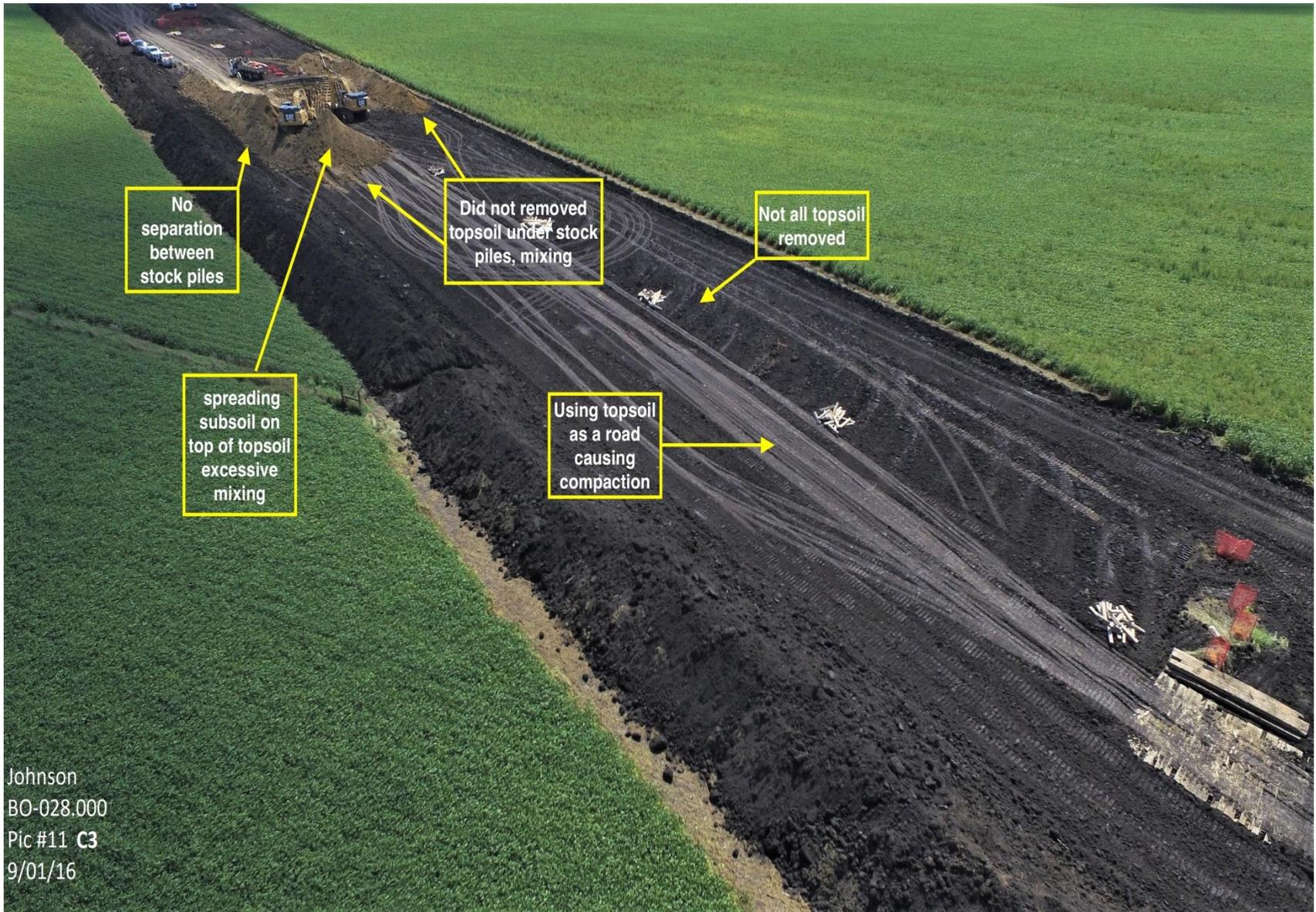


Heavy  
equipment is  
driving on  
topsoil  
compacting it

No topsoil  
was removed  
before  
construction  
began

Johnson  
BO-028.000  
Pic #1  
8/30/16



No separation between stock piles

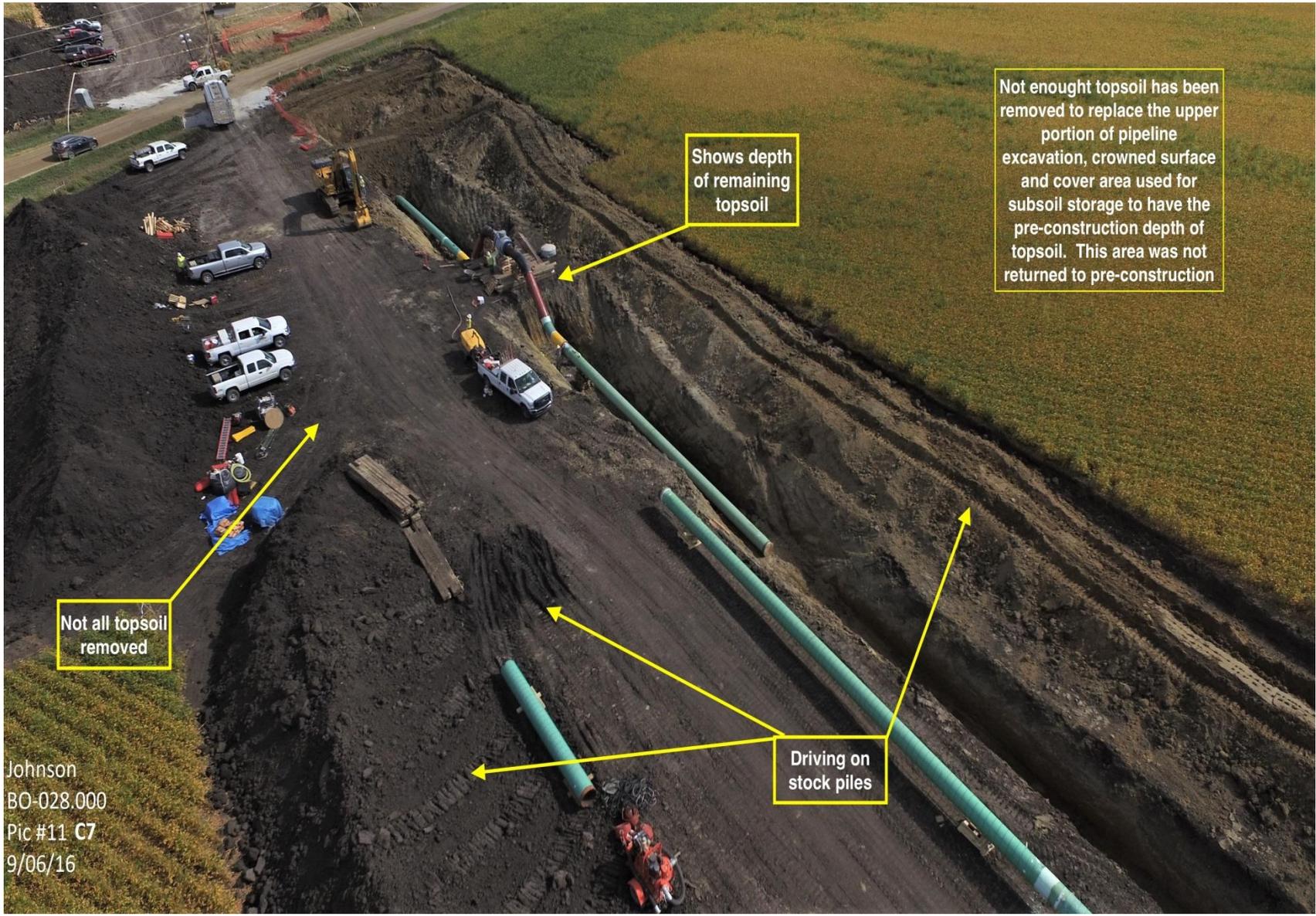
Did not removed topsoil under stock piles, mixing

