

**Determining Optimal Shipment Directions
For Canadian Wheat Board Grains
Under Full Cost Rail Freight Rates**

By

Gordon Flaten

**A Thesis
Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree of**

MASTER OF SCIENCE

**Department of Agricultural Economics and Farm Management
University of Manitoba**

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Abstract

Western Canadian rail freight rates paid by grain shippers doubled on August 1, 1995 due to the removal of the Crow Benefit subsidy. This sudden change in transportation costs has a dramatic impact on grain shipment patterns and significantly increases the importance of making optimal shipment decisions.

This study develops a decision support system to be used by the Canadian Wheat Board to determine optimal movement patterns for wheat shipments. It then examines the sensitivity of optimal movement patterns to changes in market conditions, including changes in freight and handling costs, relative sales values, supply availability and physical handling constraints. Finally, it discusses related institutional and logistical management issues that must be considered.

The economic analysis is based on a modification of the general transportation linear programming model. The objective function maximizes total net on-farm revenue, i.e. price times quantity sold at all destinations, minus the cost of transporting and handling grain from origin to destination.

Actual data are used when possible to make the model results realistic. The model incorporates rail freight and handling costs and actual 1994/95 supplies by location. Wheat sales prices and volume potential for 1994/95 by port or inland destination were

approximated. The "WGTA" scenario, which uses 1994/95 (subsidized) freight rates, results in a shipment pattern that closely approximates grain movement in that crop year.

The "base case" scenario models the impact of the removal of the Crow Benefit. The increase in rail freight rates causes a large shift in movement of wheat away from the port of Prince Rupert. The largest increase occurs in movement to, or through, the U.S., because ending the Crow Benefit removed the bias for east and west shipments relative to southbound movement. It is important to note that no attempt is made to incorporate in the model changes in production patterns that will likely occur as farmers respond to the new transportation cost environment. Other scenarios examined include allocation of scarce Vancouver throughput capacity between grades, the effect of the removal of port parity for Prince Rupert, and sensitivity of model output to changes in relative port prices, increases in carryover and decreases in supply.

In addition to the development of the transportation model, several important related issues are identified. These include the importance of data quality, changes in concepts of farmer delivery equity, and implications of using U.S. shipment routes.

The study concludes that the model developed can be useful both as a planning tool for CWB shipment decisions and to help determine the impact of a number of changes in grain market conditions and in the grain transportation and handling system.

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During my studies I was on educational leave from the Canadian Wheat Board. I am especially grateful to the CWB and the farmers who pay its operating costs for the opportunity to complete my MSc. Several colleagues at the CWB were also generous with their time in helping me navigate through the mountain of data necessary for this study and the computer software used to generate and display the results. In particular, I wish to thank Brock Fecio, Rick Steinke and Trent Weber.

Most importantly, I wish to acknowledge the encouragement I received from my wife Louise Pelletier. Louise and I were also blessed with the birth of our daughter Elise during my studies. Although Elise provided little help to me in formulating the linear programming model in this thesis she did add a lot of joy to the experience.

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Chapter 1

Introduction

1.0 Elimination of the Crow Benefit

The Canadian federal budget of February 27, 1995 included the announcement of dramatic changes in government policy relating to grain transportation. One major element of these changes is the termination of the government subsidy (the "Crow Benefit") that had been paid to railways for the movement of grain out of Western Canada (Agriculture Canada, 1995). The abolition of the Crow Benefit (effective August 1, 1995) leads to a significant increase in the cost of rail freight for grain shippers. The largest such marketer and shipper in Western Canada is the Canadian Wheat Board (CWB).

The CWB is a federal Crown Corporation that has the exclusive authority to market Western Canadian wheat and barley for export and for domestic human consumption.¹

¹ Wheat for human consumption includes such uses as bread or cake flour and semolina for pasta. Barley for human consumption includes such uses as malt (for beer or cooking) and pearled barley for soup. Non-human consumption uses include livestock feed or inputs for manufactured products such as fuel ethanol. Wheat and barley for domestic non-human uses is freely traded outside the CWB.

It markets wheat and barley on behalf of Western Canadian farmers and returns to them all sales revenue, minus marketing expenses. The CWB's objective is to maximize the net on-farm value of the grain it markets (CIGI, 1993, p463). Consequently, the change in freight rates requires the CWB to re-consider its shipping pattern.

1.1 The Problem

As long as per-tonne rail freight rates were heavily subsidized by the federal government, achieving the CWB's objective of maximizing net on-farm revenue was conceptually and operationally simpler than it is currently, now that the subsidy has been removed. The increased complexity of the CWB's decisions is caused by two main impacts of removing the subsidy. First, the end of the subsidy removes a bias to use Canadian railways and ports and increases the number of potentially economic shipment routes. Second, an increase in the direct cost of adverse freight, i.e. hauling grain one direction when it would have been economically optimal to ship it in a different direction, makes non-optimal decisions more expensive.²

² Beginning August 1, 1995, the method by which farmers share the cost of moving grain beyond Thunder Bay through the Great Lakes/St. Lawrence Seaway was changed. Prior to this year, these freight costs were "pooled" or shared by all farmers. Following the change, only those farmers who deliver grain in the Thunder Bay catchment area (the area is determined by the CWB prior to each crop year based on projected direction of movement) will be paying those costs. This policy change does not affect CWB operational decisions with regard to directional shipment decisions and thus it need not be considered in this thesis.

1.1.1 Increase in Number of Potentially Economic Shipment Routes

Subsidy payments made under the Western Grain Transportation Act (WGTA) applied only to eastward or westward movement from Western Canadian delivery points. The subsidized share of east/west rail rates was as high as 80.7 percent or \$24.97 per tonne for the average hauling distance in 1986/87, declining to 51.5 percent or \$15.63 per tonne in 1994/95 (Transport Canada, 1995).

During the years of WGTA subsidies, there were times when prices in the U.S. domestic market were high enough relative to offshore alternatives to encourage the CWB to ship grain southward. However, the WGTA subsidy made southbound movement significantly less attractive than it would have been otherwise. This was particularly true of transshipments through U.S. ports to offshore destinations. Under the new freight rate environment both the U.S. domestic market and shipments through the U.S. to offshore markets are more economically attractive. In view of the CWB's objective, the opportunities cannot be ignored.

One additional factor could have a similar complicating impact on route choice. The federal government has removed the port parity provisions of the WGTA. Under the WGTA, port parity meant rail freight rates to Prince Rupert were identical to the rates to Vancouver, even though Prince Rupert is farther from Western Canadian shipping points. Removal of port parity means decisions to ship to Vancouver or Prince Rupert

may have to be made separately, whereas previously they were essentially interchangeable.³

1.1.2 Increase in Direct Cost of Adverse Freight

An increase in direct or "visible"⁴ freight costs imposes tougher discipline on sales decisions with regard to avoiding situations where supplies are sourced from points beyond economic "boundaries". For example, sales might be made out of Vancouver based on estimated supply availability within a region or "catchment area" from which it is economical to ship to Vancouver. If the supplies (either absolute supplies or supplies available in a certain time frame) are overestimated when sales commitments are made, it may be necessary to source grain from, for example, the St. Lawrence catchment area in order to fulfil sales contract obligations. Under the WGTA subsidy,

³ They were interchangeable for classes and grades of grain which were shipped to both ports. For logistical reasons, however, many smaller volume grades are generally not shipped via Prince Rupert.

⁴ "Visible" refers to freight costs faced by shippers under the WGTA subsidy environment. The real cost of freight was, of course, the full rate (shipper plus government share). In fact, since the government contribution to freight costs was a fixed annual dollar amount, all additional freight costs caused by adverse freight or other non-optimal shipments were paid eventually by farmers (this was done through the use of a revolving tally fund which absorbed overages and shortages in real versus estimated costs of movement for each year). This, however, was not widely recognized nor would it necessarily have been easy to take into account in operational decisions. Therefore, it is appropriate to discuss the historical environment as one in which decisions were made by shippers (including the CWB) basis only the shipper share of freight rates.

the CWB's extra cost of sourcing farther away was much lower. Whereas previously the cost of adverse freight might have been justified, or at least have been relatively insignificant, this may no longer be the case. These extra costs are paid by farmers through lower on-farm returns so extra care must be taken by the CWB to avoid incurring such costs.

To put the importance of the problem in perspective, it is useful to note that between 1984/85 and 1993/94, an average of \$726 million was spent by governments (via the WGTA) and farmers (via grain handling companies and the CWB) to ship CWB grain by rail each year (Transport Canada, 1995). Over the same period, total annual CWB sales revenue basis Vancouver/Thunder Bay averaged just over \$3 billion (CWB Annual Reports). Rail costs thus represented an average of 24 percent of the total value of wheat and barley basis port position over that period. This figure ranged from a high of 32 percent in 1986/87 to a low of 17 percent in 1988/89. It is clear that the ability to make optimal sales and shipment decisions is critical to maximizing sales revenue for wheat and barley farmers.

In consideration of the above comments, the problem facing the CWB to be addressed in this thesis is, in general terms:

What quantity of each grade of grain should be sold at each export and domestic destination in order to maximize aggregate net on-farm revenue?⁵

Information necessary to answer this question includes estimated available supplies by location, freight and handling cost from each source to each destination, and relative sales prices at each destination. The corollary to the above problem is:

How far should the CWB go to source supplies for each destination?

Solving the corollary problem can therefore be thought of as defining the boundaries of the favourable shipment area for each destination.⁶

Solving this problem involves shipment decisions for 20 to 25 million tonnes of wheat and barley supplies, divided into approximately 69 grades and protein contents. The supplies are located at 888 stations (mainly towns) across Western Canada and are to be shipped via 8 potential routes. At each destination, there may be several different prices

⁵ Destinations as referred to here include export ports such as Vancouver and the U.S. Gulf or a defined point such as Minneapolis. Note that offshore destinations are not included. All offshore shipments are considered in this thesis to be represented by shipments to an export port (prices backed off to port position). Domestic destinations include flour mills, feed mills and malting plants in Eastern or Western Canada.

⁶ The area delineated by a favourable shipment area is analogous to what is often referred to as a "catchment area". At the CWB, "catchment area" is used to refer to the areas defined by the freight adjustment factors, which are set annually. Therefore, to avoid confusion, the term "favourable shipment area" is used to refer to the area from which supplies are actually drawn. The two terms may at times refer to the same area but while the catchment area is static for the year, the favourable shipment area may change as supply and/or demand conditions change.

for each grade, resulting from the CWB's practise of price discrimination amongst its customers.

1.2 Objectives

The primary objectives of this study are:

1. To develop a decision support system to assist in the determination of optimal movement patterns for selected grades of wheat.
2. To examine the sensitivity of the optimal movement patterns to changes in relative sales values, freight and handling costs, supply availability and physical handling constraints.
3. To define and discuss related institutional and logistical management issues that must be considered as part of the process to achieve optimal directional movement decisions.

1.3 Scope

This thesis uses a modified version of the model developed in linear programming literature to solve maximization transportation problems. To achieve the general

objective of maximizing the total of all net on-farm returns for all shipments, the mathematical objective is defined as the maximization of the sum total of sales revenue at the export/domestic destinations minus transportation and handling costs to place each tonne of grain at its destination. Constraints are imposed on the model to represent a number of different scenarios. The constraints include physical handling capacities of each route, varying equity of farmers' delivery opportunities, and other factors that vary by scenario.

Where possible, "real" data has been used in this thesis to help ensure the model developed is one which could easily be adapted for use in actual operations by the CWB. For example, western Canadian supply data for the 1994/95 crop year and freight/handling costs for the 1995/96 crop year are used. Sales prices, however, are confidential. Therefore, sales prices at each destination are approximated (based on advice by CWB grain traders) to demonstrate the model.

The model is used to demonstrate optimal movement patterns under a number of possible scenarios, each representing different market conditions or operating environments. The optimal movement pattern includes the recommended volume of shipments to each destination and, in corollary fashion, the optimal direction in which to ship each tonne of each grade from each station.

1.4 Organization of Thesis

The remainder of the thesis is divided into five chapters. Chapter 2 provides background on the evolution of Western Canada's grain freight rate environment, the history and functions of the CWB, and the role of the CWB in grain transportation.

Chapter 3 discusses the theoretical foundations of the problem, including a brief discussion of linear programming assumptions and limitations, and an outline of the model used in this thesis.

Chapter 4 describes the data and the empirical model.

Chapter 5 outlines the scenarios examined and, for each, discusses the model solutions and sensitivities

Chapter 6 presents an overview of related logistical management issues that must be considered as part of the process to achieve optimal directional movement decisions.

Chapter 7 offers conclusions, topics for further research, and limitations of the study.

Chapter 2

Background

2.0 History of Rail Freight Rates for Grain in Western Canada

The federal government's 1995 budget ended the almost 100 year history of what came to be known as the "Crow Rate". The Crow Rate came into being in 1897 when the Canadian Pacific Railway (CPR) wanted to build a 500 kilometre rail line from Lethbridge, Alberta to Nelson, British Columbia. The CPR wanted to be able to carry cargo out of the surrounding rich mineral region. Building a railway through the Crownest Pass area of the Rocky Mountains was very difficult, however, and the CPR decided it needed government help to finance construction. The federal government, meanwhile, wanted to extend Canadian authority into a western territory under threat of American domination. It also saw an opportunity to exercise government authority over rail freight rates and to deliver on a promise to lower freight costs for prairie settlers and farmers.

The agreement reached between the government and the CPR included \$3.5 million in direct federal subsidies to help build the line and a grant to the railway of 3.75 million acres of land held by the B.C. government. In return, the CPR gave 50,000 acres of

coal-bearing land to the federal government and accepted imposition of fixed freight rates on settlers' goods moving west and on grain moving east to Lake Superior.

These "Crowsnest Pass freight rates" remained as a fixed rate ceiling until 1918. Actual rates were lower than the ceiling in the early years, but by 1918 the railways complained that inflation had eroded their ability to earn sufficient income from the Crow Rate. The federal government suspended the Crow Rate that year but it was reinstated in 1925 as a statutory freight rate for wheat and flour moving east on CPR lines. The 1925 fixed rate was established at an inflation-adjusted level that was higher than the original in 1897.

In 1925 the Crow Rate was also extended to all railways and to grain and flour moving west, as well as east. In 1929 grain movement through Churchill was added. These additions redressed what had been a growing inequity in that farmers on new (non-CPR) rail lines and thousands of new elevators had not to that time benefited from the subsidized rates.

Freight rates for shipping grain did not change again until 1984. Farmers grew accustomed to the cheaper rates and viewed them as "a political birthright - prairie compensation for the national policy which treated the West as a hinterland to be exploited" (Western Producer, 1993, p5). The railways, on the other hand, complained bitterly about rates that had become non-compensatory following the high inflation of

World War II. A federal government commission in 1961 confirmed that the railways had been losing money. The Commission noted that as a result the railways were lowering investment and maintenance expenditures and the rail system was unable to handle increasing grain exports (Heds, 1994, p7). Another commission in 1974 calculated that the Crow Rate covered just 38.9 percent of the variable costs of moving grain (Heds, 1989, p42).

During the 1970's, various programs were implemented by governments and other organizations to make up for some of the deterioration in investment by the railways. Governments subsidized rail branch line operations and paid for their upgrading. The Canadian Wheat Board and several governments also purchased thousands of rail hopper cars for use by the railways to haul western grain.

These "back door" efforts to compensate for the negative impacts of the Crow Rate did not solve the railways' cost problems. The debate over the future of the Crow continued and included several groups. The railways complained about their losses of hundreds of millions of dollars on grain movement. Western livestock producers, especially cattle producers, complained about the higher local grain prices and a grain export bias created by the Crow. Non-agricultural business groups such as mineral companies also argued that the Crow was holding back railway investment and, therefore, the development of other businesses in the West.

Consensus grew that the economic distortions were growing so severe and the rail system so decrepit that change was inevitable. Thus, after years of tumultuous debate the Western Grain Transportation Act (WGTA) was enacted in 1983. The primary intent of the Act was to ensure the railways would be adequately compensated for moving grain in order to encourage them to make necessary capital investments to enhance efficiency. Among other things, the WGTA established that freight rates were to be set each year based on estimates of the cost of grain transport and projected grain volume. Major costing reviews were conducted every four years to ensure the rates closely tracked actual costs of shipping grain.

The 1983 rate that shippers paid for moving grain was equivalent to the old Crow Rate. The federal government's contribution started at the amount calculated to be the shortfall between the revenue received by the railways for moving grain in 1981/82 and the actual costs incurred by the railways in moving grain that year. This contribution, to be known as the "Crow Benefit", was \$658.6 million.⁷

As the cost of moving grain increased, shippers paid the first 6 percent (3 percent until 1986/87 and 6 percent thereafter) increase in costs due to inflation⁸ and the full increase

⁷ Since payments for railway overhead costs were phased in, the actual government commitment didn't reach \$658.6 million until 1986/87.

⁸ In 1981/82 the inflation rate was running well over 10 percent and showed no signs of abating. Farm interests were quite content with the WGTA's inflation sharing

in costs due to movement of more than 31.5 million tonnes of grain. The federal government picked up increases beyond the 6 percent inflation cap. The Crow Benefit reached a peak of \$720 million in 1991/92. After that, the federal government reduced its commitment due to budgetary constraints. In 1994/95, the last year the Crow Benefit was distributed, the subsidy totalled \$560 million.

A key characteristic of the Crow Benefit is that it was paid directly to the railways⁹. This meant that grain shippers were charged only a portion of the full rate for shipping grain from prairie elevators to east or west coast ports. The following table indicates the share of the full rate for moving grain paid by the government and shippers in each year from the start to the end of the WGTA.

arrangement but in retrospect farmers picked up virtually all of the inflationary impact because the inflation rate fell dramatically in the 1980's.

⁹ The recommendation of the Gilson study, which was the source of many of the WGTA provisions, was to gradually increase the proportion of the Crow Benefit that was paid directly to farmers, leaving only a small portion to be paid directly to the railways. This provision was abandoned due to considerable resistance from some farm groups, particularly the prairie Pools.

Table 1
Government and Shipper Shares of WGTA Freight Rates

Crop Year	Gov't Share	Shipper Share
1983/84	76.7	23.3
1984/85	69.6	30.4
1985/86	78.6	21.4
1986/87	80.7	19.3
1987/88	72.7	27.3
1988/89	72.3	27.7
1989/90	70.3	29.7
1990/91	66.3	33.7
1991/92	65.6	34.4
1992/93	62.7	37.3
1993/94	57.2	42.8
1994/95	51.5	48.5

Source: National Transportation Agency

The "method of payment" (MOP) of the Crow Benefit was one of the contentious debates that continued after implementation of the WGTA. Payment of the Crow Benefit directly to the railways rather than to shippers had the effect of lowering the cost of rail freight paid by the shipper. The prices for most grains shipped from the prairies are determined in world markets. Prices paid at prairie delivery points are calculated by deducting transportation, handling and other costs from the prices at the ports. The WGTA MOP had the effect of keeping farm gate prices on the prairies higher (by the value of the subsidy). This artificial boost to grain prices made livestock production on the prairies

less profitable. Similar arguments were made for other grain processing or value-added industries, like canola crushing.

The efficiency argument against the pay-the-railway MOP was more subtle. The full cost of rail transportation was not visible to shippers. Consequently, there was less demand for improvements in system efficiency, like closing under-utilized branch lines or consolidating the elevator system.

As intense debate over the real impact of the MOP continued following implementation of the WGTA, government deficit and debt problems came to the forefront of public debate and concern as well. From a peak of \$720 million in 1992/93, the federal government cut its commitment to \$650 million in 1993/94 and \$560 million in 1994/95. The 1995 budget, rather than further reducing the commitment or changing the MOP, just eliminated the Crow Benefit payment altogether. Farmers were given a one-time \$1.6 billion payout as compensation. The net effect is the same as changing the MOP but without placing the entire Crow Benefit in farmers' hands to help them pay the higher freight costs.

2.1 The Canadian Wheat Board

2.1.1 History

The Canadian Wheat Board (CWB) is a federal Crown Corporation that has the exclusive authority to market Western Canadian wheat and barley for export and domestic human consumption. The CWB's role has changed over time. After initial experimentation with a precursor to the CWB beginning in World War I, the CWB was created in 1935 to market wheat, with farmers delivering to it on a voluntary basis. During World War II the CWB was empowered to market all Canadian grains, including oilseeds and Ontario corn. In 1943 it became compulsory for western farmers to deliver their wheat to the CWB. This monopoly for western wheat was retained after the war when the federal government removed the CWB's jurisdiction over other grains. In 1949 Parliament amended the CWB Act to extend the CWB's exclusive jurisdiction to oats and barley. In 1974 interprovincial sales of wheat, oats and barley for use in animal feeds within Canada were removed from the sole responsibility of the CWB. In 1989, the CWB's authority to market oats was also removed, leaving it with its current responsibilities for the marketing of wheat and barley.

2.1.2 Price Pooling

Farmers are paid for grain delivered to the CWB through a price pooling system. All revenue received by the CWB from the sale of grain is pooled in four funds or "pools" - one each for wheat (all types except durum), durum wheat, feed barley, and designated barley. Within each pool, price spreads between grades are established to reflect relative market values.

Prices are pooled over the course of a crop year (August 1 to July 31 of the following year). Farmers receive their share of these pooled prices in phases. First, farmers receive an initial payment for their grade of grain when they deliver to the CWB, usually at a primary elevator. The level of this initial payment is based on expectations of market returns from the CWB's sales of that particular grade over the entire crop year. The initial payment is established by the federal government based on recommendations from the CWB and the government's own analysts. The objective is to set the initial payment at a level that will provide as much cash as possible to farmers when they deliver grain but that will not exceed the year's total market returns less marketing expenses. The initial payment established by the government is basis port position (Vancouver or Thunder Bay). The payment farmers receive includes deductions for freight and handling costs.

As the year proceeds, initial payments may be adjusted upward if market returns warrant. In this case, farmers who have delivered grain receive adjustment payments from the CWB. Finally, following the end of the crop year, the CWB calculates the total returns for each grade, deducts its operating expenses, and distributes the remaining money to farmers in the form of a final payment. The CWB's operating expenses include such items as staff salaries, travel, financing costs, and grain storage. The CWB's operating expenses also include an item particularly relevant to this study - freight costs that are in excess of farmers' freight deductions. If total revenue minus initial payments minus operating expenses results in a negative value, the federal government pays for the resulting deficit.¹⁰

2.2 Transportation of CWB Grains

A good understanding of the procedures and cost sharing arrangements for transporting CWB grains is essential to the analysis of appropriate techniques for making CWB transportation decisions. This section discusses transportation of CWB grains from farm

¹⁰ Deficits in the CWB pool accounts have been infrequent. Since 1943 (when the CWB obtained its monopoly on wheat deliveries) there have been 7 years in which a deficit has occurred in one or more of the wheat or barley pools. There have been 3 deficits in the wheat pool, 1 in durum, 6 in feed barley and 1 in the designated barley pool. The total cumulative value of these deficits amounts to 1.0 percent of the total cumulative sales value for all four pools over the same period (CWB, 1995).

to export port or continental destination only. Although ocean freight arrangements to ship grain overseas are an important part of the grain trade, that aspect of grain transportation is beyond the scope of this thesis.

Although the CWB is responsible for marketing wheat and barley and is ultimately responsible for arranging transportation of that grain from prairie delivery points to points of sale, it does not own any physical handling or transportation facilities. Instead, the CWB works in cooperation with a number of companies to execute the logistics of transporting grain to customers.

Sales of CWB grain are made based on estimates of supplies available for delivery. One important source of these supply estimates is the delivery contracts that farmers sign with the CWB. These contracts commit the farmer to deliver a specified number of tonnes of a certain grade to the CWB when required.

When the time approaches for the CWB to fulfil a sales commitment by, for example, loading an ocean vessel in the port of Vancouver, several steps take place. First, the CWB notifies farmers that a particular grade of grain is required and that farmers are authorized to deliver a certain portion of the volume that they have committed in their delivery contract. Farmers deliver their grain to a country elevator of their choice. Upon delivery, the elevator pays the farmer the CWB's initial payment, which is basis Vancouver or Thunder Bay, less deductions for freight and handling.

The deduction for freight is established by the CWB and consists of two elements. The first is the cost of rail movement to either Thunder Bay or Vancouver, whichever is lower. This figure may then be adjusted by a "Freight Adjustment Factor" (FAF), depending on the direction the farmer's grain is likely to be shipped. For example, an FAF is added to freight costs for movement east through the Great Lakes/St. Lawrence Seaway system due to the additional costs of shipping grain that direction. The FAF is set prior to August 1 and remains constant for all stations for the entire crop year. It is therefore based on CWB projections of directional movement up to one year in advance. The actual pattern of movement may be different from this projection.

Once farmers have delivered their grain to the elevator, the elevator company reports to the CWB its stocks of each grade of grain. The CWB then decides where it will allocate the empty rail cars that are made available to it through a rail car allocation procedure (explained in the next section). The CWB advises the elevator companies how many rail cars they will receive each week on each of Western Canada's 201 train runs (a section of railway track defined for the purpose of conforming to railway logistical operations). After any adjustments are made to this initial allocation (also explained in section on rail car allocation), the railways are informed where and when to drop empty rail cars for loading by the elevators. Elevator managers then load the ordered grain into the rail cars and the railways pick up and deliver the cars to the destination ordered by the CWB (e.g. Vancouver, Thunder Bay or a U.S. destination).

The elevator company receives payment for the grain from the CWB once it arrives at the destination. The price paid is the CWB's initial payment basis Vancouver or Thunder Bay for the actual grade delivered. The elevator company, meanwhile, pays the railway the statutory (i.e. government-set) freight rate¹¹ from their elevator to either Vancouver or Thunder Bay, whichever is lower. They may also get a discount from this rate if, for example, the elevator loaded a unit train of 50 or 100 cars within a time period specified by the railway. If a discount does apply to a particular shipment, the elevator company (not the CWB) receives the benefit and may share all, part or none of this benefit with the farmers who deliver grain to that elevator.

If a rail car full of grain is shipped from an elevator to the nearest of Vancouver or Thunder Bay, the railway receives full payment for the freight from the elevator company. If, however, the CWB orders a car to be delivered to Vancouver when the nearest destination is Thunder Bay, the CWB must pay the railway for the additional freight cost. This additional freight cost, as with all of the statutory freight rates, is distance-related. The CWB may decide to incur additional or "adverse" freight when the marginal difference in sales values at one port versus another makes it economical to ship grain longer distances by rail. Adverse freight may also be incurred when supplies in

¹¹ One of the elements of the freight rate structure which was retained (for at least five years) in the 1995 federal budget is statutory maximum rates which the railways may charge grain shippers.

the favourable shipment area are not available to fulfil sales commitments that the CWB determines must be fulfilled even at a loss.

The impact of the CWB's shipment decisions on the freight bill farmers pay can thus be viewed in two ways. First, farmers pay directly via the pool accounts for any adverse freight the CWB incurs. Second, farmers could benefit if the CWB (and elevator companies) arrange shipments to maximize railway freight rate discounts by, for example, shipping in unit trains. In the second case, farmers benefit only at elevator points where the unit trains are formed and then only if the elevator company passes those savings on to farmers.

2.3 Rail Car Allocation

An issue currently under discussion in the grain industry is the process by which grain shippers will gain access to rail cars in the future. The 1995 federal budget included the announcement that the government agency responsible for overseeing rail car allocation (Grain Transportation Agency, GTA) would be disbanded and that industry members and government would discuss means to transform the GTA's operational functions to an industry managed and funded agency (Agriculture Canada, 1995).

There have been many changes to the car allocation system in Western Canada over the past century but not in the principle of administration. Because rail freight rates for grain have been regulated during this period, some tool other than fluctuating rates has been necessary to ration access to cars.¹² Part of the debate currently underway centres on the appropriate balance to strike between an administered car allocation system and one that allocates cars by establishing a bidding or auction market in which prices determine access to cars. While there is a possibility that significant changes in the car allocation system may be implemented in the future, it is useful to describe the means by which grain cars are allocated today and discuss the implications of some alternatives on the CWB's transportation decision-making process.

Transport Canada's Western Grain Transportation Office (WGTO), the CWB and the railways all have responsibilities in the car allocation process. Each week, the WGTO determines the number of cars available for CWB grains, administered non-CWB grains and non-administered grains. Administered non-CWB grains include canola, non-CWB feed barley, non-CWB feed wheat, and oats. Non-administered commodities include rye, flax, special crops, forages and processed commodities such as dehydrated alfalfa and barley malt.

¹² If rail rates were not regulated, the price of freight could be used to ration the supply of cars. For example, when the demand for freight is high, the railways would charge more for access to cars, causing some shippers to decide not to ship until rates fall again.

When there is no shortage of cars, the available cars are divided between the three commodity categories based on sales positions submitted by all companies. Cars are allocated first to nearby sales. In times of car shortages, cars are divided between the commodity categories based on the previous year's percentage of export clearances. This figure was 77.5 percent for CWB grains and 22.5 percent for non-CWB grains in 1994/95 (CWB, 1994).

Following the split between the three categories, the WGTO allocates cars to specific companies for administered non-CWB grains and the railways allocate cars by company for non-administered commodities. Each shipper then determines where they want to place these cars and this information is transmitted to the CWB. Finally, the CWB allocates cars for CWB grains and coordinates movement of all cars for all grains on the basis of an industry-developed Industry Rail Car Allocation Policy (IRCAP). The CWB has been given this responsibility by government largely because it ships the majority of grain to port.

The CWB allocates cars for CWB grains to the 201 train runs taking into account a number of factors. The most important is the availability of the required grains and grades in a train run to match near-term sales. The second consideration is space available in the elevators on each train run. If the same grades are available in several train runs, the CWB will allocate cars to those with the least space to create opportunity for farmer deliveries. Other considerations include maximizing directional movement

of grain to maximize railway efficiency, railway work programs, and the best time of year to ship out of particular regions (e.g. regions which normally supply Thunder Bay receive few cars during the winter months when this port is closed).

Allocations to individual companies within a train run take into account both available space and a historical weighted average handling percentage. "Space cars" are allocated to provide an opportunity for elevator companies to increase their throughput by keeping their facilities on a train run as close to full capacity as possible with the types of grain that are currently in demand. They reward performance by allocating more cars to a company that is originating more grain than its competitors on a train run. A CWB study concluded that the introduction of space cars in 1993/94 significantly increased competition as a factor in determining market share of elevator companies (CWB, 1994, p8).¹³

Space cars comprise up to 25 percent of all CWB and administered non-CWB cars. The remainder of the cars are allocated between companies based on a weighted average

¹³ The number of space cars allocated to a company on a particular train run is determined by a formula. The initial calculation of cars a company will receive is the company's available space on that train run, minus average space for all companies on that train run, divided by the number of tonnes in a rail car. ("Space" is actual unfilled physical capacity plus the number of tonnes of grain expected to be shipped out in the near term for which cars have already been allocated.) If this initial allocation of cars totals more than 25 percent of the total cars (including non-space cars) allocated to that train run, each company is cut back proportionately.

historical handling percentage. This figure is calculated from weekly receipts of wheat, oats, barley and canola for the most recent 52 weeks. Each week's figure is given a declining weighting, starting from the most recent week. For example, the most recent 9 weeks are given a weighting of 20, the next 9 weeks 15, and so on.

Once companies receive their total allocation by train run from the CWB, companies have the flexibility to move cars from one train run to another. This procedure was introduced to allow companies greater flexibility to target specific facilities or train runs. The CWB has the option of disallowing requests to "flex" cars if the change would not fit with marketing requirements or would increase CWB costs. However, the CWB notes that relatively few requests to flex cars are received, likely reflecting an initial allocation of cars that fits the needs of most companies in most market conditions. As well, of the requests that were received to flex cars in 1992/93 and 1993/94, over 90 percent were approved (CWB, 1994, p11).

There is a myriad of complex operational issues involved in administering the car allocation system. Significant changes to that system will no doubt have considerable impact on how the CWB makes its transportation decisions. However, as long as the CWB retains some role in originating grain from the country and is at least partially responsible for transportation costs to move it to port, the model developed in this thesis should remain a useful decision making tool. Under this scenario, the CWB will still have to incorporate freight costs and relative sales values into its sales and transportation

decisions. Furthermore, the CWB will need to decide from where to order the grain that is required at each port. Even if changes are made to CWB initial orders as can be done currently with flex cars, the CWB should know how the changes will affect farmer returns. If the changes are negative, the CWB will require the ability to prevent the change from occurring or negotiate compensation.

Recent discussions in the industry indicate that the next system of car allocation to be adopted will likely retain some CWB influence over where grain is originated for each destination. A proposal to move to "zone allocation" has received broad industry support (Manitoba Cooperator, 1995). The proposal, among other things, involves the CWB allocating rail cars to companies on a zone basis, with each zone encompassing a number of train runs such that the prairie region would be divided into approximately 32 zones (CWB, 1995). As indicated in a discussion paper prepared for the industry by the CWB, supply information would still be provided to the CWB on a train run level. As well, considerations such as directional shipping and minimization of adverse freight costs by placing cars only in favourable shipment areas will continue to be part of industry operations. Therefore, a method by which the CWB can calculate favourable shipment areas will still be required.

Chapter 3

Theoretical Considerations and Model Formulation

3.1 Linear Programming

Linear programming is a mathematical method of allocating scarce resources to achieve an objective, such as maximizing profit (Moore, p21). It involves the description of a real-world situation as a mathematical model that consists of a linear objective function and linear resource constraints.

George B. Dantzig is generally acknowledged as the pioneer of linear programming. He did much of his work during World War II, when he was employed by the U.S. Air Force to search for mathematical techniques to solve military logistics problems. The first workable solution method to solve linear programming problems was published by Dantzig in 1947. Early applications of the technique were limited at first to organizations with large numbers of staff to perform manual calculations. As large mainframe computers became available, application spread to a large number of public and private sector problems. The proliferation of powerful personal computers has made linear programming a common decision making tool in recent years for tasks as varied as postal service route mapping and livestock feed formulation.

The general approach to linear programming is similar for all problems. First, the precise problem is identified, with the desired outcome expressed either as the maximization of some measure such as revenue, profit or welfare, or the minimization of such elements as cost, time or distance. To represent the problem as a mathematical model, three steps are performed: (1) identification of solution variables, (2) development of an objective function that is a linear relationship of the solution variables, and (3) determination of system constraints that reflect the limited resources of the problem and which are also linear relationships of the decision variables (Moore, p22).

The generalized linear programming model can be represented mathematically as:

$$\text{Maximize (or minimize) } Z = \sum_{j=1}^n c_j x_j$$

subject to

$$\sum_{j=1}^n a_{ij} x_j (\leq, =, \geq) b_i, \text{ for all } i (i = 1, 2, \dots, m)$$

$$\text{all } x_j \geq 0$$

Where: Z = total value of the objective function
 c_j = contribution per unit of activity to the objective function
 x_j = quantity of activity j
 a_{ij} = amount of resource i consumed per unit of activity j
 b_i = amount of m resources available (Moore, p41)

As alluded to earlier, to be a valid linear programming problem the functional relationships in the problem must possess certain properties. They must be proportional, additive, divisible, and deterministic. *Proportionality* requires that the rate of change of the functional relationships is constant. For example, prices, costs and input proportions must be constant regardless of the level of output. *Additivity* requires that the total measure of outcome and the total sum of resource usage be additive. For example, the total profit (Z) will equal the sum of profits earned from each individual activity. This implies that the activities are independent - i.e., cross-product terms such as x_1x_2 do not arise because of interactions between some of the decision variables. *Divisibility* requires that activities not be restricted to integer values. *Determinism* requires that all parameters in the problem are known with certainty.

3.2 The General Transportation Problem

Transportation problems are treated as a separate topic in linear programming literature. The reason for separate treatment is that, although transportation problems can be solved by the same techniques used for other types of linear programming problems, there are special solution methods for transportation problems that are computationally more efficient.

In general, the transportation problem deals with the transportation of a product from a number of sources, with limited supplies, to a number of destinations, with specific demands, at the minimum total transportation cost (Moore, p176). The general formulation of a transportation problem with m sources and n destinations is:

$$\text{Minimize } Z = \sum_{i=1}^m \sum_{j=1}^n c_{ij} x_{ij}$$

subject to

$$\sum_{j=1}^n x_{ij} = s_i \quad (\text{supply, } s_i \text{ at source } i)$$

$$\sum_{i=1}^m x_{ij} = d_j \quad (\text{demand, } d_j \text{ at destination } j)$$

$$\text{all } x_{ij} \geq 0$$

Where: Z = total value of the objective function
 c_{ij} = unit cost of transportation from source i to destination j
 x_{ij} = quantity of product shipped from i to j (Moore, p179)

It should be noted that this general transportation problem formulation can be transformed into a maximization problem. For example, profit can be maximized where profit is calculated as sales price at destination j times quantity shipped to j minus cost of transport. The model developed in this thesis is an example of this type of formulation.

3.3 Sensitivity Analysis and Parametric Programming

The model parameters of a linear programming problem are rarely known with certainty and are also usually subject to change over time. Decision makers work with best estimates of the model parameters but they need to know how *sensitive* the model's optimized variable values are to changes in parameter values. The analysis of parameter changes and their effects on linear programming solutions is referred to as *sensitivity analysis* (Moore, p140).

The most obvious method of analyzing the effect of parameter changes would be to make a change in the original problem formulation, solve the problem again, and compare the new solution with the old. However, such a process would be very time consuming. Both manual and computerized solution methods for linear programming problems provide more efficient means of obtaining the same information.

Sensitivity analysis makes use of what are known as *dual values* and the ranges over which they apply. Consider the case of a possible change in the right-hand-side value (b_i) of a constraint equation in a linear programming problem. In the problem examined in this thesis, an example of such a right-hand-side value would be the maximum volume of grain that could be shipped through Vancouver in a given time period. The dual value that is calculated for that constraint is interpreted as the marginal value of throughput capacity at Vancouver. In other words, the value of the objective function would

increase or decrease by the amount of the dual value for a unit of increase or decrease in Vancouver's throughput capacity. The range associated with the dual value gives the upper and lower limits of change in throughput capacity which could be implemented before the dual (marginal) value of throughput capacity would change.

Parametric programming is based on ideas very similar to those of sensitivity analysis. Parametric programming investigates the changes in the optimum linear programming solution due to predetermined continuous variations in the model's parameters such as the availability of resources (Taha, p276). To continue the Vancouver throughput capacity example, parametric programming would entail increasing (or decreasing) the capacity constraint until the change just exceeds the maximum increase (decrease) given in the range associated with the dual value. A new optimum solution (with a corresponding new dual value and range) would then be calculated and the process repeated using the range values in the new solution each time until the upper (lower) range value is infinite or the solution values are beyond the point of interest. The usefulness of this process will be evident later in this thesis.

3.4 Model Description

As previously indicated, the model developed in this thesis is a modification of the general transportation linear programming model. The *base case* model used in this thesis can be described mathematically as follows:

$$\text{Max } Z = \sum_{i=1}^n \sum_{k=1}^m \sum_{l=1}^o P_{ikl} S_{ikl} - \sum_{i=1}^n \sum_{j=1}^p \sum_{k=1}^m C_{ijk} X_{ijk}$$

Subject to:

$$\sum_{k=1}^m X_{ijk} = Q_{ij} \quad \text{for each } i \text{ and each } j$$

$$S_{ikl} \leq D_{ikl} \quad \text{for each } i, k, \text{ and } l$$

$$\sum_{j=1}^p X_{ijk} = \sum_{l=1}^o S_{ikl} \quad \text{for each } i \text{ and each } k$$

Where:

i =	grade of grain; i = 1, 2, ..., n
k =	destination of grain; k = 1, 2, ..., m
l =	sales price; l = 1, 2, ..., o
j =	origin of grain; j = 1, 2, ..., p
P _{ikl} =	price per tonne for grade i shipped to destination k and sold for price l
S _{ikl} =	thousand tonnes of grade i sold at destination k at price l
C _{ijk} =	per-tonne cost of transporting and handling grade i shipped from origin j to destination k
X _{ijk} =	thousand tonnes of grade i shipped from origin j to destination k

$$\begin{array}{ll}
 Q_{ij} = & \text{thousand tonnes of grade } i \text{ available at origin } j \\
 D_{ikl} = & \text{thousand tonnes of grade } i \text{ demanded at destination} \\
 & \text{k at price l}
 \end{array}$$

The objective function (Z) states that the model is to maximize price times quantity sold at each price, minus the cost of transporting and handling grain from origin to destination (i.e. maximize net on-farm revenue). The first constraint states that shipments from each origin must equal the supplies available at that origin. The second constraint states that supplies sold at each price level are limited by the volume that customers are willing to purchase at each price. The third constraint states that the volume shipped must equal the volume sold.

In addition to the base case scenario represented in the above equations, other scenarios will be analyzed to determine the sensitivity of the outcome to changes in such factors as rail freight rate levels, port handling capacity, relative sales values, freight and handling costs, and supply distribution.

Chapter 4

Data and Description of the Model

4.0 Data

4.0.1 Supply Data

The 1994/95 CWB initial payment list includes 37 grades and protein contents for wheat (including durum). Supply data for these grades has been grouped into 11 grade categories to make data manipulation and calculations manageable. The grades are grouped together according to which grades are generally marketed at similar relative prices and to eliminate grades that rarely account for significant sales volume (e.g. the price spread between Vancouver and St. Lawrence ports for #1 Canada Prairie Spring Red wheat is usually identical to the spread between those ports for the #2 grade). These groups are formed according to advice from CWB grain traders. The 11 grade categories used are:

1CWRS	(#1 Canada Western Red Spring Wheat)
2CWRS	(#2 Canada Western Red Spring Wheat)
3CWRS	(#3 Canada Western Red Spring Wheat)

CFWW	(Canada Western Feed Wheat - includes #4 and #5 Canada Western Amber Durum Wheat)
CPSR	(Canada Prairie Spring Red Wheat)
CPSW	(Canada Prairie Spring White Wheat)
CWES	(Canada Western Extra Strong Wheat)
CWSWS	(Canada Western Soft White Spring Wheat)
CWRW	(Canada Western Red Winter Wheat)
1/2CWAD	(#1 and #2 Canada Western Amber Durum Wheat)
3CWAD	(#3 Canada Western Amber Durum Wheat)

Supply data for each of these grades were obtained electronically from the CWB. The data used is the number of tonnes of each grade that were shipped by rail from each of the 888 stations during 1994/95. These figures exclude truck shipments, which would be mainly destined for Western Canadian domestic mills or northern U.S. customers (elevators/feedlots). Western Canadian domestic mills are therefore not included in the list of potential sales (described in later section) and the model does not attempt to optimize shipment directions for those Western Canadian domestic sales. Similarly, the effect on supplies or demand of truck shipments to the northern U.S. is ignored in this thesis, although these shipments should of course be considered in estimating supply distribution and demand for rail shipments to the U.S. if the model is used in actual operations.

The supply numbers represent the number of tonnes that were actually shipped by rail from each station in 1994/95. Allowance for local use and carryout (ending stocks) has already been made. These numbers do not represent total production from which local use and carryout must be factored out.

4.0.2 Freight and Handling Costs

Data for freight and handling costs were obtained electronically from the CWB. These costs are provided from each station to each of eight destinations:

- Vancouver (VC)
- Prince Rupert (PR)
- Thunder Bay (TB)
- St. Lawrence (SL)
- Churchill (CH)
- Minneapolis (MP)
- Pacific Northwest (PW)
- Gulf of Mexico (GL)

Vancouver, Prince Rupert, St. Lawrence, Churchill, the Gulf and the ports of the Pacific Northwest (States of Washington and Oregon) are export ports. Thunder Bay is included to represent sales to Eastern Canadian mills. Minneapolis is chosen to represent sales into the U.S. domestic market.

Rail freight rates used are those that were in effect for single car movement in September 1995. Rates quoted in U.S. dollars per car were converted to Canadian dollars per tonne at an exchange rate of 1.3793. For those routes for which rates were unavailable (e.g. shipments from stations on CP lines to Churchill, which is served only by CN), a very high rate (\$999 per tonne) was inserted to ensure no shipments were made on that route in the model.

For movement to Gulf ports, it is possible to use all rail or combinations of rail and barge movement from various points along the Mississippi river. The data in this thesis represent rail movement to Minneapolis and barge movement thereafter. Whatever is currently the cheapest alternative could be used in the model.

Handling costs include "Seaway" shipping from Thunder Bay to St. Lawrence ports¹⁴, "fob" costs for each port to load the grain into ocean vessels, and "other" costs. "Other" costs could include anything from cleaning charges to documentation fees, storage, or estimated costs for longer rail car turn around time. Note that fob and other costs will only affect shipment direction to the extent that they differ between destinations. (If these costs rise uniformly across all destinations, the shipment pattern will remain the same). No costs are included in the "other" category for purposes of this thesis.

4.0.3 Weighted Freight and Handling Costs

To reduce the number of calculations that must be made in the linear programming model, the supply and freight data for the 888 stations were sorted into 49 groups called shipping blocks. Shipping blocks contain several sections (train runs) of railway track

¹⁴ Note that freight rates for rail movement direct from prairie elevators to St. Lawrence ports could be used if this route becomes cheaper than Seaway movement (this is not currently the case).

that are located in close geographic proximity to each other. These blocks were used in the 1970s for purposes of car allocation and were based on railway operational requirements at that time. Freight and handling costs for each shipping block were calculated using the supplies at each station to weight the result. These weighted freight and handling costs for each grade are contained in the tables in Appendix I.

4.0.4 Sales Opportunities by Grade and Destination

To portray the demands for each grade at each destination, a table was created (Appendix II) listing the volumes that could be sold at each price level at each destination. This table was created based on advice by CWB grain traders. Although actual sales prices are confidential, this table is intended to be representative of 1994/95 potential sales volumes and relative prices.

For each grade, several price levels with associated volumes are listed. As a monopoly exporter of Western Canadian wheat, the CWB is able to price discriminate based on customers' willingness to pay, rather than all customers paying a competitively-determined market clearing price for the same grade of grain. This market structure is represented in the model by estimating maximum volumes that could be sold at each price level at each port. For example, at the top price level for 1CWRS, it is estimated that 980,000 tonnes could be sold at Vancouver. At US\$20 per tonne less, an additional 280,000 tonnes could be sold, etc. The top price level might represent one or two

countries who pay top price for quality, guaranteed supply, diversification of supply or other reasons. Customers at lower price levels might be willing to pay less for such services and/or may be eligible for export subsidies from Canada's competing wheat exporters.

For destinations where CWB sales have not traditionally been made (e.g. PNW ports), it was necessary to assume customers would be willing to purchase their CWB wheat at volumes and prices equivalent to the nearest traditional port. For example, prices and volumes at PNW ports are duplicated from Vancouver and prices and volumes at Gulf ports are duplicated from the St. Lawrence.

Note that this table lists only sales "opportunities" and not actual sales. Sales commitments would be selected from among these opportunities based on maximization of net on-farm revenue.

4.0.5 Calculation of Net On-Farm Returns

Net on-farm returns¹⁵ are calculated for each shipping block using the prices for each sales opportunity and the weighted average freight/handling cost. Tables showing the results of this calculation are attached as Appendix III.

4.1 Model Description

4.1.1 Software

All data and output for this model was contained in Lotus 1-2-3. The optimization software used was WhatsBest!, produced by Lindo Systems Inc. WhatsBest! is a spreadsheet add-on so all calculations were made within Lotus 1-2-3. The output therefore appears somewhat differently than traditional optimization software.

¹⁵ Although the term "on-farm returns" is used, what is actually being maximized is returns for the shipping elevator. Farmers face costs to truck their grain to these elevators but these costs are ignored in this model. Maximization of on-farm and at-elevator net returns would likely produce the same result.

4.1.2 Objective Function and Constraints

Although several constraint formulas change depending on the scenario being analyzed, the objective function formula remains the same in each case. In the example of the 1CWRS base case output (first grade output in Appendix IV), the objective function formula is embedded in the cell containing total net revenue. The formula calculates total net revenue by multiplying per-tonne net revenue for each block for each sales opportunity times the number of tonnes shipped from that block to that sale.

The first constraint in the base case is that all supplies in each block ("Balance to Move" column) must be shipped to some sale. Second, the quantity shipped through each port must not exceed the port's physical handling capacity. In the base case capacity constraints are imposed only on Vancouver and Prince Rupert. The third constraint dictates that total shipments against each sales opportunity must not exceed the maximum volume for each of those sales opportunities. Finally, the fourth constraint restricts the additional volume that can be gained by adding a non-traditional port to the list of destinations. For example, when adding PNW ports to the traditional west coast ports of Vancouver and Prince Rupert, the prices and volumes at Vancouver in the Sales Opportunities table were duplicated in the PNW. By adding another port, it may be possible to increase total sales at each price level by, for example, being able to serve customers who are picking up U.S. grain in the PNW who might fill part of their ship with Canadian wheat but do not want to travel to a second port (e.g. Vancouver) to do

so. However, it is unlikely that this extra business would be equivalent to Vancouver's volume. The fourth constraint therefore limits the volume increase caused by the addition of PNW and Gulf ports to no more than 25 percent of the west coast and east coast volumes respectively.

4.1.3 Model Output

The critical output in terms of making directional shipment decisions is the recommended volume to ship from each station to each destination. This information is contained in Appendix IV listing shipments against all sales opportunities. Results summarized by block and destination are also included in Appendix IV.

Chapter 5

Results

5.0 Base Case

As described in previous chapters, the base case scenario examines the results of the model when the input includes 1994/95 supplies, 1995/96 freight rates (i.e. post WGTA) and the estimated sales opportunities that are intended to be representative of 1994/95. No binding capacity constraints are imposed on any of the destinations.

