

FINANCING OPTIONS FOR HAULERS

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ABSTRACT

As New Zealand steep country harvesting moves into areas requiring mobile three and four drum haulers, financing arrangements other than those presently undertaken in the acquisition of groundbased and secondhand haulers must be considered.

While debt financing is expected to remain the most likely approach, a higher level of commitment from the logging company or forest owner will be required, given the levels of investment expected from the contractor.

The most likely forms of this commitment are seen as being:

- (a) a Company Purchase, lease back or sell back arrangement, or
- (b) a guarantee, to the finance company, of a proportion of the funds borrowed by the contractor, or
- (c) the company underwrites the contractor by either guaranteeing the uplift of production or providing for financial reimbursement when this is not possible.

Leasing under the present taxation structure, is not considered as a viable alternative to debt financing.

Contract structures which allow for the contractors to expand their operation and have access to larger volumes of wood, should also be investigated.

INTRODUCTION

Substantial capital investment is required to finance the introduction of new haulers suitable for the harvesting of radiata pine on steep country.

This investment in new equipment must be considered in relation to the total logging cost and the increase in production required to cover this level of investment.

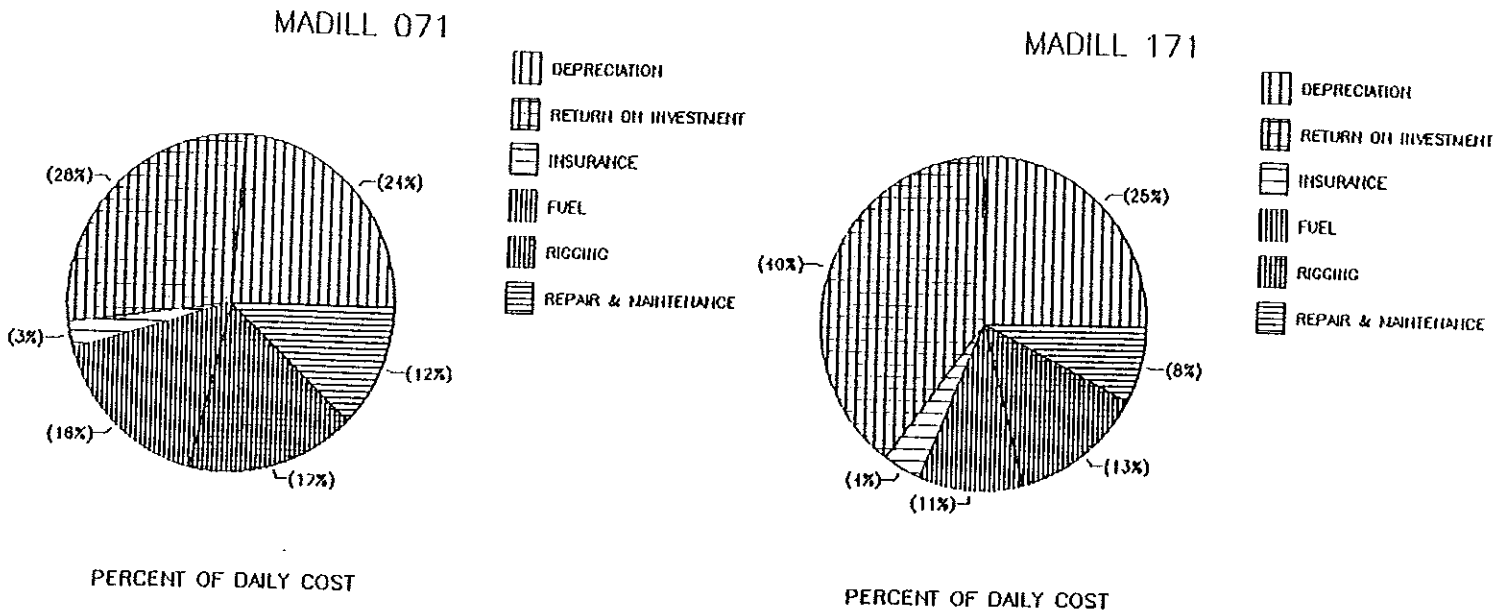
This paper discusses:

- the level of investment required for new haulers
- financing options for new equipment:
 - Contractor Ownership
 - Company Ownership
 - Leasing
 - Other options

New Haulers - How Much?

Of the new equipment considered suitable for the harvesting of New Zealand's steep country, the price ranges from \$300,000 to in excess of \$900,000, with each machine providing a niche for a given set of conditions. However of the new equipment available, and for the purpose of this discussion, the comparison is restricted to a secondhand Madill 071 and the new Madill 171.

