

## PRODUCT APPLICATION NOTE

SN0105

<b>Industry:</b>	Primary Metal Mining
<b>Type of Application:</b>	Level monitoring of an underground rock bin
<b>Optech Equipment Used:</b>	Sentinel 3100
<b>Application Description:</b>	The customer required monitoring of the level of an underground rock bin to avoid overfilling.

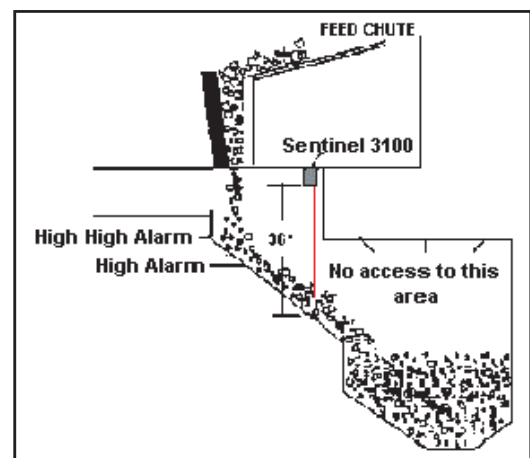
A multi-national resource company required a non-contact method of monitoring the level of an underground rock bin. In this setup, rock is fed down a chute into a swing jaw crusher, and from there into the bin. The bin level must be constantly monitored to ensure that an overflow condition does not occur. High and High High alarms were set based on its output. The SENTINEL 3100 was programmed to ignore spurious readings caused by heavy dust, so as not to set off an alarm.

The SENTINEL 3100's sealed die-cast housing was further ruggedized by enclosing it in two sections of structural steel (W10 x 33) to protect it from falling rocks.

The satisfied customer wishes to add additional units for other applications. One such application is to monitor the level of ore in an ore pass in order to trigger a Low alarm. The pass must be kept at a minimum level in order to protect the chute from the falling ore.

### KEY ADVANTAGES OF LASER TECHNOLOGY IN LEVEL MONITORING

- Measurements can be made in moderate amounts of dust
- Non-contact measurements
- Measurements can be made at non-vertical angles to the surface
- Short setup time with no calibration required
- Measurements unaffected by temperature variations
- Narrow beam divergence for long distance measurement to small targets



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