All other constraints are standard. The inclusion of PNW ports is allowed to increase total West Coast shipments by up to 25 percent. Likewise, the inclusion of the Gulf ports is allowed to increase total St. Lawrence/Gulf shipments by 25 percent. All available supplies must be shipped against some sale and shipments against each sales opportunity cannot exceed the quantity demanded.

The results of the base case for each grade are included as Appendix IV and are summarized below.

Table 2
Base Case: Shipments by Grade by Destination (000 tonnes)

Grade\Dest'n	VC	PR	TB	SL	CH	MP	PW	GL
1CWRS	3,650	1,110	200	1,000	0	500	278	200
2CWRS	1,399	390	534	1,000	300	300	60	125
3CWRS	700	300	233	0	119	0	75	0
CWFW	560	23	50	107	0	0	0	0
CPSR	350	105	233	0	0	0	0	0
CPSW	350	90	45	0	0	0	1	0
CWES	140	60	0	0	0	183	12	0
CWSWS	247	0	0	0	0	0	0	0
CWRW	72	0	0	0	0	0	0	0
1/2CWAD	228	53	160	1,425	0	400	70	303
3CWAD	70	8	0	1,122	0	0	11	8
Total Tonnes	7,766	2,139	1,455	4,654	419	1,383	507	636
% by Dest'n	41.0	11.3	7.7	24.5	2.2	7.3	2.7	3.4

Note: destinations are Vancouver, Prince Rupert, Thunder Bay, St. Lawrence, Churchill, Minneapolis, PNW and Gulf

The results of the base case are most interesting when compared with the results of other scenarios. Looking at the base case itself, however, one can observe that the larger volume grades (CWRS's, CWAD's) are shipped to most ports in significant quantities. The remaining grades tend to move mainly to Vancouver or Prince Rupert with a smaller portion moving east and none moving south with the exception of CWES. In the case of CWSWS and CWRW, these grades are produced mainly in Alberta with small quantities in Saskatchewan and very little (CWRW only) in Manitoba. Being much closer to west coast ports, net revenue is maximized when these grades are both shipped entirely through Vancouver.

In the case of CPSR and CPSW, the dividing line between east and west favourable shipment areas lies just east of the Manitoba/Saskatchewan border. Therefore, most Manitoba supplies are shipped east. In the case of CWES, strong demand in the U.S. domestic market pulls a significant portion of that crop toward Minneapolis (and onward from there to U.S. mills).

One comment should be made on the shipment directions for CWRS and CWAD grades. Although significant portions of these grades are shipped east and/or south, this does not necessarily mean net on-farm revenue is higher for those shipments than for any west coast alternative. In fact, net revenues for eastward or southward shipments are often actually lower than westward shipments would have been. In these cases, however, sales opportunities at west coast ports at those attractive prices have already been filled by supplies moving from closer (more westerly) supply points. The model is merely choosing the next best alternative which in these cases is eastward or southward movement¹⁶. In the smaller volume grades, west coast sales opportunities were less

¹⁶ It should also be understood that in this example farmers delivering to points just east of the west coast favourable shipment area do not receive significantly lower prices for their grain than the neighbour to the west just because the more easterly farmer's grain is being shipped east or south. CWB shipment decisions for a particular grade of grain are distinct from each farmer's freight deduction. The farmer's freight deduction is based on a blend of all wheat shipments over time, which results in a smooth grid of deductions that are distance-based. In this example, the more easterly farmer would have deducted from her initial payment cheque a freight cost that is slightly higher than the more westerly farmer's. The difference would be due entirely to their respective distances from west coast ports, as opposed to being based on actual shipment direction. This system more closely parallels what would happen in an open market system than one in which

likely to be filled, resulting in a smaller portion of those grades being pushed east or south.

This observation leads one to the obvious inquiry as to whether west coast sales volume could be expanded beyond the maximum demand at each price level identified for this thesis. This is a question for CWB marketing personnel to explore. The results of the model should assist in guiding this process since one can derive from the model's results the minimum price necessary at the west coast to make a switch in movement direction from an alternative destination. This minimum price would be determined by observing the western-most station that is not actually shipping west. Any west coast price that results in a net on-farm revenue at that station that is higher than that which is achieved by shipping in the direction given by the original model result would encourage re-directed shipment. Of course, re-directing shipments in this manner is dependant on finding additional customers willing to purchase at or above that price and ensuring that physical capacity is in place to handle the shipment.

more abrupt farmgate price differences result from paying farmers basis actual shipment direction.

The base case results for 1CWRS are displayed in Figure 1, entitled "Shipment Areas - 1CWRS Base Case". Figure 2 displays the same results in a simplified form, where several destinations are combined to show more clearly movement east, west and south. One can observe in these figures that the dividing line between east and west shipments is in central Saskatchewan and that most Manitoba supplies are shipped south to Minneapolis or the Gulf. For reasons included in the following section on Churchill, no sales opportunities at that port were considered in the base case for this grade.

Figure 1
Shipment Areas - 1CWRS Base Case

- ✦ Churchill
- ✦ Gulf
- ▲ Minneapolis
- Mixed
- ▼ PNW
- ★ Prince Rupert
- St. Lawrence
- Thunder Bay
- ◆ Vancouver

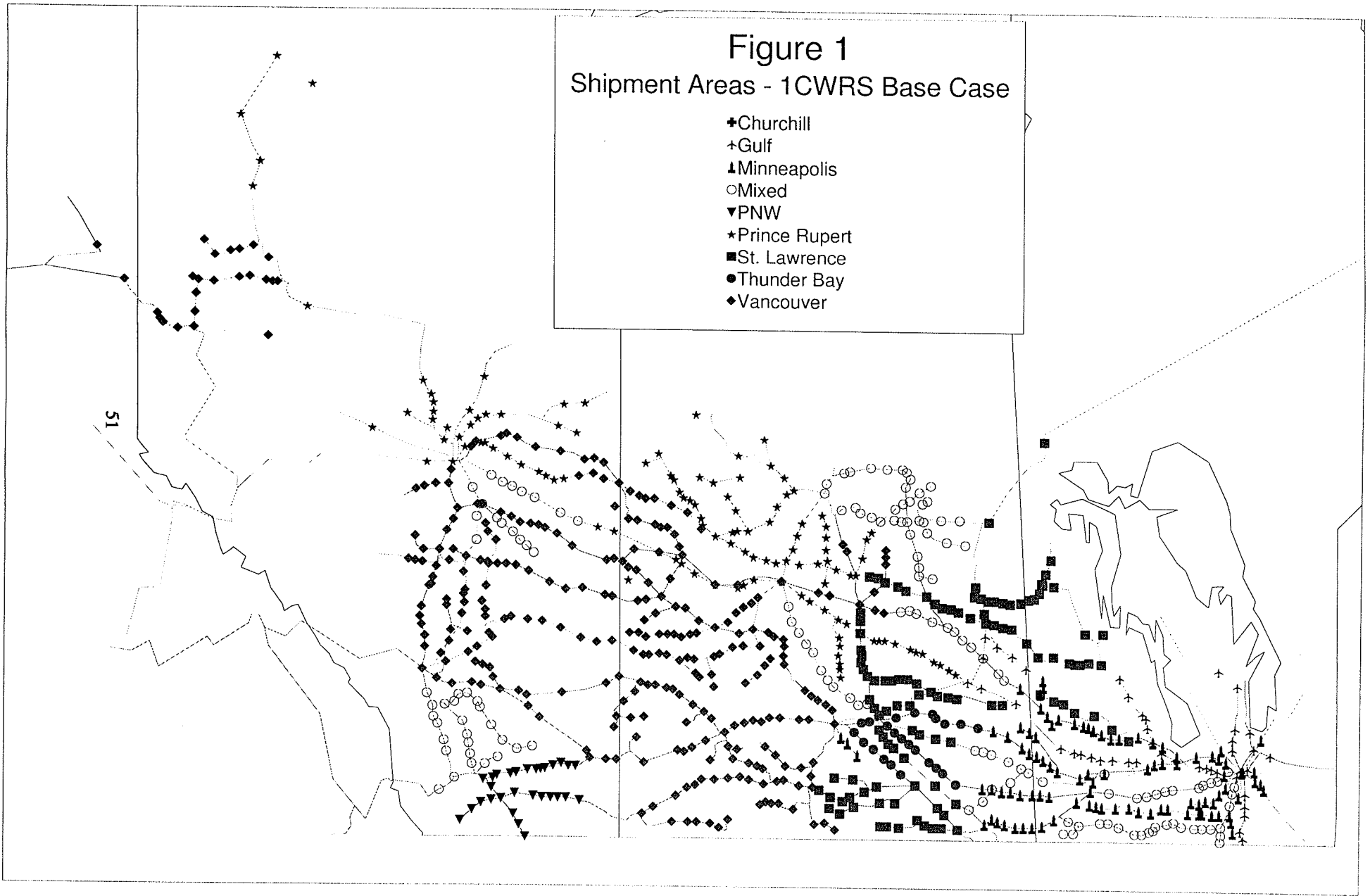
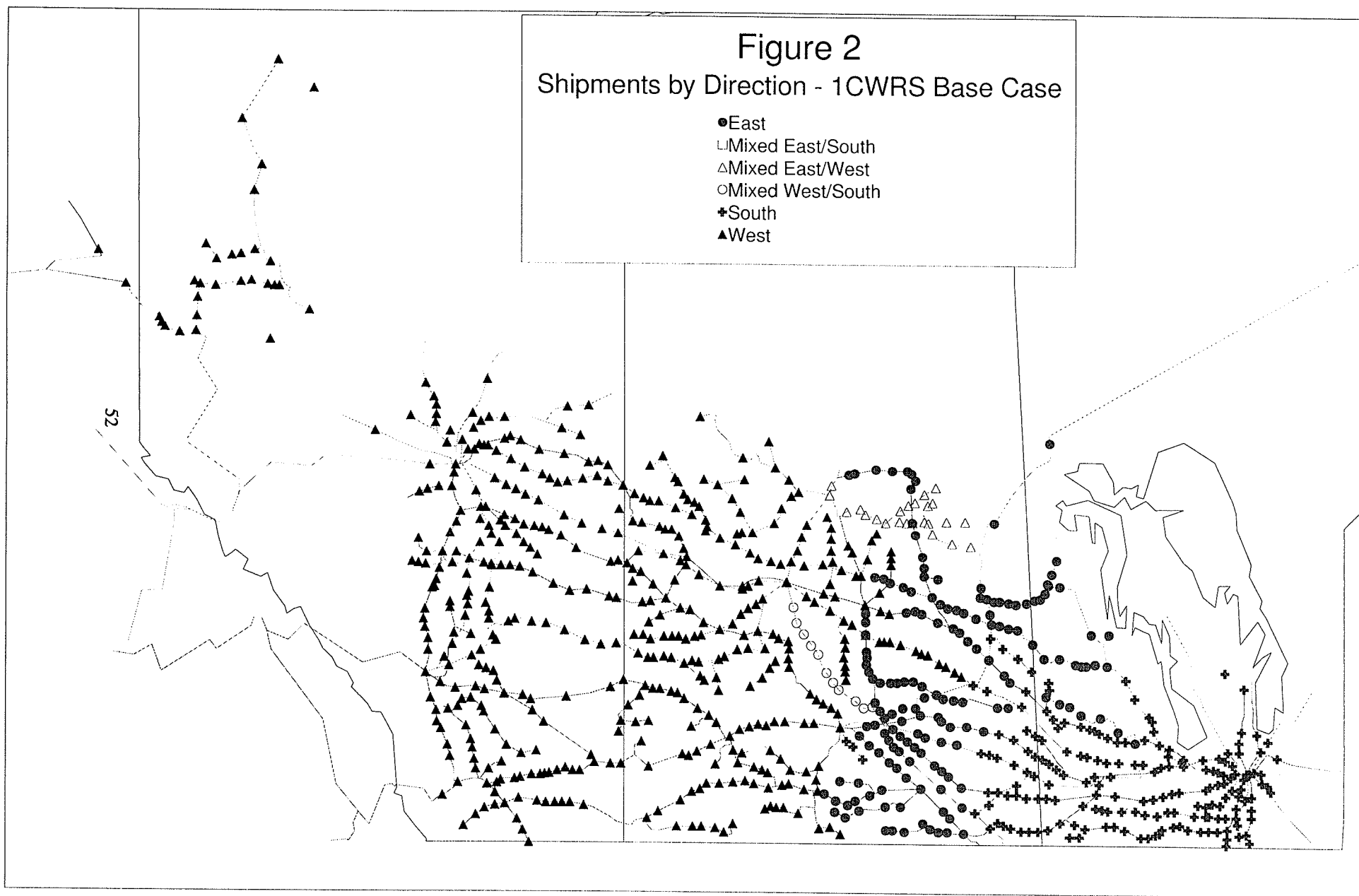


Figure 2
Shipments by Direction - 1CWRS Base Case

- East
- Mixed East/South
- △ Mixed East/West
- Mixed West/South
- ✦ South
- ▲ West



5.1 WGTA Versus Base Case

For the first variation on the base case scenario, rail freight rates were adjusted downward to the WGTA subsidized levels of 1994/95 and the model was optimized again. The shippers' share of the rail rate in 1994/95 was 48.5 percent of the total. The WGTA scenario is run under rail rates equal to just less than half those in the base case for movement to Canadian destinations. Because the WGTA subsidy did not apply to movement into or through the U.S., rates to those destinations were not changed from the base case (movement to the U.S. via Thunder Bay is ignored).

Compared to the base case, therefore, the WGTA scenario is based on freight rates to U.S. destinations that are not changed, rates to Vancouver, Thunder Bay and Churchill that are reduced by 51.5 percent, and rates to Prince Rupert that are lower by 51.5 percent plus an additional amount sufficient to make the cost equal to Vancouver (the port parity provision of the WGTA). Total freight rates to the St. Lawrence destination are reduced by less than 51.5 percent, however, since the St. Lawrence Seaway rate (\$25 per tonne) beyond Thunder Bay was not affected by the WGTA (grain movement to the St. Lawrence is most often by rail to Thunder Bay and by water after that point).

One would expect, therefore, that compared to the base case the WGTA scenario would result in less movement to the U.S., more movement to Vancouver and Prince Rupert, and less movement through the St. Lawrence Seaway.

Also, to the extent that the sales opportunities figures used in this thesis are close to reality, the results of the WGTA scenario should be close to the movement pattern which actually occurred in 1994/95.

The results of the WGTA scenario for each grade are contained in Appendix V and are summarized below.

Table 3
WGTA Scenario: Shipments by Grade by Destination (000 tonnes)

Grade\Dest'n	VC	PR	TB	SL	CH	MP	PW	GL
1CWRS	3,461	1,720	200	1,000	0	204	278	75
2CWRS	1,824	390	534	1,000	300	0	60	0
3CWRS	700	300	233	0	137	0	56	0
CWFW	560	180	0	0	0	0	0	0
CPSR	350	203	136	0	0	0	0	0
CPSW	350	134	0	0	0	0	3	0
CWES	140	60	0	0	0	180	15	0
CWSWS	247	0	0	0	0	0	0	0
CWRW	72	0	0	0	0	0	0	0
1/2CWAD	228	98	160	1,425	0	400	25	303
3CWAD	70	30	0	1,093	0	0	0	26
Total Tonnes	8,002	3,115	1,263	4,518	437	784	437	404
% by Dest'n	42.2	16.4	6.7	23.8	2.3	4.1	2.3	2.1

Comparing the WGTA scenario with actual movement in 1994/95, the destination shares are similar. Vancouver had a 43.8 percent share of actual movement, compared with

42.2 percent in the WGTA model output above. Prince Rupert had 21.7 percent of actual, 16.4 in the model, Thunder Bay 2.9 percent (6.7 in model), St. Lawrence 25.9 (23.8 in model), Churchill 1.4 percent (2.3 in model) and U.S. destinations 4.3 percent (8.5 in model) (Source for actual numbers: CGC, 1995). The main differences between actual results and the model results are in Prince Rupert, which was higher in reality than in the model, and U.S. movement, which was lower in reality. Prince Rupert's share of exports was exceptionally high in 1994/95 compared to previous years. There may have been operational reasons for this result that the model was not able to represent. Also, the model used in this thesis does not account for any extra costs of moving grain into the U.S. such as duties, documentation fees or any additional charges for inspection or cleaning at U.S. ports (or, alternatively, price discounts for shipping uncleaned grain). Beyond these factors, actual movement will likely always differ somewhat from a calculated optimum due to imperfect information and other operational considerations. Notwithstanding these considerations, the data used in the model and the model itself result in a shipment pattern that closely mirrors reality for 1994/95.

Compared with the base case, the WGTA scenario results also conform to theoretical predictions of the impact on movement patterns of removing the WGTA subsidy. When the WGTA is removed (i.e. the base case becomes the operative model), Prince Rupert volume drops by 976,000 tonnes or from 16.4 percent to 11.3 percent of total shipments. Vancouver's share also drops by 236,000 tonnes or from 42.2 to 41.0 percent. St. Lawrence shipments increase slightly by 136,000 tonnes (23.8 to 24.5 percent) and

Churchill's drop slightly by 18,000 tonnes (2.3 to 2.2 percent). The biggest increase occurs in movement to or through the U.S., with Minneapolis increasing by 599,000 tonnes (4.1 to 7.3 percent), PNW ports by 70,000 tonnes (2.3 to 2.7 percent) and Gulf ports by 232,000 tonnes (2.1 to 3.4 percent). In total, the volume of wheat that shifted from one destination to another as a result of removing the WGTA was 1.2 million tonnes or 6.5 percent of total movement.

Figures 3 and 4 also display the WGTA scenario results for 1CWRS. One can observe in these figures the smaller shipment area for U.S. destinations relative to the base case as well as the reduced number of stations shipping to Prince Rupert.

Figure 3
Shipment Areas - 1CWRS WGTA

- ✚ Churchill
- ✚ Gulf
- ▲ Minneapolis
- Mixed
- ▼ PNW
- ★ Prince Rupert
- St. Lawrence
- Thunder Bay
- ◆ Vancouver

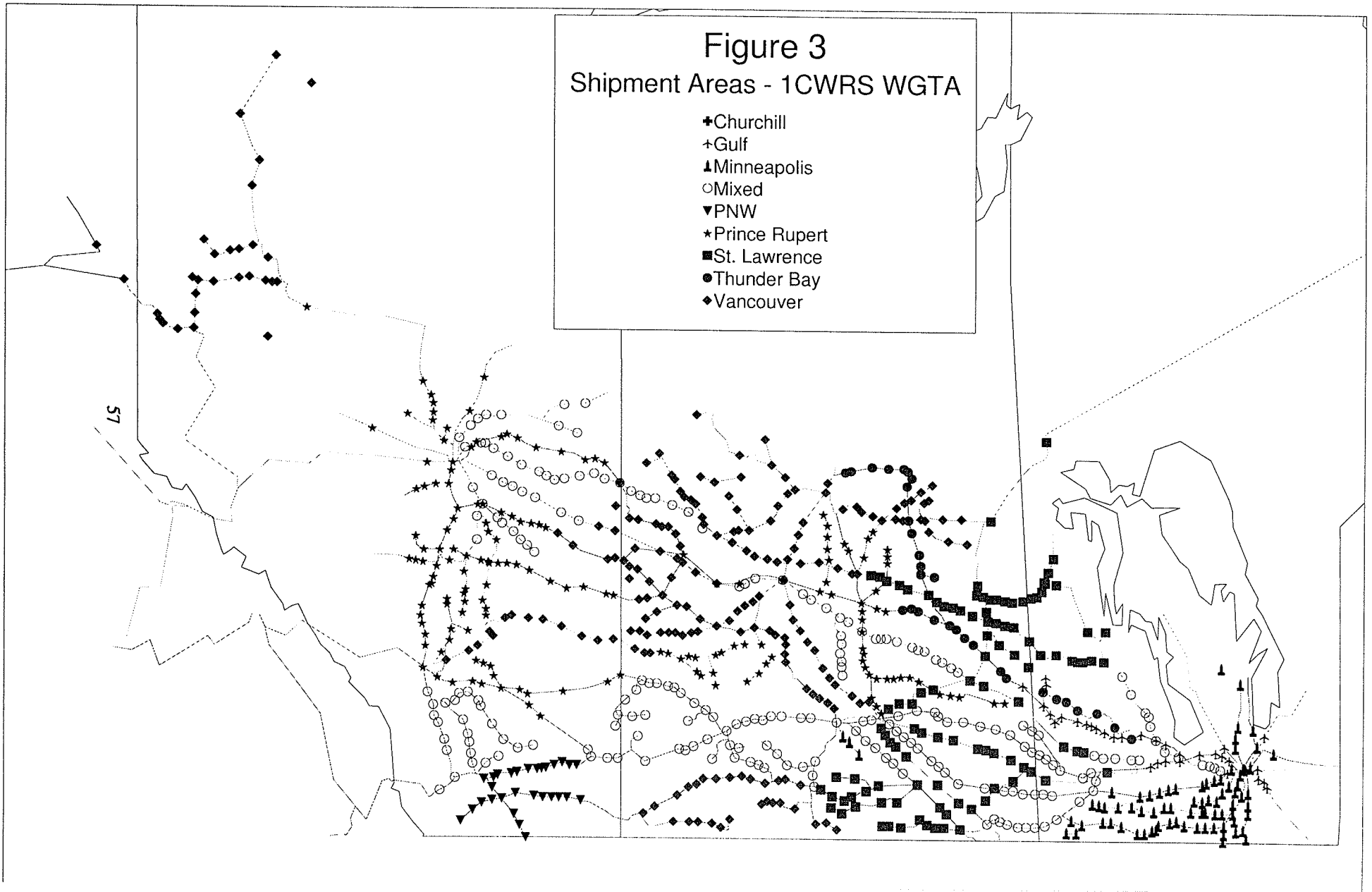
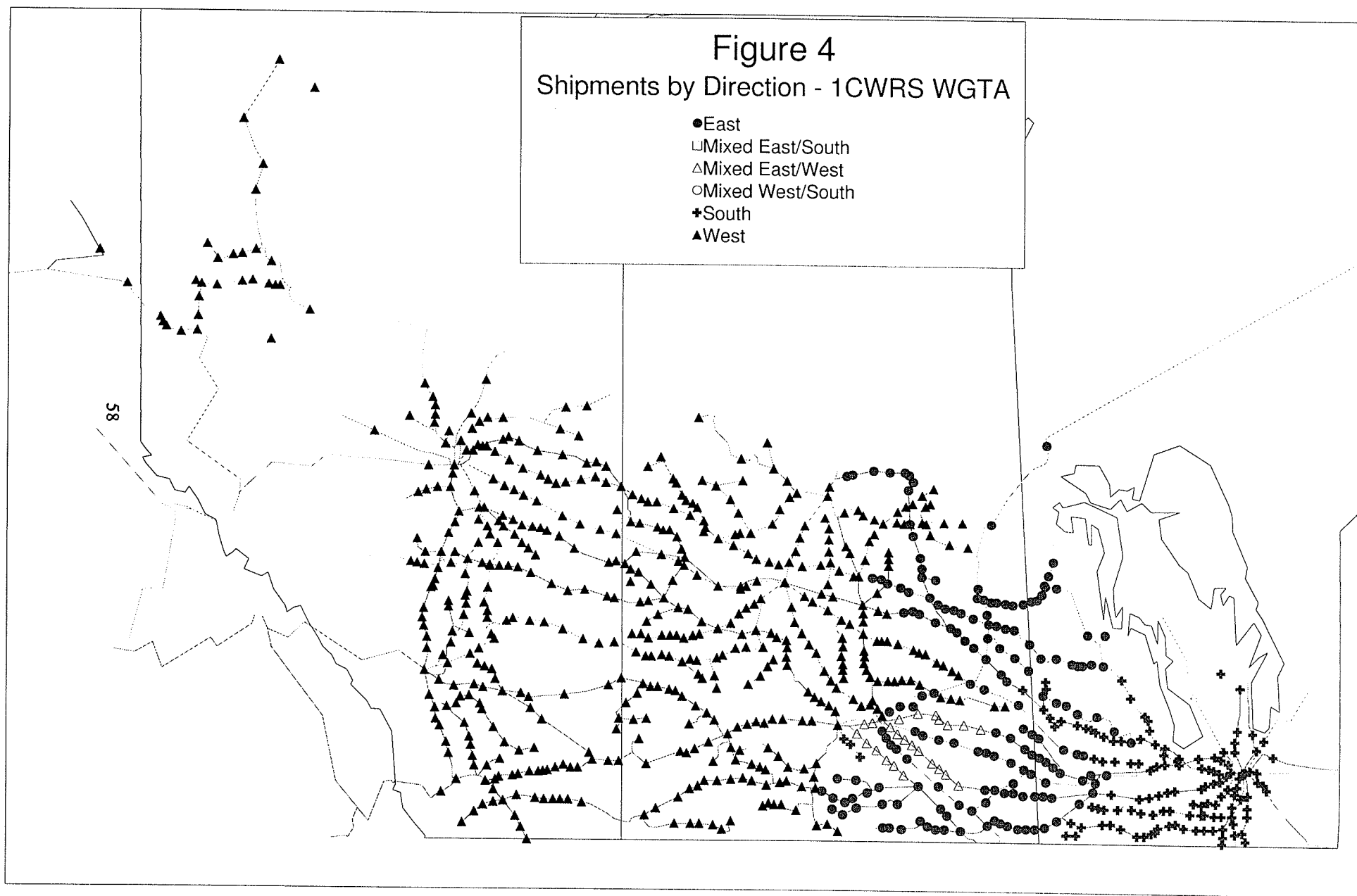


Figure 4
Shipments by Direction - 1CWRS WGTA

- East
- Mixed East/South
- △ Mixed East/West
- Mixed West/South
- + South
- ▲ West



5.2 Constrained Vancouver Capacity

The Port of Vancouver has grown in importance to the Canadian grain industry as markets for grain have shifted from Europe to destinations most economically served from Canada's west coast. As a result, in many years the demand for Vancouver's port facilities has exceeded its physical capacity to handle grain. The port's throughput capacity is affected by rail car unloading facilities, coordination of vessel arrivals and rail car arrivals, planning arrival of grain by grade to ensure the port is not "plugged" by grades not in demand, labour/management relations, and so on.

The Grain Transportation Agency released a report in 1991 that projected grain transportation and handling requirements at the west coast in 1995/96 and 2000/2001 (GTA, 1991). In that study, the "historically sustainable level" was one measure used to estimate the throughput capacity of west coast ports. This level was calculated as the best four week average handle achieved at each port since 1986/87, with that "best" level then extended to cover a 12 month period. Based on this calculation, Vancouver could handle 16.2 million tonnes of grain annually.

The five year historical share of Vancouver shipments by grain from 1990/91 to 1994/95 shows that wheat and durum constituted 70 percent of Vancouver's total handle over that period (CGC, 1991-1995). If one assumes that this share would continue to be available to wheat and durum shipments and that the GTA figure is an accurate estimate of future

Vancouver capacity, the capacity limit for wheat and durum would be 11.3 million tonnes annually.

If the output of the model in this thesis suggests that more than 11.3 million tonnes of wheat be shipped via Vancouver, some method of re-allocating the excess tonnage to other ports would have to be found. This situation could occur since each grade's movement pattern has been optimized separately, without considering the volume of other grades moving through Vancouver. The technique of parametric programming will help accomplish the re-allocation in a least-cost manner. It will also provide information that makes it possible to calculate the cost of this re-allocation relative to the original optimal movement pattern. When this cost is known, it can be used in discussions regarding whether Vancouver's throughput capacity should be increased and at what maximum cost¹⁷.

The base case scenario used in this thesis does not result in movement through Vancouver that exceeds the port's capacity. However, to demonstrate the parametric programming technique, which could be used in future situations, one can assume shipments through Vancouver must be reduced by 5 percent relative to the base case output. This would mean a reduction in shipments of 388,000 tonnes.

¹⁷ In a move that will add to Vancouver's throughput capacity, Saskatchewan Wheat Pool and Cargill Ltd. just recently announced plans to build a new grain terminal in Vancouver, possibly to be operational in 1999 (Vancouver Port Corporation, 1995).

To accomplish this reduction in a least cost manner, parametric programming must be applied to each grade. The results of this are attached as Appendix VI. For each grade, this output starts with the original, unconstrained output and lowers the Vancouver capacity constraint to just below the lower limit of the range to which the dual value of Vancouver capacity applies. The model is re-optimized with an accordingly new dual value for Vancouver capacity calculated. This process repeats itself a defined number of times.

To apply the 5 percent overall reduction in Vancouver shipments across all grades, one needs to examine the dual values generated in the parametric programming. The lowest dual value across all grades is selected first. In this case, it is the \$1.80 dual value generated for 1CWRS. The lower limit of the range to which this value applies is 31,730 tonnes lower than the current capacity constraint of 3,650,000 tonnes. That is, 31,730 tonnes of 1CWRS could be re-directed from Vancouver to another destination and the objective function value (net on-farm returns) will be lowered by \$1.80 per re-directed tonne. In other words, if the 31,730 tonnes are re-directed to the next best alternative destination, farmers as a group will be worse off by \$57,114 (\$1.80 times 31,730) compared to being able to ship that grain through Vancouver with no capacity constraint.

To reach a total reduction in Vancouver shipments of 388,000 tonnes, this process is repeated, always selecting the lowest dual value (or marginal cost of re-directing shipments) amongst all grades. The final result is depicted in the following table.

Table 4

Parametric Programming Results - Vancouver Shipment Reductions

Grade	Tonnes Re-Directed	Revenue Loss
1CWRS	323,490	\$644,000
2CWRS	37,470	\$121,000
3CWRS	0	\$0
CWFW	4,110	\$18,000
CPSR	20,826	\$91,708
CPSW	0	\$0
CWES	0	\$0
CWSWS	0	\$0
CWRW	2,104	\$7,000
1/2CWAD	0	\$0
3CWAD	0	\$0
Total	388,000	\$881,708

As might be expected, when shipments were re-directed from Vancouver they added to the volume shipped via the other two west coast ports. In the case of 2CWRS, the re-directed tonnage all passed through PNW ports. For 1CWRS, the re-directed portion

was split between Prince Rupert (320,000 tonnes) and PNW (3,000). For the other three grades which had wheat re-directed from Vancouver, it all went to Prince Rupert.

In this hypothetical case for one year of shipments, wheat farmers as a group would be better off if they were to invest up to \$881,708 to increase the throughput capacity of the Port of Vancouver to eliminate the capacity constraint. This same technique could be used by the grain industry using actual data over a number of years to help make investment decisions regarding that port's capacity.

5.3 Effect of Prince Rupert Freight Premium

Removal of the WGTA has had two major impacts on the port of Prince Rupert. First, higher freight rates have affected the economics of shipping to the west coast in general. Second, removal of the WGTA's port parity provision has made it more expensive to ship grain to Prince Rupert relative to Vancouver, whereas previously the two ports were equivalent. The following table generated for 1CWRS demonstrates the separate impact of removal of port parity. For the "Parity" results (i.e. reinstatement of port parity) the model uses the base case data with the exception that Vancouver and Prince Rupert rail rates were made equivalent (equivalent to the post-WGTA Vancouver rates). The results of the base case and WGTA scenarios are included for comparison.

Table 5

Impact of Port Parity: 1CWRS Shipments by Destination (000 tonnes)

	VC	PR	TB	SL	CH	MP	PW	GL
Parity (tonnes)	3,040	1,720	200	1,000	0	500	278	200
<i>Parity (share)</i>	<i>43.8</i>	<i>24.8</i>	<i>2.9</i>	<i>14.4</i>	<i>0.0</i>	<i>7.2</i>	<i>4.0</i>	<i>2.9</i>
Base (tonnes)	3,650	1,110	200	1,000	0	500	278	200
<i>Base (share)</i>	<i>52.6</i>	<i>16.0</i>	<i>2.9</i>	<i>14.4</i>	<i>0.0</i>	<i>7.2</i>	<i>4.0</i>	<i>2.9</i>
WGTA (tonnes)	3,461	1,720	200	1,000	0	204	278	75
<i>WGTA (share)</i>	<i>49.9</i>	<i>24.8</i>	<i>2.9</i>	<i>14.4</i>	<i>0.0</i>	<i>2.9</i>	<i>4.0</i>	<i>1.1</i>

One can see from the results that the ports of Vancouver and Prince Rupert are in direct competition with each other to attract supplies. Relative to the base case, the only change in destination share caused by the re-instatement of port parity is to shift shipments from Vancouver to Prince Rupert. Prince Rupert's share in the "Parity" scenario is identical to that in the WGTA scenario but this is due to shipments to that port being restrained by the capacity constraint imposed on Prince Rupert. One can determine from the dual values on that capacity constraint that the WGTA scenario does in fact result in more shipments to Prince Rupert than the "Parity" scenario. This is to be expected, since the WGTA scenario also includes the impact of lower overall rail freight rates, which increases shipments to the west coast in general. The majority of the impact on Prince Rupert from removal of the WGTA, however, is caused by the removal of port parity.

5.4 Changes in Relative Port Values

The volume of Western Canadian grain that is shipped via a given port is dependent on the distribution of supplies, freight and handling costs to each port, and the value of grain fob each port. A frequently-changing freight cost is the rate for barge movement of grain to Gulf ports via the Mississippi River system. As barge rates increase, net revenue derived from shipping grain using that route decreases and optimal shipment patterns may change. Changes in the relative value of grain at one port(s) relative to others could have a similar impact. Relative port values could be affected by events such as changes in importing countries' demand or changes in the ocean freight market. The scenario examined in this section is an example of the latter.

The Panama Canal is currently an important conduit for grain shipments from Gulf of Mexico ports to customers accessed from the Pacific Ocean. The canal has been operated on a break-even basis by an agency of the U.S. government since it was built, but it is scheduled to be taken over by the Panamanian government in 2000. This transfer may result in significantly higher toll charges for ships passing through the canal. One impact of higher toll charges could be lower fob values for grain shipped via the Canal.

Although the CWB does not ship significant quantities of wheat through the Panama Canal, the U.S. does. To estimate the proportion of wheat shipped from the U.S. that

passes through the Canal, 1994/95 U.S. wheat exports by port and destination were examined. Wheat shipped from west coast ports to Europe, Africa and other destinations most easily accessed from the Atlantic Ocean was assumed to pass from west to east through the Canal. Wheat shipped from Gulf and east coast ports to the Pacific Rim and other destinations most easily accessed from the Pacific Ocean was assumed to pass from east to west through the Canal. Using this method, it is estimated that insignificant quantities are shipped from west coast ports via the Canal. However, 26.9 percent of exports from east coast ports did pass through the Canal in that crop year (USDA, 1995). This implies that east coast shipments (and fob prices) could be affected more than west coast shipments by a rise in Panama Canal toll charges.

An article published in the Southern Journal of Agricultural Economics (Fuller, 1984) examined the potential increases in toll charges that could occur. While the authors did not examine charges for wheat, they did suggest that charges for sorghum could increase from 2.5 cents per bushel to 6 cents. The model used in this thesis was re-run assuming that charges for wheat would increase by this same amount, which translates into Cdn\$1.78 per tonne (exchange rate = 1.3793). It was further assumed that the effect of the increase would be to decrease the fob value of all grades of wheat by Cdn\$1.78 at all east coast ports, i.e. Gulf, St. Lawrence and Churchill.

The results of this optimization were exactly the same as the base case scenario. This interesting result is probably because the sales opportunities fed into the model have

fairly wide gaps between prices at each port. The \$1.78 drop in fob values was not enough to trigger a re-direction. If the sales opportunity values were more continuous rather than listed in discrete jumps, or if the initial optimum were less stable (i.e. less difference in net revenue for one direction versus the other at marginal stations), a shift in shipments would have occurred.

The article in the Southern Journal is more than ten years old. An attempt was made to update the possible increase in toll rates by applying the same percentage increase to current rates as was applied to the one in existence at the time of the article. The current rate of approximately US\$2.46 per tonne was increased by 140 percent. This resulted in an increase of Cdn\$4.75 per tonne. When the model is run dropping east coast values by this amount, shipments through the St. Lawrence and Churchill remain the same but shipments through the Gulf decrease by 125,000 tonnes, as shown in Appendix VII.

5.5 Sensitivity of Churchill Volume

The viability of the Port of Churchill is largely dependent on the volume of grain that is shipped through the port each year. Managers of the port would be interested in the sensitivity of Churchill shipments to changes in freight and handling costs as well as to sales values at the port. These can be examined within the model by changing Churchill sales values relative to the other ports and/or changing freight and handling costs (the

impact of changing sales values is the same as the opposite change in freight and handling costs - an increase in sales value can be represented as a decrease in costs or vice versa).

As one example, the model's output was examined to determine the sales prices at which Churchill's volume would be maximized (i.e. fill all sales opportunities available at that port) and, alternatively, minimized (i.e. shipments drop to zero). Sales opportunities of up to 300,000 tonnes were identified at Churchill for each of 2CWRS, 3CWRS and CPSR. Dual values and ranges in the original optimal output were examined to determine the upper and lower prices to maximize and minimize Churchill shipments. The following table summarizes the results.

Table 6
Sensitivity of Churchill Volume: Shipments by Grade (000 tonnes)

Grade	Base Case Sale Price	Price at Which Shipments = 300,000	Price at Which Shipments = 0
2CWRS	179.00	160.52	158.67
3CWRS	172.00	205.86	160.68
CPSR	172.00	229.29	201.11

In the base case, 300,000 tonnes of 2CWRS, 119,000 tonnes of 3CWRS and no CPSR were shipped through Churchill. The results in Table 6 show the price of 2CWRS would have to drop by \$18.48 per tonne before less than 300,000 tonnes would be shipped.

However, it wouldn't take a much further drop in price to eliminate all 2CWRS Churchill shipments.

The base case 3CWRS price is comfortably in the middle of a fairly wide price range so at least some of this grade is likely to remain in Churchill's favourable shipment area unless prices change dramatically.

The price for CPSR, on the other hand, would have to rise by more than \$29.11 per tonne relative to the base case before any of this grade would be shipped through the port.

This type of analysis can of course be performed for a much greater variety of relevant prices and costs to help the CWB and Churchill managers determine the likely impact of various price and/or cost reductions and increases on Churchill's grain business.

Some cautionary comments should be made on the Churchill results in this model. There are a number of factors that could affect actual volume moving through that port. For example, if additional grades could be offered for sale, volumes might be increased. To test this possibility, sales opportunities at Churchill for 1CWRS, CFWF, 1/2CWAD and 3CWAD were introduced into the model. The prices were assumed to be at the same discount to mid-range St. Lawrence sales opportunities for those grades as the discount

for 2CWRS, 3CWRS and CPSR - the grades included at Churchill in the original model. Maximum sales were also assumed to be 300,000 tonnes for each grade.

When the model was re-run using these new sales opportunities, the result was 300,000 tonnes of each grade shipped via Churchill, with the exception of CFWF, of which 17,000 tonnes was shipped. In the base case, 419,000 tonnes were shipped through Churchill. If the extra grades are added, the port would handle 1,336,000 tonnes (assuming it had the physical capacity). This additional Churchill volume was re-directed from a variety of other ports, depending on the grade. This outcome, which dramatically affects the results for Churchill, demonstrates the need to clearly identify all possible sales opportunities before concluding there would be no more grain to be shipped through Churchill.

5.6 Sensitivity of St. Lawrence Volume

Sensitivity analysis similar to that used for Churchill can be performed for any destination. St. Lawrence Seaway interests might be particularly concerned about the sensitivity of shipments through their facilities due to recent changes in government marine policy. The new policy announced in December 1995 (Transport Canada, 1995), calls for significant privatization and/or commercialization of marine facilities, such as the Seaway and ports, as well as removal of most government subsidies. Although future

user fees are difficult to predict, it seems certain they will rise with privatization and removal of government subsidies.

The optimization model was run using three different user fee increases. The St. Lawrence Seaway cost used in the base case (\$25 per tonne) was increased by \$2 per tonne, then \$5 and \$20 per tonne. The model was run under these different Seaway cost levels for 1CWRS shipments. At both the \$2 and \$5 increases, the St. Lawrence's share of shipments did not change. The only change was in the objective function value (total net on-farm revenue), which decreased due to the higher fees being paid. At the \$20 increase, the Seaway's share of total 1CWRS shipments declined from 1 million tonnes (14.4%) to 200,000 tonnes (2.9%). Interestingly, of the 800,000 tonnes re-directed, 600,000 tonnes was shipped to the Gulf and 200,000 went to Vancouver. A complete parametric analysis could of course be performed if Seaway interests wished to obtain more precise information regarding the potential impact on Seaway volume of changes in user fees.

5.7 Distribution of Increased Carryover Stocks

In some years, it may be necessary or advantageous to carry greater-than-normal inventory (carryover stocks) into the following crop year. Logistical difficulties may make this necessary or anticipation of higher prices may make it advantageous.

If the CWB decides to increase carryover to above-normal levels, it must decide where on the prairies those extra stocks should be stored. Storing them at port position or in other commercial storage facilities is generally not an option given the small size of western Canada's storage capacity relative to production and throughput requirements. Farm storage is the only realistic option.

Because the next crop year's production and demand patterns would not be known at the time of the storage decision, it would also not be known to which destination the carryover stocks will be shipped. The least-risk option, in terms of maximizing current and future net revenue, would be to leave the stocks in the regions where the current year's lowest net-farm returns are found. These regions will most often be close to the centre of the prairies, furthest from the sales destinations.

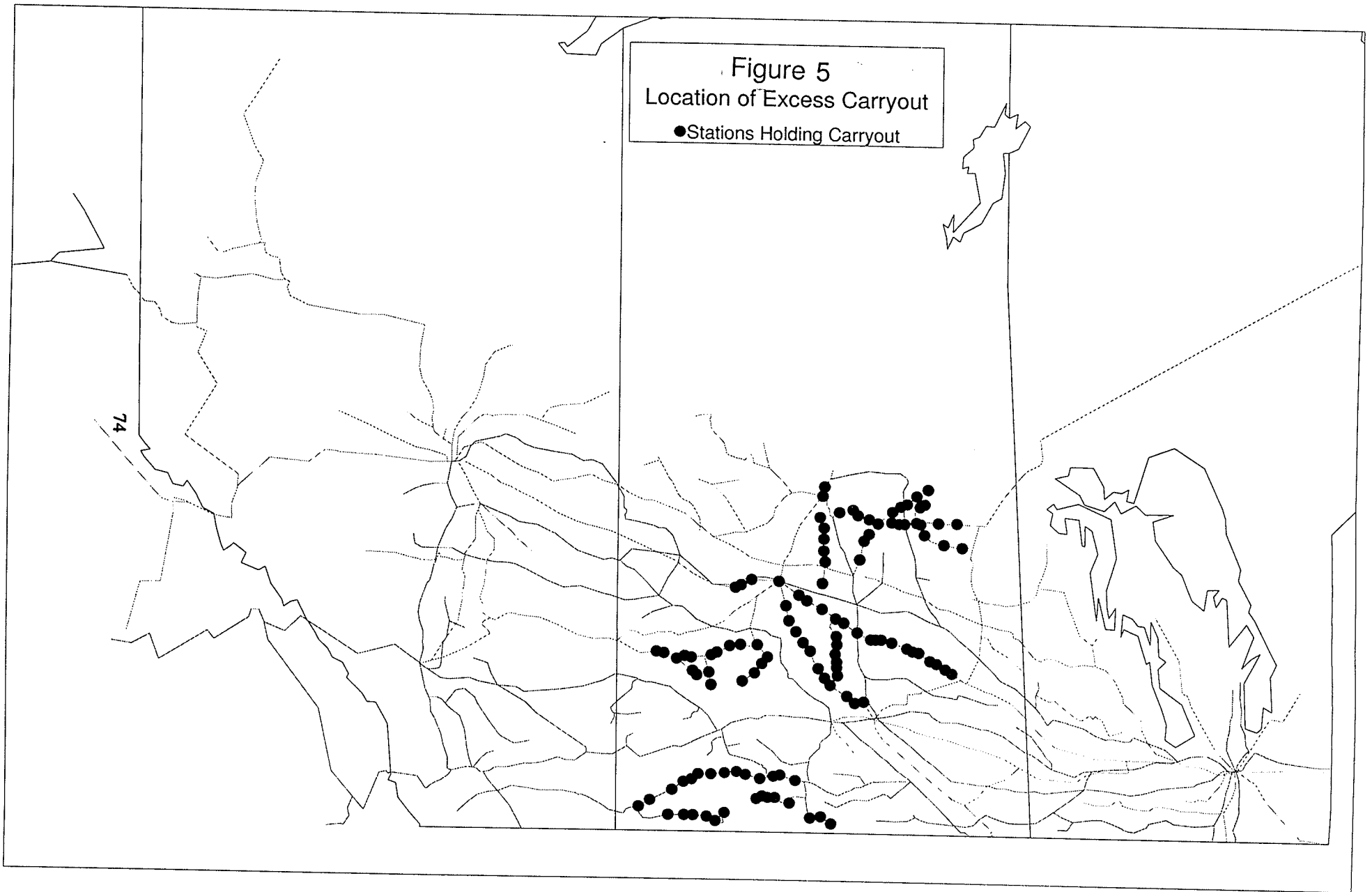
One complication that arises, however, is that the CWB must ensure some form of equity of delivery opportunity amongst farmers from all regions in the area it serves. This responsibility has traditionally been interpreted to mean all farmers must be able to deliver an approximately equal proportion of their crop within a crop year. An alternative to this approach might be to pay storage fees to some farmers who have to (or offer to) carry larger inventories of grain for eventual delivery to the CWB. These storage fees would be paid from the pool accounts and would therefore be compensation paid by farmers who delivered earlier to those who deliver later. (This type of mechanism could also work within the year if decisions are made to draw grain from

certain areas for logistical reasons and leave other regions until later in the year but pay those farmers storage fees as compensation.)

The output for 1CWRS in Appendix VIII demonstrates one example of how increased carryover stocks could be stored. For this hypothetical example, it is assumed that available stocks are 10 percent higher than in the base case, but we wish the current year's shipments to remain the same as the base case. Therefore, 10 percent of supplies will be carried over into the next crop year. As an arbitrary policy, it is decided to accept for delivery at least 50 percent of the supplies each farmers has offered to the CWB this year. The remaining supplies, though, we wish to concentrate in the low net return regions.

When the model is optimized, one can see the carryover stocks are contained in shipping blocks 17, 19, 25, 27, 31 and 77, displayed in Figure 5. As expected, all of these blocks in are central Saskatchewan, running from the southern to the northern crop production region. In the base case, these blocks shipped to a variety of ports at the west coast, east coast and in the U.S.

Figure 5
Location of Excess Carryout
● Stations Holding Carryout



5.8 Uniform Decrease in Overall Supply

Prairie grain production can vary dramatically from one year to the next as well as from early estimates to final production figures after harvest. When planning shipments, it is important to know how variations in production can affect the optimal shipment pattern. It may be desirable in the early stages of planning a year's shipments to optimize under several hypothesized production patterns.

Even a uniform increase or decrease in production across Western Canada can disproportionately affect some ports relative to others. Appendix IX provides an example of this. Supplies of 1CWRS were decreased in all shipping blocks by 20 percent relative to the base case and the model was re-optimized. The results, summarized in Table 7, show that relative to the base case, Vancouver, Minneapolis and the Gulf ports lost volume while all other destinations remained the same. In the base case, the lowest on-farm net returns which were "accepted" for shipment must have been allocated to these three destinations.

Table 7

20 Percent Decrease in Supply: Shipments of 1CWRS by Destination

Destination	000 Tonnes (Base Case)	000 Tonnes (Supply Decrease)
VC	3,650	2,590
PR	1,110	1,110
TB	200	200
SL	1,000	1,000
CH	0	0
MP	500	298
PW	278	278
GL	200	75

Chapter 6

Discussion of Related Issues

This thesis concentrates on the part of the CWB's directional shipment decision problem that is related to understanding and using supply, freight and sales data appropriately to calculate optimal solutions. This is a central part of the problem but there are related issues that require careful consideration on the part of the CWB to ensure that the best possible shipment decisions are made. The following sections highlight some of these related issues.

6.0 Data Quality

"Garbage in, garbage out" is an ever-present danger when working with very large quantities of data. The CWB's directional shipment decisions are based on supplies, freight and handling costs, and projected sales prices and volumes whose estimates can change significantly over time.

Sales of new crop supplies begin months before that crop is even harvested. Although only a portion of the crop is sold in this period, it is still necessary to make some

estimates of crop yields, quality, location and, especially in the case of feed grains, the proportion of the crop that is likely to be delivered to the CWB. The source of these estimates changes over time, including historical averages early in the year, estimates of seeded area, and weather conditions during the growing season. As the year progresses, other sources of information are used to improve supply estimates. These include harvest weather conditions, reports from elevator managers and others throughout the prairie region, harvest crop samples, producer delivery contracts, and surveys.

Freight and handling costs are less variable than supply estimates, but can change over time. Rail freight rates within Canada used to be constant throughout the crop year but they are likely to be more variable in the future as railway operations are further deregulated. Incentive rail freight rates are used relatively frequently now and these should be considered to determine if they affect the optimal shipment pattern. Shipments through the U.S. are affected by changes in the Canada-U.S. dollar exchange rate since U.S. freight and handling costs are paid in U.S. dollars.

Sales estimates can change significantly between the time of early estimates to the final execution of contracts. Prices and volumes are affected by the variables that have an impact on demand. These include available supplies in both importing and exporting countries, export subsidies, ocean freight markets, and marketing activities by exporters.

The output of any optimization model using early estimates must be viewed with caution because of the variability in input data. The CWB must examine the sensitivity of the output to a variety of possible changes in the data. A range of scenarios covering likely, high and low values for the various estimates can be created and examined.

