

# AER Drilling Waste Requirements

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# Topics to be discussed

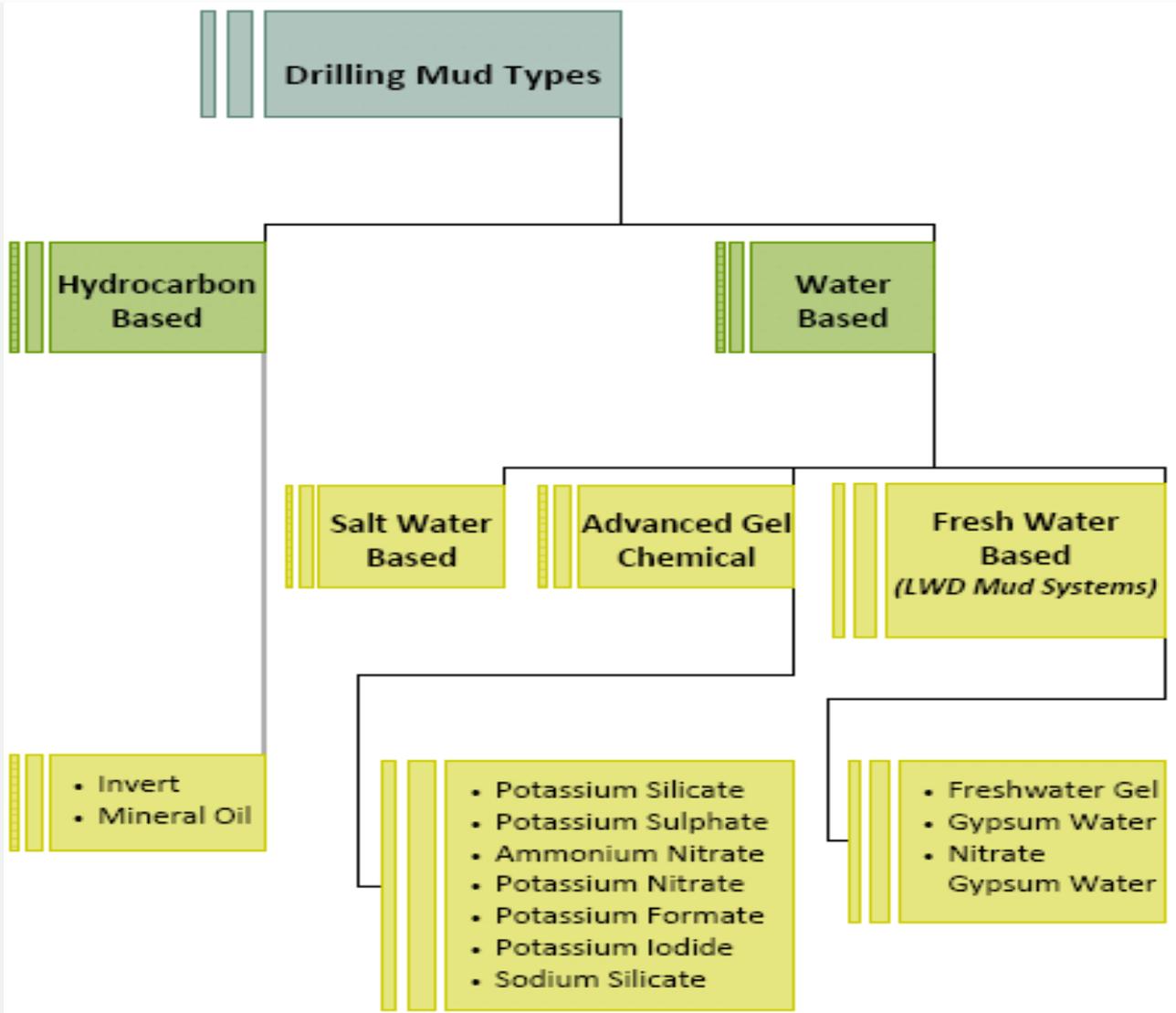
- › Drilling waste definition
- › Common types of drilling waste
- › Drilling waste disposal methods
- › Landowner consent requirements

# AER Drilling Waste Definition

Drilling waste is the mud and cuttings generated while

- 》 drilling a well (including oilsands exploration wells) and
- 》 directional drilling for the purpose of pipeline construction.

