2007 Agrichemical Spills
&
Bulk Rules Update

Matt Laak

Wisconsin Department of Agriculture,
Trade and Consumer Protection

2007 Spills

- 45 spills responded to
- 35 spill cases closed
- 10 spills open
  - 3 require verification of proper soil handling
  - 3 require site observation
  - 2 require continued private well sampling*
  - 1 requires permitted landspreading
  - 1 requires verification/completion of cleanup

Spills of Emphasis

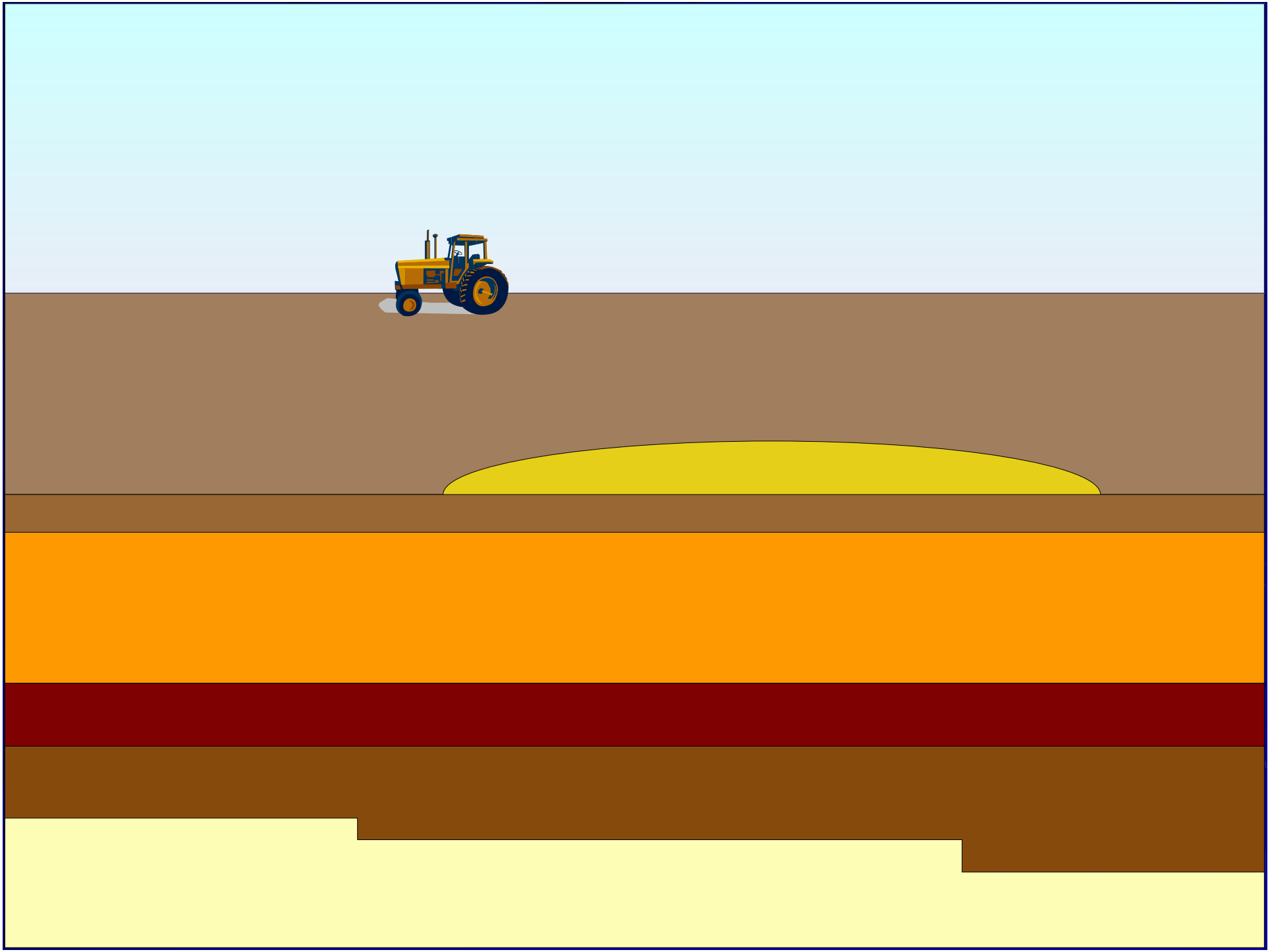
- Past Spills – some years, frequently seen problems
  - Dry fertilizer spreader: apron engages in-transport
  - Sprayer transport with induction pump on: burst hose, very difficult to stop the release
  - Inadequately secured minibulks in-transport: minibulk falls off truck, ruptures on impact
- 2007 (and 2006)…….

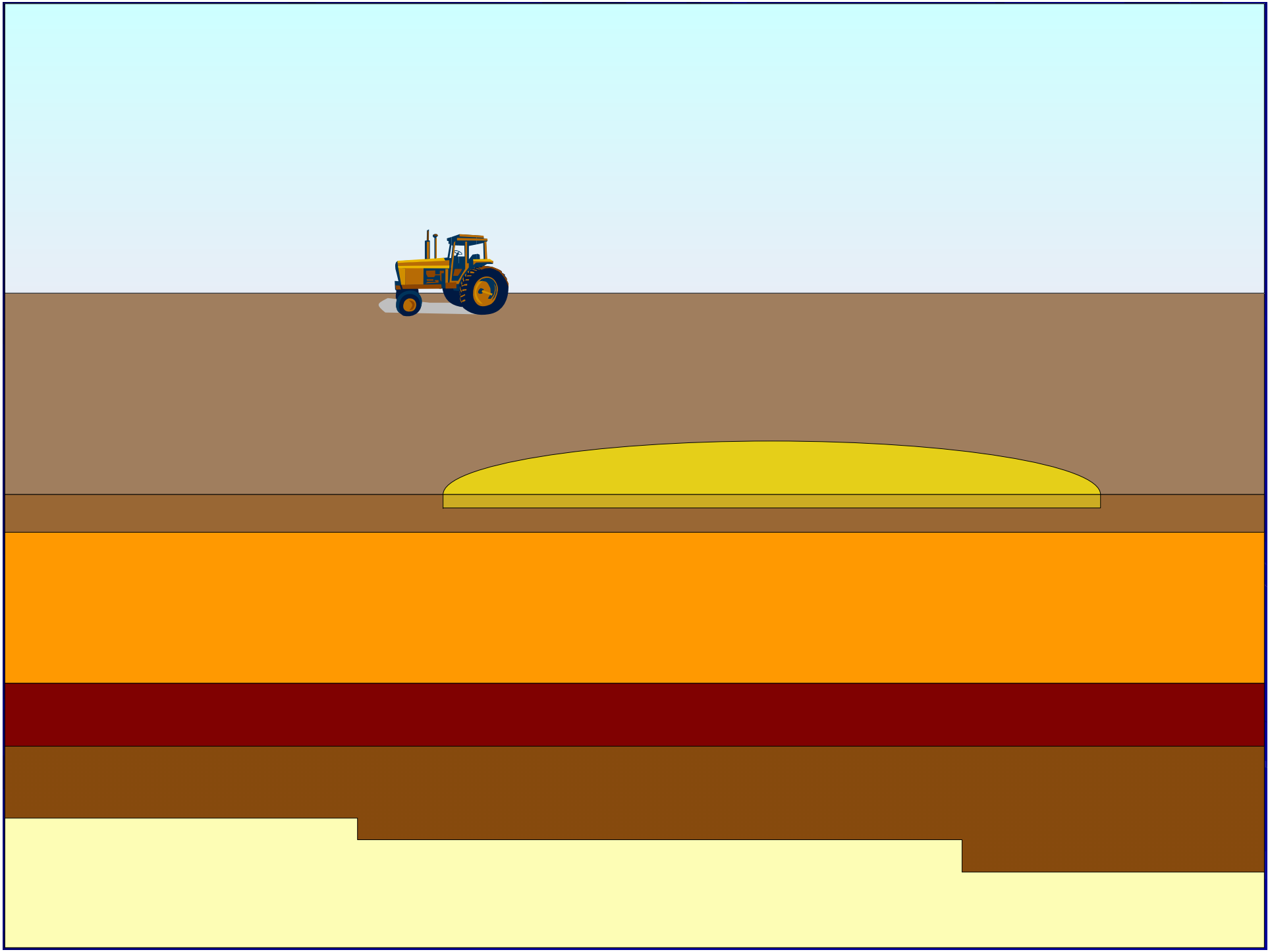
Parked Sprayer Release

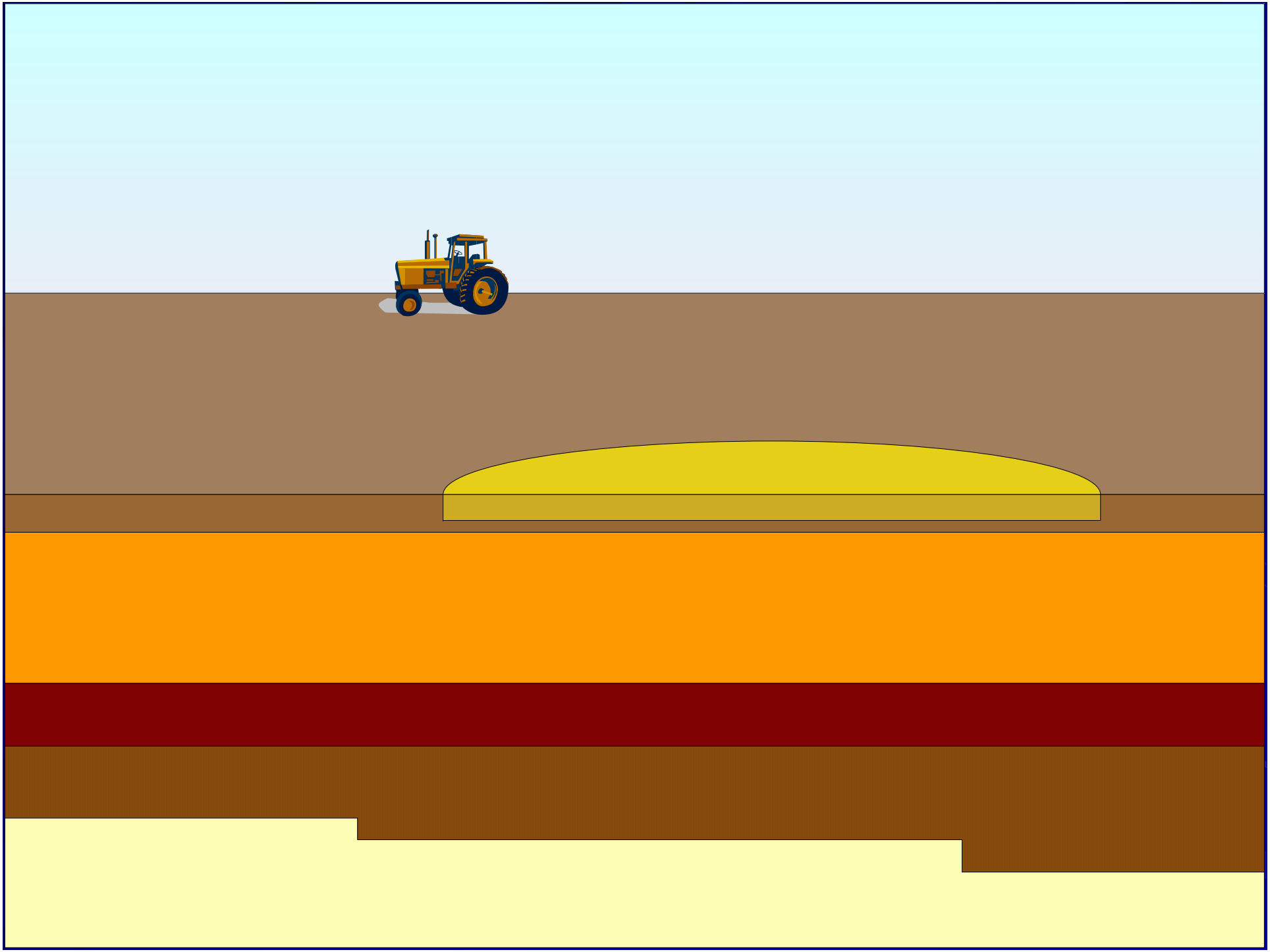
- Sprayer parked in-field overnight
- Operator returns in morning, sprayer has lost 50-75% of load
- Very different from an acute tank or valve failure

