




**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.

<b>MINE NAME:</b> Lamar East Pit	<b>MINE/PROSPECTING ID#:</b> M-1977-572	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Prowers
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Amy Eschberger	<b>INSP. DATE:</b> November 27, 2017	<b>INSP. TIME:</b> 13:45
<b>OPERATOR:</b> City of Lamar	<b>OPERATOR REPRESENTATIVE:</b> John Sutherland, Jr. and Rick Ackers	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	
<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> NA	
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None	
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> May 16, 2018	

**GENERAL INSPECTION TOPICS**

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any 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 or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

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

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

## **OBSERVATIONS**

This was a normal monitoring inspection of the Lamar East Pit (Permit No. M-1977-572) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). The permittee, City of Lamar was represented by John Sutherland, Jr. and Rick Ackers during the inspection. The site is located at the northern edge of Lamar, CO, just south of and adjacent to the Arkansas River. The site can be accessed by turning east off Hwy 50 onto Crystal St., then heading north on Valco Rd, which dead-ends at the site. The approved post-mining land use is a combination of wildlife habitat and recreational. The Division approved Technical Revision No. 4 in 2014 which added recreational use for the site, specifically for a city park.

At the time of the inspection, it was dry and sunny. A permit sign was posted at the southern entrance to the site off Valco Rd. The western portion of the permitted site is currently open to the public for recreational use (e.g., fishing, picnicking) as the North Gateway Park. The site was mined from west to east, leaving a series of four ponds. The second pond was backfilled in 2012 by the previous operator of the site, Valco, Inc. After Valco, Inc. completed the required reclamation grading and initial seeding, the permit was transferred to the City of Lamar in 2013 for final reclamation. The site now consists of three ponds, with the eastern two connected by a small channel, and a relatively flat area where the second pond was backfilled (**see enclosed Google Earth image of site**). The Division estimates total pond surface area to be 32.07 acres. Of this amount, the western pond is 9.31 acres in size, and the connected middle and eastern ponds are a combined 22.76 acres in size (with 0.54 acres subtracted for two islands present in the eastern pond).

According to the Division of Water Resources, the site has a valid well permit (Permit No. 52184-F) and augmentation plan (Case No. 13CW3060) in place that cover up to 25.87 acres of post-1981 groundwater exposure. An additional 7 acres of pond surface is considered pre-1981 exposure, which does not require augmentation. Therefore, a total groundwater exposure of 32.87 acres is allowed for the site. The most recent Substitute Water Supply Plan (SWSP) on file for the site was received on January 9, 2017, and covers depletions through March 31, 2017. This SWSP indicates the City of Lamar has made application to their Office for approval of a plan for augmentation and appropriative right of exchange to transfer the water rights from Valco, Inc. to the city. The city proposes utilizing water provided by Colorado Parks and Wildlife (CPW) from their water portfolio with the Lower Arkansas Water Management Association. The Division recommends the operator submit a copy of the current SWSP or the amended augmentation plan (if available) to demonstrate maintained compliance with the DWR with regard to the exposed groundwater.

The Division began the inspection at the western pond (**Photos 1 and 2**), then proceeded in a clockwise fashion along the gravel road that encircles the site. In accordance with the approved reclamation plan for a city park, two gravel parking lots, a few picnic areas, a restroom, and a fishing dock are present on the eastern shoreline of the western pond. The Division also observed a concrete foundation (approximately 20 feet x 40 feet in size) constructed east of the western pond, where a shade pavilion will be built.

