COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Gillette Pit	**MINE/PROSPECTING ID#:** M-1992-009	**MINERAL:** Gravel	**COUNTY:** Teller
INSPECTION TYPE: Monitoring	**INSPECTOR(S):** Elliott Russell, Patrick Lennberg	**INSP. DATE:** October 4, 2019	**INSP. TIME:** 10:00
OPERATOR: Gillette Sand and Gravel, Inc.	**OPERATOR REPRESENTATIVE:** Chris Pyles	**TYPE OF OPERATION:** 112c - Construction Regular Operation	

REASON FOR INSPECTION: Citizen Complaint (CT-01)	**BOND CALCULATION TYPE:** None	**BOND AMOUNT:** $37,613.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** CDPHE, CPW, DWR	**JOINT INSP. AGENCY:** None
WEATHER: Clear	**INSPECTOR'S SIGNATURE:**	**SIGNATURE DATE:** October 10, 2019

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected

(AR) RECORDS---------- PV	(FN) FINANCIAL WARRANTY-------- N	(RD) ROADS---------- N
(HB) HYDROLOGIC BALANCE---------- PV, PB	(BG) BACKFILL & GRADING---------- N	(EX) EXPLOSIVES--------- NA
(PW) PROCESSING WASTE/TAILING---- N	(SF) PROCESSING FACILITIES------- Y	(TS) TOPSOIL---------- N
(MP) GENL MINE PLAN COMPLIANCE- N	(FW) FISH & WILDLIFE---------- Y	(RV) REVEGETATION---- N
(SM) SIGNS AND MARKERS---------- Y	(SP) STORM WATER MGT PLAN---- N	(RS) RECL PLAN/COMP-- N
(ES) OVERBURDEN/DEV. WASTE--------- N	(SC) EROSION/SEDIMENTATION---- PB	(ST) STIPULATIONS------- N
(AT) ACID OR TOXIC MATERIALS------- N	(OD) OFF-SITE DAMAGE---------- PV	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited **/ PV = Possible violation cited**

PROBLEMS/POSSIBLE VIOLATIONS

INSPECTION TOPICS: Hydrologic Balance, Off-site Damage, and Availability Of Records
POSSIBLE VIOLATIONS: Wash water from the process ponds was released into Beaver Creek and sediment fines from the process ponds have been piled outside of the approved permit boundary. This is a possible violation of C.R.S. 34-32.5-116(4)(h) for failure to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quality of quantity of water in surface and groundwater systems both during and after the mining operation and during reclamation and C.R.S. 34-32.5-116(4)(i) for failure to protect areas outside of the affected land from slides or damages occurring during the mining operation and reclamation. This is also a possible violation of C.R.S. 34-32.5-121 for failure to notify the Division of a failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property and C.R.S. 34-32.5-124 for failure to follow the conditions of an order, permit or regulation.
CORRECTIVE ACTIONS: These possible violations will require a hearing before the Mined Land Reclamation Board scheduled for the November 13-14, 2019 Board meeting. The schedule and other details for the MLRB hearing has been provided under a separate document, sent via certified mail to the Operator on October 9, 2019.
CORRECTIVE ACTION DUE DATE: November 13, 2019

INSPECTION TOPIC: Hydrologic Balance
COMPLIANCE PROBLEM #1: Groundwater has been exposed in the Northern Pit. The Division has no evidence that the operator has a valid well permit, substitute water supply plan, or approved water augmentation plan for the exposed groundwater at the site. This is a problem related to 34-32.5-116(4)(h) of the Colorado Revised Statutes and 3.1.6(1)(a) of the Construction Materials Rules and Regulations governing injury to existing water rights.
CORRECTIVE ACTIONS: The operator shall demonstrate that the operation is in compliance with the Office of the State Engineer, show evidence that the operator is taking measures to bring the site into compliance with the SEO, or backfill the pits to at least two feet above the groundwater surface by the corrective action date specified.
CORRECTIVE ACTION DUE DATE: November 8, 2019

INSPECTION TOPIC: Sediment Control
COMPLIANCE PROBLEM #2: The drainage from the Southern Pit reports to a culvert under the private access road and into the Wetlands Area. This is a problem pursuant to C.R.S. 34-32.5-116(4)(h) and C.R.S. 34-32.5-116(4)(j).
CORRECTIVE ACTIONS: The operator shall implement erosion control measures in the Southern Pit to ensure there is no sedimentation into the Wetlands Area and provide photo documentation to the Division by the corrective action due date.
CORRECTIVE ACTION DUE DATE: November 8, 2019