Early rail shipments can also be planned to minimize the cost of "mistakes" in preliminary estimates. For example, for the first few months of the crop year, few supplies might be shipped out of the marginal or middle region of the prairies until the optimal shipment direction for those supplies is known with greater confidence. This has obvious implications for equity of delivery opportunities, a subject that is discussed below.

6.1 Changes in Concepts of Delivery Equity

Chapter 5 section 5.7 examined a scenario in which carryover stocks were increased beyond normal levels. It was suggested that storage payments could compensate farmers for delayed delivery opportunity from one year to the next. This would require a change in the traditional concept of equity of delivery opportunity, which implied farmers should be able to deliver an equal proportion of their supplies in roughly the same time frame and certainly by the end of the crop year.

Rationing supplies and allocating delivery opportunity between crop years would require a lot of thought given the complications of different pooled prices, the difficulty of projecting next year's requirements, possible shortage of farm storage facilities, and so on. There are likely a number of ways it could be done, including offers to farmers to voluntarily trade delivery commitments for the current year to the following year. Reasons for wanting to hold supplies would include projections of higher prices in the following year and/or shortages of certain grades the following year given growing conditions (e.g. shortage of high protein or feed wheat the following year when current supplies are in excess).

The most likely situation in which a change in delivery equity would be desirable, though, would be within a crop year. For example, the section above on data quality suggests the CWB should be careful not to pull supplies from the marginal or middle region of the prairies before optimal shipment direction is known with some confidence.

One other important consideration on the topic of delivery equity is the impact on consistency of quality. One of the marketing strategies employed for Western Canadian wheat has been to assure customers of uniform quality within a shipment and consistent quality from shipment to shipment. This means that if a customer orders a cargo of 2CWRS, they can have confidence that the quality will be uniform throughout the vessel and that if they order another cargo of 2CWRS three months later in the same crop year, the quality will be the same as the first cargo. This confidence is valuable to customers

who wish to be able to process their wheat and flour in the same manner from batch to batch, especially if they are using highly automated production processes.

One of the means by which consistent quality is achieved is to draw supplies from most or all regions of the prairies throughout the year. Therefore, in both October and April, ocean vessels carrying wheat to customers will contain some wheat grown in a wide variety of locations. Changes in delivery equity that cause dramatic shifts in where grain is sourced from month to month could jeopardize this consistency of quality. Logistical efficiency may therefore have to be balanced against quality concerns.

6.2 Implications of Using Alternative Shipment Routes

The potential benefits of shipping wheat through U.S. ports should be apparent. Potential sales opportunities at the various fob positions can be determined and the visible freight and handling costs to transport wheat to those positions will either be readily quoted or can be negotiated. If these prices and costs result in higher net on-farm revenue than alternative ports, these shipments should be considered.

There are, however, a number of other, less visible costs involved in shipping through U.S. facilities that should be considered before sales and shipment decisions are made. The following discusses some of the major issues:

6.2.1 Cleaning Facilities

The sale of cleaned grain is a marketing strategy employed to promote Western Canadian wheat. Most weed seeds, other grains and other foreign material are removed prior to export. Canadian ports have extensive facilities to clean grain, but most U.S. ports do not. If the CWB wishes to export through U.S. ports, alternative cleaning facilities (e.g. prairie elevators) have to be found, or the marketing strategy altered, to permit uncleaned grain to be sold. It would be possible to put a value on either the cost of cleaning, or the lower price received. The possible cost to reputation of selling uncleaned grain might also be estimated. In either case, these costs should be included in the optimization decision.

6.2.2 Integrity of CWB Shipments

It is important to maintain the integrity of CWB grain shipments so that Canadian wheat is not mixed or substituted with U.S. grain. Mixing or substituting other grain would damage the uniformity and alter the quality generally of the CWB shipment. This would cause obvious damage both in direct financial terms on a shipment (contract penalties) and to the CWB's reputation with customers. Methods of segregating the CWB shipments would have to be used, and these methods may entail additional costs.

6.2.3 Grain Inspection

One reason for the reputation for uniform and consistent quality of western Canadian wheat is the Canadian Grain Commission (CGC) grain inspectors' stamp of approval on each export shipment. These inspectors ensure each shipment meets the CGC's minimum grade standards. For shipments through U.S. ports where CGC inspectors are not present, several options are possible. CGC inspectors could be flown to export ports for specific shipments or moved permanently if enough shipments are passing through a particular port. Alternatively, CGC inspection could occur in Canada and the shipment segregated to ensure no mixing. Finally, although the CGC "stamp of approval" could not be used, private inspection services could be employed, or the grain could be sold with no final inspection prior to loading the vessel. Each option entails costs or lower revenues that should be factored into the model. A small volume of grain shipments through U.S. ports could be particularly costly on a per-tonne basis.

6.2.4 Longer Rail Car Cycle Times

Shipments to U.S. ports, and in particular the Gulf ports, may result in rail cars being in use for a greater number of days per tonne shipped compared to shipments to Canadian ports. There is an opportunity cost to this, especially when there is excess demand for the rail cars to ship other commodities. This opportunity cost could be calculated and included in the optimization. There is also an inventory cost to the CWB

associated with longer car cycle times. The CWB pays handling companies a daily carrying cost to compensate them for having paid farmers for the grain prior to the company being paid at unload. This financing cost should also be considered.

6.2.5 Rate Risk on U.S. Movement

Freight rates in the U.S. fluctuate with demand for transportation services. If demand is higher than the CWB anticipates, it may not be optimal to ship grain via a U.S. route. The opposite could also occur. Mechanisms to "lock in" rates for guaranteed movement tend to come at a cost, which would have to be considered in shipment decision calculations.

6.2.6 Maintaining Viability of Alternative Ports

Short term economics may suggest a particular port not be used at all for shipments in a certain year. If no grain moves through that port for some time, however, it could be shut down permanently. The possible cost of reduced route competition in future years would have to be considered. The CWB's impact on Canadian ports could be particularly dramatic in this sense, especially for Churchill, Prince Rupert or the St. Lawrence. Across the border, it may also be important to maintain good working relationships with U.S. railways or terminal operators to ensure good service in future years. These considerations are similar to those faced by many businesses in terms of

ensuring the viability of input suppliers, in this case transportation and handling service providers.

6.2.7 Political Risks

Shipments through U.S. facilities also face political risks. Recent grain trade disputes and U.S. actions taken against imports of Canadian grain point to a lack of guarantees that the CWB could use U.S. facilities, or sell into the U.S. without U.S. government interference. These risks should also be considered in terms of how much reliance should be placed on U.S. facilities and the U.S. market.

Chapter 7

Conclusions

7.0 Conclusions

The purpose of this thesis was to develop a decision support system to assist the CWB in making its directional shipment decisions and to examine the sensitivity of route choices under several alternative scenarios. An additional goal was to define and discuss related issues that must be considered as part of the process to achieve optimal directional movement decisions.

The shipment pattern under the "WGTA" scenario, and the actual shipment pattern that occurred in the 1994/95 crop year, are similar. This suggests that the data used and the calculations made in the model are realistic and that the model could be a useful planning tool.

Some implications of the removal of the WGTA are demonstrated in the comparison of the WGTA scenario with the base case, in which rail freight rates are raised from WGTA levels to the current full cost freight rates. The largest impact is an increase in movement to U.S. destinations and to overseas markets through U.S. ports. This is

caused by the relative increase in rates to Canadian ports. Prince Rupert's share of shipments drops due to the removal of the port parity provision of the WGTA. Vancouver and Churchill, to which movement is all rail, feel the full effect of the subsidy removal, which results in a slight decrease in shipment volume. Movement to St. Lawrence ports increases slightly because a large portion of these shipments is based on marine transportation that was not affected by the WGTA.

Parametric programming was used to examine a procedure for allocating scarce physical capacity at Vancouver amongst all grades of wheat. This allows the original optimization procedure to be done for each grade individually, which simplifies data management and reduces computer processing requirements.

In the scenario in which port parity is reinstated for Prince Rupert under the new, unsubsidized freight rates, it is shown that the removal of port parity is the major cause of the drop in Prince Rupert's share of wheat shipments. A much smaller proportion of its drop in shipments is caused by the overall increase in rail freight rates.

Changes in relative port values are shown to have an impact on shipment direction. One example is given in which east and Gulf coast wheat values fall due to an increase in Panama Canal toll rates. The example used indicated shipments of CWB wheat through the Gulf would fall relative to the base case scenario.

Examples are used to demonstrate the model's ability to test the sensitivity of Churchill and St. Lawrence movement to changes in the costs of moving through these facilities or, equivalently, the value of grain sold at these positions.

The model can be used to explore the impact of policy changes on the logistics costs of the CWB. For example, if the CWB relaxed requirements of strict equity of delivery opportunity, increased carryover stocks could be stored most economically in locations of lowest net on-farm returns. These farms tend to be located in east-central Saskatchewan in a north/south band. The model results also suggest these low net revenue regions could hold stocks until later in the crop year to minimize the cost of adverse freight caused by shipping in non-optimal directions.

In the final scenario examined, it was demonstrated that a uniform increase or decrease in supplies may not affect the shipment pattern uniformly. In the example given, a uniform decrease in supply affected shipments only to Vancouver, Minneapolis and the Gulf ports. This points to the importance of examining the model's output under different hypothesized supply and demand conditions prior to making final decisions on shipment patterns.

In addition to the development and discussion of the mathematical model, several issues related to the CWB's shipment decision problem were identified. These issues must be examined thoroughly as part of the shipment decision process. First, the importance of

using quality data is emphasized and some of the problems in obtaining quality data are discussed. Second, possible changes in concepts of delivery equity are considered to take advantage of potential logistical cost savings. Lastly, some less visible costs of using U.S. ports or shipping to U.S. markets are identified. These include a shortage of cleaning facilities at U.S. ports, maintaining integrity of CWB grain shipments, providing for proper grain inspection services, longer rail car cycle times, rate risk for U.S. freight movement, and political risks.

Although the model is discussed throughout this thesis as a planning tool, it could also be used to evaluate actual past performance against a calculated optimum. In contrast to its use in the planning stages, an ex-post evaluation would allow the model to use actual data, rather than just estimates. This type of ex-post evaluation might assist in improving operational decisions and estimation techniques in future years.

7.1 Limitations of the Study

The actual numerical output of the model in this thesis must be viewed with caution. Many factors can affect even the calculated optimal movement pattern, let alone allowing for deviations from the optimal due to operational considerations. For example, movement through west coast ports in the model ran into demand limitations at certain price levels. This resulted in shipments being made to other ports from stations that

could have netted higher returns if demand were increased at sufficient prices on the west coast. The model results can be used to identify these opportunities and take steps to try to increase demand. If these steps are successful, actual movement could be different than that suggested as "optimal" in the examples used in this thesis.

Another reason for caution in interpretation of the model results is that no attempt has been made to calculate the impact of changes in rail freight rates on production levels or patterns. The production pattern in 1994/95, which occurred under WGTA freight rates, is unlikely to be sustained because farmers will experience changes in the relative prices of crops. The higher freight deductions eastern prairie farmers now pay for moving grain through the St. Lawrence Seaway (CWB pooling change) will have further impacts on their production decisions. Therefore, the "base case" scenario is unlikely to represent what would have occurred in 1994/95 had these freight changes been in place prior to that year. The major usefulness of the thesis results is to demonstrate the ability of the model to assist in many types of calculations related to shipment decisions, rather than to predict a specific shipment pattern that will occur in reality.

7.2 Topics for Further Research

Many topics in grain transportation require thorough examination to evaluate the impacts of removing the Crow Benefit and other policy changes. Several suggested topics are

related to this study. First, methodologies to calculate the costs of using U.S. shipment routes need to be developed to assist the CWB to evaluate these opportunities. Second, changes in supply patterns resulting from the increase in freight rates should be estimated to help determine the likely impact on the volume of grain to be shipped through each port. Third, the various possible methods of disposal of the government-owned railway hopper cars should be examined to determine their impact on grain shipment logistics. Finally, the potential impact of the abandonment of railway branch lines and elevator consolidation on directional shipment planning should be studied.

References

- Agriculture and Agri-Food Canada. 1995.** *Western grain transportation reform - proposed changes to policies related to grain transportation efficiencies. News Release Backgrounder.* (February 28).
- Bird, James. 1971.** *Seaports and Seaport Terminals.* London: Hutchinson & Co. Ltd.
- Canadian International Grains Institute. 1993.** *Grains & Oilseeds: Handling, Marketing, Processing, Vol. 1 (4th edition).* Winnipeg: Canadian International Grains Institute (CIGI).
- Canadian Grain Commission. 1991-1995.** *Exports of Canadian Grain and Wheat Flour, Year to Date.* Winnipeg: CGC (July).
- Canadian Wheat Board. Annual Reports, 1984/85 through 1993/94.**
- Canadian Wheat Board. 1994.** *Grain Transportation/Car Allocation - What are the Options?* Winnipeg: CWB (December).
- Canadian Wheat Board. 1995.** How Your Freight Deduction is Calculated. In *Grain Matters* p3. Winnipeg: CWB (July/August).
- Canadian Wheat Board. 1995.** Personal Communication re: pool account deficits (November 22).
- Canadian Wheat Board. 1995.** *Zone Allocation Proposal (Discussion Paper).* Winnipeg: CWB (October 17).
- Chiang, Alpha C. 1984.** *Fundamental Methods of Mathematical Economics (3rd edition).* New York: McGraw-Hill Inc.
- Fuller, Stephen, Larry Makus, William Gallimore. 1984.** "Effects of Increasing Panama Canal Toll Rates on U.S. Grain Exports." *Southern Journal of Agricultural Economics.* (December).
- Gibson, Ronald R. 1990.** *A Spatial Equilibrium Analysis of the North American Milling Industry Under Free Trade.* Winnipeg: The University of Manitoba (May).

- Gilson, J. C. 1982.** *Western Grain Transportation: Report on Consultations and Recommendations.* Ottawa: Supply and Services Canada.
- Grain Transportation Agency. 1991.** *Grain Transportation and Handling Requirements at the West Coast in 1995/96 and 2000/01.* Winnipeg: GTA (September)
- Heads, John. 1989.** The Western Grain Transportation Act: The Next Five Years. In *Developments in Canadian Grain Transportation Policy - Proceedings of a Conference* pp41-58. Winnipeg: The University of Manitoba Transport Institute (January).
- Heads, John. 1994.** Western Grain Transportation Act. In *Delivering the Western Grain Transportation Act Benefit to Producers* pp7-17. Ottawa: Agriculture and Agri-Food Canada (June).
- Manitoba Cooperator. 1995.** *Sell Government Cars to Railways, Committee Says.* pp1&10 (November 9).
- Miller, Pamela Marie. 1988.** *The Economic Potential of U.S. Routes for the Movement of Grain from Western Canada to Export Destinations.* Winnipeg: The University of Manitoba (February).
- Moore, L. J., Sang M. Lee, Bernard W. Taylor. 1993.** *Management Science (4th edition).* Needham Heights, MA: Allyn and Bacon.
- Taha, Hamdy A. 1987.** *Operations Research (4th edition).* New York: Macmillan.
- Transport Canada. 1995.** *Minister Announces National Marine Policy. News Release and Backgrounder.* (December 14).
- Transport Canada. 1995.** Personal communication from Western Grain Transportation Office (August 30).
- United States Department of Agriculture, Agricultural Marketing Service. 1995.** *Grain and Feed Market News (Vol. 43, No. 30).* Washington: (July 28).
- Vancouver Port Corporation. 1995.** *VPC Selects Saskatchewan Wheat Pool and Cargill for Roberts Bank Development. News Release.* (December 22).
- Western Grain Marketing Panel. 1995.** *Grain Marketing: Background for Public Consultations.* Winnipeg: Western Grain Marketing Panel (December).

Western Producer. 1993. *Special Supplement: Grain Transportation Issues.*
Saskatoon: The Western Producer (January 28).

Appendix I

Weighted Freight/Handling Costs by Shipping Block by Grade

Interpretation of Appendix I

- Each page lists weighted freight/handling costs for a different grade (grades identified in upper right hand corner.
- "Balance to Move" column is supplies in thousands of tonnes.
- Weighted costs differ from grade to grade due to differences in supply distribution.

1CWRS
(Block freight)
12-Feb-96

Grade: 1CWRS

Weighted Freight/Handling Costs by Shipping Block

Block
Supplies
6,938

Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf
00	14	31.84	39.59	54.98	75.33	1006.05	82.69	55.19	106.05
01	1	52.27	56.43	24.94	45.29	38.28	39.54	1002.54	62.91
03	18	54.42	58.79	27.39	47.74	40.68	37.25	1002.54	60.61
05	40	48.87	53.29	27.28	47.63	35.30	39.54	1002.54	62.91
07	11	51.58	56.25	28.06	48.41	37.36	48.29	1002.54	71.65
09	99	46.53	51.98	29.50	49.85	37.18	43.43	61.32	66.80
11	36	46.35	50.67	29.71	50.06	33.11	46.20	61.32	69.56
13	46	47.64	51.91	29.69	50.04	32.77	49.15	61.32	72.51
15	75	44.50	48.84	33.39	53.74	30.90	54.52	61.32	77.89
17	194	41.63	46.05	34.65	55.00	34.91	58.87	60.08	82.23
19	169	41.50	47.29	38.59	58.94	36.93	64.83	59.02	88.20
21	170	40.16	46.48	37.73	58.08	36.07	60.23	59.02	83.60
23	259	40.62	45.00	36.03	56.38	33.51	59.49	59.02	82.86
25	141	43.30	47.74	36.10	56.45	30.97	60.48	61.10	83.84
27	92	42.31	46.71	35.66	56.01	32.75	61.25	59.63	84.61
29	166	40.53	45.01	39.11	59.46	35.17	64.83	59.02	88.20
31	224	41.65	46.44	34.94	55.29	35.52	53.46	59.02	76.82
33	80	43.49	49.63	32.24	52.59	35.00	51.49	61.32	74.86
35	38	41.70	50.28	35.02	55.37	35.88	50.96	61.32	74.33
37	168	36.66	41.30	39.92	60.27	37.14	61.48	59.02	84.85
39	156	37.80	42.16	38.19	58.54	36.53	61.43	59.02	84.79
41	96	34.05	38.40	42.96	63.31	40.31	72.70	55.49	96.07
43	87	34.47	39.03	42.12	62.47	40.42	70.12	56.47	93.49
45	12	32.57	36.79	43.97	64.32	42.15	72.85	55.19	96.21
47	238	37.51	46.66	40.64	60.99	39.00	70.33	57.47	93.69
49	42	31.67	40.80	45.61	65.96	43.91	71.01	53.26	94.37
61	34	50.50	1006.18	24.94	45.29	1006.05	40.58	1002.54	63.94
62	113	47.31	1006.18	27.58	47.93	1006.05	40.63	1002.54	64.00
63	36	48.48	1006.18	27.52	47.87	1006.05	41.65	998.62	65.02
64	202	45.57	1006.18	29.06	49.41	1006.05	46.42	881.06	69.78
71	443	42.75	1006.18	32.42	52.77	1006.05	51.70	362.40	75.06
72	179	42.10	1006.18	33.00	53.35	1006.05	52.64	1002.54	76.00
73	123	42.32	1006.18	33.83	54.18	1006.05	54.55	558.87	77.92
74	124	45.44	1006.18	33.16	53.51	1006.05	56.50	67.06	79.87
75	151	41.00	1006.18	35.46	55.81	1006.05	60.54	106.80	83.90
76	382	38.37	1006.18	39.15	59.50	1006.05	70.46	386.25	93.82
77	461	41.54	1006.18	37.70	58.05	1006.05	59.19	62.22	82.55
78	440	38.95	1006.18	35.42	55.77	1006.05	55.33	746.73	78.70
79	168	41.40	1006.18	35.06	55.41	1006.05	56.67	975.88	80.03
81	297	37.52	1006.18	38.93	59.28	1006.05	61.87	666.81	85.24
82	159	31.84	1006.18	42.87	63.22	1006.05	65.20	52.64	88.56
83	260	33.71	1006.18	42.47	62.82	1006.05	64.20	48.85	87.56
84	254	31.55	1006.18	44.00	64.35	1006.05	65.56	48.64	88.92
85	37	29.55	1006.18	44.24	64.59	1006.05	66.98	52.20	90.34
86	25	34.21	1006.18	45.47	65.82	1006.05	78.21	65.05	101.57
87	133	35.63	1006.18	41.68	62.03	1006.05	74.35	54.32	97.71
90	167	35.47	40.23	51.71	72.06	49.74	81.10	57.38	104.47
95	54	34.65	39.03	45.96	66.31	44.02	74.71	56.85	98.07
98	24	41.33	45.56	54.31	74.66	52.95	81.92	60.33	105.29

2CWRS
(Block freight)
28-Nov-95

Grade: 2CWRS

Weighted Freight/Handling Costs by Shipping Block

Shipping Block	Balance to Move	Block Supplies 4,108							
		Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf
00	12	31.75	39.59	54.98	75.33	1006.05	82.69	55.19	106.05
01	31	51.78	56.25	24.18	44.53	38.10	37.87	1002.54	61.24
03	207	53.31	57.69	26.23	46.58	39.62	37.25	1002.54	60.61
05	114	49.59	53.95	26.65	47.00	35.78	39.54	1002.54	62.91
07	45	51.77	56.46	28.37	48.72	37.53	51.12	1002.54	74.49
09	65	46.29	51.90	29.66	50.01	37.26	43.84	61.32	67.21
11	117	45.86	50.21	30.43	50.78	32.40	47.44	61.32	70.80
13	178	47.23	51.50	30.07	50.42	32.27	47.24	61.32	70.60
15	151	45.14	49.45	32.34	52.69	30.85	52.68	61.32	76.05
17	105	43.06	47.52	33.02	53.37	33.72	54.83	60.18	78.20
19	22	41.67	47.47	38.77	59.12	37.11	64.83	59.02	88.20
21	17	40.05	46.60	37.81	58.16	36.15	60.23	59.02	83.60
23	59	40.14	44.57	36.55	56.90	33.88	60.04	59.02	83.40
25	151	43.27	47.70	36.24	56.59	31.08	60.54	61.01	83.91
27	37	42.46	46.81	35.65	56.00	32.51	61.06	59.94	84.43
29	51	40.74	45.19	38.91	59.26	34.60	64.83	59.02	88.20
31	11	41.64	46.56	34.82	55.17	35.30	53.81	59.02	77.17
33	59	42.97	49.42	32.47	52.82	34.10	52.27	61.32	75.64
35	5	41.50	50.11	34.83	55.18	35.89	50.96	61.32	74.33
37	40	36.59	41.29	39.99	60.34	37.18	61.30	59.02	84.67
39	50	37.24	41.70	38.53	58.88	36.87	61.32	59.02	84.68
41	83	34.18	38.51	43.14	63.49	40.56	72.74	55.12	96.10
43	153	34.34	38.84	43.48	63.83	41.80	71.92	56.44	95.29
45	10	32.65	36.88	43.92	64.27	42.13	72.77	55.19	96.14
47	83	34.70	45.06	42.33	62.68	40.67	70.78	56.53	94.14
49	88	31.86	40.62	45.68	66.03	43.98	71.03	52.84	94.39
61	130	50.25	1006.18	24.43	44.78	1006.05	38.59	1002.54	61.96
62	395	48.61	1006.18	26.19	46.54	1006.05	38.66	1002.54	62.02
63	222	48.21	1006.18	27.26	47.61	1006.05	41.41	986.10	64.78
64	178	45.96	1006.18	29.00	49.35	1006.05	45.55	683.97	68.91
71	52	42.79	1006.18	32.55	52.90	1006.05	52.31	340.98	75.68
72	99	42.17	1006.18	31.78	52.13	1006.05	49.68	1002.54	73.05
73	90	43.02	1006.18	34.44	54.79	1006.05	55.40	690.10	78.77
74	150	45.83	1006.18	32.95	53.30	1006.05	55.23	66.73	78.59
75	59	42.46	1006.18	34.71	55.06	1006.05	58.50	158.41	81.86
76	125	37.59	1006.18	39.44	59.79	1006.05	71.33	210.86	94.70
77	32	41.39	1006.18	37.33	57.68	1006.05	58.57	62.04	81.93
78	74	39.33	1006.18	35.00	55.35	1006.05	54.56	575.11	77.93
79	11	41.00	1006.18	34.72	55.07	1006.05	56.23	950.44	79.60
81	23	36.44	1006.18	38.30	58.65	1006.05	60.80	580.44	84.17
82	74	31.47	1006.18	43.52	63.87	1006.05	66.47	52.47	89.84
83	34	33.68	1006.18	42.13	62.48	1006.05	64.07	48.85	87.44
84	35	31.41	1006.18	44.08	64.43	1006.05	65.58	48.15	88.94
85	31	30.37	1006.18	44.73	65.08	1006.05	68.05	52.20	91.41
86	64	34.35	1006.18	46.04	66.39	1006.05	80.35	56.80	103.71
87	123	34.98	1006.18	42.19	62.54	1006.05	75.11	54.18	98.47
90	132	34.78	39.66	52.54	72.89	50.57	81.99	56.91	105.36
95	22	34.21	38.60	45.41	65.76	43.41	74.01	57.05	97.38
98	10	40.67	44.96	53.73	74.08	52.14	81.92	60.33	105.29

3CWRS
(Block freight)
28-Nov-95

Grade: **3CWRS**

Weighted Freight/Handling Costs by Shipping Block

Block
Supplies
1,427

Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf
00	3	31.69	39.59	54.98	75.33	1006.05	82.69	55.19	106.05
01	11	51.99	56.34	23.93	44.28	38.19	37.54	1002.54	60.91
03	28	53.17	57.57	26.17	46.52	39.50	37.25	1002.54	60.61
05	22	49.30	53.68	26.89	47.24	35.54	39.54	1002.54	62.91
07	14	51.83	56.50	28.44	48.79	37.61	51.90	1002.54	75.26
09	15	45.61	51.64	29.99	50.34	37.26	44.54	61.32	67.91
11	14	45.98	50.49	30.87	51.22	32.23	49.68	61.32	73.04
13	33	47.27	51.55	29.76	50.11	32.49	45.96	61.32	69.33
15	19	45.12	49.44	32.57	52.92	30.77	53.52	61.32	76.88
17	19	42.57	47.06	33.17	53.52	33.75	55.00	59.78	78.36
19	14	41.00	47.95	39.24	59.59	37.53	64.83	59.02	88.20
21	13	40.08	46.84	38.10	58.45	36.44	60.23	59.02	83.60
23	17	40.22	44.65	36.35	56.70	33.82	59.64	59.02	83.00
25	20	42.86	47.25	36.59	56.94	31.44	60.44	60.88	83.80
27	7	42.29	46.74	35.63	55.98	32.85	61.23	59.67	84.59
29	29	40.79	45.20	38.97	59.32	34.58	64.83	59.02	88.20
31	12	41.34	46.02	35.38	55.73	35.15	58.16	59.02	81.52
33	18	43.60	49.33	32.71	53.06	34.81	51.34	61.32	74.71
35	3	41.74	50.32	35.07	55.42	35.90	50.96	61.32	74.33
37	24	36.45	41.16	40.14	60.49	37.30	61.46	59.02	84.82
39	14	37.45	41.94	38.33	58.68	36.68	61.39	59.02	84.76
41	27	34.34	38.69	43.17	63.52	40.58	72.75	54.62	96.12
43	59	34.37	38.84	44.10	64.45	42.43	72.27	56.23	95.64
45	3	32.84	37.06	44.10	64.45	42.24	72.79	55.19	96.15
47	72	35.81	45.60	41.85	62.20	40.20	70.48	57.76	93.84
49	112	32.34	40.48	45.37	65.72	43.68	70.97	51.86	94.34
61	18	49.94	1006.18	24.13	44.48	1006.05	38.06	1002.54	61.43
62	38	48.09	1006.18	26.74	47.09	1006.05	39.01	1002.54	62.38
63	40	48.03	1006.18	27.78	48.13	1006.05	42.13	947.48	65.50
64	35	45.24	1006.18	29.01	49.36	1006.05	45.10	574.10	68.47
71	37	42.73	1006.18	32.82	53.17	1006.05	52.28	386.10	75.64
72	44	41.78	1006.18	32.61	52.96	1006.05	52.03	1002.54	75.39
73	10	43.17	1006.18	34.51	54.86	1006.05	55.70	799.73	79.07
74	24	46.60	1006.18	33.51	53.86	1006.05	56.47	67.49	79.83
75	13	41.94	1006.18	34.83	55.18	1006.05	58.92	136.77	82.29
76	64	38.07	1006.18	39.33	59.68	1006.05	70.82	305.27	94.18
77	41	40.86	1006.18	36.96	57.31	1006.05	58.12	61.94	81.49
78	46	39.31	1006.18	34.68	55.03	1006.05	54.01	413.63	77.38
79	2	40.35	1006.18	34.06	54.41	1006.05	55.67	762.39	79.04
81	11	36.40	1006.18	37.88	58.23	1006.05	60.00	573.39	83.36
82	42	31.15	1006.18	44.44	64.79	1006.05	68.25	53.48	91.61
83	34	33.62	1006.18	42.77	63.12	1006.05	64.34	48.85	87.70
84	19	31.12	1006.18	43.97	64.32	1006.05	65.39	48.28	88.75
85	31	30.78	1006.18	45.01	65.36	1006.05	68.59	52.20	91.95
86	57	33.99	1006.18	45.78	66.13	1006.05	81.42	84.01	104.78
87	57	34.94	1006.18	42.36	62.71	1006.05	75.21	54.23	98.58
90	111	35.52	40.16	52.00	72.35	50.06	81.76	56.33	105.13
95	13	34.63	39.04	45.94	66.29	43.91	74.61	57.28	97.98
98	19	39.97	44.21	52.98	73.33	51.31	81.92	60.33	105.29

CWFW/4/5AD
(Block freight)
28-Nov-95

Grade: **CWFW/4/5A**

Weighted Freight/Handling Costs by Shipping Block

										Block Supplies 740
Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf	
00	3	31.69	39.59	54.98	75.33	1006.05	82.69	55.19	106.05	
01	1	51.83	56.24	23.87	44.22	38.08	38.00	1002.54	61.37	
03	20	53.35	57.66	26.27	46.62	39.59	37.25	1002.54	60.61	
05	8	49.32	53.74	26.63	46.98	35.88	39.54	1002.54	62.91	
07	4	51.71	56.33	28.17	48.52	37.47	49.05	1002.54	72.41	
09	11	46.72	52.11	29.17	49.52	37.01	42.52	61.32	65.88	
11	9	46.59	51.19	29.17	49.52	33.56	45.59	61.32	68.95	
13	3	47.60	52.05	29.78	50.13	32.58	47.00	61.32	70.37	
15	3	46.01	50.28	31.60	51.95	31.46	52.77	61.32	76.14	
17	8	41.70	45.98	34.38	54.73	34.80	58.89	60.10	82.25	
19	13	40.92	47.78	39.08	59.43	37.42	64.83	59.02	88.20	
21	14	39.94	46.87	38.15	58.50	36.50	60.23	59.02	83.60	
23	4	40.77	45.14	35.48	55.83	33.32	58.36	59.02	81.72	
25	1	42.04	46.20	37.55	57.90	32.27	60.23	61.32	83.60	
27	2	42.00	46.41	35.73	56.08	33.05	61.61	59.02	84.98	
29	6	40.55	45.00	38.87	59.22	34.48	64.83	59.02	88.20	
31	12	41.38	46.08	35.29	55.64	35.45	55.08	59.02	78.45	
33	13	43.34	49.13	32.93	53.28	34.71	51.32	61.32	74.68	
35	6	41.31	49.94	34.64	54.99	35.85	50.96	61.32	74.33	
37	3	36.37	41.10	40.21	60.56	37.36	61.50	59.02	84.86	
39	7	37.46	41.89	38.48	58.83	36.83	61.46	59.02	84.82	
41	8	33.98	38.45	43.19	63.54	40.45	72.74	56.57	96.10	
43	5	34.61	38.90	42.98	63.33	41.29	67.97	55.97	91.33	
45	1	32.41	36.63	43.86	64.21	42.06	72.84	55.19	96.20	
47	32	38.19	47.08	40.26	60.61	38.61	70.15	58.15	93.51	
49	5	32.56	40.37	44.88	65.23	43.21	70.96	52.34	94.33	
61	6	50.46	1006.18	24.59	44.94	1006.05	38.87	1002.54	62.24	
62	45	48.16	1006.18	26.80	47.15	1006.05	39.88	1002.54	63.25	
63	24	48.17	1006.18	26.99	47.34	1006.05	41.06	961.37	64.42	
64	25	45.82	1006.18	28.95	49.30	1006.05	45.72	804.88	69.09	
71	28	42.92	1006.18	32.87	53.22	1006.05	52.28	506.63	75.65	
72	26	41.73	1006.18	32.41	52.76	1006.05	51.00	1002.54	74.36	
73	7	42.87	1006.18	34.25	54.60	1006.05	55.01	612.22	78.38	
74	3	47.35	1006.18	34.41	54.76	1006.05	57.57	67.70	80.93	
75	13	40.49	1006.18	35.58	55.93	1006.05	60.76	61.24	84.13	
76	78	38.46	1006.18	39.10	59.45	1006.05	70.04	546.78	93.41	
77	29	40.57	1006.18	37.07	57.42	1006.05	58.51	61.81	81.87	
78	49	39.52	1006.18	34.31	54.66	1006.05	53.34	347.92	76.70	
79	13	41.47	1006.18	35.08	55.43	1006.05	56.61	1002.54	79.98	
81	36	37.27	1006.18	38.53	58.88	1006.05	60.87	539.48	84.24	
82	8	31.39	1006.18	44.32	64.67	1006.05	67.81	53.36	91.18	
83	57	33.71	1006.18	42.45	62.80	1006.05	64.21	48.85	87.58	
84	52	31.51	1006.18	43.48	63.83	1006.05	65.00	48.37	88.36	
85	4	30.34	1006.18	44.65	65.00	1006.05	68.04	52.20	91.40	
86	11	34.55	1006.18	46.46	66.81	1006.05	81.57	77.79	104.94	
87	5	34.62	1006.18	42.73	63.08	1006.05	75.84	54.25	99.21	
90	15	35.94	40.39	51.85	72.20	49.88	81.33	55.08	104.69	
95	2	35.45	39.82	46.93	67.28	45.17	76.21	57.56	99.58	
98	2	40.82	45.10	53.86	74.21	52.30	81.92	60.33	105.29	

CPSR
(Block freight)
28-Nov-95

Grade: CPSR

Weighted Freight/Handling Costs by Shipping Block

										Block Supplies 689
Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf	
00	7	31.69	39.59	54.98	75.33	1006.05	82.69	55.19	106.05	
01	0	51.83	56.43	24.41	44.76	38.28	37.76	1002.54	61.12	
03	9	54.81	59.14	27.60	47.95	41.00	37.25	1002.54	60.61	
05	18	48.77	53.26	27.10	47.45	35.63	39.54	1002.54	62.91	
07	7	52.13	56.72	28.73	49.08	37.77	53.99	1002.54	77.36	
09	15	47.98	52.85	28.19	48.54	37.07	41.08	61.32	64.44	
11	29	46.72	51.27	29.11	49.46	33.65	45.87	61.32	69.24	
13	52	47.40	51.61	30.42	50.77	32.13	49.70	61.32	73.06	
15	21	46.44	50.64	31.66	52.01	31.08	53.55	61.32	76.92	
17	2	41.90	46.20	34.17	54.52	34.08	57.77	59.98	81.13	
19	1	42.30	46.69	37.99	58.34	36.34	64.83	59.02	88.20	
21	1	39.60	46.20	37.55	57.90	35.90	60.23	59.02	83.60	
23	14	40.07	44.59	36.77	57.12	33.97	60.42	59.02	83.78	
25	41	43.28	47.69	36.15	56.50	31.11	60.36	61.11	83.73	
27	5	42.58	46.95	35.53	55.88	32.27	60.80	60.39	84.16	
29	7	40.74	45.14	38.44	58.79	34.11	64.83	59.02	88.20	
31	3	41.24	45.91	35.46	55.81	35.29	57.00	59.02	80.36	
33	5	43.48	49.56	32.45	52.80	34.34	51.83	61.32	75.19	
35	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
37	10	35.71	40.39	40.90	61.25	38.00	61.60	59.02	84.96	
39	5	38.57	42.88	37.31	57.66	35.65	60.61	59.02	83.98	
41	24	33.41	37.68	43.68	64.03	41.35	72.78	56.29	96.15	
43	16	34.25	38.79	42.91	63.26	41.22	71.98	56.33	95.35	
45	10	32.38	36.60	43.65	64.00	41.94	72.70	55.19	96.07	
47	16	32.61	43.62	43.77	64.12	42.12	70.92	57.72	94.29	
49	16	32.52	40.35	45.45	65.80	43.75	70.97	52.79	94.34	
61	7	50.17	1006.18	24.53	44.88	1006.05	38.93	1002.54	62.30	
62	27	47.79	1006.18	26.96	47.31	1006.05	39.41	1002.54	62.78	
63	52	48.12	1006.18	28.01	48.36	1006.05	42.53	989.04	65.90	
64	33	45.85	1006.18	28.21	48.56	1006.05	42.67	585.44	66.04	
71	4	42.49	1006.18	32.18	52.53	1006.05	51.55	272.72	74.91	
72	11	42.67	1006.18	32.34	52.69	1006.05	50.76	1002.54	74.13	
73	5	43.08	1006.18	34.43	54.78	1006.05	55.47	508.04	78.84	
74	13	46.59	1006.18	33.80	54.15	1006.05	57.84	67.83	81.20	
75	5	42.79	1006.18	34.40	54.75	1006.05	57.92	99.30	81.28	
76	5	38.06	1006.18	39.61	59.96	1006.05	70.89	129.65	94.25	
77	1	40.51	1006.18	36.50	56.85	1006.05	57.53	61.90	80.90	
78	1	39.12	1006.18	35.04	55.39	1006.05	54.64	625.93	78.01	
79	4	42.03	1006.18	35.75	56.10	1006.05	57.62	1002.54	80.98	
81	1	33.76	1006.18	39.66	60.01	1006.05	62.78	79.35	86.14	
82	16	31.11	1006.18	43.39	63.74	1006.05	66.37	52.99	89.73	
83	21	33.24	1006.18	42.02	62.37	1006.05	64.05	48.85	87.41	
84	18	32.14	1006.18	45.01	65.36	1006.05	66.80	43.85	90.16	
85	16	30.39	1006.18	44.76	65.11	1006.05	68.07	52.20	91.44	
86	7	33.51	1006.18	44.20	64.55	1006.05	75.11	110.08	98.47	
87	25	34.48	1006.18	42.38	62.73	1006.05	75.24	54.17	98.61	
90	49	35.22	40.25	51.97	72.32	50.07	81.26	57.46	104.62	
95	17	33.69	38.13	44.78	65.13	42.86	73.28	56.99	96.64	
98	17	40.19	44.50	53.28	73.63	51.52	81.92	60.33	105.29	

CPSW
(Block freight)
28-Nov-95

Grade: CPSW

Weighted Freight/Handling Costs by Shipping Block

										Block Supplies 487
Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf	
00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
01	0	51.61	56.43	24.35	44.70	38.28	37.25	1002.54	60.61	
03	0	55.33	59.55	28.00	48.35	41.38	37.25	1002.54	60.61	
05	1	49.35	53.70	26.74	47.09	35.71	39.54	1002.54	62.91	
07	0	50.42	55.24	26.73	47.08	36.49	39.54	1002.54	62.91	
09	5	45.06	51.27	30.48	50.83	37.00	44.96	61.32	68.32	
11	5	45.18	49.45	30.73	51.08	31.83	45.98	61.32	69.34	
13	0	48.04	52.27	28.51	48.86	33.46	39.54	61.32	62.91	
15	10	43.37	47.64	33.27	53.62	32.11	53.18	61.32	76.55	
17	26	42.43	46.94	33.78	54.13	34.59	55.60	59.93	78.97	
19	21	41.09	47.51	38.80	59.15	37.15	64.83	59.02	88.20	
21	21	40.02	46.34	37.63	57.98	35.97	60.23	59.02	83.60	
23	14	41.15	45.51	35.25	55.60	32.98	58.96	59.02	82.33	
25	7	43.75	48.13	35.62	55.97	30.59	60.29	61.22	83.66	
27	3	42.35	46.68	35.41	55.76	32.32	60.86	60.28	84.23	
29	8	40.59	45.18	39.07	59.42	35.14	64.83	59.02	88.20	
31	8	41.75	46.56	34.84	55.19	35.55	53.92	59.02	77.29	
33	9	42.81	49.36	32.56	52.91	33.98	52.09	61.32	75.46	
35	3	41.60	50.19	34.92	55.27	35.78	50.96	61.32	74.33	
37	24	36.82	41.37	39.75	60.10	37.02	61.55	59.02	84.92	
39	19	37.97	42.30	37.88	58.23	36.23	61.14	59.02	84.51	
41	1	34.15	38.58	43.09	63.44	40.26	72.70	56.57	96.06	
43	6	34.99	39.54	42.34	62.69	40.64	69.12	56.57	92.48	
45	1	32.99	37.22	44.16	64.51	42.50	73.03	55.19	96.40	
47	11	39.40	47.55	40.32	60.67	38.74	67.87	58.79	91.24	
49	4	32.86	40.55	43.92	64.27	42.25	70.96	51.00	94.33	
61	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
62	16	46.61	1006.18	28.84	49.19	1006.05	45.28	1002.54	68.64	
63	3	47.64	1006.18	28.68	49.03	1006.05	43.90	1002.54	67.26	
64	25	45.65	1006.18	28.79	49.14	1006.05	44.60	887.12	67.96	
71	29	42.59	1006.18	32.21	52.56	1006.05	51.66	255.11	75.02	
72	14	42.07	1006.18	32.27	52.62	1006.05	50.67	1002.54	74.03	
73	19	42.63	1006.18	33.91	54.26	1006.05	54.89	378.33	78.25	
74	12	46.26	1006.18	33.03	53.38	1006.05	55.39	67.33	78.76	
75	22	42.57	1006.18	33.97	54.32	1006.05	56.74	67.20	80.11	
76	36	38.59	1006.18	39.08	59.43	1006.05	70.84	465.65	94.21	
77	24	41.58	1006.18	37.73	58.08	1006.05	59.08	62.15	82.45	
78	30	39.53	1006.18	35.05	55.40	1006.05	54.87	624.08	78.24	
79	3	41.43	1006.18	35.14	55.49	1006.05	56.87	964.97	80.24	
81	18	37.96	1006.18	37.99	58.34	1006.05	60.33	810.88	83.69	
82	4	32.08	1006.18	43.82	64.17	1006.05	66.53	53.70	89.90	
83	16	33.70	1006.18	41.84	62.19	1006.05	63.94	48.85	87.30	
84	3	31.85	1006.18	43.41	63.76	1006.05	64.88	48.85	88.25	
85	0	29.37	1006.18	44.16	64.51	1006.05	66.75	52.20	90.11	
86	1	35.38	1006.18	47.28	67.63	1006.05	83.02	38.91	106.38	
87	3	35.43	1006.18	41.30	61.65	1006.05	73.25	53.86	96.62	
90	1	38.96	43.25	52.03	72.38	50.25	81.92	48.85	105.29	
95	0	32.99	37.22	44.16	64.51	41.91	73.03	57.71	96.40	
98	0	41.62	45.85	54.59	74.94	53.31	81.92	60.33	105.29	

CWES
(Block freight)
28-Nov-95

Grade: **CWES**

Weighted Freight/Handling Costs by Shipping Block

Block
Supplies
395

Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf
00	1	31.58	39.59	54.98	75.33	1006.05	82.69	55.19	106.05
01	1	52.08	56.40	24.29	44.64	38.25	38.38	1002.54	61.75
03	32	53.24	57.61	26.22	46.57	39.51	37.25	1002.54	60.61
05	16	49.37	53.82	26.74	47.09	35.63	39.54	1002.54	62.91
07	4	51.90	56.55	28.51	48.86	37.58	52.67	1002.54	76.04
09	8	46.44	52.17	29.10	49.45	37.28	43.09	61.32	66.46
11	12	46.42	50.81	30.00	50.35	32.91	47.91	61.32	71.28
13	33	47.08	51.44	29.94	50.29	32.30	46.67	61.32	70.03
15	13	45.17	49.47	32.01	52.36	30.79	50.23	61.32	73.60
17	4	42.98	47.55	33.11	53.46	33.83	54.94	59.86	78.30
19	3	41.19	47.91	39.21	59.56	37.55	64.83	59.02	88.20
21	2	40.06	46.59	37.80	58.15	36.14	60.23	59.02	83.60
23	3	41.54	45.76	34.64	54.99	32.64	57.26	59.02	80.62
25	15	43.86	48.36	35.93	56.28	30.73	60.79	61.31	84.16
27	2	42.53	46.89	35.67	56.02	32.65	61.08	59.91	84.45
29	1	40.93	45.40	38.98	59.33	33.81	64.83	59.02	88.20
31	2	41.45	46.06	35.32	55.67	35.52	55.71	59.02	79.08
33	6	43.52	49.04	33.01	53.36	34.34	51.61	61.32	74.97
35	1	41.44	50.05	34.77	55.12	35.82	50.96	61.32	74.33
37	4	36.65	41.09	39.92	60.27	37.35	61.61	59.02	84.98
39	1	38.50	42.72	37.46	57.81	35.81	61.41	59.02	84.78
41	2	33.79	38.19	42.77	63.12	40.17	72.65	56.57	96.01
43	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0	31.80	36.03	44.16	64.51	41.91	73.03	55.19	96.40
47	2	36.44	46.13	40.97	61.32	39.31	70.96	57.94	94.33
49	1	32.54	40.11	45.03	65.38	43.36	70.96	51.33	94.33
61	13	50.59	1006.18	24.73	45.08	1006.05	39.71	1002.54	63.08
62	69	48.72	1006.18	26.04	46.39	1006.05	38.59	1002.54	61.96
63	40	48.38	1006.18	26.67	47.02	1006.05	40.38	994.99	63.74
64	26	45.74	1006.18	28.23	48.58	1006.05	42.86	562.72	66.23
71	5	42.00	1006.18	32.39	52.74	1006.05	51.97	90.80	75.34
72	11	41.88	1006.18	32.05	52.40	1006.05	50.29	1002.54	73.65
73	8	42.52	1006.18	33.96	54.31	1006.05	54.87	735.54	78.23
74	5	45.87	1006.18	32.23	52.58	1006.05	53.25	66.25	76.61
75	4	43.58	1006.18	34.40	54.75	1006.05	57.79	130.14	81.15
76	3	38.64	1006.18	39.16	59.51	1006.05	70.02	677.58	93.39
77	2	41.13	1006.18	37.81	58.16	1006.05	59.86	62.41	83.23
78	7	39.60	1006.18	33.49	53.84	1006.05	51.94	111.39	75.30
79	1	41.33	1006.18	35.04	55.39	1006.05	56.83	894.36	80.19
81	0	35.70	1006.18	38.45	58.80	1006.05	60.76	527.37	84.13
82	1	31.56	1006.18	44.67	65.02	1006.05	68.41	53.72	91.78
83	5	33.56	1006.18	43.05	63.40	1006.05	64.55	48.85	87.92
84	4	31.92	1006.18	44.71	65.06	1006.05	66.58	49.13	89.95
85	0	30.62	1006.18	44.75	65.10	1006.05	68.13	52.20	91.49
86	1	33.72	1006.18	45.47	65.82	1006.05	81.57	53.72	104.94
87	2	35.55	1006.18	42.12	62.47	1006.05	74.69	54.53	98.06
90	15	35.26	39.85	51.84	72.19	49.92	80.93	58.14	104.30
95	2	33.79	38.01	44.71	65.06	42.71	73.06	55.48	96.43
98	2	40.29	44.64	53.42	73.77	51.62	81.92	60.33	105.29

CWSWS
(Block freight)
28-Nov-95

Grade: CWSWS

Weighted Freight/Handling Costs by Shipping Block

Block
Supplies
247

Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf
00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
05	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07	0	53.46	57.68	29.77	50.12	38.87	56.10	1002.54	79.46
09	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0	41.44	46.20	35.17	55.52	35.90	50.96	59.02	74.33
33	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	1	31.06	42.64	44.74	65.09	43.09	70.96	57.71	94.33
49	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	0	40.19	1006.18	35.17	55.52	1006.05	54.87	61.62	78.24
79	0	41.28	1006.18	35.01	55.36	1006.05	56.44	1002.54	79.81
81	11	33.59	1006.18	39.85	60.20	1006.05	62.88	52.20	86.24
82	18	32.06	1006.18	41.80	62.15	1006.05	64.11	52.97	87.48
83	147	33.51	1006.18	41.17	61.52	1006.05	63.63	48.85	86.99
84	70	32.72	1006.18	45.48	65.83	1006.05	67.45	40.66	90.81
85	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CWRW
(Block freight)
28-Nov-95

