




**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> Dowe Flats Mine	<b>MINE/PROSPECTING ID#:</b> M-1993-041	<b>MINERAL:</b> Limestone and shale	<b>COUNTY:</b> Boulder
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Amy Eschberger	<b>INSP. DATE:</b> November 5, 2019	<b>INSP. TIME:</b> 14:30
<b>OPERATOR:</b> CEMEX, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Cita Cisse, Scott Harcus, Robin Bay	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	

<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> Partial Bond	<b>BOND AMOUNT:</b> \$3,389,460.00
<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> December 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.**

**INSPECTION TOPIC:** Gen. Compliance With Mining Plan

**PROBLEM #1:** The current mining plan needs to be updated and clarified pursuant to C.R.S. 34-32.5-112(1)(c)(VI). The operator must provide sufficient information to describe or identify how the operator intends to conduct the operation. Specifically, the operation has disturbed more than the approved maximum allowed disturbance at any time of 105 acres, and therefore, this amount must be increased to reflect, at a minimum, the existing disturbance. Additionally, the mining plan map must be updated to meet the requirements of Rules 6.2.1(2) and 6.4.3.

**CORRECTIVE ACTIONS:** By the corrective action date, the operator shall submit a Technical Revision, with the required \$216 fee, to update and clarify the current approved mining plan to reflect existing and proposed activities; specifically to increase the maximum disturbed area to, at a minimum, include existing disturbance at the site (estimated by the Division to be 385.15 acres). Additionally, the revision must include an updated mining plan map in accordance with Rules 6.2.1(2) and 6.4.3, which depicts the entire approved permit boundary (1,854.45 acres) and affected lands boundary (464.9 acres).

**CORRECTIVE ACTION DUE DATE:** February 8, 2020

**INSPECTION TOPIC:** Reclamation Plan

**PROBLEM #2:** The current reclamation plan needs to be updated and clarified pursuant to C.R.S. 34-32.5-116.

The operator must provide sufficient information to describe or identify how the operator intends to conduct reclamation. Specifically, the reclamation plan needs to be updated to describe how the conveyor system and associated infrastructure will be reclaimed. Additionally, the reclamation plan map must be updated to meet the requirements of Rules 6.2.1(2) and 6.4.6.

**CORRECTIVE ACTIONS:** By the corrective action date, the operator shall submit a Technical Revision, with the required \$216 fee (can be same revision as required by Problem #1 above), to update and clarify the current approved reclamation plan to reflect existing and proposed activities. Specifically, the reclamation plan must be updated to describe how the conveyor system and associated infrastructure will be reclaimed, including its dimensions, all permanent components requiring demolition (e.g., concrete footers), any buried sections of the conveyor, any associated infrastructure, removal/disposal information, and any areas requiring grading, retopsoiling, and/or seeding once the system has been removed. Additionally, the revision must include an updated reclamation plan map in accordance with Rules 6.2.1(2) and 6.4.6 which depicts the entire approved permit boundary and affected lands boundary.

**CORRECTIVE ACTION DUE DATE: February 8, 2020**

**INSPECTION TOPIC:** Financial Warranty

**PROBLEM #3:** The financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) and Rule 4.2.1(1).

**CORRECTIVE ACTIONS:** By the corrective action date, the operator shall submit an updated bond estimate in accordance with Rule 6.4.12 that includes all information necessary to calculate the costs of reclamation that would be incurred by the state for, at a minimum, the existing disturbance at the site, including demolition/removal costs for the existing conveyor system. This bond estimate should be included with the Technical Revision submittal required by Problem #2 above.

**CORRECTIVE ACTION DUE DATE: February 8, 2020**



## **OBSERVATIONS**

This was a normal monitoring inspection of the Dowe Flats Mine (Permit No. M-1993-041) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). The operator was represented during the inspection by Cita Cisse, Scott Marcus, and Robin Bay. The site is located approximately two miles east of Lyons, Colorado in Boulder County. Access to the site is from the south off Hwy 66. **Photos 1-30** taken during the inspection are included with this report.

### **Site Summary:**

This is a 112c operation permitted for 1,854.45 acres to mine limestone and shale for use in the operator's cement plant (Lyons Quarry; Permit No. M-1977-208), located just south of this site, on the other side of Hwy 66. Four horizons have been targeted for mining at this site based principally on their calcium carbonate content and utilization potential at the cement plant. The west limb of a southward plunging syncline contains the four beds of interest; all outcrop along a general north-south strike and exhibit gentle dips to the east. The four ridges overlap due to the stratigraphic superposition of the limestone beds. The western-most seam (also stratigraphically the lowest) is referred to as the Hi-Cal Ridge. Expressions of the other horizons are more subdued and these are known locally as the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Ridges (see enclosed Figure 4: Typical Cross Section of Quarry Configuration and Rock Units to be Mined, received with TR-2 on May 26, 2009).

### **Summary of Approved Mining Plan:**

Mining of each of the limestone beds is to begin at a southern point along the outcrop, with the pit faces advancing toward the north. The operation is authorized to conduct blasting on site. According to the permit file, the operation may blast 2-4 times per week with up to 3 blasts on a given day, and this activity is monitored from two permanent seismic monitoring stations installed on site. Mine development will be essentially a box cut operation whereby overburden removed during a given point in mining is placed to backfill a previously mined portion of the mine. Overburden is stockpiled at the southern edge of the mining area for use in reclamation backfilling. Salvaged topsoil is stockpiled at the edges of the pit until sufficient areas are backfilled to allow for final topsoil placement. A visual screen (berm) approximately 6 feet in height with sides slopes no steeper than 4H:1V will be constructed with topsoil and/or overburden along the road which runs along the eastern and southern edges of the mining area. This berm will be stabilized with grass cover during operations until the material is needed for reclamation.

Through Amendment No. 1 (AM-1; approved in 1994), the primary method of transporting production rock from the mine to the cement plant was changed from haul trucks to an above-ground belt conveyor system. The operator estimated this system would be approximately 8,000 feet in length, running from the primary crusher at the mine site (also added to the permit through AM-1), across Hwy 66, to the secondary crusher at the cement plant. The system was to be at ground level for much of its length, but would be elevated at several locations to cross local infrastructure, including across existing ditches, Hwy 66, a railroad line, and St. Vrain Creek. A chain link fence was to be installed along the conveyor system where necessary to prevent public access. The primary crusher would initially be installed at the southern end of the mine and most likely be moved to the north as the mine advances in that direction. The addition of this crusher to the mine site was necessary to break the limestone into fragments of 8 inches or less so it could be transported on the belt conveyor to the plant for additional crushing.

### **Summary of Approved Reclamation Plan:**

The approved post-mining land use for the site is a combination of rangeland and wildlife habitat for prairie species. The reclamation plan calls for creating a gently sloping prairie with a single 20-acre wetland in the

northeastern portion of the site. The valley will appear much as it does today, except that the overall ground surface will be lowered about 6 feet (because the volume of backfill material will be slightly less than the volume of the mined out area). The 6-foot deficit will be spread out uniformly over the valley. All final slopes will be graded to no steeper than 3H:1V. In regraded areas where overburden is used for fill, fine overburden will be placed to depths of 2-5 feet prior to topsoil placement to provide subsoil for revegetation. Disturbed land will be retopsoiled at a depth of 4-8 inches. The majority of the site will be revegetated with a grassland seed mixture, while the northeastern wetland area will be revegetated with a wetland seed mixture. The main haul road and bridge will be left in place after mining for continued access to the property. The conveyor system along with other structures constructed for the operation will be dismantled and removed from the site. No additional details on the proposed conveyor system were provided in AM-1.

### **Technical Revision No. 2 (Updated Mining and Reclamation Plans; Approved October 22, 2009):**

During its inspection of the site on November 13, 2008, the Division observed current conditions to not reflect what was approved in the permit. The Division required the operator to submit a Technical Revision to update and clarify the approved mining and reclamation plans. The operator submitted Technical Revision No. 2 on June 1, 2009 to address these issues. TR-2 stated there are four structures at the mine site that will require demolition and removal for reclamation, including the crusher building and adjacent retaining wall, a maintenance building, and two trailers (set on concrete block foundations). Details on the conveyor system and associated infrastructure were not included in the TR-2 submittal. TR-2 revised the sequence of backfilling to allow for the large overburden stockpile stored at the southern edge of the mine site to be used during operations for backfilling active pits rather than toward the end of mining as originally approved. Enough material will be left along the county road to still achieve its intended screening function. TR-2 revised the maximum mining depth to 170 feet for the Hi-Cal pit, and 80 feet for the other ridges. TR-2 clarified the total affected area for the site is 464.9 acres, and increased the maximum (unreclaimed) disturbance at any time from 95 acres to 105 acres. Additionally, it was clarified that the main access road and the road entering the site from the east near the maintenance shop area will remain after reclamation. All other roads constructed on site will be reclaimed.

TR-2 also addressed the ponded water observed in three areas of the pits, estimated at that time to have a total surface area of 2.8 acres. The operator informed the Division the ponded water is meteoric, and a valid discharge permit and dewatering permit are in place to allow the operator to dewater the pits and discharge the water into a nearby drainage or ditch. There is also a dewatering well on site, located at the southern edge of the mine. While the operator began using the ponded water on site for dust control in 2006, the operation was not dewatering and discharging off site at the time of TR-2 submittal (2009). Because the operation is storing and using some of the ponded water out-of-priority with associated evaporative losses, the operator was working with the Division of Water Resources (DWR) to gain compliance with their office with regard to this matter. The operator provided a letter from DWR dated May 28, 2009 stating that conditional water storage rights were decreed to the mine in Case No. 83CW374, and that evidence suggests that little, if any groundwater is exposed in these quarries. This letter also confirms that a dewatering permit (No. 45501-F) was obtained for the site in 1995 to remove any precipitation captured by the pits and discharge that water to St. Vrain Creek.

### **Hydrologic Balance:**

The Division was unable to find evidence in the permit file that a Substitute Water Supply Plan (SWSP) is in place for the site. If a SWSP is required for the site by DWR, a copy of this plan must be provided to the Division to demonstrate compliance with Rule 3.1.6(1)(a), which requires an operation to maintain compliance with applicable Colorado water laws and regulations governing injury to existing water rights. Additionally, it is the Division's understanding that a permanent plan for augmentation may be required for the 20-acre wetland area proposed for final reclamation. If this is the case, the operator must provide demonstration that such a plan has

been approved by water court before the wetland area could be released from the permit.

### **Annual Report Map:**

It should be noted, the annual report maps submitted by the operator show an incorrect permit boundary (see enclosed annual report map received on September 7, 2019). The area labeled as the permit boundary on these maps appears to include only the mine disturbance area north of Hwy 66, but not the rest of the permit boundary present on both sides of this road. The originally approved permit area of 1,911.0 acres has been revised through three permit revisions, including, AM-1 (approved in 1994) which added 44.4 acres, giving a new permit area of 1,955.4 acres, Acreage Reduction No. 1 (AR-1; approved in 2004) which removed 13.07 acres, giving a new permit area of 1,942.33 acres, and Acreage Reduction No. 2 (AR-2; approved in 2005) which removed 87.88 acres, giving the current permit area of 1,854.45 acres. The operator should be sure that future annual report maps show the correct permit boundary or affected land boundary, as revised through these three revisions.