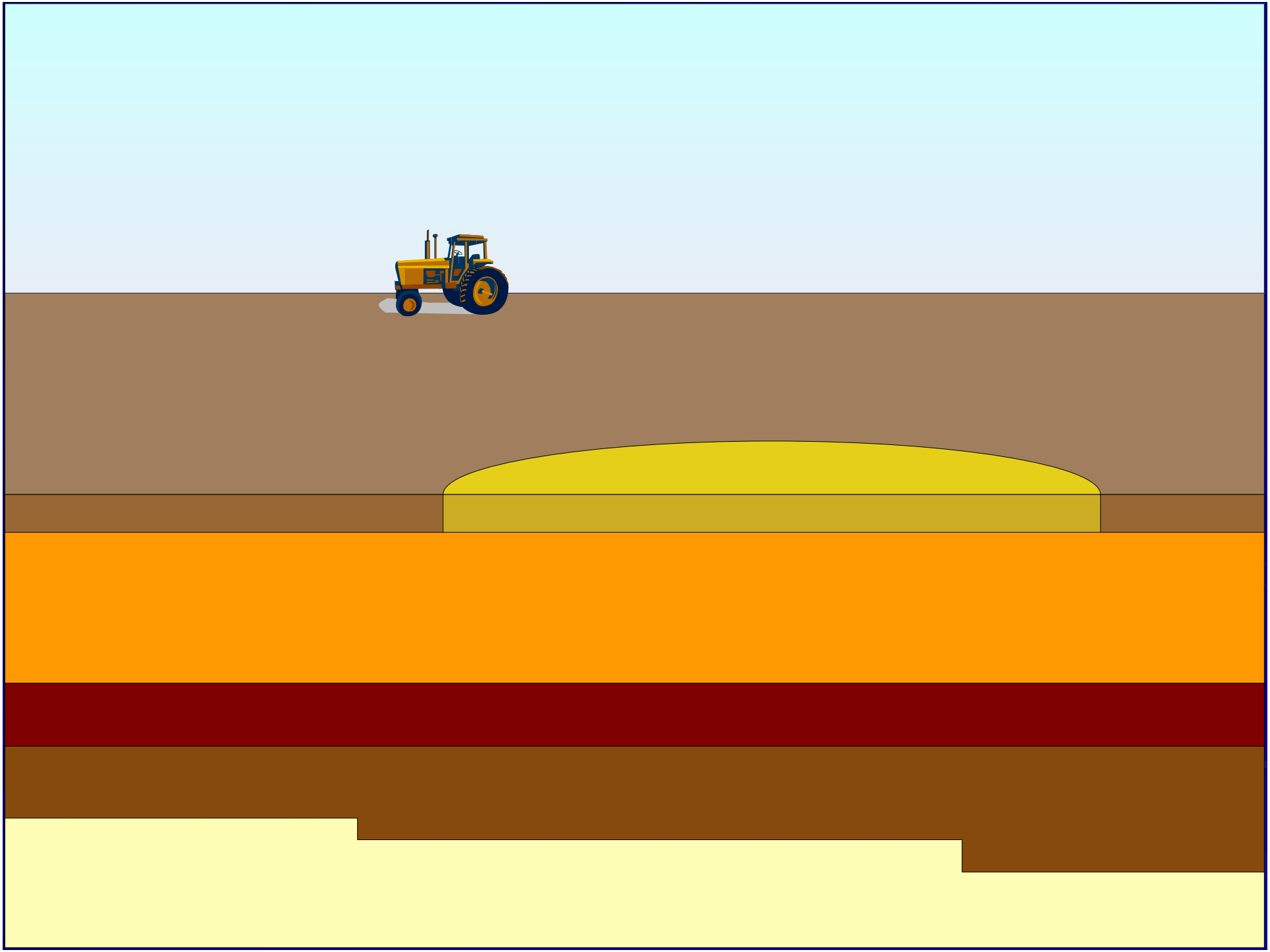
Acute Tank or Valve Failure

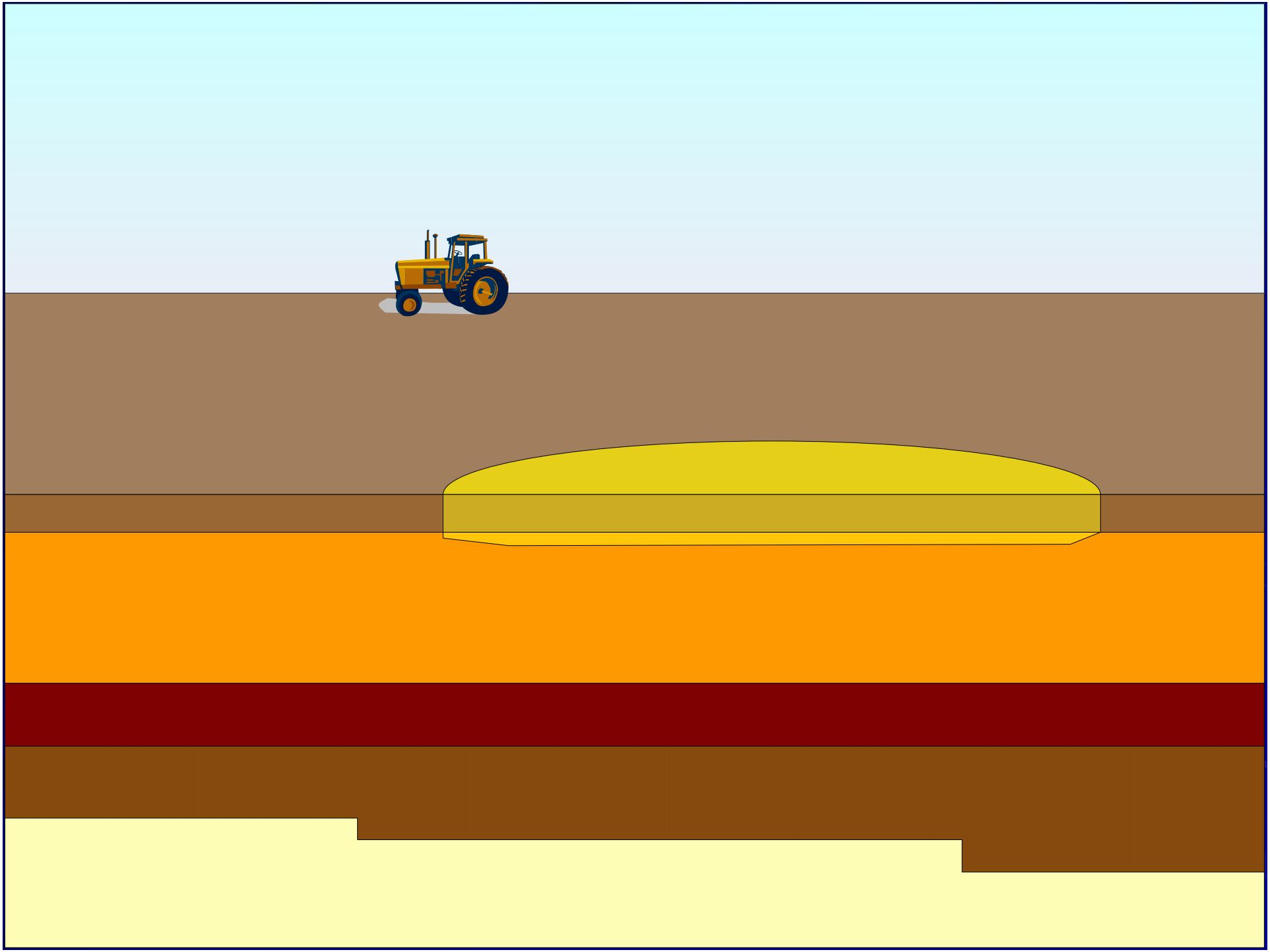
- Product spreads out on ground surface before soaking in
- Smaller mass/volume over vertical column of soil
- Contaminated soil does not extend very deep