The required reclamation grading has been completed at the site, with all disturbed land, including pond shorelines, graded to 3H:1V or flatter. However, the Division did observe some erosional damage present along a portion of the northern shoreline of the western pond (**Photo 3**). This erosion was noted in the Division's last inspection report from June 28, 2013. The operator indicated it has been difficult to repair the erosional damage given the limited access to the area for trucks and equipment. The northern shoreline of the western pond consists of a berm separating the pond from the Arkansas River, which is within 50 feet of the pond edge. The top of the berm is approximately 15-20 feet in width. The Division understands the operator's concerns about accessing the area, with the limited amount of space available. However, pursuant to Rule 3.1.5(3), all grading shall be done in a manner to control erosion and siltation of the affected lands, to protect areas outside the affected land from slides and other damage. If the erosion continues, the stability of the berm may be

compromised. Given the additional importance of the berm in flood mitigation for the site, efforts to maintain its stability should be a priority. Therefore, the Division recommends the operator find a way to repair and control the erosion along the northern shoreline of the western pond in accordance with Rule 3.1.5(3). If the erosion along the northern shoreline of the western pond has not been addressed by the next site inspection, a problem will be cited for this issue. Additionally, the operator should work to revegetate this shoreline, as its current lack of vegetative cover is most likely contributing to the erosion problem. Areas around the western pond are far less vegetated than the rest of the permit area. Part of this is due to the road, parking lots, and other park features present around the western pond. However, the northern shoreline/berm has very little vegetative cover at all.

The portion of the permit area located east of the western pond (and access road) was restricted from vehicular access by fencing and signage to protect areas undergoing revegetation. The operator indicated the restricted access also meets CPW's recommendations to protect waterfowl in these areas during their nesting period. As of 2013, the site has been jointly managed by the city and CPW. In 2014, the operator provided the Division with a copy of the preliminary development plan for the park which will be implemented in phases. Revised reclamation plan maps (**see enclosed maps**) showing locations of the proposed park features (i.e., parking lots, boat ramps, fishing piers, restroom facilities, picnic areas, viewing blinds, trails) was submitted with Technical Revision No. 4, mentioned above.

The Division observed the area between the western pond and middle pond, which was backfilled to a relatively flat surface and seeded in 2012. The Division estimates this area to be approximately 7.55 acres in size. Revegetation of this area has been very successful, with a diverse stand of grasses and forbs having established in the area (**Photos 4-6**). The area was irrigated in spring of 2014 after a planting project was conducted in conjunction with CPW and Lamar Parks and Recreation, during which almost 200 trees were planted in the area by students from Lamar schools. Unfortunately, many of the planted trees did not survive. However, the trees are not required by the approved reclamation plan. The approved revegetation plan (last revised in 2012 with Technical Revision No. 3) includes a mixture of native grasses recommended by NRCS and Habitat Construction, LLC, specifically for the sandy soils present at the site. The Division believes this portion of the site has been reclaimed in accordance with the approved reclamation plan.

The Division observed the northern shoreline of the middle pond to also have a diverse stand of native grasses and forbs established across the slopes (**Photos 7 and 8**). The Division observed the end of the 18 inch overflow pipe installed in the berm connecting the middle pond to the Arkansas River (**Photo 9**). This pipe was installed as part of the flood mitigation plan for the site, approved in 2012 under Technical Revision No. 2. The bottom edge of the pipe appeared to be approximately 2 feet from the pond water surface. An overflow pipe was installed at each of the ponds to help control pond levels during high water conditions. The pipe diameters vary from 12 inches at the western pond, to 18 inches at the middle pond, to 24 inches at the eastern pond.

The Division observed the peninsula along the northern shoreline of the middle pond (**Photo 10**). A pair of power line distribution poles are present at the edge of the peninsula. The peninsula was well vegetated with grasses, forbs, and some annual weeds, with the middle section mowed for utility access to the power line poles. The Division observed that concrete rubble had been placed along the edge of the peninsula (**Photo 11**) in efforts to stabilize the slope against further erosion which could impact the stability of the power line poles. This may not be an effective long-term solution for the slope erosion occurring at this location. The Division recommends the operator continue to monitor the area, and revise the stabilization plan as needed.

The Division observed the land separating the middle and eastern ponds, north of the channel (**Photo 12**). This area was well vegetated with a diverse stand of grasses and forbs, with some annual weeds also present. A small gravel parking lot has been constructed at the northern edge of this area. The northern shoreline of the eastern

pond was also well vegetated with native grasses (**Photo 13**). Two islands are present in the northern portion of the eastern pond (**Photos 14 and 15**), with a combined land surface of 0.54 acre. From the shoreline, it appeared that vegetative cover of the islands consists mainly of weeds. The Division recommends the operator implement the approved weed control plan on the islands, as they too are considered affected lands within the permit area.