### **Mining and Reclamation Plan Maps:**

The Division was unable to find updated mining and reclamation plan maps in the permit file which depict the entire approved permit boundary and affected land boundary, particularly the portion located south of Hwy 66. Therefore, the operator will need to provide updated mining and reclamation plan maps for the site that meet the requirements of Rules 6.2.1(2), 6.4.3, and 6.4.6 (see enclosed rules). These maps should depict both the approved permit boundary (comprising 1,854.45 acres) and the affected lands boundary (comprising 464.9 acres). These updated maps should be submitted with the Technical Revision required for Problems #1 and #2 cited in this report (see pages 1 and 2). Enclosed with this report are a total of 12 site maps that were submitted with the original application, AM-1, AR-1, AR-2, and TR-2, which the operator may find useful. Also enclosed with this report are Google Earth images 1-3 of the site showing what the Division believes to be the approved permit area based on the approved maps in the permit file.

### **Permit Sign and Boundary Markers:**

The Division observed a mine identification sign posted at the main site entrance off Hwy 66. The font size of the permit information on this sign was difficult to read from the access road. Therefore, the Division recommends the operator review Rule 3.1.12(1) (see enclosed rule) to ensure the permit identification sign meets the sizing requirements. The Division did not check boundary markers during this inspection, as the focus of the inspection was to provide Division staff new to the site an overview of the operation. However, the Division does intend to check boundary markers during the next site inspection, which will be conducted once the operator has provided updated maps depicting the entire approved permit and affected lands boundaries. In the meantime, the operator should be sure the approved permit boundary is marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries in accordance with Rule 3.1.12(2). This would include the portion of the permit boundary located south of Hwy 66.

### **Inspection Observations:**

The operation is currently mining the Hi-Cal Ridge, the 3<sup>rd</sup> Ridge, and the 4<sup>th</sup> Ridge. However, no mining was occurring during the inspection. The Division did observe a few haul trucks hauling material out from the pit area, presumably to the primary crusher area. The Hi-Cal pit is the largest and deepest of the pits, and is located in the northwestern portion of the mining area. At this time, the operation is mining the pit deeper in the north-central portion of the pit floor. The Hi-Cal pit depth is currently less than the approved maximum depth of 170 feet. Pit walls are near vertical, except for the western pit wall which has slope gradients of 3H:1V to 4H:1V. Ponded water was observed at the deeper southern end of the Hi-Cal pit floor. A mining area located directly south of the

Hi-Cal pit was labeled as the Inter-Ridge mining area. This area appears to be in the process of being backfilled. The 3<sup>rd</sup> Ridge pit is located in the southeastern portion of the mining area. This pit is approximately 25-30 feet in depth with near vertical highwalls. The operation was drilling along the northern edge of the 3<sup>rd</sup> Ridge pit in preparation for blasting. The 4<sup>th</sup> Ridge pit is located east of the Hi-Cal pit, and is approximately 12-15 feet deep at this time. Some scattered pools of water were observed in portions of the 3<sup>rd</sup> Ridge and 4<sup>th</sup> Ridge pits which could most likely be attributed to recent storm events and snow melt. In recent years, the operation has backfilled portions of the active pits, including western and southern portions of the Hi-Cal pit and northern and southern portions of the 3<sup>rd</sup> Ridge pit. These areas will need to be retopsoiled and seeded once final grading has been completed.

The crusher facility is located along the main haul road, south of the active mining area. A large steel housing and retaining wall are constructed around the crusher unit that feeds the conveyor system. The crusher facility and conveyor system were not in operation during the inspection. Mined material is stockpiled in an area above (north and east of) the crusher facility.

Salvaged topsoil is stored mainly along the eastern edges of the mining area. These stockpiles appeared to be stable with good vegetative cover. The Division observed the large overburden stockpile stored along the southern edge of the mine site. This stockpile was also stable with good vegetative cover, except for a portion of its northern side (facing the mine) where the operation has removed material from the stockpile for use in reclamation backfilling.

The Division observed the previously mined southern portion of the mine site, between the large overburden stockpile and the active pit area. This area (approximately 111 acres in size) was graded to match surrounding topography and is now well vegetated with native grasses, forbs, and some shrubs. It appeared this area has been in reclamation for many years and much if not all of it may be releaseable at this time. However, if the operator were to request a partial release of this area, the revised permit area must include access to any stockpiled material that will be needed for reclamation, including the large overburden stockpile.

The Division observed the office and maintenance shop area and the fuel station located near the site entrance. The shop area includes a metal maintenance shop building with a slab on grade concrete foundation, and two office trailers set on concrete block foundations. The fuel station is located adjacent to the main access road near the mine entrance. The fuel is stored within a secondary containment unit. No problems were observed in these areas.

According to the operator, the pit disturbance has reached its extent to the north and west, per the limitations of the county permit. The operator was not sure at this time when mining might be completed and final reclamation of remaining disturbed areas might begin, as the pits have not yet been mined to their maximum depths. The reclamation completed at the site thus far appears to be following the approved reclamation plan.

### **Estimated Disturbance:**

According to the 2019 annual report, the operator estimates the total pit disturbance to cover 92.1 acres, the areas undergoing reclamation to cover 65 acres, and the areas of unreleased reclamation to cover 233.4 acres. This would give a total of 157.1 acres of unreclaimed disturbance on site. The operator's estimate of disturbance does not appear to include non-pit disturbances (e.g., conveyor system, maintenance shop area, topsoil and overburden stockpile areas, roads to be reclaimed).

The Division estimates (based on the most recent aerial image available for the site in Google Earth, dated May 31, 2018), total unreclaimed disturbance to total 385.15 acres (see enclosed Google Earth images 1-4 of site

showing total unreclaimed disturbance). This includes 329 acres of disturbance associated with the active pit and crusher areas, 42.6 acres of disturbance associated with overburden and topsoil stockpiles (located outside of the active pit area), 6.7 acres of disturbance associated with the maintenance shop, fuel station, and equipment storage areas (located near the mine entrance), and 6.85 acres of disturbance associated with the conveyor system.

The Division's estimated disturbance at the site (385.15 acres) far exceeds the maximum amount of disturbance (105 acres) that is authorized for the operation per TR-2. Therefore, a problem is cited in this report (see page 1), requiring the operator to submit a Technical Revision (form enclosed) to increase the maximum amount of disturbance to reflect, at a minimum, existing site conditions. This revision shall include a description of current disturbances and the reclamation that remains for these areas.

A 2<sup>nd</sup> problem is cited in this report (see pages 1 and 2), requiring the operator to revise the reclamation plan to describe how the conveyor system and associated infrastructure will be reclaimed. This information can either be included with the Technical Revision submitted for the 1<sup>st</sup> problem cited, or submitted under a separate Technical Revision.

### **Financial Warranty:**

In 2013, the Division increased the required financial warranty for this site by \$211,910.00 to the currently held amount of \$3,389,460.00, per the information provided in TR-2. This amount covers the demolition of several structures (fuel tank and island, two trailers, maintenance building, crusher facility), backfilling the pits with overburden, grading the backfilled pits, replacing approximately 6 inches of topsoil on 105 acres, ripping 105 acres, and revegetating 280.8 acres of affected lands. The currently held financial warranty does not include costs for demolishing/removing the conveyor system, which the Division estimates to be approximately 9,500 feet in length. It also does not include costs for reclaiming the current disturbance on site estimated to be 385.15 acres. Therefore, a 3<sup>rd</sup> problem is cited in this report (see page 2), requiring the operator to submit an updated bond estimate that includes costs for reclaiming current disturbances at the site in accordance with the approved reclamation plan, including disturbances associated with the conveyor system. This estimate should be included with the Technical Revision submitted for the 2<sup>nd</sup> problem cited in this report. Once the Division has adequate information to calculate the required financial warranty for the site, a notice of surety increase will be issued, giving the operator 60 days from the date of that notice to post the additional required financial warranty.

### **Summary of Items to be Addressed by Operator:**

- 1) Submit a copy of the current SWSP approved for the site, if one is required by DWR.
- 2) Depict the correct approved permit boundary or affected lands boundary on future annual report map submittals.
- 3) Ensure the approved permit boundary is marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries in accordance with Rule 3.1.12(2).
- 4) Ensure the permit identification sign meets the requirements of Rule 3.1.12(1).
- 5) For the three problems cited in this report, submit a Technical Revision to:
  - a) Increase the maximum disturbed area to include, at a minimum, current disturbance that has not yet been fully reclaimed, including areas that will need to be redisturbed for reclamation (e.g., overburden

and topsoil stockpile areas) and disturbances associated with the conveyor system.

- b) Update the reclamation plan to include a description of how the conveyor system will be reclaimed, including its dimensions, all permanent components requiring demolition (e.g., concrete footers), any buried sections of the conveyor, any associated infrastructure, removal/disposal information, and any areas requiring grading, retopsoiling, and/or seeding once the system has been removed.
- c) Provide an updated mining plan map that depicts the entire approved permit boundary and affected lands boundary (including areas south of Hwy 66), and meets the requirements of Rules 6.2.1(2) and 6.4.3.
- d) Provide an updated reclamation plan map that depicts the entire approved permit boundary and affected lands boundary (including areas south of Hwy 66), and meets the requirements of Rules 6.2.1(2) and 6.4.6.
- e) Provide an updated bond estimate that includes costs for reclaiming, at a minimum, the existing disturbance in accordance with the approved reclamation plan per Rule 6.4.12. This estimate shall include costs for demolishing/removing all permanent structures that will not remain for reclamation, including the conveyor system and associated infrastructure.

This concludes the report.

*Any questions or comments regarding this inspection report should be forwarded to Amy Eschberger at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at 303-866-3567, ext. 8129, or via email at [amy.eschberger@state.co.us](mailto:amy.eschberger@state.co.us).*



## PHOTOGRAPHS



**Photo 1.** View of permit identification sign posted at main site entrance. Permit information on sign (circled) may not meet sizing requirements of Rule 3.1.12(1).



**Photo 2.** View looking south across maintenance shop area located near site entrance. Note maintenance building and two office trailers present in this area.





**Photo 3.** View looking north toward crusher facility (visible in distance), showing conveyor system (at left) which extends from crusher to plant site south of Hwy 66.



**Photo 4.** View looking north at crusher facility located near main haul road, south of active mining area. Note crusher is enclosed in a metal housing.





**Photo 5.** View looking southwest across material stockpiling area located above crusher facility, adjacent to main haul road.



**Photo 6.** View looking northwest across material stockpiling area located above crusher facility, adjacent to main haul road.





**Photo 7.** View looking east at topsoil berm along eastern edge of main haul road, stabilized with good grass cover.



**Photo 8.** View looking southeast at two acre parcel (indicated) which was removed from permit area (through AR-2) for Poudre Valley Rural Electric Substation.





**Photo 9.** View looking southeast at large overburden stockpile stored at southern edge of mine, stabilized with good grass cover, except where material has been removed (area circled) for reclamation backfilling.



**Photo 10.** View looking east across reclaimed area located south of active mining area, with slopes graded 3H:1V or flatter and established grass cover.





**Photo 11.** View looking north across reclaimed area located south of active mining area, with slopes graded 3H:1V or flatter and established grass cover.



**Photo 12.** View looking northeast across reclaimed area located south of active mining area, with slopes graded 3H:1V or flatter and established grass cover. Note road constructed along northern edge of this area (indicated) to access 3<sup>rd</sup> Ridge pit.





**Photo 13.** View looking south across 3<sup>rd</sup> Ridge pit, showing backfilled southern portion of pit which will need to be retopsoiled and seeded once final grading is complete.



