30-08-2023

To whom it may concern,

I've worked with Jake over the past 4 yrs in South Australia and was first introduced to him in his role piloting drone lidar into our large non-entry voids undergrounds using established technology to survey the size of the underground openings. These void surveys generally occur weekly to monthly and unlike open pit monitoring methods are non-continuous. Since then Jake has been developing methods to enable continuous monitoring of non-entry voids. He has developed the "Void Monitor" in which he is able to place a lidar device into an open void or off of an open pit wall to enable continuous monitoring of non-entry voids or pit walls. He is continuing to innovate the "Void Monitor" to enable placement in variable environments with simplified placement. He has shown a great passion for improving the way we can safely work around non-entry voids in our underground voids using innovative monitoring methods. I endorse the application of Jake Hartwig for the Australian Innovation Competition.

Regards,

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Manager Mine Planning

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