Grade: CWRW

Weighted Freight/Handling Costs by Shipping Block

Block
Supplies
72

Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf
00	0	31.98	39.59	54.98	75.33	1006.05	82.69	55.19	106.05
01	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03	0	55.24	59.47	27.92	48.27	41.31	37.25	1002.54	60.61
05	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
07	0	50.42	55.24	26.73	47.08	36.49	39.54	1002.54	62.91
09	2	44.18	51.09	30.36	50.71	36.95	44.84	61.32	68.20
11	0	46.83	51.05	29.14	49.49	32.87	49.20	61.32	72.56
13	0	47.46	51.61	30.96	51.31	31.67	53.34	61.32	76.70
15	0	45.58	49.81	33.37	53.72	28.72	58.51	61.32	81.88
17	0	42.85	47.08	33.89	54.24	34.44	57.96	60.99	81.33
19	1	41.22	47.41	38.69	59.04	37.04	64.83	59.02	88.20
21	0	40.00	47.46	38.74	59.09	37.09	60.23	59.02	83.60
23	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0	42.04	46.86	36.96	57.31	31.67	60.23	61.32	83.60
27	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0	39.60	43.82	38.15	58.50	34.22	64.83	59.02	88.20
31	0	41.44	45.91	35.47	55.82	35.60	56.29	59.02	79.65
33	0	43.23	49.83	32.14	52.49	32.86	53.34	61.32	76.70
35	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	0	37.22	42.04	39.34	59.69	36.49	61.61	59.02	84.98
39	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	0	33.69	37.91	42.87	63.22	40.51	72.65	56.57	96.01
43	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	1	37.72	46.33	41.08	61.43	39.38	70.96	58.75	94.33
49	1	31.00	41.27	45.75	66.10	44.08	70.96	53.91	94.33
61	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	1	46.55	1006.18	28.63	48.98	1006.05	43.20	1002.54	66.56
63	0	47.46	1006.18	26.13	46.48	1006.05	39.01	1002.54	62.37
64	1	45.01	1006.18	29.11	49.46	1006.05	45.60	820.49	68.96
71	1	42.29	1006.18	32.65	53.00	1006.05	51.70	329.94	75.07
72	0	42.34	1006.18	31.89	52.24	1006.05	49.53	1002.54	72.90
73	0	43.82	1006.18	35.17	55.52	1006.05	56.40	1002.54	79.77
74	1	44.64	1006.18	32.02	52.37	1006.05	52.40	64.73	75.76
75	0	42.63	1006.18	33.33	53.68	1006.05	56.02	63.15	79.38
76	0	39.89	1006.18	40.43	60.78	1006.05	71.99	1002.54	95.35
77	9	42.95	1006.18	39.68	60.03	1006.05	62.27	62.97	85.63
78	1	39.83	1006.18	35.15	55.50	1006.05	54.70	232.22	78.06
79	0	40.95	1006.18	34.63	54.98	1006.05	56.00	1002.54	79.36
81	4	35.71	1006.18	38.75	59.10	1006.05	61.96	492.75	85.32
82	0	32.40	1006.18	42.97	63.32	1006.05	65.08	53.72	88.45
83	34	33.56	1006.18	42.69	63.04	1006.05	64.33	48.85	87.70
84	9	31.95	1006.18	43.61	63.96	1006.05	65.24	45.95	88.60
85	1	29.42	1006.18	44.20	64.55	1006.05	66.83	52.20	90.19
86	0	34.78	1006.18	46.60	66.95	1006.05	83.65	53.72	107.02
87	0	36.03	1006.18	42.37	62.72	1006.05	76.08	54.93	99.45
90	1	34.94	39.36	52.29	72.64	50.48	81.20	58.72	104.56
95	0	33.59	37.81	44.75	65.10	42.50	73.03	55.19	96.40
98	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1/2CWAD
(Block freight)
28-Nov-95

Grade: 1/2CWAD

Weighted Freight/Handling Costs by Shipping Block

Block
Supplies
2,639

Shipping Block	Balance to Move	Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf
00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
03	1	55.84	60.06	28.51	48.86	41.91	37.25	1002.54	60.61
05	0	49.63	54.05	27.32	47.67	35.08	39.54	1002.54	62.91
07	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
09	13	46.39	51.74	29.97	50.32	37.20	43.91	61.32	67.28
11	1	45.49	49.71	30.54	50.89	32.26	45.35	61.32	68.71
13	1	45.84	50.06	30.73	51.08	31.32	44.53	61.32	67.90
15	1	43.62	47.84	32.93	53.28	31.87	53.34	61.32	76.70
17	23	41.33	45.72	35.11	55.46	35.12	60.37	60.07	83.74
19	257	41.57	47.82	39.11	59.46	37.45	64.83	59.02	88.20
21	71	39.93	46.53	37.81	58.16	36.15	60.23	59.02	83.60
23	5	40.62	44.97	35.97	56.32	33.51	59.25	59.02	82.61
25	1	43.72	47.95	35.74	56.09	30.45	60.65	61.32	84.01
27	3	42.55	46.79	36.10	56.45	33.25	61.50	59.22	84.86
29	1	39.73	44.42	39.21	59.56	35.82	64.83	59.02	88.20
31	51	41.64	46.41	34.98	55.33	35.64	53.08	59.02	76.44
33	24	43.66	49.26	32.77	53.12	34.84	51.47	61.32	74.84
35	32	41.72	50.30	35.04	55.39	35.88	50.96	61.32	74.33
37	2	37.31	42.11	39.27	59.62	36.40	60.80	59.02	84.16
39	10	38.05	42.50	37.71	58.06	36.06	61.37	59.02	84.73
41	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	1	34.18	39.00	41.18	61.53	39.47	72.65	56.57	96.01
45	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	114	39.51	47.67	40.18	60.53	38.61	67.82	58.65	91.19
49	5	31.72	40.93	45.84	66.19	44.15	70.96	53.72	94.33
61	0	51.02	1006.18	25.54	45.89	1006.05	41.84	1002.54	65.21
62	9	46.61	1006.18	28.84	49.19	1006.05	45.36	1002.54	68.72
63	0	48.25	1006.18	27.95	48.30	1006.05	42.54	1002.54	65.90
64	51	45.52	1006.18	29.14	49.49	1006.05	46.49	956.65	69.85
71	248	42.69	1006.18	32.65	53.00	1006.05	52.08	386.77	75.44
72	95	41.38	1006.18	32.96	53.31	1006.05	52.34	1002.54	75.70
73	17	41.70	1006.18	33.30	53.65	1006.05	54.90	743.44	78.27
74	2	44.09	1006.18	32.78	53.13	1006.05	57.74	68.58	81.10
75	7	40.33	1006.18	35.89	56.24	1006.05	61.38	99.36	84.75
76	75	39.00	1006.18	39.18	59.53	1006.05	70.65	868.64	94.02
77	331	41.11	1006.18	37.39	57.74	1006.05	58.89	62.07	82.26
78	301	39.14	1006.18	35.39	55.74	1006.05	55.25	639.35	78.61
79	46	41.22	1006.18	34.89	55.24	1006.05	56.54	932.82	79.91
81	425	37.79	1006.18	37.84	58.19	1006.05	60.05	783.78	83.41
82	37	33.21	1006.18	43.97	64.32	1006.05	65.92	52.61	89.29
83	267	33.58	1006.18	42.52	62.87	1006.05	64.22	48.85	87.59
84	111	32.06	1006.18	43.89	64.24	1006.05	65.64	48.71	89.00
85	1	29.37	1006.18	44.16	64.51	1006.05	66.75	52.20	90.11
86	1	35.86	1006.18	47.83	68.18	1006.05	83.65	42.17	107.02
87	0	37.22	1006.18	41.18	61.53	1006.05	72.88	54.93	96.24
90	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3CWAD
(Block freight)
28-Nov-95

Grade: **3CWAD**

Weighted Freight/Handling Costs by Shipping Block

Shipping Block	Balance to Move	Block Supplies 1,219							
		Weighted rate - VC	Weighted rate - PR	Weighted rate - TB	Weighted rate - SL	Weighted rate - CH	Weighted rate - MP	Weighted rate - PNW	Weighted rate - Gulf
00	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
01	0	52.27	56.43	24.94	45.29	38.28	39.54	1002.54	62.91
03	4	55.39	59.73	28.18	48.53	41.58	37.25	1002.54	60.61
05	4	48.48	52.88	27.61	47.96	34.98	39.54	1002.54	62.91
07	2	51.49	56.17	27.97	48.32	37.29	48.14	1002.54	71.50
09	20	46.31	51.78	29.89	50.24	37.20	43.90	61.32	67.27
11	10	45.94	50.28	29.98	50.33	32.62	46.79	61.32	70.16
13	6	46.82	51.13	29.84	50.19	32.22	45.13	61.32	68.49
15	2	45.03	49.40	32.58	52.93	30.60	52.13	61.32	75.50
17	25	42.15	46.60	34.31	54.66	34.91	58.44	60.23	81.80
19	86	41.29	47.65	38.94	59.29	37.29	64.83	59.02	88.20
21	39	39.88	46.71	37.98	58.33	36.33	60.23	59.02	83.60
23	4	40.87	45.17	35.47	55.82	33.23	59.73	59.02	83.09
25	3	43.46	47.91	36.09	56.44	31.02	60.63	61.32	83.99
27	3	42.41	46.68	36.00	56.35	33.18	61.52	59.17	84.89
29	2	40.01	44.62	38.91	59.26	35.45	64.83	59.02	88.20
31	20	41.67	46.52	34.86	55.21	35.58	52.71	59.02	76.07
33	47	43.54	49.37	32.69	53.04	34.36	51.77	61.32	75.13
35	26	41.47	50.08	34.79	55.14	35.83	50.96	61.32	74.33
37	0	37.30	41.83	39.26	59.61	36.54	61.19	59.02	84.56
39	3	38.53	42.75	37.46	57.81	35.81	61.23	59.02	84.60
41	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	26	39.17	47.52	40.11	60.46	38.51	68.70	57.81	92.07
49	3	32.34	40.69	45.85	66.20	44.14	70.96	53.72	94.33
61	0	50.42	1006.18	24.94	45.29	1006.05	36.86	1002.54	60.23
62	29	47.04	1006.18	28.07	48.42	1006.05	41.57	1002.54	64.94
63	10	48.05	1006.18	28.25	48.60	1006.05	42.91	995.11	66.28
64	70	45.56	1006.18	29.07	49.42	1006.05	46.34	861.14	69.70
71	138	43.00	1006.18	32.48	52.83	1006.05	51.62	507.78	74.99
72	145	41.48	1006.18	32.77	53.12	1006.05	52.00	1002.54	75.37
73	60	42.39	1006.18	33.91	54.26	1006.05	55.10	746.90	78.47
74	5	44.80	1006.18	32.50	52.85	1006.05	54.63	66.52	77.99
75	11	41.94	1006.18	34.62	54.97	1006.05	58.03	63.08	81.39
76	21	38.88	1006.18	38.68	59.03	1006.05	71.06	740.31	94.42
77	52	40.26	1006.18	36.78	57.13	1006.05	57.97	61.81	81.33
78	184	39.33	1006.18	34.28	54.63	1006.05	53.35	362.58	76.72
79	26	40.88	1006.18	34.57	54.92	1006.05	55.96	961.65	79.32
81	54	37.34	1006.18	37.63	57.98	1006.05	59.44	615.44	82.81
82	8	33.27	1006.18	44.14	64.49	1006.05	66.00	53.61	89.36
83	50	33.49	1006.18	42.31	62.66	1006.05	64.14	48.85	87.51
84	21	32.10	1006.18	43.78	64.13	1006.05	65.47	48.85	88.83
85	0	29.37	1006.18	44.16	64.51	1006.05	66.75	52.20	90.11
86	0	36.03	1006.18	48.08	68.43	1006.05	83.65	26.86	107.02
87	0	33.59	1006.18	42.97	63.32	1006.05	76.54	53.72	99.91
90	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Appendix II

Sales Opportunities by Port and Grade

Interpretation of Appendix II

- Grades are identified in boxes down left side column.
- Code for each sales opportunity is listed across top row. VC1 is top price sales opportunity at Vancouver, VC2 is second best, etc.
- First row in each grade is price in U.S. dollars, second row is Canadian dollars. Third row is maximum volume (000 tonnes) which can be sold at each price.

Sales Opportunities by Destination

		Sales Opportunities by Destination																								
TCWRS		Total Volume:		14,080																						
Price (US\$Sub)	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Price (Cdn\$Sub)	205	180	150	125	125	205	162	162	147	127	170	165	150	145	0	140	205	180	180	150	125	191	153	140		
Volume (000)	283	248	221	207	283	262	251	223	203	175	234	253	207	200	0	183	283	248	221	207	172	283	162	200		
	280	290	630	700	2,100	420	120	270	300	900	200	300	500	200	0	500	960	250	630	700	2,100	300	500	200		
2CWRS		Total Volume:		7,894																						
Price (US\$Sub)	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Price (Cdn\$Sub)	170	150	135	125	0	170	152	137	122	0	160	140	138	0	130	130	170	150	135	125	0	146	138	0		
Volume (000)	290	290	350	1,050	0	120	210	180	188	0	221	186	186	0	178	178	234	207	188	172	0	201	190	0		
							120	150	450		534	500	500		300	300	280	280	350	1,050		500	500			
3CWRS		Total Volume:		5,123																						
Price (US\$Sub)	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Price (Cdn\$Sub)	180	150	125	0	0	180	152	127	PR4	PR5	146	135	130	SL3	125	160	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Volume (000)	221	207	172	0	0	221	210	178	0	0	200	186	178	0	172	0	221	207	172	0	0	141	133	0		
	350	350	700			150	160	300	0	0	233	100	500		300		350	350	700			100	500			
CWFWA/2AD		Total Volume:		1,810																						
Price (US\$Sub)	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Price (Cdn\$Sub)	120	0	0	0	0	120	PR2	PR3	PR4	PR5	110	120	SL2	SL3	0	0	120	0	0	0	0	126	0	0		
Volume (000)	580	0	0	0	0	240	0	0	0	0	50	168	0	0	0	0	168	0	0	0	0	174	0	0		
												50					590					200				
CPEN		Total Volume:		5,133																						
Price (US\$Sub)	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Price (Cdn\$Sub)	180	150	125	0	0	180	162	127	PR4	PR5	145	135	130	SL3	125	160	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Volume (000)	221	207	172	0	0	221	210	175	0	0	200	186	178	0	172	0	221	207	172	0	0	141	133	0		
	350	350	700			150	160	300	0	0	233	100	500		300		350	350	700			100	500			
CPEN		Total Volume:		4,833																						
Price (US\$Sub)	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Price (Cdn\$Sub)	180	150	125	0	0	180	152	127	PR4	PR5	145	135	130	SL3	125	160	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Volume (000)	221	207	172	0	0	221	210	175	0	0	200	186	178	0	0	0	221	207	172	0	0	141	133	0		
	350	350	700			150	150	300	0	0	233	100	500		0	0	350	350	700			100	500			
CWES		Total Volume:		540																						
Price (US\$Sub)	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Price (Cdn\$Sub)	185	0	0	0	0	185	0	0	0	0	0	0	0	0	0	0	135	185	0	0	0	0	0	0		
Volume (000)	228	0	0	0	0	228	0	0	0	0	0	0	0	0	0	0	188	228	0	0	0	0	0	0		
	140					80										200	140									
CWSWS		Total Volume:		4,633																						
Price (US\$Sub)	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Price (Cdn\$Sub)	180	150	125	0	0	180	162	127	PR4	PR5	145	135	130	SL3	125	160	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3		
Volume (000)	221	207	172	0	0	221	210	175	0	0	200	186	178	0	0	0	221	207	172	0	0	141	133	0		
	350	350	700			150	150	300	0	0	233	100	500	0	0	0	350	350	700			100	500			

CWNR

CWRW		Total Volume:		4,833																					
	Y01	Y02	Y03	Y04	Y05	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	ME	FW1	FW2	FW3	FW4	FW5	QL1	QL2	QL3	
Price (US\$)	190	150	125			180	152	127			145	135	130				180	150	125			141	133	131	
Price (C\$)	221	207	172	0	0	221	210	175			200	188	178	0	0	0	221	207	172	0	0	194	183	183	
Volume (000)	350	350	700			180	150	300	0	0	233	100	500				350	350	700			100	500	0	

1/2CWAD

1/2CWAD		Total Volume:		3,944																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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111

Appendix III

Net On-Farm Revenue Calculations

Interpretation of Appendix III

- Each cell represents net revenue at each particular block if supplies are shipped to the sales opportunity in the column heading. Calculation is Canadian dollar sales price at port minus weighted transportation/handling cost from the block to the relevant port.

ICWRS
(Net returns)
07-Dec-95

Grade: ICWRS

Shipping Block	VC1	VC2	VC3	VC4	VC5	PR1	PR2	PR3	PR4	PR5	TB	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	250.82	218.43	189.85	175.06	140.57	243.17	211.44	183.86	163.17	135.58	179.50	179.84	131.57	124.67	(1,006.05)	110.42	227.58	193.08	165.50	151.70	117.22	157.39	104.29	87.05
01	230.49	196.00	166.42	154.83	120.14	228.33	194.60	167.02	146.33	118.74	209.54	209.88	161.61	154.71	(38.28)	153.56	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	200.54	147.43	130.19
03	228.34	193.86	166.27	152.46	123.54	223.96	192.24	164.65	143.96	116.38	207.09	207.43	159.15	152.26	(40.68)	155.86	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	202.84	149.73	132.49
05	233.89	199.40	171.82	158.03	125.83	228.47	197.74	170.16	149.47	121.68	207.20	207.54	159.27	152.37	(35.30)	153.56	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	200.54	147.43	130.19
07	231.18	196.69	169.11	155.31	126.03	226.50	194.78	167.19	146.50	118.92	206.42	206.76	158.48	151.59	(37.38)	144.81	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
11	236.22	201.74	174.16	160.36	125.68	230.78	199.05	171.47	145.00	122.26	204.78	205.12	156.84	149.64	(33.11)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
13	235.12	200.64	174.34	160.55	126.06	232.09	200.36	172.78	150.78	123.19	204.88	205.32	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
15	238.26	203.76	176.19	162.40	130.78	230.84	199.12	171.53	150.84	123.26	201.09	201.43	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
17	241.13	206.64	179.06	165.27	127.91	232.92	202.20	174.61	153.92	128.34	201.09	201.43	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
19	241.26	206.77	179.19	165.39	130.91	233.47	204.55	176.18	155.47	127.68	199.83	200.17	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
21	242.60	208.11	180.53	166.73	132.25	236.27	207.34	178.18	156.27	128.69	198.75	199.09	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
23	242.14	207.68	180.07	166.26	131.80	237.78	208.04	178.45	157.76	130.18	198.45	198.79	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
25	243.48	204.97	177.39	163.60	129.11	235.02	203.29	175.71	155.02	127.43	198.38	198.72	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
27	240.45	205.97	178.38	164.59	130.11	236.05	204.32	176.74	156.05	128.46	198.82	199.16	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
29	242.23	207.74	180.16	166.36	131.88	237.75	208.03	178.44	157.75	130.17	199.54	200.17	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
31	241.11	206.63	179.04	165.25	130.78	236.31	204.59	177.00	156.31	128.73	199.54	200.17	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
33	239.26	204.78	177.19	163.40	128.92	233.13	201.41	173.82	153.13	125.55	199.54	200.17	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
35	241.06	206.56	178.99	165.20	130.71	232.47	200.75	173.18	152.47	124.89	199.46	199.80	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
37	248.10	211.61	184.03	170.23	135.75	237.47	204.15	178.03	156.05	128.46	199.46	199.80	157.04	150.15	(37.16)	146.87	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	191.79	136.69	121.45
39	244.96	210.48	182.80	169.10	134.62	240.80	206.88	181.29	160.60	133.02	198.29	198.63	148.36	141.46	(38.53)	142.14	221.43	188.95	159.37	145.57	111.09	185.56	132.46	115.22
41	246.71	214.23	186.64	172.43	137.95	243.73	212.01	184.42	163.78	138.14	191.52	191.86	143.59	136.69	(40.31)	131.67	223.73	189.25	161.66	147.87	113.39	175.25	122.15	104.90
43	248.29	213.61	188.22	172.43	139.84	245.96	214.24	186.65	165.96	139.38	190.51	190.85	142.58	135.68	(42.15)	120.25	227.58	189.25	161.66	147.87	113.39	175.25	122.15	104.90
45	250.19	215.71	189.12	173.33	140.74	248.96	217.23	189.12	168.67	140.94	191.86	192.20	143.59	136.69	(43.91)	122.09	229.50	191.86	165.50	151.70	117.22	157.39	104.29	87.05
47	245.25	210.76	183.18	174.33	134.90	241.96	210.23	182.65	161.96	134.37	188.87	189.21	140.94	134.04	(43.91)	122.09	229.50	191.86	165.50	151.70	117.22	157.39	104.29	87.05
49	251.09	216.61	189.02	175.23	140.74	241.96	210.23	182.65	161.96	134.37	188.87	189.21	140.94	134.04	(43.91)	122.09	229.50	191.86	165.50	151.70	117.22	157.39	104.29	87.05
61	232.25	197.77	170.19	158.39	121.91	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	209.54	209.88	161.61	154.71	(1,006.05)	152.52	(719.79)	(754.27)	(781.86)	(795.65)	(830.13)	200.54	147.43	130.19
62	235.45	200.87	173.38	159.59	125.10	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	206.90	207.24	158.97	152.07	(1,006.05)	151.45	(715.87)	(750.35)	(777.93)	(791.73)	(826.21)	198.43	148.34	129.10
63	234.27	198.79	172.20	158.41	123.93	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	206.90	207.24	158.97	152.07	(1,006.05)	151.45	(715.87)	(750.35)	(777.93)	(791.73)	(826.21)	198.43	148.34	129.10
64	237.19	202.71	175.12	161.33	128.85	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	205.42	205.76	157.48	150.59	(1,006.05)	146.59	(598.31)	(832.79)	(860.38)	(874.17)	(898.85)	193.68	145.33	128.06
66	240.01	205.83	178.58	164.57	128.97	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	202.06	202.40	154.12	147.23	(1,006.05)	141.41	(79.64)	(114.12)	(141.71)	(155.50)	(189.98)	168.38	135.28	117.10
68	240.85	206.17	178.58	164.57	128.97	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	202.06	202.40	154.12	147.23	(1,006.05)	141.41	(79.64)	(114.12)	(141.71)	(155.50)	(189.98)	168.38	135.28	117.10
70	240.43	205.95	178.38	164.57	128.97	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	202.06	202.40	154.12	147.23	(1,006.05)	141.41	(79.64)	(114.12)	(141.71)	(155.50)	(189.98)	168.38	135.28	117.10
72	237.31	202.63	175.25	161.45	128.97	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	201.32	201.66	152.71	145.82	(1,006.05)	138.55	(278.11)	(310.80)	(338.18)	(368.40)	(395.53)	187.45	134.34	117.10
74	241.78	207.27	179.69	165.89	131.41	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	199.02	199.36	151.09	144.19	(1,006.05)	132.57	175.95	141.47	113.89	139.83	105.35	183.58	130.47	113.23
76	244.39	209.91	182.32	168.53	134.05	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	196.78	197.12	148.84	141.94	(1,006.05)	122.85	(103.50)	(137.88)	(165.57)	(193.36)	(219.84)	169.62	128.44	109.20
78	241.22	206.73	179.15	165.35	130.87	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	199.06	199.40	151.13	144.23	(1,006.05)	133.91	220.53	(498.46)	(528.05)	(559.84)	(574.32)	184.75	127.79	110.55
80	243.81	208.87	183.16	168.57	135.70	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	195.55	195.89	147.81	140.72	(1,006.05)	131.23	(284.05)	(310.80)	(338.18)	(368.40)	(395.53)	187.45	134.34	117.10
82	250.92	216.44	188.85	175.06	140.58	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	191.62	191.96	143.58	136.78	(1,006.05)	127.90	230.12	(418.63)	(448.12)	(478.61)	(508.10)	191.79	136.69	121.45
84	249.04	214.56	188.97	173.18	138.70	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	192.01	192.35	142.54	135.75	(1,006.05)	128.91	233.90	(418.63)	(448.12)	(478.61)	(508.10)	191.79	136.69	121.45
86	251.21	216.73	189.14	175.35	140.86	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	190.48	190.82	142.31	135.41	(1,006.05)	127.54	234.11	(418.63)	(448.12)	(478.61)	(508.10)	191.79	136.69	121.45
88	253.20	218.72	191.14	177.34	142.86	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	189.01	189.35	141.07	134.18	(1,006.05)	126.12	230.86	(418.63)	(448.12)	(478.61)	(508.10)	191.79	136.69	121.45
90	248.84	214.06	186.47	172.68	138.20	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	189.01	189.35	141.07	134.18	(1,006.05)	126.12	230.86	(418.63)	(448.12)	(478.61)	(508.10)	191.79	136.69	121.45
92	247.12	212.84	185.05	171.26	136.78	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	189.01	189.35	141.07	134.18	(1,006.05)	126.12	230.86	(418.63)	(448.12)	(478.61)	(508.10)	191.79	136.69	121.45
94	248.11	213.62	186.04	172.24	137.78	(723.42)	(755.15)	(782.73)	(803.42)	(831.01)	189.01	189.35	141.07	134.18	(1,006.05)	126.12	230.86	(418.63)	(448.12)	(478.61)	(508.10)	191.79	136.69</	

2CWR5
(Net returns)
07-Dec-95

Grade: 2CWR5

Shipping Block	YC1	YC2	YC3	YC4	YC5	PR1	PR2	PR3	PR4	PR5	IB	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	202.73	175.14	154.45	140.86	(31.75)	194.89	170.06	149.07	128.68	(39.59)	165.71	117.77	110.88	(75.33)	(828.74)	96.82	179.29	151.70	131.01	117.22	(55.19)	95.33	83.60	(106.05)
01	192.70	155.11	134.42	120.83	(51.78)	178.23	153.40	132.71	112.02	(56.25)	196.50	148.57	141.87	(44.53)	141.21	141.44	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	140.14	128.42	(81.24)
03	181.17	153.58	132.89	119.10	(53.31)	176.79	161.98	131.27	110.58	(57.89)	194.46	148.52	139.63	(46.58)	142.06	142.06	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	140.77	129.04	(80.61)
05	184.89	157.90	136.81	122.82	(49.59)	180.53	155.70	135.01	114.32	(50.95)	194.03	148.10	139.20	(47.00)	143.53	139.76	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	138.47	126.74	(82.91)
07	182.71	155.13	134.44	128.12	(51.77)	178.02	163.19	132.50	112.32	(50.95)	194.03	148.10	139.20	(47.00)	143.53	139.76	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	138.47	126.74	(82.91)
09	188.19	160.80	139.81	126.55	(46.88)	182.58	157.78	137.07	116.38	(51.90)	191.02	143.09	136.19	(50.01)	142.05	135.47	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	136.89	115.18	(74.49)
11	188.82	161.03	140.34	126.55	(46.88)	182.58	157.78	137.07	116.38	(51.90)	191.02	143.09	136.19	(50.01)	142.05	135.47	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	136.89	115.18	(74.49)
13	187.25	159.88	138.97	125.18	(47.23)	184.27	159.44	138.78	118.07	(50.21)	190.25	142.32	135.79	(50.78)	148.91	131.87	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	134.17	122.45	(87.21)
15	189.34	161.75	141.07	127.27	(45.14)	185.03	158.15	137.48	116.77	(51.50)	188.35	140.41	133.51	(52.89)	147.04	132.07	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	132.33	121.48	(86.20)
17	191.42	165.22	143.14	129.35	(43.08)	186.96	162.13	141.44	120.50	(49.45)	187.87	139.74	132.84	(53.37)	145.59	124.48	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	130.78	119.05	(70.80)
19	192.81	165.22	143.14	129.35	(43.08)	186.96	162.13	141.44	120.50	(49.45)	187.87	139.74	132.84	(53.37)	145.59	124.48	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	130.78	119.05	(70.80)
21	194.43	168.76	146.07	132.27	(40.14)	189.92	165.09	144.40	123.71	(44.57)	182.88	134.94	128.04	(56.18)	143.15	119.07	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	128.47	114.48	(78.20)
23	191.21	163.62	142.94	129.14	(43.27)	188.78	161.96	141.27	120.58	(47.70)	184.45	136.61	129.31	(56.90)	145.43	119.27	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	126.02	113.39	(83.91)
25	192.02	164.43	143.74	129.93	(42.48)	187.87	162.84	142.15	121.46	(48.81)	185.04	137.10	130.21	(56.00)	146.80	118.24	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	124.48	111.40	(83.91)
27	193.74	166.15	145.48	131.67	(40.74)	189.29	164.46	142.41	121.72	(46.56)	185.87	137.93	131.04	(55.17)	144.01	125.50	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	122.48	110.09	(83.91)
29	192.85	165.28	144.57	130.78	(41.64)	187.92	163.10	142.41	121.72	(46.56)	185.87	137.93	131.04	(55.17)	144.01	125.50	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	122.48	110.09	(83.91)
31	191.51	163.82	143.23	129.44	(42.97)	185.06	160.23	138.54	118.17	(41.29)	182.88	134.94	128.04	(56.18)	143.15	119.07	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	120.50	108.60	(83.91)
33	192.98	165.40	144.71	130.91	(41.50)	184.37	159.55	138.86	116.17	(50.11)	185.88	137.93	131.04	(55.17)	144.01	125.50	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	118.24	107.48	(83.91)
35	197.89	170.30	149.81	135.82	(38.59)	193.20	168.37	147.86	128.99	(41.29)	182.88	134.94	128.04	(56.18)	143.15	119.07	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	116.17	106.25	(83.91)
37	197.24	169.65	148.96	135.17	(37.24)	192.78	167.96	147.27	128.58	(41.70)	182.88	134.94	128.04	(56.18)	143.15	119.07	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	114.48	105.22	(83.91)
39	200.30	172.71	152.02	138.23	(34.18)	195.97	171.14	150.45	128.78	(38.51)	177.55	134.22	127.32	(58.88)	142.43	117.99	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	112.47	104.08	(83.91)
41	200.14	172.55	151.86	138.07	(34.18)	195.97	171.14	150.45	128.78	(38.51)	177.55	134.22	127.32	(58.88)	142.43	117.99	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	110.09	102.87	(83.91)
43	201.83	174.24	153.55	139.78	(32.65)	197.60	172.78	152.09	131.40	(36.88)	176.77	128.83	121.54	(62.86)	137.18	106.54	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	108.60	101.48	(83.91)
45	196.78	172.19	151.50	137.71	(34.70)	189.42	164.59	143.90	123.21	(45.06)	178.38	128.83	123.53	(62.86)	137.18	106.54	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	106.25	100.24	(83.91)
47	202.62	158.64	137.59	122.18	(50.25)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	196.28	148.32	141.43	(44.78)	(826.74)	140.72	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	104.08	99.28	(83.91)
49	184.23	158.64	137.59	122.18	(50.25)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	196.28	148.32	141.43	(44.78)	(826.74)	140.72	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	102.87	98.07	(83.91)
51	185.87	158.28	137.59	122.18	(50.25)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	196.28	148.32	141.43	(44.78)	(826.74)	140.72	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	101.48	96.86	(83.91)
53	186.27	158.69	138.00	124.21	(48.21)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	194.49	148.88	139.88	(46.54)	(826.74)	140.85	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	100.24	95.65	(83.91)
55	188.13	161.54	140.85	127.06	(45.36)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	193.43	148.78	138.60	(47.81)	(826.74)	140.85	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	99.28	94.44	(83.91)
57	191.69	164.10	143.42	129.62	(42.79)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	191.89	147.78	137.66	(49.35)	(826.74)	137.89	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	98.07	93.23	(83.91)
59	192.31	164.73	144.04	130.24	(42.17)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	188.13	140.20	134.08	(52.13)	(826.74)	127.00	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	96.86	92.02	(83.91)
61	191.46	163.87	143.18	129.39	(43.02)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	188.91	140.98	134.08	(52.13)	(826.74)	127.00	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	95.65	90.81	(83.91)
63	188.85	161.07	140.38	126.58	(45.83)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	188.25	138.31	131.42	(54.79)	(826.74)	129.62	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	94.44	89.60	(83.91)
65	192.02	164.44	143.75	129.95	(42.46)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	187.73	139.80	132.90	(53.30)	(826.74)	123.91	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	93.23	88.39	(83.91)
67	196.89	169.30	148.61	134.82	(37.59)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	185.98	138.05	131.15	(55.06)	(826.74)	120.81	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	92.02	87.18	(83.91)
69	193.09	165.51	144.82	131.02	(41.39)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	181.24	133.31	126.41	(59.79)	(826.74)	107.98	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	90.81	85.97	(83.91)
71	195.15	167.57	146.88	133.09	(39.33)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	185.69	137.75	130.85	(57.68)	(826.74)	120.74	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	89.60	84.76	(83.91)
73	193.48	165.90	145.21	131.42	(41.00)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	185.96	138.03	131.13	(55.35)	(826.74)	124.75	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	88.39	83.55	(83.91)
75	196.04	170.45	149.77	135.97	(36.44)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	182.29	134.45	127.55	(55.07)	(826.74)	123.08	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	87.18	82.34	(83.91)
77	203.01	175.42	154.74	140.94	(31.47)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	177.17	129.23	122.33	(63.87)	(826.74)	118.51	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	85.97	81.13	(83.91)
79	200.80	173.21	152.62	138.73	(33.68)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	178.56	130.82	123.73	(62.48)	(826.74)	115.24	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	84.76	80.92	(83.91)
81	203.07	175.48	154.79	141.00	(31.41)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	175.81	128.87	121.78	(64.43)	(826.74)	113.73	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	83.55	79.71	(83.91)
83	204.11	176.53	155.84	142.04	(30.37)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	174.65	128.71	119.82	(65.08)	(826.74)	111.28	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	82.34	78.50	(83.91)
85	200.14	172.55	151.86	138.07	(34.35)	(771.70)	(796.53)	(817.22)	(837.91)	(1,006.18)	176.95	130.02	123.87	(62.54)	(826.74)	109.88	(788.06)	(795.85)	(816.34)	(830.13)	(1,002.54)	81.13	77.29	(83.91)
87	199.50	171.91	151.22	137.43	(34.96																			

3CWRS
(Net return)
07-Dec-95

Grade: 3CWRS

Shipping
Block

	YC1	YC2	YC3	YC4	YC5	PR1	PR2	PR3	PR4	PR5	TR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	189.00	175.21	140.72	(31.69)	(31.69)	181.10	170.06	135.58	(39.59)	(39.59)	145.02	110.88	103.98	(75.33)	(833.64)	(82.69)	165.50	151.70	117.22	(55.19)	(55.19)	88.43	78.71	(106.05)
01	185.70	154.90	120.42	(51.99)	(51.99)	164.34	153.31	118.83	(56.34)	(56.34)	141.93	135.03	134.22	(37.54)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	133.57	121.85	(60.91)	
03	171.29	153.72	119.24	(53.17)	(53.17)	163.12	152.09	117.60	(57.57)	(57.57)	173.63	139.69	132.79	(46.52)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	133.87	122.15	(60.61)	
05	168.86	155.07	123.12	(49.30)	(49.30)	167.01	155.98	121.49	(53.68)	(53.68)	173.11	138.96	132.07	(47.24)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	131.57	119.85	(62.91)	
07	175.07	161.28	120.58	(51.83)	(51.83)	164.18	153.15	118.87	(50.49)	(50.49)	171.56	137.42	130.82	(48.79)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	131.57	119.85	(62.91)	
09	174.71	160.92	128.43	(45.81)	(45.81)	169.05	158.01	123.53	(51.55)	(51.55)	169.12	135.86	128.97	(50.34)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	119.22	114.85	(75.26)	
11	173.42	159.63	125.15	(47.27)	(47.27)	170.20	159.17	124.68	(49.44)	(49.44)	170.24	138.09	129.20	(50.11)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	126.57	114.85	(75.26)	
13	173.57	161.77	127.29	(45.12)	(45.12)	171.25	158.11	123.62	(47.06)	(47.06)	167.42	138.96	128.08	(51.22)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	121.44	109.72	(73.04)	
15	178.12	165.89	132.33	(42.57)	(42.57)	173.63	162.59	125.73	(47.95)	(47.95)	168.63	132.69	125.79	(52.92)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	125.15	113.43	(69.33)	
17	178.68	164.32	129.84	(41.00)	(41.00)	172.74	161.71	127.22	(48.84)	(48.84)	161.90	127.76	126.81	(59.59)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	117.60	105.87	(78.88)	
19	180.60	168.81	132.33	(40.08)	(40.08)	173.85	162.81	128.33	(47.25)	(47.25)	163.40	129.50	125.60	(58.45)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	113.39	106.28	(84.58)	
21	177.83	164.04	129.65	(42.86)	(42.86)	173.43	162.40	127.92	(48.74)	(48.74)	161.03	128.89	123.33	(55.98)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
23	178.39	164.80	130.12	(42.29)	(42.29)	173.95	162.92	128.43	(46.74)	(46.74)	161.03	128.89	123.33	(55.98)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
25	179.30	168.10	131.62	(40.79)	(40.79)	174.49	164.45	129.97	(45.20)	(45.20)	161.03	128.89	123.33	(55.98)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
27	177.09	163.29	128.81	(41.34)	(41.34)	173.49	163.64	129.15	(46.02)	(46.02)	161.03	128.89	123.33	(55.98)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
29	177.09	163.29	128.81	(41.34)	(41.34)	173.49	163.64	129.15	(46.02)	(46.02)	161.03	128.89	123.33	(55.98)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
31	177.09	163.29	128.81	(41.34)	(41.34)	173.49	163.64	129.15	(46.02)	(46.02)	161.03	128.89	123.33	(55.98)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
33	178.94	165.15	130.67	(41.74)	(41.74)	170.38	159.33	125.84	(49.33)	(49.33)	167.29	130.48	123.58	(55.73)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
35	183.24	169.45	134.87	(38.45)	(38.45)	170.53	159.49	134.01	(50.32)	(50.32)	164.93	133.15	128.25	(53.06)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
37	188.35	172.55	138.07	(37.45)	(37.45)	178.75	167.71	133.23	(41.16)	(41.16)	159.86	125.72	123.89	(55.42)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
39	188.32	172.52	138.04	(34.34)	(34.34)	182.00	170.97	136.48	(38.89)	(38.89)	156.90	121.75	114.68	(84.45)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
41	187.85	174.06	139.58	(32.84)	(32.84)	183.63	172.59	138.11	(37.06)	(37.06)	155.90	121.75	114.68	(84.45)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
43	184.68	171.09	136.81	(35.81)	(35.81)	178.09	164.05	129.57	(45.60)	(45.60)	158.15	124.00	117.11	(82.20)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
45	188.34	174.55	140.07	(32.34)	(32.34)	180.21	169.18	134.70	(40.48)	(40.48)	154.63	120.49	114.73	(83.63)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
47	170.75	156.96	122.48	(48.09)	(48.09)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
49	172.60	158.80	124.32	(48.03)	(48.03)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
51	172.60	158.80	124.32	(48.03)	(48.03)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
53	175.45	161.65	127.17	(45.24)	(45.24)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
55	177.96	164.18	129.86	(42.73)	(42.73)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
57	178.91	165.12	130.84	(41.78)	(41.78)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
59	177.81	163.72	129.24	(43.17)	(43.17)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
61	174.09	160.30	125.81	(46.80)	(46.80)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
63	178.78	164.96	130.47	(41.94)	(41.94)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
65	182.62	168.82	134.34	(38.07)	(38.07)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
67	179.82	168.03	131.55	(40.68)	(40.68)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
69	181.37	167.58	133.10	(39.31)	(39.31)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
71	180.34	166.55	132.06	(40.35)	(40.35)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
73	184.29	170.50	138.02	(36.40)	(36.40)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
75	187.07	173.27	141.26	(31.15)	(31.15)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
77	189.54	175.74	141.26	(33.62)	(33.62)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
79	187.07	173.27	141.26	(31.15)	(31.15)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
81	189.57	175.78	141.30	(30.78)	(30.78)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
83	189.91	176.12	141.64	(33.99)	(33.99)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
85	186.70	172.91	138.42	(34.94)	(34.94)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
87	185.75	171.96	137.47	(35.52)	(35.52)	178.49	168.53	131.01	(1,006.18)	(1,006.18)	175.87	134.63	131.59	(65.72)	(781.86)	(795.85)	(830.13)	(1,002.54)	(1,002.54)	(1,002.54)	111.48	104.40	(82.36)	
89	185.17	171.37	136.89	(34.63)	(34																			

CWFW/ASAD
(Net returns)
07-Dec-95

Grade: CWFW/ASAD

Shipping
Block

	YC1	YC2	YC3	YC4	YC5	PR1	PR2	PR3	PR4	PR5	IB	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	133.82	(31.89)	(31.89)	(31.89)	(31.89)	125.93	(39.59)	(39.59)	(39.59)	(39.59)	96.74	90.19	(75.33)	(75.33)	(1,006.05)	(82.69)	110.32	(55.19)	(55.19)	(55.19)	(55.19)	87.74	(106.05)	(106.05)
01	113.89	(51.83)	(51.83)	(51.83)	(51.83)	109.28	(56.24)	(56.24)	(56.24)	(56.24)	127.85	121.29	(44.22)	(44.22)	(38.08)	(38.08)	(837.03)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	112.42	(81.37)	(81.37)
03	112.17	(53.35)	(53.35)	(53.35)	(53.35)	107.88	(57.66)	(57.66)	(57.66)	(57.66)	125.45	118.90	(46.82)	(46.82)	(39.59)	(37.25)	(837.03)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	113.18	(80.81)	(80.81)
05	116.19	(49.32)	(49.32)	(49.32)	(49.32)	111.77	(53.74)	(53.74)	(53.74)	(53.74)	125.09	118.54	(46.98)	(46.98)	(35.68)	(39.54)	(837.03)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	110.88	(82.91)	(82.91)
07	113.80	(51.71)	(51.71)	(51.71)	(51.71)	109.18	(58.33)	(58.33)	(58.33)	(58.33)	117.00	117.00	(48.52)	(48.52)	(37.47)	(49.05)	(837.03)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	101.38	(72.41)	(72.41)
09	118.80	(46.72)	(46.72)	(46.72)	(46.72)	113.41	(52.11)	(52.11)	(52.11)	(52.11)	122.55	115.99	(49.52)	(49.52)	(37.01)	(42.52)	104.19	(81.32)	(81.32)	(81.32)	(81.32)	101.38	(85.88)	(85.88)
11	118.93	(46.59)	(46.59)	(46.59)	(46.59)	114.32	(51.19)	(51.19)	(51.19)	(51.19)	122.56	118.00	(49.52)	(49.52)	(35.56)	(45.59)	104.19	(81.32)	(81.32)	(81.32)	(81.32)	107.91	(85.88)	(85.88)
13	117.92	(47.60)	(47.60)	(47.60)	(47.60)	113.47	(52.05)	(52.05)	(52.05)	(52.05)	121.94	115.38	(49.52)	(49.52)	(32.58)	(47.00)	104.19	(81.32)	(81.32)	(81.32)	(81.32)	104.84	(86.95)	(86.95)
15	123.82	(46.01)	(46.01)	(46.01)	(46.01)	115.23	(50.28)	(50.28)	(50.28)	(50.28)	120.13	113.57	(51.95)	(51.95)	(31.46)	(32.77)	104.19	(81.32)	(81.32)	(81.32)	(81.32)	103.43	(70.37)	(70.37)
17	124.59	(40.92)	(40.92)	(40.92)	(40.92)	119.54	(45.98)	(45.98)	(45.98)	(45.98)	117.34	110.78	(54.73)	(54.73)	(34.80)	(38.89)	105.42	(80.10)	(80.10)	(80.10)	(80.10)	91.54	(78.14)	(78.14)
19	125.57	(39.94)	(39.94)	(39.94)	(39.94)	117.73	(47.78)	(47.78)	(47.78)	(47.78)	112.65	106.09	(59.43)	(59.43)	(37.42)	(37.42)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	85.59	(82.25)	(82.25)
21	124.75	(40.77)	(40.77)	(40.77)	(40.77)	118.65	(46.87)	(46.87)	(46.87)	(46.87)	113.57	109.88	(55.83)	(55.83)	(33.32)	(38.38)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	90.19	(83.60)	(83.60)
23	123.48	(42.04)	(42.04)	(42.04)	(42.04)	120.37	(45.14)	(45.14)	(45.14)	(45.14)	116.24	107.02	(58.50)	(58.50)	(36.50)	(80.23)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	85.59	(82.25)	(82.25)
25	123.52	(42.00)	(42.00)	(42.00)	(42.00)	119.11	(46.41)	(46.41)	(46.41)	(46.41)	114.17	107.82	(57.90)	(57.90)	(36.08)	(80.23)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	90.19	(83.60)	(83.60)
27	124.87	(40.55)	(40.55)	(40.55)	(40.55)	120.51	(45.00)	(45.00)	(45.00)	(45.00)	115.99	109.44	(58.08)	(58.08)	(32.27)	(80.23)	104.19	(81.32)	(81.32)	(81.32)	(81.32)	92.07	(81.72)	(81.72)
29	124.14	(41.39)	(41.39)	(41.39)	(41.39)	119.43	(46.06)	(46.06)	(46.06)	(46.06)	112.85	108.30	(59.22)	(59.22)	(34.45)	(84.83)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	85.59	(82.25)	(82.25)
31	124.18	(41.34)	(41.34)	(41.34)	(41.34)	118.39	(46.06)	(46.06)	(46.06)	(46.06)	116.43	109.87	(55.84)	(55.84)	(35.45)	(84.83)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	88.81	(84.98)	(84.98)
33	124.21	(41.31)	(41.31)	(41.31)	(41.31)	115.58	(49.94)	(49.94)	(49.94)	(49.94)	117.08	112.24	(53.28)	(53.28)	(34.71)	(51.32)	104.19	(81.32)	(81.32)	(81.32)	(81.32)	85.59	(82.25)	(82.25)
35	129.14	(36.37)	(36.37)	(36.37)	(36.37)	124.42	(41.10)	(41.10)	(41.10)	(41.10)	111.52	110.53	(54.99)	(54.99)	(35.85)	(50.96)	104.19	(81.32)	(81.32)	(81.32)	(81.32)	99.11	(78.45)	(78.45)
37	128.06	(37.46)	(37.46)	(37.46)	(37.46)	123.63	(41.89)	(41.89)	(41.89)	(41.89)	104.98	108.68	(58.53)	(58.53)	(37.36)	(81.50)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	99.48	(74.33)	(74.33)
39	131.53	(33.96)	(33.96)	(33.96)	(33.96)	127.07	(38.45)	(38.45)	(38.45)	(38.45)	108.53	101.97	(63.54)	(63.54)	(40.45)	(84.83)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	88.93	(84.86)	(84.86)
41	130.91	(34.81)	(34.81)	(34.81)	(34.81)	128.61	(36.83)	(36.83)	(36.83)	(36.83)	108.75	102.19	(63.33)	(63.33)	(41.29)	(87.87)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	88.97	(84.82)	(84.82)
43	127.33	(35.19)	(35.19)	(35.19)	(35.19)	118.44	(47.08)	(47.08)	(47.08)	(47.08)	107.88	101.31	(64.21)	(64.21)	(42.06)	(84.83)	108.49	(59.02)	(59.02)	(59.02)	(59.02)	77.69	(81.32)	(81.32)
45	132.96	(32.56)	(32.56)	(32.56)	(32.56)	125.14	(40.37)	(40.37)	(40.37)	(40.37)	111.47	104.81	(60.81)	(60.81)	(38.61)	(70.15)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	82.48	(81.32)	(81.32)
47	117.35	(48.16)	(48.16)	(48.16)	(48.16)	125.14	(40.37)	(40.37)	(40.37)	(40.37)	109.84	100.28	(65.23)	(65.23)	(43.21)	(70.15)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
49	117.35	(48.17)	(48.17)	(48.17)	(48.17)	125.14	(40.37)	(40.37)	(40.37)	(40.37)	127.13	120.58	(44.94)	(44.94)	(1,006.05)	(38.87)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	77.59	(81.32)	(81.32)
51	119.70	(45.82)	(45.82)	(45.82)	(45.82)	124.73	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	124.92	118.37	(47.15)	(47.15)	(1,006.05)	(39.68)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
53	122.60	(42.92)	(42.92)	(42.92)	(42.92)	122.77	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	124.73	118.17	(47.34)	(47.34)	(1,006.05)	(41.06)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
55	123.78	(41.73)	(41.73)	(41.73)	(41.73)	118.88	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	119.32	112.78	(53.22)	(53.22)	(1,006.05)	(45.72)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
57	122.65	(42.87)	(42.87)	(42.87)	(42.87)	119.32	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	112.78	110.78	(52.78)	(52.78)	(1,006.05)	(52.28)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
59	118.17	(47.35)	(47.35)	(47.35)	(47.35)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
61	125.03	(40.49)	(40.49)	(40.49)	(40.49)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
63	127.06	(38.46)	(38.46)	(38.46)	(38.46)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
65	124.95	(40.57)	(40.57)	(40.57)	(40.57)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
67	125.99	(39.52)	(39.52)	(39.52)	(39.52)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
69	124.06	(41.47)	(41.47)	(41.47)	(41.47)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
71	128.24	(37.27)	(37.27)	(37.27)	(37.27)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
73	134.13	(31.29)	(31.29)	(31.29)	(31.29)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
75	131.81	(33.71)	(33.71)	(33.71)	(33.71)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
77	134.01	(31.51)	(31.51)	(31.51)	(31.51)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
79	135.18	(30.34)	(30.34)	(30.34)	(30.34)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
81	130.97	(34.55)	(34.55)	(34.55)	(34.55)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
83	130.99	(34.62)	(34.62)	(34.62)	(34.62)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
85	129.57	(35.94)	(35.94)	(35.94)	(35.94)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
87	130.07	(35.45)	(35.45)	(35.45)	(35.45)	117.51	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	117.48	110.78	(54.78)	(54.78)	(1,006.05)	(55.01)	107.37	(55.97)	(55.97)	(55.97)	(55.97)	80.28	(81.32)	(81.32)
89	124.70	(40.82)	(40.82)	(40.82)	(40.82)	120.41	(45.10)	(45.10)	(45.10)	(45.10)	97.88	91.30	(74.21)	(74.21)	(52.30)	(81.92)	105.19	(80.33)						

