

3D MAPPING - MINERAL STOCKPILES

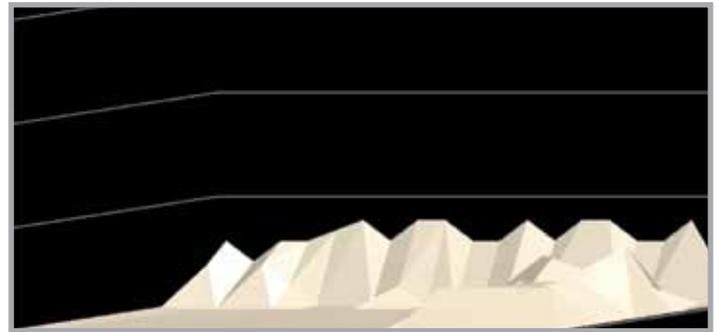
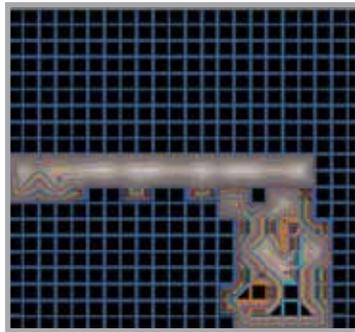


Christy & Griffin have developed a sophisticated process whereby stockpiles, irrespective of size and profile can be accurately mapped to initially determine footprint, and thereafter create a simulated 3D profile. From this we can determine the true volume, and also determination of tonnage.

Utilizing customized GPS equipment and app based software, this mapping process replaces other more traditional methods, and allows savings to be passed on to the customer.

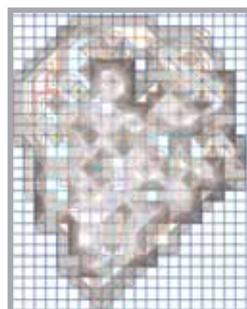
The process allows not only for an accurate calculation of physical size, and a determination of the surface area, which is becoming increasingly important for environmental purposes, and in some locations, is a legislated requirement.

If this service is then combined with core sampling, an actual determination of weight of the stockpile can thus be established.