OBSERVATIONS

This inspection was conducted by Elliott Russell of the Division of Reclamation, Mining and Safety (Division) in response to a call made to the Colorado Department of Health and Environment (CDPHE) Emergency and Incident Reporting Line on Thursday, October 3, 2019, regarding a milky discoloration in Beaver Creek. Patrick Lennberg, also with the Division, accompanied the inspection. Gillette Sand and Gravel, Inc. (Operator) was represented by Chris Pyles during the inspection. The Division assigned this as Citizen Complaint CT-01.

On Thursday, October 3, 2019, following the call reported to CDPHE, the Division made contact with a separate Operator within the area of Beaver Creek. Through that Operator's investigation, they traced the milky discoloration approximately 4 miles upstream from the initial reporting area to the vicinity of the Gillette Pit, near Colorado State Highway 67 and Teller County Road 81.

The Gillette Pit is a Construction Materials 112c Operation and is permitted at 32 acres of land for the extraction of gravel. The site is located in Teller County, approximately 3.5 miles east of Cripple Creek, Colorado. Affected lands will be reclaimed to support a post-mining land use of rangeland and wildlife habitat. The Gillette Pit consists of five distinct areas: 1) an active excavation in the northeast corner of the site (referred to as the Northern Pit in this inspection report); 2) an active excavation in the southeast corner of the site (referred to as the Southern Pit in this inspection report); 3) the

processing plant in the northwest corner of the site; 4) an older excavation and scale house near the entrance in the southwest corner of the site; and 5) a central Wetlands Area, designated as jurisdictional wetlands by the Corps of Engineers in 2002. The Northern Pit and the processing plant are located between the West Fork of West Beaver Creek (Beaver Creek) and the small tributary to Beaver Creek which flows through the Wetlands Area. The Southern Pit and entrance area are located south of the Wetlands Area.

The Division met Chris Pyles at the mine site entrance on the east side of CR 81, approximately ¼ mile south of SH 67. Near the turn off to the site, Beaver Creek flows through a culvert under CR 81. The Division observed a milky discoloration indicative of a large amount of suspended fine sediment particles in Beaver Creek (**Photo 1 and 2**). Mr. Pyles led the Division to the Wetlands Area within the permit boundary where a haul road connects the northern and southern portions of the site. Mr. Pyles pointed out a slight milky discoloration within this area which he believed to be related to beaver activity and the Operator's frequent attempts to clear a plugged culvert under the haul road. The Operator stated they use an excavator about two times each week to clear out debris placed by beavers to unplug the haul road culvert to prevent water from over-topping and washing out the haul road crossing. The Operator had recently cleaned this culvert out and believed this is the cause of the off-site discoloration in Beaver Creek (**Photo 3**). The Division observed some cloudiness to the water within the beaver pond just upstream of the access road, however this didn't appear to be the same type of suspended fine sediment observed downstream near CR 81.

The Division then proceeded to inspect the processing plant and wash water ponds. While approaching the wash plant, the Division observed water draining from washed product stockpiles as well as from a heap of sediment fines which had been excavated out of the wash water ponds (**Photo 4**). This draining water was leaving the process plant area through a cut-out in a perimeter berm and reporting to the Wetlands Area tributary, downstream of the haul road crossing (**Photo 5**).

The Division inspected the wash water ponds and observed the ponds were extremely close to capacity and a large amount of sediment had built up in the first pond. The Operator stated process water flows from the wash plant into the first pond, through a weir into the second pond, and then through another weir into the northern portion of the second pond where water is then pumped back into the wash plant. When more water is needed, the Operator purchases water from the City of Cripple Creek from a main near the northwest corner of the permit, as approved in Technical Revision TR-03 in 2005. The process water level was so high, the first pond's western embankment was nearly over-topping and the weir within the second pond was completely inundated. The Division observed a large amount of sediment fines piled along the west side of both of the wash ponds' western embankment. Mr. Pyles stated he had cleaned out the sediment ponds a week before the inspection. The Division observed several western permit boundary markers had been partially buried by the sediment fines generated from clean out (**Photo 6 and 7**). There was also a two-track road created from the processing plant area around the west side of the ponds to the northwest corner of the northern pond (**Photo 8**). The western permit boundary follows the western embankment of the wash ponds, thus the piled sediment fines and two-track have affected off-site lands (**Photo 9**). The Division used a Garmin 64st to acquire GPS data of the off-site disturbance. After the inspection, the Division used the GPS data, observations made and photographs taken during the inspection, and Google Earth, to determine that approximately 0.3 acres have been disturbed outside of the approved permit boundary. This has been cited as a possible violation requiring a hearing before the Mined Land Reclamation Board.

