merged system will be better able to invest in improved bi-level and other specialized cars, and to reduce shippers' equipment costs by improving cycle times and efficiently repositioning equipment. Service to and from Mexico, where many of the auto companies have located manufacturing facilities, will be improved, and under the settlement

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[61](...continued)
and reduce the cost of transporting approximately 14,000 railcars in GM service annually."

competition for Mexican traffic will be strengthened. Shipper concerns about the quality of SP service will be overcome.[62]

Because of these competitive benefits, auto companies such as General Motors, BMW, Mitsubishi, Nissan North America, Nissan Mexicana, Hyundai Motor America, American Isuzu Motors and Mercedes-Benz Mexico, and other auto and auto parts shippers and transporters,[63] support the merger.

Chemicals. Chemicals are produced and consumed at numerous locations all over the United States and the world, and as they are generic commodities there is intense competition among producers. One important dimension of that competition is transportation cost -- which encompasses not only rates but transit time, reliability, and such matters as storage-in-transit

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[62] See, for example, the statement of BMW: "Past and current vehicle movements by Southern Pacific have resulted in higher than industry accepted damages to automobiles than other railroad companies. This has resulted in delayed shipments, damage repairs that require customer disclosure, and in a few cases actual lost sales to customers that did not want to accept a previously rail damaged vehicle. With the merger of Union Pacific, with this company's lower damage frequency, higher priority of on-time shipments and extensive damage prevention programs I have used in the past on different occasions, I feel our company could greatly benefit from such a positive merger of the more financially sound and customer damage prevention oriented Union Pacific."

[63] See, for example, statements of Kia Motors America, CT Services, Industria Automotriz, Carplastic, Metalsa, Unik Group, Transfreight, Inter-Rail Transport, Fre-Mac Industries, Auto Warehousing, Cassens Transport, Hadley Auto Transport and Predelivery Service Corporation.

opportunities. A further crucial issue for many chemical manufacturers is safety -- an area where UP has been by far the industry leader and SP is lagging further and further behind.

A particular concentration of chemicals production is on the Texas/Louisiana Gulf Coast, where UP and SP, as well as BN/Santa Fe, KCS and IC, each serve numerous plants. Most of the Texas and Louisiana chemical plants are located on water, and can and do use low-cost water transportation for their incoming and outgoing product in lieu of rail if rail is not fully competitive. As Mr. Spero discusses more fully in his verified statement, the merger and the settlement will greatly increase UP/SP competitiveness for chemicals traffic, both in the Gulf Coast and elsewhere, enhancing the position of UP/SP-served chemical producers in their end markets.

Gulf Coast producers served by UP and not SP, of which there are a substantial number, will gain new single-line service across the Southern Corridor to the West Coast and single-line access to a wide range of SP destinations. Gulf Coast producers served by SP and not UP, of which there are also a substantial number, will gain single-line access to points such as Seattle and Spokane, the Upper Midwest, and a wide range of other UP destinations, and will no longer be dependent on a railroad with service problems and capital constraints.[64] Both UP and SP

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[64] See also, for example, the statements of Amvac Chemical ("With the merger of the Union Pacific and Southern Pacific, Amvac will again be able to ship via the shortest route to the (continued...)

producers will gain greatly improved operations -- including new run-through operations to Eastern roads -- in the Houston-Memphis-St. Louis-Chicago corridor, shorter routes to the Pacific Northwest, faster turn times on costly, shipper-owned equipment, and additional SIT yard opportunities. Gulf Coast chemical shippers will save a day in transit time to and from both the Memphis/St. Louis/Chicago gateways and the West Coast. Also, under the settlement BN/Santa Fe will be a much stronger competitor for Gulf Coast chemicals traffic, with new access to major chemicals plants at, among other locations, Mont Belvieu, Eldon, Bayport, Corpus Christi, Orange and Amelia, Texas, new single-line access to New Orleans, a new direct route to Memphis, and shorter routes to the key chemicals gateways of St. Louis and Chicago.

Chemicals producers elsewhere will also benefit competitively. For example, Wyoming soda ash producers will gain shorter routes to Northern California markets, Texas and Louisiana markets, and new single-line service to Arizona, New

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[64](...continued)
Pacific Northwest utilizing the quality safety standards of the Union Pacific. This change in route will result in a decrease in the distance by 500 miles."), ISK Biosciences ("the safety concern with the SP, with their financial struggles, will be assisted with the resources of the UP"), Jones Chemicals ("Having our chemicals delivered safely is our first and foremost concern. This merger would bring UP's strong history of capital improvements into the SP system, with the combined capital dollars being applied to the upgrading and improvement of the SP's rails, thus insuring a safer rail network."), and NGL Supply ("today the SP is a financially weak carrier and we are concerned about the safety of shipping hazardous commodities over a system that may not be able to maintain its roadbed at proper levels").

Mexico, SP-served Mexican gateways, and other SP destinations not served by UP.

All of these pro-competitive benefits have led a striking array of chemical shippers to support the merger, including Exxon, Shintech, Hoechst Celanese, Bayer, Vulcan Chemicals, Unocal, FMC, Rhone-Poulenc, Degussa, Cabot, American Natural Soda Ash Corporation, Rexene, Petrogas, Applied Industrial Materials (Aimcor), Nalco Chemical, Neste Trifinery and scores of other producers and consumers of a wide range of chemicals and petrochemicals.[65]

Grain. The UP/SP merger is a natural fit for grain shippers, just as the UP/CNW merger was.[66] UP is a major

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[65] See also, for example, the statements of Shrieve Chemical, Valley Oil Transportation, Pioneer Chlor-Alkali, Empire Coke, Coast Energy Group, Alox Corporation, Chem-Rail Transport, Anderson Die & Manufacturing, Buckman Laboratories, Chemtech Products, Ownes-Illinois, Clorox, Chief Ethanol Fuels, Cimarron Gas Companies, Consolidated Oil & Transportation, Abilene Ag Service & Supply, Farstad Oil, Advanced Aromatics, Accu Chem Conversion, Tosco Refining & Marketing, Agrium, Aspey Fertilizer, Bonus Crop Fertilizer, Chemical Distributors, Dune Company, Alpha/Owens-Corning, El Dorado Chemical, Triad Transport, SF Services.

[66] In the UP/CNW control case, I testified that combining those two railroads would open up many new UP end markets to CNW grain producers. This has emphatically been the case -- the consolidated UP/CNW system has been flooded with Iowa and Minnesota grain newly moving to feeder and export markets. The producers are, in the words of one Minnesota cooperative, "elated" at the effects of the UP/CNW merger, and support the UP/SP merger for the same reason (statement of La Salle Farmers Grain Company). See also the statement of Farmers Commodities Corporation:

> "The recent acquisition of the Chicago Northwestern allowed us to participate in the Pacific Northwest Export Market.

(continued...)

originator of wheat, corn, barley and other grains, whereas SP, which originates very little grain, serves major end markets for grain that UP cannot reach. Among these are the feeder markets in California's San Joaquin and Imperial Valleys, Arizona, the Texas Panhandle and Mexico. BN/Santa Fe is a major grain originator and serves all of these end markets. Thus, the merger will create new single-line service opportunities for UP grain producers and SP grain consumers, and will provide stronger competition to BN/Santa Fe in grain markets it already serves on a single-line basis. The merger will also, as already noted, create a new capability to move 286,000-lb. cars of wheat and feed grains to Houston and other ports for export -- another capability that BN/Santa Fe already has.

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[66](...continued)
This new market to Iowa and southern Minnesota allowed local Cooperatives and Producers to receive ten to twelve cents per bushel in additional revenue. In the first month of operation we sold forty-five 100 car shuttle trains from these locations to the PNW for Export. This is approximately sixteen million bushels of corn and the increased revenues would represent $1,920,000.00 in additional revenue realized by local cooperatives and Producers. This type of savings was promised and delivered under the Union Pacific and Chicago Northwestern Acquisition."

And the statement of Grain Land Coop:

> "Before the Union Pacific bought out Chicago Northwestern, we were confined to one market, the Clinton and Cedar Rapids corn processing cycle trains. Since the UP and the CNW merger, we have been able to use shuttle trains to ship directly to Gulf ports. If UP and SP merge, an even greater number of destination choices would be available to us on a single line."

These and other pro-competitive benefits for grain and grain products traffic have led scores of producers, consumers and marketers of these commodities to support the merger.[67]

Coal. As Mr. Sharp discusses in more detail in his verified statement, the merger, by creating new single-line routing opportunities and operating efficiencies, will benefit producers and consumers of both the Utah and Colorado coals that SP originates and the Powder River Basin coal that UP originates.