The first Madill 071 started work in New Zealand in 1976 and currently four of the machines are in operation. To import a 10 year old machine from the U.S. costs in the vicinity of NZ\$290,000.



Madill 071		Madill 171	
24.64	Depreciation	44.93	
28.96	Return on Investment	69.91	
2.82	Insurance	6.80	
56.42	Total Owning Costs	121.64	
16.75	Fuel	18.61	
17.23	Rigging	23.00	
12.32	Repairs and Maintenance	13.48	
46.30	Total Operating Costs	55.09	
\$102.72	Total Hourly Cost	\$ 176.73	
\$616.00	Total Daily Cost	\$1060.00	

Figure 1 and Table 1 : Comparison of Hauler Daily Costs

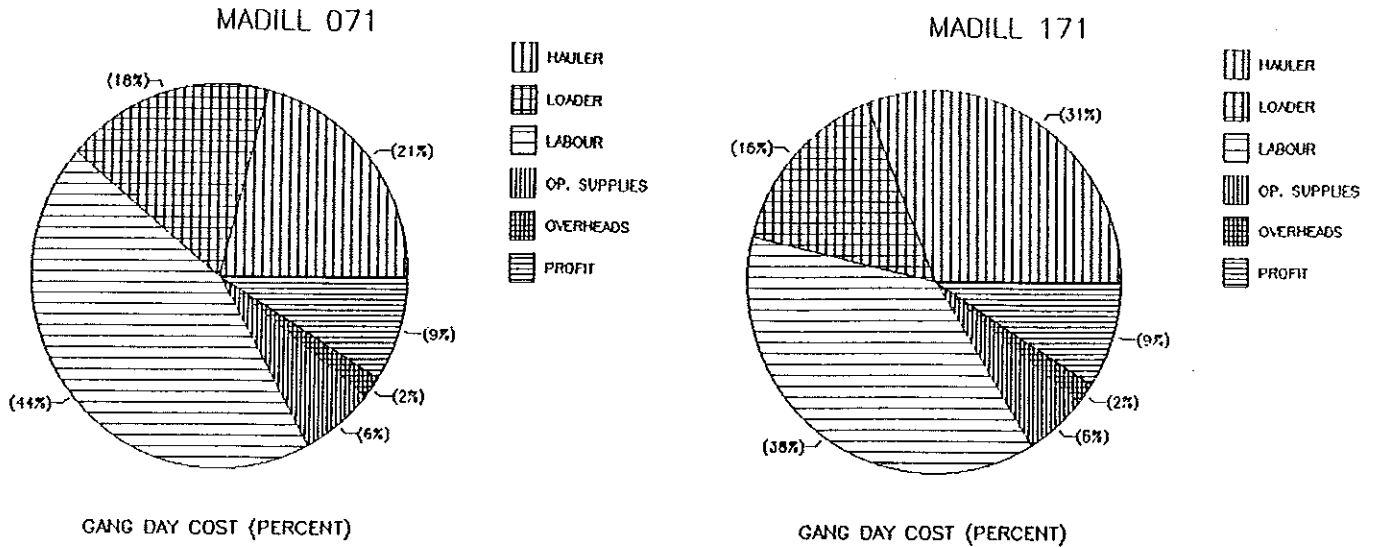
The Madill 171 replaces the 071 and offers an additional 98 kw of power, twenty percent faster line speeds and 6 meters extra on the tower. Landed in New Zealand at current exchange rates, the Madill 171 costs NZ\$660,000.

Daily Cost Comparison

In order to provide a valid comparison of the real costs as-

sociated with each of the two haulers, they must be viewed in terms of their respective daily costs.

Working through the LIRA costing procedure, a significant increase, (72%) in the cost of operating a new hauler is noted (Table 1). While the running costs remain at a similar level, a major difference is evident in the hauler owning costs (\$56/pmh for the 071



Madill 071		Madill 171	
616.00	Hauler	1060.00	
523.00	Loader	523.00	
1286.00	Labour	1286.00	
183.00	Operating Supplies	183.00	
53.00	Overheads	62.00	
266.00	Profit (10%)	331.00	
2927.00	Total	3425.00	

Figure 2 and Table 2 : Daily Gang Costs Comparison

and \$122 for the 171). This reflects the average capital invested in each hauler over a five year period, of \$220,000 and \$536,000 respectively.

The 72% increase in daily cost for the newer machine, while substantial, must be viewed in the wider context of the total gang day cost. When expressed in these terms, the operation of a new hauler equates to an 18% increase in the total gang cost. The breakdown of the various components for both the 071 and 171

operation are given in Table 2.