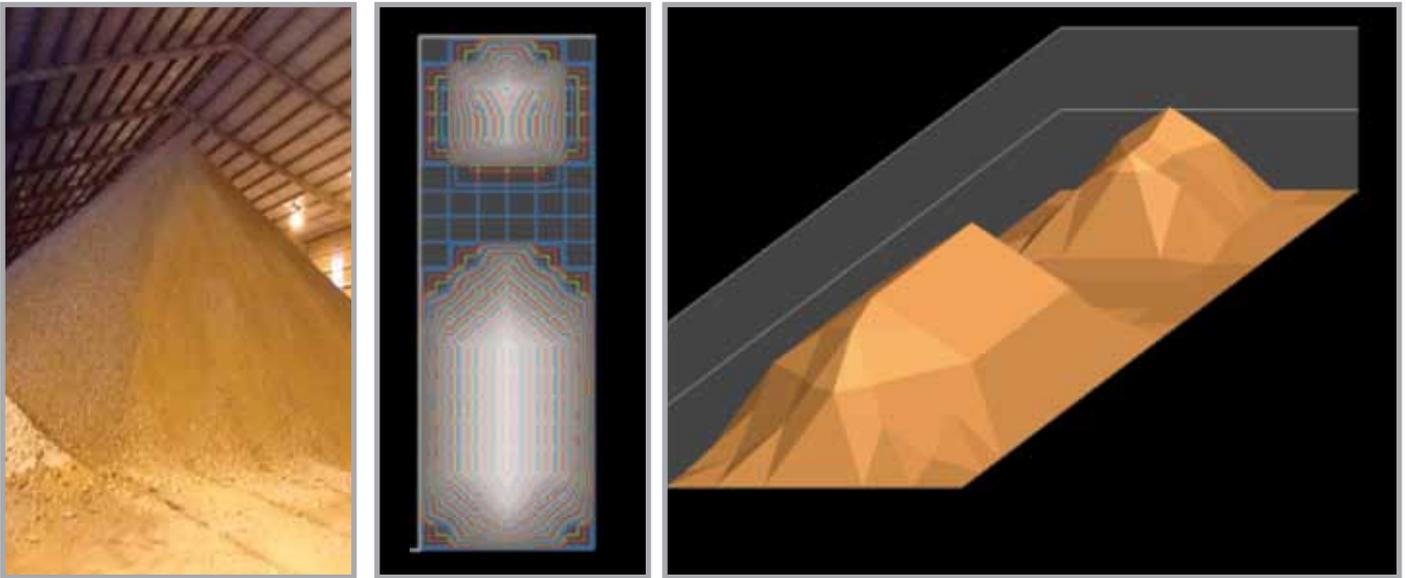


Stockpile → Footprint → 3D Mapping

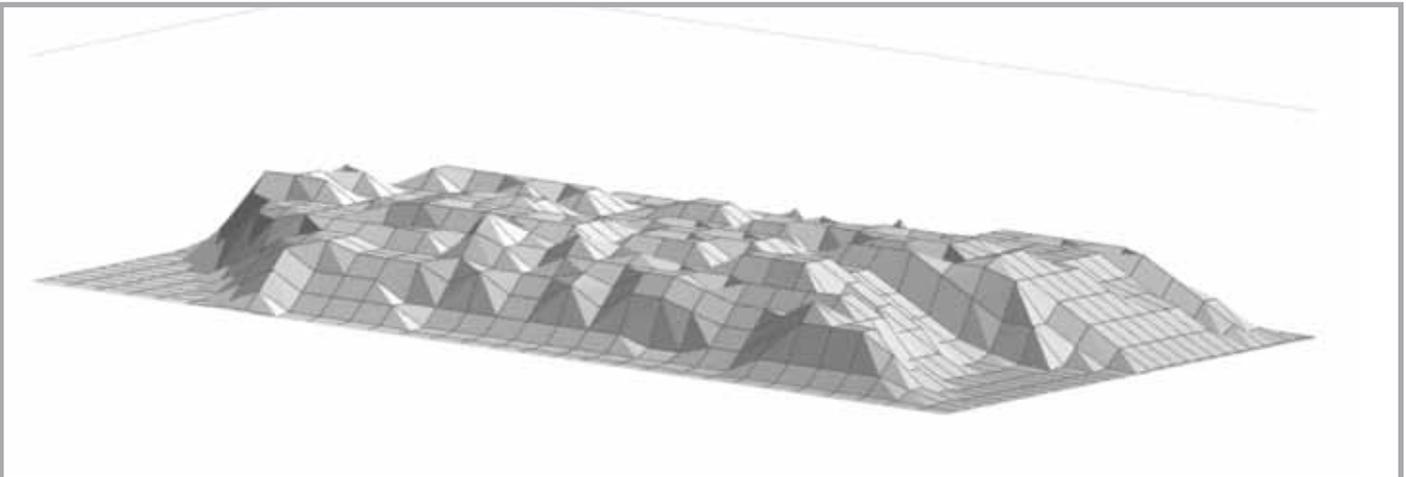
The above shows a small stockpile, however larger and more complex stockpiles can also be measured using exactly the same methods.



Although the technique is designed to be used out of doors, we have further enhanced this to allow us to measure undercover stockpile area. In this method we cannot use GPS as the accuracy does tend to be reduced, but we have further developed the software to allow measurements to be made by triangulation. This makes the product unique, as we are able to use the same mapping techniques, irrespective of measurement method.



Example of an undercover stockpile determination.



The surface area of any stockpile can be determined by using a series of algorithms that is built into the mapping program. This provides useful data for organizations that have EPA compliance responsibilities and reporting criteria.

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