Utah and Colorado coal will particularly benefit. Smoother operations in Utah and a direct single-line route to the Ports of Los Angeles and Long Beach will promote Utah and Colorado coal exports to Pacific Rim countries. There will also be a much shorter single-line route from Utah to domestic coal users in Southern Nevada and Southern California. Single-line access to UP-served consumers in the Midwest and South Central regions and to Mississippi River barge terminals will promote additional domestic and export opportunities. Handling of eastbound movements of Utah and Colorado coal via Denver, and thence on either UP's "KP" line across Kansas or the UP mainline from North Platte to Chicago will provide much better service

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[67] See, for example, the statements of the California Farm Bureau Federation, DeBruce Grain, United Purchasers Association, Scoular Company, Phillips Cattle, Foxley Grain, Arizona Grain, California Pacific Rice Milling, Gulf Rice Arkansas, Superior Cattle Feeders, Thelen Grain, Eades Commodities, West Central Cooperative, West Bend Elevator, Garvey Grain, Farmers Cooperative Company, George Verhoeven Grain, J.S. West Milling, General Mills, J.R. Simplot, Modern Mills, Honeymead Products, Harvest States Cooperatives and Farmers Merchant.

than SP's current route via Pueblo, Topeka and Kansas City, which is mountainous, then slow, then congested. Also, coal producers on the Utah Railway will have access to BN/Santa Fe, which will open up new domestic and export opportunities.

Powder River Basin coal users will greatly benefit from the new Kansas City bypass and from other efficiencies that will shorten cycle times and increase reliability.

These pro-competitive benefits have led many coal consumers, producers and traders to support the merger.[68]

Metals and minerals. Metals and minerals producers throughout the West will enjoy more competitive rail service as a result of the merger. The Arizona and New Mexico copper industry will benefit from the upgrading of the Colton-El Paso and El Paso-Dallas lines and shorter routes to Memphis and the Southeast. The varied minerals producers in Wyoming, Utah and Nevada will benefit from improved operations of the merged system across the Central Corridor, and in other ways as well. Nevada barites producers and Utah and Nevada copper producers will be served by both UP/SP and BN/Santa Fe, opening up new single-line opportunities for their production and inputs. Midwest steel producers will benefit from shorter routes to Northern California and improved service to the South Central region. Traders and

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[68] See also, for example, the statements of Transocean Coal Company, California Portland Cement, ACE Cogeneration Company, Ash Grove Cement, Grand River Dam Authority, Pacific Coast Coal Company, Texas-Lehigh Cement, Emerald International, Austin White Lime, Nevada Cement and RMC Lonestar.

consumers of metal scrap will gain a multiplicity of new single-line service opportunities. SP metals shippers will benefit from access to UP's gondola fleet. More metals and minerals will move at lower cost as a result of the merged system's expanded triangulation and backhaul opportunities. Geneva Steel, in Utah, will be served by both UP/SP and BN/Santa Fe, and as a result will have direct, single-line routes from both systems for sourcing taconite from Minnesota, each with ample backhaul opportunities to support favorable rates, and two wider single-line networks to handle its outbound steel.

These varied competitive benefits for metals and minerals traffic have led Reynolds Metals, Nucor Steel, Oregon Steel, Birmingham Steel, Pinole Point Steel, L.B. Foster, California Steel Industries, 3M, Vulcan Materials, Texas Industries, Texas Crushed Stone, Gulf Coast Limestone, Gifford-Hill, Armstrong World Industries, Dowell Schlumberger and numerous other producers, consumers and merchants of metals[69] and

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[69] See also, for example, the statements of Cascade Steel Rolling Mills, Bull Moose Tube, Iron & Metals, Inc., Lefton Iron & Metal, W&W Steel, Chapparal Steel, Schnitzer Steel Products, CMC Steel Group, Krueger Engineering & Mfg., Precision Flamecutting & Steel, Short's Scrap Iron & Metal, PDM Incorporated, Itochu Auto Metals, Pacific Pipe, Noranda Aluminum, Larson Sales, Arkansas Steel Associates, Paxton & Vierling Steel, Shapiro Brothers, Tube & Steel Company of America, Pipe & Tube, Pimalco Aerospace Aluminum, Newport Steel, Miller Compressing, Martrans, MACSTEEL, General Metals of Tacoma, Farwest Steel, Crest Steel, Commonwealth Aluminum, Commercial Metals, Alter Trading, Southwire Company, RSR Corporation and Bay Zinc.

minerals[70] to support the merger.

I. Every Rail Corridor Will Enjoy Stronger Competition

A review of the major corridors in which UP, SP or both operate provides still another perspective on the competitive benefits of the merger and the settlement.

As one aid in this corridor analysis, we compiled 1994 traffic data showing the relative shares of UP, SP and other railroads in region-to-region flows associated with each rail corridor.[71] It should be stressed that these compilations indicate only the relative shares of the particular carriers in overall region-to-region flows, and should not be construed to mean that all the traffic in a flow is competitive among railroads. In fact, as I explain in Subpart K below, much of the carload traffic in these flows is not competitive.[72] But the flow data do give a sense of the significance of each carrier in

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[70] See, for example, the statements of North Texas Cement, M-I Drilling Fluids, P.W. Gillibrand, Scarpelli Materials, Cummings-Moore Graphite, Mid-State Construction & Materials, World Minerals, Western Aggregates, Utelite Corporation, United Clays, Southern Clay Products, North American Lime Management, Harborlite, Green Rock Quarries, Granite Rock Company, Glass Mountain Pumice, Continental Lime, Calaveras Cement, C&N Rock, Lone Star Northwest, Dolese Bros. and Columbia Western Clay.

[71] Our traffic file was the same file we used for the Traffic Study (see Part II below). It was assembled from 100% actual UP and SP data and ICC Waybill Sample data for non-UP/SP movements, with double-counts eliminated. Shares were computed on the basis of tonnage; computing them on the basis of units (carloads and intermodal containers and trailers) made little difference in the results.

[72] Intermodal and auto traffic, though literally moving between exclusively-served facilities, will often be competitive, depending on the locations of alternative facilities.

the overall region-to-region traffic that traverses particular rail corridors.

For purposes of these data compilations, we defined fourteen regions, each comprised of one or more BEAs. A map of these regions follows the data compilations themselves in Appendix A. Briefly, our Chicago, Kansas City, St. Louis and Memphis regions are the single BEAs containing those cities. Our Chicago North and Kansas City North regions are groups of BEAs that are, as the name implies, north of Chicago and Kansas City, and for which traffic to or from the south and west would likely be routed through Chicago or Kansas City, respectively. Our New Orleans region is the New Orleans BEA and two adjacent BEAs in Louisiana. Our East Texas region is the Houston and Austin BEAs, and our North Texas region is the Dallas BEA and three contiguous BEAs. Our Northeast and Southeast regions divide the East between, on the one hand, Indiana, Ohio, Pennsylvania, Maryland, the District of Columbia and states to the north thereof, and on the other hand, Kentucky, West Virginia, Virginia and states to the south thereof. Finally, our Southern California region is the Los Angeles and San Diego BEAs, our Northern California region is the remainder of the California BEAs, and our Pacific Northwest region is the six Oregon and Washington BEAs.

We assigned traffic to railroads based on which railroad originated or terminated the traffic in the area of principal interest for purposes of the competitive analysis. Our assignment rules applied in the following order. First, traffic

that originated or terminated in California was assigned to the railroad that originated or terminated the traffic in California.[73] Then, traffic that originated or terminated in Texas was assigned to the railroad that originated or terminated the traffic in Texas. Then, similar assignments were made based on what railroad originated or terminated the traffic in the Pacific Northwest, Kansas City, Kansas City North, Memphis, New Orleans and St. Louis regions.[74]

We have also included in the compilations data from Reebie Associates on the volume of truck and water traffic in each region-to-region flow. Reebie's truck data covers only STCC Codes 20 through 39 and selected non-manufactured items such as fresh fruits and vegetables and coal. It does not include, for example, lumber, minerals, grain or most agricultural crops, nor does it include truck hauls in connection with rail intermodal or carload movements. Reebie's water data are based primarily on the Army Corps of Engineers sampling-based Waterborne Commerce Statistics.

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[73] Where traffic originated on a shortline, it was assigned to the first Class I railroad in the haul.

[74] Any assignment of rail traffic to carriers for purposes of computing share data is to some extent arbitrary, because interline traffic can be assigned in various ways. My assignment rules were based on two principles that I believe are reasonable. First, each movement was assigned to a single railroad. And second, the basis for that assignment was to look to the end of the haul where (a) competition between UP and SP is most in issue, and (b) originating/terminating railroads in fact tend to have the greatest routing influence and secure the longest hauls. My geographical assignment rules tended to satisfy both (a) and (b).

As we shall see in discussing the corridors individually, what these data show, and what is confirmed by the on-the-ground facts as to routes, shipper coverage and competitive capability, is that in the large majority of the rail corridors throughout the West, the UP/SP merger will combine the railroads that are number two and number three -- often a weak number three -- and create a more formidable and equal competitor to the number one railroad, BN/Santa Fe (or, in a few north-south corridors in the Central United States, KCS or IC). This conclusion is strikingly clear even on the basis of the 1994 data, which do not reflect the substantial traffic diversions that BN/Santa Fe will gain as a result of its merger (as well as volumes KCS will gain from rights it secured from BN/Santa Fe). The data also show that (a) particularly in the shorter-haul north-south corridors and corridors within the Central portion of the country, but also, surprisingly, in a number of the transcontinental corridors, trucks far outstrip railroads as handlers of surface freight, and (b) in a number of corridors water is a strong competitive option for bulk commodities.