**Photo 14.** View looking east across 3<sup>rd</sup> Ridge pit, showing eastern pit wall (in background), approximately 20-25 feet in height with near vertical slopes.





**Photo 15.** View looking northeast across 3<sup>rd</sup> Ridge pit, showing operation drilling along northern pit wall in preparation for blasting.



**Photo 16.** View looking north across 3<sup>rd</sup> Ridge pit, showing northern pit wall (in background), approximately 25-30 feet in height with near vertical slopes.





**Photo 17.** View looking east across area north of 3<sup>rd</sup> Ridge pit where drilling was occurring during inspection in preparation for blasting.



**Photo 18.** View looking north, showing active haul truck on site during inspection.





**Photo 19.** View looking north across 4<sup>th</sup> Ridge pit, showing northern pit wall approximately 15 feet in height with near vertical to 1H:1V slopes.



**Photo 20.** View looking east across 4<sup>th</sup> Ridge pit.





**Photo 21.** View looking southeast across Hi-Cal pit from its northwestern edge. Note western pit slope (in foreground) graded to 3H:1V or flatter.



**Photo 22.** View looking east across northern portion of Hi-Cal pit from its northwestern edge.





**Photo 23.** View looking southeast across center of Hi-Cal pit from its northwestern edge. Most recent excavation area at north-central portion of pit floor (indicated).



**Photo 24.** View looking north across area designated as Inter-Ridge pit, located at southern edge of Hi-Cal pit. This area appears to be in the process of being backfilled.





**Photo 25.** View looking east across equipment storage area located adjacent to main haul road, southeast of Hi-Cal pit.



**Photo 26.** View looking northeast at large overburden stockpile stored along southern edge of mine, north of Vestal Rd. Note this side of the pile has good grass cover.





**Photo 27.** View looking north, showing portion of above ground conveyor system (at right) installed across Hwy 66. This area appears to be within the approved permit boundary.



**Photo 28.** View looking north across paved road and bridge constructed across St Vrain Creek in the early 1990's in association with installation of the conveyor system. This area appears to be within the approved permit boundary.





**Photo 29.** View looking north at area where conveyor system crosses over N 51<sup>st</sup> St (main entrance to plant site south of Hwy 66). This area appears to be within the approved permit boundary.



**Photo 30.** View looking northeast across portion of above ground conveyor system just south of St Vrain Creek. This area appears to be within the approved permit boundary.



### GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

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

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

### Inspection Contact Address

Cita Cisse  
CEMEX, Inc.  
P.O. Box 529  
Lyons, CO 80540

Encls: Figure 4: Typical Cross Section of Quarry Configuration and Rock Units to be Mined, received with TR-2 on May 26, 2009

Annual report map, received on September 7, 2019

Rules 6.2.1(2), 6.4.3, and 6.4.6 – pertaining to map submittals

12 site maps: 2 maps received on June 1, 1993 with original application; 3 maps received on August 31, 1994 with AM-1; 2 maps received on May 24, 2004 with AR-1; 2 maps received on November 8, 2004 with AR-2; and 3 maps received on May 26, 2009 with TR-2

Google Earth images 1-3 of site showing approved permit area

Rule 3.1.12(1) – pertaining to permit identification sign

Google Earth images 1-4 of site showing total unreclaimed disturbance

Technical Revision form

CC: Uwe Lubjuhn, CEMEX, Inc.  
Scott Harcus, CEMEX, Inc.  
Robin Bay, Habitat Management, Inc.  
Michael Cunningham, DRMS

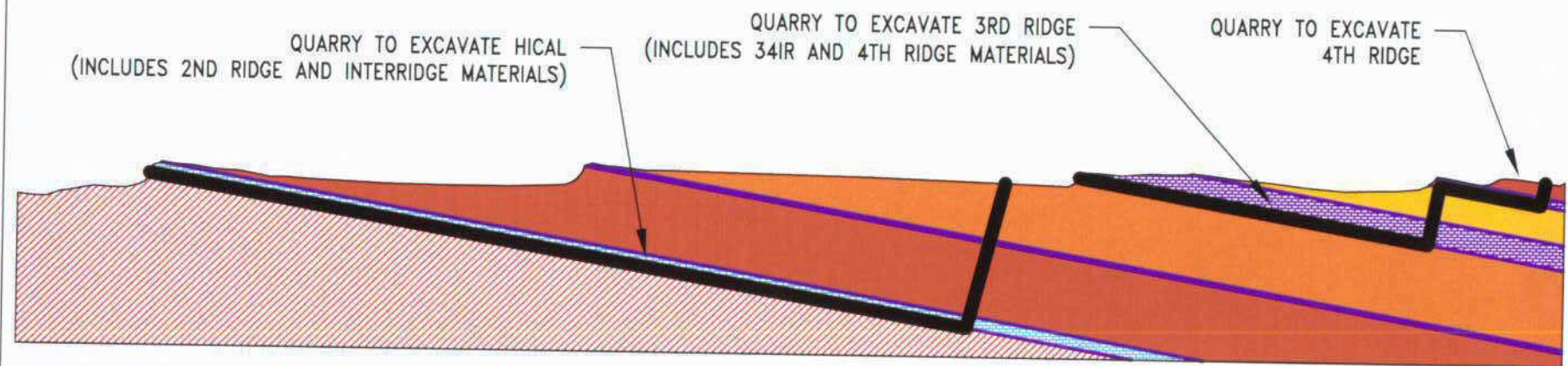

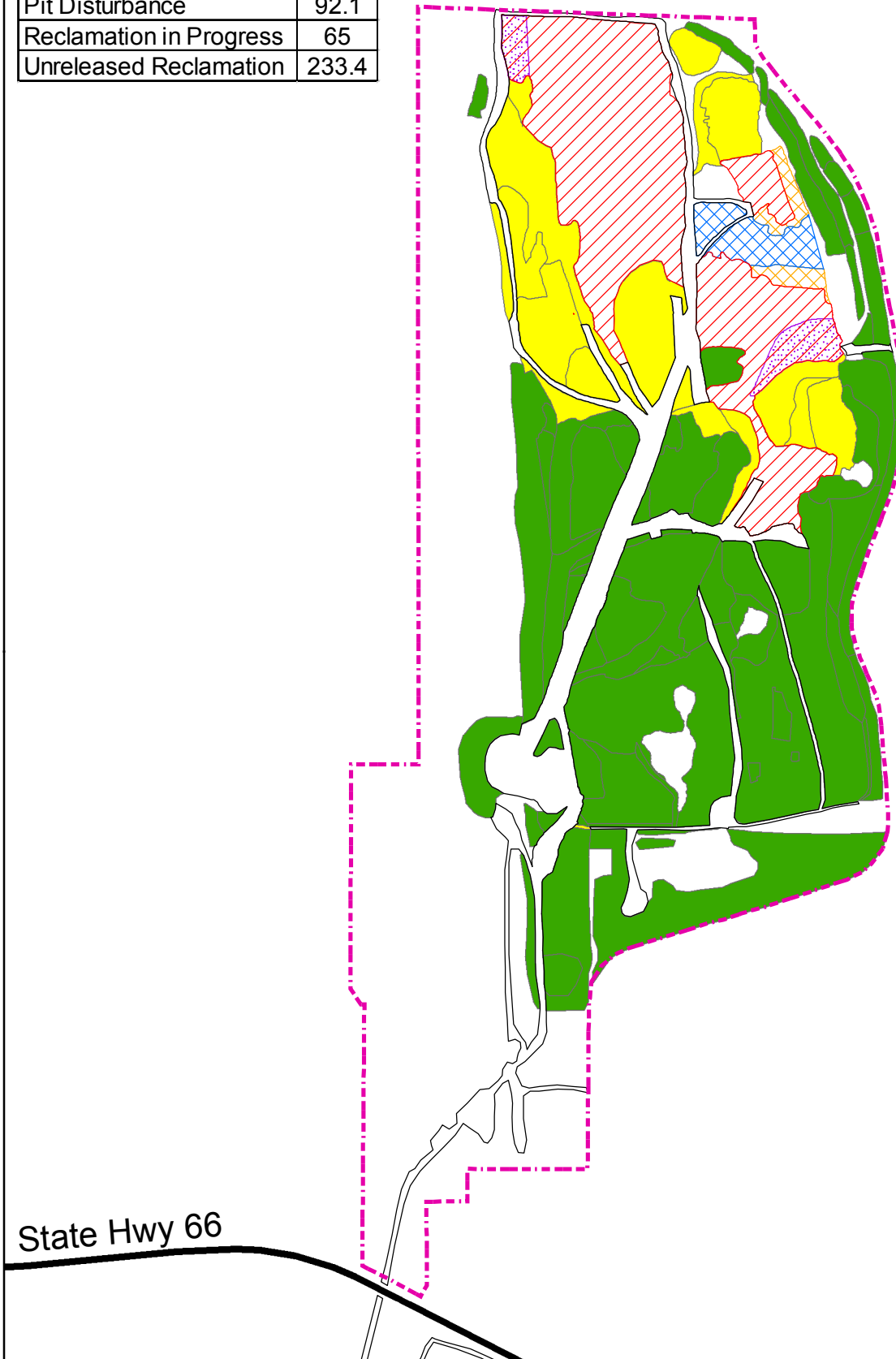


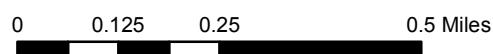
FIGURE 4: TYPICAL CROSS SECTION OF QUARRY CONFIGURATION AND ROCK UNITS TO BE MINED

PREPARED BY:		APPLICANT NAME:		PROJECT:			
 <b>BANKS AND GESSO, LLC.</b> 720 KIPLING ST., SUITE 117 LAKEWOOD, COLORADO 80215 (303) 274-4277		<b>CEMEX</b> 5134 UTE HIGHWAY P.O. BOX 529 LYONS, CO 80540 303-823-2109		<b>DOWE FLATS MINE</b> <b>M-1993-041 TR 02</b> BOULDER COUNTY COLORADO			
JOB NO	DATE	SCALE	DRAWN BY	DESIGNED BY	APPROVAL	REV	SHEET
09008	5/22/09	NO SCALE					

Area	Acres
Pit Disturbance	92.1
Reclamation in Progress	65
Unreleased Reclamation	233.4



Dowe Flats Quarry Permit Boundary	Unreleased Reclamation
Pit Disturbance Boundary	Reclamation in Progress
2018-2019 New Mining Disturbance	Anticipated Reclamation 2019
Anticipated 2019 Mining Disturbance	



## Dowe Flats 2019 DRMS Report

Permit #M-1993-041

### Map 1: Disturbance & Reclamation Areas

Prepared By:



Drawn By: RFB

Approved By: CC

Mapped: 8/27/2019

Drawn: 8/29/2019

**RULE 6:**        **PERMIT APPLICATION EXHIBIT REQUIREMENTS**

**6.1        REQUIREMENTS FOR SPECIFIC OPERATIONS**

**6.1.1     General Provisions**

This Rule provides for the specification of Exhibits required to be submitted along with each type of Permit application.

**6.1.2     110, 110(6) Limited Impact, 111 Special Operations**

These operations shall provide all the Exhibits, as described in Rule 6.3. Rule 6.5 (Geotechnical Stability Exhibit) may also be required on a case-by-case basis.