We see that despite the substantial increase in the daily cost for the 171, the labour and loader components together, make up the bulk of the cost for both operations.

Productivity

Based on a production level of 170 tonnes/day for a Madill 071, it is possible to calculate the increase in productivity required to offset

the additional cost of the hauler. For the costs of the two hauler options, outlined above, an additional 30 tonnes per day is required to be produced to offset the additional costs associated with the operation of a new 171 Madill. It is at this stage the logging planners and managers should decide if the Madill 171, with its attributes (outlined previously) is capable of producing the required 30 tonnes per day.

Indications from the Tasmanian experience of operating both models, as well as the comparative studies of Prebble (1989) suggest the 18% increase in productivity is well within the capability of the 171.

Financing Options - Ownership

The most common form of machine acquisition in the New Zealand logging industry is based on the debt financing of the owner/operator logging contractors. These financing agreements typically run for 3 to 5 years, and coincide with both the contract term (4 to 5 years), and the expected economic life of a prime mover in a ground based system (3 to 5 years). Despite the "contracts" being more an "agreement to provide a service" than an "absolute binding contract", the financial institutions, through their experience of the industry, have become comfortable with financing skidders, tractors, and the occasional secondhand hauler.

However the financing of newer, considerably more expensive haulers creates a different proposition to the financing of ground based equipment.

The new hauler is viewed as a machine which rapidly loses value over the first five years, before depreciating at a greatly reduced level for the remaining ten or so years of its life. Furthermore, the contract structure under which they are expected to operate is the same as that of a ground based contract, despite requiring more

than three times the capital outlay of a skidder contractor contract on flat terrain.

Because of these considerations, the finance companies hesitancy to go beyond the current debt financing arrangement, either in terms of tenure (up to 5 years) or the required deposit (25 - 30%) can be more fully appreciated.

When calculating their level of exposure, and the risk of this exposure, the financier must also take note of the region in which the equipment will be working. For the new haulers this will typically be in areas with little or no logging infrastructure and newly developed (and possibly quite fragile) export markets to produce for. The ability to produce logs for 230 days per year, becomes increasingly less likely.

At this point, the past good record of the contractor may prove insufficient, and some further security may be necessary from the forest owners.

To outlay 30% (or in excess of \$200,000) in the current environment as a deposit on a hauler, the contractor would have to be very confident of the industry's future. Should a contractor manage to attain this level of equity in the business, most would tend to start thinking about deer farms or retiring, as expansion within the industry has not been encouraged. As is the case in North America, expansion, both horizontal (operating more than one logging crew) and vertical (roadbuilding or log transport) should be seen by the forest owners as a means of more fully exploiting the logging and business skills of good contractors.

Leasing

While a common method of logging machine acquisition in many countries, leasing as an alternative to debt financing has not been adopted as an alternative within the New Zealand industry.

While leasing can be used to improve a company's financial statement in terms of the ratio of debt to current assets, and for freeing up capital for other uses, if this capital is not put to good use the advantage is lost. Cash itself is often a company's least productive asset, in terms of the yield returns. As Sundberg et al also note: "It is obvious that a lessor, under his lease agreement, will charge a sum sufficient to reimburse him for the difference between the cost of the asset leased and its residual or scrap value. Interest on the capital invested in the asset will be included plus a reasonable profit. To be on the safe side, the lessor may underestimate the residual value of the equipment or even recover the full cost of the equipment plus interest over the term of the lease. This, along with the profit margin, represents an increased cost to the lessee over any other method of acquiring the equipment."

Leasing can be viewed as an alternative to debt financing if there is some advantage able to be gained through the taxation system. However since the changes in the Income Tax Act of 1982, which was drafted to specifically treat financial lease as hire purchase agreements, any tax advantages or financial lease over debt financing have been eliminated. (The implications of the Law change on leasing are more fully described by Church, 1988).

Other Options

- Machinery Suppliers

Generally machine suppliers prefer to restrict their operations to what they do best, i.e. to manufacture and market logging equipment. Some machinery suppliers however do become involved in the financing of logging equipment, as a means of promoting the introduction of their equipment, and recently this has taken the form of a lease with the option to buy. This arrangement has been

used recently with the introduction into the Hawkes Bay of Chapman Industries Ecologger II.

This financing option however is expected to remain restricted to a promotional role for new entrants to the equipment market.

Company Purchase

With the recent move from company crews to contract crews, the benefits in terms of increased productivity have been clearly demonstrated. While the continued scaling down of all facets of company operations continues, there remains a continued role for the forest owner or logging company, given the present contract structure.