1. West Coast-Midwest/Northeast

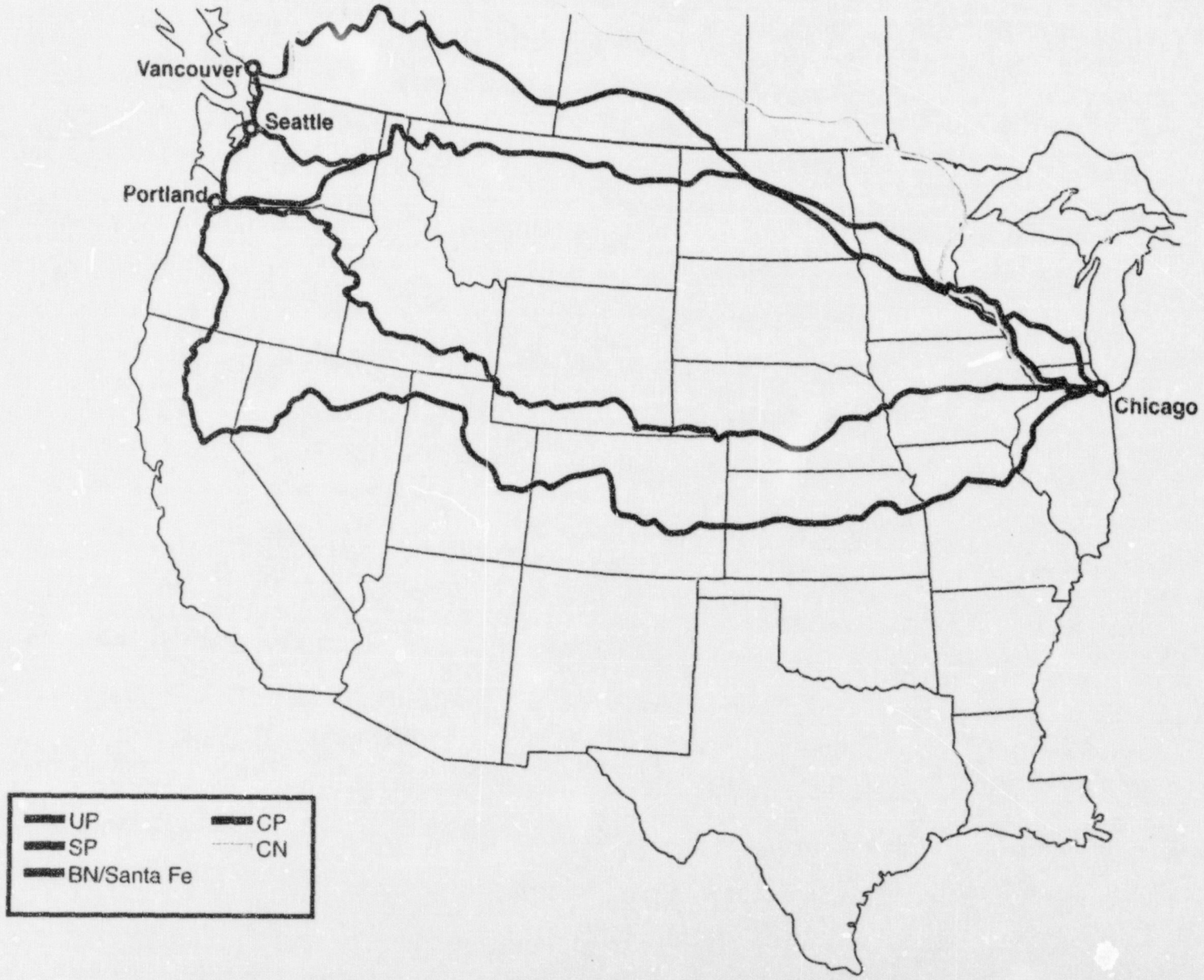
The West Coast-Midwest corridors link the Pacific Northwest, Northern California and Southern California, on the one hand, with the Midwest gateways of Chicago, Kansas City and St. Louis and the regions served via those gateways, on the other hand. In discussing these corridors, I shall focus separately on each Western region.

Pacific Northwest-Chicago/Kansas City/St. Louis/Chicago North/Kansas City North/Northeast (Maps #21, #22 and #23). Between the Pacific Northwest and the Midwest gateways and regions served over those gateways (the Northeast, and also our Chicago North and Kansas City North regions), BN/Santa Fe has the rail traffic, SP has and UP the remainder. (CP and CN are also extremely competitive for West Coast-Midwest lumber traffic, though their tonnage is not reflected in our data.) The high BN/Santa Fe share reflects BN/Santa Fe's extensive shipper coverage in this region and excellent routes from Seattle/Tacoma and Portland to the Midwest (its route is 222 miles shorter than UP's from Seattle to Chicago, and closely comparable to UP's from Portland to Chicago). BN/Santa Fe also benefits from being the only U.S. railroad that serves Vancouver, B.C., and many other points north and east of Seattle. SP's small share reflects its failure to reach Washington and the substantial circuity of its route via Roseville from Oregon to the Midwest (its route from Portland to Chicago is 768 miles longer than BN/Santa Fe's and 766 miles longer than UP's). UP is hampered in these regional flows by having more limited shipper coverage in Washington than BN/Santa Fe and no shipper coverage in Southern Oregon. Truck is surprisingly strong in these flows, carrying, for example, more than rail between the Pacific Northwest and the Northeast.

There is very little three-railroad competition in the Pacific Northwest. The only point served by UP, SP and

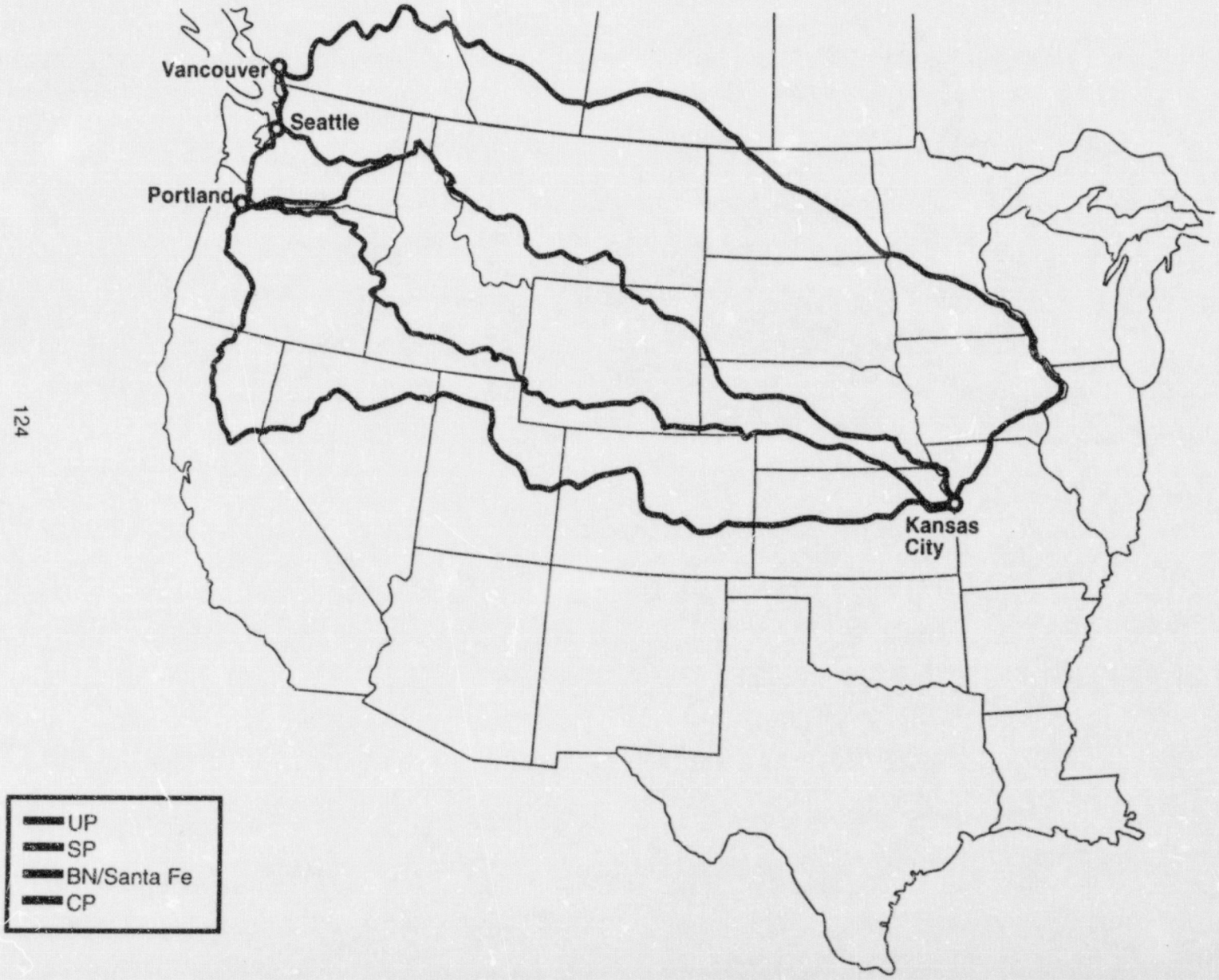
Map #21

Pacific Northwest–Chicago Routes



Map #22

Pacific Northwest–Kansas City Routes



Map #23

Pacific Northwest–St. Louis Routes

BN/Santa Fe is Portland, and, as further discussed in Subpart K below, SP has a very small share of the competitive traffic in Portland. North and east of Portland, BN/Santa Fe and UP are the only rail competitors. South of Portland, BN/Santa Fe and SP are the only rail competitors.

