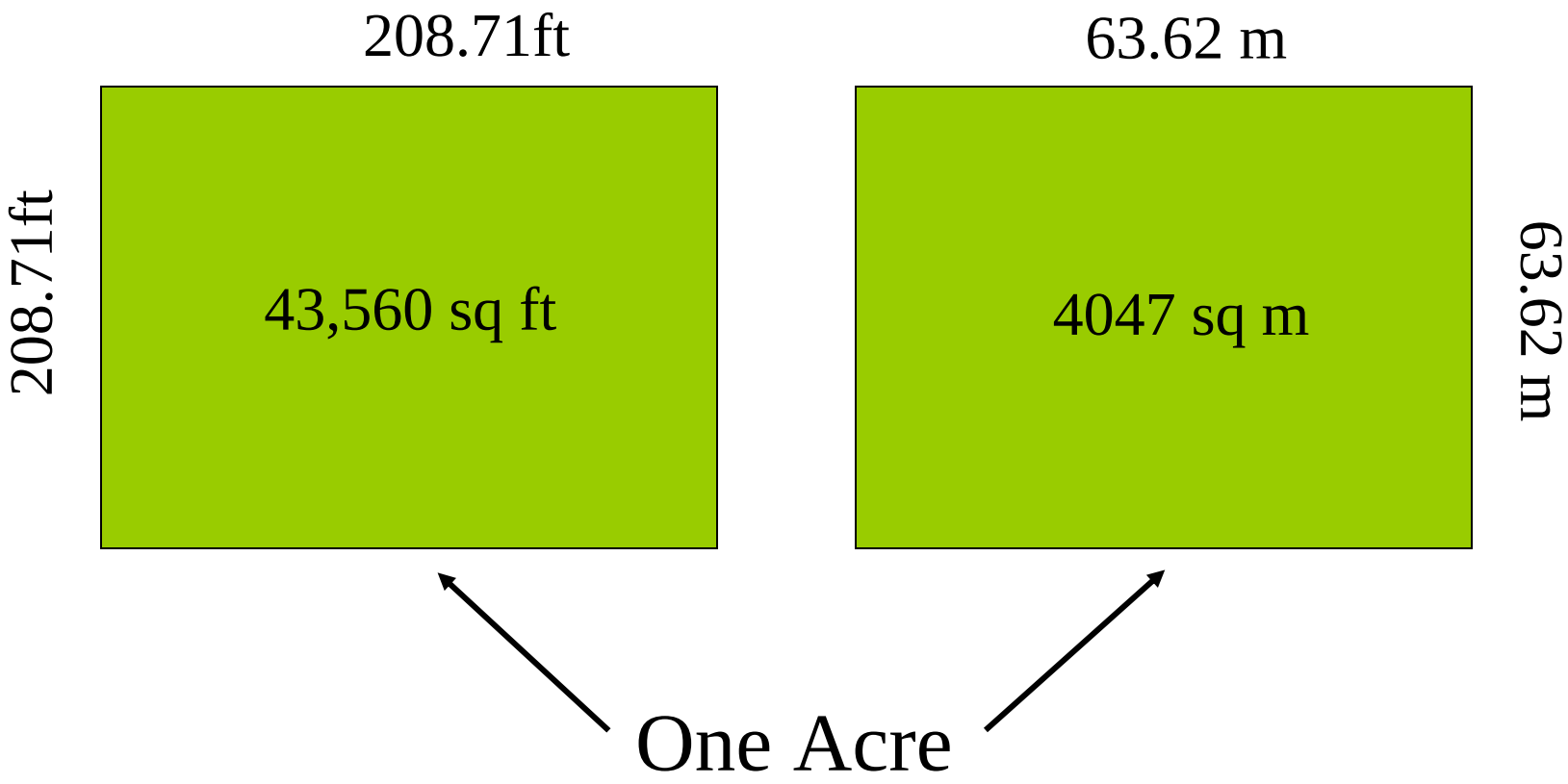
Area

Units of measure in resource estimation are usually acres



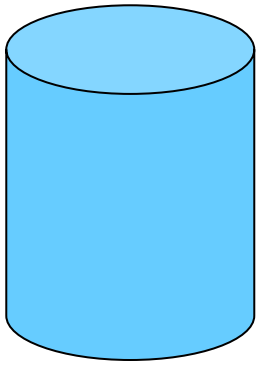
Area to Volume

Volume to Tons

1800 short tons per acre/foot

But where does this come from?

The Weight of Coal



If one cubic foot of water weighs 62.6 lbs…

What does one cu. ft of coal weigh,

if the specific gravity of the coal is 1.5?

62.5 * 1.5 = 93.75 lbs

The Weight of Coal, cont.

If one acre contains 43,560 cu ft
and
one short ton = 2000 lbs

What does one acre/foot of 1.5 SG
coal weigh in short tons

(43,560 cu ft * 93.75 lbs) / 2000 lbs/ton
or
2041.8 short tons

But I said earlier 1800 tons per acre/foot… What specific gravity is this based on?

(1800 tons * 2000) = 3,600,000 lbs

3,600,000 lbs /43,560 cu ft per acre = 82.64 lbs per cu ft

82.64 lbs(coal) / 62.6 lbs (water) = 1.32 SG

This magically appears in USGS Bull 891, Table 2 (p.22)
Coal Resource Classification System of the U.S. Geological Survey
by Wood and others
http://pubs.er.usgs.gov/pubs/cir/cir891

Conversion Factors by Rank

Rank	SG	Tons
Anthracite	1.47	2,000
Bituminous	1.32	1,800
Subbituminous	1.30	1,770
Lignite	1.29	1,750

(Have no idea where the average SG's came from!)