Along the western embankment, the Division observed a drainage area leading to the southwest which contained dry sediment fines (**Photo 10 and 11**). The Division believes this drainage had been affected by over-topping wash water and sediment fines, but not recently. The Division observed the northwest corner of the northern wash pond and discovered evidence of recent wash water which had over-topped the western pond embankment and reported directly to Beaver Creek (**Photo 13-15**). The Operator was unaware of the discharge event, however site personnel stated this is where some of the process pond water was overflowing on Thursday. The Operator stated the wash plant was shut down at 4 P.M. on Thursday. Although the wash water was no longer discharging, suspended fine sediment was still lingering at the point where the wash water had entered Beaver Creek. The Division walked just upstream of this point and observed clear water and even numerous brook trout (**Photo 16**). Following Beaver Creek downstream, the Division observed increasing turbidity and evidence of off-site sedimentation (**Photo 17**). The discharge of wash water into Beaver Creek, the stockpiling of sediment fines off-site, and the failure to notify the Division of the failure of the process pond impoundment has been cited as a possible violation requiring a hearing before the Mined Land Reclamation Board (MLRB).

The Division inspected the Northern Pit, which is a u-shaped excavation with highwalls ranging from 15-20 feet tall on the eastern side that daylights on the western side near the processing plant. The Operator had recently stripped topsoil above the eastern highwall in preparation of advancing the highwall further east. The Operator stated he is planning on backfilling the northern highwall with the wash plant sediment fines to the approved final reclamation slope of no steeper than 2H:1V. The Division observed one large area of standing water as well as several smaller areas (**Photo 18**). The Operator stated that the floor of the pit is nearing the water table and the large ponded area was approximately 4 to 6 feet deep. As the operation is not authorized to expose groundwater and the permit file does not reflect the Operator has a Substitute Water Supply Plan with the Division of Water Resources (DWR), this has been cited as a Compliance Problem #1 requiring corrective action. The Operator will need to backfill these areas to at least two feet above the groundwater table to ensure groundwater is not exposed or gain authorization with DWR and submit the appropriate revision to the Division.

The Division inspected the Southern Pit, which the Operator stated is used primarily as road base and requires minimal processing for the product. The highwall along the southern and eastern portions of the Southern Pit ranges from 15 feet to 35 feet and is the tallest in the southeast corner. The Division observed a drainage along the western side of the Southern Pit which flows through a culvert under a private access road constructed by the Operator which passes through the site (**Photo 19**). This culvert reports directly to a large beaver pond within the central Wetlands Area (**Photo 20**). A review of an aerial photograph taken with the Division's UAV drone at the time of the inspection shows that this large beaver pond contains suspended sediment while upstream beaver ponds do not (**Photo 21**). The Division has determined that the uncontrolled drainage from the Southern Pit has allowed sediment to reach the Wetlands Area, which is the cause of the cloudiness in the downstream beaver ponds inspected earlier near the haul road crossing. This has been cited as Compliance Problem #2, requiring the Operator to manage storm water from the Southern Pit. The Operator will need to install adequate erosion control measures to ensure sediment remains within the Southern Pit and doesn't report to the Wetlands Area.

Before the Division left the site, the Operator had placed material in the berm cut-out south of the Process Plant and was constructing a taller berm around the northwest corner of the northern process pond where the over-topping had occurred.

Following the inspection, the Division spoke with the Operator that evening and Mr. Pyles voluntarily committed to ceasing any wash plant activities at the site until further notice. On October 9, 2019, the Division sent a formal Cease and Desist Order, prohibiting all mining operation activities at the site, and a Reason to Believe a Violation Exists and Notice of Board Hearing, scheduling the matter before the MLRB during the November 13-14, 2019 Board meeting. Please note, the specified corrective actions associated with Compliance Problem #1 and #2 are allowed to be completed at the site as the Cease and Desist Order does not apply to them.