The BN/Santa Fe merger will further enhance BN/Santa Fe's flows, for example, combining excellent BN intermodal facilities in the Pacific Northwest with excellent Santa Fe intermodal facilities in Chicago.

The UP/SP merger and the settlement with BN/Santa Fe will clearly intensify competition for these traffic flows. As already discussed, SP's shippers, most of whom are located south of Portland, will gain huge mileage savings to and from Chicago, Kansas City and St. Louis. These shippers, many of whom use long-haul truck or truck to BN/Santa Fe's transload centers in Portland, Salem and Eugene because of SP's inferior service, will gain reliable, competitive rail service and benefit from access to UP equipment. Traffic will be pre-blocked at North Platte for through handling to the East. Also, as a result of the multiple positive effects of the merger on equipment utilization, including the ability to reposition UP equipment between California and the Pacific Northwest, UP/SP will be able to offer much improved equipment supply to all Pacific Northwest shippers. And BN/Santa Fe, thanks to the Keddie-Bieber line purchase and associated trackage rights, will gain the same equipment repositioning advantage.

Northern California-Chicago/Kansas City/St. Louis/Chicago North/Kansas City North/Northeast (Maps #24, #25 and #26). Between Northern California and the Midwest gateways and regions served via those gateways, BN/Santa Fe is again the clear traffic leader, SP again lags, . This reflects the excellent BN/Santa Fe route from the Bay Area to Kansas City and Chicago, which is substantially faster than UP's route and dominates service-sensitive traffic. SP, hampered by a longer route from Oakland to Chicago (99 miles longer than BN/Santa Fe) and by its service problems on both the Central Corridor (whose clearance restrictions force high-cube intermodal traffic over the Tucumcari route) and the southern route via Tucumcari, is a weak competitor for most intermodal traffic. Its share of this overall regional flow is as high as it is because of SP's extensive exclusive coverage of shippers in the Northern California region (which we defined as the BEA that extends down through the Central Valley to Bakersfield). Grain terminated at SP-exclusive feeder locations, for example, contributes substantially to SP's total tonnage in the flow.

Even in the wide areas of California where it has far more shipper coverage than either BN/Santa Fe or UP, however, SP's traffic base has been eroding to truck, Santa Fe intermodal, and transloading because of its severe service problems.[75] UP,

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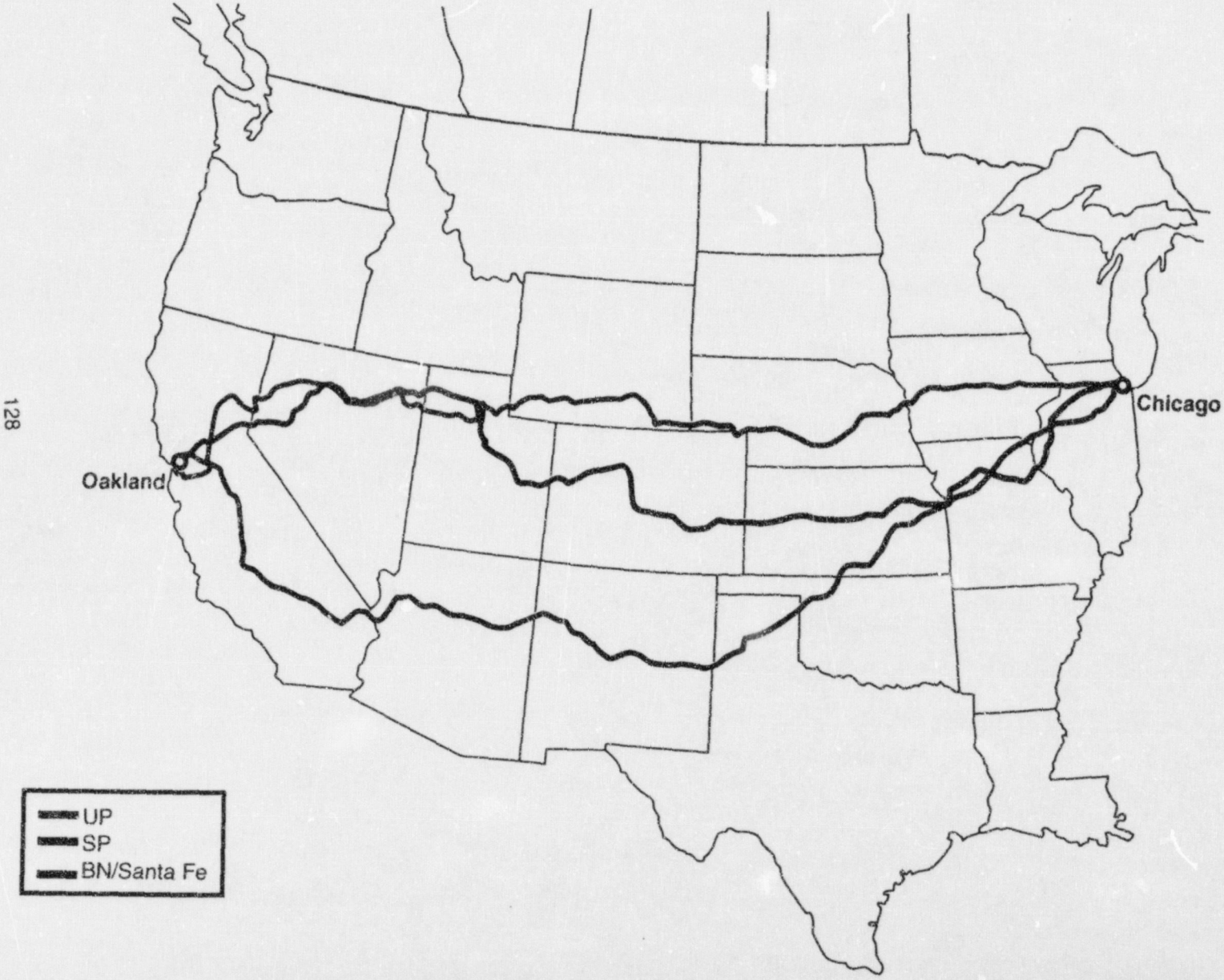
[75] Waybill Sample data show that SP's total California
(continued...)

Map #24

Northern California–Chicago Routes



Map #25

Northern California–Kansas City Routes

Map #26

Northern California–St. Louis Routes

with a substantial share of competitive traffic in the Bay Area itself, has minimal shipper coverage north of the Bay Area compared with SP, and virtually no shipper coverage in the important San Joaquin Valley, where SP and BN/Santa Fe are the competitors. Also, unlike SP and BN/Santa Fe, UP is hampered by an inability to reposition equipment between Northern and Southern California. As with the Pacific Northwest flows, truck is a surprisingly strong competitor for these flows, handling nearly twice the tonnage of rail to and from the Northeast.

The BN/Santa Fe merger will greatly enhance BN/Santa Fe's competitiveness in these flows. The merger newly gives BN/Santa Fe a single-line route between Northern California and St. Louis. Santa Fe already had intermodal facilities in Northern California that neither UP nor SP came close to matching, including ramps at Richmond, North Bay, Stockton, Modesto, Fresno and Bakersfield. The BN/Santa Fe merger added BN's excellent Chicago, Kansas City and St. Louis facilities to already-outstanding Santa Fe facilities in Chicago and Kansas City, and gave BN/Santa Fe the flexibility of alternative routes between Kansas City and Chicago.

The UP/SP merger and the settlement with BN/Santa Fe will yield much stronger competition for these flows. By restoring the traditional Overland Route, the merged system will

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[75](...continued)
originations and terminations between 1992 and 1994, while total California originations and terminations by Santa Fe and UP were

gain routes to all three Midwest gateways that are much shorter than either UP's or SP's (see Maps #4, #5 and #6). With the shifting of UP's Southern California intermodal trains to the Tucumcari line, operations on the Central Corridor will be smoother. Operations will also be improved by the availability of alternative lines from Northern California to Utah (with high-speed trains handled on the SP line and bulk trains on the former WP line) and the elimination of train interference in Northern Utah. The merged system will operate through Bay Area-Midwest/beyond blocks, including a block from Roseville to Chicago that bypasses North Platte. Shippers at Salt Lake City and Denver will also benefit from the mileage savings and improved operations in the Northern California-Midwest corridor.

The merged system will still be in a close contest with BN/Santa Fe, whose high-speed route, though somewhat longer in miles, will remain closely competitive with the UP/SP route. But UP/SP should be able to offer the best intermodal and carload service in these corridors. UP/SP will institute a highly reliable 53½-hour third-morning intermodal service that will be faster than BN/Santa Fe's service. UP/SP will add at least one new intermodal train in each direction between the Bay Area and Chicago.

