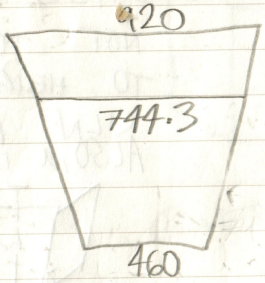
OPTION 1

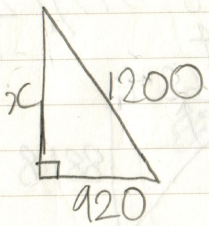
460 × 1·618034
= 744·29564



Angle at base of panel is also 79°, similar to Option 3 :. the Golden mean is found within the panel!

The question is, where do you want the golden ratio to occur in the kiln. At the top, half way up, 3/4... ?? Maybe better at the top, where the vortex will occur...

HEIGHT

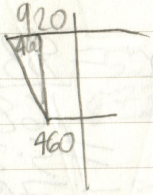


$x^2 + 920^2 = 1200^2$

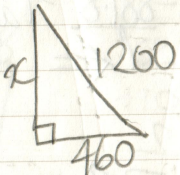
$\sqrt{1200^2 - 920^2} = x$

$770·45 = x$

FOR A POINTY HEX : PYRAMID



$920 - 460 = 460$



$x = \sqrt{1200^2 - 460^2}$

$= 1108·33208$

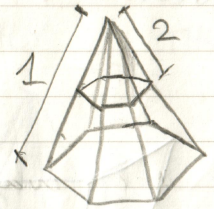
(111cm).

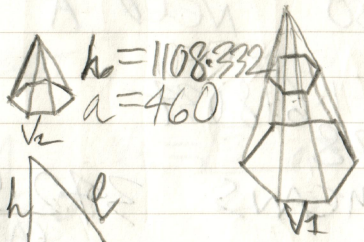
So, 111 − ~30 (SNUFF LAYER)
= 81cm of biochar
↳ Hard to work out volume!

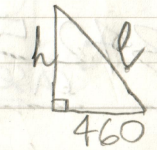
Volume of a pointy hexagonal pyramid

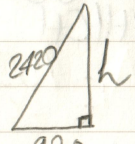
$V = \frac{\sqrt{3}}{2} a^2 h$, a = base edge, h is height

So, volume is large hex pyramid (if you extended it out to a vertex) − small hex pyramid (the truncated bit)









$l = 2370 - 1200$
$= 1170$

Need to draw to find l!

$460^2 + h^2 = l^2$

$h = \sqrt{1200^2 - 460^2}$

$= 1108·332$

$h = \sqrt{2420^2 - 920^2}$

$= 2238·3$

$V_1 = \frac{\sqrt{3}}{2} \times 920^2 \times 2238·3$

$= 0·866$ " $= 1640682633$

$V_2 = \frac{\sqrt{3}}{2} \times 460^2 \times 1108·332$

$= 203102920·1$

$V_1 - V_2 = 1437579713$

$l = 1437·579713$

$\Rightarrow 1438l$ (NOT TAKING INTO ACCOUNT REDUCTION IN VOLUME FROM DOUBLE TOP FOLD & 30cm OF SNUFF LAYER)

− MAYBE ROUGHLY 1000l of BIOCHAR