**6.1.3     112 Reclamation Permit Operations**

These operations shall provide all the Exhibits, as described in Rule 6.4. Rule 6.5 (Geotechnical Stability Exhibit) may also be required on a case-by-case basis.

**6.2        GENERAL REQUIREMENTS OF EXHIBITS**

**6.2.1     General Requirements**

- (1)        This Rule provides for the guidelines for, and information requirements of, each Exhibit required to be submitted with the permit application, as specified according to Rule 6.1.
- (2)        Maps and Exhibits  
             Maps, except the index map, must conform to the following criteria:
  - (a)        show name of Applicant;
  - (b)        must be prepared and signed by a registered land surveyor, professional engineer, or other qualified person;
  - (c)        give date prepared;
  - (d)        identify and outline the area which corresponds with the application;
  - (e)        with the exception of the map of the affected lands required in Section 34-32.5-112(2)(d), C.R.S. 1984, as amended, shall be prepared at a scale that is appropriate to clearly show all elements that are required to be delineated by the Act and these Rules. The acceptable range of map scales shall not be larger than 1 inch = 50 feet nor smaller than 1 inch = 660 feet. Also, that a map scale, appropriate legend, map title, date and a north arrow shall be included.

110  
112

- (c) where such structure is a utility, the applicant may supply a notarized letter, on utility letterhead, from the owner(s) of the utility that the mining and reclamation activities, as proposed, will have "no negative effect" on their utility.

112

#### **6.4 SPECIFIC EXHIBIT REQUIREMENTS - 112 RECLAMATION OPERATION**

##### **6.4.1 EXHIBIT A - Legal Description**

- (1) The legal description must identify the affected land, specify affected areas and be adequate to field locate the property. Description shall be by (a), township, range, and section, to at least the nearest quarter-quarter section and (b), location of the main entrance to the site reported as latitude and longitude, or the Universal Transverse Mercator (UTM) Grid as determined from a USGS topographic map. A metes and bounds survey description is acceptable in lieu of township, range, and section. Where available, the street address or lot number(s) shall be given. This information may be available from the County Assessor's office or U.S. Geological Survey (USGS) maps.
- (2) The main entrance to the mine site shall be located based on a USGS topographic map showing latitude and longitude or Universal Transverse Mercator (UTM). The operator will need to specify coordinates of latitude and longitude in degrees, minutes and seconds or in decimal degrees to an accuracy of at least five (5) decimal places (e.g., latitude 37.12345 N, longitude 104.45678 W). For UTM, the operator will need to specify North American Datum (NAD) 1927, NAD 1983, or WGS 84, and the applicable zone, measured in meters.

##### **6.4.2 EXHIBIT B - Index Map**

An index map showing the regional location of the affected land and all roads and other access to the area. A standard U.S. Geological Survey topographic quadrangle or equivalent is acceptable. Scale criteria need not be followed for this map.

##### **6.4.3 EXHIBIT C - Pre-mining and Mining Plan Map(s) of Affected Lands**

One or more maps may be necessary to legibly portray the following information:

- (a) all adjoining surface owners of record;
- (b) the name and location of all creeks, roads, buildings, oil and gas wells and lines, and power and communication lines on the area of affected land and within two hundred (200) feet of all boundaries of such area;
- (c) the existing topography of the area with contour lines of sufficient detail to portray the direction and rate of slope of the affected land;
- (d) the total area to be involved in the operation, including the area to be mined and the area of affected lands (see definition of "Affected Land");
- (e) the type of present vegetation covering the affected lands; and

- (f) in conjunction with Exhibit G - Water Information, Rule 6.4.7, if required by the Office, further water resources information will be presented on a map in this section.
- (g) Show the owner's name, type of structures, and location of all significant, valuable, and permanent man-made structures contained on the area of affected land and within two hundred (200) feet of the affected land.
- (h) In conjunction with Exhibit I - Soils Information, Rule 6.4.9, soils information may be presented on a map in this section.
- (i) Aerial photos, if available, may be included in this section.

112(3)(c)  
115(4)(e)

#### **6.4.4 EXHIBIT D - Mining Plan**

The mining plan shall supply the following information, correlated with the affected lands, map(s) and timetables:

- (a) description of the method(s) of mining to be employed in each stage of the operation as related to any surface disturbance on affected lands;
- (b) earthmoving;
- (c) all water diversions and impoundments; and
- (d) the size of area(s) to be worked at any one time.
- (e) An approximate timetable to describe the mining operation. The timetable is for the purpose of establishing the relationship between mining and reclamation during the different phases of a mining operation. An Operator/Applicant shall not be required to meet specific dates for initiation, or completion of mining in a phase as may be identified in the timetable. This does not exempt an Operator/Applicant from complying with the performance standards of Rule 3.1. If the operation is intended to be an intermittent operation as defined in Section 34-32.5-103(11)(b), C.R.S., the Applicant should include in this exhibit a statement that conforms to the provisions of Section 34-32.5-103(11)(b), C.R.S. Such timetable should include:
  - (i) an estimate of the periods of time which will be required for the various stages or phases of the operation;
  - (ii) a description of the size and location of each area to be worked during each phase; and
  - (iii) outlining the sequence in which each stage or phase of the operation will be carried out.

(Timetables need not be separate and distinct from the mining plan, but may be incorporated therein.)

- (v) Topsoiling - specify anticipated minimum depth or range of depths for those areas where topsoil will be replaced.

**6.4.6 EXHIBIT F - Reclamation Plan Map**

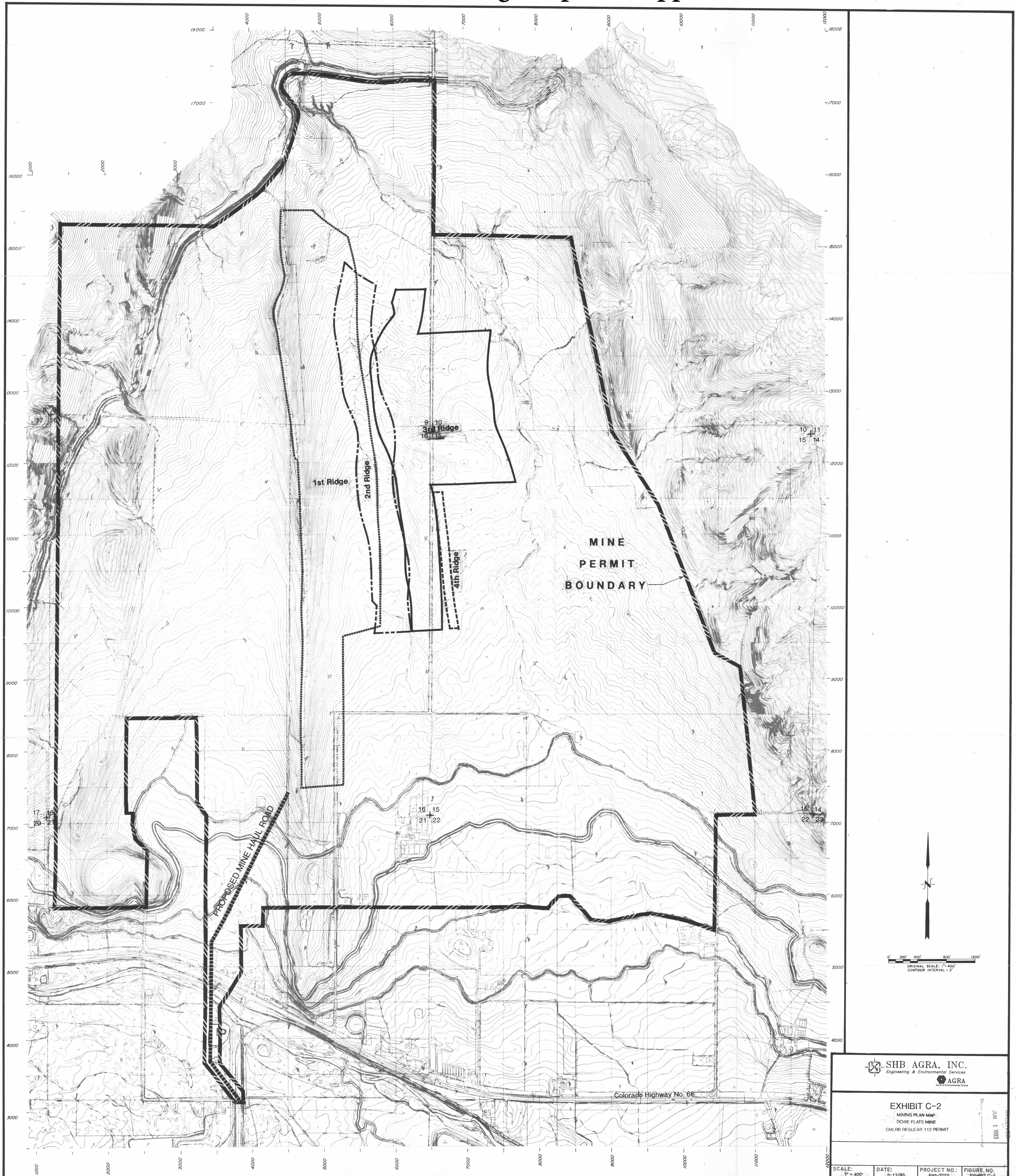
The map(s) of the proposed affected land, by all phases of the total scope of the mining operation, shall indicate the following:

- (a) The expected physical appearance of the area of the affected land, correlated to the proposed mining and reclamation timetables. The map must show proposed topography of the area with contour lines of sufficient detail to portray the direction and rate of slope of all reclaimed lands; and
- (b) Portrayal of the proposed final land use for each portion of the affected lands.