The Division observed the edge of the 24 inch overflow pipe installed in the berm separating the eastern pond from the river (**Photo 16**). The bottom edge of the pipe appeared to be approximately 1.5 feet from the pond water surface. The Division observed a well-established stand of grasses along the edge of the eastern shoreline of the eastern pond (**Photo 17**). The city mows the strip of land between the eastern pond and the gravel road (**Photos 18 and 19**). Vegetative cover across this area consists mainly of native grasses. The southern shoreline of the eastern pond was fairly well vegetated with newer grass growth than what is present along the northern shoreline (**Photos 20-25**). According to the operator, the southern and eastern shorelines of the middle and eastern ponds had experienced less revegetation success from the initial seeding completed by the previous operator in 2012. Therefore, in early summer of 2014, the city imported 6,000 tons of clean topsoil to the site and spread it across these areas. In early fall of 2014, the city reseeded these areas. The city's water department ran city water to the area from the east side, installing three fire hydrants along the southern shoreline for irrigation purposes. It is unclear how often the areas were irrigated, but the results show significant grass germination and growth along much of the southern shorelines. There are some minor patchy areas where grasses are less prevalent (**Photos 26-30**), particularly along the southeastern edge of the eastern pond, and the vegetation is less diverse than observed in other revegetated areas on site. However, overall, vegetation of the southern shorelines is off to a great start, especially west of the parking lot located between the two ponds. The Division recommends the operator continue to monitor revegetation success along the southern shorelines of the eastern ponds, and interseed and/or irrigate the area as needed.

The Division observed some weeds present on site, particularly on the islands and along some of the pond edges. The Division recommends the operator implement the approved weed control plan for the site, especially for any noxious weed species such as Tamarisk. According to the operator, weed control, including Tamarisk removal, is conducted regularly throughout the site. Lamar Parks and Recreation controls weeds at the site by cutting them to ground level, then spraying an environmentally safe herbicide recommended by CPW.

The Division believes much of the site has been reclaimed in accordance with the approved reclamation plan. During the inspection, the operator inquired about releasing portions of the site through a partial release. The Division agreed that some portions of the site are releasable. However, the proposed revised permit area would need to remain contiguous, and include access for continued reclamation efforts. The proposed permit area should also be easy to delineate in the field with markers. It is not Division policy to allow a permit area to be split into separate non-contiguous areas. Since the Division requires additional work to be completed on the northern shoreline of the western pond, and the revegetation has not quite fully established across the southern shoreline of the middle and eastern ponds, at a minimum, these areas must remain in the permit area.

On April 25, 2018, the Division received a request from Hope Dibble of Alberts Water & Wastewater Specialists, Inc. for a full release of the permit. The Division is unable to process any permitting requests from this entity until the operator (City of Lamar) submits a notarized letter of authorization. This requirement was included in the Division's Notice of Incompleteness letter sent to the operator on May 8, 2018. The letter also details additional filing requirements of Rule 4.17.1 that must be met before the request can be processed. If the operator chooses to continue with the full release request, the Division will need to schedule another inspection of the site to assess current conditions.



## **PHOTOGRAPHS**



**Photo 1.** View looking southwest from eastern edge of western pond. Pond shorelines have been graded to 3H:1V or flatter.



**Photo 2.** View looking north from eastern edge of western pond. Pond shorelines have been graded to 3H:1V or flatter.





**Photo 3.** View looking northwest from eastern edge of western pond, showing erosion damage present on northern shoreline/berm.



**Photo 4.** View looking southeast across reclaimed area between western and middle ponds, showing establishment of diverse stand of grasses.





**Photo 5.** View looking north across reclaimed area between western and middle ponds, showing establishment of diverse stand of grasses.



**Photo 6.** View looking east across reclaimed area between western and middle ponds, showing establishment of diverse stand of grasses.