Reduction in SP's $495 reciprocal switch charges, and the elimination of such charges as between UP and SP, will add to shipper options, and the ability to reposition UP equipment between Northern California and both the Pacific Northwest and

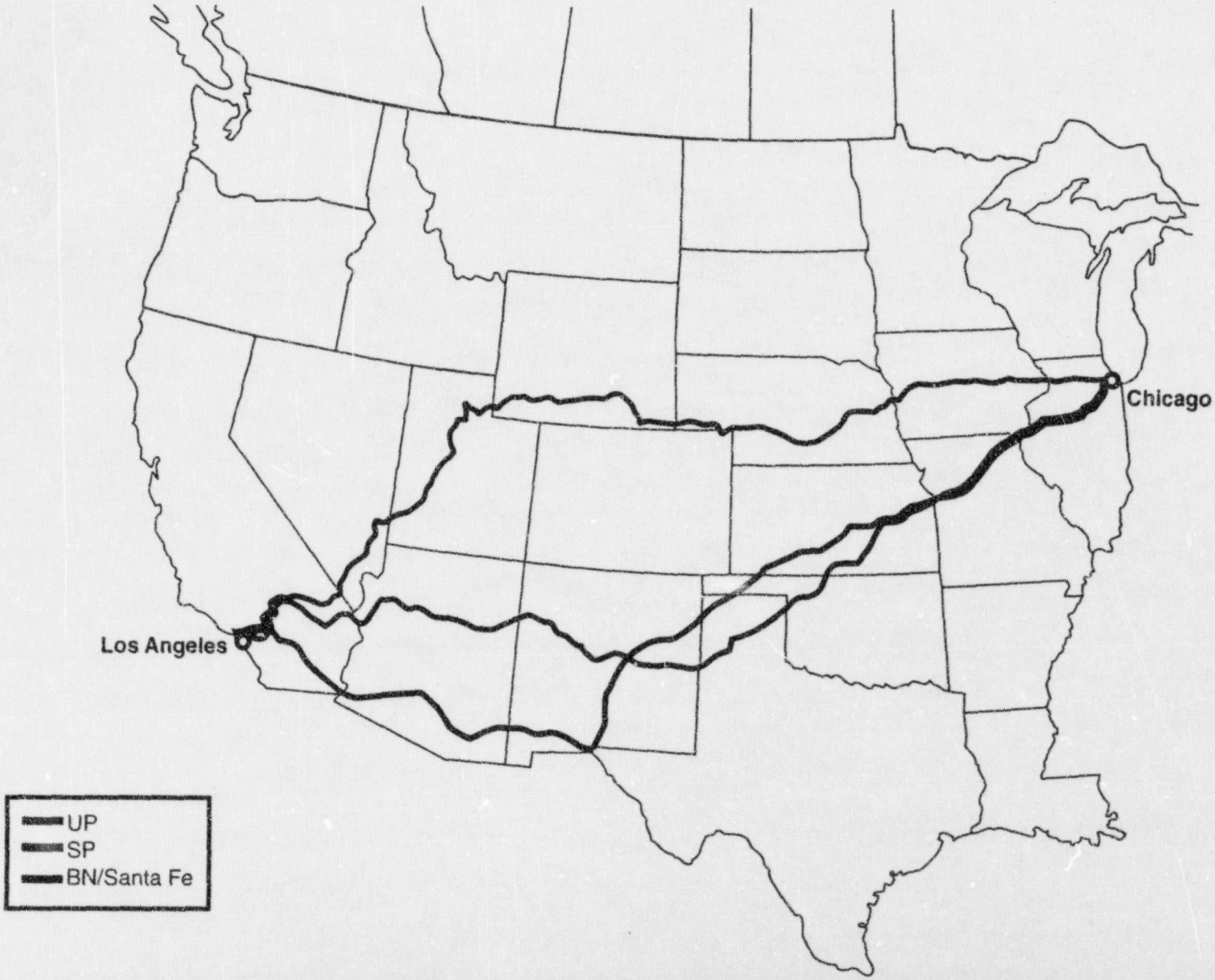
Southern California will improve equipment supply. Shippers exclusive to SP at hundreds of stations in California will benefit from new single-line access to numerous points, tremendous service improvements, and the assurance of fine service and far better equipment supply for the foreseeable future, instead of confronting constant worries about SP's service.

The settlement will further augment BN/Santa Fe's competitiveness in these corridors by giving it a Central Corridor route that provides route flexibility advantages and, for traffic to and from such points as Omaha and the Twin Cities, major mileage savings over the Santa Fe route.

Southern California-Chicago/Kansas City/St. Louis/Chicago North/Kansas City North/Northeast (Maps #27, #28 and #29). Between Southern California and the Midwest gateways and areas served over them, BN/Santa Fe is once again the leader, with and the fastest and most reliable service. This time, it is UP that lags behind, . These shares reflect the significant mileage advantage -- about 150 miles -- of both BN/Santa Fe and SP over UP to Kansas City and St. Louis and the congestion that UP encounters in its routes to those gateways, as well as UP's equipment repositioning handicap and poor coverage of shipper facilities in Southern California compared with both SP and BN/Santa Fe. As with the Northern California flows, SP's service is weak, but it holds a share of the traffic because of its unparalleled access

Map #27

Southern California–Chicago Routes



Map #28

Southern California–Kansas City Routes

Map #29

Southern California–St. Louis Routes

to shippers in Southern California. In this very high-volume flow, we find that trucks even more overwhelm rail, carrying nearly three times as much freight as rail to and from the Northeast.

By merging, BN/Santa Fe will gain even greater advantages with respect to Southern California-Midwest traffic, including route and terminal flexibility, a single-line route to St. Louis, the addition of BN's Chicago intermodal and auto facilities to the already-strong Santa Fe collection of facilities in both Chicago and the Los Angeles Basin, and (through the settlement agreement between SP and BN/Santa Fe) the right to use SP's Tucumcari line as an alternative to its own line between Vaughn, New Mexico, and Kansas City.

The UP/SP merger will greatly increase the merged system's competitiveness for these flows, thanks to the concentration of intermodal traffic on the Tucumcari route, the upgrading of that route and SP's Colton-El Paso line, the construction of an Inland Empire intermodal terminal, substantial mileage reductions for UP shippers in the Los Angeles-Kansas City and Los Angeles-St. Louis corridors, the availability of alternative lines between Colton and Los Angeles, and the building of through blocks of inbound traffic that bypass Colton and move directly to City of Industry, near downtown Los Angeles. For the first time, there will be a reliable, third-morning competitor for BN/Santa Fe's impressive Chicago-Los Angeles

intermodal service. Also, under the settlement, UP/SP will have better access to the Global I and II facilities in Chicago.

SP Southern California shippers will gain much improved service and equipment supply, and all UP/SP shippers will benefit from faster, more reliable service and the operation of more through trains and blocks between North Platte and points in the East. As in Northern California, reduction in SP switching charges, and the elimination of such charges as between UP and SP, will be beneficial, and the ability to reposition UP equipment between Southern California and both Northern California and Texas will contribute to greatly improved equipment supply.

2. West Coast-South Central/Southeast

The West Coast-South Central corridors link the Pacific Northwest, Northern California and Southern California, on the one hand, with Texas, New Orleans, Memphis, and the Southeast region that is served over New Orleans and Memphis, on the other hand.[76] The rail volumes in these flows, while substantial, are less than half those in the West Coast-Midwest/Northeast flows. In discussing these corridors, I will again focus separately on each Western region.

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[76] For simplicity in discussing the traffic data, I will group the Southeast with Memphis. Appendix A shows each region-to-region flow separately. Some of the subsequent corridor discussions also associate the Northeast and the Southeast with particular gateways for convenience, though I recognize that the midcontinent gateways are to some extent interchangeable.

Pacific Northwest-Texas (Maps #30 and #31). Between the Pacific Northwest and the North Texas and East Texas regions,[77] BN/Santa Fe, even before their merger, had and SP lagged . This reflects the same BN/Santa Fe coverage, route and service advantages, and the same SP coverage, route and service disadvantages, in the Pacific Northwest that I discussed in connection with Pacific Northwest-Midwest flows. From Seattle, BN/Santa Fe's route is 218 miles shorter than UP's to Dallas and 185 miles shorter than UP's to Houston (and of course SP has no route because it does not serve Seattle). From Portland, there is little variation in route lengths to Houston, but to Dallas, even with the trackage rights via Pueblo that it received in the BN/Santa Fe case, SP's route is about 200 miles longer than either BN/Santa Fe's or UP's.

With its recent merger, BN/Santa Fe will be even stronger in these flows. The merger created new single-line service from BN points in the Pacific Northwest to numerous Santa Fe points in Texas. BN/Santa Fe has indicated that it will aggressively compete in the Texas intermodal market, from which BN temporarily withdrew in order to concentrate its assets and energies on Pacific Northwest-Midwest traffic. The merger gives BN/Santa Fe route flexibility in Texas, the use of alternative facilities in Houston and Dallas, and direct access via Amarillo

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[77] South Texas traffic is addressed in the discussion of Mexico above.