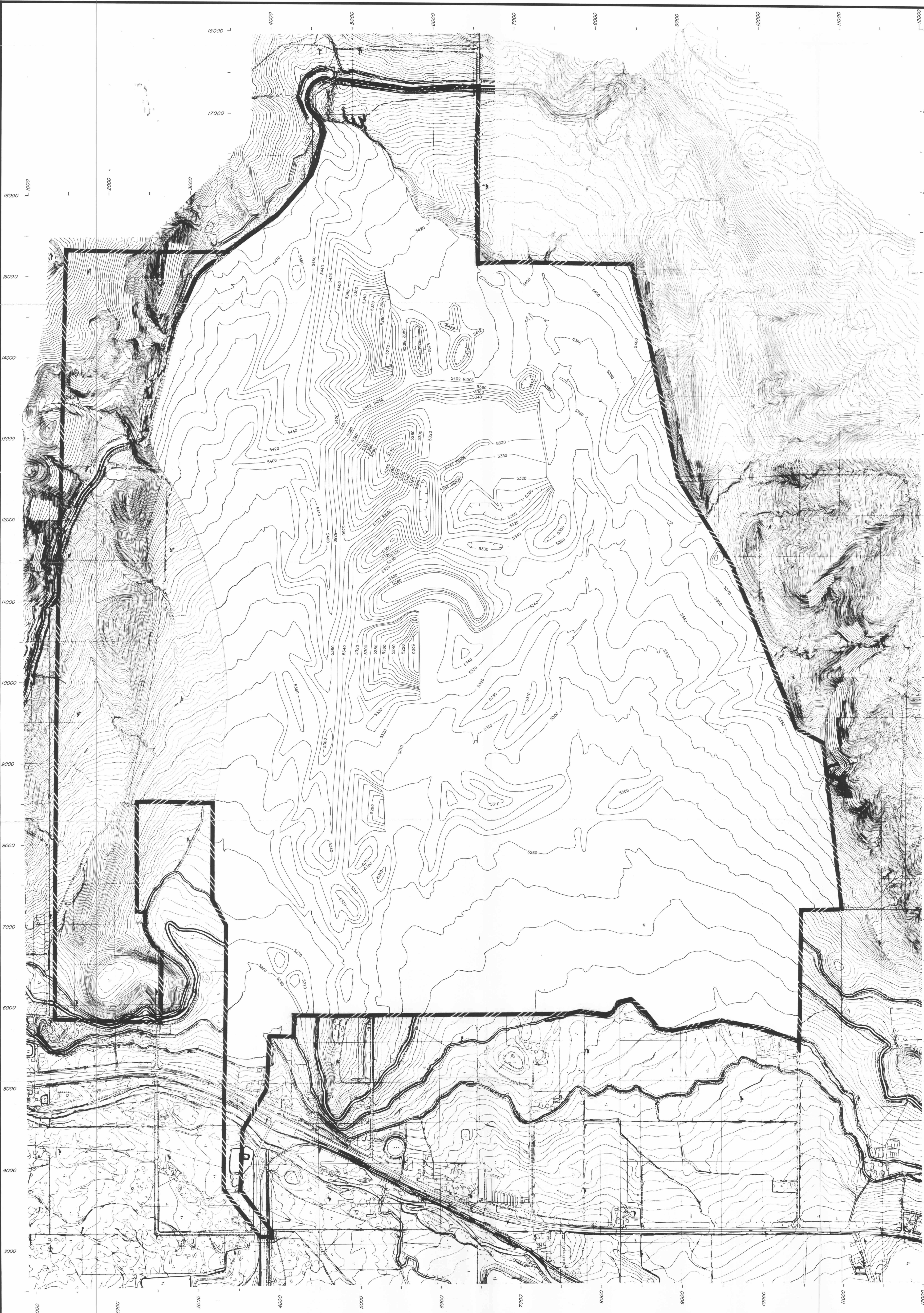
**6.4.7 EXHIBIT G - Water Information**

- (1) If the operation is not expected to directly affect surface or groundwater systems, a statement and sufficient demonstration of that expectation shall be submitted.
- (2) If the operation is expected to directly affect surface or groundwater systems, the Operator/Applicant shall:
  - (a) Locate on the map (in Exhibit C) tributary water courses, wells, springs, stock water ponds, reservoirs, and ditches on the affected land and on adjacent lands where such structures may be affected by the proposed mining operations;
  - (b) Identify all known aquifers; and
  - (c) Submit a brief statement or plan showing how water from de-watering operations or from runoff from disturbed areas, piled material and operating surfaces will be managed to protect against pollution of either surface or groundwater (and, where applicable, control pollution in a manner that is consistent with water quality discharge permits), both during and after the operation.
- (3) The Operator/Applicant shall provide an estimate of the project water requirements including flow rates and annual volumes for the development, mining and reclamation phases of the project.
- (4) The Operator/Applicant shall indicate the projected amount from each of the sources of water to supply the project water requirements for the mining operation and reclamation.
- (5) The Operator/Applicant shall affirmatively state that the Operator/Applicant has acquired (or has applied for) a National Pollutant Discharge Elimination System (NPDES) permit from the Water Quality Control Division at the Colorado Department of Health and Environment, if necessary.









0' 200' 400' 800' 1200'

ORIGINAL SCALE: 1" = 400'

CONTOUR INTERVAL: 2'

**SHB AGRA, INC.**  
Engineering & Environmental Services  
 **AGRA**  
Earth & Environmental Group

**EXHIBIT F**  
**RECLAMATION PLAN MAP**  
(APPROXIMATE FINAL CONTOURS)  
**DOWE FLATS MINE**  
**CMLRB REGULAR 112 PERMIT**

RECEIVED  
JUN 1 1993  
Division of Environmental & Cultural Resources

SCALE: 1" = 400'	DATE: 5/19/93	PROJECT NO.: E92-7075	FIGURE NO. EXH F
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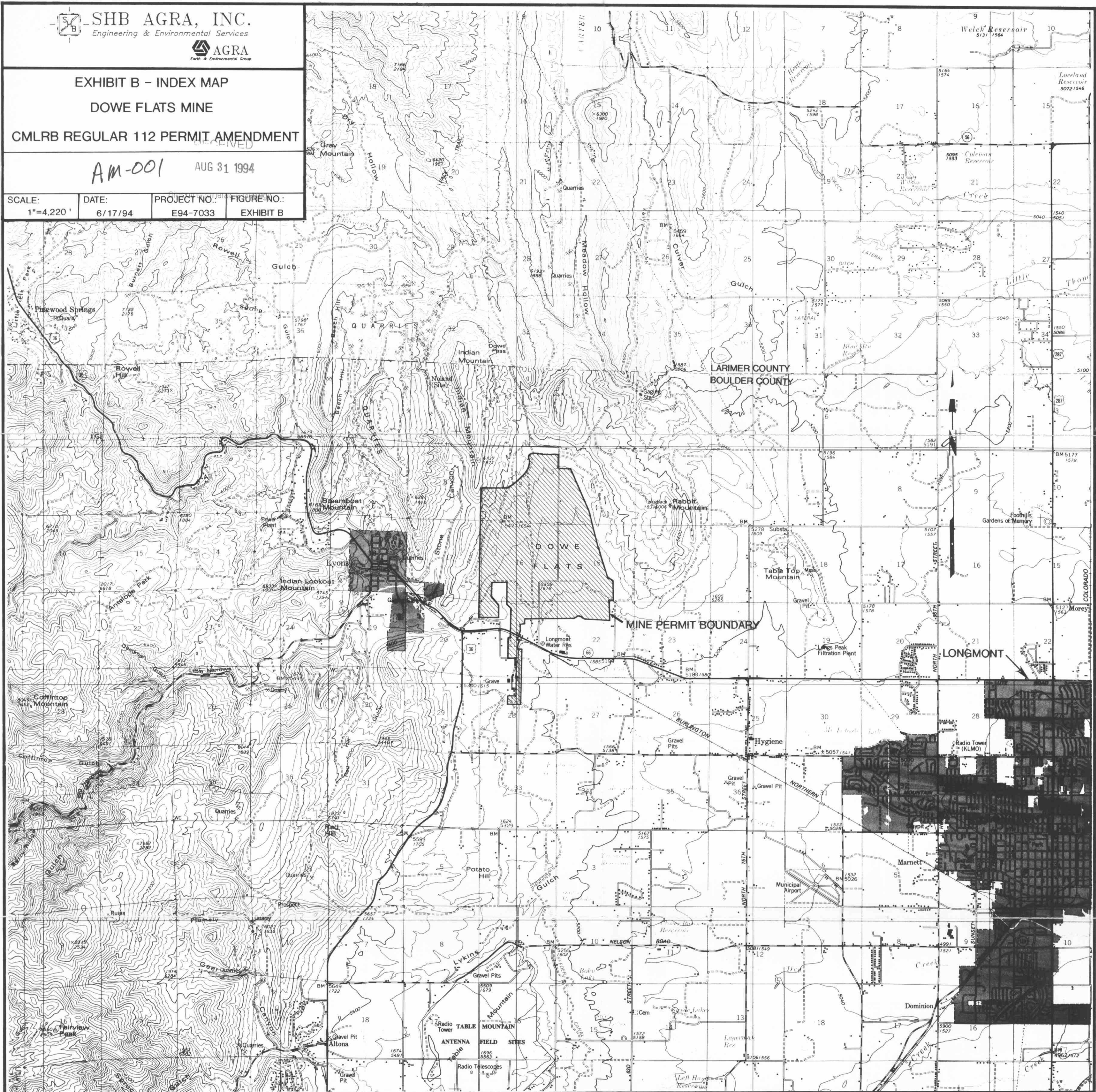
## EXHIBIT B - INDEX MAP

DOWE FLATS MINE

CMLRB REGULAR 112 PERMIT AMENDMENT

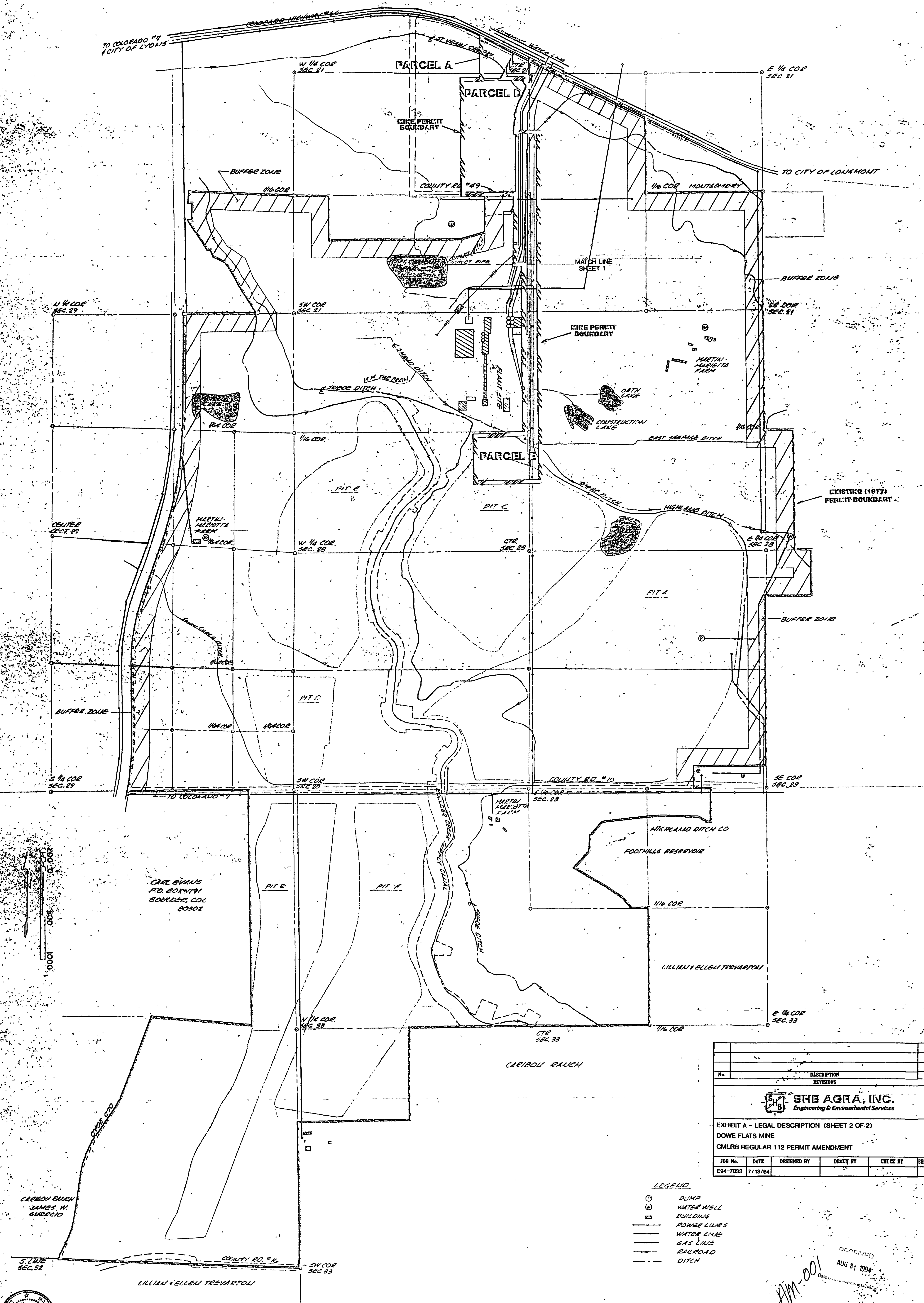
AM-001 AUG 31 1994

SCALE: 1"=4,220'	DATE: 6/17/94	PROJECT NO.: E94-7033	FIGURE NO.: EXHIBIT B
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Received: 8/31/1994 (AM-1)