Not all topsoil removed

spreading subsoil on top of topsoil excessive mixing

Using topsoil as a road causing compaction

Johnson  
BO-028.000  
Pic #11 C3  
9/01/16



Shows depth of remaining topsoil

Not enough topsoil has been removed to replace the upper portion of pipeline excavation, crowned surface and cover area used for subsoil storage to have the pre-construction depth of topsoil. This area was not returned to pre-construction

Not all topsoil removed

Driving on stock piles

Johnson  
BO-028.000  
Pic #11 C7  
9/06/16

Johnson  
BO-028  
Pic #27 C16  
9/9/16

Heavy equipment causing  
permeant subsoil  
compaction

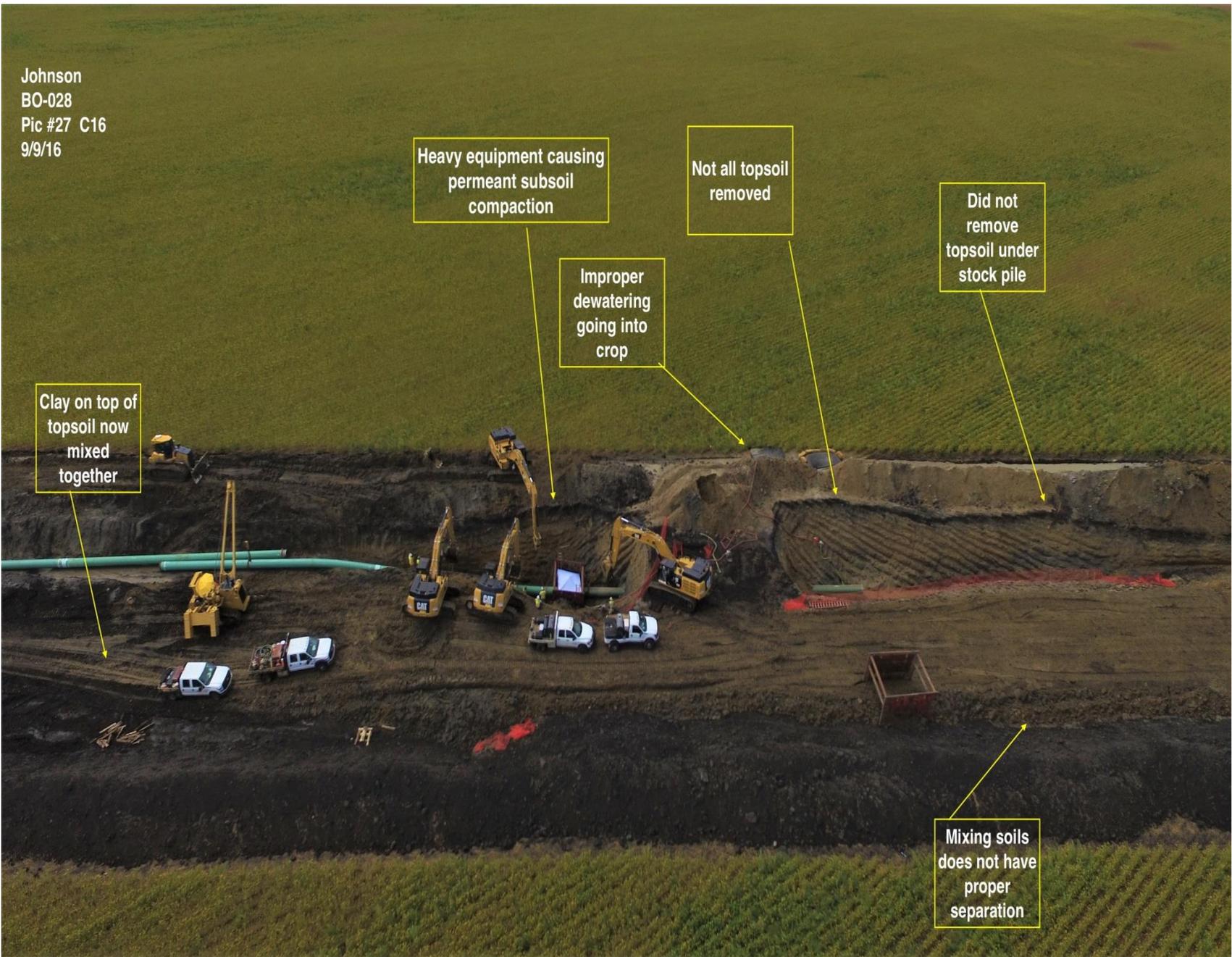
Not all topsoil  
removed

Did not  
remove  
topsoil under  
stock pile

Improper  
dewatering  
going into  
crop

Clay on top of  
topsoil now  
mixed  
together

Mixing soils  
does not have  
proper  
separation

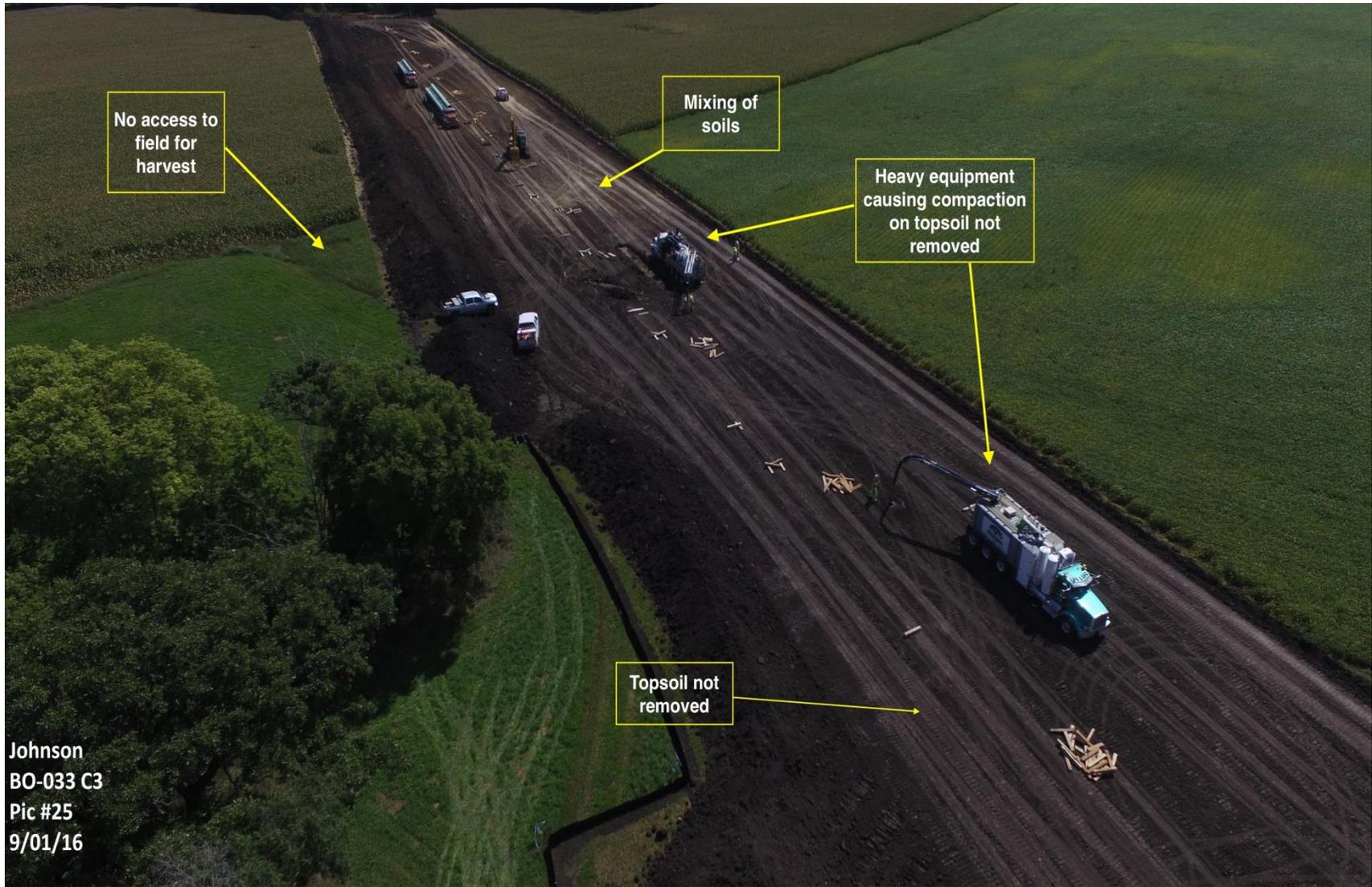


Removal of topsoil in wet conditions, not all topsoil removed



Driving off ROW compacting soil as ROW is too wet to drive on





No access to field for harvest

Mixing of soils

Heavy equipment causing compaction on topsoil not removed

Topsoil not removed