CPSR
(Net returns)
07-Dec-95

Grade: CPSR

Shipping Block	YC1	YC2	YC3	YC4	YC5	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	SH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	189.00	175.20	140.72	(31.69)	(31.69)	181.10	170.06	135.58	(39.59)	(39.59)	145.02	110.88	103.98	(75.33)	(833.64)	(82.69)	185.50	151.70	117.22	(55.19)	(55.19)	88.43	78.71	(108.05)
01	168.88	155.07	120.58	(51.83)	(51.83)	164.28	153.22	118.74	(56.43)	(56.43)	175.56	141.44	134.54	(44.78)	(37.76)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	133.38	121.64	(81.12)	
03	185.87	152.08	117.60	(54.81)	(54.81)	184.55	153.22	118.74	(59.14)	(59.14)	172.40	138.25	131.38	(47.95)	(37.25)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	133.87	122.15	(60.81)	
05	171.91	158.12	123.64	(48.77)	(48.77)	187.43	156.40	121.91	(53.26)	(53.26)	172.90	138.78	131.88	(47.45)	(39.54)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.57	119.85	(82.91)	
07	168.58	154.77	120.29	(52.13)	(52.13)	183.97	152.93	118.45	(52.85)	(52.85)	171.81	137.67	130.77	(48.54)	(33.99)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	117.12	105.40	(77.38)	
09	172.71	156.92	124.44	(47.98)	(47.98)	167.84	158.80	122.32	(51.27)	(51.27)	170.89	138.74	129.85	(41.08)	(41.08)	159.37	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
11	173.28	159.49	125.89	(46.72)	(46.72)	169.42	158.39	123.90	(52.85)	(52.85)	171.81	137.67	130.77	(48.54)	(33.99)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.57	119.85	(82.91)	
13	174.25	160.48	125.97	(47.40)	(47.40)	169.08	158.04	123.58	(51.61)	(51.61)	168.58	134.19	127.30	(49.08)	(39.54)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	117.12	105.40	(77.38)	
15	178.79	164.99	130.51	(41.90)	(41.90)	170.04	159.01	124.53	(50.64)	(50.64)	168.34	134.19	127.30	(49.08)	(39.54)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.57	119.85	(82.91)	
17	178.39	164.59	130.11	(42.30)	(42.30)	163.48	158.04	123.58	(51.61)	(51.61)	168.58	134.19	127.30	(49.08)	(39.54)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	117.12	105.40	(77.38)	
19	181.09	166.83	132.81	(39.60)	(39.60)	162.98	158.04	123.58	(48.20)	(48.20)	162.00	127.88	120.98	(57.77)	(57.77)	140.28	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
21	180.62	167.30	132.81	(40.07)	(40.07)	174.49	163.45	128.48	(46.89)	(46.89)	162.00	127.88	120.98	(57.77)	(57.77)	140.28	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
23	177.41	163.62	129.14	(42.59)	(42.59)	173.74	162.70	128.22	(46.89)	(46.89)	162.00	127.88	120.98	(57.77)	(57.77)	140.28	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
25	178.11	164.32	129.83	(43.28)	(43.28)	172.99	161.96	127.48	(47.69)	(47.69)	163.85	129.09	122.19	(57.12)	(57.12)	138.45	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
27	179.95	166.15	131.67	(40.74)	(40.74)	175.54	164.51	130.03	(45.14)	(45.14)	161.56	127.41	120.52	(55.88)	(55.88)	140.14	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
29	179.45	165.88	131.17	(41.24)	(41.24)	175.54	164.51	130.03	(45.14)	(45.14)	161.56	127.41	120.52	(55.88)	(55.88)	140.14	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
31	177.21	163.42	128.93	(43.48)	(43.48)	171.13	163.74	129.26	(45.81)	(45.81)	164.54	130.39	123.50	(55.81)	(55.81)	138.30	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
33	182.69	166.90	132.81	0.00	0.00	220.69	209.85	125.81	(49.56)	(49.56)	167.54	133.40	126.50	(55.81)	(55.81)	138.30	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
35	184.98	171.19	136.70	(35.71)	(35.71)	180.30	169.26	134.78	(40.39)	(40.39)	159.10	124.96	118.06	(61.25)	(61.25)	138.07	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
37	182.12	168.32	133.84	(38.57)	(38.57)	177.81	166.78	132.29	(42.86)	(42.86)	162.69	128.55	121.65	(57.66)	(57.66)	138.07	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
39	187.28	173.49	139.00	(34.41)	(34.41)	183.01	171.98	137.49	(37.68)	(37.68)	158.32	122.18	115.28	(64.03)	(64.03)	131.06	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
41	188.44	172.65	138.16	(34.25)	(34.25)	184.09	173.05	138.57	(36.79)	(36.79)	158.35	122.18	115.28	(64.03)	(64.03)	131.06	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
43	188.31	174.82	140.04	(32.38)	(32.38)	177.07	170.06	138.57	(36.79)	(36.79)	158.35	122.18	115.28	(64.03)	(64.03)	131.06	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
45	188.08	174.28	139.80	(32.81)	(32.81)	188.04	173.05	138.57	(43.62)	(43.62)	158.35	122.18	115.28	(64.03)	(64.03)	131.06	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
47	188.17	174.38	139.89	(32.52)	(32.52)	180.33	169.30	134.82	(40.35)	(40.35)	154.55	120.41	113.51	(64.12)	(64.12)	130.29	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
49	170.52	159.10	124.82	(47.79)	(47.79)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
51	172.90	156.73	122.24	(48.12)	(48.12)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
53	172.58	156.77	122.24	(48.12)	(48.12)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
55	174.84	161.05	126.57	(45.85)	(45.85)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
57	178.02	164.23	129.75	(42.67)	(42.67)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
59	177.61	163.82	129.34	(43.06)	(43.06)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
61	174.09	164.11	129.82	(46.59)	(46.59)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
63	177.90	164.11	129.82	(46.59)	(46.59)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
65	182.63	168.33	134.35	(38.06)	(38.06)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
67	180.18	168.39	131.91	(40.81)	(40.81)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
69	181.57	167.78	133.29	(39.12)	(39.12)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
71	178.65	164.86	130.38	(42.03)	(42.03)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
73	186.93	173.13	138.65	(33.76)	(33.76)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
75	186.57	175.78	141.30	(31.11)	(31.11)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
77	187.44	175.85	140.27	(32.24)	(32.24)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
79	188.55	174.78	139.17	(32.14)	(32.14)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
81	190.30	178.51	142.03	(30.39)	(30.39)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
83	187.18	173.29	138.90	(33.51)	(33.51)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
85	188.21	172.42	137.94	(34.46)	(34.46)	178.59	167.53	131.01	(1,006.18)	(1,006.18)	175.47	141.32	134.43	(44.58)	(33.64)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.70	119.98	(82.78)	
87	185.47	171.87	137.19	(35.22)	(35.22)	180.44	169.40	134.92	(40.25)	(40.25)	148.03	113.89	106.99	(62.73)	(62.73)	122.35	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
89	187.00	173.20	138.72	(33.69)	(33.69)	171.52	137.04	138.13	(38.13)	(38.13)	155.22	121.07	114.18	(55.13)	(55.13)	129.55	145.57	111.09	(61.32)	(61.32)	125.24	108.69	(89.24)	
91	180.50	168.71	132.22	(40.19)	(40.19)	178.18	1																	

CPSW
(Net returns)
07-Dec-06

Grade: CPSW

Shipping
Block

	YC1	YC2	YC3	YC4	YC5	PR1	PR2	PR3	PR4	PR5	TR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.76	0.00
01	189.08	155.29	120.60	(51.81)	(51.81)	164.28	153.22	118.74	(56.43)	(56.43)	175.65	141.51	134.61	(44.70)	(38.28)	(37.25)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	133.87	122.15	(60.61)
03	185.38	151.57	117.06	(55.33)	(55.33)	161.14	150.10	115.62	(59.55)	(59.55)	172.00	137.65	130.98	(46.35)	(41.38)	(37.25)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	133.87	122.15	(60.61)
05	171.34	157.54	123.06	(48.35)	(48.35)	168.98	155.95	121.47	(53.70)	(53.70)	173.28	139.12	132.22	(47.09)	(35.71)	(39.54)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.57	119.85	(62.91)
07	170.27	156.48	121.99	(50.42)	(50.42)	165.45	154.41	119.93	(51.27)	(51.27)	169.52	135.37	128.48	(49.45)	(36.49)	(39.54)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.57	119.85	(62.91)
09	175.63	161.84	127.35	(45.06)	(45.06)	169.42	158.39	123.90	(48.45)	(48.45)	169.52	135.37	128.48	(49.45)	(36.49)	(39.54)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.57	119.85	(62.91)
11	175.50	161.71	127.23	(45.18)	(45.18)	171.23	160.20	125.72	(48.45)	(48.45)	169.52	135.37	128.48	(49.45)	(36.49)	(39.54)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	131.57	119.85	(62.91)
13	172.65	158.88	124.37	(43.27)	(43.27)	173.05	162.02	127.54	(47.64)	(47.64)	168.73	132.08	125.18	(51.08)	(31.83)	(45.98)	159.37	145.57	111.09	(81.32)	(81.32)	126.16	114.44	(62.91)
15	177.32	163.53	129.05	(42.43)	(42.43)	173.05	162.02	127.54	(47.64)	(47.64)	168.73	132.08	125.18	(51.08)	(31.83)	(45.98)	159.37	145.57	111.09	(81.32)	(81.32)	126.16	114.44	(62.91)
17	178.28	164.47	129.98	(41.09)	(41.09)	173.75	162.72	128.24	(46.94)	(46.94)	168.22	132.59	125.69	(53.82)	(32.11)	(53.18)	159.37	145.57	111.09	(81.32)	(81.32)	125.14	113.42	(62.91)
19	179.80	165.81	131.32	(40.02)	(40.02)	174.25	163.32	129.00	(47.51)	(47.51)	161.20	127.05	120.15	(54.13)	(34.59)	(55.60)	160.78	146.87	112.48	(81.32)	(81.32)	117.93	106.21	(75.55)
21	180.87	166.88	132.39	(41.15)	(41.15)	175.18	164.14	128.83	(46.34)	(46.34)	162.37	128.23	121.33	(59.15)	(37.15)	(64.83)	161.66	147.87	113.39	(59.02)	(59.02)	115.51	103.79	(78.97)
23	179.54	165.75	131.27	(43.75)	(43.75)	172.56	161.52	127.04	(45.51)	(45.51)	164.75	130.60	123.71	(57.98)	(35.97)	(60.23)	161.66	147.87	113.39	(59.02)	(59.02)	112.15	94.58	(68.20)
25	178.34	164.55	130.07	(42.35)	(42.35)	174.01	162.97	128.49	(46.68)	(46.68)	164.38	130.23	123.34	(55.97)	(36.59)	(58.96)	161.66	147.87	113.39	(59.02)	(59.02)	110.88	99.18	(83.60)
27	180.10	166.31	131.83	(40.59)	(40.59)	175.51	164.48	130.00	(45.18)	(45.18)	164.59	130.45	123.55	(55.78)	(36.59)	(58.96)	161.66	147.87	113.39	(59.02)	(59.02)	110.83	100.43	(82.33)
29	178.94	165.14	130.66	(41.75)	(41.75)	174.13	163.10	128.62	(46.56)	(46.56)	165.92	128.78	119.88	(59.42)	(35.14)	(64.83)	161.66	147.87	113.39	(59.02)	(59.02)	110.28	98.53	(83.66)
31	179.09	165.30	130.81	(42.81)	(42.81)	173.33	162.30	125.81	(48.38)	(48.38)	167.43	133.29	124.12	(55.19)	(35.55)	(53.92)	161.66	147.87	113.39	(59.02)	(59.02)	106.28	94.58	(88.20)
33	177.88	164.09	129.61	(41.60)	(41.60)	170.49	159.46	124.98	(50.19)	(50.19)	165.08	130.93	126.40	(52.81)	(33.98)	(52.09)	159.37	145.57	111.09	(81.32)	(81.32)	117.19	105.47	(77.29)
35	179.09	165.30	130.81	(37.97)	(37.97)	179.31	168.28	133.80	(41.37)	(41.37)	160.25	126.10	119.21	(80.16)	(35.27)	(35.78)	159.37	145.57	111.09	(81.32)	(81.32)	119.02	107.30	(75.46)
37	183.87	170.07	135.59	(38.82)	(38.82)	179.31	168.28	133.80	(41.37)	(41.37)	160.25	126.10	119.21	(80.16)	(35.27)	(35.78)	159.37	145.57	111.09	(81.32)	(81.32)	120.15	108.43	(74.33)
39	182.72	168.93	134.45	(34.99)	(34.99)	181.15	170.12	135.83	(38.58)	(38.58)	156.91	122.77	115.87	(83.44)	(40.28)	(72.70)	161.66	147.87	113.39	(59.02)	(59.02)	109.97	97.84	(84.92)
41	185.54	171.90	137.42	(32.96)	(32.96)	183.47	172.43	137.95	(37.22)	(37.22)	155.84	121.70	114.80	(82.69)	(40.84)	(69.12)	164.12	150.32	115.84	(56.57)	(56.57)	98.42	86.70	(98.06)
43	183.70	173.91	139.42	(39.40)	(39.40)	173.14	162.11	127.62	(47.55)	(47.55)	159.58	125.54	118.84	(80.67)	(38.74)	(67.87)	161.66	147.87	113.39	(59.02)	(59.02)	102.00	90.28	(92.48)
45	187.70	173.91	139.42	(32.88)	(32.88)	180.14	169.11	134.82	(40.55)	(40.55)	156.08	121.53	115.04	(84.27)	(42.25)	(70.96)	161.66	147.87	113.39	(59.02)	(59.02)	103.24	91.52	(91.24)
47	181.29	167.50	133.05	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.76	0.00
49	187.83	174.03	139.85	(46.81)	(46.81)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
51	220.69	206.90	172.41	(47.54)	(47.54)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
53	174.08	160.29	125.81	(45.65)	(45.65)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
55	175.04	161.25	126.77	(42.59)	(42.59)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
57	178.62	164.83	130.34	(42.07)	(42.07)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
59	178.06	164.27	129.78	(42.63)	(42.63)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
61	174.43	160.64	126.15	(42.57)	(42.57)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
63	178.12	164.33	129.84	(38.59)	(38.59)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
65	179.11	167.37	132.69	(41.58)	(41.58)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
67	181.16	168.31	133.83	(39.53)	(39.53)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
69	179.28	165.47	130.96	(41.43)	(41.43)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
71	182.73	168.94	134.45	(37.96)	(37.96)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
73	188.80	174.81	140.33	(32.08)	(32.08)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
75	188.98	173.19	138.71	(33.70)	(33.70)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
77	188.84	175.04	140.56	(31.85)	(31.85)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
79	191.32	177.53	143.04	(29.37)	(29.37)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
81	185.28	171.46	137.04	(35.38)	(35.38)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
83	185.28	171.46	137.04	(35.38)	(35.38)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
85	185.28	171.46	137.04	(35.38)	(35.38)	178.59	167.53	(831.01)	(1,006.18)	(1,006.18)	171.16	137.01	130.12	(49.18)	(1,006.05)	(45.28)	(781.88)	(795.65)	(830.13)	(1,002.54)	(1,002.54)	125.84	114.11	(58.84)
87	185.28	171.46	137.04	(35.38)	(35.38)	178.59	167.53	(831.01)	(1,006.18)	(1,00														

CWES
(Net returns)
07-Dec-95

Grade: CWES

120

Shipping Block	VC1	VC2	VC3	VC4	VC5	PR1	PR2	PR3	PR4	PR5	TB	BL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	198.00	(31.58)	(31.58)	(31.58)	(31.58)	187.99	(39.59)	(39.59)	(39.59)	(39.59)	(54.98)	(75.33)	(75.33)	(75.33)	(1,006.05)	103.52	172.39	(55.19)	(55.19)	(55.19)	(55.19)	(106.05)	(106.05)	(106.05)
01	175.50	(52.08)	(52.08)	(52.08)	(52.08)	171.19	(56.40)	(56.40)	(56.40)	(56.40)	(24.29)	(44.64)	(44.64)	(44.64)	(38.25)	147.82	(774.98)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	(81.75)	(81.75)	(81.75)
03	174.34	(53.24)	(53.24)	(53.24)	(53.24)	169.97	(57.61)	(57.61)	(57.61)	(57.61)	(26.22)	(46.57)	(46.57)	(46.57)	(39.51)	148.98	(774.98)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	(80.61)	(80.61)	(80.61)
05	175.22	(49.37)	(49.37)	(49.37)	(49.37)	173.77	(53.82)	(53.82)	(53.82)	(53.82)	(28.74)	(47.09)	(47.09)	(47.09)	(35.63)	146.68	(774.98)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	(82.91)	(82.91)	(82.91)
07	175.69	(51.90)	(51.90)	(51.90)	(51.90)	171.04	(58.55)	(58.55)	(58.55)	(58.55)	(28.51)	(48.88)	(48.88)	(48.88)	(37.58)	143.11	166.26	(81.32)	(81.32)	(81.32)	(81.32)	(78.04)	(78.04)	(78.04)
09	181.15	(48.44)	(48.44)	(48.44)	(48.44)	175.42	(52.17)	(52.17)	(52.17)	(52.17)	(29.10)	(49.45)	(49.45)	(49.45)	(30.29)	138.26	168.28	(81.32)	(81.32)	(81.32)	(81.32)	(85.45)	(85.45)	(85.45)
11	181.16	(48.44)	(48.44)	(48.44)	(48.44)	176.77	(50.81)	(50.81)	(50.81)	(50.81)	(30.00)	(50.29)	(50.29)	(50.29)	(32.91)	138.26	168.28	(81.32)	(81.32)	(81.32)	(81.32)	(85.45)	(85.45)	(85.45)
13	180.51	(47.08)	(47.08)	(47.08)	(47.08)	176.12	(51.44)	(51.44)	(51.44)	(51.44)	(29.94)	(50.29)	(50.29)	(50.29)	(32.30)	139.54	168.28	(81.32)	(81.32)	(81.32)	(81.32)	(71.28)	(71.28)	(71.28)
15	182.41	(45.17)	(45.17)	(45.17)	(45.17)	176.15	(49.47)	(49.47)	(49.47)	(49.47)	(32.01)	(52.36)	(52.36)	(52.36)	(30.79)	135.97	166.26	(81.32)	(81.32)	(81.32)	(81.32)	(70.03)	(70.03)	(70.03)
17	184.81	(42.98)	(42.98)	(42.98)	(42.98)	180.04	(47.51)	(47.51)	(47.51)	(47.51)	(33.11)	(53.46)	(53.46)	(53.46)	(32.30)	135.97	166.26	(81.32)	(81.32)	(81.32)	(81.32)	(73.60)	(73.60)	(73.60)
19	185.39	(41.19)	(41.19)	(41.19)	(41.19)	179.87	(48.59)	(48.59)	(48.59)	(48.59)	(39.21)	(59.58)	(59.58)	(59.58)	(33.83)	131.27	167.73	(59.86)	(59.86)	(59.86)	(59.86)	(78.30)	(78.30)	(78.30)
21	187.52	(40.06)	(40.06)	(40.06)	(40.06)	181.00	(45.78)	(45.78)	(45.78)	(45.78)	(37.80)	(58.15)	(58.15)	(58.15)	(34.84)	125.97	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(88.20)	(88.20)	(88.20)
23	183.73	(43.86)	(43.86)	(43.86)	(43.86)	180.89	(48.36)	(48.36)	(48.36)	(48.36)	(35.92)	(56.28)	(56.28)	(56.28)	(34.84)	125.97	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(83.60)	(83.60)	(83.60)
25	185.06	(42.53)	(42.53)	(42.53)	(42.53)	180.89	(48.36)	(48.36)	(48.36)	(48.36)	(35.92)	(56.28)	(56.28)	(56.28)	(34.84)	125.97	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(83.60)	(83.60)	(83.60)
27	186.66	(40.93)	(40.93)	(40.93)	(40.93)	182.18	(48.36)	(48.36)	(48.36)	(48.36)	(35.92)	(56.28)	(56.28)	(56.28)	(34.84)	125.97	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(83.60)	(83.60)	(83.60)
29	188.12	(41.46)	(41.46)	(41.46)	(41.46)	181.53	(48.36)	(48.36)	(48.36)	(48.36)	(35.92)	(56.28)	(56.28)	(56.28)	(34.84)	125.97	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(83.60)	(83.60)	(83.60)
31	184.06	(43.52)	(43.52)	(43.52)	(43.52)	178.54	(48.36)	(48.36)	(48.36)	(48.36)	(35.92)	(56.28)	(56.28)	(56.28)	(34.84)	125.97	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(83.60)	(83.60)	(83.60)
33	186.14	(41.44)	(41.44)	(41.44)	(41.44)	177.53	(48.36)	(48.36)	(48.36)	(48.36)	(35.92)	(56.28)	(56.28)	(56.28)	(34.84)	125.97	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(83.60)	(83.60)	(83.60)
35	190.93	(38.55)	(38.55)	(38.55)	(38.55)	188.50	(41.09)	(41.09)	(41.09)	(41.09)	(34.77)	(55.12)	(55.12)	(55.12)	(35.82)	135.24	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(79.08)	(79.08)	(79.08)
37	189.09	(38.50)	(38.50)	(38.50)	(38.50)	184.87	(42.72)	(42.72)	(42.72)	(42.72)	(39.92)	(60.27)	(60.27)	(60.27)	(37.35)	124.50	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(74.33)	(74.33)	(74.33)
39	193.79	(33.79)	(33.79)	(33.79)	(33.79)	189.39	(38.19)	(38.19)	(38.19)	(38.19)	(42.77)	(57.81)	(57.81)	(57.81)	(35.81)	124.79	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(84.78)	(84.78)	(84.78)
41	227.58	0.00	0.00	0.00	0.00	227.58	0.00	0.00	0.00	0.00	(42.77)	(57.81)	(57.81)	(57.81)	(35.81)	124.79	168.56	(59.02)	(59.02)	(59.02)	(59.02)	(84.78)	(84.78)	(84.78)
43	195.78	(31.80)	(31.80)	(31.80)	(31.80)	181.55	(38.03)	(38.03)	(38.03)	(38.03)	0.00	0.00	0.00	0.00	0.00	186.21	227.58	(55.19)	(55.19)	(55.19)	0.00	0.00	0.00	
45	191.15	(38.44)	(38.44)	(38.44)	(38.44)	181.46	(48.13)	(48.13)	(48.13)	(48.13)	(44.18)	(64.51)	(64.51)	(64.51)	(41.91)	113.17	172.39	(55.19)	(55.19)	(55.19)	(55.19)	(96.40)	(96.40)	(96.40)
47	195.05	(32.54)	(32.54)	(32.54)	(32.54)	187.48	(40.11)	(40.11)	(40.11)	(40.11)	(40.97)	(61.32)	(61.32)	(61.32)	(39.31)	115.24	169.84	(57.94)	(57.94)	(57.94)	(57.94)	(94.33)	(94.33)	(94.33)
49	178.99	(50.59)	(50.59)	(50.59)	(50.59)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(45.03)	(85.38)	(85.38)	(85.38)	(43.28)	115.24	169.84	(57.94)	(57.94)	(57.94)	(57.94)	(94.33)	(94.33)	(94.33)
51	178.88	(48.72)	(48.72)	(48.72)	(48.72)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(24.72)	(45.08)	(45.08)	(45.08)	(1,006.05)	146.40	176.25	(51.33)	(51.33)	(51.33)	(51.33)	(94.33)	(94.33)	(94.33)
53	179.20	(48.28)	(48.28)	(48.28)	(48.28)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(28.04)	(48.39)	(48.39)	(48.39)	(1,006.05)	147.82	(774.98)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	(83.08)	(83.08)	(83.08)
55	181.84	(45.74)	(45.74)	(45.74)	(45.74)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(28.87)	(48.39)	(48.39)	(48.39)	(1,006.05)	145.83	(787.40)	(994.99)	(994.99)	(994.99)	(994.99)	(81.96)	(81.96)	(81.96)
57	185.58	(42.00)	(42.00)	(42.00)	(42.00)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(28.23)	(48.39)	(48.39)	(48.39)	(1,006.05)	143.34	136.78	(82.72)	(82.72)	(82.72)	(82.72)	(88.23)	(88.23)	(88.23)
59	183.70	(41.88)	(41.88)	(41.88)	(41.88)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(32.39)	(52.74)	(52.74)	(52.74)	(1,006.05)	135.92	136.78	(82.72)	(82.72)	(82.72)	(82.72)	(83.74)	(83.74)	(83.74)
61	185.06	(42.52)	(42.52)	(42.52)	(42.52)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(32.05)	(52.40)	(52.40)	(52.40)	(1,006.05)	131.34	136.78	(82.72)	(82.72)	(82.72)	(82.72)	(88.23)	(88.23)	(88.23)
63	181.72	(45.87)	(45.87)	(45.87)	(45.87)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(33.96)	(54.31)	(54.31)	(54.31)	(1,006.05)	128.42	136.78	(82.72)	(82.72)	(82.72)	(82.72)	(83.74)	(83.74)	(83.74)
65	184.01	(43.58)	(43.58)	(43.58)	(43.58)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(32.23)	(52.68)	(52.68)	(52.68)	(1,006.05)	128.42	136.78	(82.72)	(82.72)	(82.72)	(82.72)	(83.74)	(83.74)	(83.74)
67	186.94	(38.64)	(38.64)	(38.64)	(38.64)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(34.40)	(58.18)	(58.18)	(58.18)	(1,006.05)	128.42	136.78	(82.72)	(82.72)	(82.72)	(82.72)	(83.74)	(83.74)	(83.74)
69	188.45	(41.13)	(41.13)	(41.13)	(41.13)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(39.18)	(59.51)	(59.51)	(59.51)	(1,006.05)	128.42	136.78	(82.72)	(82.72)	(82.72)	(82.72)	(83.74)	(83.74)	(83.74)
71	187.99	(39.60)	(39.60)	(39.60)	(39.60)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(37.81)	(58.18)	(58.18)	(58.18)	(1,006.05)	128.42	136.78	(82.72)	(82.72)	(82.72)	(82.72)	(83.74)	(83.74)	(83.74)
73	186.28	(41.33)	(41.33)	(41.33)	(41.33)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(33.49)	(53.84)	(53.84)	(53.84)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	(83.23)
75	191.88	(31.56)	(31.56)	(31.56)	(31.56)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(35.04)	(55.36)	(55.36)	(55.36)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	(83.23)
77	190.03	(35.70)	(35.70)	(35.70)	(35.70)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(38.45)	(58.80)	(58.80)	(58.80)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	(83.23)
79	194.03	(33.56)	(33.56)	(33.56)	(33.56)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(44.67)	(65.02)	(65.02)	(65.02)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	(83.23)
81	195.66	(31.92)	(31.92)	(31.92)	(31.92)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(44.95)	(65.02)	(65.02)	(65.02)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	(83.23)
83	196.96	(30.62)	(30.62)	(30.62)	(30.62)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(44.71)	(65.02)	(65.02)	(65.02)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	(83.23)
85	193.88	(33.72)	(33.72)	(33.72)	(33.72)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(44.75)	(65.02)	(65.02)	(65.02)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	(83.23)
87	192.04	(35.55)	(35.55)	(35.55)	(35.55)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(45.47)	(65.02)	(65.02)	(65.02)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	(83.23)
89	192.53	(35.28)	(35.28)	(35.28)	(35.28)	177.80	(1,006.18)	(1,006.18)	(1,006.18)	(1,006.18)	(42.12)	(62.47)	(62.47)	(62.47)	(1,006.05)	126.34	165.18	(82.41)	(82.41)	(82.41)	(82.41)	(83.23)	(83.23)	

Grade: ☐ CWSWS

Shipping Block	YC1	YC2	YC3	YC4	YC5	PR1	PR2	PR3	PR4	PR5	IR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	220.69	206.90	172.41			220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
01	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
03	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
05	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
07	187.23	153.44	118.95	(53.46)	(53.46)	163.01	209.65	175.17	0.00	0.00	200.00	168.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
09	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
11	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
13	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
15	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
17	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
19	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
21	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
23	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
25	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
27	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
29	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
31	179.25	165.46	130.97	(41.44)	(41.44)	174.49	163.45	128.97	(46.20)	(46.20)	200.00	168.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
33	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
35	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
37	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
39	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
41	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
43	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
45	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
47	189.63	175.84	141.36	(31.06)	(31.06)	178.05	167.01	132.53	(42.64)	(42.64)	155.26	168.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
49	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
51	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
53	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
55	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
57	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
59	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
61	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
63	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
65	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
67	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
69	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
71	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
73	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
75	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
77	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
79	180.50	166.71	132.22	(40.19)	(40.19)	178.05	167.01	132.53	(42.64)	(42.64)	155.26	168.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
81	179.41	165.62	131.14	(41.28)	(41.28)	(796.53)	(831.01)	(1,006.18)	(1,006.18)	(1,006.18)	164.83	129.79	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
83	179.41	165.62	131.14	(33.59)	(33.59)	(785.49)	(826.01)	(1,006.18)	(1,006.18)	(1,006.18)	164.89	130.65	129.79	(55.52)	(1,006.09)	(54.87)	159.06	145.27	110.79	(81.42)	(81.42)	118.25	104.52	(79.81)
85	179.41	165.62	131.14	(32.06)	(32.06)	(785.49)	(826.01)	(1,006.18)	(1,006.18)	(1,006.18)	160.15	128.01	118.11	(60.20)	(1,006.05)	(52.88)	178.48	(795.63)	(830.13)	(1,002.54)	(1,002.54)	114.67	96.82	(86.24)
87	187.97	173.19	139.69	(33.51)	(33.51)	(785.49)	(826.01)	(1,006.18)	(1,006.18)	(1,006.18)	158.82	124.05	117.16	(62.15)	(1,006.05)	(53.83)	171.63	153.93	119.45	(52.97)	(52.97)	107.01	95.28	(86.94)
89	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
91	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
93	220.69	206.90	172.41	0.00	0.00	220.69	209.65	175.17	0.00	0.00	200.00	188.21	1											

CWRW
(Net returns)
07-Dec-05

Grade: CWRW

Shipping Block	VC1	VC2	VC3	VC4	VC5	PR1	PR2	PR3	PR4	PR5	TB	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	188.71	174.92	140.43	(31.98)	(31.98)	181.10	170.08	135.58	(39.59)	(39.59)	145.02	110.88	103.98	(75.33)	(1,008.05)	(82.89)	185.50	151.70	117.22	(55.19)	(55.18)	88.43	78.71	(106.05)
01	220.69	206.90	172.41	0.00	0.00	220.69	209.85	135.58	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
03	165.45	151.66	117.17	(55.24)	(55.24)	161.22	150.18	115.70	(59.47)	(59.47)	172.08	137.94	131.04	(48.27)	(41.31)	(37.25)	220.69	206.90	172.41	(1,002.54)	(1,002.54)	133.87	122.15	(80.81)
05	220.69	206.90	172.41	0.00	0.00	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
07	170.27	156.48	121.90	(50.42)	(50.42)	185.45	154.41	119.93	(55.24)	(55.24)	173.27	139.13	132.23	(47.08)	(36.49)	(39.54)	220.69	206.90	172.41	(1,002.54)	(1,002.54)	131.57	118.85	(82.91)
09	178.50	162.71	128.23	(44.18)	(44.18)	189.60	158.57	124.08	(51.09)	(51.09)	169.64	135.50	129.82	(50.71)	(38.95)	(44.84)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
11	173.86	160.07	125.59	(46.83)	(46.83)	189.60	158.57	124.08	(51.09)	(51.09)	169.64	135.50	129.82	(50.71)	(38.95)	(44.84)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
13	173.23	159.44	124.95	(47.46)	(47.46)	189.60	158.57	124.08	(51.09)	(51.09)	169.64	135.50	129.82	(50.71)	(38.95)	(44.84)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
15	175.10	164.04	126.83	(45.58)	(45.58)	189.60	158.57	124.08	(51.09)	(51.09)	169.64	135.50	129.82	(50.71)	(38.95)	(44.84)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
17	177.83	166.04	129.58	(42.85)	(42.85)	189.60	158.57	124.08	(51.09)	(51.09)	169.64	135.50	129.82	(50.71)	(38.95)	(44.84)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
19	179.48	165.67	131.19	(41.22)	(41.22)	189.60	158.57	124.08	(51.09)	(51.09)	169.64	135.50	129.82	(50.71)	(38.95)	(44.84)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
21	180.89	166.90	132.41	(40.00)	(40.00)	189.60	158.57	124.08	(51.09)	(51.09)	169.64	135.50	129.82	(50.71)	(38.95)	(44.84)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
23	220.69	206.90	172.41	0.00	0.00	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
25	178.85	164.88	130.37	(42.04)	(42.04)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
27	220.69	206.90	172.41	0.00	0.00	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
29	181.09	187.30	132.81	(39.60)	(39.60)	176.87	165.83	129.27	(43.82)	(43.82)	181.85	127.71	120.81	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
31	179.25	165.48	130.97	(41.44)	(41.44)	174.78	163.75	129.27	(43.82)	(43.82)	181.85	127.71	120.81	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
33	177.48	163.67	129.18	(43.23)	(43.23)	170.86	159.82	125.34	(45.91)	(45.91)	184.53	130.39	123.49	(55.82)	(35.80)	(56.29)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
35	220.69	206.90	172.41	0.00	0.00	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
37	183.47	169.68	135.19	(37.22)	(37.22)	178.85	167.81	133.13	(42.04)	(42.04)	160.68	126.52	119.62	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
39	220.69	206.90	172.41	0.00	0.00	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
41	187.00	173.21	138.72	(33.69)	(33.69)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
43	220.69	206.90	172.41	0.00	0.00	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
45	182.57	169.18	134.70	(37.72)	(37.72)	174.36	163.32	128.84	(48.33)	(48.33)	187.88	133.72	126.82	(52.49)	(32.86)	(53.34)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
47	220.69	206.90	172.41	0.00	0.00	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
49	185.88	175.89	141.41	(31.00)	(31.00)	179.42	168.39	133.91	(41.27)	(41.27)	158.82	124.78	117.88	(61.43)	(39.38)	(70.96)	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
51	220.69	206.90	172.41	0.00	0.00	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
53	174.14	160.34	125.88	(48.55)	(48.55)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
55	173.23	159.44	124.95	(47.46)	(47.46)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
57	175.88	161.88	127.40	(45.01)	(45.01)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
59	178.40	164.81	130.13	(42.29)	(42.29)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
61	178.35	164.55	130.07	(42.34)	(42.34)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
63	176.87	163.08	128.59	(43.82)	(43.82)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
65	176.06	162.25	127.78	(44.64)	(44.64)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
67	180.80	167.00	132.52	(42.63)	(42.63)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
69	177.74	163.95	129.47	(39.89)	(39.89)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
71	180.85	167.06	132.58	(42.95)	(42.95)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
73	179.73	165.94	131.48	(40.95)	(40.95)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
75	184.98	171.19	138.70	(35.71)	(35.71)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
77	189.29	174.50	140.02	(32.40)	(32.40)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
79	187.13	173.34	138.65	(33.56)	(33.56)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
81	186.74	174.95	140.47	(31.95)	(31.95)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
83	191.27	177.48	142.99	(29.42)	(29.42)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
85	185.91	172.12	137.63	(34.78)	(34.78)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
87	184.68	170.87	136.38	(36.03)	(36.03)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
89	185.74	171.96	137.47	(34.94)	(34.94)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90	172.41	0.00	0.00	194.48	182.78	0.00
91	187.10	173.31	138.82	(33.59)	(33.59)	220.69	209.85	175.17	0.00	0.00	200.00	188.21	179.31	0.00	0.00	0.00	220.69	206.90						

1/2CWAD
(Net returns)
07-Dec-95

Grade: 1/2CWAD

Shipping Block	YC1	YC2	YC3	YC4	YC5	PR1	PR2	PR3	PR4	PR5	TR	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	337.93	317.24	275.86	0.00	0.00	337.93	320.00	278.82	0.00	0.00	317.24	324.14	296.55	275.86	0.00	288.96	337.93	317.24	275.86	0.00	0.00	332.41	300.00	268.96
01	337.93	317.24	275.86	0.00	0.00	337.93	320.00	278.82	0.00	0.00	317.24	324.14	296.55	275.86	0.00	288.96	337.93	317.24	275.86	0.00	0.00	332.41	300.00	268.96
02	282.09	281.40	220.02	(55.84)	(55.84)	277.87	288.73	218.58	(60.06)	(60.06)	288.73	275.28	247.69	227.00	(41.91)	231.72	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	271.80	239.29	206.35
03	288.30	287.61	228.23	(49.63)	(49.63)	283.88	285.98	224.57	(54.05)	(54.05)	289.92	276.47	248.98	226.19	(35.08)	229.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	269.50	237.09	206.05
07	337.93	317.24	275.86	0.00	0.00	337.93	320.00	278.82	0.00	0.00	317.24	324.14	296.55	275.86	0.00	288.96	337.93	317.24	275.86	0.00	0.00	332.41	300.00	268.96
09	291.54	270.85	228.47	(46.39)	(46.39)	286.18	288.25	228.87	(51.74)	(51.74)	287.27	273.82	246.23	225.54	(37.20)	225.05	276.81	255.92	214.54	(61.32)	(61.32)	265.13	232.72	201.68
11	292.44	271.75	230.37	(45.49)	(45.49)	288.21	270.28	228.91	(49.71)	(49.71)	288.70	273.28	245.68	224.97	(32.26)	225.82	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
13	292.09	271.40	230.02	(45.84)	(45.84)	287.88	269.93	228.55	(50.06)	(50.06)	288.51	270.88	245.68	224.97	(31.87)	215.83	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
15	294.31	273.62	232.24	(43.62)	(43.62)	292.21	274.28	232.90	(47.84)	(47.84)	284.31	270.88	245.68	224.97	(35.12)	208.59	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
17	296.80	275.91	234.53	(41.33)	(41.33)	290.08	272.15	230.77	(45.72)	(45.72)	282.13	268.88	241.09	215.40	(37.45)	204.13	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
19	298.38	275.87	234.29	(41.57)	(41.57)	290.11	272.18	230.80	(47.82)	(47.82)	278.13	268.88	241.09	215.40	(37.45)	204.13	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
21	299.00	277.31	235.93	(39.93)	(39.93)	291.40	273.47	232.09	(46.53)	(46.53)	279.43	265.98	238.39	217.70	(35.12)	206.59	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
23	299.00	277.31	235.93	(39.93)	(39.93)	291.40	273.47	232.09	(46.53)	(46.53)	279.43	265.98	238.39	217.70	(35.12)	206.59	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
25	294.20	275.51	233.31	(40.62)	(40.62)	292.95	275.02	233.84	(44.97)	(44.97)	281.27	267.82	240.23	219.54	(35.12)	208.59	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
27	295.38	274.69	232.14	(43.72)	(43.72)	289.96	272.05	230.87	(47.95)	(47.95)	281.50	268.04	240.46	219.77	(30.45)	208.32	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
29	298.20	277.41	236.13	(42.55)	(42.55)	291.13	273.20	231.82	(46.79)	(46.79)	281.14	268.04	240.46	219.77	(30.45)	208.32	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
31	298.20	277.41	236.13	(42.55)	(42.55)	291.13	273.20	231.82	(46.79)	(46.79)	281.14	268.04	240.46	219.77	(30.45)	208.32	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
33	298.20	277.41	236.13	(42.55)	(42.55)	291.13	273.20	231.82	(46.79)	(46.79)	281.14	268.04	240.46	219.77	(30.45)	208.32	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
35	294.27	273.58	232.20	(41.84)	(41.84)	293.51	275.58	234.20	(44.42)	(44.42)	282.26	268.81	240.46	219.77	(35.84)	215.89	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
37	296.21	275.52	234.14	(41.72)	(41.72)	287.63	270.74	229.38	(49.26)	(49.26)	284.47	271.02	241.22	220.53	(34.84)	217.49	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
39	300.82	279.93	238.65	(37.31)	(37.31)	289.70	273.59	232.21	(50.30)	(50.30)	282.20	268.75	241.18	220.47	(35.88)	218.00	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
41	299.68	279.19	237.81	(38.05)	(38.05)	288.82	277.88	236.51	(42.11)	(42.11)	277.97	264.52	238.93	217.80	(38.06)	207.59	276.81	255.92	214.54	(61.32)	(61.32)	263.70	231.28	201.68
43	337.93	317.24	275.86	0.00	0.00	337.93	320.00	278.82	0.00	0.00	317.24	324.14	296.55	275.86	0.00	288.96	337.93	317.24	275.86	0.00	0.00	332.41	300.00	268.96
45	303.75	283.06	241.68	(34.18)	(34.18)	298.93	281.00	239.82	(39.00)	(39.00)	278.08	262.81	235.02	214.33	(39.47)	196.32	281.36	258.22	216.84	(58.57)	(58.57)	248.25	215.26	184.10
47	337.93	317.24	275.86	0.00	0.00	337.93	320.00	278.82	0.00	0.00	317.24	324.14	296.55	275.86	0.00	288.96	337.93	317.24	275.86	0.00	0.00	332.41	300.00	268.96
49	298.42	277.73	238.35	(39.51)	(39.51)	290.26	272.33	230.95	(47.67)	(47.67)	277.06	263.81	235.02	214.33	(38.61)	201.14	279.28	258.99	217.21	(53.72)	(53.72)	241.22	208.81	177.78
51	306.21	285.52	244.14	(51.72)	(51.72)	298.99	279.06	237.68	(40.93)	(40.93)	271.40	257.84	230.38	209.67	(44.15)	198.00	284.21	263.52	222.14	(684.82)	(685.31)	237.09	206.05	206.05
53	285.81	286.22	224.84	(51.02)	(51.02)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	288.40	274.95	247.36	226.87	(1,008.05)	223.61	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
55	292.41	271.72	230.34	(45.52)	(45.52)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
57	295.24	274.55	233.47	(42.69)	(42.69)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
59	296.55	275.86	233.48	(41.38)	(41.38)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
61	298.23	275.54	234.18	(41.70)	(41.70)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
63	293.84	273.15	231.77	(44.09)	(44.09)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
65	297.60	275.91	235.93	(40.33)	(40.33)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
67	298.53	278.24	234.68	(39.00)	(39.00)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
69	298.82	278.13	234.75	(41.11)	(41.11)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
71	298.79	278.10	234.72	(39.14)	(39.14)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
73	296.71	276.02	234.78	(41.22)	(41.22)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
75	300.13	279.44	238.07	(37.79)	(37.79)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
77	304.72	284.03	242.65	(33.21)	(33.21)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
79	304.34	283.85	242.28	(33.58)	(33.58)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
81	305.88	285.17	243.80	(32.06)	(32.06)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
83	308.86	287.87	246.49	(29.37)	(29.37)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
85	302.07	281.38	240.00	(35.86)	(35.86)	288.25	(688.18)	(727.56)	(1,008.18)	(1,008.18)	289.29	275.84	248.25	227.56	(1,008.05)	226.42	(684.82)	(685.31)	(726.68)	(1,002.54)	(1,002.54)	237.09	206.05	206.05
87	300.71	280.02	238.64	(37.22)	(37.22)																			

3CWAD
(Net returns)
07-Dec-95

Grade: 3CWAD

Shipping Block	VC1	VC2	VC3	VC4	VC5	PR1	PR2	PR3	PR4	PR5	TB	SL1	SL2	SL3	CH	MP	PW1	PW2	PW3	PW4	PW5	QL1	QL2	QL3
00	268.96	0.00	0.00	0.00	0.00	268.96	0.00	0.00	0.00	0.00	0.00	268.65	262.76	0.00	0.00	0.00	268.96	0.00	0.00	0.00	0.00	297.93	286.20	0.00
01	216.69	(52.27)	(52.27)	(52.27)	(52.27)	212.53	(58.43)	(58.43)	(58.43)	(58.43)	(24.94)	244.36	237.47	(45.29)	(38.28)	(39.54)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	235.02	223.29	(82.91)
03	213.58	(55.39)	(55.39)	(55.39)	(55.39)	209.23	(59.73)	(59.73)	(59.73)	(59.73)	(28.18)	241.12	234.22	(46.53)	(41.58)	(37.25)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	235.02	223.29	(82.91)
05	220.49	(48.48)	(48.48)	(48.48)	(48.48)	216.09	(52.88)	(52.88)	(52.88)	(52.88)	(27.61)	241.69	234.80	(47.09)	(41.58)	(37.25)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	235.02	223.29	(82.91)
07	222.68	(51.49)	(51.49)	(51.49)	(51.49)	212.79	(56.17)	(56.17)	(56.17)	(56.17)	(27.97)	241.34	234.44	(46.32)	(41.58)	(37.25)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	235.02	223.29	(82.91)
09	223.02	(48.31)	(48.31)	(48.31)	(48.31)	217.19	(51.78)	(51.78)	(51.78)	(51.78)	(29.86)	239.33	232.51	(43.90)	(37.20)	(32.82)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	228.42	214.70	(82.91)
11	222.14	(46.82)	(46.82)	(46.82)	(46.82)	218.68	(50.28)	(50.28)	(50.28)	(50.28)	(29.86)	239.33	232.51	(43.90)	(37.20)	(32.82)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	228.42	214.70	(82.91)
13	223.93	(45.03)	(45.03)	(45.03)	(45.03)	217.63	(51.13)	(51.13)	(51.13)	(51.13)	(29.86)	239.33	232.51	(43.90)	(37.20)	(32.82)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	228.42	214.70	(82.91)
15	223.93	(45.03)	(45.03)	(45.03)	(45.03)	217.63	(51.13)	(51.13)	(51.13)	(51.13)	(29.86)	239.33	232.51	(43.90)	(37.20)	(32.82)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	228.42	214.70	(82.91)
17	226.81	(42.15)	(42.15)	(42.15)	(42.15)	222.37	(49.40)	(49.40)	(49.40)	(49.40)	(32.58)	236.73	232.51	(50.19)	(32.22)	(45.13)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	227.77	216.05	(82.91)
19	227.67	(41.29)	(41.29)	(41.29)	(41.29)	221.31	(47.55)	(47.55)	(47.55)	(47.55)	(32.58)	236.73	232.51	(50.19)	(32.22)	(45.13)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	227.77	216.05	(82.91)
21	229.09	(39.88)	(39.88)	(39.88)	(39.88)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
23	228.09	(40.87)	(40.87)	(40.87)	(40.87)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
25	225.51	(43.46)	(43.46)	(43.46)	(43.46)	223.79	(45.17)	(45.17)	(45.17)	(45.17)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
27	226.56	(42.41)	(42.41)	(42.41)	(42.41)	221.05	(47.91)	(47.91)	(47.91)	(47.91)	(35.47)	233.63	226.93	(55.82)	(33.22)	(59.73)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
29	226.95	(40.01)	(40.01)	(40.01)	(40.01)	222.29	(46.68)	(46.68)	(46.68)	(46.68)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
31	227.29	(41.67)	(41.67)	(41.67)	(41.67)	224.34	(44.82)	(44.82)	(44.82)	(44.82)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
33	225.42	(43.54)	(43.54)	(43.54)	(43.54)	222.44	(46.52)	(46.52)	(46.52)	(46.52)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
35	227.50	(41.47)	(41.47)	(41.47)	(41.47)	224.44	(45.37)	(45.37)	(45.37)	(45.37)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
37	230.44	(37.30)	(37.30)	(37.30)	(37.30)	227.13	(41.83)	(41.83)	(41.83)	(41.83)	(34.79)	234.61	227.61	(55.14)	(35.83)	(52.71)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
39	230.44	(37.30)	(37.30)	(37.30)	(37.30)	227.13	(41.83)	(41.83)	(41.83)	(41.83)	(34.79)	234.61	227.61	(55.14)	(35.83)	(52.71)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
41	268.96	0.00	0.00	0.00	0.00	268.96	0.00	0.00	0.00	0.00	0.00	268.65	262.76	0.00	0.00	0.00	268.96	0.00	0.00	0.00	0.00	297.93	286.20	0.00
43	268.96	0.00	0.00	0.00	0.00	268.96	0.00	0.00	0.00	0.00	0.00	268.65	262.76	0.00	0.00	0.00	268.96	0.00	0.00	0.00	0.00	297.93	286.20	0.00
45	268.96	0.00	0.00	0.00	0.00	268.96	0.00	0.00	0.00	0.00	0.00	268.65	262.76	0.00	0.00	0.00	268.96	0.00	0.00	0.00	0.00	297.93	286.20	0.00
47	229.79	(39.17)	(39.17)	(39.17)	(39.17)	221.44	(47.52)	(47.52)	(47.52)	(47.52)	(40.11)	229.19	222.29	(50.48)	(38.51)	(68.70)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
49	228.82	(32.34)	(32.34)	(32.34)	(32.34)	228.27	(40.69)	(40.69)	(40.69)	(40.69)	(45.55)	223.45	216.55	(48.20)	(44.14)	(70.98)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
51	216.54	(50.42)	(50.42)	(50.42)	(50.42)	212.53	(58.43)	(58.43)	(58.43)	(58.43)	(24.94)	244.36	237.47	(45.29)	(38.28)	(39.54)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	235.02	223.29	(82.91)
53	221.93	(47.04)	(47.04)	(47.04)	(47.04)	216.09	(52.88)	(52.88)	(52.88)	(52.88)	(27.61)	241.69	234.80	(47.09)	(41.58)	(37.25)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	235.02	223.29	(82.91)
55	223.91	(48.05)	(48.05)	(48.05)	(48.05)	217.19	(51.78)	(51.78)	(51.78)	(51.78)	(29.86)	239.33	232.51	(43.90)	(37.20)	(32.82)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	228.42	214.70	(82.91)
57	223.41	(45.58)	(45.58)	(45.58)	(45.58)	218.68	(50.28)	(50.28)	(50.28)	(50.28)	(29.86)	239.33	232.51	(43.90)	(37.20)	(32.82)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	228.42	214.70	(82.91)
59	227.49	(41.48)	(41.48)	(41.48)	(41.48)	221.31	(47.55)	(47.55)	(47.55)	(47.55)	(32.58)	236.73	232.51	(50.19)	(32.22)	(45.13)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	227.77	216.05	(82.91)
61	226.57	(42.39)	(42.39)	(42.39)	(42.39)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
63	224.16	(44.80)	(44.80)	(44.80)	(44.80)	224.44	(45.37)	(45.37)	(45.37)	(45.37)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
65	227.02	(41.94)	(41.94)	(41.94)	(41.94)	227.22	(46.68)	(46.68)	(46.68)	(46.68)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
67	228.08	(38.88)	(38.88)	(38.88)	(38.88)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
69	228.08	(38.88)	(38.88)	(38.88)	(38.88)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
71	228.08	(38.88)	(38.88)	(38.88)	(38.88)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
73	228.08	(38.88)	(38.88)	(38.88)	(38.88)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
75	228.08	(38.88)	(38.88)	(38.88)	(38.88)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
77	228.08	(38.88)	(38.88)	(38.88)	(38.88)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
79	228.08	(38.88)	(38.88)	(38.88)	(38.88)	222.26	(48.71)	(48.71)	(48.71)	(48.71)	(37.88)	230.36	228.09	(59.29)	(37.29)	(54.83)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
81	231.63	(37.34)	(37.34)	(37.34)	(37.34)	227.13	(41.83)	(41.83)	(41.83)	(41.83)	(34.79)	234.61	227.61	(55.14)	(35.83)	(52.71)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
83	235.69	(33.49)	(33.49)	(33.49)	(33.49)	227.22	(46.68)	(46.68)	(46.68)	(46.68)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
85	236.87	(32.10)	(32.10)	(32.10)	(32.10)	227.22	(46.68)	(46.68)	(46.68)	(46.68)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
87	232.93	(36.03)	(36.03)	(36.03)	(36.03)	227.22	(46.68)	(46.68)	(46.68)	(46.68)	(38.09)	233.21	226.31	(56.44)	(31.02)	(60.63)	(733.58)	(1,002.54)	(1,002.54)	(1,002.54)	(1,002.54)	229.44	217.71	(82.91)
89	235.37	(33.59)	(33.59)	(33.59)	(33.59)																			

Appendix IV

Base Case Scenario: Results by Grade

Interpretation of Appendix IV

- To assist in interpretation of the following tables, the first page is a map indicating location of each shipping block. The accompanying table lists approximate location of each block.
- Grades are identified in top right hand corner of each page. Each grade's results takes two pages. First page lists objective function value, constraints and shipments by port. Second page summarizes optimum shipments from each block to each port.
- The first page for each grade contains objective function value in the "total net revenue" cell. The constraint contained on the left hand side of the page indicates that all supplies ("Balance to Move") have been shipped. The first set of constraints on the right side of the page summarizes the actual shipments to each port, with the volume constraints for Vancouver and Prince Rupert listed. Below that are the dual values and ranges for that capacity constraint. Next is the constraint that actual shipments against each sales opportunity cannot exceed the maximum identified demand. Finally, in bottom right corner, total west coast and total east coast sales (which each include a previously-unutilized U.S. port) cannot exceed 125 percent of identified sales opportunities at the Canadian ports.