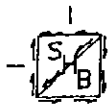
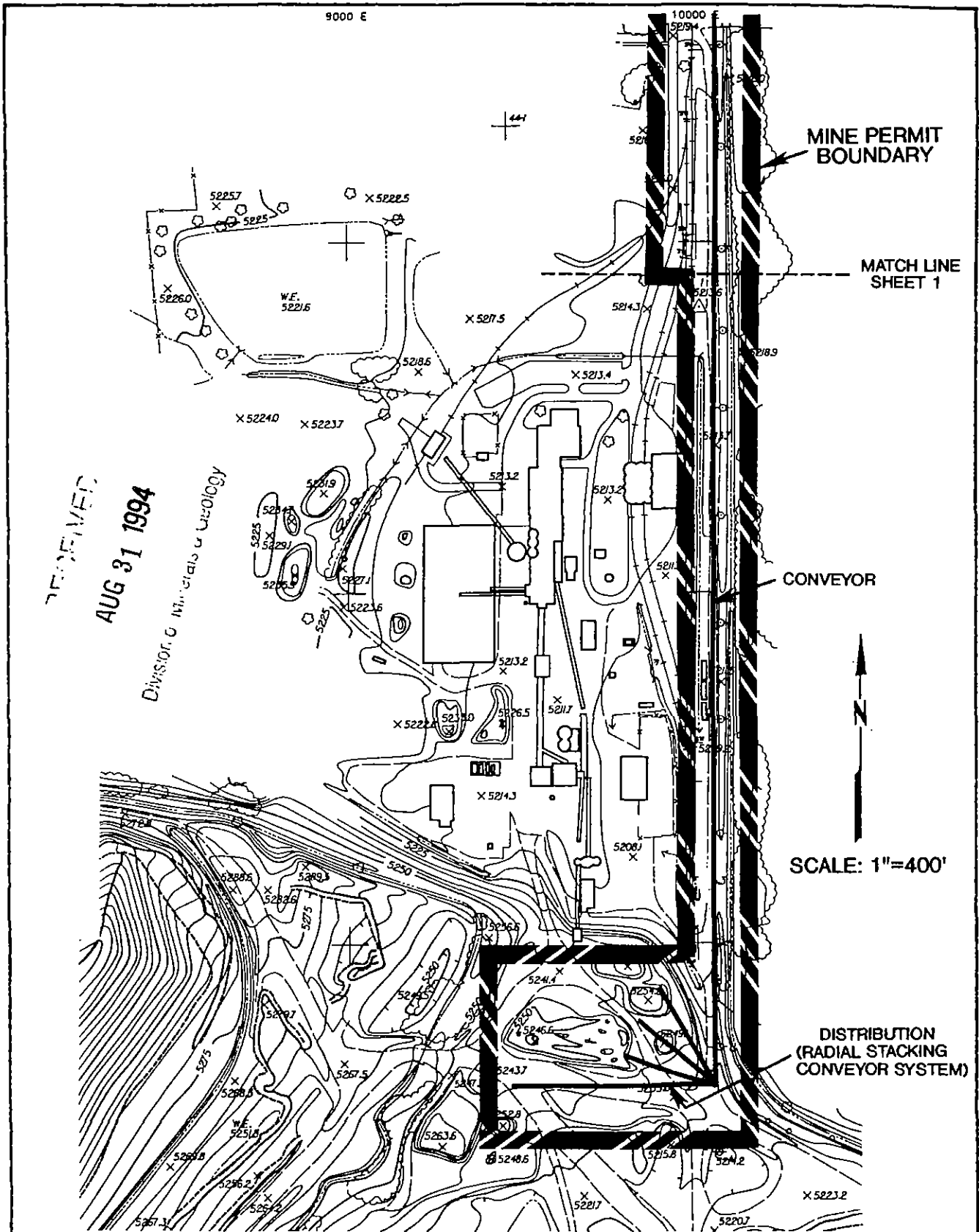
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99	AS SHOWN	7/13/84
100	AS SHOWN	7/13/84

No.		DESCRIPTION		DATE	
REVISIONS					
SHE AGRA, INC. Engineering & Environmental Services					
EXHIBIT A - LEGAL DESCRIPTION (SHEET 2 OF 2)					
DOWE FLATS MINE					
CMLRB REGULAR 112 PERMIT AMENDMENT					
JOB No.	DATE	DESIGNED BY	DRAWN BY	CHECK BY	SHEET No.
E04-7033	7/13/84				2

- LEGEND
- ① DUMP
  - ② WATER WELL
  - ③ BUILDING
  - POWER LINES
  - WATER LINE
  - GAS LINE
  - RAILROAD
  - DITCH

RECEIVED  
SEP 14 1977  
RECLAMATION SECTION  
Colo. Dept. of Natural Resources

8/31/1994 (AM-1)



**SHB AGRA, INC.**  
*Engineering & Environmental Services*



**AGRA**  
Environmental Group

SHB AGRA PROJECT NO. E94-7033

EXHIBIT C-2 (SHEET 2)

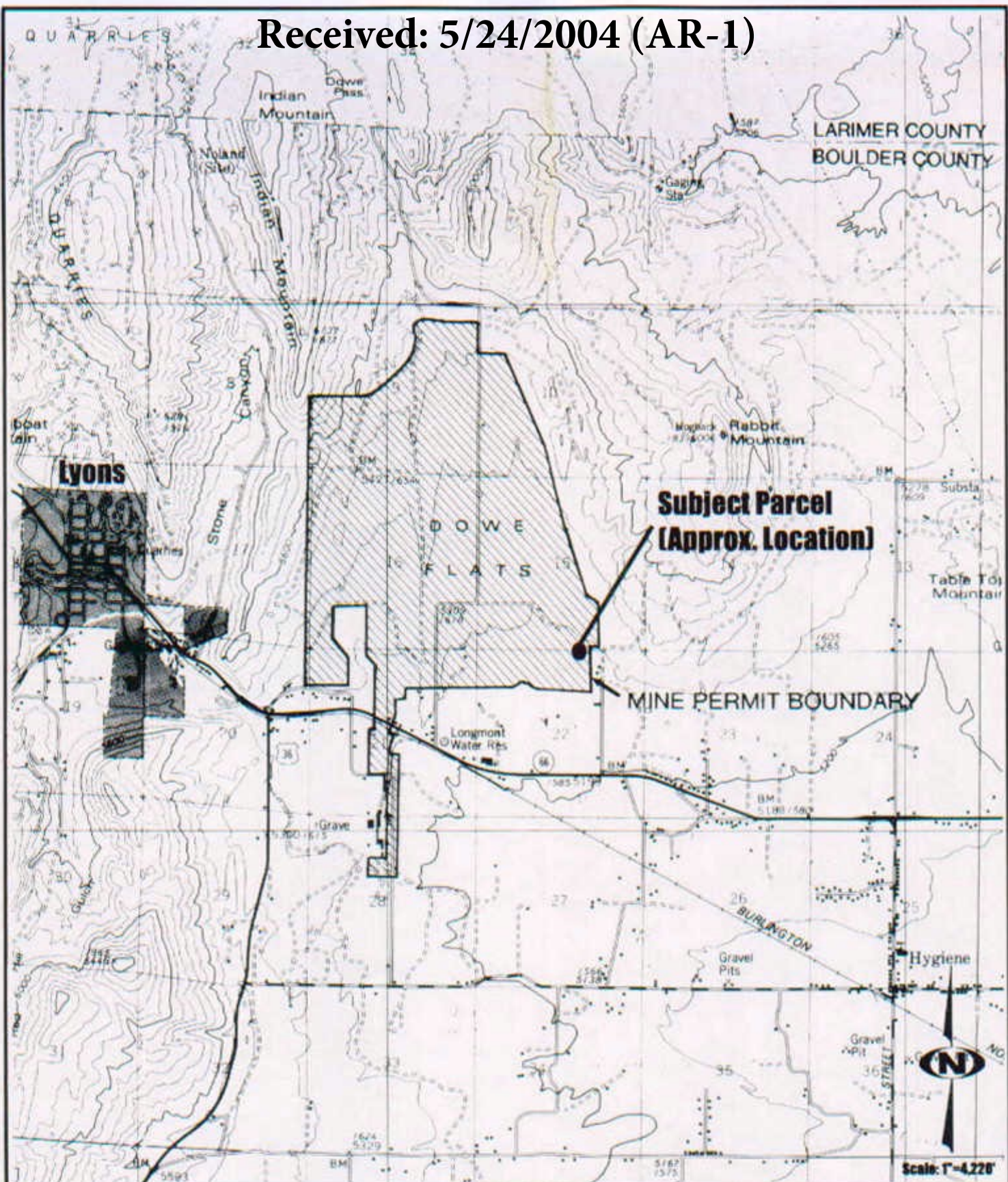
DOWE FLATS MINE

## MINE PLAN MAP

**CMLRB REGULAR 112 PERMIT AMENDMENT**



Received: 5/24/2004 (AR-1)



**Banks & Gesso, LLC**

720 Kipling, Suite 117  
Lakewood, CO 80215  
banksandgesso.com

**Attachment A: Vicinity Map**

**Cemex Dowe Flats Mine  
DMG #M-1993-041 Acreage Reduction**

**5/19/04**

**04020-412**





PILES  
1-3 WASTE ROCK  
1-4 TOPSOIL  
484,351 CU. YD.