The Division contacted CDPHE after the inspection. The Operator has a storm water discharge permit, however this permit does not allow the discharge of process waters.

This concludes the Division's Inspection Report; a subset of photographs taken during the time of the inspection are included below. If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8132**, or by email at elliott.russell@state.co.us.

Inspection Contact Address
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PHOTOGRAPHS

Photo 1. Downstream side of CR 81 culvert; looking southwest.

Photo 2. Upstream side of CR 81 culvert; looking north.

Photo 3. Access road culvert and area of cleaned-out beaver pond debris; looking northeast.

Photo 4. Draining product and sediment fines; looking north.

Photo 5. Draining product and sediment fines water leaving site through berm cut-out; looking south.

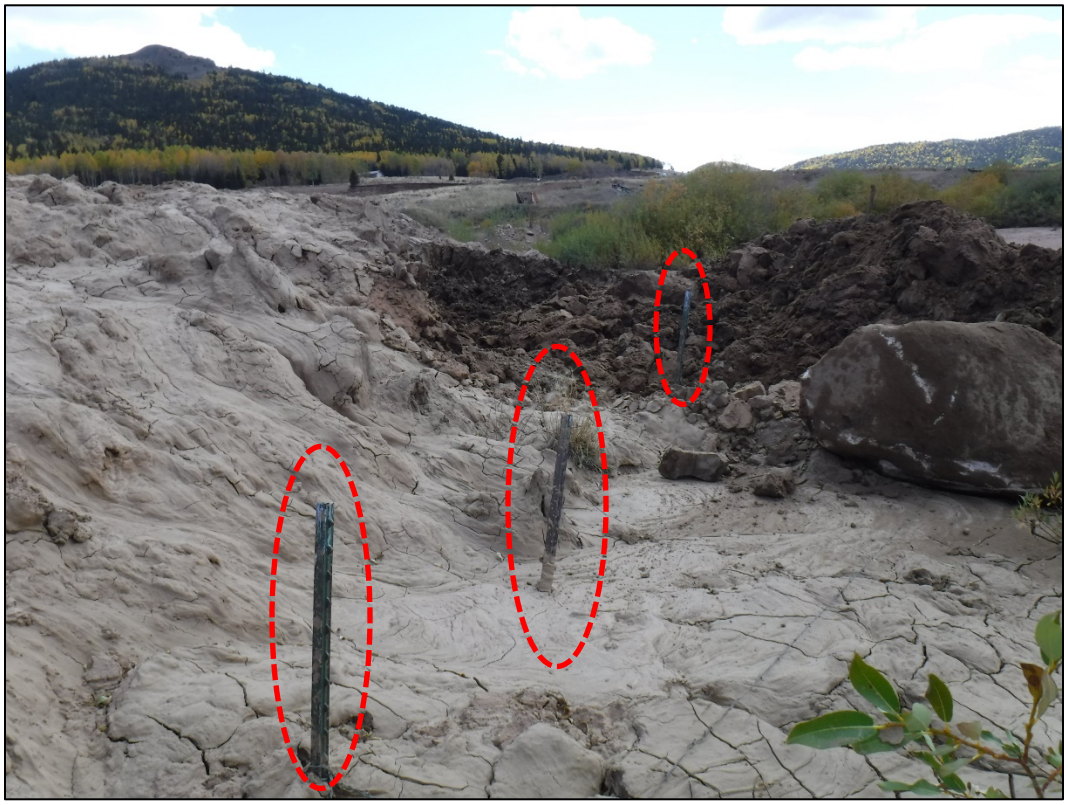

Photo 6. Permit boundary markers (circled) and piled sediment fines; looking south.

Photo 7. Permit boundary marker (circled) and piled sediment fines; looking south.

Photo 8. Two track located west of the western permit boundary; looking southeast.

Photo 9. Overview of western permit boundary (yellow solid line) and off-site disturbance (red dashed line); looking north.

Photo 10. Off-site drainage with sediment fines; looking northeast.

Photo 11. Off-site drainage with sediment fines; looking northeast.

