

USE OF THE BELL 220 TO RELIEVE LANDING CONGESTION

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INTRODUCTION

The decision to try a Bell 220 was made because of constant interference to the haul cycle caused by the build up of logs in the front of the tower.

Trying to achieve deflection while maintaining enough space in front of the hauler to land logs, resulted in the incoming drags getting caught up in the previous drags that had not been moved to the process area. This was due to the loader being fully committed to log sorting, stacking, and truck loading.

The Bell 220 was thought to be the most suited because of low operating costs, ability to work in a very confined space, and the wide range of ways it can handle logs.

TREE SIZE AND TOPOGRAPHY

Currently my gang is working in untended stands of radiata pine which range from 0.4 to 1.0 tonnes in average piece size. Stocking ranges from 500 to 1200 stems per hectare. These stands contain tree sizes that can range from 0.2 to 3.0 tonnes in the same setting, and be in excess of 30 metres tall, but only 25 - 30 cm in diameter. It is this long, thin tree that the wheeled loader finds difficult to extract from under the spar.

Golden Downs forest has mainly long, convex slopes, but the heads of gullies usually span 500 - 700 metres across, and up to 100 - 150 metres deep, allowing for ideal skyline operations.

SYSTEMS USED

My most preferred system is the 'shotgun', but topography so far has generally limited this to only a small proportion of the settings we have been on.

The most used system is the 'North Bend', in conjunction with a mobile tail hold. I find this system is versatile, easy on ropes, and we can achieve a constant production. Scab skyline is used with a mobile tail hold. Only when there is no deflection, or if we have short hauls, do we use highlead.

I have a Young YCC13 MSP carriage, but because of the depth of the gullies and long hauls, it has not been used. I would like to try a drop line carriage such as a Danebo Drumlock which would suit the deep gullies that typify the Golden Downs topography.

EFFECTS OF THE BELL

1. Maximises hauler deflection by allowing it to be set up closer to the edge of the landing.
2. Reduces haul distances because we can now work from the road edge, and two stage up to 100 metres to a landing.
3. Eliminates stockpile in landing chute.
4. Because the hauler is now independent of the wheeled loader, irregular truck scheduling has no effect on production.

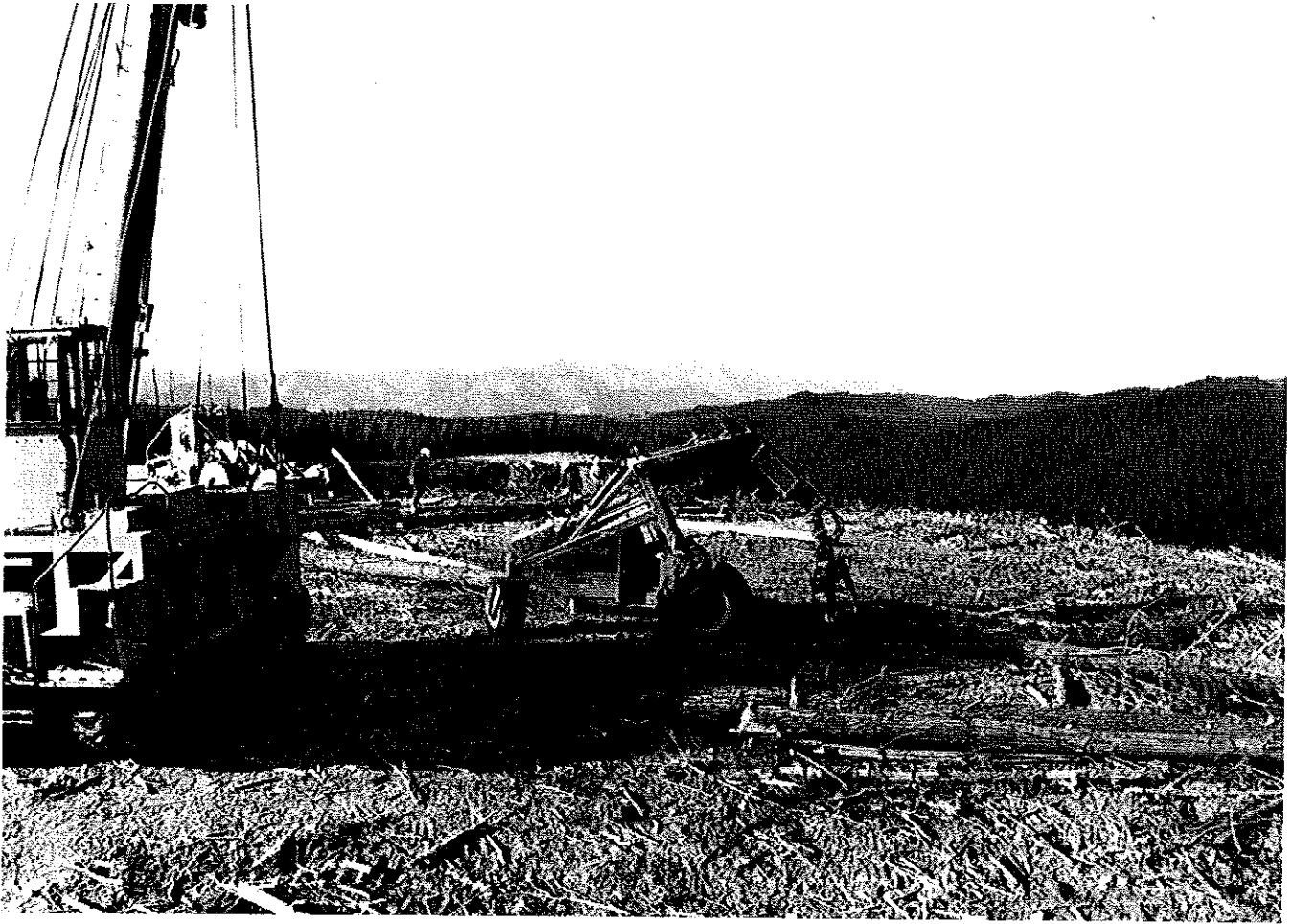


Figure 1 : Bell Logger clearing the Tower

5. Creates safer environment for log making, as this is now done well clear of the ropes and incoming drags. versatile, and easy to operate. Both safety and production have improved, while "cost per unit" and gear breakages have decreased.
6. Smooths out woodflow through the skids by forming a stockpile out of the way during surges in production. Then drawing from it whenever the skidders can cope. Better work practices and conditions in the processing area, as a result of the Bell, have allowed a higher standard of log making, while dealing with a heavier, but more even, work load.
7. Makes the breaker out's job safer, as the heads of trees being cleared from under the ropes are no longer caught up in the rigging, causing it to thrash about. This was most prevalent during scab skyline operations. The elimination of bottle necks allows a smooth flow of wood from the breaker out, right through to the processed stockpiles. This has led to better utilisation of the hauler and wheeled loader.

CONCLUSIONS

I now feel the Bell 220 is an important part of my operation. It has proved to be cost effective,

REFERENCE

DUGGAN, M.D. (1989) : "Clearing the Tower with a Bell Logger", LIRA Brief Report Vol. 14 No. 7 1989.