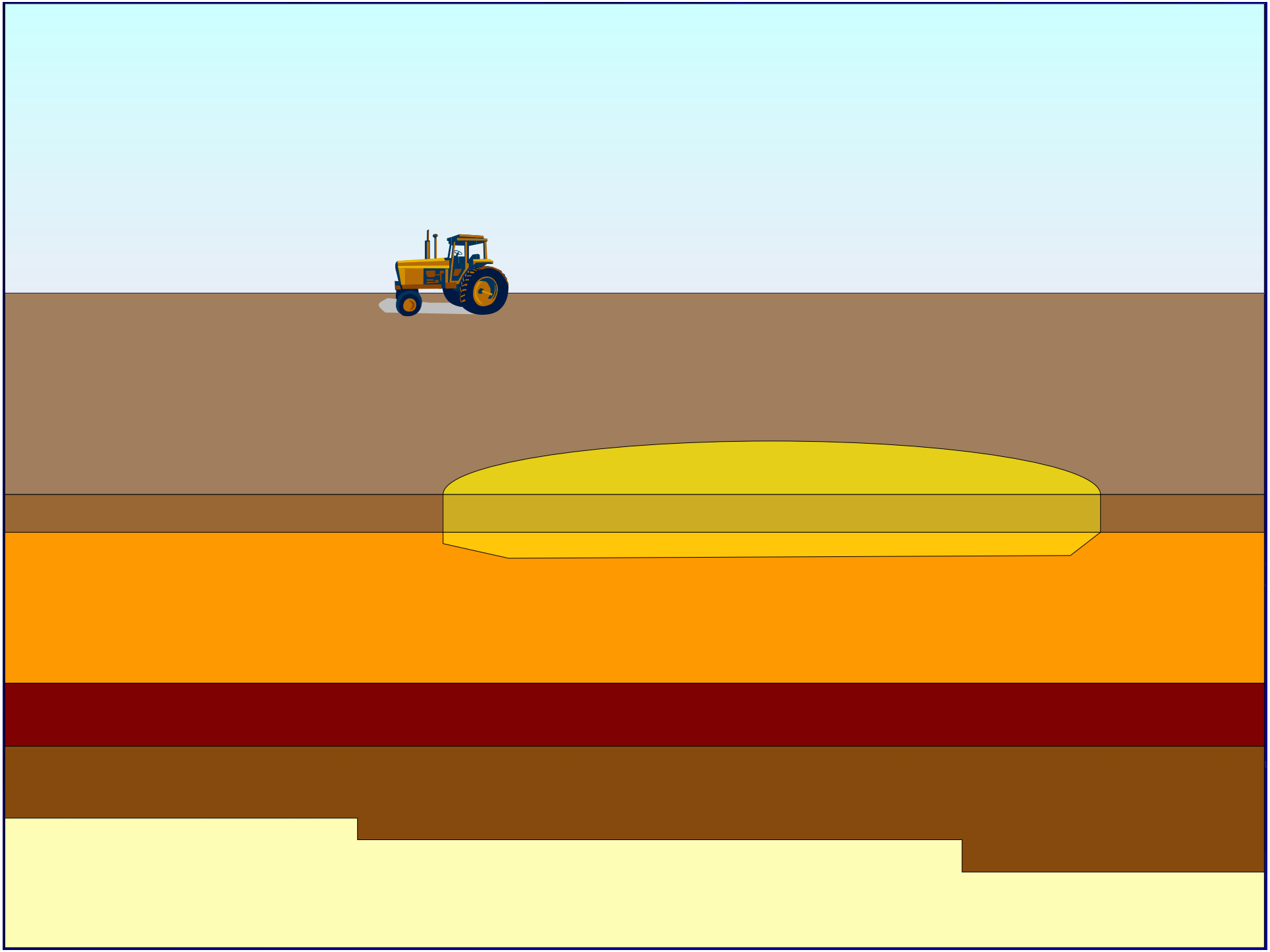


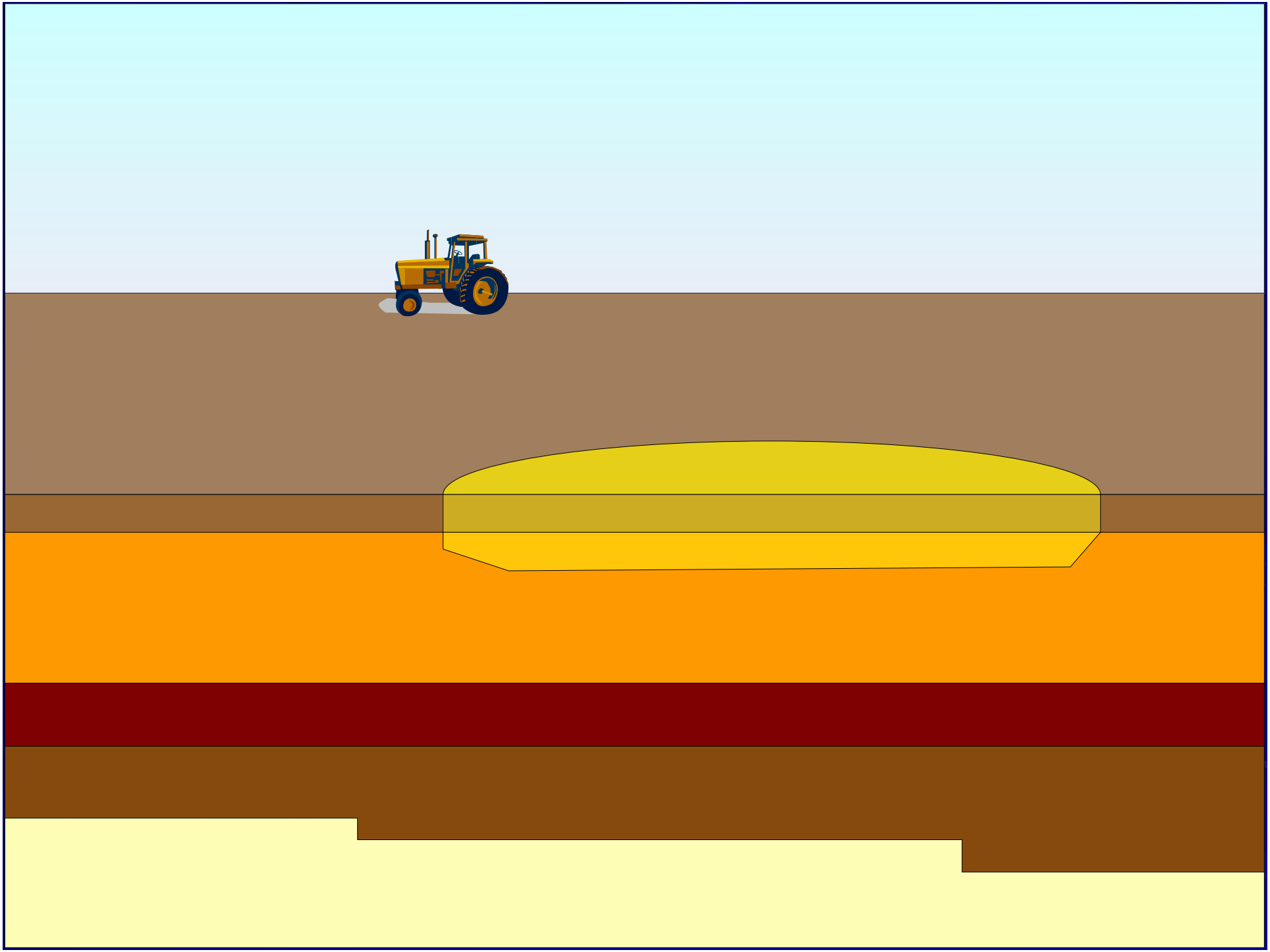


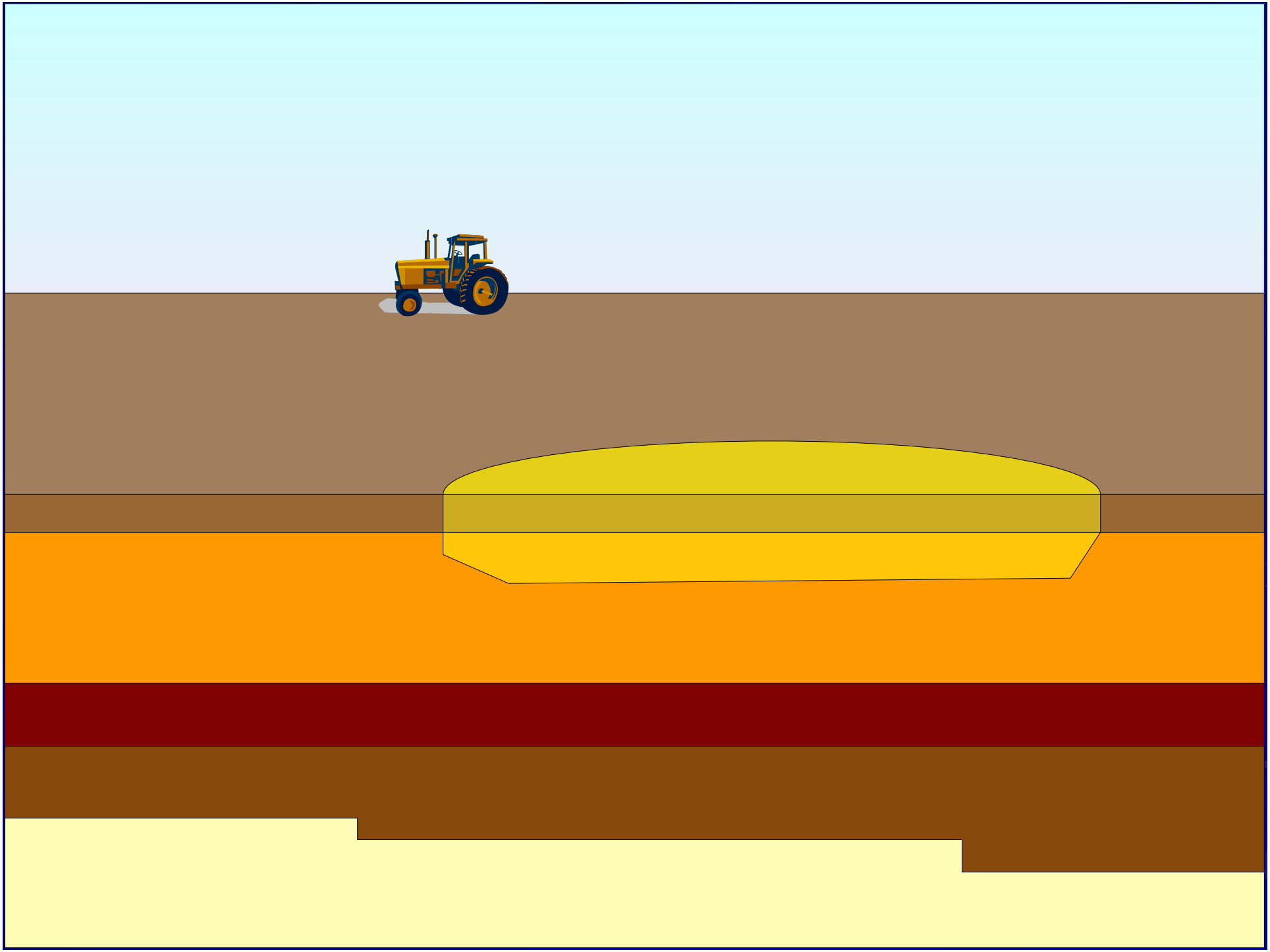


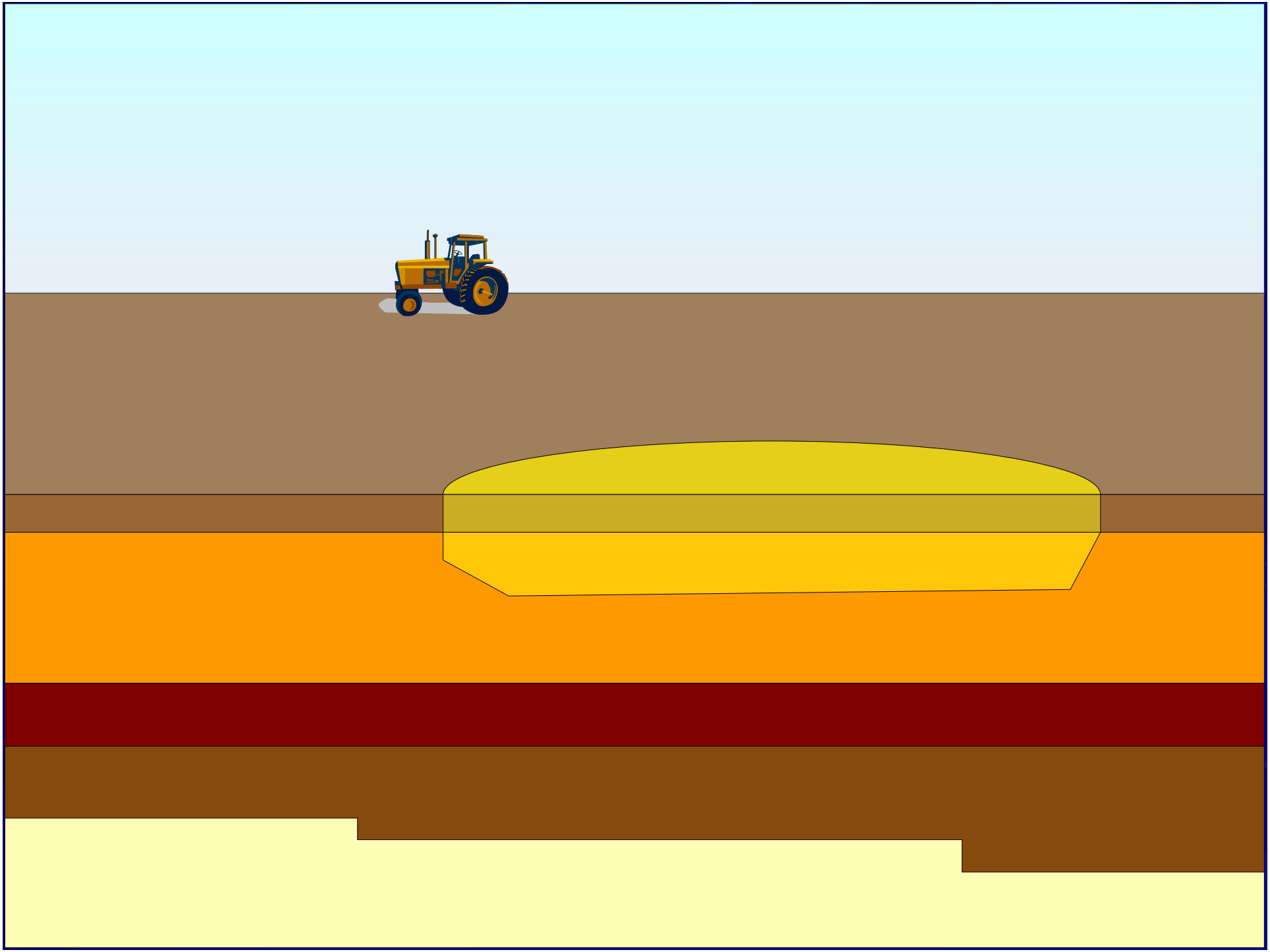


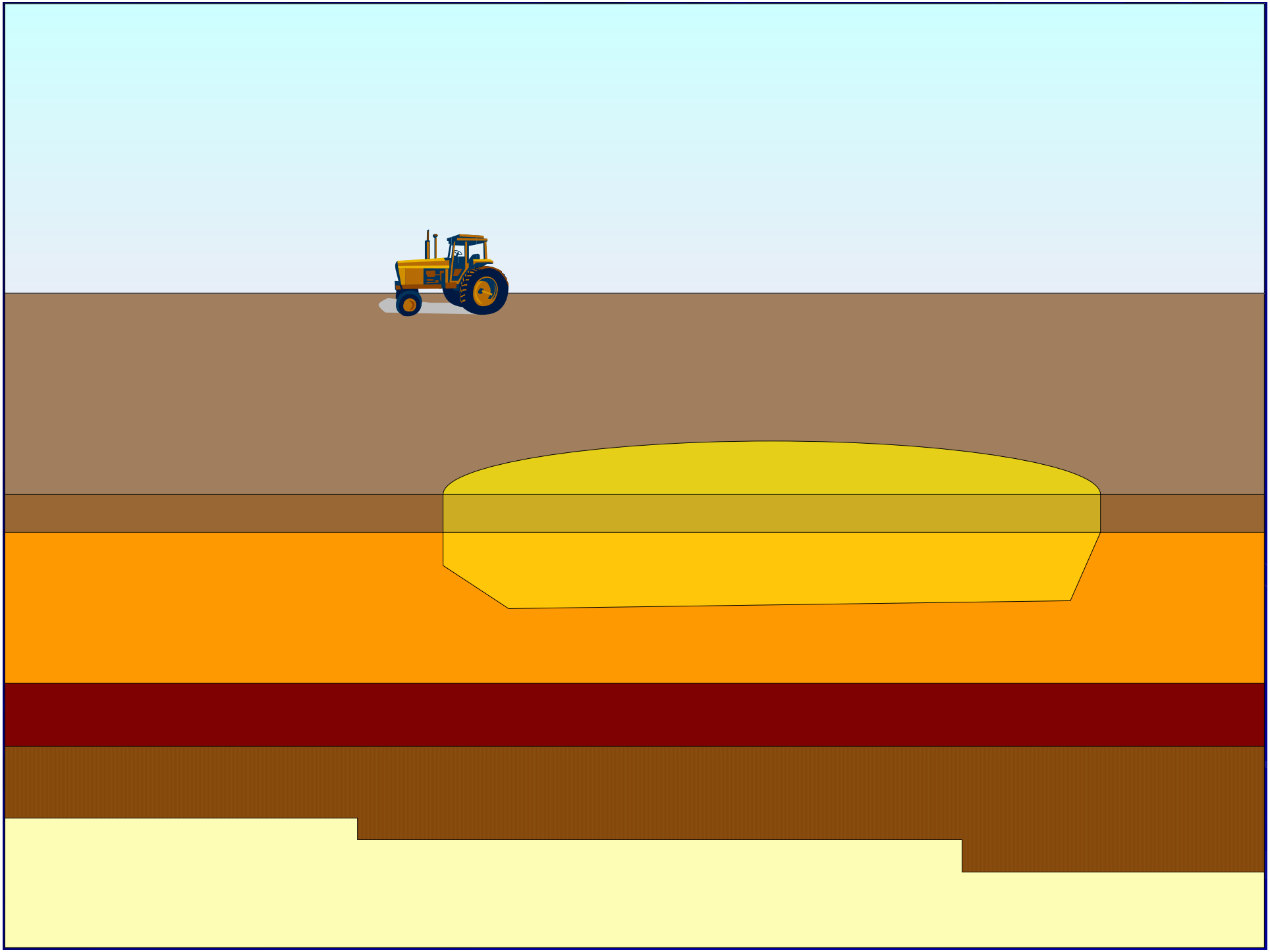