**Photo 7.** View looking southwest from north of middle pond, showing establishment of diverse stand of grasses along northern shoreline.



**Photo 8.** View looking south from north of middle pond, showing establishment of diverse stand of grasses along northern shoreline.





**Photo 9.** View of 18 inch overflow pipe installed in berm that separates middle pond from the Arkansas River. Installation of the pipe was part of the flood mitigation plan approved for the site. Edge of pipe was approximately 2 feet from pond water surface.



**Photo 10.** View looking south across peninsula in northern shoreline of middle pond. A pair of power line distribution poles are present at the edge of the peninsula. The operator keeps the peninsula mowed for utility access.





**Photo 11.** View looking south, showing concrete rubble operator has placed at edge of peninsula on northern shoreline of middle pond to help stabilize the slope against further erosion. This may not be an effective long-term solution.



**Photo 12.** View looking south across land between middle and eastern ponds. Note the diverse stand of grasses established across the area. Corner of parking lot is present at left.





**Photo 13.** View looking east across northern shoreline of eastern pond, showing well established grasses along this shoreline.



**Photo 14.** View looking south from northern shoreline of eastern pond, showing smaller of two islands present in this pond. Vegetation present on the island appeared to consist mainly of weeds.





**Photo 15.** View looking south from northern shoreline of eastern pond, showing larger of two islands present in this pond. Vegetation present on the island appeared to consist mainly of weeds.



**Photo 16.** View of 24 inch overflow pipe installed in berm that separates eastern pond from the Arkansas River. Installation of the pipe was part of the flood mitigation plan approved for the site. Edge of pipe was approximately 1.5 feet from pond water surface.





**Photo 17.** View looking southwest across eastern shoreline of eastern pond, showing well established native grasses along the edge of the shoreline.



**Photo 18.** View looking northwest across land between eastern pond and gravel road. The operator keeps this area mowed. Note vegetative cover across area consisting mostly of native grasses.





**Photo 19.** View looking north across land between eastern pond and gravel road. The operator keeps this area mowed. Note vegetative cover across area consisting mostly of native grasses. Gravel road that encircles the site shown at right.



**Photo 20.** View looking north across land south of eastern pond, showing area fairly well vegetated with newer grass growth than present along northern shoreline.





**Photo 21.** View looking west across land south of eastern pond, showing area fairly well vegetated with newer grass growth than present along northern shoreline.



**Photo 22.** View looking northwest across land south of middle pond, showing area fairly well vegetated with newer grass growth than present along northern shoreline.





**Photo 23.** View looking north across land south of middle pond, showing area fairly well vegetated with newer grass growth than present along northern shoreline.



**Photo 24.** View looking west across land south of middle pond, showing area fairly well vegetated with newer grass growth than present along northern shoreline.





**Photo 25.** Representative ground view of land south of middle and eastern ponds with good grass growth.



**Photo 26.** View looking west across land southeast of eastern pond, showing grasses less prevalent in some areas.





**Photo 27.** View looking east across land southeast of eastern pond, showing grasses less prevalent in some areas.



**Photo 28.** View looking west across land south of eastern pond, showing grasses less prevalent in some areas.





**Photo 29.** View looking west across land south of eastern pond, showing grasses less prevalent in some areas.



**Photo 30.** View looking northwest across land south of eastern pond, showing grasses less prevalent in some areas (foreground).

**Inspection Contact Address**

John Sutherland, Jr.  
City of Lamar  
102 East Parmenter  
Lamar, CO 81052

Enclosures: Google Earth image of site  
Two reclamation plan maps submitted with Technical Revision No. 4

