

# Dalgaranga reduces ore loss by 19% and recovers an additional AUD151,522 in a single blast

Commodity	Ore Grades	Geology	Powder Factor	Location
Gold	Low	Narrow-vein	Low to Medium 4.0 – 7.0	Australia

Dalgaranga is a low-grade open pit gold mine owned by Gascoyne Resources Limited. Located in the Dalgaranga Greenstone Belt within the Murchison gold mining region of WA, approximately 600km north west of Perth by road. The Dalgaranga Project has a Proved and Probable Reserve of 16.9Mt @ 0.9 g/t for 501,800 oz Au (ASX release 3rd October 2019).

## Challenges

BVI polypipe was not accurately accounting for blast movement due to highly complex and narrow veined nature of the ore body

- Significant gold bearing material sent to waste dump (ore loss) and waste being put through the mill (dilution)
- Blast Vector Indicators (BVI's) were both underestimating blast movement at the surface and providing no information for blast movement at depth
- Lack of visual distinction between ore and waste meant that this couldn't be corrected in the field during ore block mark up

## Solution

The BMT system allowed Dalgaranga to accurately translate pre to post blast dig lines as a result of blast movement

- Blast movement monitors (BMMs) are installed in monitoring holes throughout the shot
- installation and detection as per site standard operating procedures
- BMM Explorer software calculates new dig lines for each flitch, and areas of ore loss and dilution that would have occurred without monitoring

## Results

*In one blast alone, Dalgaranga recovered an additional 2,874 t of ore valued at AUD \$151,522 that otherwise would have been sent to the waste pile had blast movement not been accounted for.*

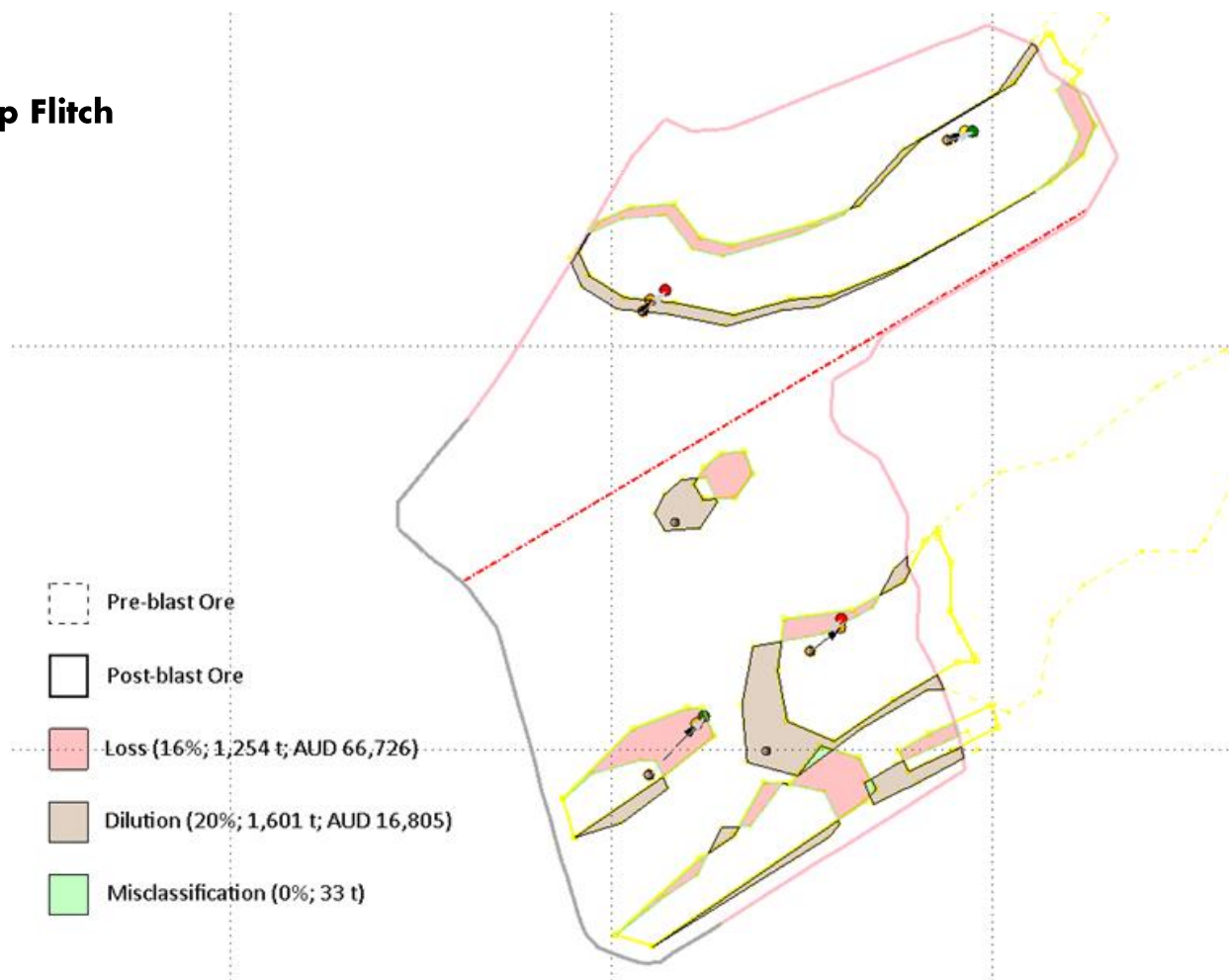
- Measured horizontal movement ranged from 1.7-10.3
- Measured vertical movement of up to 3m
- Reduction in dilution of over 25%
- Recovered an additional 2,874 t of ore valued at AUD \$151,522