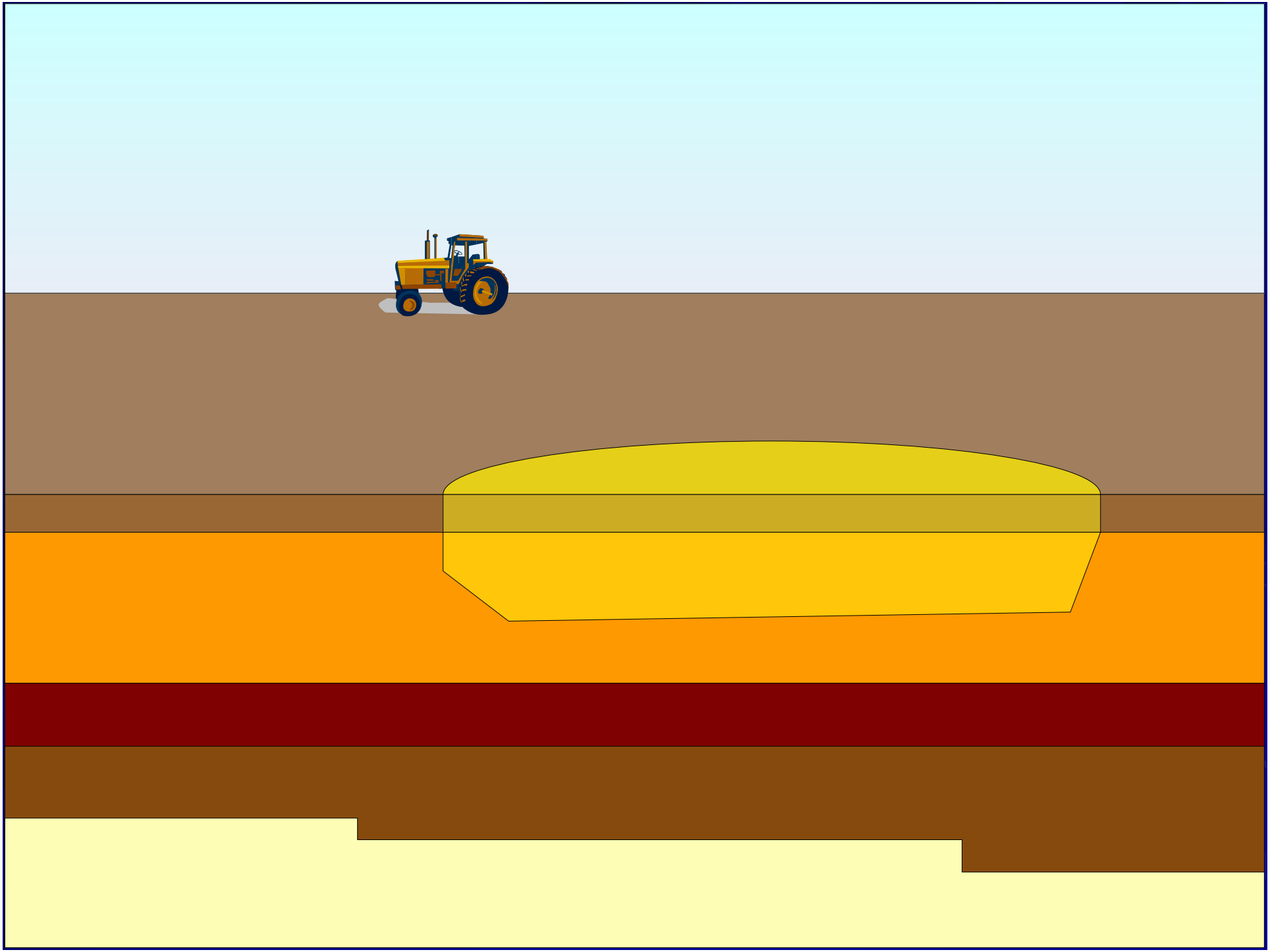


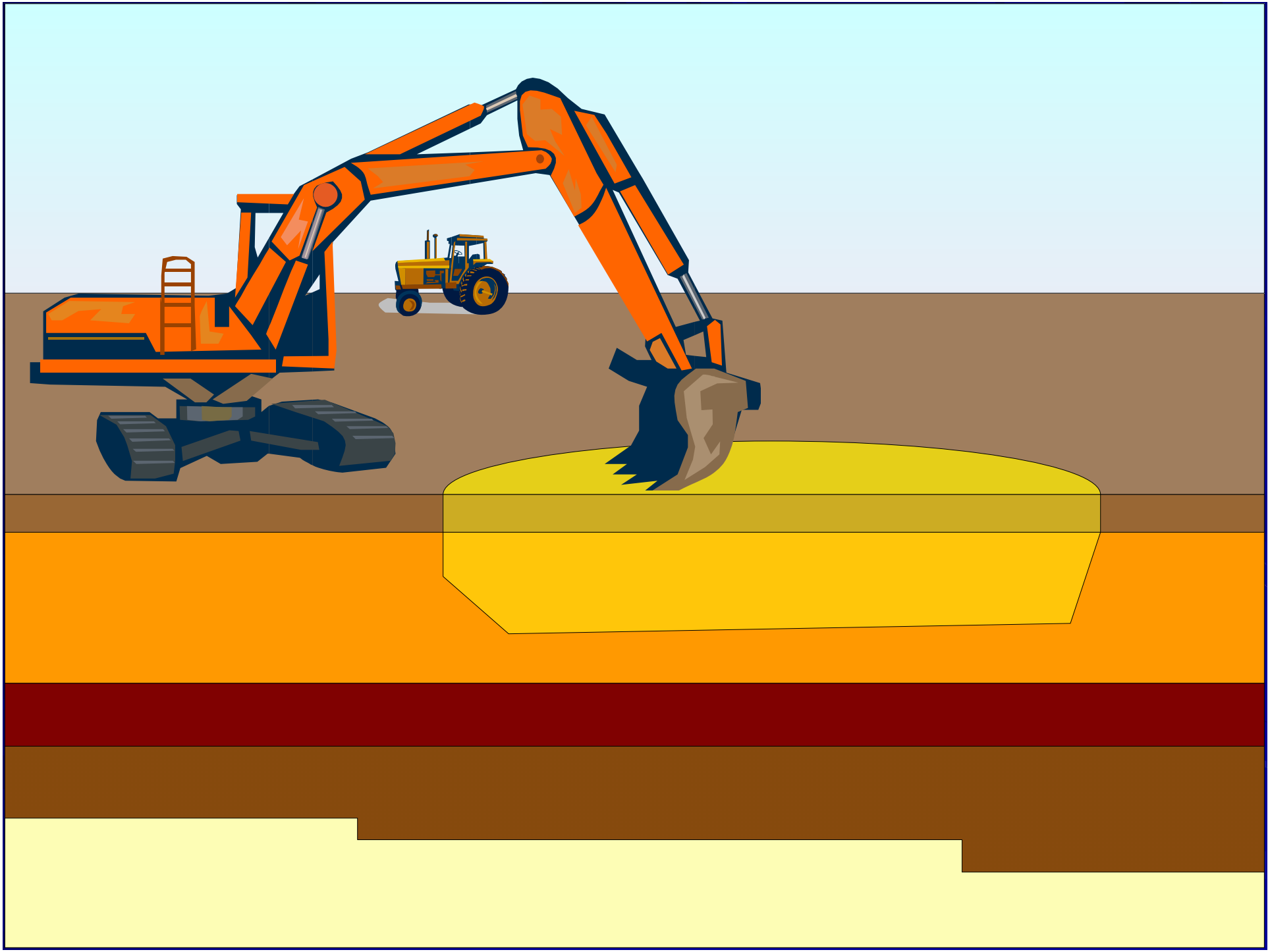


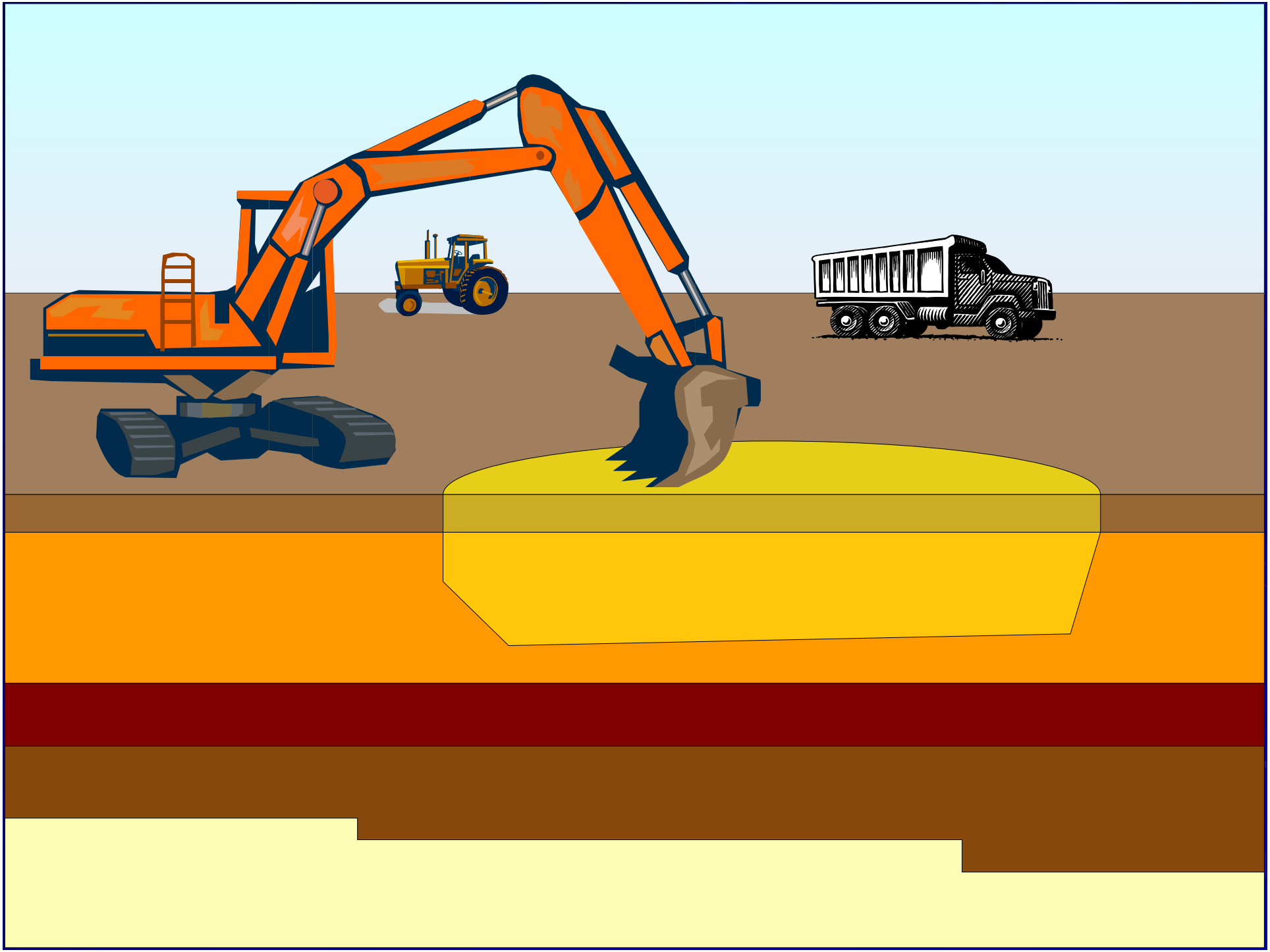






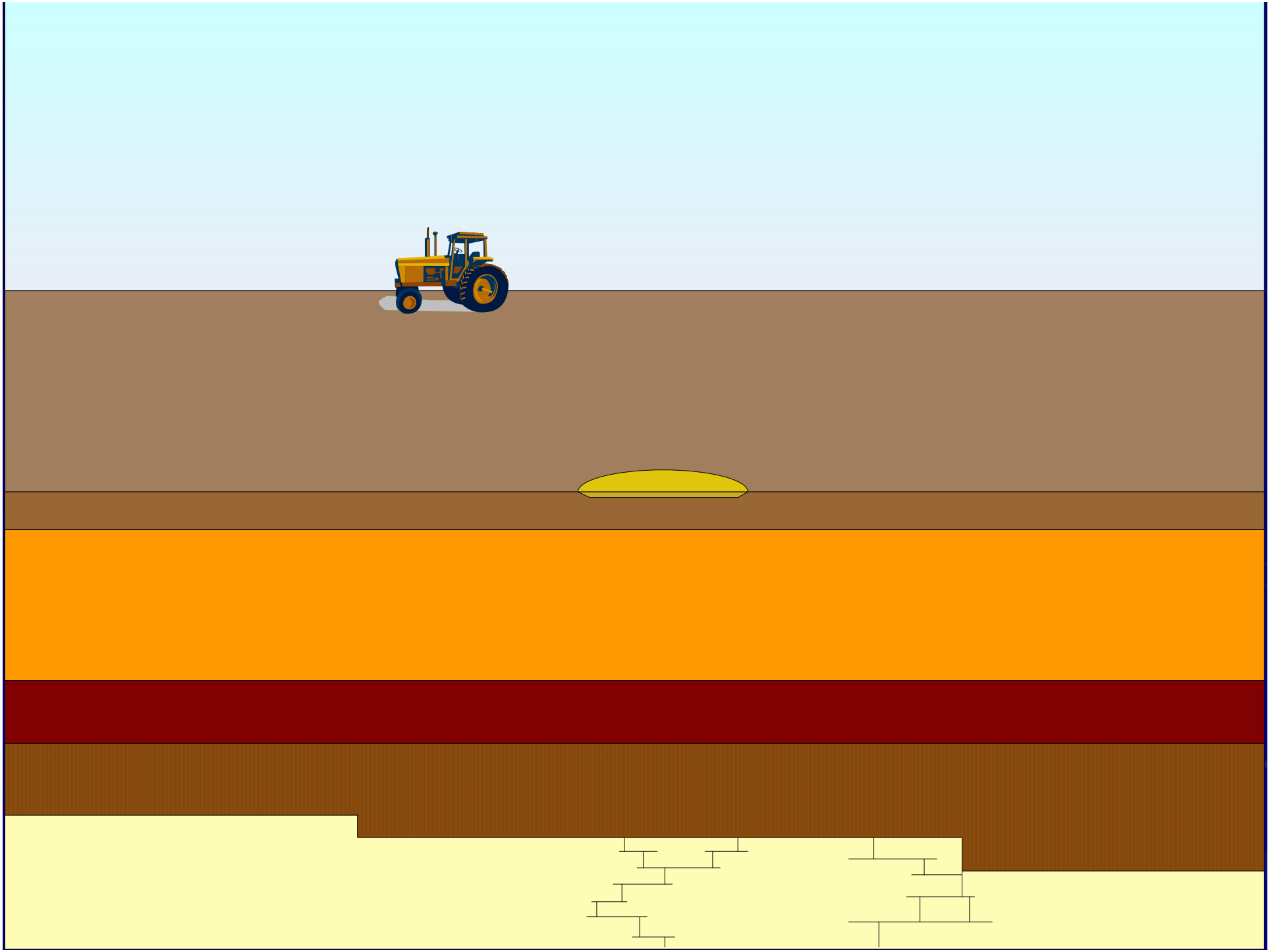