CC: Wally Erickson, DRMS



# M-1977-572 (112c) / Lamar East Pit / City of Lamar

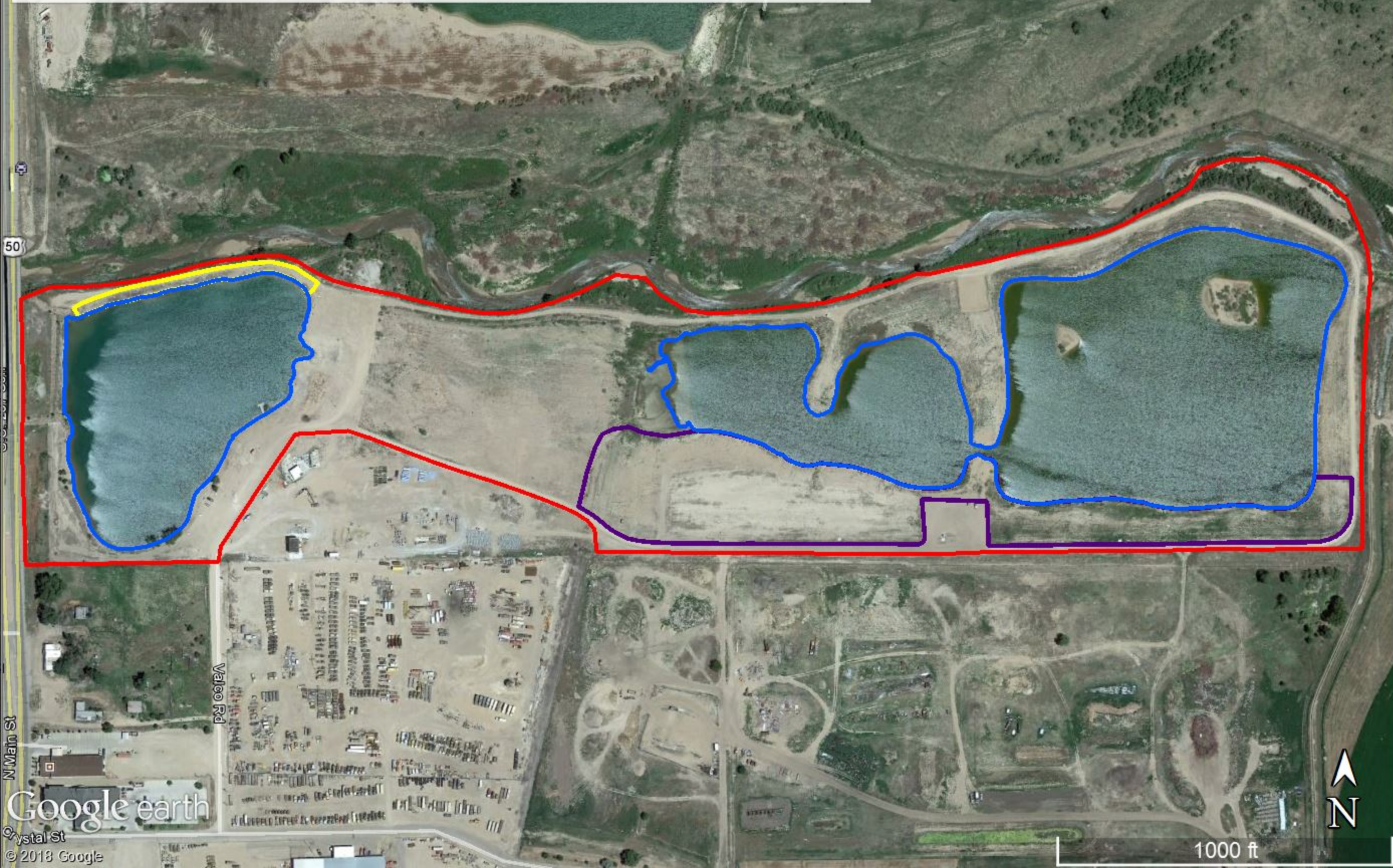
Red Outline = 72.2 acres = Approved Permit Area

Blue Outline = 32.07 acres = Total pond surface [(9.31 acres + 23.3 acres) - 0.54 acre islands]