Block Locations

127

<u>Block #</u>	<u>Approximate Location</u>	<u>Block #</u>	<u>Approximate Location</u>
00	Peace River	61	MB
01	MB	62	MB
03	MB	63	MB
05	MB	64	MB, SS
07	MB	71	SS
09	SS, MB	72	SS
11	SS, MB	73	SS
13	MB, SS	74	SS, NS
15	SS, NS, MB	75	NS, SS
17	SS, NS	76	NS, NA, SS
19	SS	77	SS
21	SS	78	SS
23	NS	79	SS
25	NS	81	SS
27	NS	82	SA
29	NS	83	SA
31	SS	84	SA
33	SS	85	NA, SA
35	SS	86	NA
37	NS, NA	87	NA
39	NS	90	Peace River
41	NA	95	NA, Peace River
43	NA	98	Peace River
45	NA		
47	SA, SS		
49	NA		

Abbreviations:

MB	Manitoba
SS	Southern Saskatchewan (southern half of grain area)
NS	Northern Saskatchewan
SA	Southern Alberta
NA	Northern Alberta

1CWRS
(Max net rev)
12-Feb-96

Grade: 1CWRS

Calculated Maximum Net Revenue

Total Net Revenue:

\$1,263,310

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	14	=	14		Actual		Constraint
01	1	=	1	VC	3,650	<=	4,000
03	18	=	18	PR	1,110	<=	1,720
05	40	=	40	TB	200		
07	11	=	11	SL	1,000		
09	99	=	99	CH	0		
11	36	=	36	MP	500		
13	46	=	46	PW	278		
15	75	=	75	GL	200		
17	194	=	194	Dual Values & Ranges for WC Port Capacity			
19	169	=	169		Dual	Upper	Lower
21	170	=	170	VC	0.00	-----	349.95
23	259	=	259	PR	0.00	-----	610.00
25	141	=	141	Actual Shipments Against Sales Opportunities			
27	92	=	92		Actual		Constraint
29	166	=	166	VC1	980	<=	980
31	224	=	224	VC2	280	<=	280
33	80	=	80	VC3	630	<=	630
35	38	=	38	VC4	700	<=	700
37	168	=	168	VC5	1,060	<=	2,100
39	156	=	156	PR1	420	<=	420
41	96	=	96	PR2	120	<=	120
43	87	=	87	PR3	270	<=	270
45	12	=	12	PR4	300	<=	300
47	238	=	238	PR5	0	<=	900
49	42	=	42	TB	200	<=	200
61	34	=	34	SL1	300	<=	300
62	113	=	113	SL2	500	<=	500
63	36	=	36	SL3	200	<=	200
64	202	=	202	CH	0	<=	0
71	443	=	443	MP	500	<=	500
72	179	=	179	PW1	105	<=	980
73	123	=	123	PW2	30	<=	280
74	124	=	124	PW3	68	<=	630
75	151	=	151	PW4	75	<=	700
76	382	=	382	PW5	0	<=	2,100
77	461	=	461	GL1	75	<=	300
78	440	=	440	GL2	125	<=	500
79	168	=	168	GL3	0	<=	200
81	297	=	297	Allocation of Top Value Sales at WC and EC/Gulf			
82	159	=	159		Actual		Sales Opp*1.25
83	260	=	260	VC1+PR1+PW1	1,505	<=	1,505
84	254	=	254	VC2+PR2+PW2	430	<=	430
85	37	=	37	VC3+PR3+PW3	968	<=	968
86	25	=	25	VC4+PR4+PW4	1,075	<=	1,075
87	133	=	133	VC5+PR5+PW5	1,060	<=	3,225
90	167	=	167	SL1+GL1	375	<=	375
95	54	=	54	SL2+GL2	625	<=	625
98	24	=	24	SL3+GL3	200	<=	250

1CWRS
(Block Summary)
12-Feb-96

Grade: 1CWRS

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	Vancouver 3,482	Prince Rupert 1,278	Thunder Bay 200	St. Lawrence 1,000	Churchill 0	Minneapolis 500	PNW 278	Gulf 200
00	14	14	0	0	0	0	0	0	0
01	1	0	0	0	0	0	1	0	0
03	18	0	0	0	0	0	0	0	0
05	40	0	0	0	0	0	18	0	0
07	11	0	0	0	11	0	0	0	40
09	99	0	0	0	0	0	0	0	0
11	36	0	0	0	0	0	99	0	0
13	46	0	0	0	46	0	36	0	0
15	75	0	0	0	75	0	0	0	0
17	194	0	194	0	0	0	0	0	0
19	169	169	0	0	0	0	0	0	0
21	170	170	0	0	0	0	0	0	0
23	259	0	259	0	0	0	0	0	0
25	141	0	21	0	120	0	0	0	0
27	92	0	92	0	0	0	0	0	0
29	166	0	166	0	0	0	0	0	0
31	224	139	0	0	0	0	0	0	0
33	80	0	0	0	80	0	85	0	0
35	38	0	0	0	0	0	0	0	0
37	168	53	115	0	0	0	38	0	0
39	156	0	156	0	0	0	0	0	0
41	96	0	96	0	0	0	0	0	0
43	87	0	87	0	0	0	0	0	0
45	12	0	12	0	0	0	0	0	0
47	238	238	0	0	0	0	0	0	0
49	42	42	0	0	0	0	0	0	0
61	34	0	0	0	0	0	0	0	0
62	113	0	0	0	0	0	0	0	34
63	36	0	0	0	0	0	36	0	113
64	202	0	0	0	0	0	188	0	13
71	443	0	0	200	243	0	0	0	0
72	179	0	0	0	179	0	0	0	0
73	123	0	0	0	123	0	0	0	0
74	124	0	0	0	124	0	0	0	0
75	151	151	0	0	0	0	0	0	0
76	382	382	0	0	0	0	0	0	0
77	461	461	0	0	0	0	0	0	0
78	440	440	0	0	0	0	0	0	0
79	168	168	0	0	0	0	0	0	0
81	297	297	0	0	0	0	0	0	0
82	159	159	0	0	0	0	0	0	0
83	260	0	0	0	0	0	0	0	0
84	254	236	0	0	0	0	0	260	0
85	37	37	0	0	0	0	0	18	0
86	25	25	0	0	0	0	0	0	0
87	133	133	0	0	0	0	0	0	0
90	167	167	0	0	0	0	0	0	0
95	54	0	54	0	0	0	0	0	0
98	24	0	24	0	0	0	0	0	0

2CWRS
(Max net rev)
12-Feb-96

Grade: 2CWRS

Calculated Maximum Net Revenue

Total Net Revenue:

\$644,319

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	12	=	12		Actual		Constraint
01	31	=	31	VC	1,399	≤	4,000
03	207	=	207	PR	390	≤	1,720
05	114	=	114	TB	534		
07	45	=	45	SL	1,000		
09	65	=	65	CH	300		
11	117	=	117	MP	300		
13	178	=	178	PW	60		
15	151	=	151	GL	125		
17	105	=	105				
19	22	=	22	Dual Values & Ranges for WC Port Capacity			
21	17	=	17		Dual	Upper	Lower
23	59	=	59	VC	0.00	.....	2,600.56
25	151	=	151	PR	0.00	.....	1,330.00
27	37	=	37				
29	51	=	51	Actual Shipments Against Sales Opportunities			
31	11	=	11		Actual		Constraint
33	59	=	59	VC1	280	≤	280
35	5	=	5	VC2	280	≤	280
37	40	=	40	VC3	350	≤	350
39	50	=	50	VC4	489	≤	1,050
41	83	=	83	VC5	0	≤	0
43	153	=	153	PR1	120	≤	120
45	10	=	10	PR2	120	≤	120
47	83	=	83	PR3	150	≤	150
49	88	=	88	PR4	0	≤	450
61	130	=	130	PR5	0	≤	0
62	395	=	395	TB	534	≤	534
63	222	=	222	SL1	500	≤	500
64	178	=	178	SL2	500	≤	500
71	52	=	52	SL3	0	≤	0
72	99	=	99	CH	300	≤	300
73	90	=	90	MP	300	≤	300
74	150	=	150	PW1	30	≤	280
75	59	=	59	PW2	30	≤	280
76	125	=	125	PW3	0	≤	350
77	32	=	32	PW4	0	≤	1,050
78	74	=	74	PW5	0	≤	0
79	11	=	11	GL1	125	≤	500
81	23	=	23	GL2	0	≤	500
82	74	=	74	GL3	0	≤	0
83	34	=	34				
84	35	=	35	Allocation of Top Value Sales at WC and EC/Gulf			
85	31	=	31		Actual		Sales Opp*1.25
86	64	=	64	VC1+PR1+PW1	430	≤	430
87	123	=	123	VC2+PR2+PW2	430	≤	430
90	132	=	132	VC3+PR3+PW3	500	≤	538
95	22	=	22	VC4+PR4+PW4	489	≤	1,613
98	10	=	10	VC5+PR5+PW5	0	≤	0
				SL1+GL1	625	≤	625
				SL2+GL2	500	≤	625
				SL3+GL3	0	≤	0

2CWRS
(Block Summary)
12-Feb-96

Grade: 2CWRS

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 1,399	PR 390	TB 534	SL 1,000	CH 300	MP 300	PW 60	GL 125
00	12	12	0	0	0	0	0	0	0
01	31	0	0	0	31	0	0	0	0
03	207	0	0	0	0	0	207	0	0
05	114	0	0	114	0	0	0	0	0
07	45	0	0	0	45	0	0	0	0
09	65	0	0	0	65	0	0	0	0
11	117	0	0	0	117	0	0	0	0
13	178	0	0	83	96	0	0	0	0
15	151	0	0	0	2	149	0	0	0
17	105	37	68	0	0	0	0	0	0
19	22	22	0	0	0	0	0	0	0
21	17	17	0	0	0	0	0	0	0
23	59	0	59	0	0	0	0	0	0
25	151	0	0	0	0	151	0	0	0
27	37	0	37	0	0	0	0	0	0
29	51	0	51	0	0	0	0	0	0
31	11	11	0	0	0	0	0	0	0
33	59	0	0	0	59	0	0	0	0
35	5	5	0	0	0	0	0	0	0
37	40	40	0	0	0	0	0	0	0
39	50	0	50	0	0	0	0	0	0
41	83	0	83	0	0	0	0	0	0
43	153	153	0	0	0	0	0	0	0
45	10	0	10	0	0	0	0	0	0
47	83	83	0	0	0	0	0	0	0
49	88	88	0	0	0	0	0	0	0
61	130	0	0	130	0	0	0	0	0
62	395	0	0	0	177	0	0	0	0
63	222	0	0	0	222	0	93	0	125
64	178	0	0	178	0	0	0	0	0
71	52	52	0	0	0	0	0	0	0
72	99	33	0	0	66	0	0	0	0
73	90	90	0	0	0	0	0	0	0
74	150	0	0	29	121	0	0	0	0
75	59	59	0	0	0	0	0	0	0
76	125	125	0	0	0	0	0	0	0
77	32	32	0	0	0	0	0	0	0
78	74	74	0	0	0	0	0	0	0
79	11	11	0	0	0	0	0	0	0
81	23	23	0	0	0	0	0	0	0
82	74	74	0	0	0	0	0	0	0
83	34	0	0	0	0	0	0	0	0
84	35	10	0	0	0	0	0	34	0
85	31	31	0	0	0	0	0	26	0
86	64	64	0	0	0	0	0	0	0
87	123	123	0	0	0	0	0	0	0
90	132	132	0	0	0	0	0	0	0
95	22	0	22	0	0	0	0	0	0
98	10	0	10	0	0	0	0	0	0

3CWRS
(Max net rev)
12-Feb-96

Grade: 3CWRS

Calculated Maximum Net Revenue

Total Net Revenue: \$245,306

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	3	=	3		Actual		Constraint
01	11	=	11	VC	700	≤	4,000
03	28	=	28	PR	300	≤	1,720
05	22	=	22	TB	233		
07	14	=	14	SL	0		
09	15	=	15	CH	119		
11	14	=	14	MP	0		
13	33	=	33	PW	75		
15	19	=	19	GL	0		
17	19	=	19				
19	14	=	14	Dual Values & Ranges for WC Port Capacity			
21	13	=	13		Dual	Upper	Lower
23	17	=	17	VC	0.00	.....	3,300.00
25	20	=	20	PR	0.00	.....	1,420.00
27	7	=	7				
29	29	=	29	Actual Shipments Against Sales Opportunities			
31	12	=	12		Actual		Constraint
33	18	=	18	VC1	350	≤	350
35	3	=	3	VC2	350	≤	350
37	24	=	24	VC3	0	≤	700
39	14	=	14	VC4	0	≤	0
41	27	=	27	VC5	0	≤	0
43	59	=	59	PR1	150	≤	150
45	3	=	3	PR2	150	≤	150
47	72	=	72	PR3	0	≤	300
49	112	=	112	PR4	0	≤	0
61	18	=	18	PR5	0	≤	0
62	38	=	38	TB	233	≤	233
63	40	=	40	SL1	0	≤	100
64	35	=	35	SL2	0	≤	500
71	37	=	37	SL3	0	≤	0
72	44	=	44	CH	119	≤	300
73	10	=	10	MP	0	≤	0
74	24	=	24	PW1	38	≤	350
75	13	=	13	PW2	37	≤	350
76	64	=	64	PW3	0	≤	700
77	41	=	41	PW4	0	≤	0
78	46	=	46	PW5	0	≤	0
79	2	=	2	GL1	0	≤	100
81	11	=	11	GL2	0	≤	500
82	42	=	42	GL3	0	≤	0
83	34	=	34				
84	19	=	19	Allocation of Top Value Sales at WC and EC/Gulf			
85	31	=	31		Actual		Sales Opp*1.25
86	57	=	57	VC1+PR1+PW1	538	≤	538
87	57	=	57	VC2+PR2+PW2	537	≤	538
90	111	=	111	VC3+PR3+PW3	0	≤	1,075
95	13	=	13	VC4+PR4+PW4	0	≤	0
98	19	=	19	VC5+PR5+PW5	0	≤	0
				SL1+GL1	0	≤	125
				SL2+GL2	0	≤	625
				SL3+GL3	0	≤	0

3CWRS
(Block Summary)
12-Feb-96

Grade: **3CWRS**

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 700	PR 300	TB 233	SL 0	CH 119	MP 0	PW 75	GL 0
00	3	3	0	0	0	0	0	0	0
01	11	0	0	11	0	0	0	0	0
03	28	0	0	28	0	0	0	0	0
05	22	0	0	22	0	0	0	0	0
07	14	0	0	14	0	0	0	0	0
09	15	0	0	15	0	0	0	0	0
11	14	0	0	0	0	14	0	0	0
13	33	0	0	0	0	33	0	0	0
15	19	0	0	0	0	19	0	0	0
17	19	0	0	0	0	8	0	11	0
19	14	14	0	0	0	0	0	0	0
21	13	13	0	0	0	0	0	0	0
23	17	0	17	0	0	0	0	0	0
25	20	0	0	0	0	20	0	0	0
27	7	0	0	0	0	7	0	0	0
29	29	0	29	0	0	0	0	0	0
31	12	0	1	0	0	0	0	11	0
33	18	0	0	0	0	0	0	0	0
35	3	3	0	0	0	18	0	0	0
37	24	16	7	0	0	0	0	0	0
39	14	0	14	0	0	0	0	0	0
41	27	0	27	0	0	0	0	0	0
43	59	0	59	0	0	0	0	0	0
45	3	0	3	0	0	0	0	0	0
47	72	72	0	0	0	0	0	0	0
49	112	112	0	0	0	0	0	0	0
61	18	0	0	18	0	0	0	0	0
62	38	0	0	38	0	0	0	0	0
63	40	0	0	40	0	0	0	0	0
64	35	0	0	35	0	0	0	0	0
71	37	37	0	0	0	0	0	0	0
72	44	44	0	0	0	0	0	0	0
73	10	10	0	0	0	0	0	0	0
74	24	11	0	13	0	0	0	0	0
75	13	13	0	0	0	0	0	0	0
76	64	64	0	0	0	0	0	0	0
77	41	41	0	0	0	0	0	0	0
78	46	46	0	0	0	0	0	0	0
79	2	2	0	0	0	0	0	0	0
81	11	11	0	0	0	0	0	0	0
82	42	42	0	0	0	0	0	0	0
83	34	0	0	0	0	0	0	0	0
84	19	0	0	0	0	0	0	34	0
85	31	31	0	0	0	0	0	19	0
86	57	57	0	0	0	0	0	0	0
87	57	57	0	0	0	0	0	0	0
90	111	0	111	0	0	0	0	0	0
95	13	0	13	0	0	0	0	0	0
98	19	0	19	0	0	0	0	0	0

CWFW/4/5AD
(Max net rev)
12-Feb-96

Grade: **CWFW/4/5AD**

Calculated Maximum Net Revenue

Total Net Revenue:

\$93,130

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	3	=	3		Actual		Constraint
01	1	=	1	VC	560	=	4,000
03	20	=	20	PR	23	=	1,720
05	8	=	8	TB	50		
07	4	=	4	SL	107		
09	11	=	11	CH	0		
11	9	=	9	MP	0		
13	3	=	3	PW	0		
15	3	=	3	GL	0		
17	8	=	8				
19	13	=	13	Dual Values & Ranges for WC Port Capacity			
21	14	=	14		Dual	Upper	Lower
23	4	=	4	VC	0.00	.....	3,440.00
25	1	=	1	PR	0.00	.....	1,696.53
27	2	=	2				
29	6	=	6	Actual Shipments Against Sales Opportunities			
31	12	=	12		Actual		Constraint
33	13	=	13	VC1	560	=	560
35	6	=	6	VC2	0	=	0
37	3	=	3	VC3	0	=	0
39	7	=	7	VC4	0	=	0
41	8	=	8	VC5	0	=	0
43	5	=	5	PR1	23	=	240
45	1	=	1	PR2	0	=	0
47	32	=	32	PR3	0	=	0
49	5	=	5	PR4	0	=	0
61	6	=	6	PR5	0	=	0
62	45	=	45	TB	50	=	50
63	24	=	24	SL1	107	=	200
64	25	=	25	SL2	0	=	0
71	28	=	28	SL3	0	=	0
72	26	=	26	CH	0	=	0
73	7	=	7	MP	0	=	0
74	3	=	3	PW1	0	=	560
75	13	=	13	PW2	0	=	0
76	78	=	78	PW3	0	=	0
77	29	=	29	PW4	0	=	0
78	49	=	49	PW5	0	=	0
79	13	=	13	GL1	0	=	200
81	36	=	36	GL2	0	=	0
82	8	=	8	GL3	0	=	0
83	57	=	57				
84	52	=	52	Allocation of Top Value Sales at WC and EC/Gulf			
85	4	=	4		Actual		Sales Opp*1.25
86	11	=	11	VC1+PR1+PW1	583	=	860
87	5	=	5	VC2+PR2+PW2	0	=	0
90	15	=	15	VC3+PR3+PW3	0	=	0
95	2	=	2	VC4+PR4+PW4	0	=	0
98	2	=	2	VC5+PR5+PW5	0	=	0
				SL1+GL1	107	=	250
				SL2+GL2	0	=	0
				SL3+GL3	0	=	0

CWFW/4/5AD
(Block Summary)
12-Feb-96

Grade: CWFW/4/5AD

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 491	PR 92	TB 50	SL 107	CH 0	MP 0	PW 0	GL 0
00	3	3	0	0	0	0	0	0	0
01	1	0	0	0	1	0	0	0	0
03	20	0	0	0	20	0	0	0	0
05	8	0	0	8	0	0	0	0	0
07	4	0	0	4	0	0	0	0	0
09	11	0	0	7	4	0	0	0	0
11	9	0	0	0	9	0	0	0	0
13	3	0	0	0	3	0	0	0	0
15	3	0	3	0	0	0	0	0	0
17	8	0	8	0	0	0	0	0	0
19	13	13	0	0	0	0	0	0	0
21	14	14	0	0	0	0	0	0	0
23	4	0	4	0	0	0	0	0	0
25	1	0	1	0	0	0	0	0	0
27	2	0	2	0	0	0	0	0	0
29	6	0	6	0	0	0	0	0	0
31	12	0	12	0	0	0	0	0	0
33	13	0	13	0	0	0	0	0	0
35	6	0	6	0	0	0	0	0	0
37	3	0	3	0	0	0	0	0	0
39	7	0	7	0	0	0	0	0	0
41	8	0	8	0	0	0	0	0	0
43	5	0	5	0	0	0	0	0	0
45	1	0	1	0	0	0	0	0	0
47	32	32	0	0	0	0	0	0	0
49	5	5	0	0	0	0	0	0	0
61	6	0	0	6	0	0	0	0	0
62	45	0	0	0	45	0	0	0	0
63	24	0	0	0	24	0	0	0	0
64	25	0	0	25	0	0	0	0	0
71	28	28	0	0	0	0	0	0	0
72	26	26	0	0	0	0	0	0	0
73	7	7	0	0	0	0	0	0	0
74	3	3	0	0	0	0	0	0	0
75	13	13	0	0	0	0	0	0	0
76	78	78	0	0	0	0	0	0	0
77	29	29	0	0	0	0	0	0	0
78	49	49	0	0	0	0	0	0	0
79	13	13	0	0	0	0	0	0	0
81	36	36	0	0	0	0	0	0	0
82	8	8	0	0	0	0	0	0	0
83	57	57	0	0	0	0	0	0	0
84	52	52	0	0	0	0	0	0	0
85	4	4	0	0	0	0	0	0	0
86	11	11	0	0	0	0	0	0	0
87	5	5	0	0	0	0	0	0	0
90	15	0	15	0	0	0	0	0	0
95	2	0	2	0	0	0	0	0	0
98	2	0	2	0	0	0	0	0	0

CPSR
(Max net rev)
12-Feb-96

Grade: CPSR

Calculated Maximum Net Revenue

Total Net Revenue:

\$123,047

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments		
00	7	=	7		Actual	Constraint
01	0	=	0	VC	350	4,000
03	9	=	9	PR	105	1,720
05	18	=	18	TB	233	
07	7	=	7	SL	0	
09	15	=	15	CH	0	
11	29	=	29	MP	0	
13	52	=	52	PW	0	
15	21	=	21	GL	0	
17	2	=	2			
19	1	=	1	Dual Values & Ranges for WC Port Capacity		
21	1	=	1		Dual	Upper
23	14	=	14	VC	0.00	3,650.00
25	41	=	41	PR	0.00	1,614.91
27	5	=	5			
29	7	=	7	Actual Shipments Against Sales Opportunities		
31	3	=	3		Actual	Constraint
33	5	=	5	VC1	350	350
35	0	=	0	VC2	0	350
37	10	=	10	VC3	0	700
39	5	=	5	VC4	0	0
41	24	=	24	VC5	0	0
43	16	=	16	PR1	105	150
45	10	=	10	PR2	0	150
47	16	=	16	PR3	0	300
49	16	=	16	PR4	0	0
61	7	=	7	PR5	0	0
62	27	=	27	TB	233	233
63	52	=	52	SL1	0	100
64	33	=	33	SL2	0	500
71	4	=	4	SL3	0	0
72	11	=	11	CH	0	300
73	5	=	5	MP	0	0
74	13	=	13	PW1	0	350
75	5	=	5	PW2	0	350
76	5	=	5	PW3	0	700
77	1	=	1	PW4	0	0
78	1	=	1	PW5	0	0
79	4	=	4	GL1	0	100
81	1	=	1	GL2	0	500
82	16	=	16	GL3	0	0
83	21	=	21	Allocation of Top Value Sales at WC and EC/Gulf		
84	18	=	18		Actual	Sales Opp*1.25
85	16	=	16	VC1+PR1+PW1	455	538
86	7	=	7	VC2+PR2+PW2	0	538
87	25	=	25	VC3+PR3+PW3	0	1,075
90	49	=	49	VC4+PR4+PW4	0	0
95	17	=	17	VC5+PR5+PW5	0	0
98	17	=	17	SL1+GL1	0	125
				SL2+GL2	0	625
				SL3+GL3	0	0

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 350	PR 105	TB 233	SL 0	CH 0	MP 0	PW 0	GL 0
00	7	7	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	9	0	0	9	0	0	0	0	0
05	18	0	0	18	0	0	0	0	0
07	7	0	0	7	0	0	0	0	0
09	15	0	0	15	0	0	0	0	0
11	29	0	0	29	0	0	0	0	0
13	52	0	17	35	0	0	0	0	0
15	21	0	21	0	0	0	0	0	0
17	2	0	2	0	0	0	0	0	0
19	1	0	1	0	0	0	0	0	0
21	1	1	0	0	0	0	0	0	0
23	14	14	0	0	0	0	0	0	0
25	41	41	0	0	0	0	0	0	0
27	5	0	5	0	0	0	0	0	0
29	7	4	3	0	0	0	0	0	0
31	3	3	0	0	0	0	0	0	0
33	5	5	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0
37	10	10	0	0	0	0	0	0	0
39	5	0	5	0	0	0	0	0	0
41	24	0	24	0	0	0	0	0	0
43	16	16	0	0	0	0	0	0	0
45	10	0	10	0	0	0	0	0	0
47	16	16	0	0	0	0	0	0	0
49	16	16	0	0	0	0	0	0	0
61	7	0	0	7	0	0	0	0	0
62	27	0	0	27	0	0	0	0	0
63	52	0	0	52	0	0	0	0	0
64	33	0	0	33	0	0	0	0	0
71	4	4	0	0	0	0	0	0	0
72	11	11	0	0	0	0	0	0	0
73	5	5	0	0	0	0	0	0	0
74	13	13	0	0	0	0	0	0	0
75	5	5	0	0	0	0	0	0	0
76	5	5	0	0	0	0	0	0	0
77	1	1	0	0	0	0	0	0	0
78	1	1	0	0	0	0	0	0	0
79	4	4	0	0	0	0	0	0	0
81	1	1	0	0	0	0	0	0	0
82	16	16	0	0	0	0	0	0	0
83	21	21	0	0	0	0	0	0	0
84	18	18	0	0	0	0	0	0	0
85	16	16	0	0	0	0	0	0	0
86	7	7	0	0	0	0	0	0	0
87	25	25	0	0	0	0	0	0	0
90	49	49	0	0	0	0	0	0	0
95	17	17	0	0	0	0	0	0	0
98	17	0	17	0	0	0	0	0	0

CPSW
(Max net rev)
12-Feb-96

Grade: CPSW

Calculated Maximum Net Revenue

Total Net Revenue:

\$86,984

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments		
00	0	=	0		Actual	Constraint
01	0	=	0	VC	350	4,000
03	0	=	0	PR	90	1,720
05	1	=	1	TB	45	
07	0	=	0	SL	0	
09	5	=	5	CH	0	
11	5	=	5	MP	0	
13	0	=	0	PW	1	
15	10	=	10	GL	0	
17	26	=	26	Dual Values & Ranges for WC Port Capacity		
19	21	=	21		Dual	Upper
21	21	=	21	VC	0.00	3,650.00
23	14	=	14	PR	0.00	1,629.84
25	7	=	7	Actual Shipments Against Sales Opportunities		
27	3	=	3		Actual	Constraint
29	8	=	8	VC1	350	350
31	8	=	8	VC2	0	350
33	9	=	9	VC3	0	700
35	3	=	3	VC4	0	0
37	24	=	24	VC5	0	0
39	19	=	19	PR1	90	150
41	1	=	1	PR2	0	150
43	6	=	6	PR3	0	300
45	1	=	1	PR4	0	0
47	11	=	11	PR5	0	0
49	4	=	4	TB	45	233
61	0	=	0	SL1	0	100
62	16	=	16	SL2	0	500
63	3	=	3	SL3	0	0
64	25	=	25	CH	0	0
71	29	=	29	MP	0	0
72	14	=	14	PW1	1	350
73	19	=	19	PW2	0	350
74	12	=	12	PW3	0	700
75	22	=	22	PW4	0	0
76	36	=	36	PW5	0	0
77	24	=	24	GL1	0	100
78	30	=	30	GL2	0	500
79	3	=	3	GL3	0	0
81	18	=	18	Allocation of Top Value Sales at WC and EC/Gulf		
82	4	=	4		Actual	Sales Opp*1.25
83	16	=	16	VC1+PR1+PW1	441	538
84	3	=	3	VC2+PR2+PW2	0	538
85	0	=	0	VC3+PR3+PW3	0	1,075
86	1	=	1	VC4+PR4+PW4	0	0
87	3	=	3	VC5+PR5+PW5	0	0
90	1	=	1	SL1+GL1	0	125
95	0	=	0	SL2+GL2	0	625
98	0	=	0	SL3+GL3	0	0

CPSW
(Block Summary)
12-Feb-96

Grade: CPSW

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 350	PR 90	TB 45	SL 0	CH 0	MP 0	PW 1	GL 0
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0
05	1	0	0	1	0	0	0	0	0
07	0	0	0	0	0	0	0	0	0
09	5	5	0	0	0	0	0	0	0
11	5	0	5	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
15	10	0	10	0	0	0	0	0	0
17	26	0	26	0	0	0	0	0	0
19	21	21	0	0	0	0	0	0	0
21	21	21	0	0	0	0	0	0	0
23	14	0	14	0	0	0	0	0	0
25	7	0	7	0	0	0	0	0	0
27	3	0	3	0	0	0	0	0	0
29	8	8	0	0	0	0	0	0	0
31	8	8	0	0	0	0	0	0	0
33	9	9	0	0	0	0	0	0	0
35	3	3	0	0	0	0	0	0	0
37	24	24	0	0	0	0	0	0	0
39	19	0	19	0	0	0	0	0	0
41	1	0	1	0	0	0	0	0	0
43	6	2	4	0	0	0	0	0	0
45	1	0	1	0	0	0	0	0	0
47	11	11	0	0	0	0	0	0	0
49	4	4	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	16	0	0	16	0	0	0	0	0
63	3	0	0	3	0	0	0	0	0
64	25	0	0	25	0	0	0	0	0
71	29	29	0	0	0	0	0	0	0
72	14	14	0	0	0	0	0	0	0
73	19	19	0	0	0	0	0	0	0
74	12	12	0	0	0	0	0	0	0
75	22	22	0	0	0	0	0	0	0
76	36	36	0	0	0	0	0	0	0
77	24	24	0	0	0	0	0	0	0
78	30	30	0	0	0	0	0	0	0
79	3	3	0	0	0	0	0	0	0
81	18	18	0	0	0	0	0	0	0
82	4	4	0	0	0	0	0	0	0
83	16	16	0	0	0	0	0	0	0
84	3	3	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
86	1	0	0	0	0	0	0	0	0
87	3	3	0	0	0	0	0	1	0
90	1	0	1	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

CWES
(Max net rev)
12-Feb-96

Grade: **CWES**

Calculated Maximum Net Revenue

Total Net Revenue:

\$65,647

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	1	=	1		Actual		Constraint
01	1	=	1	VC	140	<=	4,000
03	32	=	32	PR	60	<=	1,720
05	16	=	16	TB	0		
07	4	=	4	SL	0		
09	8	=	8	CH	0		
11	12	=	12	MP	183		
13	33	=	33	PW	12		
15	13	=	13	GL	0		
17	4	=	4				
19	3	=	3	Dual Values & Ranges for WC Port Capacity			
21	2	=	2		Dual	Upper	Lower
23	3	=	3	VC	0.00	.....	3,860.00
25	15	=	15	PR	0.00	.....	1,660.00
27	2	=	2				
29	1	=	1	Actual Shipments Against Sales Opportunities			
31	2	=	2		Actual		Constraint
33	6	=	6	VC1	140	<=	140
35	1	=	1	VC2	0	<=	0
37	4	=	4	VC3	0	<=	0
39	1	=	1	VC4	0	<=	0
41	2	=	2	VC5	0	<=	0
43	0	=	0	PR1	60	<=	60
45	0	=	0	PR2	0	<=	0
47	2	=	2	PR3	0	<=	0
49	1	=	1	PR4	0	<=	0
61	13	=	13	PR5	0	<=	0
62	69	=	69	TB	0	<=	0
63	40	=	40	SL1	0	<=	0
64	26	=	26	SL2	0	<=	0
71	5	=	5	SL3	0	<=	0
72	11	=	11	CH	0	<=	0
73	8	=	8	MP	183	<=	200
74	5	=	5	PW1	12	<=	140
75	4	=	4	PW2	0	<=	0
76	3	=	3	PW3	0	<=	0
77	2	=	2	PW4	0	<=	0
78	7	=	7	PW5	0	<=	0
79	1	=	1	GL1	0	<=	0
81	0	=	0	GL2	0	<=	0
82	1	=	1	GL3	0	<=	0
83	5	=	5				
84	4	=	4	Allocation of Top Value Sales at WC and EC/Gulf			
85	0	=	0		Actual		Sales Opp*1.25
86	1	=	1	VC1+PR1+PW1	212	<=	215
87	2	=	2	VC2+PR2+PW2	0	<=	0
90	15	=	15	VC3+PR3+PW3	0	<=	0
95	2	=	2	VC4+PR4+PW4	0	<=	0
98	2	=	2	VC5+PR5+PW5	0	<=	0
				SL1+GL1	0	<=	0
				SL2+GL2	0	<=	0
				SL3+GL3	0	<=	0

CWES
(Block Summary)
12-Feb-96

Grade: CWES

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 140	PR 60	TB 0	SL 0	CH 0	MP 183	PW 12	GL 0
00	1	1	0	0	0	0	0	0	0
01	1	0	0	0	0	0	1	0	0
03	32	0	0	0	0	0	32	0	0
05	16	0	0	0	0	0	16	0	0
07	4	4	0	0	0	0	0	0	0
09	8	0	0	0	0	0	8	0	0
11	12	0	12	0	0	0	0	0	0
13	33	0	21	0	0	0	0	12	0
15	13	0	13	0	0	0	0	0	0
17	4	4	0	0	0	0	0	0	0
19	3	3	0	0	0	0	0	0	0
21	2	2	0	0	0	0	0	0	0
23	3	0	3	0	0	0	0	0	0
25	15	15	0	0	0	0	0	0	0
27	2	0	2	0	0	0	0	0	0
29	1	1	0	0	0	0	0	0	0
31	2	2	0	0	0	0	0	0	0
33	6	6	0	0	0	0	0	0	0
35	1	1	0	0	0	0	0	0	0
37	4	2	2	0	0	0	0	0	0
39	1	0	1	0	0	0	0	0	0
41	2	0	2	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	2	2	0	0	0	0	0	0	0
49	1	1	0	0	0	0	0	0	0
61	13	0	0	0	0	0	0	0	0
62	69	0	0	0	0	0	13	0	0
63	40	0	0	0	0	0	69	0	0
64	26	21	0	0	0	0	40	0	0
71	5	5	0	0	0	0	4	0	0
72	11	11	0	0	0	0	0	0	0
73	8	8	0	0	0	0	0	0	0
74	5	5	0	0	0	0	0	0	0
75	4	4	0	0	0	0	0	0	0
76	3	3	0	0	0	0	0	0	0
77	2	2	0	0	0	0	0	0	0
78	7	7	0	0	0	0	0	0	0
79	1	1	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0
82	1	1	0	0	0	0	0	0	0
83	5	5	0	0	0	0	0	0	0
84	4	4	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
86	1	1	0	0	0	0	0	0	0
87	2	2	0	0	0	0	0	0	0
90	15	15	0	0	0	0	0	0	0
95	2	0	2	0	0	0	0	0	0
98	2	0	2	0	0	0	0	0	0

CWSWS
(Max net rev)
12-Feb-96

Grade: **CWSWS**

Calculated Maximum Net Revenue

Total Net Revenue:

\$46,297

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0		Actual		Constraint
01	0	=	0	VC	247	<=	4,000
03	0	=	0	PR	0	<=	1,720
05	0	=	0	TB	0		
07	0	=	0	SL	0		
09	0	=	0	CH	0		
11	0	=	0	MP	0		
13	0	=	0	PW	0		
15	0	=	0	GL	0		
17	0	=	0				
19	0	=	0	Dual Values & Ranges for WC Port Capacity			
21	0	=	0		Dual	Upper	Lower
23	0	=	0	VC	0.00	.....	3,753.18
25	0	=	0	PR	0.00	.....	1,720.00
27	0	=	0				
29	0	=	0	Actual Shipments Against Sales Opportunities			
31	0	=	0		Actual		Constraint
33	0	=	0	VC1	247	<=	350
35	0	=	0	VC2	0	<=	350
37	0	=	0	VC3	0	<=	700
39	0	=	0	VC4	0	=<=	0
41	0	=	0	VC5	0	=<=	0
43	0	=	0	PR1	0	<=	150
45	0	=	0	PR2	0	<=	150
47	1	=	1	PR3	0	<=	300
49	0	=	0	PR4	0	=<=	0
61	0	=	0	PR5	0	=<=	0
62	0	=	0	TB	0	<=	233
63	0	=	0	SL1	0	<=	100
64	0	=	0	SL2	0	<=	500
71	0	=	0	SL3	0	=<=	0
72	0	=	0	CH	0	=<=	0
73	0	=	0	MP	0	=<=	0
74	0	=	0	PW1	0	<=	350
75	0	=	0	PW2	0	<=	350
76	0	=	0	PW3	0	<=	700
77	0	=	0	PW4	0	=<=	0
78	0	=	0	PW5	0	=<=	0
79	0	=	0	GL1	0	<=	100
81	11	=	11	GL2	0	<=	500
82	18	=	18	GL3	0	=<=	0
83	147	=	147	Allocation of Top Value Sales at WC and EC/Gulf			
84	70	=	70		Actual		Sales Opp*1.25
85	0	=	0	VC1+PR1+PW1	247	<=	538
86	0	=	0	VC2+PR2+PW2	0	<=	538
87	0	=	0	VC3+PR3+PW3	0	<=	1,075
90	0	=	0	VC4+PR4+PW4	0	=<=	0
95	0	=	0	VC5+PR5+PW5	0	=<=	0
98	0	=	0	SL1+GL1	0	<=	125
				SL2+GL2	0	<=	625
				SL3+GL3	0	=<=	0

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 247	PR 0	TB 0	SL 0	CH 0	MP 0	PW 0	GL 0
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0
05	0	0	0	0	0	0	0	0	0
07	0	0	0	0	0	0	0	0	0
09	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	1	1	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0
77	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0	0	0
81	11	11	0	0	0	0	0	0	0
82	18	18	0	0	0	0	0	0	0
83	147	147	0	0	0	0	0	0	0
84	70	70	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

CWRW
(Max net rev)
12-Feb-96

Grade: CWRW

Calculated Maximum Net Revenue

Total Net Revenue:

\$13,347

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0		Actual		Constraint
01	0	=	0	VC	72	≤	4,000
03	0	=	0	PR	0	≤	1,720
05	0	=	0	TB	0		
07	0	=	0	SL	0		
09	2	=	0	CH	0		
11	0	=	2	MP	0		
13	0	=	0	PW	0		
15	0	=	0	GL	0		
17	0	=	0				
19	1	=	1	Dual Values & Ranges for WC Port Capacity			
21	0	=	0		Dual	Upper	Lower
23	0	=	0	VC	0.00	.....	3,927.86
25	0	=	0	PR	0.00	.....	1,720.00
27	0	=	0				
29	0	=	0	Actual Shipments Against Sales Opportunities			
31	0	=	0		Actual		Constraint
33	0	=	0	VC1	72	≤	350
35	0	=	0	VC2	0	≤	350
37	0	=	0	VC3	0	≤	700
39	0	=	0	VC4	0	≤	0
41	0	=	0	VC5	0	≤	0
43	0	=	0	PR1	0	≤	150
45	0	=	0	PR2	0	≤	150
47	1	=	1	PR3	0	≤	300
49	1	=	1	PR4	0	≤	0
61	0	=	0	PR5	0	≤	0
62	1	=	1	TB	0	≤	233
63	0	=	0	SL1	0	≤	100
64	1	=	1	SL2	0	≤	500
71	1	=	1	SL3	0	≤	0
72	0	=	0	CH	0	≤	0
73	0	=	0	MP	0	≤	0
74	1	=	1	PW1	0	≤	350
75	0	=	0	PW2	0	≤	350
76	0	=	0	PW3	0	≤	700
77	9	=	9	PW4	0	≤	0
78	1	=	1	PW5	0	≤	0
79	0	=	0	GL1	0	≤	100
81	4	=	4	GL2	0	≤	500
82	0	=	0	GL3	0	≤	0
83	34	=	34	Allocation of Top Value Sales at WC and EC/Gulf			
84	9	=	9		Actual	Sales Opp*1.25	
85	1	=	1	VC1+PR1+PW1	72	≤	538
86	0	=	0	VC2+PR2+PW2	0	≤	538
87	0	=	0	VC3+PR3+PW3	0	≤	1,075
90	1	=	1	VC4+PR4+PW4	0	≤	0
95	0	=	0	VC5+PR5+PW5	0	≤	0
98	0	=	0	SL1+GL1	0	≤	125
				SL2+GL2	0	≤	625
				SL3+GL3	0	≤	0

CWRW
(Block Summary)
12-Feb-96

Grade: CWRW

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 72	PR 0	TB 0	SL 0	CH 0	MP 0	PW 0	GL 0
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0
05	0	0	0	0	0	0	0	0	0
07	0	0	0	0	0	0	0	0	0
09	2	2	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
19	1	1	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	1	1	0	0	0	0	0	0	0
49	1	1	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	1	1	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0
64	1	1	0	0	0	0	0	0	0
71	1	1	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0
74	1	1	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0
77	9	9	0	0	0	0	0	0	0
78	1	1	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0	0	0
81	4	4	0	0	0	0	0	0	0
82	0	0	0	0	0	0	0	0	0
83	34	34	0	0	0	0	0	0	0
84	9	9	0	0	0	0	0	0	0
85	1	1	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0
90	1	1	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

1/2CWAD
(Max net rev)
12-Feb-96

Grade: 1/2CWAD

Calculated Maximum Net Revenue

Total Net Revenue:

\$646,333

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments		
00	0	=	0		Actual	Constraint
01	0	=	0	VC	228	4,000
03	1	=	1	PR	53	1,720
05	0	=	0	TB	160	
07	0	=	0	SL	1,425	
09	13	=	13	CH	0	
11	1	=	1	MP	400	
13	1	=	1	PW	70	
15	1	=	1	GL	303	
17	23	=	23	Dual Values & Ranges for WC Port Capacity		
19	257	=	257		Dual	Upper
21	71	=	71	VC	0.00	3,772.00
23	5	=	5	PR	0.00	1,667.00
25	1	=	1	Actual Shipments Against Sales Opportunities		
27	3	=	3		Actual	Constraint
29	1	=	1	VC1	105	105
31	51	=	51	VC2	25	25
33	24	=	24	VC3	98	98
35	32	=	32	VC4	0	0
37	2	=	2	VC5	0	0
39	10	=	10	PR1	0	45
41	0	=	0	PR2	11	11
43	1	=	1	PR3	42	42
45	0	=	0	PR4	0	0
47	114	=	114	PR5	0	0
49	5	=	5	TB	160	160
61	0	=	0	SL1	700	700
62	9	=	9	SL2	225	225
63	0	=	0	SL3	500	500
64	51	=	51	CH	0	0
71	248	=	248	MP	400	400
72	95	=	95	PW1	56	105
73	17	=	17	PW2	3	25
74	2	=	2	PW3	11	98
75	7	=	7	PW4	0	0
76	75	=	75	PW5	0	0
77	331	=	331	GL1	175	700
78	301	=	301	GL2	56	225
79	46	=	46	GL3	72	500
81	425	=	425	Allocation of Top Value Sales at WC and EC/Gulf		
82	37	=	37		Actual	Sales Opp*1.25
83	267	=	267	VC1+PR1+PW1	161	161
84	111	=	111	VC2+PR2+PW2	39	39
85	1	=	1	VC3+PR3+PW3	151	151
86	1	=	1	VC4+PR4+PW4	0	0
87	0	=	0	VC5+PR5+PW5	0	0
90	0	=	0	SL1+GL1	875	875
95	0	=	0	SL2+GL2	281	281
98	0	=	0	SL3+GL3	572	625

1/2CWAD
(Block Summary)
12-Feb-96

Grade: 1/2CWAD

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 228	PR 53	TB 160	SL 1,425	CH 0	MP 400	PW 70	GL 303
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	1	0	0	0	0	0	0	0	0
05	0	0	0	0	0	0	0	0	1
07	0	0	0	0	0	0	0	0	0
09	13	0	0	0	0	0	0	0	0
11	1	0	0	0	0	0	0	0	13
13	1	0	0	0	0	0	0	0	1
15	1	0	0	1	0	0	0	0	1
17	23	0	0	23	0	0	0	0	0
19	257	0	0	0	257	0	0	0	0
21	71	0	0	0	71	0	0	0	0
23	5	0	0	0	5	0	0	0	0
25	1	0	0	0	1	0	0	0	0
27	3	0	0	3	0	0	0	0	0
29	1	0	1	0	0	0	0	0	0
31	51	0	0	0	0	0	0	0	0
33	24	0	0	0	0	0	0	0	51
35	32	0	0	0	0	0	0	0	24
37	2	0	2	0	0	0	0	0	32
39	10	0	10	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0
43	1	0	1	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	114	0	35	79	0	0	0	0	0
49	5	0	5	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	9	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	9
64	51	0	0	0	0	0	0	0	0
71	248	0	0	0	0	0	0	0	51
72	95	0	0	0	0	0	223	0	25
73	17	0	0	0	0	0	0	0	95
74	2	0	0	0	17	0	0	0	0
75	7	0	0	0	2	0	0	0	0
76	75	0	0	0	0	0	0	0	0
77	331	0	0	0	75	0	0	0	0
78	301	0	0	47	331	0	0	0	0
79	46	0	0	0	77	0	177	0	0
81	425	0	0	0	46	0	0	0	0
82	37	37	0	0	425	0	0	0	0
83	267	79	0	0	0	0	0	0	0
84	111	111	0	0	119	0	0	69	0
85	1	1	0	0	0	0	0	0	0
86	1	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	1	0
90	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

3CWAD
(Max net rev)
12-Feb-96

Grade: **3CWAD**

Calculated Maximum Net Revenue

Total Net Revenue:

\$279,339

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0		Actual		Constraint
01	0	=	0	VC	70	<=	4,000
03	4	=	4	PR	8	<=	1,720
05	4	=	4	TB	0		
07	2	=	2	SL	1,122		
09	20	=	20	CH	0		
11	10	=	10	MP	0		
13	6	=	6	PW	11		
15	2	=	2	GL	8		
17	25	=	25				
19	86	=	86	Dual Values & Ranges for WC Port Capacity			
21	39	=	39		Dual	Upper	Lower
23	4	=	4	VC	0.00	.....	3,930.00
25	3	=	3	PR	0.00	.....	1,711.80
27	3	=	3				
29	2	=	2	Actual Shipments Against Sales Opportunities			
31	20	=	20		Actual		Constraint
33	47	=	47	VC1	70	<=	70
35	26	=	26	VC2	0	<=	0
37	0	=	0	VC3	0	<=	0
39	3	=	3	VC4	0	<=	0
41	0	=	0	VC5	0	<=	0
43	0	=	0	PR1	8	<=	30
45	0	=	0	PR2	0	<=	0
47	26	=	26	PR3	0	<=	0
49	3	=	3	PR4	0	<=	0
61	0	=	0	PR5	0	<=	0
62	29	=	29	TB	0	<=	0
63	10	=	10	SL1	80	<=	80
64	70	=	70	SL2	1,042	<=	1,820
71	138	=	138	SL3	0	<=	0
72	145	=	145	CH	0	<=	0
73	60	=	60	MP	0	<=	0
74	5	=	5	PW1	11	<=	70
75	11	=	11	PW2	0	<=	0
76	21	=	21	PW3	0	<=	0
77	52	=	52	PW4	0	<=	0
78	184	=	184	PW5	0	<=	0
79	26	=	26	GL1	8	<=	80
81	54	=	54	GL2	0	<=	1,820
82	8	=	8	GL3	0	<=	0
83	50	=	50				
84	21	=	21	Allocation of Top Value Sales at WC and EC/Gulf			
85	0	=	0		Actual	Sales Opp*1.25	
86	0	=	0	VC1+PR1+PW1	89	<=	108
87	0	=	0	VC2+PR2+PW2	0	<=	0
90	0	=	0	VC3+PR3+PW3	0	<=	0
95	0	=	0	VC4+PR4+PW4	0	<=	0
98	0	=	0	VC5+PR5+PW5	0	<=	0
				SL1+GL1	88	<=	100
				SL2+GL2	1,042	<=	2,275
				SL3+GL3	0	<=	0

3CWAD
(Block Summary)
12-Feb-96

Grade: 3CWAD

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 70	PR 8	TB 0	SL 1,122	CH 0	MP 0	PW 11	GL 8
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	4	0	0	0	0	0	0	0	0
05	4	0	0	0	0	0	0	0	4
07	2	0	0	0	2	0	0	0	4
09	20	0	0	0	20	0	0	0	0
11	10	0	0	0	10	0	0	0	0
13	6	0	0	0	6	0	0	0	0
15	2	0	0	0	2	0	0	0	0
17	25	0	0	0	25	0	0	0	0
19	86	0	0	0	86	0	0	0	0
21	39	0	0	0	39	0	0	0	0
23	4	0	0	0	4	0	0	0	0
25	3	0	0	0	3	0	0	0	0
27	3	0	0	0	3	0	0	0	0
29	2	0	2	0	0	0	0	0	0
31	20	0	0	0	20	0	0	0	0
33	47	0	0	0	47	0	0	0	0
35	26	0	0	0	26	0	0	0	0
37	0	0	0	0	0	0	0	0	0
39	3	0	3	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	26	0	0	0	26	0	0	0	0
49	3	0	3	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	29	0	0	0	29	0	0	0	0
63	10	0	0	0	10	0	0	0	0
64	70	0	0	0	70	0	0	0	0
71	138	0	0	0	138	0	0	0	0
72	145	0	0	0	145	0	0	0	0
73	60	0	0	0	60	0	0	0	0
74	5	0	0	0	5	0	0	0	0
75	11	0	0	0	11	0	0	0	0
76	21	0	0	0	21	0	0	0	0
77	52	0	0	0	52	0	0	0	0
78	184	0	0	0	184	0	0	0	0
79	26	0	0	0	26	0	0	0	0
81	54	0	0	0	54	0	0	0	0
82	8	8	0	0	0	0	0	0	0
83	50	40	0	0	0	0	0	0	0
84	21	21	0	0	0	0	0	10	0
85	0	0	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

Appendix V

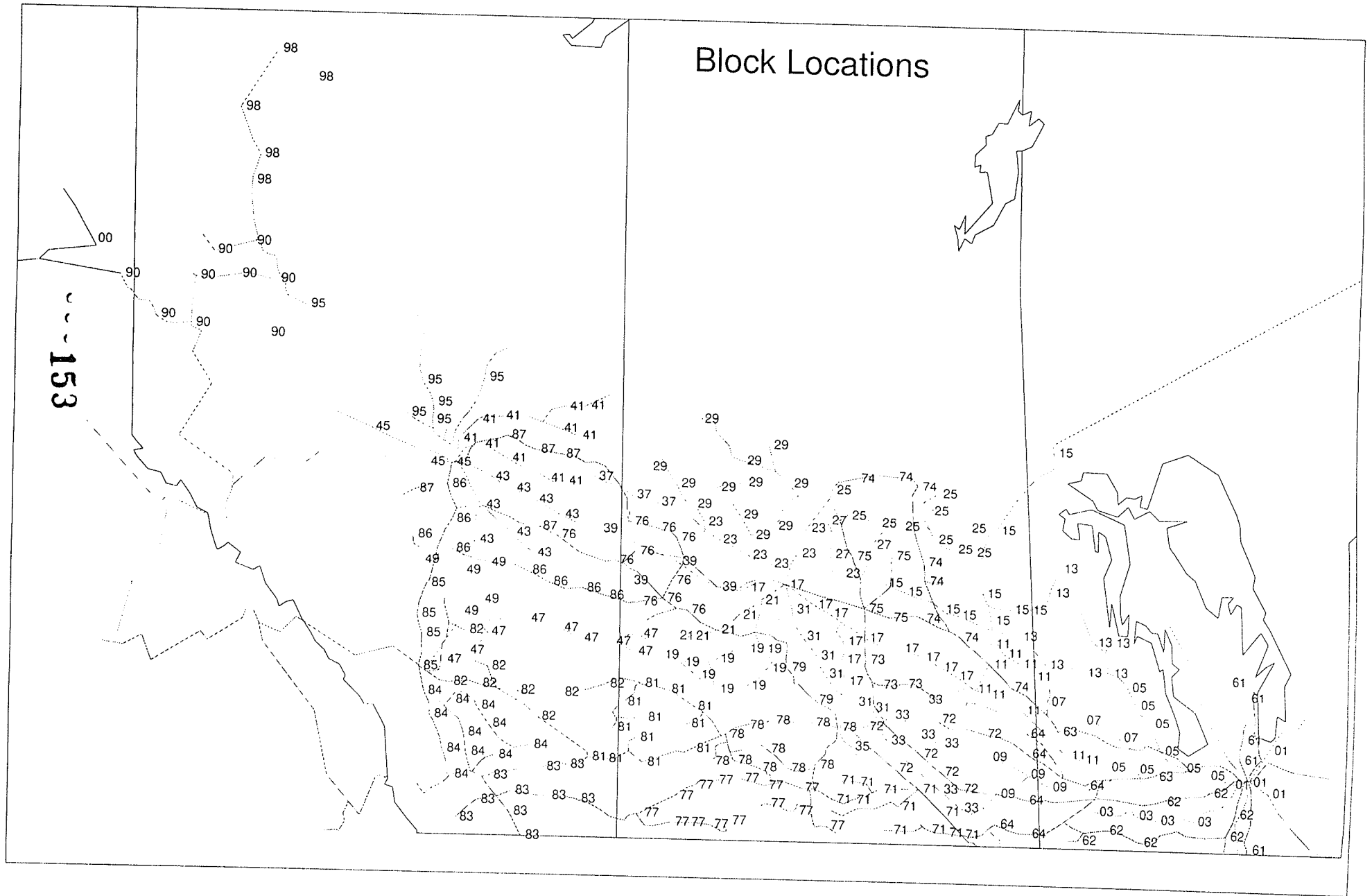
WGTA Scenario: Results by Grade

Interpretation of Appendix V

- To assist in interpretation of the following tables, the first page is a map indicating location of each shipping block. The accompanying table lists approximate location of each block.
- Grades are identified in top right hand corner of each page. Each grade's results takes two pages. First page lists objective function value, constraints and shipments by port. Second page summarizes optimum shipments from each block to each port.
- The first page for each grade contains objective function value in the "total net revenue" cell. The constraint contained on the left hand side of the page indicates that all supplies ("Balance to Move") have been shipped. The first set of constraints on the right side of the page summarizes the actual shipments to each port, with the volume constraints for Vancouver and Prince Rupert listed. Below that are the dual values and ranges for that capacity constraint. Next is the constraint that actual shipments against each sales opportunity cannot exceed the maximum identified demand. Finally, in bottom right corner, total west coast and total east coast sales (which each include a previously-unutilized U.S. port) cannot exceed 125 percent of identified sales opportunities at the Canadian ports.

Block Locations

153



<u>Block #</u>	<u>Approximate Location</u>	<u>Block #</u>	<u>Approximate Location</u>
00	Peace River	61	MB
01	MB	62	MB
03	MB	63	MB
05	MB	64	MB, SS
07	MB	71	SS
09	SS, MB	72	SS
11	SS, MB	73	SS
13	MB, SS	74	SS, NS
15	SS, NS, MB	75	NS, SS
17	SS, NS	76	NS, NA, SS
19	SS	77	SS
21	SS	78	SS
23	NS	79	SS
25	NS	81	SS
27	NS	82	SA
29	NS	83	SA
31	SS	84	SA
33	SS	85	NA, SA
35	SS	86	NA
37	NS, NA	87	NA
39	NS	90	Peace River
41	NA	95	NA, Peace River
43	NA	98	Peace River
45	NA		
47	SA, SS		
49	NA		

Abbreviations:

MB	Manitoba
SS	Southern Saskatchewan (southern half of grain area)
NS	Northern Saskatchewan
SA	Southern Alberta
NA	Northern Alberta

(Max net rev)
28-Nov-95

Grade: ICWRS

Calculated Maximum Net Revenue

Total Net Revenue:

\$1,365,140

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	14	=	14		Actual		Constraint
01	1	=	1	VC	3,461	<=	4,000
03	18	=	18	PR	1,720	=<=	1,720
05	40	=	40	TB	200		
07	11	=	11	SL	1,000		
09	99	=	99	CH	0		
11	36	=	36	MP	204		
13	46	=	46	PW	278		
15	75	=	75	GL	75		
17	194	=	194				
19	169	=	169	Dual Values & Ranges for WC Port Capacity			
21	170	=	170		Dual	Upper	Lower
23	259	=	259	VC	0.00	.....	538.62
25	141	=	141	PR	2.76	58.39	3.68
27	92	=	92				
29	166	=	166	Actual Shipments Against Sales Opportunities			
31	224	=	224		Actual		Constraint
33	80	=	80	VC1	980	=<=	980
35	38	=	38	VC2	280	=<=	280
37	168	=	168	VC3	630	=<=	630
39	156	=	156	VC4	700	=<=	700
41	96	=	96	VC5	871	<=	2,100
43	87	=	87	PR1	420	=<=	420
45	12	=	12	PR2	120	=<=	120
47	238	=	238	PR3	270	=<=	270
49	42	=	42	PR4	300	=<=	300
61	34	=	34	PR5	610	<=	900
62	113	=	113	TB	200	=<=	200
63	36	=	36	SL1	300	=<=	300
64	202	=	202	SL2	500	=<=	500
71	443	=	443	SL3	200	=<=	200
72	179	=	179	CH	0	=<=	0
73	123	=	123	MP	204	<=	500
74	124	=	124	PW1	105	<=	980
75	151	=	151	PW2	30	<=	280
76	382	=	382	PW3	68	<=	630
77	461	=	461	PW4	75	<=	700
78	440	=	440	PW5	0	<=	2,100
79	168	=	168	GL1	75	<=	300
81	297	=	297	GL2	0	<=	500
82	159	=	159	GL3	0	<=	200
83	260	=	260				
84	254	=	254	Allocation of Top Value Sales at WC and EC/Gulf			
85	37	=	37		Actual		Sales Opp*1.25
86	25	=	25	VC1+PR1+PW1	1,505	=<=	1,505
87	133	=	133	VC2+PR2+PW2	430	=<=	430
90	167	=	167	VC3+PR3+PW3	968	=<=	968
95	54	=	54	VC4+PR4+PW4	1,075	=<=	1,075
98	24	=	24	VC5+PR5+PW5	1,481	<=	3,225
				SL1+GL1	375	=<=	375
				SL2+GL2	500	<=	625
				SL3+GL3	200	<=	250

Shipments by Corridor (Summary)

Shipping Block	Block Total	VC	PR	TB	SL	CH	MP	PW	GL
Subtotal:		3,461	1,720	200	1,000	0	204	278	75
00	14	14	0	0	0	0	0	0	0
01	1	0	0	0	0	0	0	0	0
03	18	0	0	0	0	0	0	0	1
05	40	0	0	0	0	0	18	0	0
07	11	0	0	11	0	0	2	0	38
09	99	0	0	0	99	0	0	0	0
11	36	0	0	0	36	0	0	0	0
13	46	0	0	0	46	0	0	0	0
15	75	0	0	0	75	0	0	0	0
17	194	46	148	0	0	0	0	0	0
19	169	0	169	0	0	0	0	0	0
21	170	170	0	0	0	0	0	0	0
23	259	259	0	0	0	0	0	0	0
25	141	141	0	0	0	0	0	0	0
27	92	0	92	0	0	0	0	0	0
29	166	166	0	0	0	0	0	0	0
31	224	224	0	0	0	0	0	0	0
33	80	0	0	0	80	0	0	0	0
35	38	0	0	0	0	0	0	0	0
37	168	157	11	0	0	0	38	0	0
39	156	156	0	0	0	0	0	0	0
41	96	61	35	0	0	0	0	0	0
43	87	54	34	0	0	0	0	0	0
45	12	0	12	0	0	0	0	0	0
47	238	238	0	0	0	0	0	0	0
49	42	0	42	0	0	0	0	0	0
61	34	0	0	0	0	0	0	0	0
62	113	0	0	0	0	0	34	0	0
63	36	0	0	0	0	0	113	0	0
64	202	0	0	65	137	0	0	0	36
71	443	0	0	0	443	0	0	0	0
72	179	0	94	0	85	0	0	0	0
73	123	0	123	0	0	0	0	0	0
74	124	0	0	124	0	0	0	0	0
75	151	0	151	0	0	0	0	0	0
76	382	382	0	0	0	0	0	0	0
77	461	461	0	0	0	0	0	0	0
78	440	288	152	0	0	0	0	0	0
79	168	168	0	0	0	0	0	0	0
81	297	191	106	0	0	0	0	0	0
82	159	0	159	0	0	0	0	0	0
83	260	0	0	0	0	0	0	0	0
84	254	94	143	0	0	0	0	260	0
85	37	0	37	0	0	0	0	18	0
86	25	0	25	0	0	0	0	0	0
87	133	0	133	0	0	0	0	0	0
90	167	167	0	0	0	0	0	0	0
95	54	0	54	0	0	0	0	0	0
98	24	24	0	0	0	0	0	0	0

(Max net rev)
28-Nov-95

Grade: 2CWRS

Calculated Maximum Net Revenue

Total Net Revenue:

\$698,589

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	12	=	12	VC	Actual		Constraint
01	31	=	31	PR	1,824	<=	4,000
03	207	=	207	TB	390	<=	1,720
05	114	=	114	SL	534		
07	45	=	45	CH	1,000		
09	65	=	65	MP	300		
11	117	=	117	PW	0		
13	178	=	178	GL	60		
15	151	=	151		0		
17	105	=	105	Dual Values & Ranges for WC Port Capacity			
19	22	=	22		Dual	Upper	Lower
21	17	=	17	VC	0.00	.....	2,175.56
23	59	=	59	PR	0.00	.....	1,330.00
25	151	=	151	Actual Shipments Against Sales Opportunities			
27	37	=	37		Actual		Constraint
29	51	=	51	VC1	280	<=	280
31	11	=	11	VC2	280	<=	280
33	59	=	59	VC3	350	<=	350
35	5	=	5	VC4	914	<=	1,050
37	40	=	40	VC5	0	<=	0
39	50	=	50	PR1	120	<=	120
41	83	=	83	PR2	120	<=	120
43	153	=	153	PR3	150	<=	150
45	10	=	10	PR4	0	<=	450
47	83	=	83	PR5	0	<=	0
49	88	=	88	TB	534	<=	534
61	130	=	130	SL1	500	<=	500
62	395	=	395	SL2	500	<=	500
63	222	=	222	SL3	0	<=	0
64	178	=	178	CH	300	<=	300
71	52	=	52	MP	0	<=	300
72	99	=	99	PW1	30	<=	280
73	90	=	90	PW2	30	<=	280
74	150	=	150	PW3	0	<=	350
75	59	=	59	PW4	0	<=	1,050
76	125	=	125	PW5	0	<=	0
77	32	=	32	GL1	0	<=	500
78	74	=	74	GL2	0	<=	500
79	11	=	11	GL3	0	<=	0
81	23	=	23	Allocation of Top Value Sales at WC and EC/Gulf			
82	74	=	74		Actual		Sales Opp*1.25
83	34	=	34	VC1+PR1+PW1	430	<=	430
84	35	=	35	VC2+PR2+PW2	430	<=	430
85	31	=	31	VC3+PR3+PW3	500	<=	538
86	64	=	64	VC4+PR4+PW4	914	<=	1,613
87	123	=	123	VC5+PR5+PW5	0	<=	0
90	132	=	132	SL1+GL1	500	<=	625
95	22	=	22	SL2+GL2	500	<=	625
98	10	=	10	SL3+GL3	0	<=	0

THESWGTA
(Block Summary)
07-Dec-95

Grade: 2CWRS

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 1,824	PR 390	TB 534	SL 1,000	CH 300	MP 0	PW 60	GL 0
00	12	0	12	0	0	0	0	0	0
01	31	0	0	31	0	0	0	0	0
03	207	0	0	207	0	0	0	0	0
05	114	0	0	48	66	0	0	0	0
07	45	0	0	0	45	0	0	0	0
09	65	0	0	0	65	0	0	0	0
11	117	0	0	0	0	117	0	0	0
13	178	0	0	0	147	31	0	0	0
15	151	0	0	0	0	151	0	0	0
17	105	84	21	0	0	0	0	0	0
19	22	22	0	0	0	0	0	0	0
21	17	17	0	0	0	0	0	0	0
23	59	0	59	0	0	0	0	0	0
25	151	150	0	0	0	0	0	0	0
27	37	37	0	0	0	0	0	0	0
29	51	51	0	0	0	0	0	0	0
31	11	0	11	0	0	0	0	0	0
33	59	59	0	0	0	0	0	0	0
35	5	0	0	0	0	0	0	0	0
37	40	40	0	0	0	0	0	5	0
39	50	50	0	0	0	0	0	0	0
41	83	83	0	0	0	0	0	0	0
43	153	143	10	0	0	0	0	0	0
45	10	10	0	0	0	0	0	0	0
47	83	26	58	0	0	0	0	0	0
49	88	71	18	0	0	0	0	0	0
61	130	0	0	0	130	0	0	0	0
62	395	0	0	70	325	0	0	0	0
63	222	0	0	0	222	0	0	0	0
64	178	0	0	178	0	0	0	0	0
71	52	0	52	0	0	0	0	0	0
72	99	99	0	0	0	0	0	0	0
73	90	90	0	0	0	0	0	0	0
74	150	120	30	0	0	0	0	0	0
75	59	59	0	0	0	0	0	0	0
76	125	107	17	0	0	0	0	0	0
77	32	32	0	0	0	0	0	0	0
78	74	74	0	0	0	0	0	0	0
79	11	0	11	0	0	0	0	0	0
81	23	0	23	0	0	0	0	0	0
82	74	74	0	0	0	0	0	0	0
83	34	0	0	0	0	0	0	0	0
84	35	0	15	0	0	0	0	34	0
85	31	0	31	0	0	0	0	21	0
86	64	64	0	0	0	0	0	0	0
87	123	123	0	0	0	0	0	0	0
90	132	132	0	0	0	0	0	0	0
95	22	0	22	0	0	0	0	0	0
98	10	10	0	0	0	0	0	0	0

(Max net rev)
28-Nov-95

Grade: 3CWR5

Calculated Maximum Net Revenue

Total Net Revenue:

\$266,046

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	3	=	3		Actual		Constraint
01	11	=	11	VC	700	<=	4,000
03	28	=	28	PR	300	<=	1,720
05	22	=	22	TB	233		
07	14	=	14	SL	0		
09	15	=	15	CH	137		
11	14	=	14	MP	0		
13	33	=	33	PW	56		
15	19	=	19	GL	0		
17	19	=	19				
19	14	=	14	Dual Values & Ranges for WC Port Capacity			
21	13	=	13		Dual	Upper	Lower
23	17	=	17	VC	0.00	.....	3,300.00
25	20	=	20	PR	0.00	.....	1,420.00
27	7	=	7				
29	29	=	29	Actual Shipments Against Sales Opportunities			
31	12	=	12		Actual		Constraint
33	18	=	18	VC1	350	<=	350
35	3	=	3	VC2	350	<=	350
37	24	=	24	VC3	0	<=	700
39	14	=	14	VC4	0	<=	0
41	27	=	27	VC5	0	<=	0
43	59	=	59	PR1	150	<=	150
45	3	=	3	PR2	150	<=	150
47	72	=	72	PR3	0	<=	300
49	112	=	112	PR4	0	<=	0
61	18	=	18	PR5	0	<=	0
62	38	=	38	TB	233	<=	233
63	40	=	40	SL1	0	<=	100
64	35	=	35	SL2	0	<=	500
71	37	=	37	SL3	0	<=	0
72	44	=	44	CH	137	<=	300
73	10	=	10	MP	0	<=	0
74	24	=	24	PW1	38	<=	350
75	13	=	13	PW2	19	<=	350
76	64	=	64	PW3	0	<=	700
77	41	=	41	PW4	0	<=	0
78	46	=	46	PW5	0	<=	0
79	2	=	2	GL1	0	<=	100
81	11	=	11	GL2	0	<=	500
82	42	=	42	GL3	0	<=	0
83	34	=	34				
84	19	=	19	Allocation of Top Value Sales at WC and EC/Gulf			
85	31	=	31		Actual		Sales Opp*1.25
86	57	=	57	VC1+PR1+PW1	537	<=	538
87	57	=	57	VC2+PR2+PW2	519	<=	538
90	111	=	111	VC3+PR3+PW3	0	<=	1,075
95	13	=	13	VC4+PR4+PW4	0	<=	0
98	19	=	19	VC5+PR5+PW5	0	<=	0
				SL1+GL1	0	<=	125
				SL2+GL2	0	<=	625
				SL3+GL3	0	<=	0

THESWGTA
(Block Summary)
07-Dec-95

Grade: **3CWR5**

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 700	PR 300	TB 233	SL 0	CH 137	MP 0	PW 56	GL 0
00	3	0	3	0	0	0	0	0	0
01	11	0	0	11	0	0	0	0	0
03	28	0	0	28	0	0	0	0	0
05	22	0	0	22	0	0	0	0	0
07	14	0	0	14	0	0	0	0	0
09	15	0	0	15	0	0	0	0	0
11	14	0	0	0	0	14	0	0	0
13	33	0	0	0	0	33	0	0	0
15	19	0	0	0	0	19	0	0	0
17	19	0	0	0	0	19	0	0	0
19	14	0	14	0	0	0	0	0	0
21	13	0	13	0	0	0	0	0	0
23	17	10	0	0	0	0	0	0	0
25	20	0	0	0	0	8	0	0	0
27	7	0	0	0	0	20	0	0	0
29	29	29	0	0	0	7	0	0	0
31	12	0	12	0	0	0	0	0	0
33	18	0	0	0	0	0	0	0	0
35	3	0	0	0	0	18	0	0	0
37	24	24	0	0	0	0	0	3	0
39	14	0	14	0	0	0	0	0	0
41	27	27	0	0	0	0	0	0	0
43	59	59	0	0	0	0	0	0	0
45	3	3	0	0	0	0	0	0	0
47	72	72	0	0	0	0	0	0	0
49	112	106	5	0	0	0	0	0	0
61	18	0	0	18	0	0	0	0	0
62	38	0	0	38	0	0	0	0	0
63	40	0	0	40	0	0	0	0	0
64	35	0	0	35	0	0	0	0	0
71	37	37	0	0	0	0	0	0	0
72	44	0	44	0	0	0	0	0	0
73	10	10	0	0	0	0	0	0	0
74	24	0	11	13	0	0	0	0	0
75	13	13	0	0	0	0	0	0	0
76	64	0	64	0	0	0	0	0	0
77	41	41	0	0	0	0	0	0	0
78	46	0	46	0	0	0	0	0	0
79	2	2	0	0	0	0	0	0	0
81	11	0	11	0	0	0	0	0	0
82	42	42	0	0	0	0	0	0	0
83	34	0	0	0	0	0	0	0	0
84	19	0	0	0	0	0	0	34	0
85	31	31	0	0	0	0	0	19	0
86	57	57	0	0	0	0	0	0	0
87	57	12	44	0	0	0	0	0	0
90	111	111	0	0	0	0	0	0	0
95	13	13	0	0	0	0	0	0	0
98	19	0	19	0	0	0	0	0	0

(Max net rev)
28-Nov-95

Grade: CFWF/4/5AD

Calculated Maximum Net Revenue

Total Net Revenue:

\$105,367

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	3	=	3		Actual		Constraint
01	1	=	1	VC	560	<=	4,000
03	20	=	20	PR	180	<=	1,720
05	8	=	8	TB	0		
07	4	=	4	SL	0		
09	11	=	11	CH	0		
11	9	=	9	MP	0		
13	3	=	3	PW	0		
15	3	=	3	GL	0		
17	8	=	8				
19	13	=	13	Dual Values & Ranges for WC Port Capacity			
21	14	=	14		Dual	Upper	Lower
23	4	=	4	VC	0.00	.....	3,440.00
25	1	=	1	PR	0.00	.....	1,539.69
27	2	=	2				
29	6	=	6	Actual Shipments Against Sales Opportunities			
31	12	=	12		Actual		Constraint
33	13	=	13	VC1	560	<=	560
35	6	=	6	VC2	0	<=	0
37	3	=	3	VC3	0	<=	0
39	7	=	7	VC4	0	<=	0
41	8	=	8	VC5	0	<=	0
43	5	=	5	PR1	180	<=	240
45	1	=	1	PR2	0	<=	0
47	32	=	32	PR3	0	<=	0
49	5	=	5	PR4	0	<=	0
61	6	=	6	PR5	0	<=	0
62	45	=	45	TB	0	<=	50
63	24	=	24	SL1	0	<=	200
64	25	=	25	SL2	0	<=	0
71	28	=	28	SL3	0	<=	0
72	26	=	26	CH	0	<=	0
73	7	=	7	MP	0	<=	0
74	3	=	3	PW1	0	<=	560
75	13	=	13	PW2	0	<=	0
76	78	=	78	PW3	0	<=	0
77	29	=	29	PW4	0	<=	0
78	49	=	49	PW5	0	<=	0
79	13	=	13	GL1	0	<=	200
81	36	=	36	GL2	0	<=	0
82	8	=	8	GL3	0	<=	0
83	57	=	57				
84	52	=	52	Allocation of Top Value Sales at WC and EC/Gulf			
85	4	=	4		Actual		Sales Opp*1.25
86	11	=	11	VC1+PR1+PW1	740	<=	860
87	5	=	5	VC2+PR2+PW2	0	<=	0
90	15	=	15	VC3+PR3+PW3	0	<=	0
95	2	=	2	VC4+PR4+PW4	0	<=	0
98	2	=	2	VC5+PR5+PW5	0	<=	0
				SL1+GL1	0	<=	250
				SL2+GL2	0	<=	0
				SL3+GL3	0	<=	0

THESWGTA
(Block Summary)
07-Dec-95

Grade: **CWFW/4/5AD**

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 560	PR 180	TB 0	SL 0	CH 0	MP 0	PW 0	GL 0
00	3	3	0	0	0	0	0	0	0
01	1	1	0	0	0	0	0	0	0
03	20	20	0	0	0	0	0	0	0
05	8	0	8	0	0	0	0	0	0
07	4	0	4	0	0	0	0	0	0
09	11	11	0	0	0	0	0	0	0
11	9	9	0	0	0	0	0	0	0
13	3	0	3	0	0	0	0	0	0
15	3	0	3	0	0	0	0	0	0
17	8	8	0	0	0	0	0	0	0
19	13	13	0	0	0	0	0	0	0
21	14	14	0	0	0	0	0	0	0
23	4	0	4	0	0	0	0	0	0
25	1	1	0	0	0	0	0	0	0
27	2	2	0	0	0	0	0	0	0
29	6	6	0	0	0	0	0	0	0
31	12	0	12	0	0	0	0	0	0
33	13	0	13	0	0	0	0	0	0
35	6	6	0	0	0	0	0	0	0
37	3	3	0	0	0	0	0	0	0
39	7	0	7	0	0	0	0	0	0
41	8	0	8	0	0	0	0	0	0
43	5	5	0	0	0	0	0	0	0
45	1	1	0	0	0	0	0	0	0
47	32	32	0	0	0	0	0	0	0
49	5	0	5	0	0	0	0	0	0
61	6	6	0	0	0	0	0	0	0
62	45	45	0	0	0	0	0	0	0
63	24	24	0	0	0	0	0	0	0
64	25	0	25	0	0	0	0	0	0
71	28	22	6	0	0	0	0	0	0
72	26	26	0	0	0	0	0	0	0
73	7	7	0	0	0	0	0	0	0
74	3	0	3	0	0	0	0	0	0
75	13	0	13	0	0	0	0	0	0
76	78	78	0	0	0	0	0	0	0
77	29	29	0	0	0	0	0	0	0
78	49	49	0	0	0	0	0	0	0
79	13	0	13	0	0	0	0	0	0
81	36	36	0	0	0	0	0	0	0
82	8	8	0	0	0	0	0	0	0
83	57	57	0	0	0	0	0	0	0
84	52	0	52	0	0	0	0	0	0
85	4	4	0	0	0	0	0	0	0
86	11	11	0	0	0	0	0	0	0
87	5	5	0	0	0	0	0	0	0
90	15	15	0	0	0	0	0	0	0
95	2	0	2	0	0	0	0	0	0
98	2	2	0	0	0	0	0	0	0

(Max net rev)
28-Nov-95

Grade: CPSR

Calculated Maximum Net Revenue

Total Net Revenue:

\$133,797

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	7	=	7	VC	Actual 350	<=	Constraint 4,000
01	0	=	0	PR	203	<=	1,720
03	9	=	9	TB	136		
05	18	=	18	SL	0		
07	7	=	7	CH	0		
09	15	=	15	MP	0		
11	29	=	29	PW	0		
13	52	=	52	GL	0		
15	21	=	21				
17	2	=	2				
19	1	=	1	Dual Values & Ranges for WC Port Capacity			
21	1	=	1	VC	Dual 0.00	Upper	Lower 3,650.00
23	14	=	14	PR	0.00		1,517.42
25	41	=	41				
27	5	=	5	Actual Shipments Against Sales Opportunities			
29	7	=	7		Actual		Constraint
31	3	=	3	VC1	350	<=	350
33	5	=	5	VC2	0	<=	350
35	0	=	0	VC3	0	<=	700
37	10	=	10	VC4	0	<=	0
39	5	=	5	VC5	0	<=	0
41	24	=	24	PR1	150	<=	150
43	16	=	16	PR2	53	<=	150
45	10	=	10	PR3	0	<=	300
47	16	=	16	PR4	0	<=	0
49	16	=	16	PR5	0	<=	0
61	7	=	7	TB	136	<=	233
62	27	=	27	SL1	0	<=	100
63	52	=	52	SL2	0	<=	500
64	33	=	33	SL3	0	<=	0
71	4	=	4	CH	0	<=	300
72	11	=	11	MP	0	<=	0
73	5	=	5	PW1	0	<=	350
74	13	=	13	PW2	0	<=	350
75	5	=	5	PW3	0	<=	700
76	5	=	5	PW4	0	<=	0
77	1	=	1	PW5	0	<=	0
78	1	=	1	GL1	0	<=	100
79	4	=	4	GL2	0	<=	500
81	1	=	1	GL3	0	<=	0
82	16	=	16				
83	21	=	21	Allocation of Top Value Sales at WC and EC/Gulf			
84	18	=	18		Actual		Sales Opp*1.25
85	16	=	16	VC1+PR1+PW1	500	<=	538
86	7	=	7	VC2+PR2+PW2	53	<=	538
87	25	=	25	VC3+PR3+PW3	0	<=	1,075
90	49	=	49	VC4+PR4+PW4	0	<=	0
95	17	=	17	VC5+PR5+PW5	0	<=	0
98	17	=	17	SL1+GL1	0	<=	125
				SL2+GL2	0	<=	625
				SL3+GL3	0	<=	0

THESWGTA
(Block Summary)
07-Dec-95

Grade: CPSR

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 350	PR 203	TB 136	SL 0	CH 0	MP 0	PW 0	GL 0
00	7	7	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	9	0	0	9	0	0	0	0	0
05	18	0	0	18	0	0	0	0	0
07	7	0	0	7	0	0	0	0	0
09	15	0	0	15	0	0	0	0	0
11	29	29	0	0	0	0	0	0	0
13	52	0	52	0	0	0	0	0	0
15	21	0	21	0	0	0	0	0	0
17	2	0	2	0	0	0	0	0	0
19	1	1	0	0	0	0	0	0	0
21	1	1	0	0	0	0	0	0	0
23	14	14	0	0	0	0	0	0	0
25	41	41	0	0	0	0	0	0	0
27	5	5	0	0	0	0	0	0	0
29	7	7	0	0	0	0	0	0	0
31	3	0	3	0	0	0	0	0	0
33	5	5	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0
37	10	10	0	0	0	0	0	0	0
39	5	0	5	0	0	0	0	0	0
41	24	24	0	0	0	0	0	0	0
43	16	16	0	0	0	0	0	0	0
45	10	0	10	0	0	0	0	0	0
47	16	16	0	0	0	0	0	0	0
49	16	16	0	0	0	0	0	0	0
61	7	0	0	7	0	0	0	0	0
62	27	0	0	27	0	0	0	0	0
63	52	0	0	52	0	0	0	0	0
64	33	0	33	0	0	0	0	0	0
71	4	4	0	0	0	0	0	0	0
72	11	11	0	0	0	0	0	0	0
73	5	5	0	0	0	0	0	0	0
74	13	0	13	0	0	0	0	0	0
75	5	5	0	0	0	0	0	0	0
76	5	0	5	0	0	0	0	0	0
77	1	1	0	0	0	0	0	0	0
78	1	1	0	0	0	0	0	0	0
79	4	4	0	0	0	0	0	0	0
81	1	1	0	0	0	0	0	0	0
82	16	16	0	0	0	0	0	0	0
83	21	0	21	0	0	0	0	0	0
84	18	0	18	0	0	0	0	0	0
85	16	13	2	0	0	0	0	0	0
86	7	7	0	0	0	0	0	0	0
87	25	25	0	0	0	0	0	0	0
90	49	49	0	0	0	0	0	0	0
95	17	17	0	0	0	0	0	0	0
98	17	0	17	0	0	0	0	0	0

Calculated Maximum Net Revenue

Total Net Revenue:

\$95,860

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0		Actual		Constraint
01	0	=	0	VC	350	<=	4,000
03	0	=	0	PR	134	<=	1,720
05	1	=	1	TB	0		
07	0	=	0	SL	0		
09	5	=	5	CH	0		
11	5	=	5	MP	0		
13	0	=	0	PW	3		
15	10	=	10	GL	0		
17	26	=	26				
19	21	=	21	Dual Values & Ranges for WC Port Capacity			
21	21	=	21		Dual	Upper	Lower
23	14	=	14	VC	0.00	.....	3,650.00
25	7	=	7	PR	0.00	.....	1,586.18
27	3	=	3				
29	8	=	8	Actual Shipments Against Sales Opportunities			
31	8	=	8		Actual		Constraint
33	9	=	9	VC1	350	<=	350
35	3	=	3	VC2	0	<=	350
37	24	=	24	VC3	0	<=	700
39	19	=	19	VC4	0	<=	0
41	1	=	1	VC5	0	<=	0
43	6	=	6	PR1	134	<=	150
45	1	=	1	PR2	0	<=	150
47	11	=	11	PR3	0	<=	300
49	4	=	4	PR4	0	<=	0
61	0	=	0	PR5	0	<=	0
62	16	=	16	TB	0	<=	233
63	3	=	3	SL1	0	<=	100
64	25	=	25	SL2	0	<=	500
71	29	=	29	SL3	0	<=	0
72	14	=	14	CH	0	<=	0
73	19	=	19	MP	0	<=	0
74	12	=	12	PW1	3	<=	350
75	22	=	22	PW2	0	<=	350
76	36	=	36	PW3	0	<=	700
77	24	=	24	PW4	0	<=	0
78	30	=	30	PW5	0	<=	0
79	3	=	3	GL1	0	<=	100
81	18	=	18	GL2	0	<=	500
82	4	=	4	GL3	0	<=	0
83	16	=	16				
84	3	=	3	Allocation of Top Value Sales at WC and EC/Gulf			
85	0	=	0		Actual		Sales Opp*1.25
86	1	=	1	VC1+PR1+PW1	487	<=	538
87	3	=	3	VC2+PR2+PW2	0	<=	538
90	1	=	1	VC3+PR3+PW3	0	<=	1,075
95	0	=	0	VC4+PR4+PW4	0	<=	0
98	0	=	0	VC5+PR5+PW5	0	<=	0
				SL1+GL1	0	<=	125
				SL2+GL2	0	<=	625
				SL3+GL3	0	<=	0

THESWGTA
(Block Summary)
07-Dec-95

Grade: CPSW

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 350	PR 134	TB 0	SL 0	CH 0	MP 0	PW 3	GL 0
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0
05	1	0	1	0	0	0	0	0	0
07	0	0	0	0	0	0	0	0	0
09	5	5	0	0	0	0	0	0	0
11	5	5	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
15	10	0	10	0	0	0	0	0	0
17	26	26	0	0	0	0	0	0	0
19	21	21	0	0	0	0	0	0	0
21	21	9	12	0	0	0	0	0	0
23	14	0	14	0	0	0	0	0	0
25	7	7	0	0	0	0	0	0	0
27	3	3	0	0	0	0	0	0	0
29	8	8	0	0	0	0	0	0	0
31	8	0	8	0	0	0	0	0	0
33	9	9	0	0	0	0	0	0	0
35	3	0	0	0	0	0	0	0	0
37	24	24	0	0	0	0	0	3	0
39	19	0	19	0	0	0	0	0	0
41	1	0	1	0	0	0	0	0	0
43	6	6	0	0	0	0	0	0	0
45	1	1	0	0	0	0	0	0	0
47	11	11	0	0	0	0	0	0	0
49	4	0	4	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	16	16	0	0	0	0	0	0	0
63	3	3	0	0	0	0	0	0	0
64	25	0	25	0	0	0	0	0	0
71	29	29	0	0	0	0	0	0	0
72	14	14	0	0	0	0	0	0	0
73	19	19	0	0	0	0	0	0	0
74	12	0	12	0	0	0	0	0	0
75	22	0	22	0	0	0	0	0	0
76	36	36	0	0	0	0	0	0	0
77	24	24	0	0	0	0	0	0	0
78	30	30	0	0	0	0	0	0	0
79	3	0	3	0	0	0	0	0	0
81	18	18	0	0	0	0	0	0	0
82	4	4	0	0	0	0	0	0	0
83	16	16	0	0	0	0	0	0	0
84	3	0	3	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
86	1	1	0	0	0	0	0	0	0
87	3	3	0	0	0	0	0	0	0
90	1	0	1	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

THESWGTA
(Max net rev)
28-Nov-95

Grade: CWES

Calculated Maximum Net Revenue

Total Net Revenue:

\$69,655

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	1	=	1	VC	Actual		Constraint
01	1	=	1	PR	140	<=	4,000
03	32	=	32	TB	60	<=	1,720
05	16	=	16	SL	0		
07	4	=	4	CH	0		
09	8	=	8	MP	180		
11	12	=	12	PW	15		
13	33	=	33	GL	0		
15	13	=	13				
17	4	=	4				
19	3	=	3				
21	2	=	2				
23	3	=	3				
25	15	=	15				
27	2	=	2				
29	1	=	1				
31	2	=	2				
33	6	=	6				
35	1	=	1				
37	4	=	4				
39	1	=	1				
41	2	=	2				
43	0	=	0				
45	0	=	0				
47	2	=	2				
49	1	=	1				
61	13	=	13				
62	69	=	69				
63	40	=	40				
64	26	=	26				
71	5	=	5				
72	11	=	11				
73	8	=	8				
74	5	=	5				
75	4	=	4				
76	3	=	3				
77	2	=	2				
78	7	=	7				
79	1	=	1				
81	0	=	0				
82	1	=	1				
83	5	=	5				
84	4	=	4				
85	0	=	0				
86	1	=	1				
87	2	=	2				
90	15	=	15				
95	2	=	2				
98	2	=	2				

Dual Values & Ranges for WC Port Capacity			
VC	Dual	Upper	Lower
PR	0.00	3,860.00	1,660.00

Actual Shipments Against Sales Opportunities			
	Actual		Constraint
VC1	140	<=	140
VC2	0	<=	0
VC3	0	<=	0
VC4	0	<=	0
VC5	0	<=	0
PR1	60	<=	60
PR2	0	<=	0
PR3	0	<=	0
PR4	0	<=	0
PR5	0	<=	0
TB	0	<=	0
SL1	0	<=	0
SL2	0	<=	0
SL3	0	<=	0
CH	0	<=	0
MP	180	<=	200
PW1	15	<=	140
PW2	0	<=	0
PW3	0	<=	0
PW4	0	<=	0
PW5	0	<=	0
GL1	0	<=	0
GL2	0	<=	0
GL3	0	<=	0

Allocation of Top Value Sales at WC and EC/Gulf			
	Actual		Sales Opp*1.25
VC1+PR1+PW1	215	<=	215
VC2+PR2+PW2	0	<=	0
VC3+PR3+PW3	0	<=	0
VC4+PR4+PW4	0	<=	0
VC5+PR5+PW5	0	<=	0
SL1+GL1	0	<=	0
SL2+GL2	0	<=	0
SL3+GL3	0	<=	0

THESWGTA
(Block Summary)
07-Dec-95

Grade: **CWES**

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 140	PR 60	TB 0	SL 0	CH 0	MP 180	PW 15	GL 0
00	1	1	0	0	0	0	0	0	0
01	1	0	0	0	0	0	1	0	0
03	32	0	0	0	0	0	32	0	0
05	16	0	0	0	0	0	16	0	0
07	4	4	0	0	0	0	0	0	0
09	8	0	0	0	0	0	8	0	0
11	12	12	0	0	0	0	0	0	0
13	33	0	33	0	0	0	0	0	0
15	13	13	0	0	0	0	0	1	0
17	4	4	0	0	0	0	0	0	0
19	3	3	0	0	0	0	0	0	0
21	2	2	0	0	0	0	0	0	0
23	3	3	0	0	0	0	0	0	0
25	15	15	0	0	0	0	0	0	0
27	2	2	0	0	0	0	0	0	0
29	1	1	0	0	0	0	0	0	0
31	2	0	2	0	0	0	0	0	0
33	6	6	0	0	0	0	0	0	0
35	1	0	0	0	0	0	0	0	0
37	4	4	0	0	0	0	0	1	0
39	1	1	0	0	0	0	0	0	0
41	2	2	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	2	2	0	0	0	0	0	0	0
49	1	0	0	0	0	0	0	0	0
61	13	0	0	0	0	0	13	0	0
62	69	0	0	0	0	0	69	0	0
63	40	0	0	0	0	0	40	0	0
64	26	0	24	0	0	0	1	0	0
71	5	5	0	0	0	0	0	0	0
72	11	11	0	0	0	0	0	0	0
73	8	8	0	0	0	0	0	0	0
74	5	5	0	0	0	0	0	0	0
75	4	2	1	0	0	0	0	0	0
76	3	3	0	0	0	0	0	0	0
77	2	2	0	0	0	0	0	0	0
78	7	7	0	0	0	0	0	0	0
79	1	1	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0
82	1	0	0	0	0	0	0	0	0
83	5	0	0	0	0	0	0	1	0
84	4	0	0	0	0	0	0	5	0
85	0	0	0	0	0	0	0	4	0
86	1	0	0	0	0	0	0	0	0
87	2	0	0	0	0	0	0	1	0
90	15	15	0	0	0	0	0	2	0
95	2	2	0	0	0	0	0	0	0
98	2	2	0	0	0	0	0	0	0

Calculated Maximum Net Revenue

Total Net Revenue:

\$49,797

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0	VC	Actual 247	<=	Constraint 4,000
01	0	=	0	PR	0	<=	1,720
03	0	=	0	TB	0		
05	0	=	0	SL	0		
07	0	=	0	CH	0		
09	0	=	0	MP	0		
11	0	=	0	PW	0		
13	0	=	0	GL	0		
15	0	=	0				
17	0	=	0				
19	0	=	0	Dual Values & Ranges for WC Port Capacity			
21	0	=	0	VC	Dual 0.00	Upper	Lower 3,753.06
23	0	=	0	PR	0.00		1,720.00
25	0	=	0				
27	0	=	0	Actual Shipments Against Sales Opportunities			
29	0	=	0	VC1	Actual 247	<=	Constraint 350
31	0	=	0	VC2	0	<=	350
33	0	=	0	VC3	0	<=	700
35	0	=	0	VC4	0	<=	0
37	0	=	0	VC5	0	<=	0
39	0	=	0	PR1	0	<=	150
41	0	=	0	PR2	0	<=	150
43	0	=	0	PR3	0	<=	300
45	0	=	0	PR4	0	<=	0
47	1	=	1	PR5	0	<=	0
49	0	=	0	TB	0	<=	233
61	0	=	0	SL1	0	<=	100
62	0	=	0	SL2	0	<=	500
63	0	=	0	SL3	0	<=	0
64	0	=	0	CH	0	<=	0
71	0	=	0	MP	0	<=	0
72	0	=	0	PW1	0	<=	350
73	0	=	0	PW2	0	<=	350
74	0	=	0	PW3	0	<=	700
75	0	=	0	PW4	0	<=	0
76	0	=	0	PW5	0	<=	0
77	0	=	0	GL1	0	<=	100
78	0	=	0	GL2	0	<=	500
79	0	=	0	GL3	0	<=	0
81	11	=	11	Allocation of Top Value Sales at WC and EC/Gulf			
82	18	=	18	VC1+PR1+PW1	Actual 247	<=	Sales Opp*1.25 538
83	147	=	147	VC2+PR2+PW2	0	<=	538
84	70	=	70	VC3+PR3+PW3	0	<=	1,075
85	0	=	0	VC4+PR4+PW4	0	<=	0
86	0	=	0	VC5+PR5+PW5	0	<=	0
87	0	=	0	SL1+GL1	0	<=	125
90	0	=	0	SL2+GL2	0	<=	625
95	0	=	0	SL3+GL3	0	<=	0
98	0	=	0				

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 247	PR 0	TB 0	SL 0	CH 0	MP 0	PW 0	GL 0
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0
05	0	0	0	0	0	0	0	0	0
07	0	0	0	0	0	0	0	0	0
09	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	1	1	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0
77	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0	0	0
81	11	11	0	0	0	0	0	0	0
82	18	18	0	0	0	0	0	0	0
83	147	147	0	0	0	0	0	0	0
84	70	70	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

Calculated Maximum Net Revenue

Total Net Revenue:

\$14,434

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0	VC	Actual 72	<=	Constraint 4,000
01	0	=	0	PR	0	<=	1,720
03	0	=	0	TB	0		
05	0	=	0	SL	0		
07	0	=	0	CH	0		
09	2	=	2	MP	0		
11	0	=	0	PW	0		
13	0	=	0	GL	0		
15	0	=	0				
17	0	=	0				
19	1	=	1	Dual Values & Ranges for WC Port Capacity			
21	0	=	0	VC	Dual 0.00	Upper	Lower 3,927.68
23	0	=	0	PR	0.00		1,720.00
25	0	=	0				
27	0	=	0	Actual Shipments Against Sales Opportunities			
29	0	=	0		Actual		Constraint
31	0	=	0	VC1	72	<=	350
33	0	=	0	VC2	0	<=	350
35	0	=	0	VC3	0	<=	700
37	0	=	0	VC4	0	<=	0
39	0	=	0	VC5	0	<=	0
41	0	=	0	PR1	0	<=	150
43	0	=	0	PR2	0	<=	150
45	0	=	0	PR3	0	<=	300
47	1	=	1	PR4	0	<=	0
49	1	=	1	PR5	0	<=	0
61	0	=	0	TB	0	<=	233
62	1	=	1	SL1	0	<=	100
63	0	=	0	SL2	0	<=	500
64	1	=	1	SL3	0	<=	0
71	1	=	1	CH	0	<=	0
72	0	=	0	MP	0	<=	0
73	0	=	0	PW1	0	<=	350
74	1	=	1	PW2	0	<=	350
75	0	=	0	PW3	0	<=	700
76	0	=	0	PW4	0	<=	0
77	9	=	9	PW5	0	<=	0
78	1	=	1	GL1	0	<=	100
79	0	=	0	GL2	0	<=	500
81	4	=	4	GL3	0	<=	0
82	0	=	0				
83	34	=	34	Allocation of Top Value Sales at WC and EC/Gulf			
84	9	=	9		Actual		Sales Opp*1.25
85	1	=	1	VC1+PR1+PW1	72	<=	538
86	0	=	0	VC2+PR2+PW2	0	<=	538
87	0	=	0	VC3+PR3+PW3	0	<=	1,075
90	1	=	1	VC4+PR4+PW4	0	<=	0
95	0	=	0	VC5+PR5+PW5	0	<=	0
98	0	=	0	SL1+GL1	0	<=	125
				SL2+GL2	0	<=	625
				SL3+GL3	0	<=	0