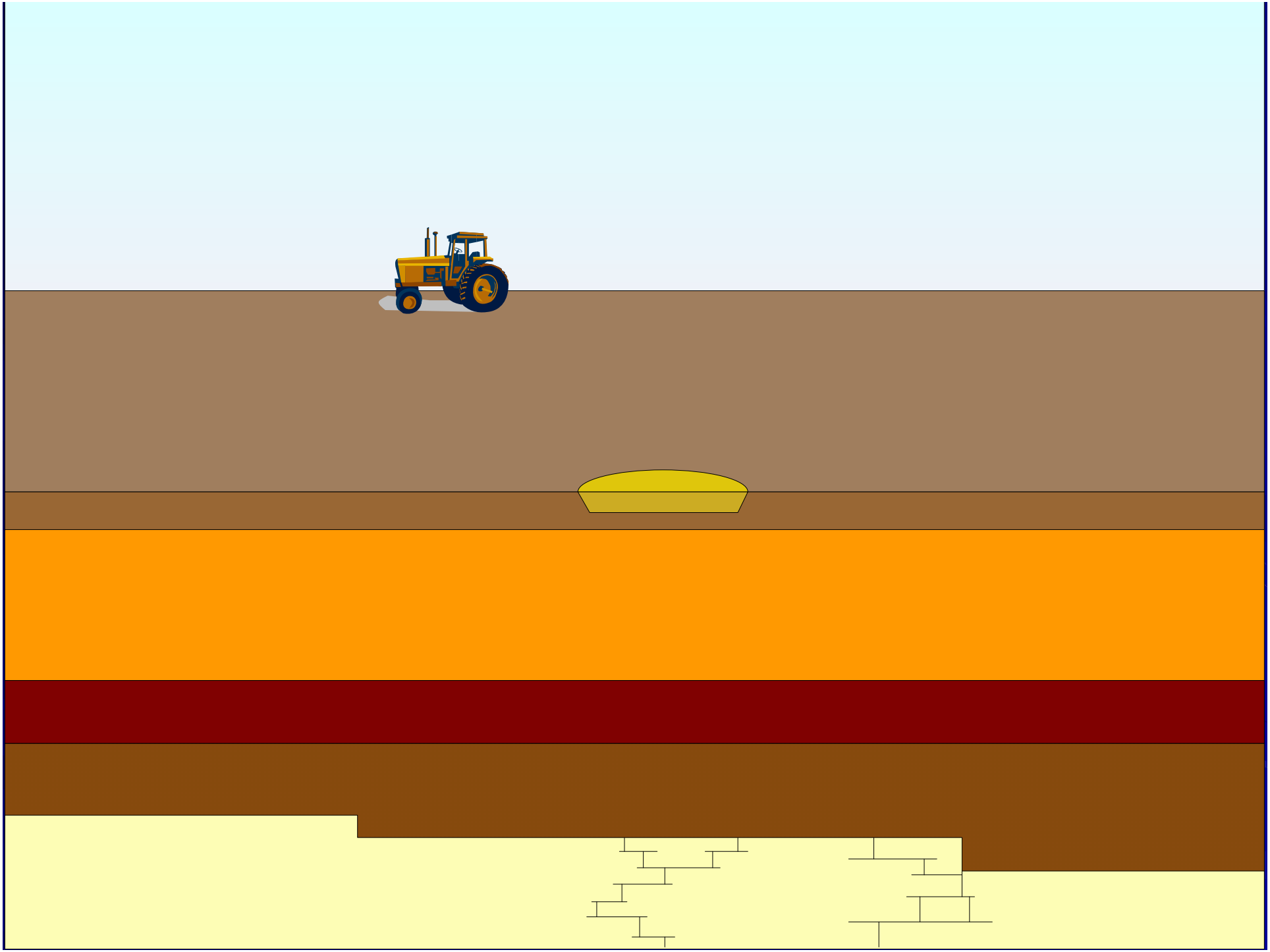


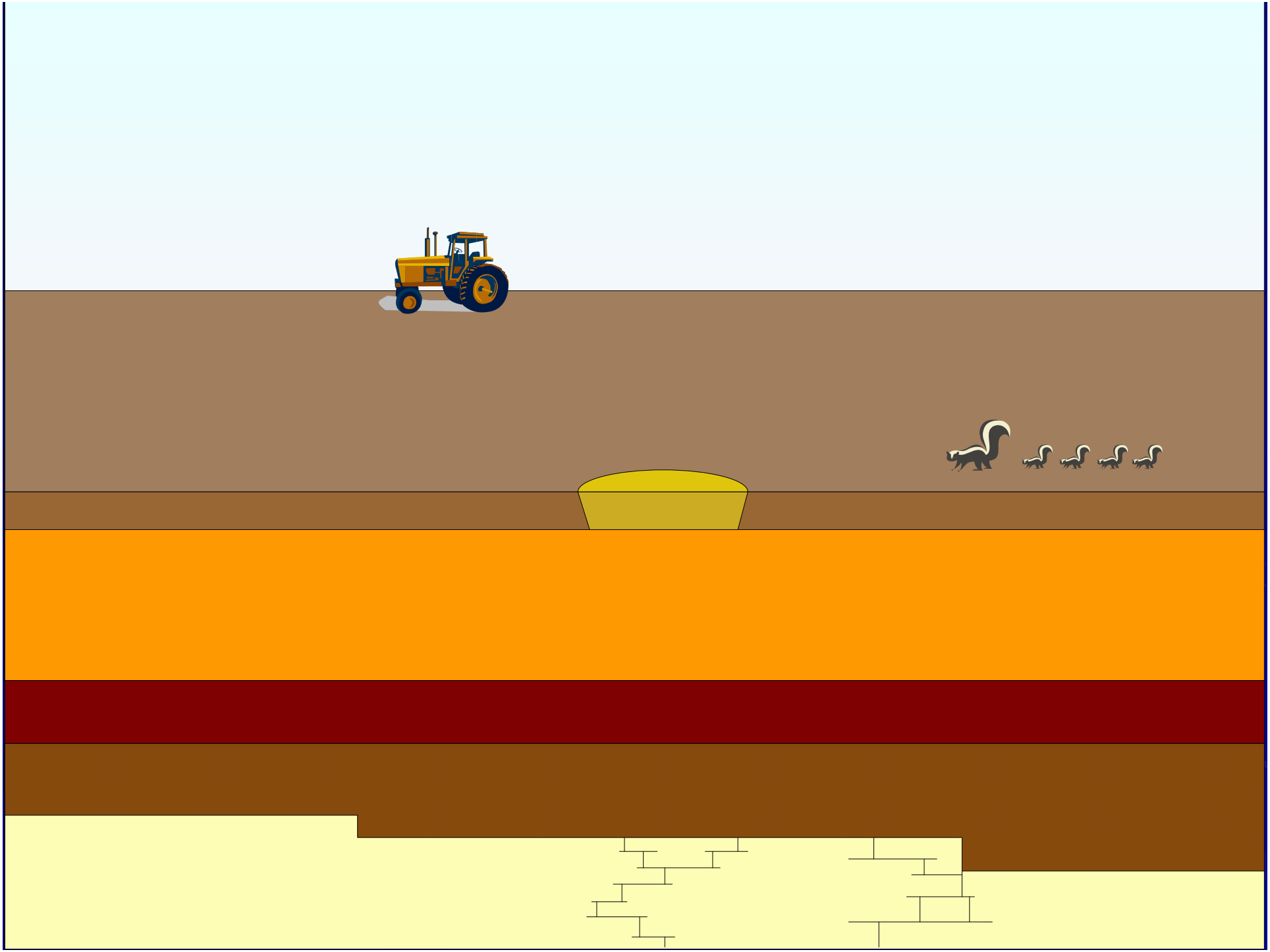


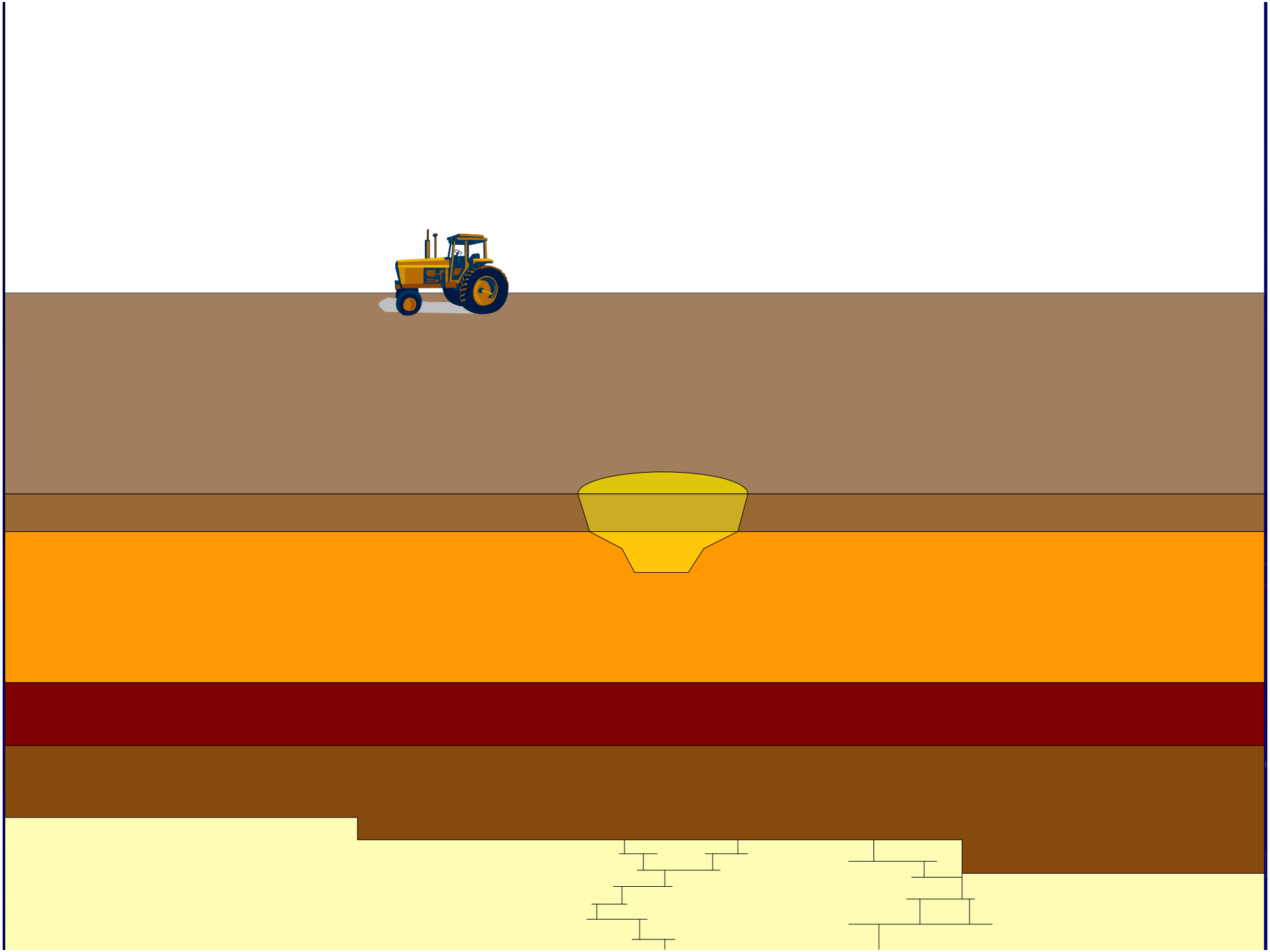
Slow Drip Spill

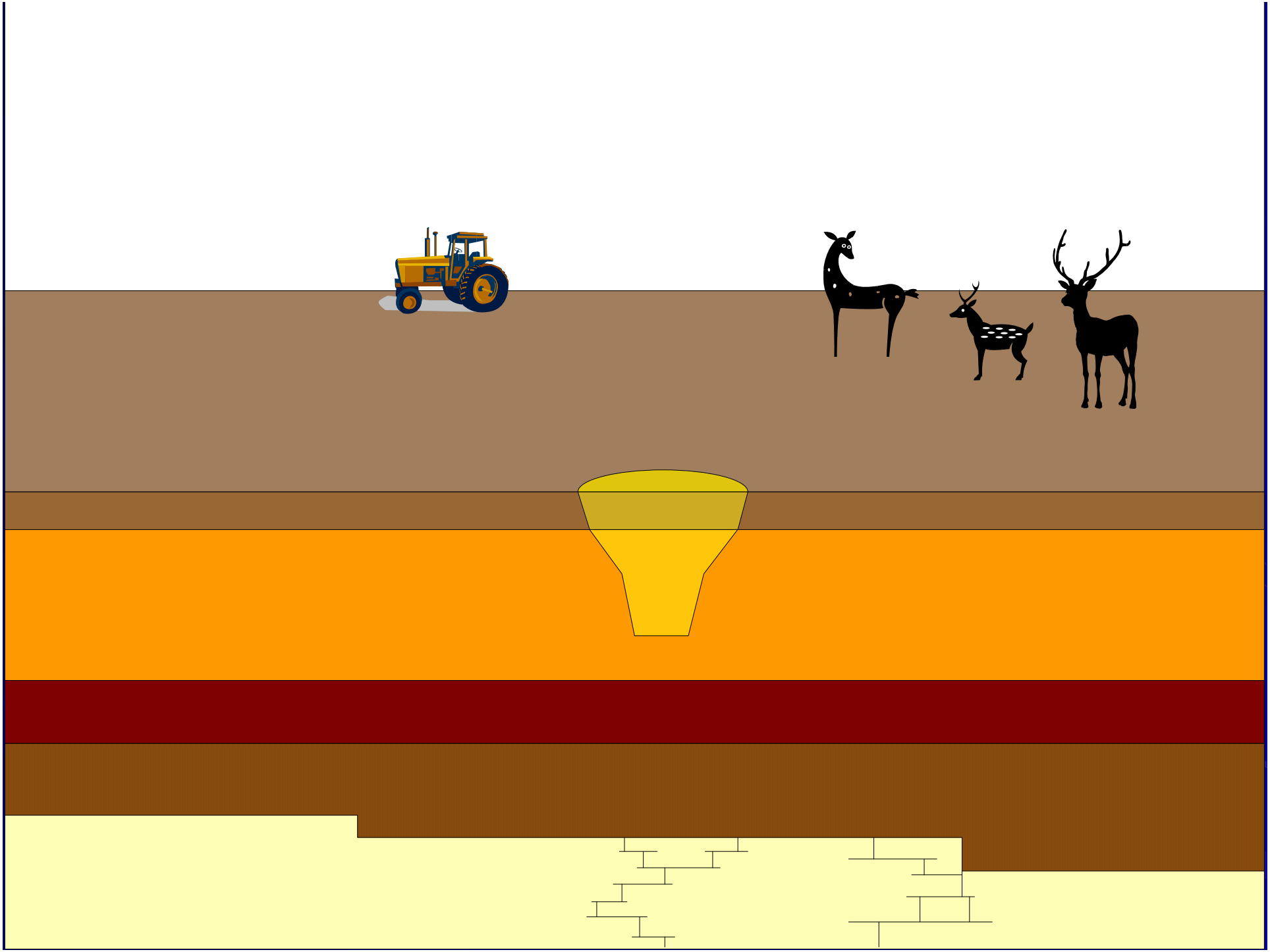
- Spilled material stays in small area on surface
- Soaks in creating its own saturated conduit to deeper soils
- Large mass/volume over soil column: downward pressure
- Deep soil impacts, possibly to bedrock and groundwater