Purple Outline = 9.7 acres = Grasses not quite fully established

Yellow Outline = Shoreline with erosion problem

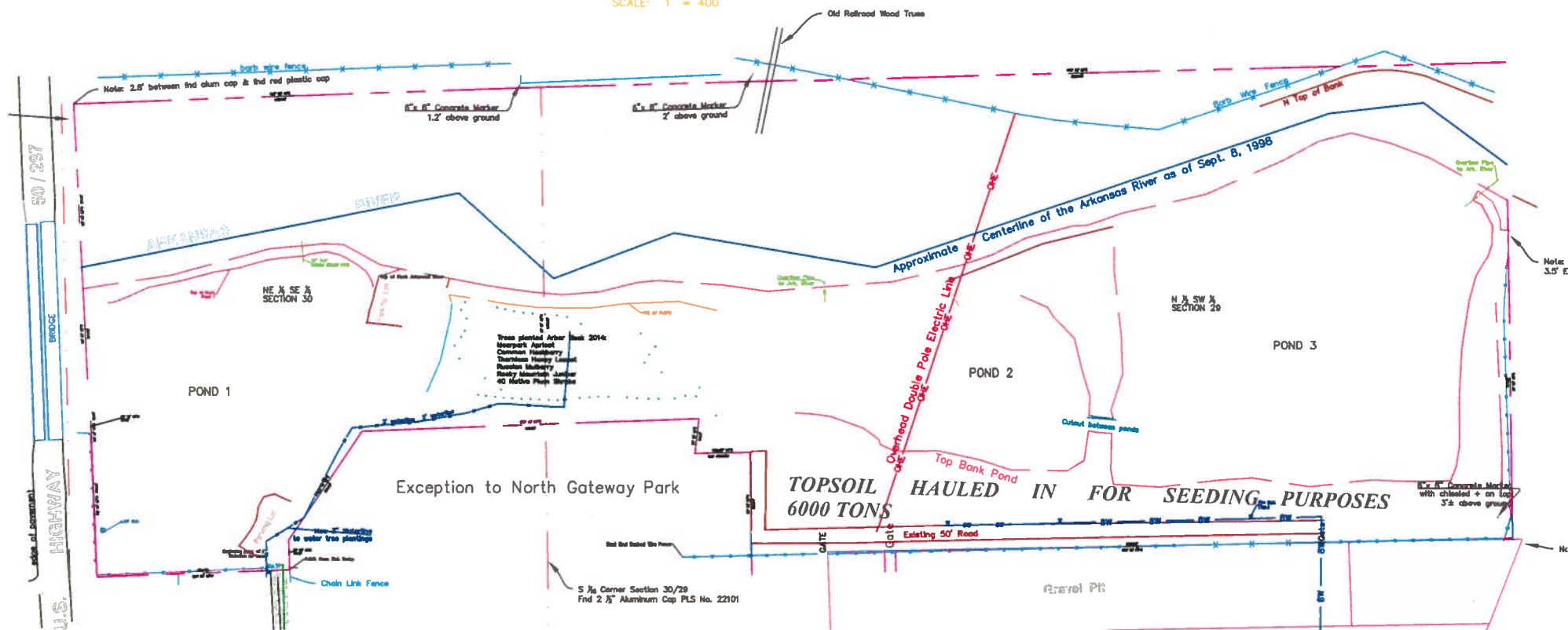
(Image data from: 6/12/2017)





**RECEIVED**  
 AUG 15 2014  
 DIVISION OF RECLAMATION  
 MINING & SAFETY-MINERALS  
 FEE REPORT MAP FW

Reclamation Plan Map  
 Permit #M-1977-572  
 Site Name: Lamar East Pit







### MAP KEY

 ARCHERY RANGE

 BATHROOM

 BOAT RAMP

 BRIDGE

 FISH CLEANING AREA

 HIKING

 HANDICAPPED ACCESSIBLE

 WALK OUT PIER

 PARKING AREAS

 PICNIC AREA / SHADE AREA

 RE-VEGETATED AREAS

 VIEWING BLIND

 WATERFOWL CLOSURE AREA

Orange line indicates trail

Yellow line indicates parking lots

Red line indicates public access roads

Areas of Re-vegetation

Lime line indicates waterfowl closure boundary

BLACKENED AREA ON MAP - INDICATES CONJOINING OF PONDS 3 & 4