QUARTERLY PROGRESS SUMMARY: July – September 2015

STEEPLAND HARVESTING PROGRAMME

This programme outlines a pathway for the New Zealand forest industry to develop innovative harvesting technologies for steep country forests that will reduce costs and make harvesting jobs safer for workers.

Summary of progress during this quarter

The main achievements in this programme during the period 1 July to 30 September 2015 have been:

- demonstration of remote controlled tree felling using a John Deere 909 feller buncher
- continued development of the full teleoperation control system (incorporating a control console with video and
- audio feedback) for the John Deere feller buncher; and
- commencement of construction of the beta prototype mobile tail hold carriage for the Innovative Yarding System project

Key highlights and achievements

The Steep Land Harvesting programme, supported by innovative engineering firms and contractors throughout New Zealand, has catalysed the development of a new generation of harvesting technologies. This programme has been recognised both by the local forest industry and internationally as contributing to increased levels of mechanisation in the New Zealand forest industry approaching 40% of all tree felling operations and 60% of log processing operations. About 38 new winch-assisted feller buncher systems, including three ClimbMAX steep slope harvesters, are now operating in New Zealand (comprising 12% of steep country harvesting operations).

This programme is realising substantial productivity gains for the forest industry through developing innovative steep country harvesting technologies. The original business plan envisaged direct economic benefits of over $100 million by 2020, as well as enhanced worker safety. Remote controlled mechanised tree felling has moved a step closer with the successful installation and commissioning of the first remote controlled John Deere 909 feller buncher. Other remote control applications arising from the programme include low cost grapple carriages, such as the Alpine Grapple, supported by video camera-based vision systems for improved log extraction (the CutoverCam).

The next remote controlled application being developed is a mobile tail hold anchor machine, controlled from the cable yarder cab, and a Twin Winch Tail Hold Carriage which will improve the efficiency of skyline shifts. These innovations from the programme are providing forest owners and contractors with solutions to improve productivity and reduce the exposure of workers to hazards on steep terrain.

Investment

Investment period	*Industry contribution*	*MPI contribution*	*Total investment*
During this Quarter	$0.150m	$0.150m	$0.300
Programme To Date	$2.653m	$2.653m	$5.306m