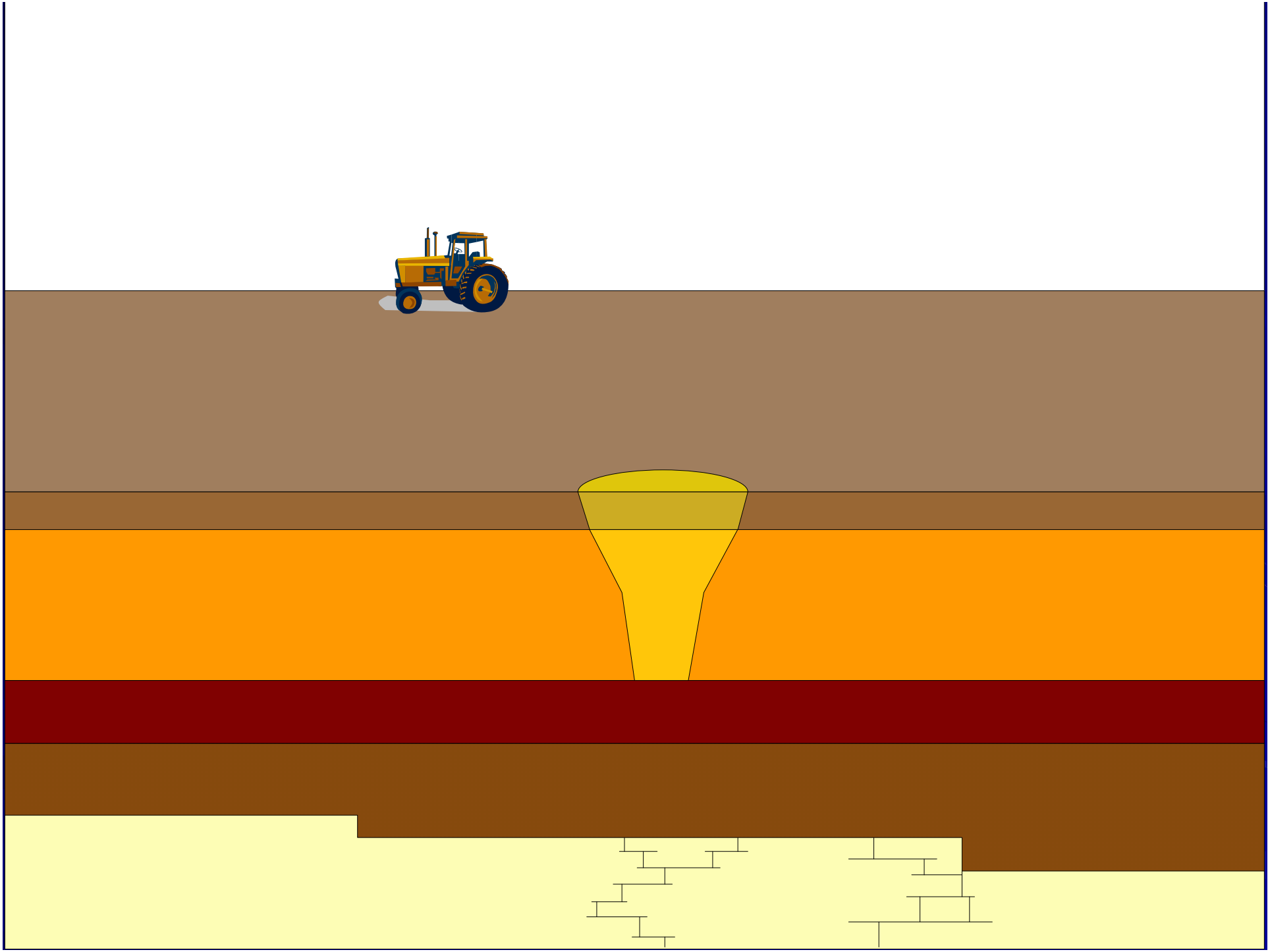


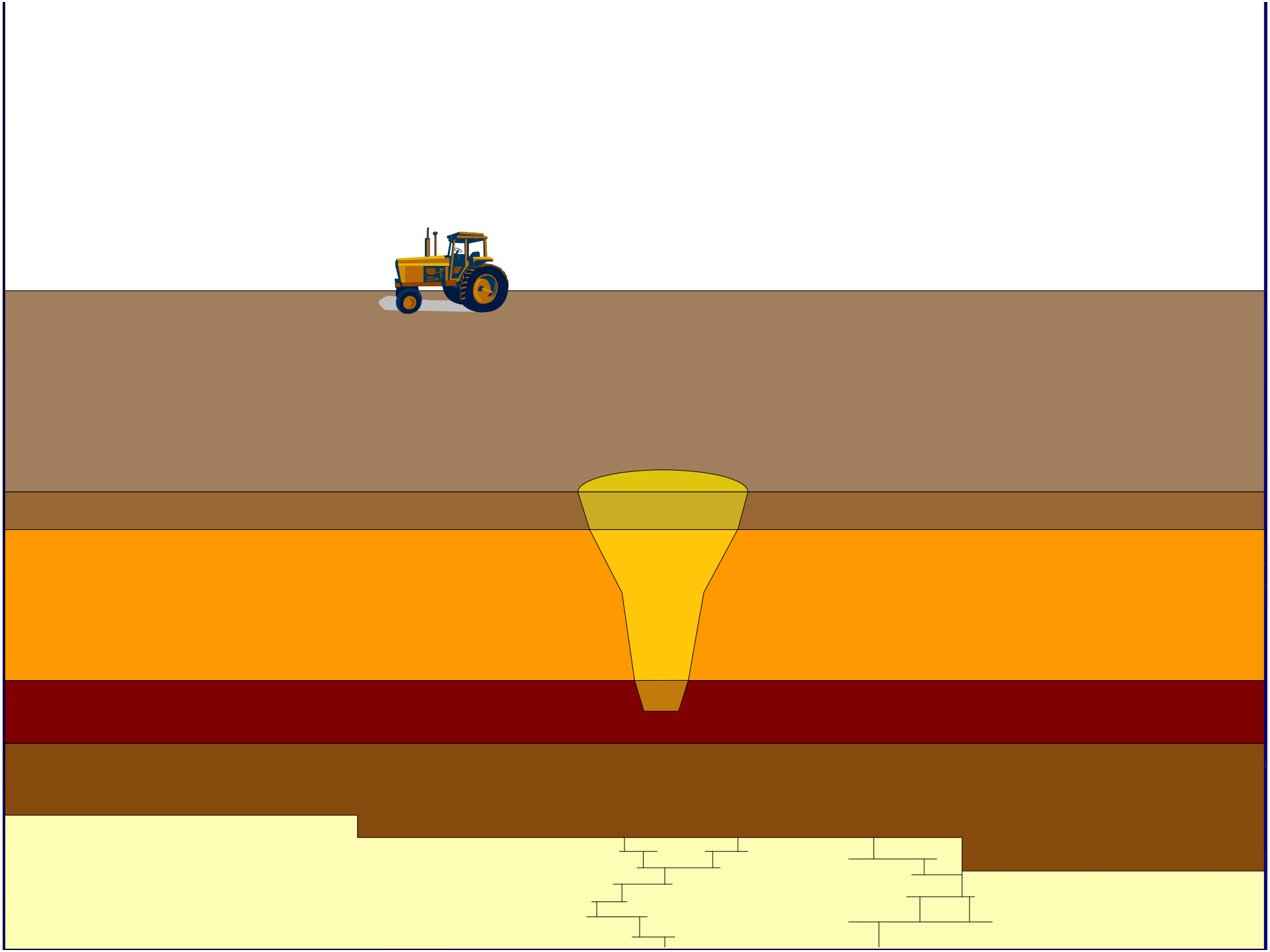


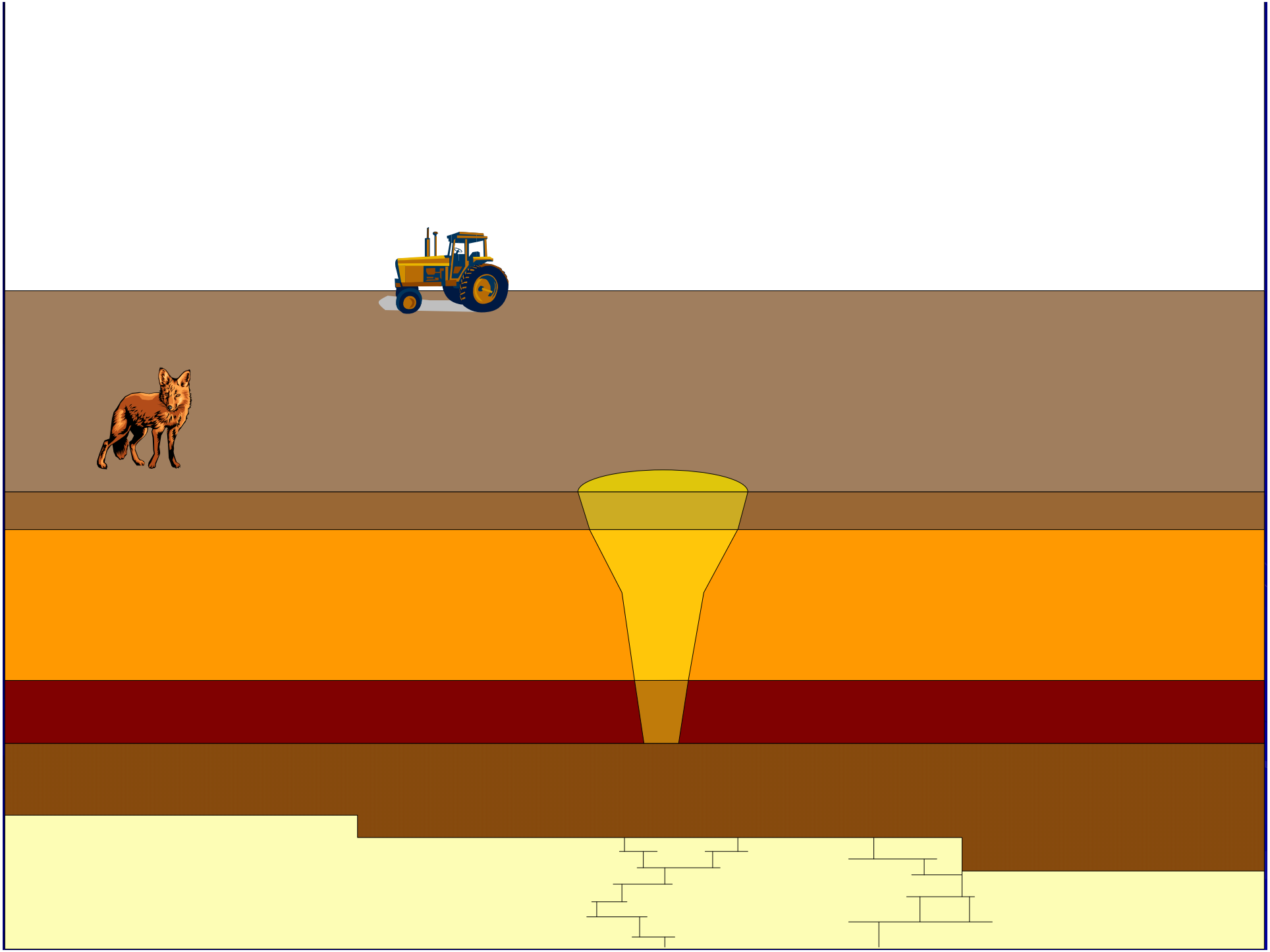


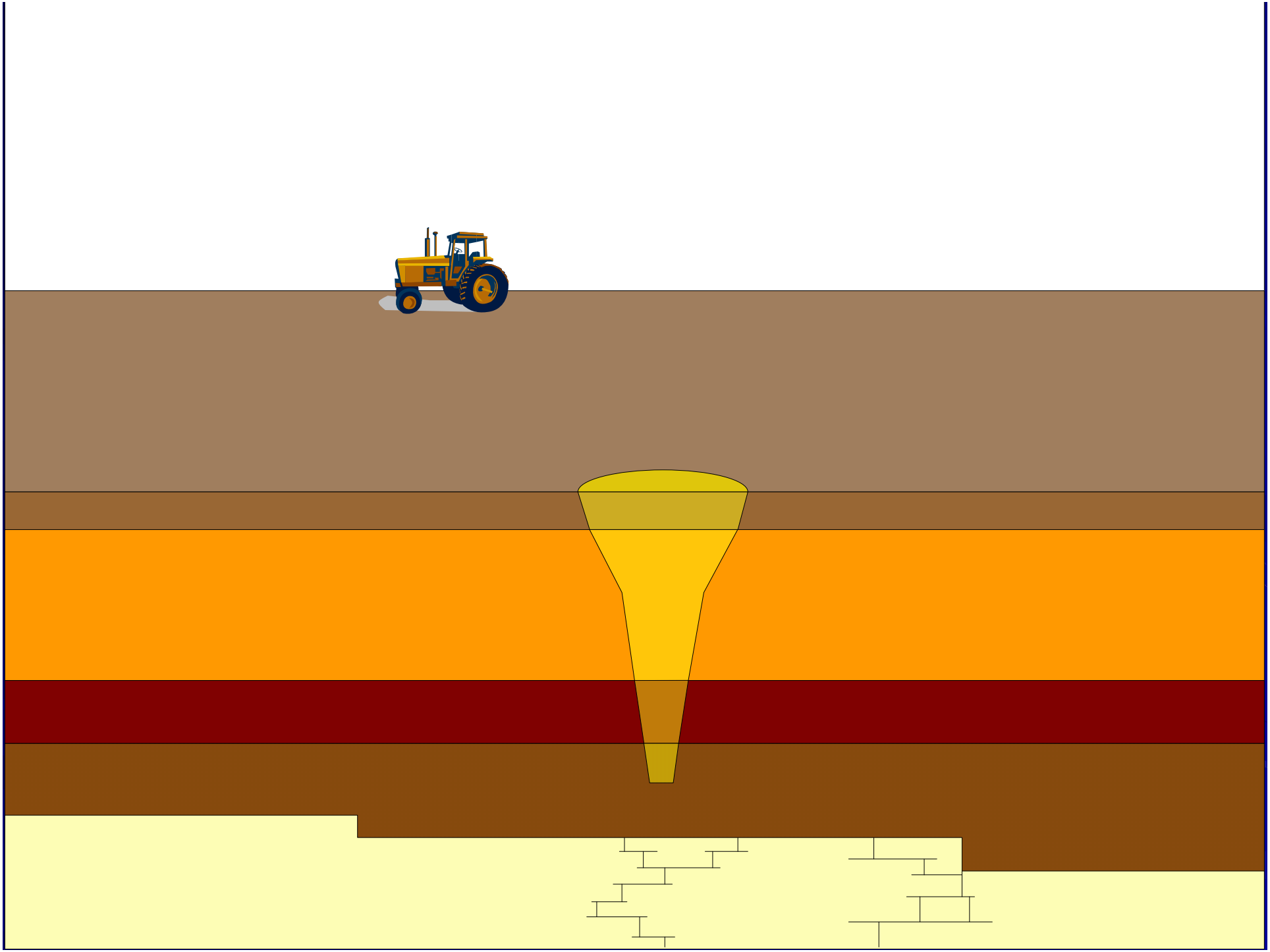


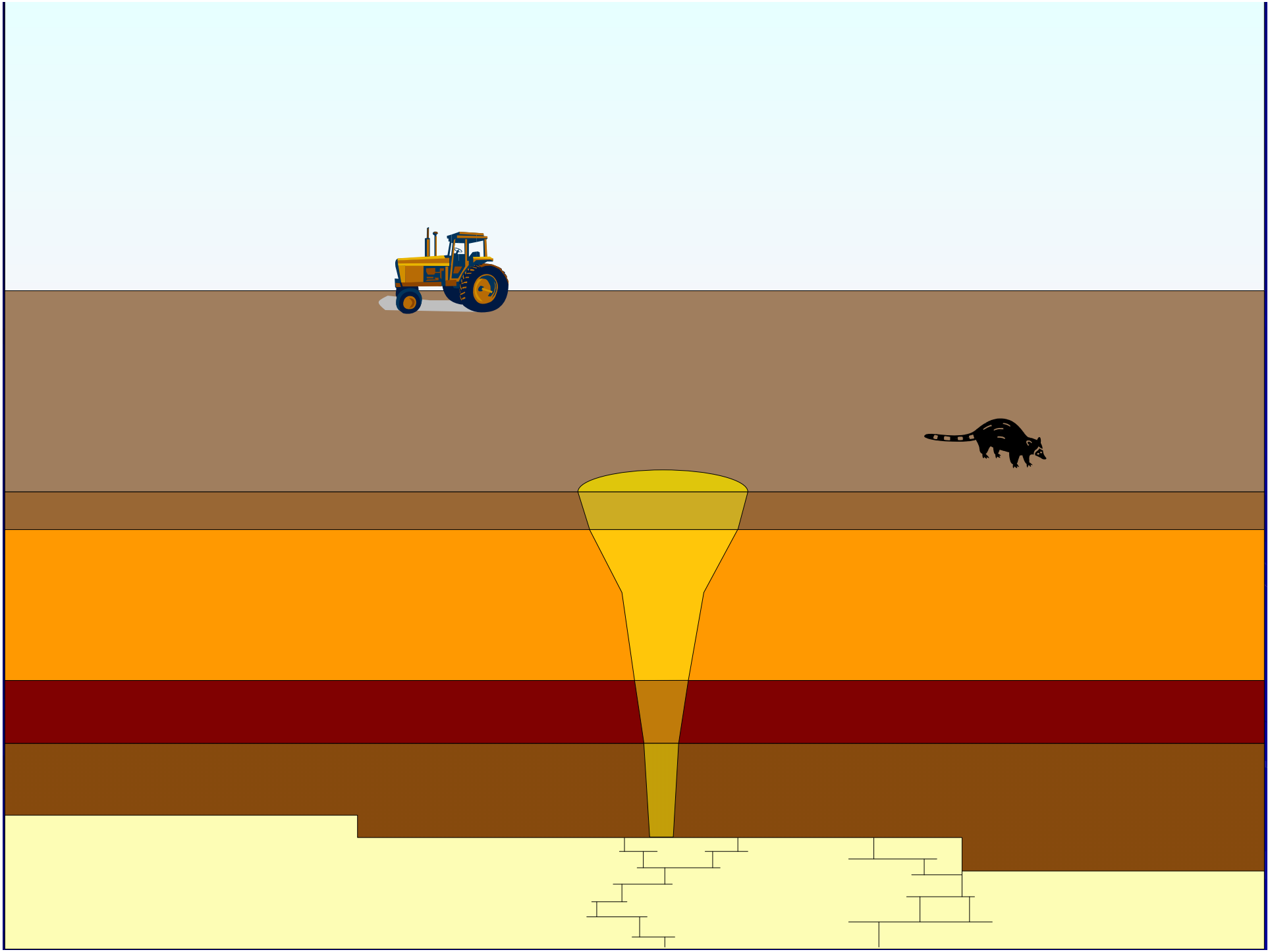


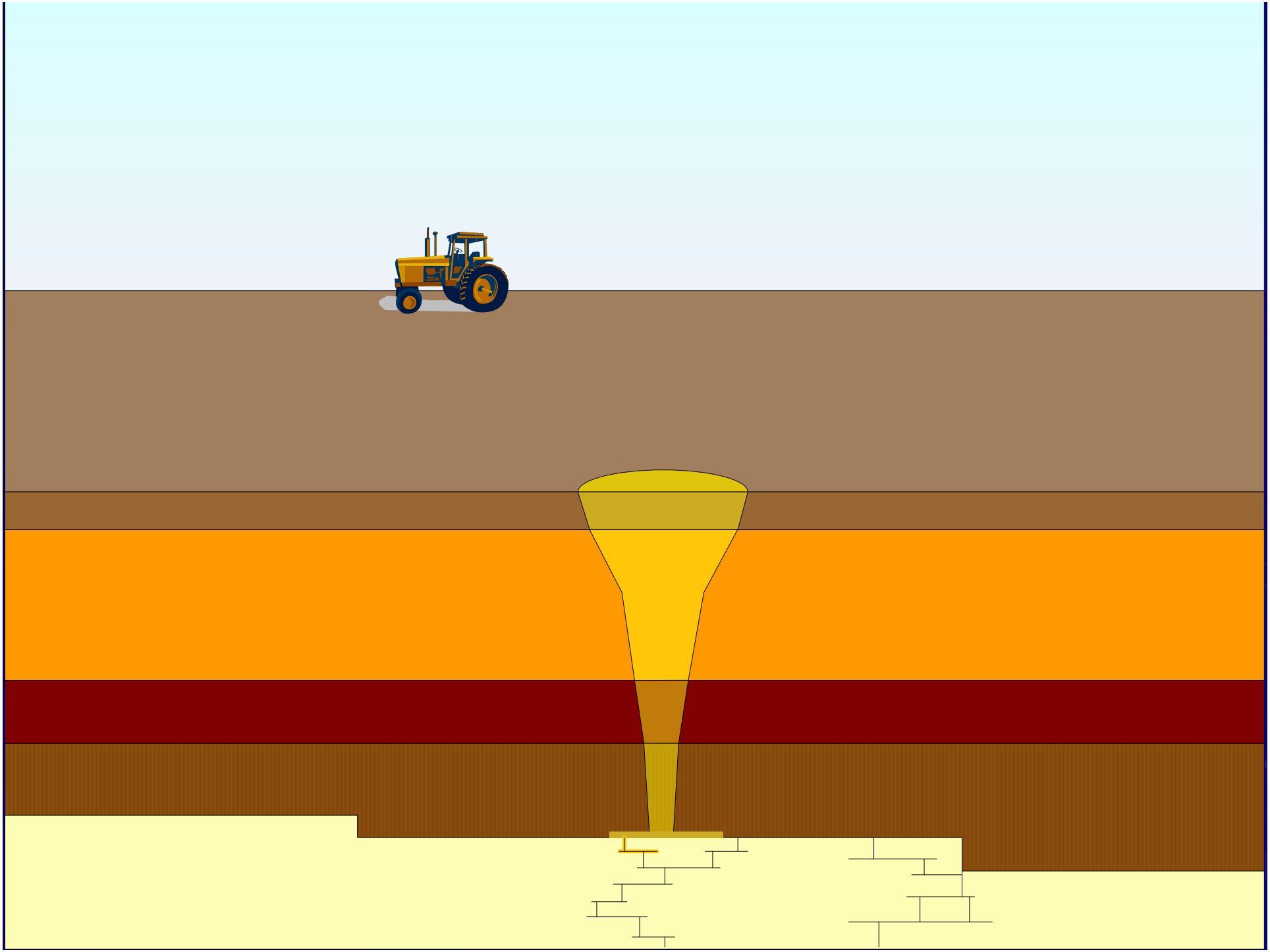


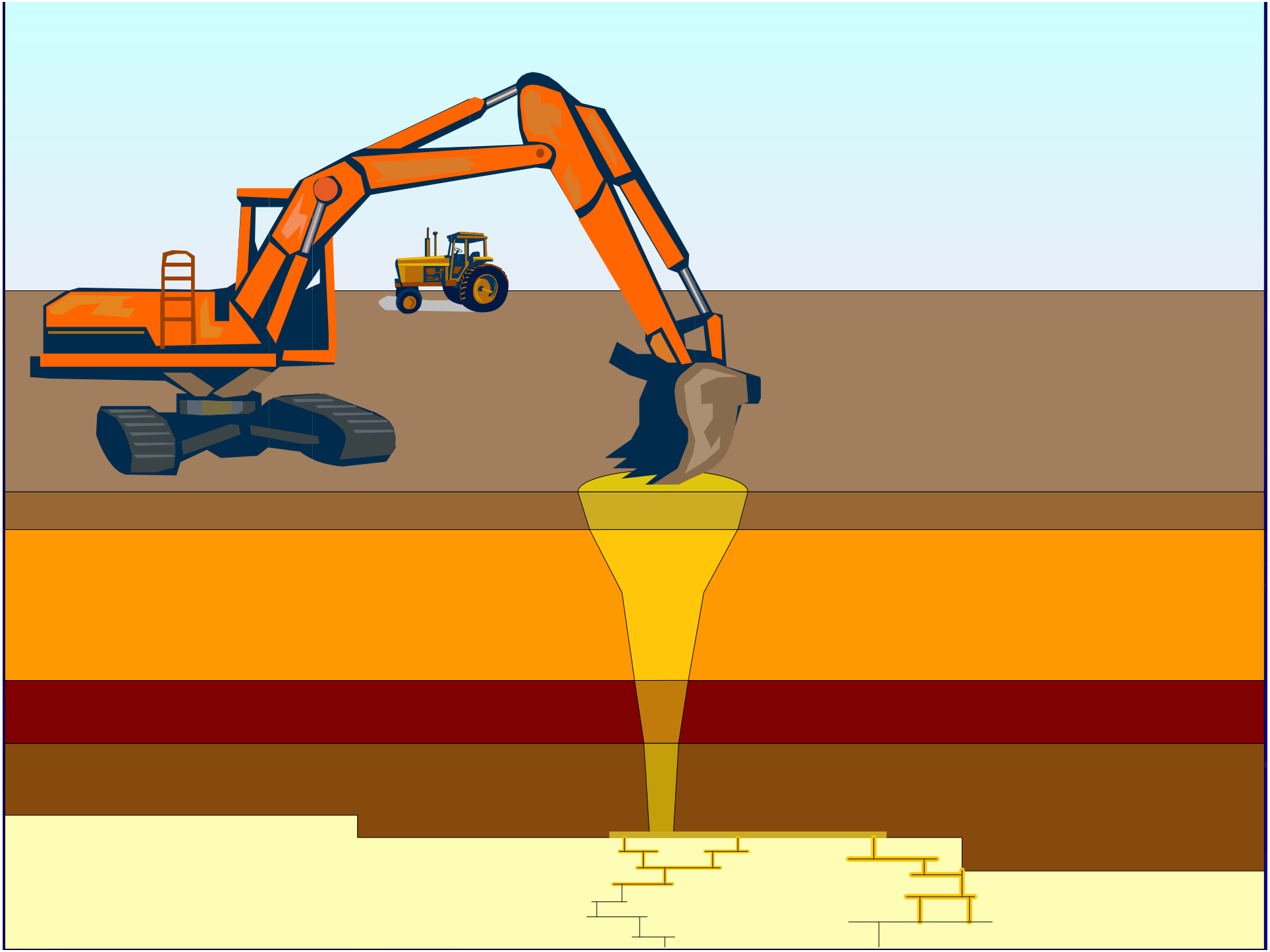


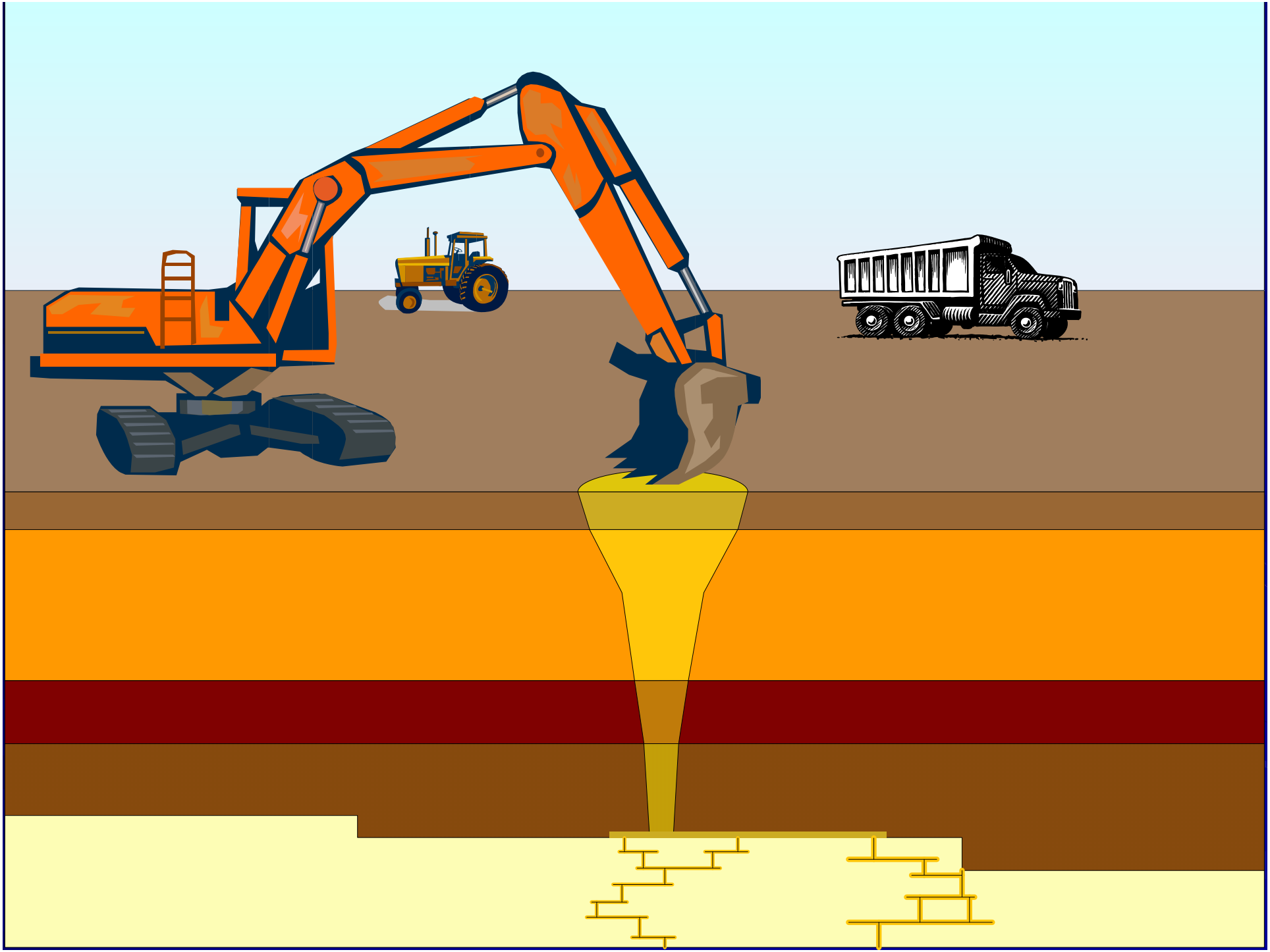










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Overnight Slow Drip Spills

- If your facility has such a spill:
  - Environmental consultant will be required (and DATCP recommends mobile lab)
  - Be prepared to have consultant monitor nearby drinking water wells
- Prevent these spills!
  - Know the equipment
  - Take precautions, close valves, etc.
  - Set policy, train employees

Bulk Rules Update

- Revised Bulk Rules: effective November 1, 2006
- 2007 DATCP inspections: emphasis on education & instruction
- 2008 DATCP inspections: emphasis on rainwater/rinsate management, both mix/load pads and secondary containment

Rinsate/Rainwater Management

- DATCP visits site, requests mix/load pad be pumped….
  - Can recovery be started within 2 minutes?
  - If recovered liquid does not immediately leave the site, is liquid stored in a rinsate tank in secondary containment?
- If “No” to either question, consider how to make the answer yes, contact DATCP local field staff

Rinsate/Rainwater Management

- Does your facility sample rainwater in outdoor fertilizer secondary containment?
  - If “Yes” (and last results are less than 200 ppm total N), the water may be left in the structure until it can be used (maintain capacity & stability)
  - If “No”, all rainwater must be recovered prior to the end of the business day on which it collected, stored in a tank in secondary containment

Construction/Alteration of Structures

- Rules require plan submittal at least 21 days prior to start of new construction or substantial alteration.

Just what is substantial alteration?

Substantial Alteration

- Reconstruction of structures
- Replacement of structures
- Structural modification
- Modification that affects capacity of structures