The initial introduction of logging equipment, which the company either deems or believes to be more efficient than equipment currently available, requires some further commitment from the company. Some means of "risk sharing" between the company and the contractor is required.

Using the company to facilitate the introduction of the logging equipment and either hiring it or selling it back to the contractor at a later date, gives the contractor the opportunity to generate some equity in the business. By operating the equipment in partnership, the responsibility for its operation is shared, until the contractor, having built up equity in the business, is able to purchase the hauler.

The company is also generally able to obtain access to finance at a cheaper rate than the contractor. A 3% reduction in interest rate results in a \$71 (or 7%) reduction in the daily cost of the hauler.

Two variations of the "Company Purchase" arrangements are as follows:

- (a) The Company purchases the equipment and operates it for up to 5 years, before selling

the equipment to the contractor.

- This option was used by the N.Z. Forest Service to bring in a Washington 88 hauler.

(b) The Company purchases the equipment and leases it back to a contractor who eventually buys it.

- The Chilean company Forestal Bio Bio used this approach to finance the introduction of the Urus IV haulers into its steep country operations.

(b) Company Guarantee

The Company guarantee may take one of two forms:

(i) a guarantee of production uplift, or

(ii) a guarantee, to the finance company, of the funds borrowed by the contractor.

(i) The guaranteed uplift approach has been used in Tasmania for hauler financing, and similar in effect to the concession sale approach. Usually worked in association to a lease agreement with a finance company, the forest owner or holder of the cutting rights either provides a guarantee of wood uplift or provides financial reimbursement when uplift is not possible.

(ii) This type of "borrowed funds" guarantee has been used within the forestry industry for the purchase of specialised equipment. The forest owner provides a guarantee, to the finance company, for a percentage (e.g. 25% to 50%) of the borrowed funds by the contractor. In this way the risk associated with the operation of expensive and specialised equipment is shared.

Contract Structure Alternatives

As noted previously, the "agreement to provide a service" type contract does not inspire great confidence to those who must take the risk. It is therefore important to consider other contract structures, used abroad. These include:

(a) Concession Sale

Introduced in South Australia to gear up contractors for mechanised harvesting operations, "the concession sale", runs for 4 years on tendered volumes. Initially the contractor is allocated a two year parcel of timber with a second two year parcel, to match the first as closely as possible, being allocated after two years. Within the contract, 80% of contractor's cash flow is guaranteed over a rolling 3 month period. In this way, the contractor has the confidence to gear up for the work ahead.

The reletting of all tenders is staggered over an 18 month period, so that should a contractor miss out, he will not have to wait long before another volume comes up.

While the "guaranteed uplift" works well in the Tasmania export hardwood chip joint ventures, the application of the system under typical New Zealand market conditions is expected to be limited. With the inability to stockpile, because of radiata pine's rapid degrade following felling, and the frequent changes in log specifications, the "guaranteed uplift" approach would be restricted to export joint ventures or integrated processing plants.

Of the two types of guarantee, the borrowed funds approach appears to hold the most promise.

The present structure of contracts and their administration needs to be re-evaluated. The current Quotas target setting procedures appear to be penalising the good performers. The practice of contractors restricting production to target only, rather than over-produce and face a rate reduction, does not inspire the efficient use of either manpower or machinery. This, I believe has been the major contributing factor to the comparative lack of innovation in the New Zealand Cable logging industry in recent years. Systems which focus more on encouraging the lower producers rather than discouraging the high producers need to be examined, and I believe the application of both the "concession sale" and the "company guarantee" approach have considerable merit.

A first step would involve, allowing fewer contractors to pull larger volumes and producing to capacity rather than to quota.

CONCLUSION

The New Zealand cable logging industry has reached the point where the decision of what hauler is used must be based on what hauler is best suited to the job, rather than on what hauler is available.

In many of the new areas this will mean the purchase of new equipment. Debt financing is the most likely approach, with the options of:

- (a) with the company purchasing the equipment and either renting it to the contractor or selling it to contractor when the capital outlay is reduced to a manageable level, or
- (b) a guarantee, to the finance company, of a proportion of the funds borrowed by the

contractor, or

- (c) the Company acting a guarantor to the contractor by accepting the responsibility for uplift of production and allowing for financial reimbursement when this is not feasible.

Other contract structures need to be evaluated, with consideration being given to having fewer contractors, working in greater volumes.

The expansion of successful contractors should be encouraged.

Other approaches which limit the liabilities of new contractors by contract felling, logmaking and loading should be provided for when possible.

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