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 72	PR 0	TB 0	SL 0	CH 0	MP 0	PW 0	GL 0
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0
05	0	0	0	0	0	0	0	0	0
07	0	0	0	0	0	0	0	0	0
09	2	2	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
19	1	1	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	1	1	0	0	0	0	0	0	0
49	1	1	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	1	1	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0
64	1	1	0	0	0	0	0	0	0
71	1	1	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0
74	1	1	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0
77	9	9	0	0	0	0	0	0	0
78	1	1	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0	0	0
81	4	4	0	0	0	0	0	0	0
82	0	0	0	0	0	0	0	0	0
83	34	34	0	0	0	0	0	0	0
84	9	9	0	0	0	0	0	0	0
85	1	1	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0
90	1	1	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

THESWGTA
(Max net rev)
28-Nov-95

Grade: 1/2CWAD

Calculated Maximum Net Revenue

Total Net Revenue:

\$677,732

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0	VC	Actual 228	<=	Constraint 4,000
01	0	=	0	PR	98	<=	1,720
03	1	=	1	TB	160		
05	0	=	0	SL	1,425		
07	0	=	0	CH	0		
09	13	=	13	MP	400		
11	1	=	1	PW	25		
13	1	=	1	GL	303		
15	1	=	1				
17	23	=	23				
19	257	=	257	Dual Values & Ranges for WC Port Capacity			
21	71	=	71		Dual	Upper	Lower
23	5	=	5	VC	0.00	.....	3,772.00
25	1	=	1	PR	0.00	.....	1,622.00
27	3	=	3				
29	1	=	1	Actual Shipments Against Sales Opportunities			
31	51	=	51		Actual	Constraint	
33	24	=	24	VC1	105	<=	105
35	32	=	32	VC2	25	<=	25
37	2	=	2	VC3	98	<=	98
39	10	=	10	VC4	0	<=	0
41	0	=	0	VC5	0	<=	0
43	1	=	1	PR1	45	<=	45
45	0	=	0	PR2	11	<=	11
47	114	=	114	PR3	42	<=	42
49	5	=	5	PR4	0	<=	0
61	0	=	0	PR5	0	<=	0
62	9	=	9	TB	160	<=	160
63	0	=	0	SL1	700	<=	700
64	51	=	51	SL2	225	<=	225
71	248	=	248	SL3	500	<=	500
72	95	=	95	CH	0	<=	0
73	17	=	17	MP	400	<=	400
74	2	=	2	PW1	11	<=	105
75	7	=	7	PW2	3	<=	25
76	75	=	75	PW3	11	<=	98
77	331	=	331	PW4	0	<=	0
78	301	=	301	PW5	0	<=	0
79	46	=	46	GL1	175	<=	700
81	425	=	425	GL2	56	<=	225
82	37	=	37	GL3	72	<=	500
83	267	=	267				
84	111	=	111	Allocation of Top Value Sales at WC and EC/Gulf			
85	1	=	1		Actual	Sales Opp*1.25	
86	1	=	1	VC1+PR1+PW1	161	<=	161
87	0	=	0	VC2+PR2+PW2	39	<=	39
90	0	=	0	VC3+PR3+PW3	151	<=	151
95	0	=	0	VC4+PR4+PW4	0	<=	0
98	0	=	0	VC5+PR5+PW5	0	<=	0
				SL1+GL1	875	<=	875
				SL2+GL2	281	<=	281
				SL3+GL3	572	<=	625

THESWGTA
(Block Summary)
07-Dec-95

Grade: 1/2CWAD

Shipments by Corridor (Summary)

Shipping Block	Block Total	VC 228	PR 98	TB 160	SL 1,425	CH 0	MP 400	PW 25	GL 303
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	1	0	0	0	0	0	1	0	0
05	0	0	0	0	0	0	0	0	0
07	0	0	0	0	0	0	0	0	0
09	13	0	0	0	0	0	13	0	0
11	1	0	0	0	0	0	0	0	0
13	1	0	0	0	0	0	0	0	1
15	1	0	0	0	0	0	1	0	0
17	23	0	0	0	23	0	0	0	0
19	257	0	0	0	257	0	0	0	0
21	71	0	0	0	71	0	0	0	0
23	5	0	0	0	5	0	0	0	0
25	1	0	0	1	0	0	0	0	0
27	3	0	0	0	3	0	0	0	0
29	1	0	0	1	0	0	0	0	0
31	51	0	0	0	0	0	0	0	0
33	24	0	0	0	0	0	0	0	51
35	32	0	0	0	0	0	0	0	24
37	2	0	0	2	0	0	0	0	32
39	10	0	0	0	10	0	0	0	0
41	0	0	0	0	0	0	0	0	0
43	1	0	0	1	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	114	0	0	0	114	0	0	0	0
49	5	0	5	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	9	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	9
64	51	0	0	0	0	0	0	0	0
71	248	0	0	0	0	0	0	0	51
72	95	0	0	0	0	0	200	0	48
73	17	0	0	0	17	0	54	0	40
74	2	0	0	0	2	0	0	0	0
75	7	0	0	0	7	0	0	0	0
76	75	0	0	0	75	0	0	0	0
77	331	0	0	0	331	0	0	0	0
78	301	0	0	156	15	0	130	0	0
79	46	0	0	0	0	0	0	0	0
81	425	0	0	0	425	0	0	0	46
82	37	37	0	0	0	0	0	0	0
83	267	98	75	0	70	0	0	24	0
84	111	92	19	0	0	0	0	0	0
85	1	1	0	0	0	0	0	0	0
86	1	0	0	0	0	0	0	1	0
87	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

Calculated Maximum Net Revenue

Total Net Revenue:

\$296,142

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0	VC	Actual 70	<=	Constraint 4,000
01	0	=	0	PR	30	<=	1,720
03	4	=	4	TB	0		
05	4	=	4	SL	1,093		
07	2	=	2	CH	0		
09	20	=	20	MP	0		
11	10	=	10	PW	0		
13	6	=	6	GL	26		
15	2	=	2				
17	25	=	25	Dual Values & Ranges for WC Port Capacity			
19	86	=	86		Dual	Upper	Lower
21	39	=	39	VC	0.00	.....	3,930.00
23	4	=	4	PR	0.00	.....	1,690.00
25	3	=	3				
27	3	=	3	Actual Shipments Against Sales Opportunities			
29	2	=	2		Actual		Constraint
31	20	=	20	VC1	70	=<=	70
33	47	=	47	VC2	0	=<=	0
35	26	=	26	VC3	0	=<=	0
37	0	=	0	VC4	0	=<=	0
39	3	=	3	VC5	0	=<=	0
41	0	=	0	PR1	30	=<=	30
43	0	=	0	PR2	0	=<=	0
45	0	=	0	PR3	0	=<=	0
47	26	=	26	PR4	0	=<=	0
49	3	=	3	PR5	0	=<=	0
61	0	=	0	TB	0	=<=	0
62	29	=	29	SL1	74	<=	80
63	10	=	10	SL2	1,019	<=	1,820
64	70	=	70	SL3	0	=<=	0
71	138	=	138	CH	0	=<=	0
72	145	=	145	MP	0	=<=	0
73	60	=	60	PW1	0	<=	70
74	5	=	5	PW2	0	=<=	0
75	11	=	11	PW3	0	=<=	0
76	21	=	21	PW4	0	=<=	0
77	52	=	52	PW5	0	=<=	0
78	184	=	184	GL1	26	<=	80
79	26	=	26	GL2	0	<=	1,820
81	54	=	54	GL3	0	=<=	0
82	8	=	8				
83	50	=	50	Allocation of Top Value Sales at WC and EC/Gulf			
84	21	=	21		Actual		Sales Opp*1.25
85	0	=	0	VC1+PR1+PW1	100	<=	108
86	0	=	0	VC2+PR2+PW2	0	=<=	0
87	0	=	0	VC3+PR3+PW3	0	=<=	0
90	0	=	0	VC4+PR4+PW4	0	=<=	0
95	0	=	0	VC5+PR5+PW5	0	=<=	0
98	0	=	0	SL1+GL1	100	=<=	100
				SL2+GL2	1,019	<=	2,275
				SL3+GL3	0	=<=	0

THESWGTA
(Block Summary)
07-Dec-95

Grade: 3CWAD

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 70	PR 30	TB 0	SL 1,093	CH 0	MP 0	PW 0	GL 26
00	0	0	0	0	0	0	0	0	0
01	0	0	0	0	0	0	0	0	0
03	4	0	0	0	4	0	0	0	0
05	4	0	0	0	4	0	0	0	0
07	2	0	0	0	2	0	0	0	0
09	20	0	0	0	20	0	0	0	0
11	10	0	0	0	10	0	0	0	0
13	6	0	0	0	6	0	0	0	0
15	2	0	0	0	2	0	0	0	0
17	25	0	0	0	25	0	0	0	0
19	86	0	0	0	86	0	0	0	0
21	39	0	0	0	39	0	0	0	0
23	4	0	0	0	4	0	0	0	0
25	3	0	0	0	3	0	0	0	0
27	3	0	0	0	3	0	0	0	0
29	2	0	0	0	2	0	0	0	0
31	20	0	0	0	20	0	0	0	0
33	47	0	0	0	47	0	0	0	0
35	26	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	26
39	3	0	0	0	3	0	0	0	0
41	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
47	26	8	8	0	0	0	0	0	0
49	3	3	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	29	0	0	0	0	0	0	0	0
63	10	0	0	0	29	0	0	0	0
64	70	0	0	0	10	0	0	0	0
71	138	0	0	0	70	0	0	0	0
72	145	0	0	0	138	0	0	0	0
73	60	0	0	0	145	0	0	0	0
74	5	0	0	0	60	0	0	0	0
75	11	0	0	0	5	0	0	0	0
76	21	0	0	0	11	0	0	0	0
77	52	0	0	0	21	0	0	0	0
78	184	0	0	0	52	0	0	0	0
79	26	0	0	0	184	0	0	0	0
81	54	0	0	0	26	0	0	0	0
82	8	8	0	0	54	0	0	0	0
83	50	50	0	0	0	0	0	0	0
84	21	0	21	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
86	0	0	0	0	0	0	0	0	0
87	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0

Appendix VI

Vancouver Capacity Constraint: Parametric Programming Results

Interpretation of Appendix VI

- Each page summarizes parametric programming results for one grade (1CWRS takes two pages).
- Top row shows Vancouver capacity constraint as it is reduced by the previous dual value lower range limit. Second row shows the new calculated net revenue. Third row shows the new Vancouver shipment volume. Fourth row shows the new dual value and the fifth row shows the lower range limit of this dual value, to be used in calculating the new capacity constraint in the next column.
- The final five pages show the complete output for the re-directed grades at the ending Vancouver capacity constraint values.

1CWRS
(Parametric)
07-Dec-95

Grade: 1CWRS

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	3650.03599	3618.293	3597.845	3545.546	3538.39	3429.553	3394.561	3369.611	3368.924
Total Net Revenue	\$1,263,310	\$1,263,310	\$1,263,253	\$1,263,216	\$1,263,117	\$1,263,104	\$1,262,899	\$1,262,829	\$1,262,779	\$1,262,778
VC Actual Shipments	3650.046	3650.03599	3618.293	3597.845	3545.546	3538.39	3429.553	3394.561	3369.611	3368.924
VC Dual Value	0.00	1.80	1.80	1.88	1.88	1.88	2.00	2.00	2.00	2.00
Dual Lower Limit	349.95	31.73	20.44	52.29	7.15	108.83	34.98	24.94	0.68	34.98
										316.01

621-179

1CWRS
(Parametric)
11-Dec-95

Grade: **1CWRS**

Parametric Programming Results - VC Capacity

	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>
VC Capacity Constraint	3333.932	3326.44524	3224.502	3175.11	3171.6887	3159.77186	3135.0291	3130.261	3129.553	3118.554
Total Net Revenue	\$1,262,707	\$1,262,666	\$1,261,267	\$1,260,590	\$1,260,543	\$1,260,378	\$1,260,028	\$1,259,961	\$1,259,951	\$1,259,793
VC Actual Shipments	3333.932	3326.44524	3224.502	3175.11	3171.6887	3159.77186	3135.0291	3130.261	3129.553	3118.554
VC Dual Value	2.00	10.20	10.20	10.20	10.20	10.48	10.48	10.48	10.48	14.48
Dual Lower Limit	7.48	101.93	49.38	3.41	11.91	24.73	4.76	0.70	10.99	49.49

257.30

2CWRS
(Parametric)
07-Dec-95

Grade: 2CWRS

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	1399.42701	1389.927	1364.124	1361.927	1328.736	1293.561	1289.122	1276.272	1267.121
Total Net Revenue	\$644,319	\$644,319	\$644,291	\$644,205	\$644,198	\$643,926	\$643,632	\$643,595	\$643,488	\$643,409
VC Actual Shipments	1399.437	1399.42701	1389.927	1364.124	1361.927	1328.736	1293.561	1289.122	1276.272	1267.121
VC Dual Value	0.00	2.95	3.33	3.33	8.19	8.35	8.35	8.35	8.54	8.58
Dual Lower Limit	2,600.56	9.49	25.79	2.19	33.18	35.17	4.43	12.84	9.14	30.18
										162.41

3CWRS
(Parametric)
07-Dec-95

Grade: **3CWRS**

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	699.99	699.425	685.055	683.082	680.19974	658.165999	648.55162	645.127	628.73739
Total Net Revenue	\$245,306	\$245,306	\$245,296	\$244,963	\$244,916	\$244,846	\$244,305	\$244,064	\$243,977	\$243,560
VC Actual Shipments	700	699.99	699.425	685.055	683.082	680.19974	658.165999	648.55162	645.127	628.73739
VC Dual Value	0.00	17.72	18.02	18.24	18.24	18.53	18.94	19.09	19.30	19.30
Dual Lower Limit	3,300.00	0.56	14.36	1.96	2.87	22.02	9.60	3.41	16.38	20.63
										91.80

CWFW/4/5AD
(Parametric)
07-Dec-95

Grade: **CWFW/4/5AD**

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	559.99	557.762	555.858	549.277	534.643	528.477	520.03	508.096	504.617
Total Net Revenue	\$93,130	\$93,130	\$93,121	\$93,112	\$93,083	\$93,018	\$92,990	\$92,953	\$92,897	\$92,880
VC Actual Shipments	560	559.99	557.762	555.858	549.277	534.643	528.477	520.03	508.096	504.617
VC Dual Value	0.00	4.38	4.41	4.43	4.45	4.45	4.46	4.70	4.72	5.79
Dual Lower Limit	3,440.00	2.22	1.89	6.57	14.62	6.16	8.44	11.92	3.47	13.29
										68.58

CPSR
(Parametric)
11-Dec-95

Grade: **CPSR**

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	349.99	345.83	306.378102	305.774416	288.655001	287.6	275.915	259.769549	257.922094
Total Net Revenue	\$123,047	\$123,047	\$123,029	\$122,731	\$122,721	\$122,400	\$122,380	\$122,147	\$121,803	\$121,760
VC Actual Shipments	350	349.99	345.83	306.378102	305.774416	288.655001	287.6	275.915	259.769549	257.922094
VC Dual Value	0.00	4.40	4.42	11.71	14.13	15.09	15.12	15.61	17.84	17.85
Dual Lower Limit	3,650.00	4.15	39.44	0.59	17.11	1.05	11.68	16.14	1.84	16.00

107.99

CPSW
(Parametric)
11-Dec-95

Grade: **CPSW**

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	349.99	347.832	323.812	316.017	308.467	303.272	291.282	264.08674	252.431702
Total Net Revenue	\$86,984	\$86,984	\$86,974	\$86,865	\$86,829	\$86,793	\$86,759	\$86,652	\$86,304	\$86,145
VC Actual Shipments	350	349.99	347.832	323.812	316.017	308.467	303.272	291.282	264.08674	252.431702
VC Dual Value	0.00	4.54	4.55	4.59	4.80	6.11	7.46	10.31	10.89	10.91
Dual Lower Limit	3,650.00	2.15	24.01	7.78	7.54	5.18	11.98	27.19	11.65	4.62
										102.10

CWES
(Parametric)
11-Dec-95

Grade: **CWES**

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	139.99	125.461	121.896	117.66972	114.94402	107.716071	97.6220898	94.1005015	89.6180002
Total Net Revenue	\$65,720	\$65,720	\$65,450	\$65,380	\$65,296	\$65,242	\$65,094	\$64,875	\$64,794	\$64,691
VC Actual Shipments	140	139.99	125.461	121.896	117.66972	114.94402	107.716071	97.6220898	94.1005015	89.6180002
VC Dual Value	0.00	14.38	15.08	15.11	15.30	15.35	16.45	17.20	17.55	17.56
Dual Lower Limit	3,860.00	14.52	3.55	4.22	2.72	7.22	10.08	3.51	4.47	1.62
										51.91

CWSWS
(Parametric)
11-Dec-95

Grade: **CWSWS**

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	246.811045	246.711	176.958004	176.448	175.979	29.0069944	28.947	17.6970002	-0.0100003
Total Net Revenue	\$46,297	\$46,297	\$46,296	\$45,742	\$45,736	\$45,730	\$43,474	\$43,473	\$43,264	\$42,771
VC Actual Shipments	246.821	246.811045	246.711	176.958004	176.448	175.979	29.0069944	28.947	17.6970002	-0.0100003
VC Dual Value	0.00	4.76	7.94	11.58	14.42	15.35	15.67	18.61	20.91	1.00
Dual Lower Limit	3,753.18	0.09	69.74	0.50	0.46	146.96	0.05	11.24	17.70	0.00

246.74

CWRW
(Parametric)
11-Dec-95

Grade: **CWRW**

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	72.1330664	71.254	71.054	71.004	70.631	70.611	70.551	70.311	69.911
Total Net Revenue	\$13,347	\$13,347	\$13,345	\$13,344	\$13,344	\$13,343	\$13,342	\$13,342	\$13,341	\$13,340
VC Actual Shipments	72.143	72.1330664	71.254	71.054	71.004	70.631	70.611	70.551	70.311	69.911
VC Dual Value	0.00	2.77	3.00	4.15	4.22	4.22	4.22	4.23	4.23	4.42
Dual Lower Limit	3,927.86	0.87	0.19	0.04	0.36	0.01	0.05	0.23	0.39	1.11

3.25

1/2CWAD
(Parametric)
11-Dec-95

Grade: 1/2CWAD

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	227.99	179.239998	156.99	151.361	148.611	146.791	69.4899996	58.9899998	57.245
Total Net Revenue	\$646,333	\$646,332	\$645,588	\$645,248	\$645,162	\$645,120	\$645,090	\$642,753	\$641,914	\$641,770
VC Actual Shipments	228	227.99	179.239998	156.99	151.361	148.611	146.791	69.4899996	58.9899998	57.245
VC Dual Value	0.00	15.27	15.27	15.27	15.27	16.65	16.65	60.43	63.19	63.19
Dual Lower Limit	3,772.00	48.74	22.24	5.62	2.74	1.81	77.29	10.49	1.73	1.98
										172.64

3CWAD
(Parametric)
11-Dec-95

Grade: **3CWAD**

Parametric Programming Results - VC Capacity

	Original	1	2	3	4	5	6	7	8	9
VC Capacity Constraint	4000	69.99	29.742001	29.592	10.3439991	8.77299997	0.30999999			
Total Net Revenue	\$279,339	\$279,339	\$278,720	\$278,718	\$278,391	\$278,364	\$278,182	\$278,115	\$278,115	\$278,115
VC Actual Shipments	70	69.99	29.742001	29.592	10.3439991	8.77299997	0.30999999	0	0	0
VC Dual Value	0.00	15.36	15.94	16.76	16.77	17.43	21.35	1.00	1.00	1.00
Dual Lower Limit	3,930.00	40.24	0.14	19.24	1.56	8.45	0.31	0.00	0.00	0.00
										69.94

1CWRS
(Max net rev)
12-Feb-96

Grade: **1CWRS**

Calculated Maximum Net Revenue

Total Net Revenue:

\$1,262,667

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	14	=	14		Actual		Constraint
01	1	=	1	VC	3,327	=<	3,327
03	18	=	18	PR	1,430	=<	1,430
05	40	=	40	TB	200		
07	11	=	11	SL	1,000		
09	99	=	99	CH	0		
11	36	=	36	MP	500		
13	46	=	46	PW	281		
15	75	=	75	GL	200		
17	194	=	194				
19	169	=	169	Dual Values & Ranges for WC Port Capacity			
21	170	=	170		Dual	Upper	Lower
23	259	=	259	VC	10.20	3.14	8.92
25	141	=	141	PR	8.19	3.14	8.92
27	92	=	92				
29	166	=	166	Actual Shipments Against Sales Opportunities			
31	224	=	224		Actual		Constraint
33	80	=	80	VC1	980	=<	980
35	38	=	38	VC2	280	=<	280
37	168	=	168	VC3	630	=<	630
39	156	=	156	VC4	700	=<	700
41	96	=	96	VC5	737	=<	2,100
43	87	=	87	PR1	420	=<	420
45	12	=	12	PR2	120	=<	120
47	238	=	238	PR3	270	=<	270
49	42	=	42	PR4	297	=<	300
61	34	=	34	PR5	324	=<	900
62	113	=	113	TB	200	=<	200
63	36	=	36	SL1	300	=<	300
64	202	=	202	SL2	500	=<	500
71	443	=	443	SL3	200	=<	200
72	179	=	179	CH	0	=<	0
73	123	=	123	MP	500	=<	500
74	124	=	124	PW1	105	=<	980
75	151	=	151	PW2	30	=<	280
76	382	=	382	PW3	68	=<	630
77	461	=	461	PW4	78	=<	700
78	440	=	440	PW5	0	=<	2,100
79	168	=	168	GL1	75	=<	300
81	297	=	297	GL2	125	=<	500
82	159	=	159	GL3	0	=<	200
83	260	=	260				
84	254	=	254	Allocation of Top Value Sales at WC and EC/Gulf			
85	37	=	37		Actual		Sales Opp*1.25
86	25	=	25	VC1+PR1+PW1	1,505	=<	1,505
87	133	=	133	VC2+PR2+PW2	430	=<	430
90	167	=	167	VC3+PR3+PW3	968	=<	968
95	54	=	54	VC4+PR4+PW4	1,075	=<	1,075
98	24	=	24	VC5+PR5+PW5	1,060	=<	3,225
				SL1+GL1	375	=<	375
				SL2+GL2	625	=<	625
				SL3+GL3	200	=<	250

2CWRS
(Max net rev)
12-Feb-96

Grade: 2CWRS

Calculated Maximum Net Revenue

Total Net Revenue:

\$644,194

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	12	=	12		Actual		Constraint
01	31	=	31	VC	1,362	=<	1,362
03	207	=	207	PR	390	<	585
05	114	=	114	TB	534		
07	45	=	45	SL	1,000		
09	65	=	65	CH	300		
11	117	=	117	MP	300		
13	178	=	178	PW	98		
15	151	=	151	GL	125		
17	105	=	105				
19	22	=	22	Dual Values & Ranges for WC Port Capacity			
21	17	=	17		Dual	Upper	Lower
23	59	=	59	VC	8.19	0.41	32.78
25	151	=	151	PR	0.00	*****	195.46
27	37	=	37				
29	51	=	51	Actual Shipments Against Sales Opportunities			
31	11	=	11		Actual		Constraint
33	59	=	59	VC1	280	=<	280
35	5	=	5	VC2	280	=<	280
37	40	=	40	VC3	350	=<	350
39	50	=	50	VC4	452	<	1,050
41	83	=	83	VC5	0	=<	0
43	153	=	153	PR1	120	=<	120
45	10	=	10	PR2	120	=<	120
47	83	=	83	PR3	150	=<	150
49	88	=	88	PR4	0	<	450
61	130	=	130	PR5	0	=<	0
62	395	=	395	TB	534	=<	534
63	222	=	222	SL1	500	=<	500
64	178	=	178	SL2	500	=<	500
71	52	=	52	SL3	0	=<	0
72	99	=	99	CH	300	=<	300
73	90	=	90	MP	300	=<	300
74	150	=	150	PW1	30	<	280
75	59	=	59	PW2	30	<	280
76	125	=	125	PW3	38	<	350
77	32	=	32	PW4	0	<	1,050
78	74	=	74	PW5	0	=<	0
79	11	=	11	GL1	125	<	500
81	23	=	23	GL2	0	<	500
82	74	=	74	GL3	0	=<	0
83	34	=	34				
84	35	=	35	Allocation of Top Value Sales at WC and EC/Gulf			
85	31	=	31		Actual	Sales Opp*1.25	
86	64	=	64	VC1+PR1+PW1	430	=<	430
87	123	=	123	VC2+PR2+PW2	430	=<	430
90	132	=	132	VC3+PR3+PW3	537	=<	538
95	22	=	22	VC4+PR4+PW4	452	<	1,613
98	10	=	10	VC5+PR5+PW5	0	=<	0
				SL1+GL1	625	=<	625
				SL2+GL2	500	<	625
				SL3+GL3	0	=<	0

CWFW/4/5AD
(Max net rev)
12-Feb-96

Grade: **CWFW/4/5AD**

Calculated Maximum Net Revenue

Total Net Revenue:

\$93,112

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	3	=	3		Actual		Constraint
01	1	=	1	VC	556	=<	556
03	20	=	20	PR	28	<	239
05	8	=	8	TB	50		
07	4	=	4	SL	107		
09	11	=	11	CH	0		
11	9	=	9	MP	0		
13	3	=	3	PW	0		
15	3	=	3	GL	0		
17	8	=	8				
19	13	=	13	Dual Values & Ranges for WC Port Capacity			
21	14	=	14		Dual	Upper	Lower
23	4	=	4	VC	4.41	1.88	0.02
25	1	=	1	PR	0.00	*****	211.45
27	2	=	2				
29	6	=	6	Actual Shipments Against Sales Opportunities			
31	12	=	12		Actual		Constraint
33	13	=	13	VC1	556	<	560
35	6	=	6	VC2	0	=<	0
37	3	=	3	VC3	0	=<	0
39	7	=	7	VC4	0	=<	0
41	8	=	8	VC5	0	=<	0
43	5	=	5	PR1	28	<	240
45	1	=	1	PR2	0	=<	0
47	32	=	32	PR3	0	=<	0
49	5	=	5	PR4	0	=<	0
61	6	=	6	PR5	0	=<	0
62	45	=	45	TB	50	=<	50
63	24	=	24	SL1	107	<	200
64	25	=	25	SL2	0	=<	0
71	28	=	28	SL3	0	=<	0
72	26	=	26	CH	0	=<	0
73	7	=	7	MP	0	=<	0
74	3	=	3	PW1	0	<	560
75	13	=	13	PW2	0	=<	0
76	78	=	78	PW3	0	=<	0
77	29	=	29	PW4	0	=<	0
78	49	=	49	PW5	0	=<	0
79	13	=	13	GL1	0	<	200
81	36	=	36	GL2	0	=<	0
82	8	=	8	GL3	0	=<	0
83	57	=	57				
84	52	=	52	Allocation of Top Value Sales at WC and EC/Gulf			
85	4	=	4		Actual	Sales Opp*1.25	
86	11	=	11	VC1+PR1+PW1	583	<	860
87	5	=	5	VC2+PR2+PW2	0	=<	0
90	15	=	15	VC3+PR3+PW3	0	=<	0
95	2	=	2	VC4+PR4+PW4	0	=<	0
98	2	=	2	VC5+PR5+PW5	0	=<	0
				SL1+GL1	107	<	250
				SL2+GL2	0	=<	0
				SL3+GL3	0	=<	0

CPSR
(Max net rev)
12-Feb-96

Grade: CPSR

Calculated Maximum Net Revenue

Total Net Revenue:

\$122,955

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	7	=	7		Actual		Constraint
01	0	=	0	VC	329	=<	329
03	9	=	9	PR	126	<=	142
05	18	=	18	TB	233		
07	7	=	7	SL	0		
09	15	=	15	CH	0		
11	29	=	29	MP	0		
13	52	=	52	PW	0		
15	21	=	21	GL	0		
17	2	=	2				
19	1	=	1	Dual Values & Ranges for WC Port Capacity			
21	1	=	1		Dual	Upper	Lower
23	14	=	14	VC	4.42	16.67	15.62
25	41	=	41	PR	0.00	*****	15.62
27	5	=	5				
29	7	=	7	Actual Shipments Against Sales Opportunities			
31	3	=	3		Actual		Constraint
33	5	=	5	VC1	329	<=	350
35	0	=	0	VC2	0	<=	350
37	10	=	10	VC3	0	<=	700
39	5	=	5	VC4	0	=<=	0
41	24	=	24	VC5	0	=<=	0
43	16	=	16	PR1	126	<=	150
45	10	=	10	PR2	0	<=	150
47	16	=	16	PR3	0	<=	300
49	16	=	16	PR4	0	=<=	0
61	7	=	7	PR5	0	=<=	0
62	27	=	27	TB	233	=<=	233
63	52	=	52	SL1	0	<=	100
64	33	=	33	SL2	0	<=	500
71	4	=	4	SL3	0	=<=	0
72	11	=	11	CH	0	<=	300
73	5	=	5	MP	0	=<=	0
74	13	=	13	PW1	0	<=	350
75	5	=	5	PW2	0	<=	350
76	5	=	5	PW3	0	<=	700
77	1	=	1	PW4	0	=<=	0
78	1	=	1	PW5	0	=<=	0
79	4	=	4	GL1	0	<=	100
81	1	=	1	GL2	0	<=	500
82	16	=	16	GL3	0	=<=	0
83	21	=	21				
84	18	=	18	Allocation of Top Value Sales at WC and EC/Gulf			
85	16	=	16		Actual	Sales Opp*1.25	
86	7	=	7	VC1+PR1+PW1	455	<=	538
87	25	=	25	VC2+PR2+PW2	0	<=	538
90	49	=	49	VC3+PR3+PW3	0	<=	1,075
95	17	=	17	VC4+PR4+PW4	0	=<=	0
98	17	=	17	VC5+PR5+PW5	0	=<=	0
				SL1+GL1	0	<=	125
				SL2+GL2	0	<=	625
				SL3+GL3	0	=<=	0

CWRW
(Max net rev)
12-Feb-96

Grade: CWRW

Calculated Maximum Net Revenue

Total Net Revenue:

\$13,339

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	0	=	0		Actual		Constraint
01	0	=	0	VC	70	=<	70
03	0	=	0	PR	1	<=	30
05	0	=	0	TB	1		
07	0	=	0	SL	0		
09	2	=	0	CH	0		
11	0	=	0	MP	0		
13	0	=	0	PW	0		
15	0	=	0	GL	0		
17	0	=	0				
19	1	=	1	Dual Values & Ranges for WC Port Capacity			
21	0	=	0		Dual	Upper	Lower
23	0	=	0	VC	4.42	0.03	1.09
25	0	=	0	PR	0.00	*****	28.89
27	0	=	0				
29	0	=	0	Actual Shipments Against Sales Opportunities			
31	0	=	0		Actual		Constraint
33	0	=	0	VC1	70	<=	350
35	0	=	0	VC2	0	<=	350
37	0	=	0	VC3	0	<=	700
39	0	=	0	VC4	0	=<=	0
41	0	=	0	VC5	0	=<=	0
43	0	=	0	PR1	1	<=	150
45	0	=	0	PR2	0	<=	150
47	1	=	0	PR3	0	<=	300
49	1	=	1	PR4	0	=<=	0
61	0	=	1	PR5	0	=<=	0
62	1	=	0	TB	1	<=	233
63	0	=	1	SL1	0	<=	100
64	1	=	0	SL2	0	<=	500
71	1	=	1	SL3	0	=<=	0
72	0	=	1	CH	0	=<=	0
73	0	=	0	MP	0	=<=	0
74	1	=	0	PW1	0	=<=	0
75	0	=	1	PW2	0	<=	350
76	0	=	0	PW3	0	<=	350
77	9	=	0	PW4	0	=<=	700
78	1	=	9	PW5	0	=<=	0
79	0	=	1	GL1	0	<=	0
81	4	=	0	GL2	0	<=	100
82	0	=	4	GL3	0	<=	500
83	0	=	0			=<=	0
84	34	=	34	Allocation of Top Value Sales at WC and EC/Gulf			
85	9	=	9		Actual	Sales Opp*1.25	
86	1	=	1	VC1+PR1+PW1	71	<=	538
87	0	=	0	VC2+PR2+PW2	0	<=	538
90	0	=	0	VC3+PR3+PW3	0	<=	1,075
95	1	=	1	VC4+PR4+PW4	0	=<=	0
98	0	=	0	VC5+PR5+PW5	0	=<=	0
	0	=	0	SL1+GL1	0	<=	0
				SL2+GL2	0	<=	125
				SL3+GL3	0	=<=	625
							0

Appendix VII

Changes in Relative Port Values: Effect of Panama Canal Toll Rates

Interpretation of Appendix VII

- The attached two tables are formatted similar to those in Appendices IV and V. They show the results for the scenario in which St. Lawrence Seaway costs increase by \$20 per tonne from the base case.

PANAMA
(Max net rev)
12-Feb-96

Grade: **1CWRS**

Calculated Maximum Net Revenue

Total Net Revenue:

\$1,257,797

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	14	=	14		<u>Actual</u>		<u>Constraint</u>
01	1	=	1	VC	3,775	<=	4,000
03	18	=	18	PR	1,110	<=	1,720
05	40	=	40	TB	200		
07	11	=	11	SL	1,000		
09	99	=	99	CH	0		
11	36	=	36	MP	500		
13	46	=	46	PW	278		
15	75	=	75	GL	75		
17	194	=	194	Dual Values & Ranges for WC Port Capacity			
19	169	=	169		<u>Dual</u>	<u>Upper</u>	<u>Lower</u>
21	170	=	170	VC	0.00	.....	224.95
23	259	=	259	PR	0.00	.....	610.00
25	141	=	141	Actual Shipments Against Sales Opportunities			
27	92	=	92		<u>Actual</u>		<u>Constraint</u>
29	166	=	166	VC1	980	=<=	980
31	224	=	224	VC2	280	=<=	280
33	80	=	80	VC3	630	=<=	630
35	38	=	38	VC4	700	=<=	700
37	168	=	168	VC5	1,185	<=	2,100
39	156	=	156	PR1	420	=<=	420
41	96	=	96	PR2	120	=<=	120
43	87	=	87	PR3	270	=<=	270
45	12	=	12	PR4	300	=<=	300
47	238	=	238	PR5	0	<=	900
49	42	=	42	TB	200	=<=	200
61	34	=	34	SL1	300	=<=	300
62	113	=	113	SL2	500	=<=	500
63	36	=	36	SL3	200	=<=	200
64	202	=	202	CH	0	=<=	0
71	443	=	443	MP	500	=<=	500
72	179	=	179	PW1	105	<=	980
73	123	=	123	PW2	30	<=	280
74	124	=	124	PW3	68	<=	630
75	151	=	151	PW4	75	<=	700
76	382	=	382	PW5	0	<=	2,100
77	461	=	461	GL1	75	<=	300
78	440	=	440	GL2	0	<=	500
79	168	=	168	GL3	0	<=	200
81	297	=	297	Allocation of Top Value Sales at WC and EC/Gulf			
82	159	=	159		<u>Actual</u>		<u>Sales Opp*1.25</u>
83	260	=	260	VC1+PR1+PW1	1,505	=<=	1,505
84	254	=	254	VC2+PR2+PW2	430	=<=	430
85	37	=	37	VC3+PR3+PW3	968	=<=	968
86	25	=	25	VC4+PR4+PW4	1,075	=<=	1,075
87	133	=	133	VC5+PR5+PW5	1,185	<=	3,225
90	167	=	167	SL1+GL1	375	=<=	375
95	54	=	54	SL2+GL2	500	<=	625
98	24	=	24	SL3+GL3	200	<=	250

PANAMA
(Block Summary)
12-Feb-96

Grade: 1CWRS

Shipments by Corridor (Summary)

Shipping Block	Block Total	VC 3,775	PR 1,110	TB 200	SL 1,000	CH 0	MP 500	PW 278	GL 75
Subtotal:									
00	14	14	0	0	0	0	0	0	0
01	1	0	0	0	0	0	0	0	1
03	18	0	0	0	0	0	0	0	18
05	40	0	0	0	0	0	20	0	20
07	11	0	0	11	0	0	0	0	0
09	99	0	0	0	0	0	99	0	0
11	36	0	0	0	0	0	36	0	0
13	46	0	0	46	0	0	0	0	0
15	75	0	0	0	75	0	0	0	0
17	194	0	194	0	0	0	0	0	0
19	169	169	0	0	0	0	0	0	0
21	170	170	0	0	0	0	0	0	0
23	259	0	259	0	0	0	0	0	0
25	141	0	61	0	79	0	0	0	0
27	92	0	92	0	0	0	0	0	0
29	166	5	161	0	0	0	0	0	0
31	224	224	0	0	0	0	0	0	0
33	80	0	0	41	39	0	0	0	0
35	38	0	0	0	0	0	38	0	0
37	168	168	0	0	0	0	0	0	0
39	156	0	156	0	0	0	0	0	0
41	96	0	96	0	0	0	0	0	0
43	87	87	0	0	0	0	0	0	0
45	12	0	12	0	0	0	0	0	0
47	238	238	0	0	0	0	0	0	0
49	42	42	0	0	0	0	0	0	0
61	34	0	0	0	0	0	0	0	0
62	113	0	0	0	0	0	34	0	0
63	36	0	0	0	0	0	113	0	0
64	202	0	0	0	40	0	0	0	36
71	443	0	0	0	443	0	162	0	0
72	179	0	0	0	179	0	0	0	0
73	123	0	0	102	21	0	0	0	0
74	124	0	0	0	124	0	0	0	0
75	151	151	0	0	0	0	0	0	0
76	382	382	0	0	0	0	0	0	0
77	461	461	0	0	0	0	0	0	0
78	440	440	0	0	0	0	0	0	0
79	168	168	0	0	0	0	0	0	0
81	297	297	0	0	0	0	0	0	0
82	159	159	0	0	0	0	0	0	0
83	260	0	0	0	0	0	0	0	0
84	254	236	0	0	0	0	0	260	0
85	37	37	0	0	0	0	0	18	0
86	25	25	0	0	0	0	0	0	0
87	133	133	0	0	0	0	0	0	0
90	167	167	0	0	0	0	0	0	0
95	54	0	54	0	0	0	0	0	0
98	24	0	24	0	0	0	0	0	0

Appendix VIII

Increased Carryover Stocks: Result for 1CWRS

Interpretation of Appendix VIII

- The attached two tables are formatted similar to those in Appendices IV and V. They show the results for the scenario in which 1CWRS carryout is increased by 10 percent.

Calculated Maximum Net Revenue

Total Net Revenue:

\$1,266,078

Constraints

Shipping Block	Min 50%	Shipments	Balance to Move	Port Capacity Constraints & Actual Shipments		
00	8	16	16	VC	Actual	Constraint
01	1	1	1	PR	3,650	4,000
03	10	20	20	TB	1,110	1,720
05	22	44	44	SL	200	
07	6	12	12	CH	1,000	
09	55	109	109	MP	0	
11	20	39	39	PW	500	
13	25	50	50	GL	278	
15	41	82	82		200	
17	107	118	214	Dual Values & Ranges for WC Port Capacity		
19	93	93	185	VC	Dual	Lower
21	94	187	187	PR	0.00	349.60
23	142	285	285		0.00	610.00
25	77	77	155	Actual Shipments Against Sales Opportunities		
27	51	51	101		Actual	Constraint
29	91	182	182	VC1	980	980
31	123	123	246	VC2	280	280
33	44	89	89	VC3	630	630
35	21	41	41	VC4	700	700
37	93	185	185	VC5	1,060	2,100
39	86	172	172	PR1	420	420
41	53	106	106	PR2	120	120
43	48	96	96	PR3	270	270
45	7	14	14	PR4	300	300
47	131	37	37	PR5	0	900
49	23	124	124	TB	200	200
61	18	39	39	SL1	300	300
62	62	222	222	SL2	500	500
63	20	487	487	SL3	200	200
64	111	197	197	CH	0	0
71	244	135	135	MP	500	500
72	99	136	136	PW1	105	980
73	67	166	166	PW2	30	280
74	68	420	420	PW3	68	630
75	83	254	507	PW4	75	700
76	210	484	484	PW5	0	2,100
77	254	185	185	GL1	75	300
78	242	326	326	GL2	125	500
79	93	175	175	GL3	0	200
81	163	286	286	Allocation of Top Value Sales at WC and EC/Gulf		
82	87	280	280		Actual	Sales Opp*1.25
83	143	41	41	VC1+PR1+PW1	1,505	1,505
84	140	28	28	VC2+PR2+PW2	430	430
85	20	147	147	VC3+PR3+PW3	968	968
86	14	184	184	VC4+PR4+PW4	1,075	1,075
87	73	59	59	VC5+PR5+PW5	1,060	3,225
88	13	27	27	SL1+GL1	375	375
Total Shipment	6,938	6,938		SL2+GL2	625	625
				SL3+GL3	200	250

IN1CWRS
(Block Summary)
12-Feb-96

Grade: **IN1CWRS**

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 3,650	PR 1,110	TB 200	SL 1,000	CH 0	MP 500	PW 278	GL 200
00	16	16	0	0	0	0	0	0	0
01	1	0	0	0	0	0	1	0	0
03	20	0	0	0	0	0	20	0	0
05	44	0	0	0	0	0	44	0	0
07	12	0	0	0	12	0	0	0	0
09	109	0	0	0	0	0	109	0	0
11	39	0	0	0	0	0	38	0	1
13	50	0	0	0	50	0	0	0	0
15	82	0	0	0	82	0	0	0	0
17	118	0	118	0	0	0	0	0	0
19	93	93	0	0	0	0	0	0	0
21	187	187	0	0	0	0	0	0	0
23	285	0	285	0	0	0	0	0	0
25	77	0	66	0	12	0	0	0	0
27	51	0	51	0	0	0	0	0	0
29	182	0	182	0	0	0	0	0	0
31	123	100	0	0	0	0	23	0	0
33	89	0	0	0	89	0	0	0	0
35	41	0	0	0	0	0	41	0	0
37	185	185	0	0	0	0	0	0	0
39	172	0	172	0	0	0	0	0	0
41	106	0	106	0	0	0	0	0	0
43	96	65	32	0	0	0	0	0	0
45	14	0	14	0	0	0	0	0	0
47	262	262	0	0	0	0	0	0	0
49	46	46	0	0	0	0	0	0	0
61	37	0	0	0	0	0	37	0	0
62	124	0	0	0	0	0	0	0	124
63	39	0	0	0	0	0	39	0	0
64	222	0	0	0	0	0	147	0	75
71	487	0	0	0	487	0	0	0	0
72	197	0	0	183	14	0	0	0	0
73	135	0	0	17	118	0	0	0	0
74	136	0	0	0	136	0	0	0	0
75	166	166	0	0	0	0	0	0	0
76	420	420	0	0	0	0	0	0	0
77	254	254	0	0	0	0	0	0	0
78	484	484	0	0	0	0	0	0	0
79	185	185	0	0	0	0	0	0	0
81	326	326	0	0	0	0	0	0	0
82	175	175	0	0	0	0	0	0	0
83	286	8	0	0	0	0	0	0	0
84	280	280	0	0	0	0	278	0	0
85	41	41	0	0	0	0	0	0	0
86	28	28	0	0	0	0	0	0	0
87	147	147	0	0	0	0	0	0	0
90	184	184	0	0	0	0	0	0	0
95	59	0	59	0	0	0	0	0	0
98	27	0	27	0	0	0	0	0	0

Appendix IX

Uniform Decrease in Supply: Result for 1CWRS

Interpretation of Appendix IX

- The attached two tables are formatted similar to those in Appendices IV and V. They show the results for the scenario in which ICWRS supplies are decreased in all blocks by 10 percent.

DEC1CWRS
(Max net rev)
12-Feb-96

Grade: **1CWRS**

Calculated Maximum Net Revenue

Total Net Revenue:

\$1,074,184

Constraints

Shipping Block	Balance to Move		Shipments	Port Capacity Constraints & Actual Shipments			
00	12	=	12		Actual		Constraint
01	1	=	1	VC	2,590	<=	3,482
03	14	=	14	PR	1,110	<=	1,497
05	32	=	32	TB	200		
07	9	=	9	SL	1,000		
09	79	=	79	CH	0		
11	28	=	28	MP	298		
13	36	=	36	PW	278		
15	60	=	60	GL	75		
17	155	=	155				
19	135	=	135	Dual Values & Ranges for WC Port Capacity			
21	136	=	136		Dual	Upper	Lower
23	207	=	207	VC	0.00	.....	892.46
25	112	=	112	PR	0.00	.....	387.46
27	74	=	74				
29	132	=	132	Actual Shipments Against Sales Opportunities			
31	179	=	179		Actual		Constraint
33	64	=	64	VC1	980	<=	980
35	30	=	30	VC2	280	<=	280
37	135	=	135	VC3	630	<=	630
39	125	=	125	VC4	700	<=	700
41	77	=	77	VC5	0	<=	2,100
43	70	=	70	PR1	420	<=	420
45	10	=	10	PR2	120	<=	120
47	191	=	191	PR3	270	<=	270
49	33	=	33	PR4	300	<=	300
61	27	=	27	PR5	0	<=	900
62	90	=	90	TB	200	<=	200
63	29	=	29	SL1	300	<=	300
64	161	=	161	SL2	500	<=	500
71	354	=	354	SL3	200	<=	200
72	143	=	143	CH	0	<=	0
73	98	=	98	MP	298	<=	500
74	99	=	99	PW1	105	<=	980
75	120	=	120	PW2	30	<=	280
76	306	=	306	PW3	68	<=	630
77	369	=	369	PW4	75	<=	700
78	352	=	352	PW5	0	<=	2,100
79	135	=	135	GL1	75	<=	300
81	237	=	237	GL2	0	<=	500
82	127	=	127	GL3	0	<=	200
83	208	=	208				
84	204	=	204	Allocation of Top Value Sales at WC and EC/Gulf			
85	30	=	30		Actual		Sales Opp*1.25
86	20	=	20	VC1+PR1+PW1	1,505	<=	1,505
87	107	=	107	VC2+PR2+PW2	430	<=	430
90	134	=	134	VC3+PR3+PW3	967	<=	968
95	43	=	43	VC4+PR4+PW4	1,075	<=	1,075
98	19	=	19	VC5+PR5+PW5	0	<=	3,225
				SL1+GL1	375	<=	375
				SL2+GL2	500	<=	625
				SL3+GL3	200	<=	250

DEC1CWRS
(Block Summary)
12-Feb-96

Grade: **DEC1CWRS**

Shipments by Corridor (Summary)

Shipping Block Subtotal:	Block Total	VC 2,590	PR 1,110	TB 200	SL 1,000	CH 0	MP 298	PW 278	GL 75
00	12	12	0	0	0	0	0	0	0
01	1	0	0	0	0	0	1	0	0
03	14	0	0	0	0	0	0	0	0
05	32	0	0	0	0	0	0	0	14
07	9	0	0	9	0	0	0	0	32
09	79	0	0	0	0	0	0	0	0
11	28	0	0	0	0	0	51	0	29
13	36	0	0	0	36	0	28	0	0
15	60	0	0	0	60	0	0	0	0
17	155	0	155	0	0	0	0	0	0
19	135	135	0	0	0	0	0	0	0
21	136	136	0	0	0	0	0	0	0
23	207	0	207	0	0	0	0	0	0
25	112	0	0	0	112	0	0	0	0
27	74	0	74	0	0	0	0	0	0
29	132	0	132	0	0	0	0	0	0
31	179	76	0	0	104	0	0	0	0
33	64	0	0	0	64	0	0	0	0
35	30	0	0	0	0	0	30	0	0
37	135	0	135	0	0	0	0	0	0
39	125	0	125	0	0	0	0	0	0
41	77	0	77	0	0	0	0	0	0
43	70	0	70	0	0	0	0	0	0
45	10	0	10	0	0	0	0	0	0
47	191	191	0	0	0	0	0	0	0
49	33	33	0	0	0	0	0	0	0
61	27	0	0	0	0	0	0	0	0
62	90	0	0	0	0	0	27	0	0
63	29	0	0	0	0	0	90	0	0
64	161	0	0	0	120	0	29	0	0
71	354	0	0	92	262	0	42	0	0
72	143	0	0	0	143	0	0	0	0
73	98	0	0	0	98	0	0	0	0
74	99	0	0	99	0	0	0	0	0
75	120	120	0	0	0	0	0	0	0
76	306	306	0	0	0	0	0	0	0
77	369	369	0	0	0	0	0	0	0
78	352	352	0	0	0	0	0	0	0
79	135	135	0	0	0	0	0	0	0
81	237	237	0	0	0	0	0	0	0
82	127	127	0	0	0	0	0	0	0
83	208	0	0	0	0	0	0	0	0
84	204	134	0	0	0	0	0	208	0
85	30	30	0	0	0	0	0	70	0
86	20	20	0	0	0	0	0	0	0
87	107	107	0	0	0	0	0	0	0
90	134	71	62	0	0	0	0	0	0
95	43	0	43	0	0	0	0	0	0
98	19	0	19	0	0	0	0	0	0