- Modification that affects containment of products or recovery of discharges

What is NOT Substantial Alteration

- Routine maintenance
- Replacement of parts with similar parts

- **Installing/replacing tanks***
  - **Installing additional tank(s)**
  - **Replacing with larger (volume or dimension) tanks**
  - **Any tank change that increases (or could increase) required capacity**

Construction/Alteration of Structures

- Rules require plan submittal at least 21 days prior to start of new construction or substantial alteration.
  - Designs consistent with rules and minimum design standards.
  - PE statement, certifying plans comply with new rule (including capacity requirements) and minimum design standards.
- This did not often happen in 2007

2007 Construction

- Planning and plan submittal: 80% after September 1, with desire to finish construction by December 1
- Plans generally lacked….
  - Designs consistent with rules and minimum design standards.
  - PE statement, certifying plans comply with new rule (including capacity requirements) and minimum design standards.
- Plans submitted when construction in-progress

Construction Recommendations

- Start planning after September 1 for construction the *following* year (or NOW for construction this year)
- Communicate with engineer – what are the needs and wants for your facility?
- Communicate with DATCP – I will work with facility and engineer
  - Keep the design consistent with rule and design standards
  - 21 days prior to construction issue

Professional Design

- DATCP can not design facilities - PE
- Minimum design standards to assist engineer
- Engineer to calculate capacity of mix/load pad, pad liquid-tight zone, and secondary containment – communicate tank stats!
- Clear drawings – faster DATCP review, best by scalable PDF via e-mail

Recap: plan ahead!

- Prevent parked sprayer spills
  - Know your equipment
  - Create policy & train employees
- Manage rainwater & rinsate
  - Recovery equipment
  - Storage containers (in containment)
  - Sample outdoor fertilizer dike water
- Plan well in advance of construction/ alteration