# Common types of Drilling Mud



# Storage of Drilling Waste

- › Sump (earthen excavation)
- › Earthen berm storage system
- › Aboveground storage tank
- › Entry and exit pits (pipeline only)

# Sump

- » Construction requirements to ensure the drilling waste does not migrate beyond the walls of the sump into the environment



# Sumps

## 》 Remote

- 》 requires landowner approval
- 》 Licensee has 18 months to close the storage system
- 》 Fencing to prevent public and wildlife access
- 》 Signage required to identify the site

## 》 On-Lease

- 》 no extra approvals, assumed with the lease license
- 》 Licensee has 18 months to close the storage system
- 》 Fencing to prevent public and wildlife access
- 》 No extra signage required as lease already has sign

# Earthen Berm

- » Construction requirements to ensure the drilling waste does not migrate beyond the berm into the environment



# Earthen Berm

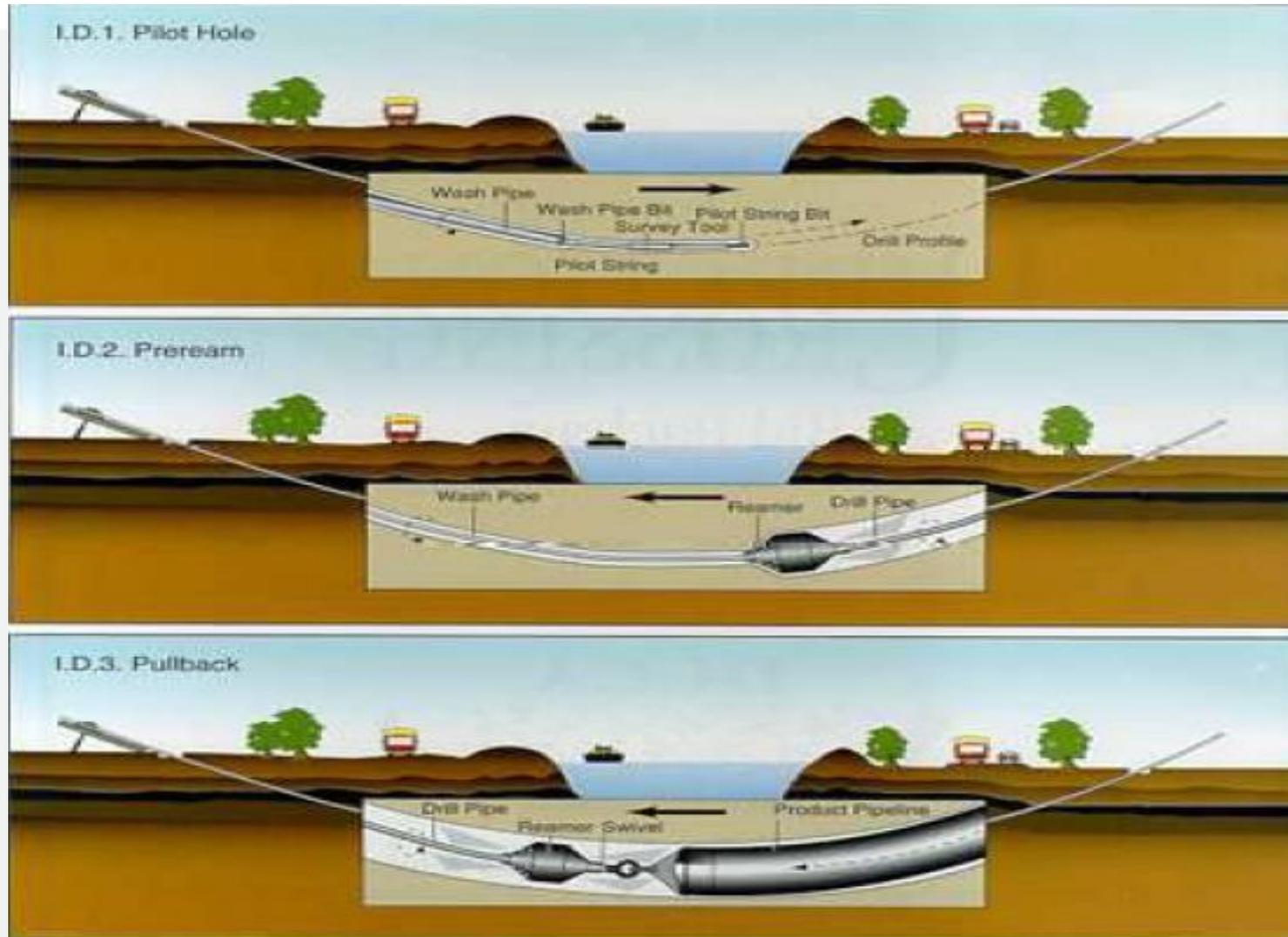
- » Has to be located on a licensed site or a licensed remote sump site
- » Can only store water based drilling mud

