

# Misha's Vineyard Wines Limited

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## PRESS RELEASE

### Satellites Steer Course for New Lakefront Vineyard

*Using sophisticated Global Positioning System (GPS) technology,  
Misha's Vineyard on the shores of Lake Dunstan takes shape.*

**BENDIGO, 25<sup>th</sup> November, 2005** – Through sophisticated GPS-driven technology, the boundaries are literally being pushed on the rugged and rocky terraces facing the shores of Lake Dunstan to transform a barren land that barely supported sheep in the past into one of the most spectacular vineyards in the region.

Misha's Vineyard, just north of Cromwell on the lakefront terraces, is the newest area of Bendigo Station to prove suitable for grapes. Planting grapes on this site only became possible with the use of a custom-designed vineyard establishment solution which employs satellite-guided technology and the availability of water through a new lakefront terrace irrigation scheme installed in 2004.

The vineyard establishment solution was designed by Brent Hill Contracting and has been refined and modified over the last few years. Hill has integrated the latest Trimble AgGPS® Field Management System in his Fendt Favourit 822 planting tractor which includes an Autopilot system which is powered by a GPS-based navigation controller that incorporates a black box with 3 spinning gyros to correct for the roll and pitch of the planting tractor. It also includes an AgGPS 214 High-Accuracy Receiver and an AgGPS 170 Field Computer for field topographic mapping.

“By using a base station and a dual frequency receiver, we can pick up signals from an average of 9 satellites” Hill explained. “And with corrections transmitted at a rate of up to 20 times a second, we are achieving centimetre-level accuracy for marking out the ground irrigation system and for the planting process – even on the rugged and steep faces of these terraces.” he added.

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Vineyard: Lakefront Terraces, SH 8, Bendigo, Central Otago, New Zealand

Offices: 96B Molyneux Avenue, Cromwell, 9191, New Zealand • 9 Ross Avenue, Singapore, 298203

Tel/Fax +64 3 445 4456 Tel: +65 9828 5735 Email [misha@mishasvineyard.com](mailto:misha@mishasvineyard.com)

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After the initial stages of ground preparation, which proved a long and arduous process due to the amount of schist and reef rock on the terraces, Hill used a quad bike also equipped with a GPS system so that vineyard drip irrigation scheme could be marked out according to the irrigation plan. Providing GPS locations for main, sub-main and riser groups, the data was then collected in ESRI shapefile format and transferred on a flash memory card to the planting tractor's autopilot system so that there would be perfect alignment to the vineyard rows during planting.

Just prior to planting, the cross gridding took place creating a highly-accurate grid for the planting operation. Using a 10-metre hydraulically-folding marking bar, scratches were marked in the ground 90 degrees to the row direction and according to the post and plant spacing requirements.

Then the planting process utilised Hill's custom-built mechanical planter which supports two people at the rear of the planter on seats hinged on leaf springs that rise and fall according to the ground conditions. The mechanical planting mechanism consists of a pre-ripper which rips rows to 600mm or post depth which is followed by a planting shoe which is a U-shaped mechanism that creates and defines the planting trench. As the planter moves along the rows, rubber-cushioned mould boards deflect around any rocks and then the individual press wheel assemblies, with pneumatic airbag suspension that inflate and deflate according to the ground contour, apply constant pressure so that the soil is compacted around the vine roots. With the combination of the GPS system and the optimized mechanical planter, vines can be planted at a rate in excess of 15,000 vines a day, with absolute precision.

"Without this sort of technology, the planning and planting of this vineyard, particularly on our steep slope faces would have been virtually impossible" said Misha Wilkinson, who owns Misha's Vineyard with her husband Andy Wilkinson. "With over a 99% success rate with the machine-planting on the 10 hectares that were planted in 2004, it has already proven it's the best solution for to tackle this difficult terrain with pinpoint accuracy" she added.

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The establishment of Misha's Vineyard was initially enabled by the provision of water since the creeks and races didn't yield enough to irrigate the terraces. Early last year Misha's Vineyard owners Misha & Andy Wilkinson, John Perriam from Bendigo Station and an adjacent vineyard owner, banded together to develop an irrigation scheme. "That was our first crucial step in turning land that was considered too dry and stony, and with soils too thin and poor, to be considered for anything other than extensive sheep grazing in the past" said John Perriam.

The irrigation scheme, designed by Fruitfed Supplies, pumps water directly from Lake Dunstan up a steep escarpment and runs several kilometres along the terraces. The investment once thought too hard and too costly to implement, has now proven its worth with over 40 hectares of vineyard already established on the terraces.

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## **About Misha's Vineyard Wines Limited**

Established in 2004 by Andy and Misha Wilkinson, Misha's Vineyard is situated on 57 hectares of Bendigo Station's most visually spectacular sites located on the north-west facing terraces overlooking Lake Dunstan. With 10 hectares planted in 2004, and a further 13 hectares in 2005, Misha's Vineyard plans further planting as well as the construction of an underground wine cellar and winery. Currently two-thirds of the vineyard is planted in Pinot Noir, with the remainder comprising a selection of white varieties including Pinot Gris, Riesling, Sauvignon Blanc and Gewürztraminer. The primary market for Misha's Vineyard Wines will be Asia and the full range of wines is scheduled for launch in early 2009.

## **About Brent Hill Contracting Ltd**

Based in Etrick, Central Otago, Brent Hill Contracting is an agricultural contractor whose father started the business in 1948. During the latter part of the nineties, further work was sought to complement their agricultural activities. This led to the commencement of viticultural activities with the purchase of a mechanical harvester in 2000. Since then, Brent Hill Contracting has taken on vineyard establishment from land clearing to fully-planted vineyards and also offers services for mechanical pre-pruning and harvesting.

***For further information please contact:***

**Misha Wilkinson or Andy Wilkinson at Misha's Vineyard Wines Limited**

**Tel: +65 9828 5735 (Singapore mobile) or Email: [misha@mishasvineyard.com](mailto:misha@mishasvineyard.com)**

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## TECHNICAL DETAILS

Further details on the components within the **Trimble AgGPS Autopilot System – a GPS-based tractor guidance and control system.**

- The Trimble **AgGPS Autopilot** is powered by a high performance GPS-based navigation controller that connects to the tractor's power steering mechanism to automatically steer a precise path. The Autopilot display allows row patterns to be selected and to view operating parameters. Once the Autopilot lines up the tractor at the beginning of a row, the automated steering guides the tractor smoothly down the row with an in-cab lightbar display that provides feedback on the course. The Autopilot system works accurately on rolling or sloping terrain as well as level ground due to the inertial measurement technology that automatically compensates for roll and pitch of the tractor.
- Trimble's **AgGPS 214 High-Accuracy Receiver** is designed specifically for Real-Time Kinematic (RTK) operation to allow centimetre-level accuracy along straight lines. This dual-frequency receiver extends the use of GPS signals to get even greater accuracy by using a base station which transmits real-time carrier phase corrections at a frequency of up to twenty times per second via radio to the field tractor which provides immediate guidance along row lines, row number and ground speed.
- The Trimble **AgGPS 170 Field Computer** is a rugged field computer with daylight-readable colour display designed for agriculture's environmental extremes. With the added Autopilot option, it runs **AgGPS FieldManager** - a top-of-the-line field information management solution which allows for field mapping, variable rate management, land levelling, soil sampling and record keeping. Another in-vehicle display is the **AgGPS EZ-Guide Plus** lightbar guidance system which is the first system to combine crystal-clear guidance LEDs, a sunlight-readable LCD screen and integrated GPS, all within a slim profile lightbar.

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