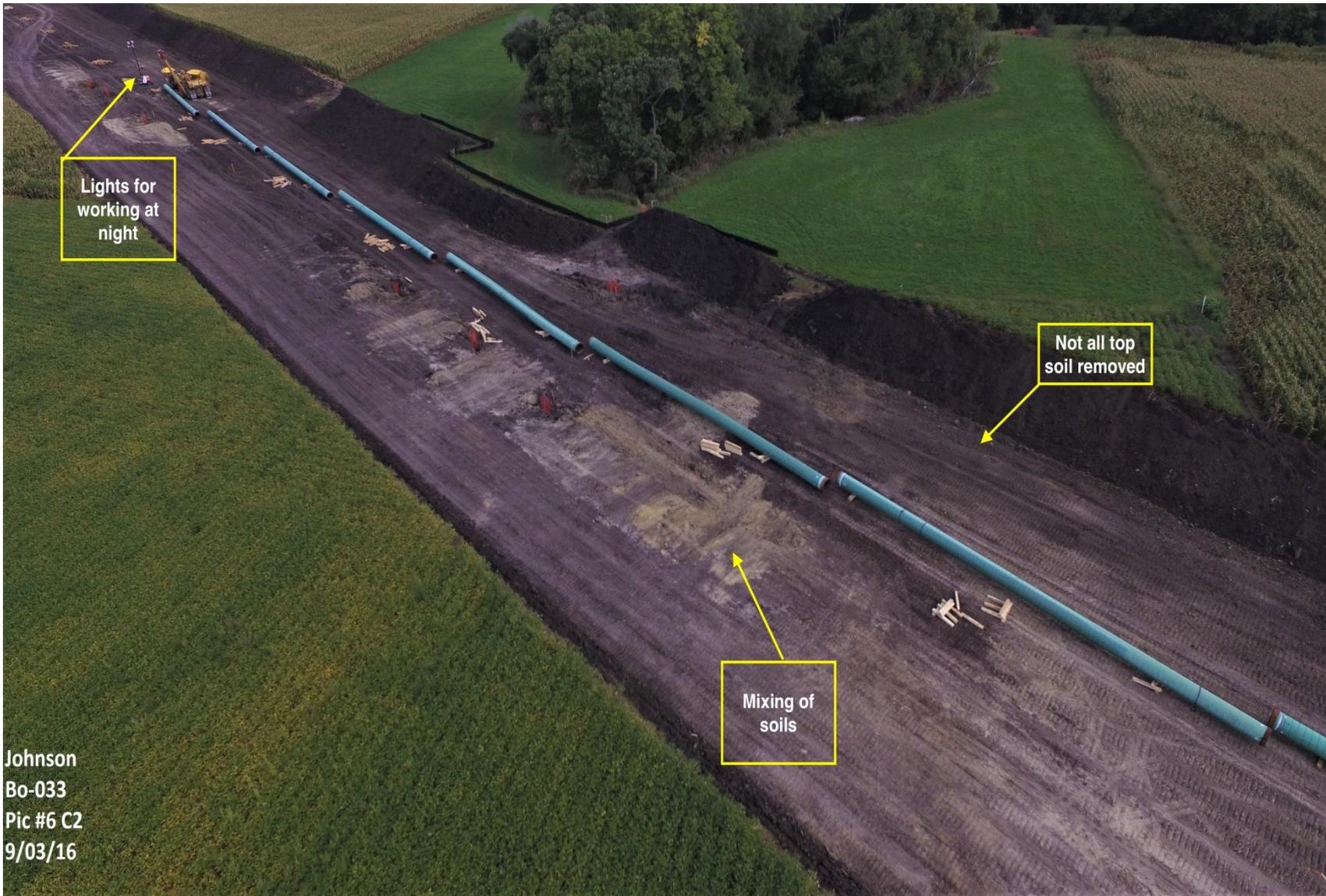
Johnson  
BO-033 C3  
Pic #25  
9/01/16



Not all top  
soil removed

Mixing of soil

Johnson  
BO-033  
Pic #7 C1  
10/4/16



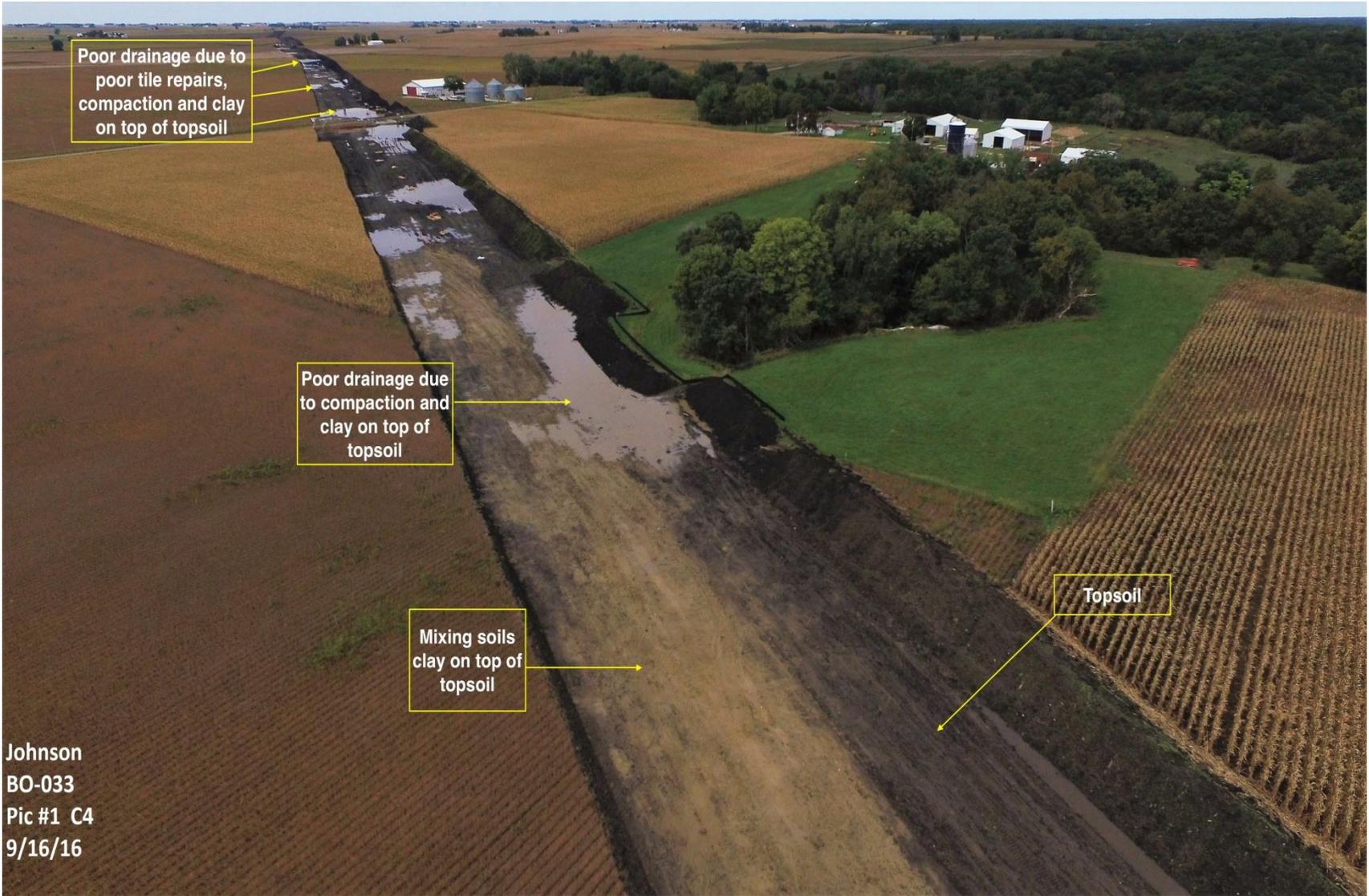
Johnson  
Bo-033  
Pic #6 C2  
9/03/16



Stock piles driven on and now incorporated into topsoil that was not removed causing severe mixing

Mixing soils can not be restored to pre-construction condition

Johnson  
BO-033  
Pic #76 C5  
9/12/16



Poor drainage due to poor tile repairs, compaction and clay on top of topsoil

Poor drainage due to compaction and clay on top of topsoil

Mixing soils clay on top of topsoil

Topsoil

Johnson  
BO-033  
Pic #1 C4  
9/16/16

Stake shows broken tile and depth of topsoil not removed



Shows 3 feet of topsoil not removed



Broken tile and compaction causing water to pool and can not drain



Ruts showing a 18" pair of pliers



# Compaction on and off ROW



No haybales and silt going into

ing  
ng

on

8.000

0 F2

16

Rutting  
and co



Not all top soil removed and driving on it to mix the soil and compacting it. Stacking broken matting on topsoil pile



Working in wet condition. They call it soft soil



## Repairing tile in wet conditions on topsoil compaction it more

---



Working in wet conditions causing compaction, mixing and ruts



## Driving off ROW compacting soils



Driving off ROW all over field



Working in wet condition repaired tile and driving on topsoil pile compacting it



Tow ropes on CAT as it gets stuck 3 feet in the mud



Mixing soil and causing ruts



Grader “drying” soil by pushing it aside causing compaction and mixing



Broken matting not removed from field just buried due to wet conditions. Tractor used to pull equipment out of the mud





Piece of  
cribbing  
brought up  
when ripping

Johnson  
BO-028.000  
Pic #1 J1  
5/2018

Mounds of topsoil pushed aside to “Dry” conditions so they could work



Drying topsoil causing HUGE clots



Showing size of dirt clots



Broken tile due to matting buried in mud, compaction topsoil and mixing



Tile ripped out of the ground when work field



Stakes showing broken tile they are going to fix in wet conditions



Stake next to broken tile, repair in wet conditions causing compaction





Silt going into field

Working in very wet conditions leaving ruts, compacting soils and mixing topsoil with subsoil