Map #30

Pacific Northwest–Dallas Routes

Map #31

Pacific Northwest–Houston Routes

to Santa Fe's new state-of-the-art intermodal facility at Alliance, near Fort Worth.

The merger will create new routes in these corridors that are much shorter than either UP's or SP's present routes (see Maps #11 and #12). The merged system will institute new daily Texas-Denver-Pacific Northwest carload trains, saving shippers a full day in transit time, and a new Pacific Northwest-Texas intermodal service via Southern California. Very extensive new single-line service opportunities will be created for both UP and SP shippers in the Pacific Northwest-Texas market.

The settlement with BN/Santa Fe will add still further rail competition in these flows by greatly expanding BN/Santa Fe's coverage of Texas points.

Pacific Northwest-New Orleans (see Map #32). Here, BN/Santa Fe

. BN/Santa Fe attains this high share, even without a single-line route to New Orleans, by working with connections (principally KCS and IC) and exploiting its wide shipper coverage in the Pacific Northwest and fast, direct route to Dallas.

The UP/SP merger will intensify competition for this traffic by giving the merged system a much shorter route (see Map #13). As with Pacific Northwest-Texas traffic, the merged system will institute new daily service.

The settlement with BN/Santa Fe takes rail competition to a still higher level, by giving BN/Santa Fe single-line access

Map #32

Pacific Northwest--New Orleans Routes

to New Orleans. With a share of the traffic already in excess of 50% and the best coverage of the Pacific Northwest, BN/Santa Fe can be expected to more than hold its own once it gains direct connections to the Eastern roads at New Orleans.

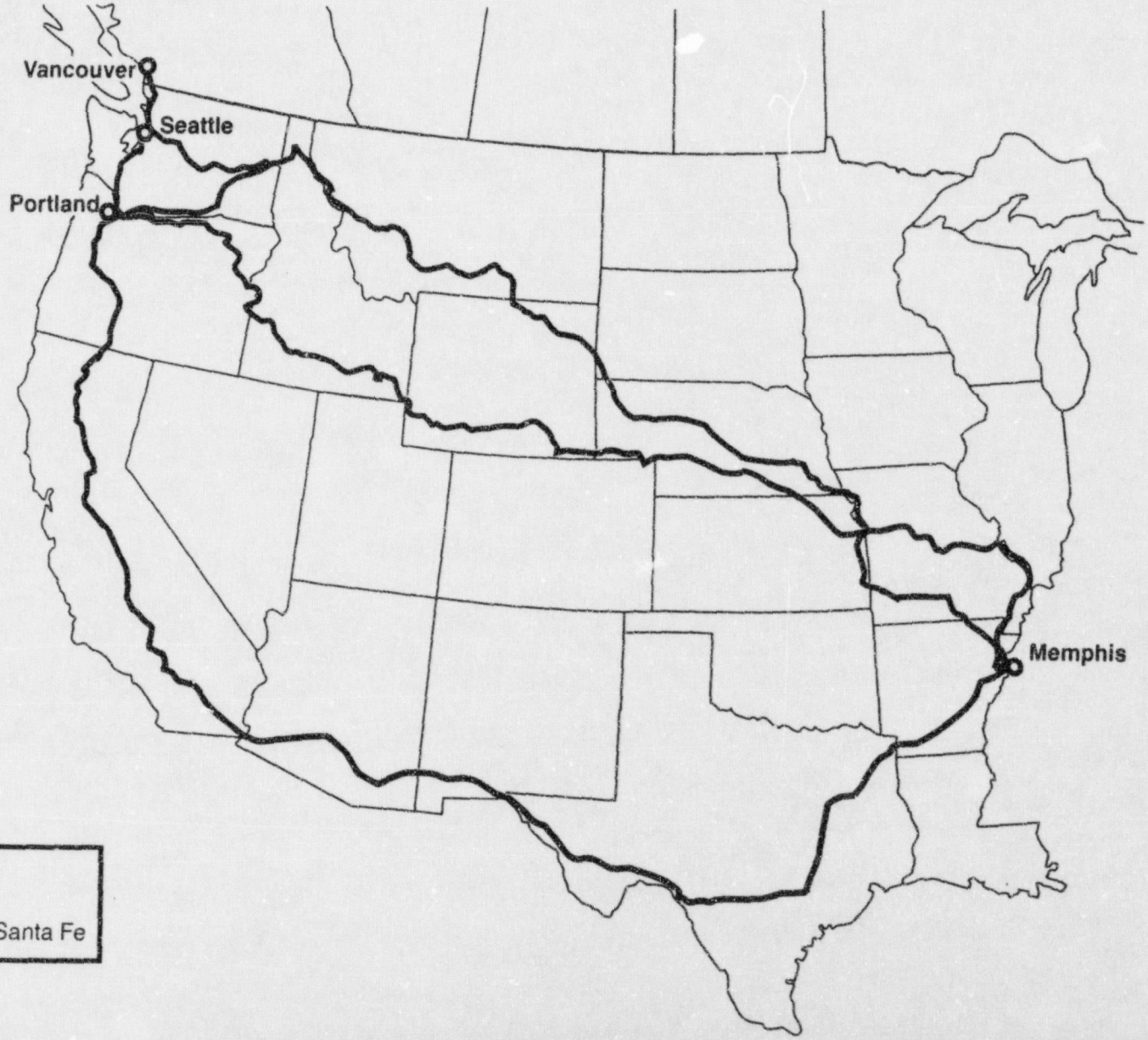
Pacific Northwest-Memphis/Southeast (see Map #33). To Memphis and the Southeast from the Pacific Northwest, BN/Santa Fe has by far the best service. With the advantage of its wider Pacific Northwest coverage and routes extending into the Southeast to Birmingham, Mobile and Pensacola, BN/Santa Fe handles between these regions, while SP handles only . SP's route is extremely circuitous; SP uses the Southern Corridor for this traffic because its route via Roseville is even longer.

The UP/SP merger will cut 723 miles off SP's Portland-Memphis route, hugely benefitting SP shippers in both the Pacific Northwest and the Arkansas/Missouri area. By consolidating volumes, the merged system will be able to improve its service and offer a stronger challenge to BN/Santa Fe, which is likely to remain the preeminent carrier in these flows.

California-Texas (see Map #34). Between California and North Texas/East Texas, SP has BN/Santa Fe and UP . UP's lines via the Central Corridor are far too circuitous to be competitive, and its small volume of traffic tends to move between Northern California and Dallas, where UP's circuity is least. BN/Santa Fe has a mileage and service advantage over SP from Dallas, with a 164-mile shorter

Map #33

Pacific Northwest–Memphis Routes



Map #34

California–Texas Routes

route to Los Angeles and a 289-mile shorter route to Oakland (UP's routes are much longer still). SP's share of the total flow reflects its extensive exclusive coverage of shippers in both California and Texas. For competitive traffic, SP is much less of a factor; for example, SP has lost major California-Texas intermodal business because of inadequate service.

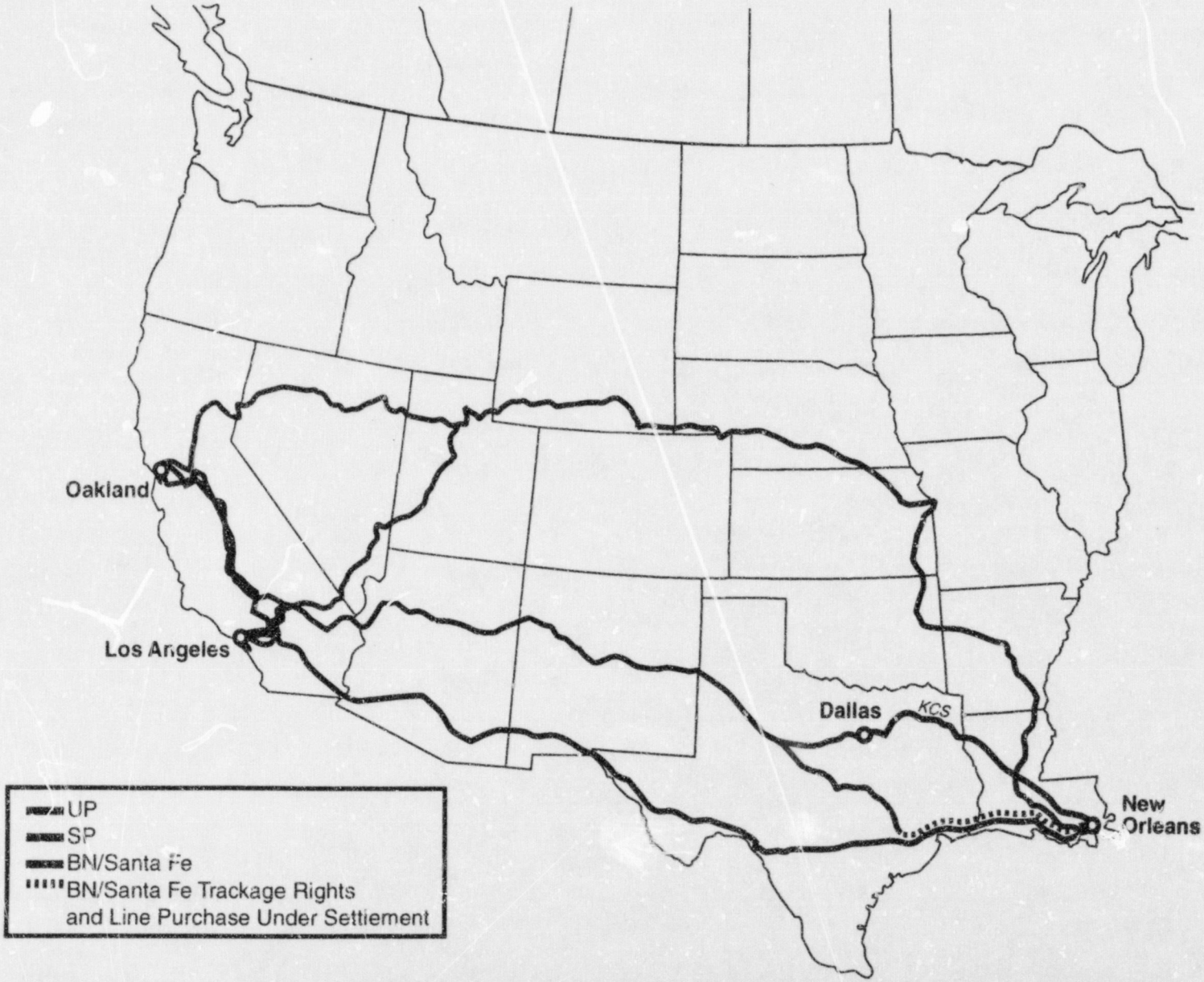
By merging, BN and Santa Fe will gain further advantages for these flows. As with the Pacific Northwest-Texas flows, the merger gives BN/Santa Fe new route and terminal flexibility in Texas and wider coverage of Texas points. The merged BN/Santa Fe will have more service between California and Memphis (new service has already been instituted), stopping at Dallas en route, and the BN/Santa Fe merger application projected substantial California-Texas traffic gains for this reason.