DMG Permit Boundary

Subject Parcel

13.07 Acres

No.	DESCRIPTION	DATE			
FILE:YR1-3.DWG	REVISIONS:				
<div> <b>SHB AGRA, INC.</b> <i>Engineering &amp; Environmental Services</i></div> <div> <b>AGRA</b> <small>AGRICULTURAL &amp; GROUNDWATER RESOURCES</small></div>					
EXHIBIT C-2 (SHEET 1 OF 2) MINE PLAN MAP DOWE FLATS MINE CMLRB REGULAR 112 PERMIT AMENDMENT					
JOB No.	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	SHEET No.
E94-7033	7/20/94	PB	LNC	DVB	1 of 2



**Banks & Gesso, LLC**  
720 Kipling, Suite 117  
Lakewood, CO 80215  
banksandgesso.com

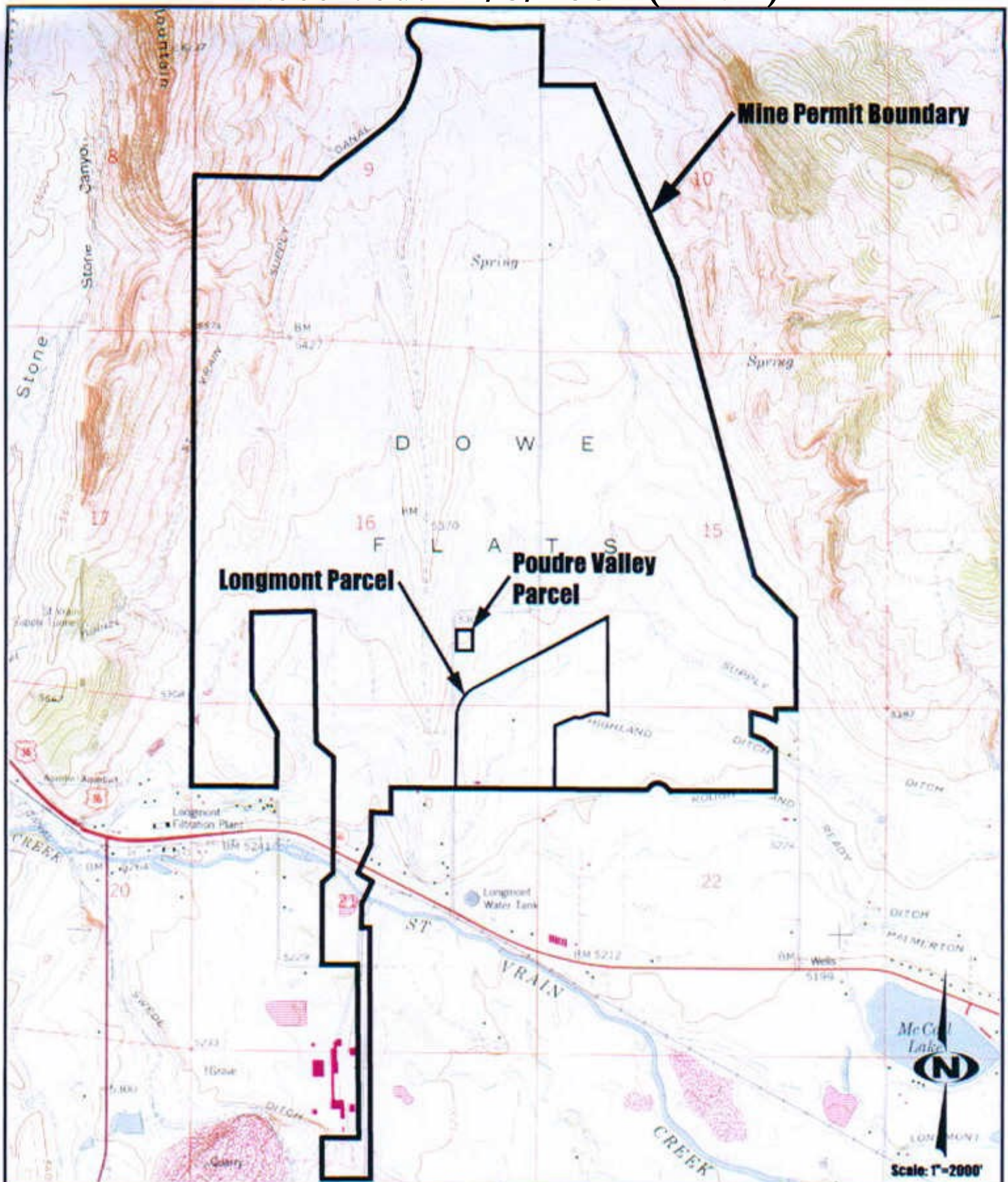
**Attachment B: Parcel Location**

**Cemex Dowe Flats Mine**  
**DMG #M-1993-041 Acreage Reduction**

5/19/04

04020-412





**Banks & Gesso, LLC**

720 Kipling, Suite 117  
Lakewood, CO 80215  
banksandgesso.com

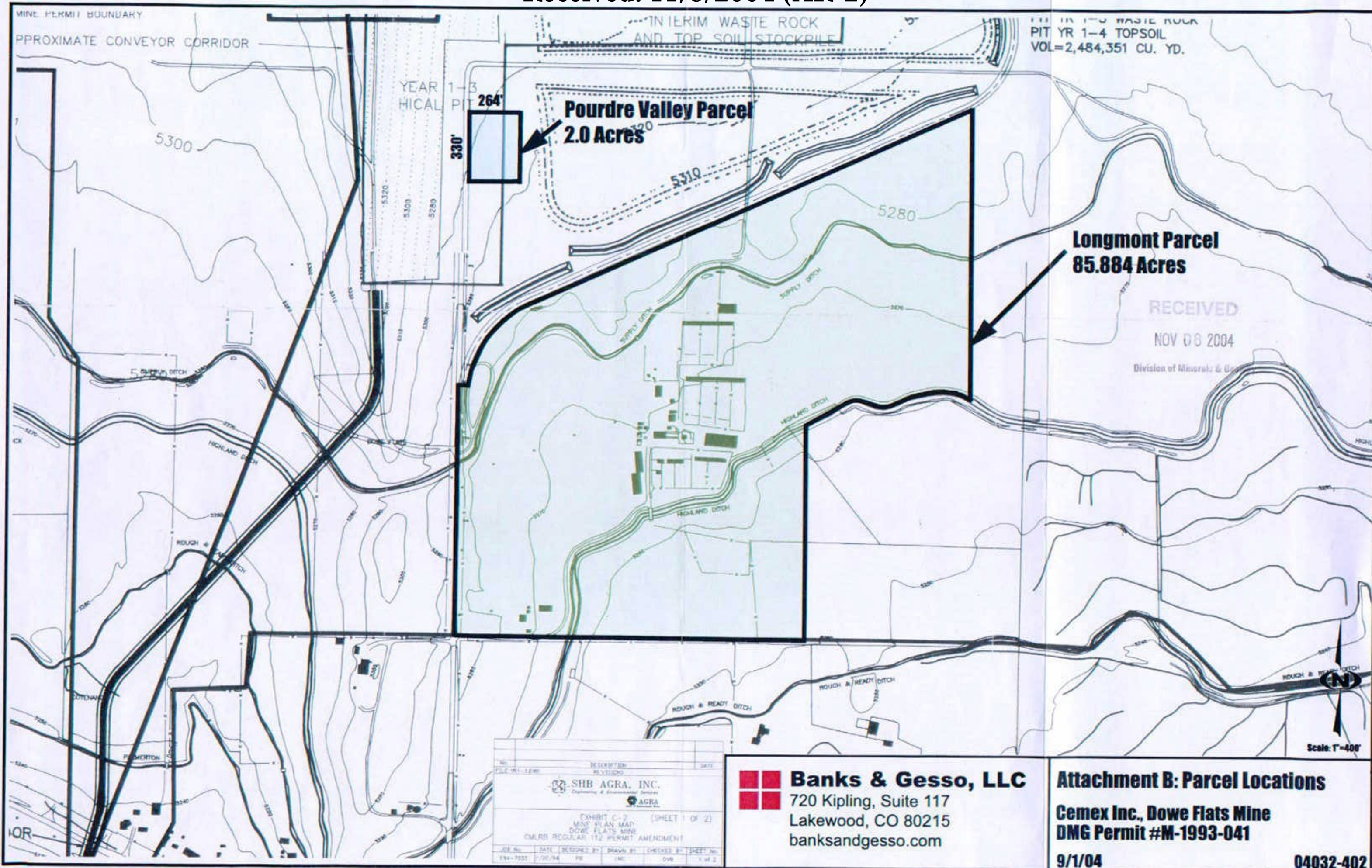
**Attachment A: Vicinity Map**

**Cemex, Inc., Dowe Flats Mine  
DMG #M-1993-041**

**9/21/04**

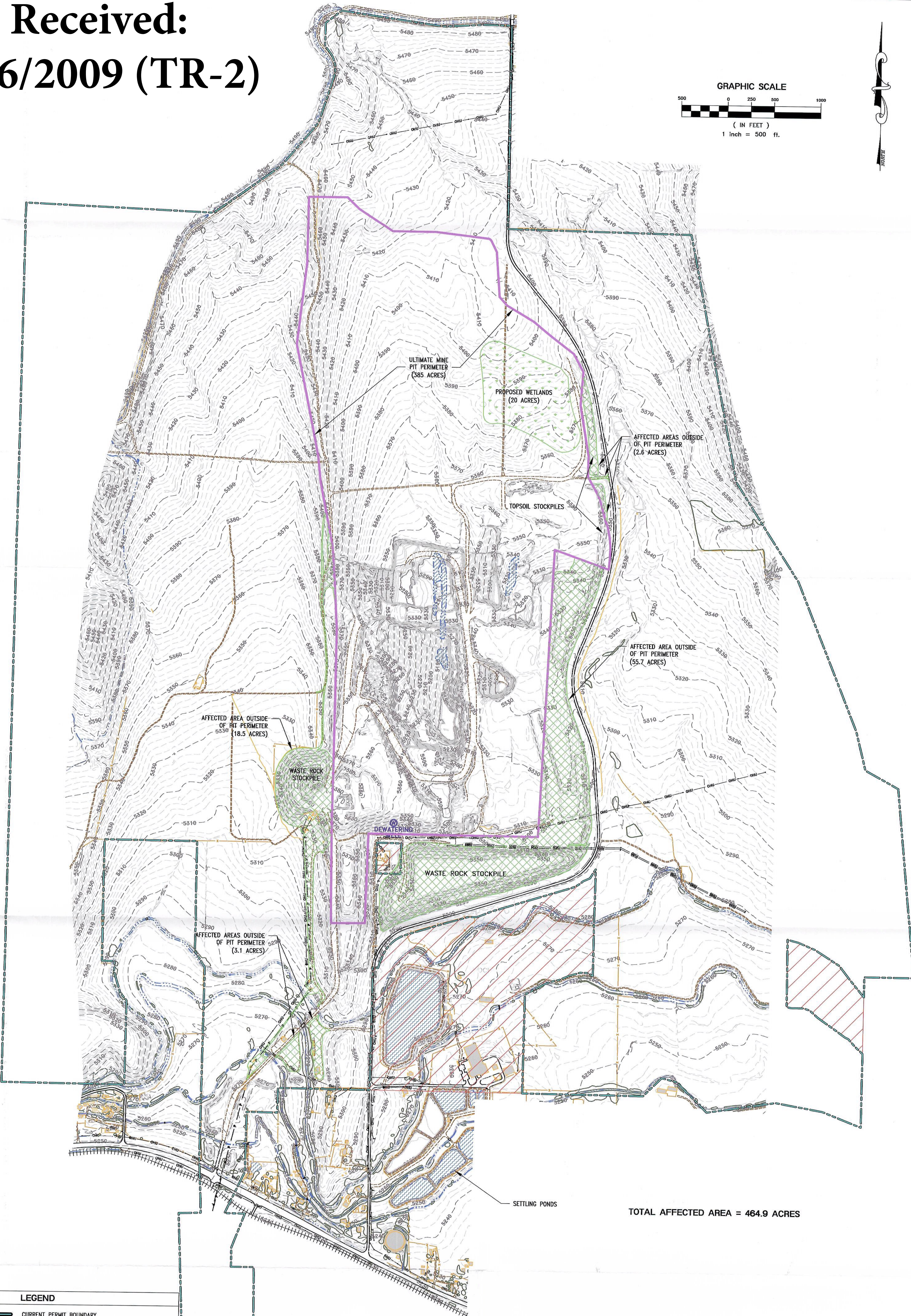
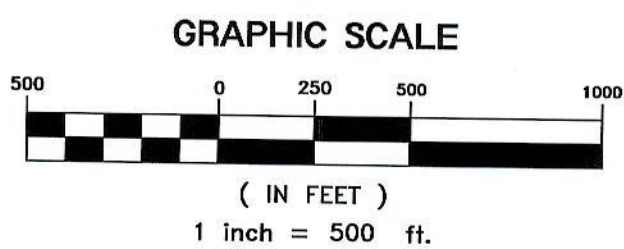
**04032-402**