Johnson  
BO-028.000  
Pic #17 D4  
9/08/16



Bag is over  
filled

Johnson  
BO-028.000  
Pic #11 D6  
9/10/16

Hose going  
into field

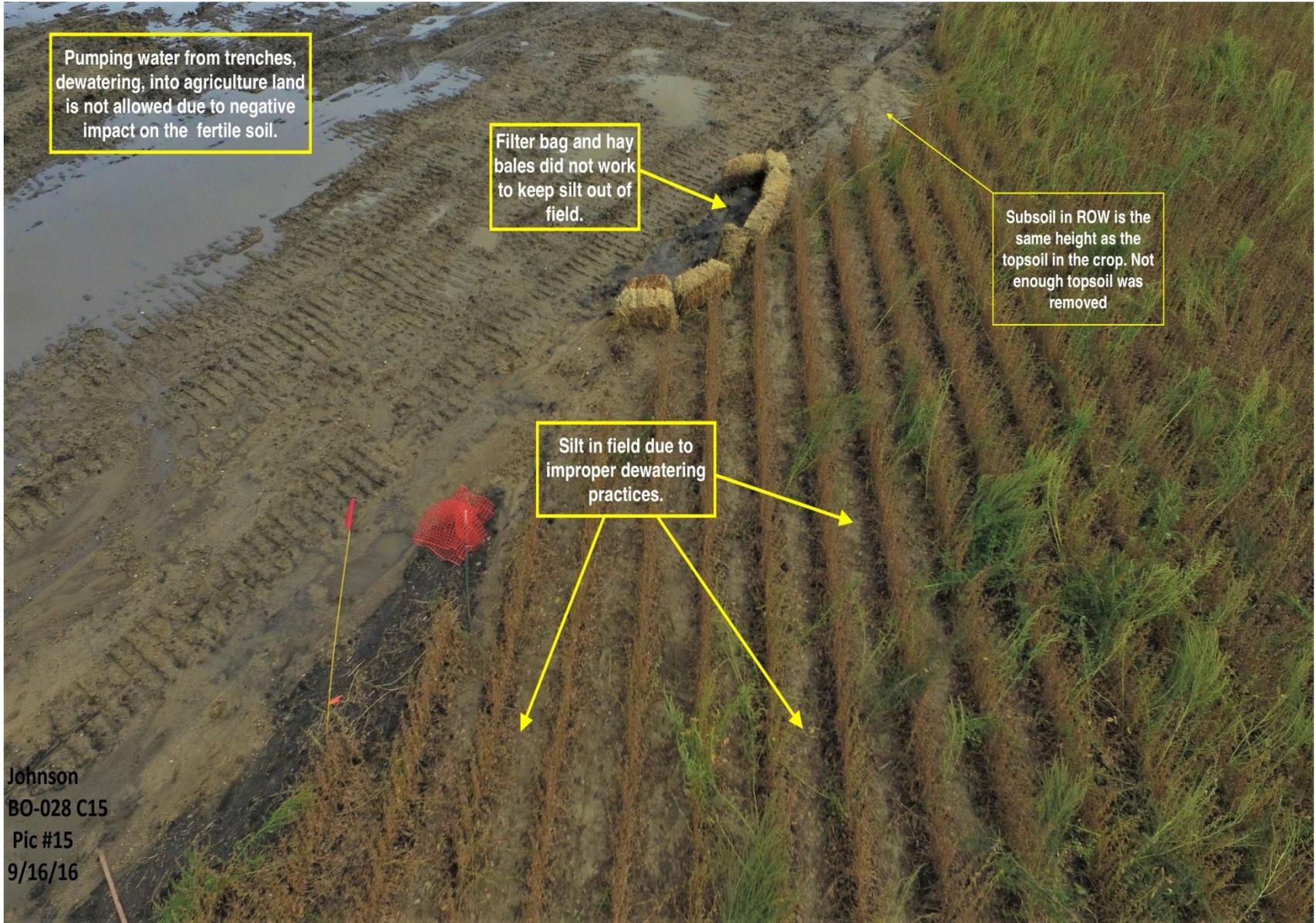
Pumping water from trenches, dewatering, into agriculture land is not allowed due to negative impact on the fertile soil.

Filter bag and hay bales did not work to keep silt out of field.

Subsoil in ROW is the same height as the topsoil in the crop. Not enough topsoil was removed

Silt in field due to improper dewatering practices.

Johnson  
BO-028 C15  
Pic #15  
9/16/16





Erosion on topsoil stockpiles

Shows black topsoil under clay subsoil

Results from dewatering into field

Topsoil used as berm instead of silt fence

Johnson  
BO-028  
Pic #17 D10  
11/02/16

A photograph showing a patch of light-colored, silty soil in a field. The soil is surrounded by dry, brown vegetation and some green leaves. A yellow box highlights the text 'Silt from dewatering in field'. A yellow arrow points to a specific area on the soil. A dark metal rod or pipe is visible in the lower right foreground, partially buried in the soil. The overall scene is outdoors under bright sunlight, with shadows cast across the ground.

Silt from  
dewatering in  
field

Johnson  
BO-028.000  
Pic 1 D2  
9/15/16

Dewatering in field even though there is a no dewater agreement. Broken silt bag and berm not holding water in.



Silt water allowed to drain into field



Hose used to dewater into field



## Dewatering into field



Compacted soil where equipment was parked every night



Compaction were equipment was parked every night working in wet conditions. Light were there as they worked at night to avoid inspectors.



## Broken tile and compaction



Too wet should not be working on top soil



Wet working conditions, pumping water into ditches



## Dewatering into field, ruts and compaction



Dewatering , mixing, compaction. Topsoil has been moved to get hose to field and is now mixed into ROW



# Close up of dewatering and topsoil



Working in wet conditions causing more compaction



# Ariel view of extent of damage



Matting has now been placed, berm has been placed but not working and too late



## Example of working su

Dozers working subsoil  
causing deep ruts and  
compaction

Wood matt shards left behind from broken matts and mixed soils next to the topsoil storage piles.





This was fertile black topsoil, it has now been mixed with subsoil. t This has not been restored to the pre-construction condition

Johnson  
BO-028.000  
Pic #18 C12  
11/04/16

# One year later



# Mixing, compaction



One year later same location as  
previous slide



# Restoration efforts by DAPL. Soil is badly mixed and compacted





Decompaction is mixing soils

Compaction is so severe farm equipment can not rip soil

Mixed soils can no longer see topsoil under subsoils

Not enough topsoil was removed to restore topsoil depth to pre-construction condition

Johnson  
BO-028.000  
Pic #16 C10  
11/04/16

They will work the ground which will mix the parent material/clay with the upper soil. They have a track hoe on top of the topsoil pile compacting it.