The UP/SP merger will create California-Dallas routes much shorter than either UP's or SP's (see Maps #9 and #10), with transit time savings of half a day over SP's present service. UP shippers will gain new single-line routes between California and Texas. With the upgrading of the Colton-El Paso and El Paso-Dallas lines, service in these corridors will greatly improve. The settlement, again, gives BN/Santa Fe much wider shipper coverage in Texas, and the ability to improve service by consolidating Texas and New Orleans business on California trains.

California-New Orleans (see Map #35). With the only direct single-line route between California and New Orleans, SP

Map #35

California–New Orleans Routes



handled in 1994. UP, with its highly circuitous Central Corridor routing, had . BN/Santa Fe, working principally with KCS, carried .

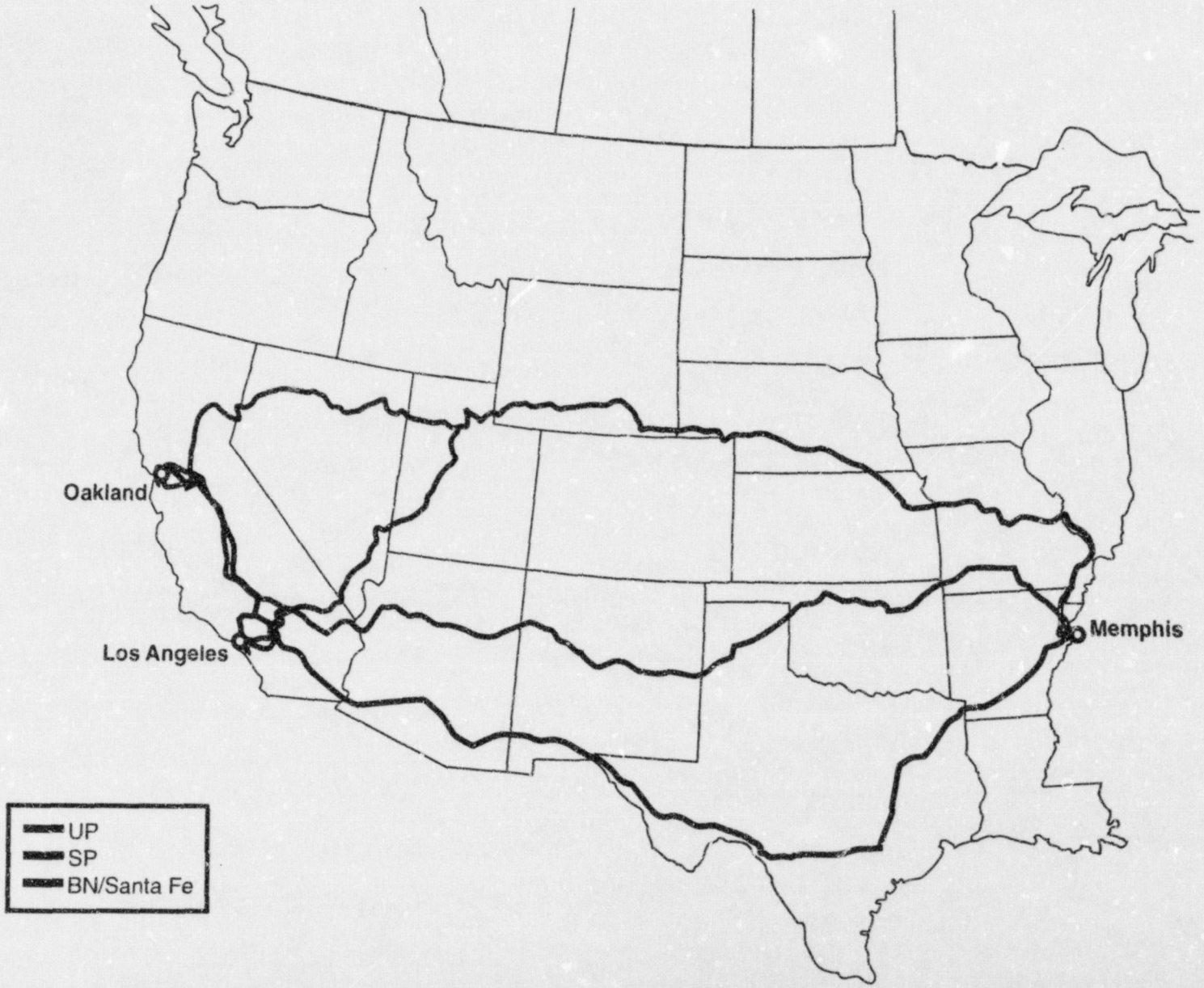
The UP/SP merger will improve service in this corridor, thanks to the upgrading of SP's El Paso-Colton line and the coordination of facilities. Schedules will improve, and more traffic will be pre-blocked in both directions. The BN/Santa Fe settlement will greatly strengthen competition by giving BN/Santa Fe a new excellent single-line route between California and New Orleans.

California-Memphis/Southeast (see Map #36). In 1994, even before its merger gave BN/Santa Fe a new single-line route between California and Memphis that is significantly better than SP's, BN/Santa Fe (that is, Santa Fe) handled between California and Memphis and the Southeast. BN/Santa Fe gained from its ability to move traffic deeply into the Southeast. SP, with the only single-line route but hampered by circuity and poor service quality (having lost the UPS business in this corridor because of service problems), had . UP, with its highly circuitous Central Corridor route, had principally to and from Northern California. Truck is strong into the Southeast, carrying much more than rail.

With their merger, BN/Santa Fe, already a strong competitor, will be far more competitive for these flows. BN/Santa Fe inaugurated new California-Memphis-Birmingham intermodal service promptly after merging. For Northern

Map #36

California–Memphis Routes



California traffic, BN/Santa Fe's new route to Memphis is 223 miles shorter than SP's and 305 miles shorter than UP's. For Southern California traffic, BN/Santa Fe's new route is 98 miles shorter than SP's and 445 miles shorter than UP's.

The UP/SP merger will meet the BN/Santa Fe competitive challenge in this corridor. The merged system's new route, comprised of synergistic parts of UP's and SP's lines, will be 10 miles shorter than BN/Santa Fe to Oakland and 135 miles shorter to Los Angeles (see Maps #7 and #8). Upgrading the Colton-El Paso and El Paso-Dallas lines will further improve service. For example, intermodal traffic will move reliably from Memphis to Los Angeles in 56 hours, five hours less than SP's current schedule, and the merged system will institute a new daily train pair in this corridor. (UP shippers will save a full two days.) Also, UP/SP will institute intermodal service that is competitive with BN/Santa Fe's fourth-morning Memphis-Bay Area service -- something neither SP nor UP can do at present. The merged system will also have the benefit of a less congested Central Corridor alternative for Northern California traffic.