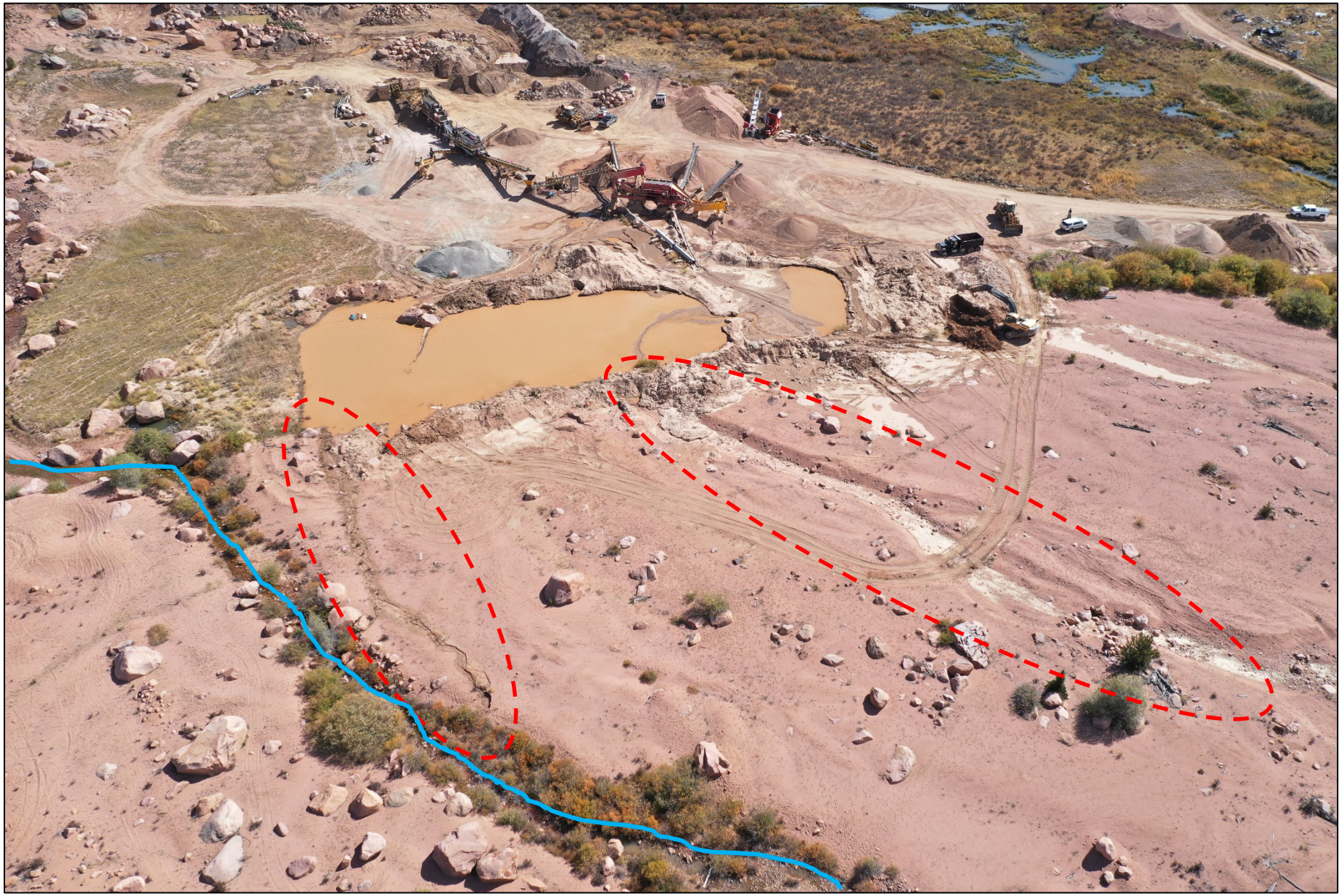

Photo 12. Overview of process ponds, wash water flow paths (circled in dashed red), and Beaver Creek (solid blue line); looking east.

Photo 13. Northwest corner of Pond 2 where wash water overtopped the embankment; looking south.

Photo 14. Wash water off-site flow path; looking west.

Photo 15. Erosional feature where wash water entered Beaver Creek; looking west.

Photo 16. Beaver Creek upstream of the wash water inflow with brook trout present and no turbidity; looking north.

Photo 17. Beaver Creek downstream of the wash water inflow; looking north.

Photo 18. Northern Pit with exposed groundwater on pit floor; looking south.

Photo 19. Drainage along western portion of the Southern Pit; looking southwest.

Photo 20. Culvert from Southern Pit drainage entering the Wetlands Area; looking southeast.

Photo 21. Overview of Wetlands Area and Southern Pit, culvert area circled in yellow; looking east.