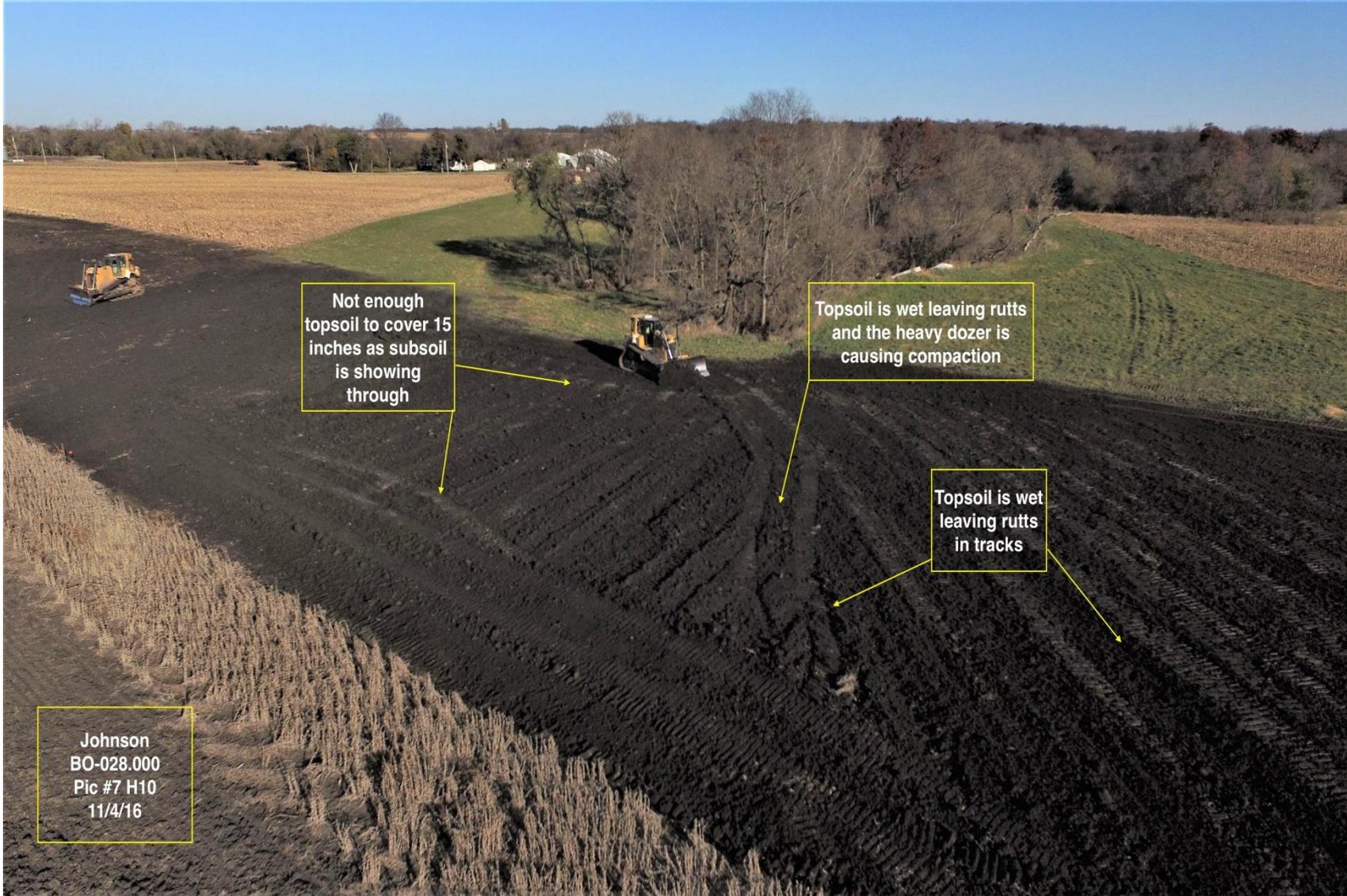


They will work the ground which will mix the parent material/clay with the upper soil.



Restoration has mixing parent material/clay with upper layer or soil. Now they will place the top soil to make it look pretty.





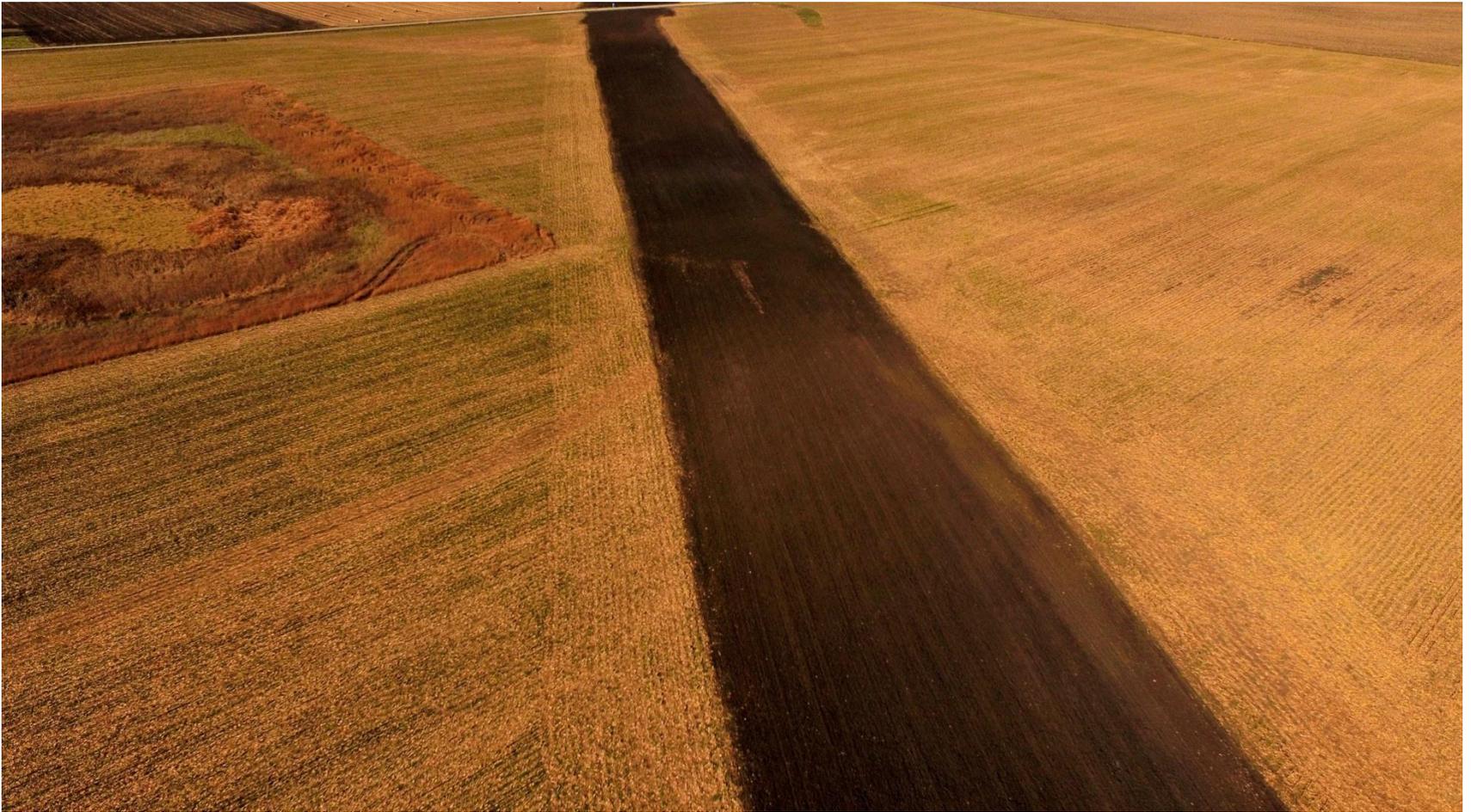
Not enough topsoil to cover 15 inches as subsoil is showing through