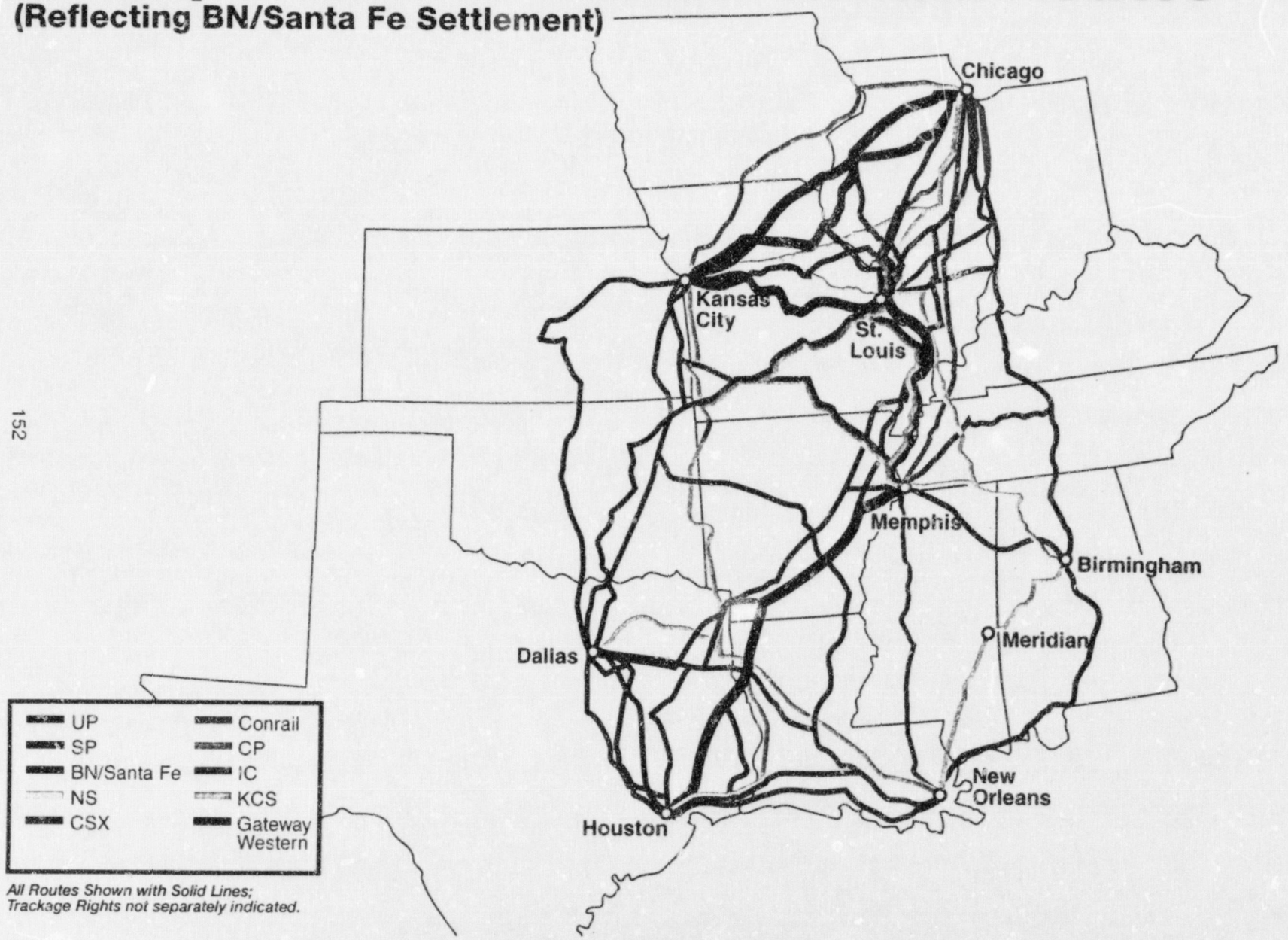
3. Midwest-South Central City Pairs

UP and SP serve a long list of relatively short-haul city-pairs in the Midwest-South Central area (see Map #37). More railroads serve these city-pairs than the transcontinental corridors we have discussed thus far. These city-pairs, particularly the shorter ones, serve primarily as parts of longer rail routes, for which there are often alternative competitive

Map #37

Principal Midwest–South Central Routes

(Reflecting BN/Santa Fe Settlement)



All Routes Shown with Solid Lines; Trackage Rights not separately indicated.

gateway/railroad options that do not traverse the particular city-pair (for example, the Kansas City-Dallas city-pair is used by BN/Santa Fe, UP and SP as part of longer Kansas City-Houston routes, but KCS also moves grain from Kansas City to Houston over a route via Beaumont that does not pass through Dallas). Rail traffic volumes originating in one of these cities (or the surrounding territory) and terminating in another are often minimal. Moreover, for such traffic, trucks are extremely competitive, because most distances are quite short.[78] Truck economics are distinctly superior to rail at such shorter distances for most traffic. (Virtually no LTL or truckload carriers use rail in these city-pairs.) For example, the Reebie data show truck volumes 2-1/2 times those of rail between Dallas and both the St. Louis/Northeast and Memphis/Southeast regions; three times those of rail between Kansas City and Chicago and points north and east, between Kansas City and St. Louis, and between St. Louis and Chicago; and four times those of rail between Dallas and New Orleans. Barges also compete for bulk traffic in most of the north south Midwest-South Central lanes, as shown in Appendix A.

The following is a brief discussion of the competitive situation in each of the Midwest-South Central city pairs.

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[78] Many studies have shown that below about 1,000 miles, trucks outperform intermodal in cost, transit time and overall service quality. See, for example, 1992 IANA/NITL Intermodal Index; AAR, Intermodal Trends, Dec. 21, 1993.

Chicago/Northeast-Kansas City. Here, BN/Santa Fe, CP, NS and Gateway Western (via haulage over SP from Springfield, Illinois, to Chicago) are all competitors, as well as UP and SP. UP had and SP less than . BN and Santa Fe had parallel lines between Chicago and Kansas City, and their merger gave them valuable route flexibility between these points. UP's route is circuitous, and the merger will give UP shippers a 110-mile saving.

Chicago-St. Louis. BN/Santa Fe, IC, NS, CSX, Conrail and Gateway Western, as well as UP and SP, all compete for traffic in this lane. Water is also substantial for bulk commodities. UP handled and SP . Consolidating UP and SP volumes will only provide a stronger competitive alternative.

Chicago-Dallas. BN/Santa Fe is strong in this city-pair, with . KCS can also work with Kansas City connections such as CP. SP had only . BN and Santa Fe were parallel from Chicago to Dallas, and each had good facilities in both cities; their merger will thus greatly strengthen their competitiveness in this lane. Directional operations in Texas and Arkansas should improve UP/SP Chicago-Dallas service. The merger also gives SP shippers a 56-mile shorter route.

Chicago-Memphis. There is competition in this lane from IC, which has by far the best and fastest route, and from BN/Santa Fe, CSX and NS. These roads handled

and UP and SP only . Combining UP and SP can only help provide a better competitive alternative.

Chicago-Houston. Here, UP is the service leader, with . SP and BN/Santa Fe have . Trucks carry more freight than rail in this lane, where the highway distance is less than 1,000 miles. The BN/Santa Fe merger will improve BN/Santa Fe's competitiveness in this lane, thanks to route and terminal flexibility. Also, BN/Santa Fe has made clear that it intends to compete aggressively in the Texas intermodal market; the low combined 1994 BN and Santa Fe traffic share reflects BN's temporary strategic retreat from that market. The UP/SP-BN/Santa Fe settlement gives BN/Santa Fe still further route flexibility, and a Chicago-Houston route that is shorter and has much less rise and fall. The merged UP/SP system will achieve major service improvements in this lane, as a result of directional operations, increased run-through trains and pre-blocking, and facility coordinations. The merged system will operate a 31 hour, 40 minute Chicago-Houston intermodal schedule; SP's current scheduled time is 51 hours.

Chicago-New Orleans. Here, IC with a straight-shot route that no other railroad can match. CSX and NS also compete for traffic. Water is a major competitor for bulks, and total water tonnage exceeds total rail tonnage. Railroads other than UP and SP have compared with UP's and SP. SP's circuitous

line via Houston is not a competitive factor. UP mainly handles carload business to and from points in the New Orleans/Baton Rouge area that are not served by IC. The UP/SP merger will give the merged system route and terminal flexibility that will improve its competitiveness in this lane. In the settlement, BN/Santa Fe will gain a new single-line route that is shorter than the route that SP has now. Competition in this lane will clearly be stronger.

Kansas City-St. Louis/Southeast. In this city-pair, there is competition from BN/Santa Fe, NS and Gateway Western. These railroads handled UP and SP less than . The merger can only increase competition in this lane.

Kansas City-Dallas. BN/Santa Fe and KCS (via Shreveport) compete here, handling . UP had of the traffic, and SP . BN and Santa Fe had parallel lines, and gained significant route and terminal flexibility by merging. SP did receive trackage rights over BN/Santa Fe's line via Oklahoma City in the settlement in the BN/Santa Fe merger case, and that is not reflected in the 1994 traffic data. But, as I have noted, SP has limited competitive potential in this corridor because its access to grain is much less than the grain access of BN/Santa Fe, UP and KCS, which all serve major grain points north of Kansas City. Again, the merger will increase competition against the dominant railroads in this lane.