Blast Movement	Ore Loss per Blast			Dilution		
	Ore Loss		Value	Dilution		Value
	%, gm/t,	Tonne	%	AUD	Tonne	%
0.8	2,874 t	19 %	151,522	3,823 t	25 %	40,136
Total Ore Recovered				\$151,522		

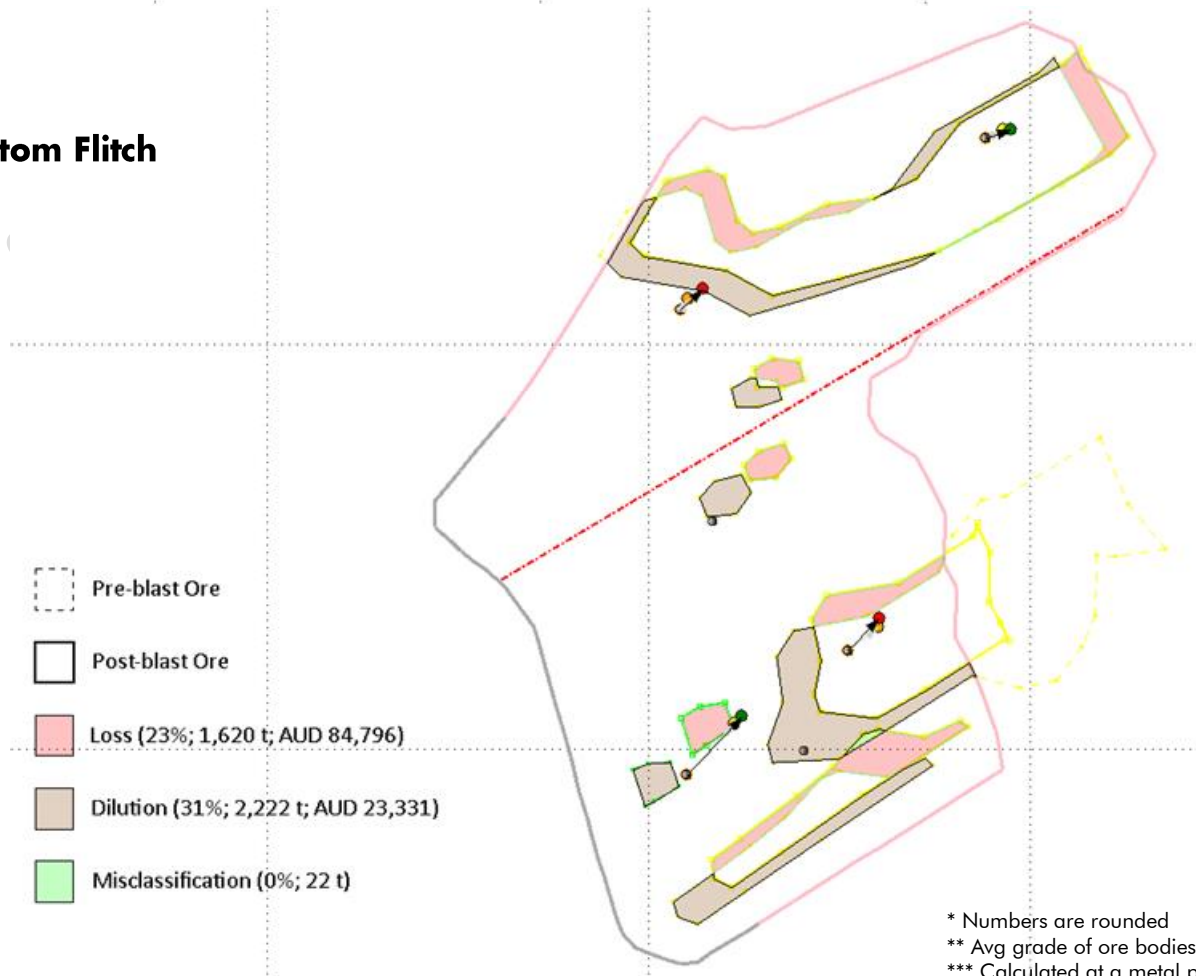
### Stated assumptions

- Grade of Waste material < 0.2 g/t
- Gold price = AUD\$2150/oz
- Density of rock = 2.2 t/m<sup>3</sup>
- Average grade = 0.8 g/t
- Mill Recovery = 88%

### Top Flitch



### Bottom Flitch



\* Numbers are rounded  
 \*\* Avg grade of ore bodies 0.8g/t  
 \*\*\* Calculated at a metal price of AUD \$2150/oz