Topsoil is wet leaving ruts and the heavy dozer is causing compaction

Topsoil is wet leaving ruts in tracks

Johnson  
BO-028.000  
Pic #7 H10  
11/4/16

Right after restoration



Right after restoration



2 years later 2018



2 years later 2018



Compaction, mixed soil, erosion crops having trouble growing



## Erosion, mixed soil and crop loss



## Flooding due to broken tile and compaction in ROW



Crops on ROW vs off ROW. Red color is due to mixed soil and crops died



Erosion due to broken tile and contour not being restored

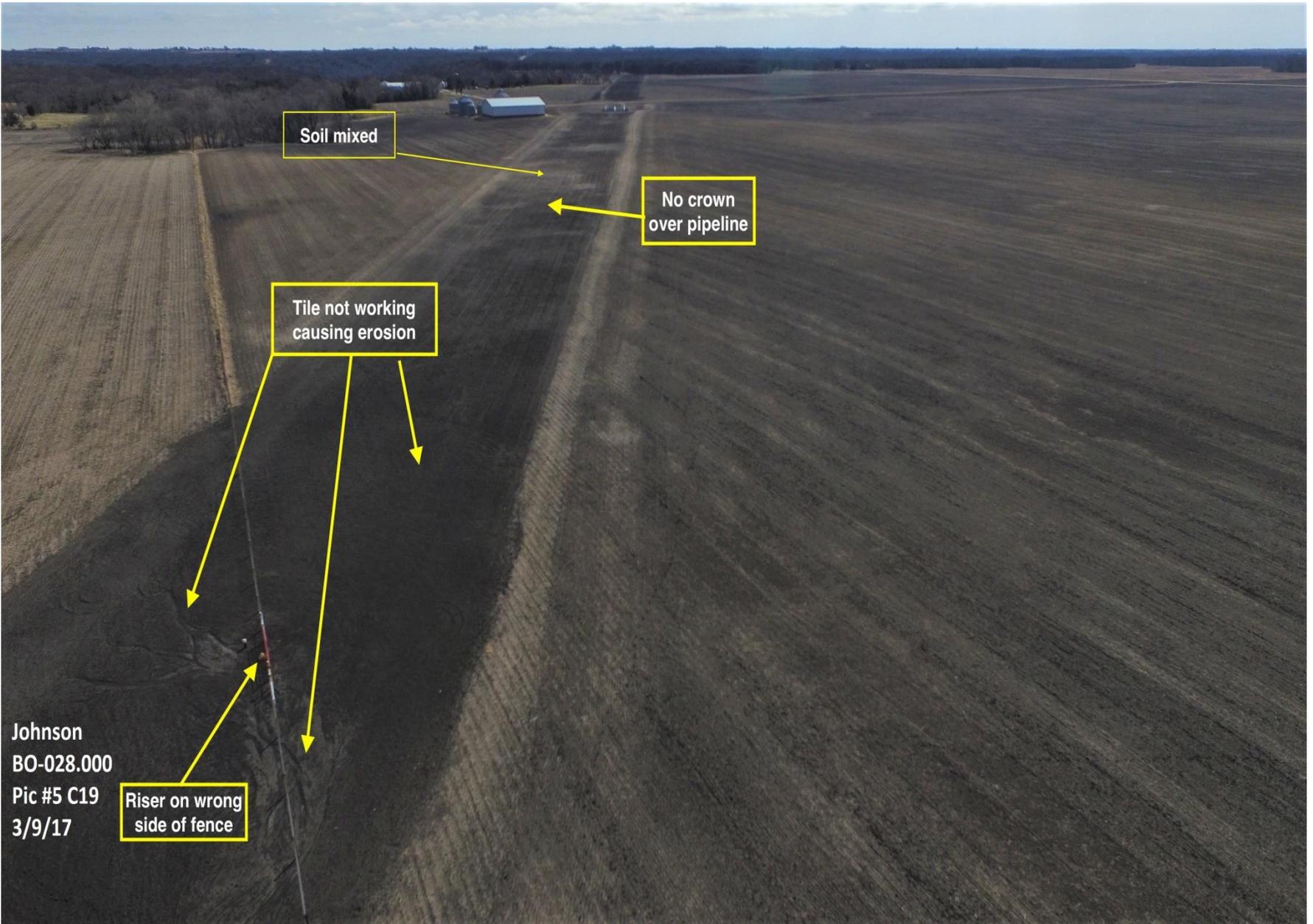




Residence, bins,  
equipment and well in  
blast zone of valve

No crown  
over pipeline

Johnson  
BO-028.000  
Pic #6 C20  
3/9/17



Soil mixed

No crown over pipeline

Tile not working causing erosion

Riser on wrong side of fence