# Above Ground Storage

» Tanks located on the licensed lease site



# Entry/Exit Pits (Pipeline only)



# Pipeline Boring Rig



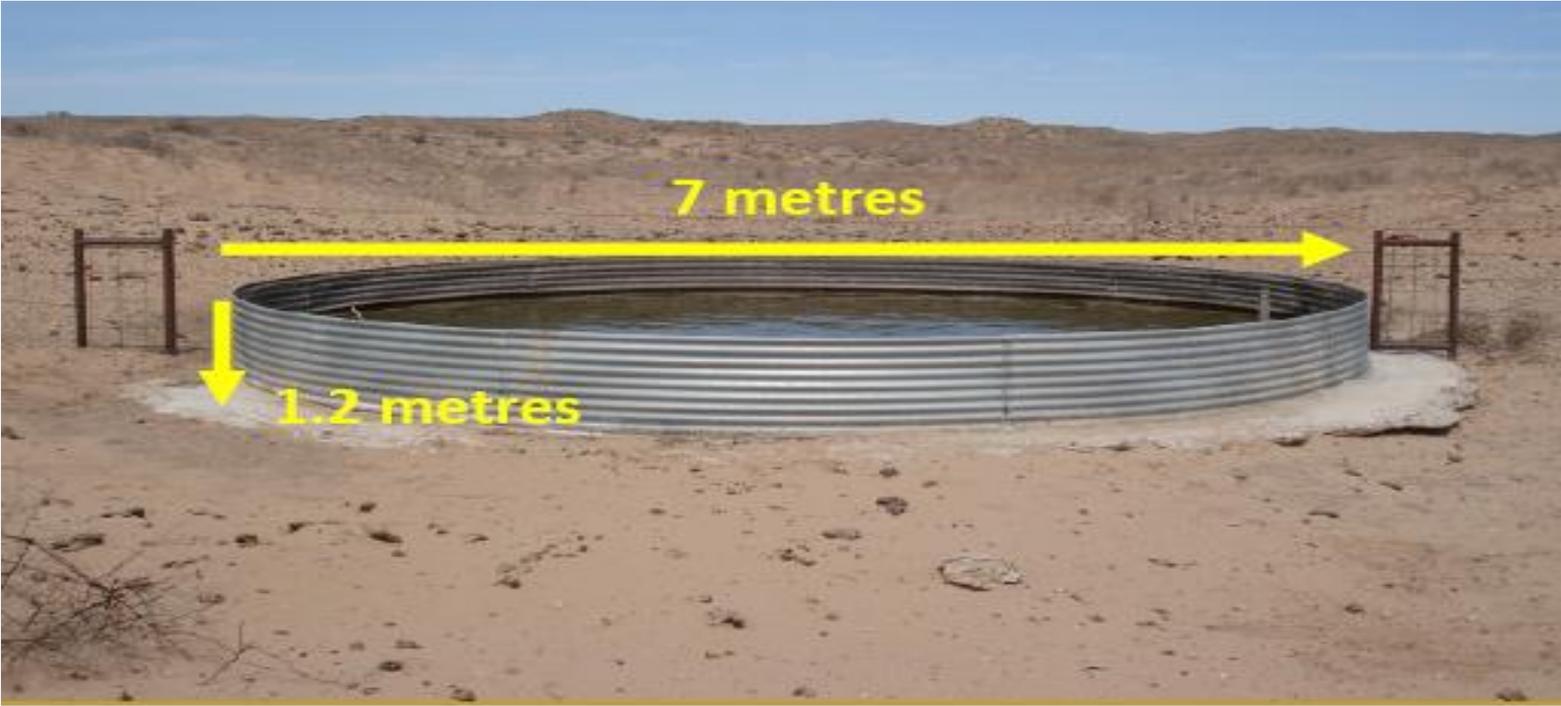
# Entry/Exit Pits (Pipeline only)



# Storage of Cement Returns

- » Cement Ring
- » Tank or Bin
- » Cement pit

# Cement Ring



# Tank or Bin



# Pit



# Disposal of Drilling Waste

- › Landspray while drilling
- › Landspray
- › Landspread
- › Mix-bury-Cover
- › Pump off
- › Pipeline specific

# Landowner Consent is required to

- › manage drilling waste beyond the well site or pipeline-right-of-way boundaries
  - › landspray,
  - › landspray-while-drilling
  - › pump-off method
- › place cement returns in pits on a well site or remote drilling waste storage site when the collective area of one or more pits exceeds 4 m<sup>2</sup>.

# Landspray While Drilling (LWD)



# Incorporation



# Landspray



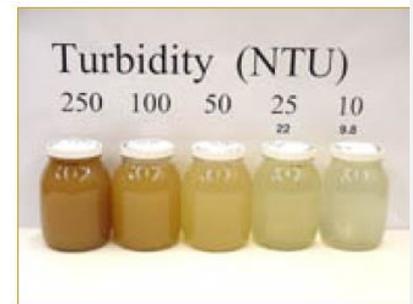
# Landspread



# Mix-bury-Cover



# Pump-off



# Pipeline Specific

- 》 Landowner consent not required for pipeline waste disposal within a disturbed pipeline right-of-way using mix-bury-cover or landspread.
- 》 Disposal of drilling waste on a pipeline right-of-way is limited to those generated from construction of the pipeline associated with the right-of-way.



**Questions**



A landscape photograph showing a dirt road winding through a vast field of yellow and green crops under a bright blue sky with scattered white clouds. The road leads towards the horizon, creating a sense of depth and direction. The sky is a vibrant blue, and the clouds are soft and white. The fields are a mix of bright yellow and lush green, suggesting a healthy agricultural landscape. The overall scene is bright and optimistic.

**Thank you**