



# Public Service Commission State of North Dakota

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PSC - 7

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## INSPECTION REPORT

DATE OF INSPECTION: June 28, 2022  
TYPE OF INSPECTION: Partial  
PERMITTEE - MINE: Coteau Properties Company - Freedom Mine  
PERMITS INSPECTED: NACT-9501 Boundary and Adjacent Lands  
PERSONS ACCOMPANYING INSPECTORS: Clyde Eisenbeis (property owner); Sarah Flath, Rylan Sundsbak and Dillon Belisle (Coteau Properties Company - adjacent landowner)  
INSPECTION CONDITIONS: The inspection was conducted between 12:45 p.m. and 1:45 p.m. CDT. Skies were sunny. The temperature was near 75° F. Access was unrestricted.

### OFF-SITE REVIEW

The NW¼ of Section 34, T146N, R88W, Mercer County was inspected with one of the surface owners of this property, Mr. Clyde Eisenbeis. Mr. Eisenbeis has alleged that erosion is occurring on property in the NW¼ of Section 34 because of surface coal mining and reclamation activities on adjacent lands to the east in the NE¼ of Section 34, which is included in surface coal mining permit NACT-9501.

The diversion and road ditch along the east and north sides of the northeastern portion of NW¼ of Section 34 were walked. The diversion is located off permit and was constructed many years before the adjacent area was permitted and mined. The diversion was re-built in 2012. This diversion and the road ditch divert surface water runoff from the east, where mining occurred in the past, around the Eisenbeis' cropland in the NW¼ of Section 34 (**Figure 1**). The diversion appears to have functioned as intended during spring precipitation runoff events.

The cropland in the NW¼ of Section 34 was planted to soybeans this spring with minimal tillage and canola stubble from last year's crop remains on the soil surface. A rill approximately 1 foot wide, 6 inches deep, and about 40 feet in length was observed in the crop about 150 feet west of the diversion (**Figure 2**). A row of soybeans was planted in this rill which means it had formed prior to spring seeding. No other significant active erosional features were observed in the cropland field.

As previously documented in a June 8, 2022 inspection report, several erosional features have formed in the diversion in the northeast corner of the NW¼ of Section 34. The most significant feature is a head cut that is approximately 40 feet in length, 6 feet wide, and 3 feet in depth (**Figure 3**). This feature was about

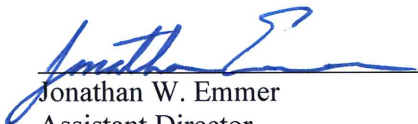
40 feet from the center of the county road to the north. A similar, but smaller head cut, was present in the diversion upstream from the larger feature and several small (1 cubic foot) scour erosion features were observed upstream from this feature. The smaller head cut was about 20 feet in length, 3 feet wide, and 2 feet deep and was approximately 70 feet from the center of the county road. These erosional features were observed in the diversion bend where the diversion transitions into the county road ditch. The entire length of the diversion was walked, and no other erosional features were observed in the diversion or the road ditch.

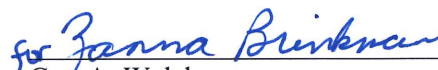
The diversion is well vegetated with a dense stand of grass, primarily smooth brome grass. A few patches of Canada thistle and absinth wormwood plants were observed in the diversion. A few trees have established in the county road ditch and in the primary drainage that passes through this property. A group of trees was also observed from a distance in the NE¼ of the SW¼ of Section 34 (**Figure 4**). Mr. Eisenbeis alleged that all these trees have established because of increased water in the drainage directly related to surface coal mining discharges.

Rock was observed in the drainageway in the NE¼ of Section 34 where runoff from the south watershed enters the diversion on the Eisenbeis property.

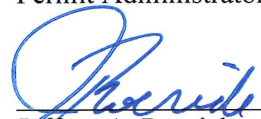
A GPS tracklog of the route traveled during this inspection (**Figure 1**) is on file with the Reclamation Division as are additional photographs. Mr. Eisenbeis asked that photographs be taken of the concrete matting that has been placed in the road ditch to provide access into the eastern portion of his field. The concrete matting in the road ditch dips about 3 feet below the surface elevation of the adjacent cropland. Mr. Eisenbeis alleges that current access into his field is inferior to what existed prior to the reconstruction of the diversion and deepening of the county road ditch in 2012. Mr. Eisenbeis expressed that the diversion is reducing the acreage available as cropland in the NW¼ of Section 34. It appears the reconstructed diversion occupies an additional 1 acre of cropland based on digital measurements from aerial photography (2009 NAIP and 2021 NAIP).


Two ground monitoring wells (USGS-3753 1/2) located immediately north of the NW¼ of Section 34, along the south side of the SW1/4 of Section 27, T146, R88W, were examined to determine the depth to ground water. The depth to ground water in these wells were 33.7 and 33.4 feet below the top of the surface pipe, respectively. The ground water depth in monitoring wells in the northwest corner of Section 27 were also examined (MP93-P01 A/B). The depth to ground water in these wells were 4 and 9.5 feet below the top of the surface pipe, respectively. Mr. Eisenbeis requested a copy of the results of the ground water data from the two USGS monitoring wells just north of his property in excel format.