Johnson  
BO-028.000  
Pic #5 C19  
3/9/17

# Erosion due to broken tile, compaction and contour not being restored



Berm showing dis vs. undis



Erosion as berm was not reinstalled



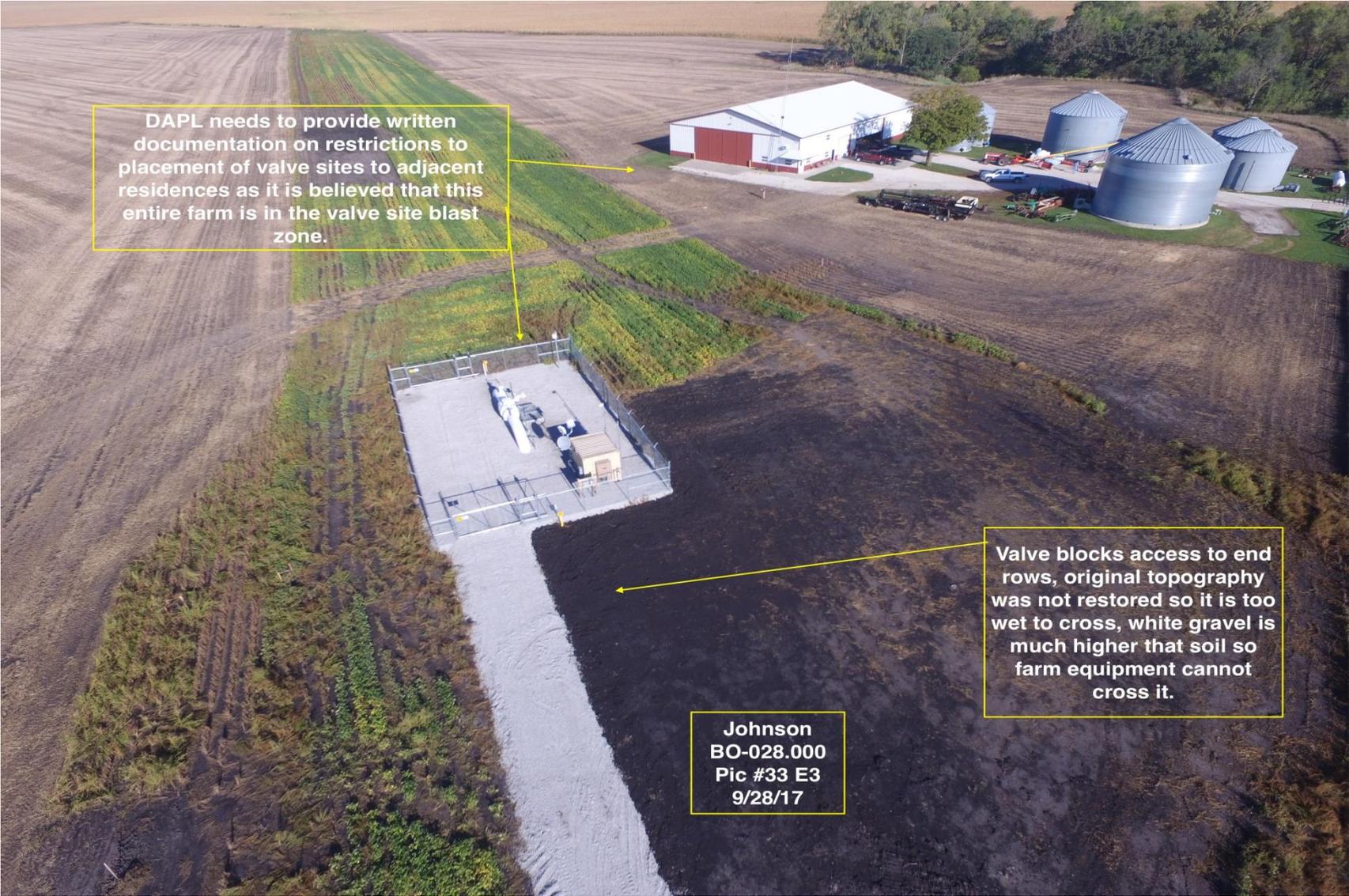
## Broken berm showing erosion



Puntenney  
WE-078  
Pic #1 E1  
5/27/17

Erosion



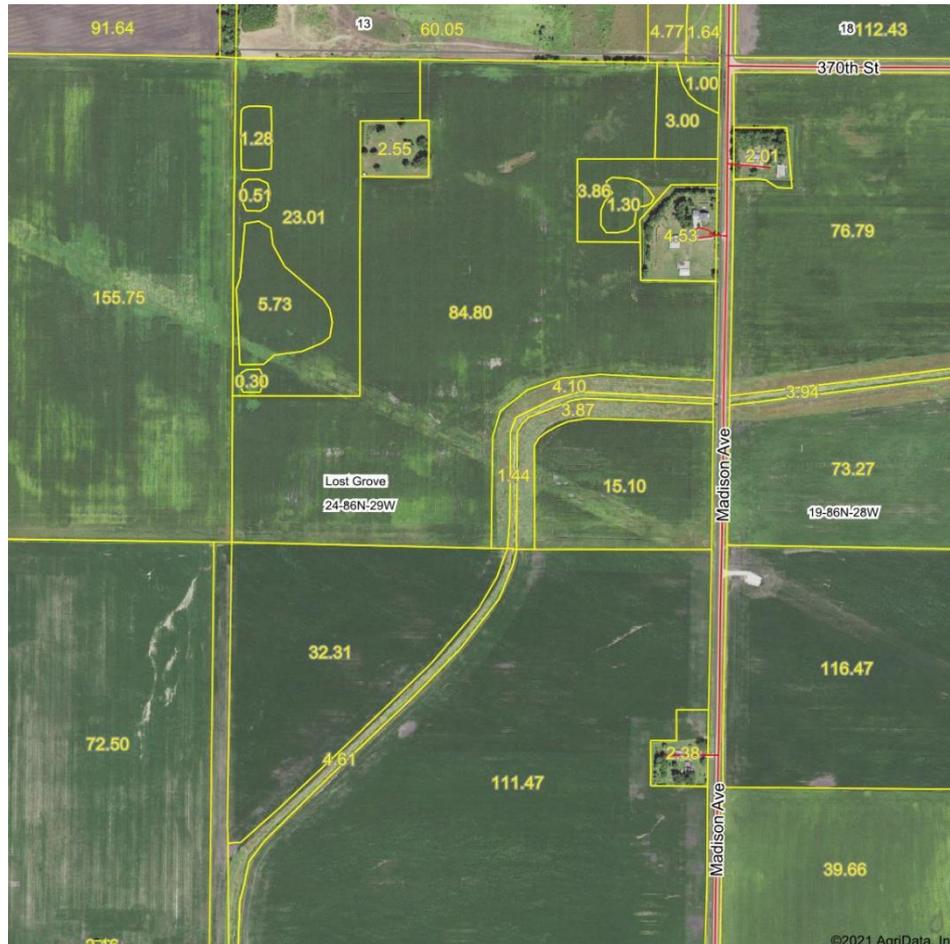


DAPL needs to provide written documentation on restrictions to placement of valve sites to adjacent residences as it is believed that this entire farm is in the valve site blast zone.

Valve blocks access to end rows, original topography was not restored so it is too wet to cross, white gravel is much higher that soil so farm equipment cannot cross it.

Johnson  
BO-028.000  
Pic #33 E3  
9/28/17

# Today 11/2021



# Scar today 11/2021