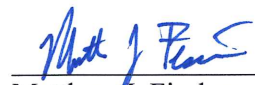
  
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Freedom Mine Inspection Report

June 28, 2022

Page 3 of 6

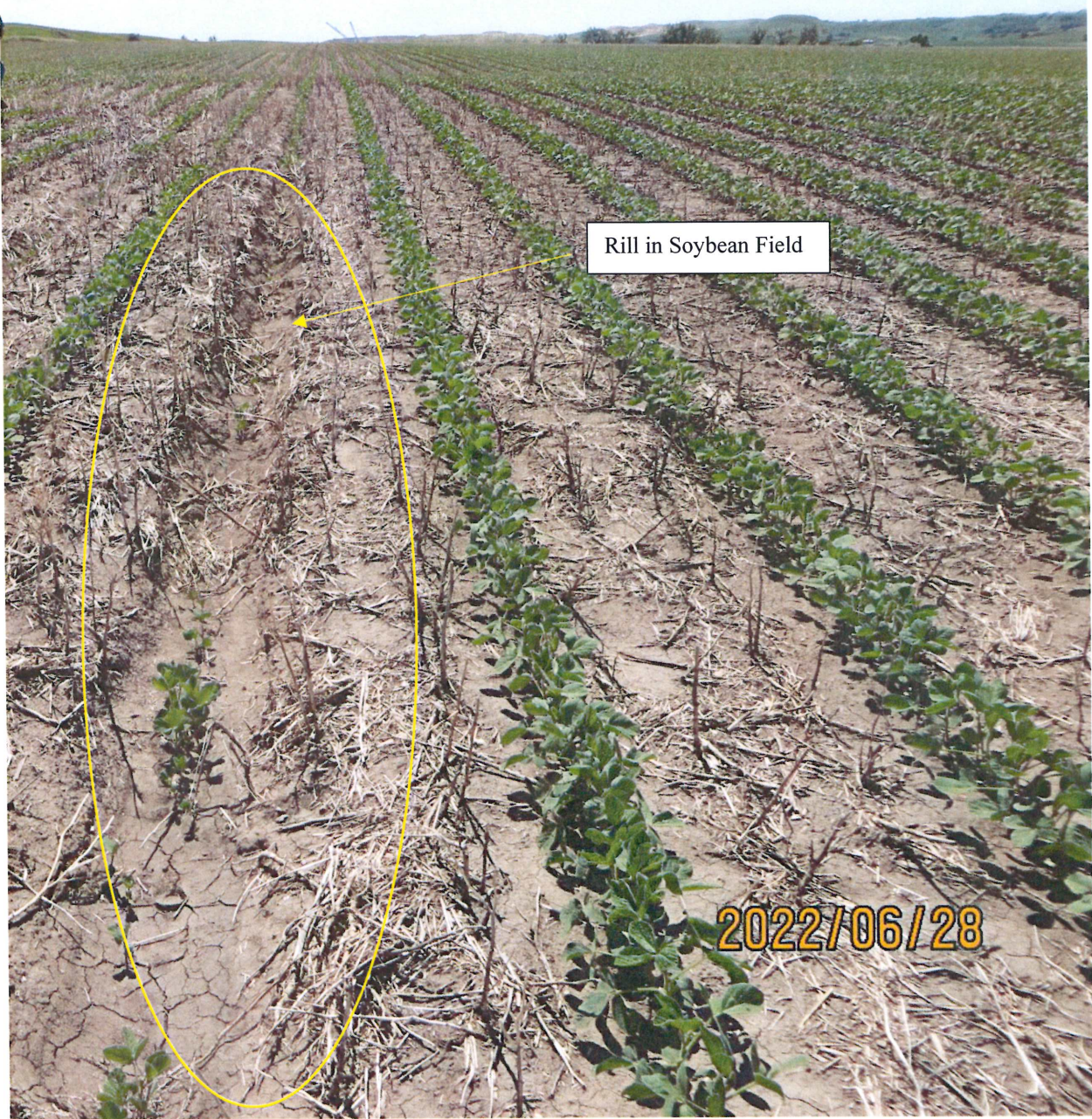
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Mine Data\Freedom Mine\Inspection Reports\2022\220628\_Eisenbeis

**Figure 1.** GPS point track log of the inspection route (black) and Freedom Mine permit NACT-9501 (orange).



**Figure 2.** A rill approximately 1 foot wide, 6 inches deep, and about 40 feet in length was observed in the cropland about 150 feet west of the diversion. The photo was taken facing south.



**Figure 3.** A head cut in the diversion that was approximately 40 feet in length, 6 feet wide, and 3 feet in depth. The inspector standing in the diversion head cut is 6 feet tall. The photo was taken facing south.



**Figure 4.** A group of trees were also observed from a distance in the NE $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 34. The photo was taken facing southwest.