Received:  
5/26/2009 (TR-2)




TOTAL AFFECTED AREA = 464.9 ACRES

- LEGEND**
- CURRENT PERMIT BOUNDARY
  - ULTIMATE MINE PIT PERIMETER (1994)
  - ACREAGE REDUCTIONS
  - PAVED ROAD
  - UNPAVED ROAD
  - RAILROAD
  - FENCE
  - DITCH / WATERWAY
  - CULVERT
  - OVERHEAD UTILITY
  - PIPE
  - EXISTING INDEX CONTOUR (2005 10')
  - EXISTING INTERMEDIATE CONTOUR (2005 2')
  - BRUSH LINE
  - TREE LINE
  - WETLANDS
  - AFFECTED AREAS OUTSIDE PIT PERIMETER (79.9 ACRES)
  - EXISTING STRUCTURE

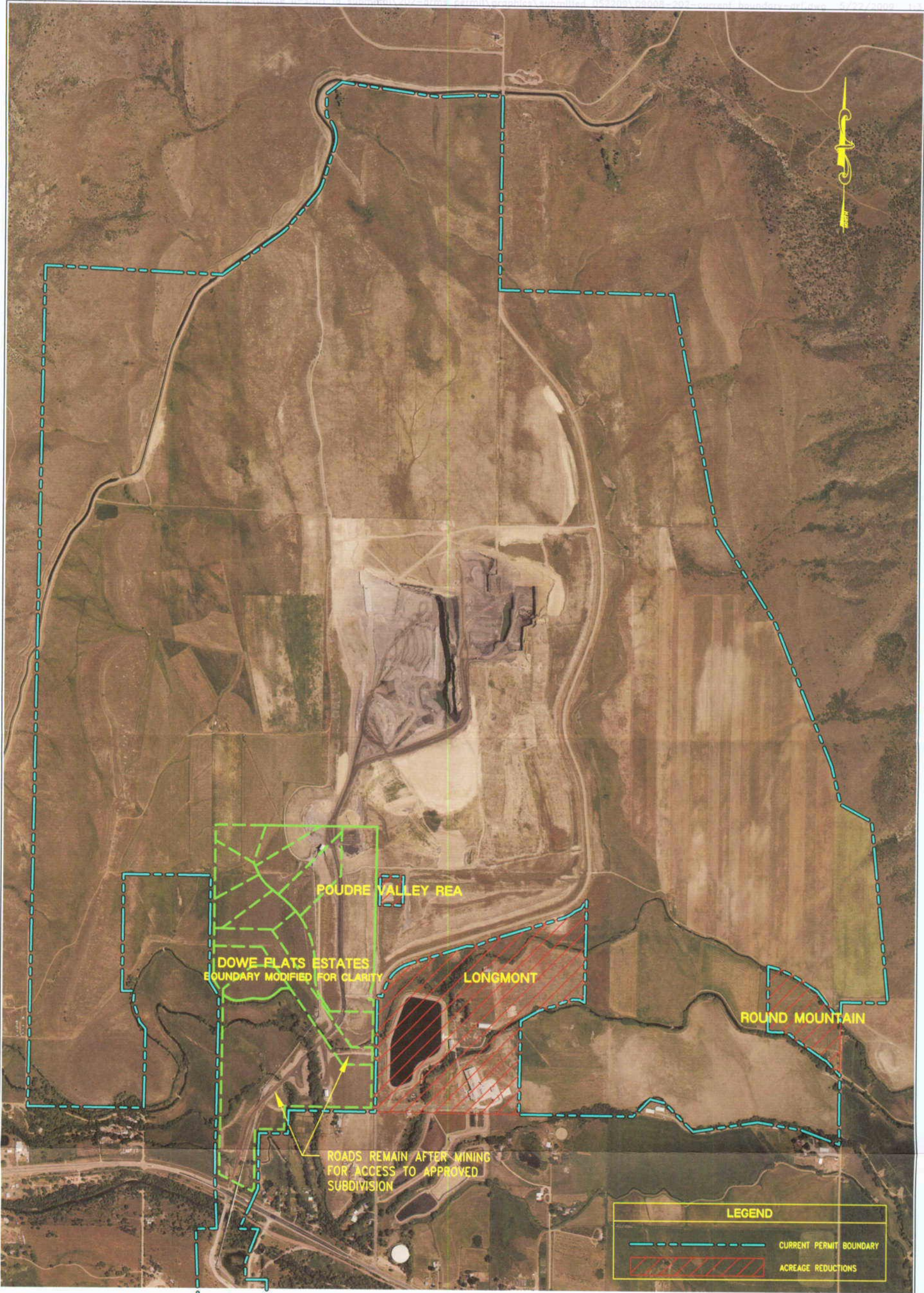
**REFERENCES:**  
TOPOGRAPHIC FEATURES SUCH AS CONTOURS, STRUCTURES AND ROADS TAKEN FROM A MAP BY KUCERA INTERNATIONAL INC. W.O.#58809. DATA WAS COMPILED TO NATIONAL MAP ACCURACY STANDARDS USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY TAKEN 11-16-05.  
1994 PERMIT BOUNDARY AND ULTIMATE MINE PERIMETER TAKEN FROM A 1994 PERMIT AMMENDMENT MINE PLAN MAP BY SHB AGRA, INC. DATED 7/20/94.

Permit # M-1993-041 Confidential? N  
Class Revision Type Seq TR-02  
MV# 5-26-09 Inspection Date  
Doc Date (if no date stamp) 5-26-09  
Doc Name Fig. 3 - TOTAL AFFECTED AREA  
From DRMS/Other CEMEX  
To DRMS/Other  
Recipients

FIGURE 3: TOTAL AFFECTED AREA - LIFE OF MINE

PREPARED BY:		APPLICANT:		PROJECT:			
 <b>BANKS AND GESSO, L.L.C.</b> 720 KIPLING ST., SUITE 117 LAKEWOOD, COLORADO 80215 (303) 274-4277		<b>CEMEX</b> 5134 UTE HIGHWAY P.O. BOX 529 LYONS, CO 80540 303-823-2109		<b>DOWE FLATS MINE</b> <b>M-1993-041 TR 02</b> BOULDER COUNTY COLORADO			
JOB NO	DATE	SCALE	DRAWN BY	DESIGNED BY	APPROVAL	REV	SHEET
09008	5/22/09	1"=500'	DRF	SK	PTB		



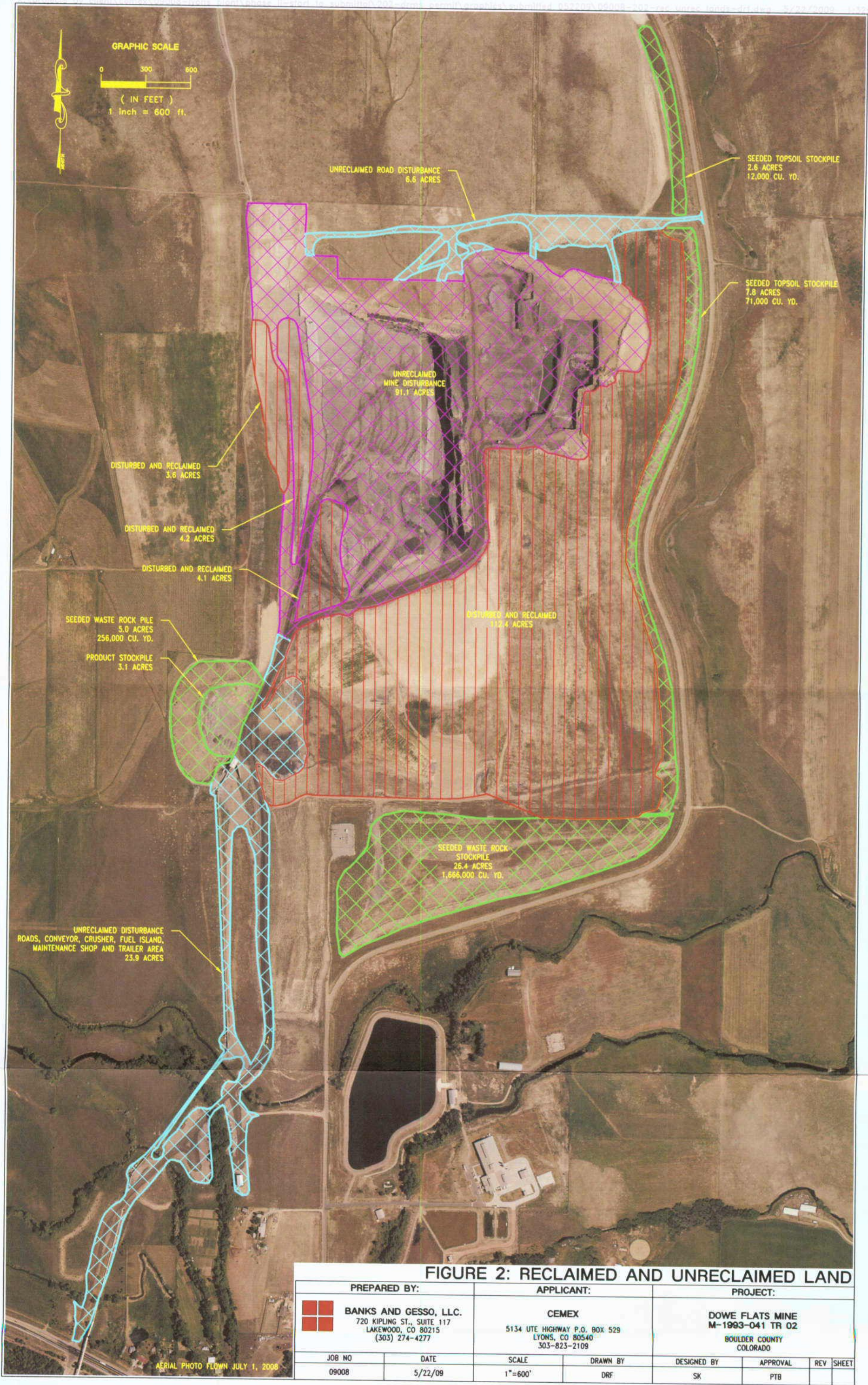


REFERENCES:  
1994 PERMIT BOUNDARY AND ULTIMATE MINE PERIMETER TAKEN FROM A 1994  
PERMIT AMMENDMENT MINE PLAN MAP BY SHB AGRA, INC. DATED 7/20/94.  
AERIAL PHOTOGRAPHY FLOWN JULY 1, 2008

FIGURE 1: CURRENT PERMIT BOUNDARY

PREPARED BY:		APPLICANT:		PROJECT:			
<div><div></div><div></div><div></div><div></div></div> <div><b>BANKS AND GESSO, LLC.</b> 720 KIPLING ST., SUITE 117 LAKEWOOD, CO 80215 (303) 274-4277</div>		<div><b>CEMEX</b> 5134 UTE HIGHWAY P.O. BOX 529 LYONS, CO 80540 303-823-2109</div>		<div><b>DOWE FLATS MINE</b> <b>M-1993-041 TR 02</b> BOULDER COUNTY COLORADO</div>			
JOB NO	DATE	SCALE	DRAWN BY	DESIGNED BY	APPROVAL	REV	SHEET
09008	5/22/09	NO SCALE	DRF	SK	PTB		

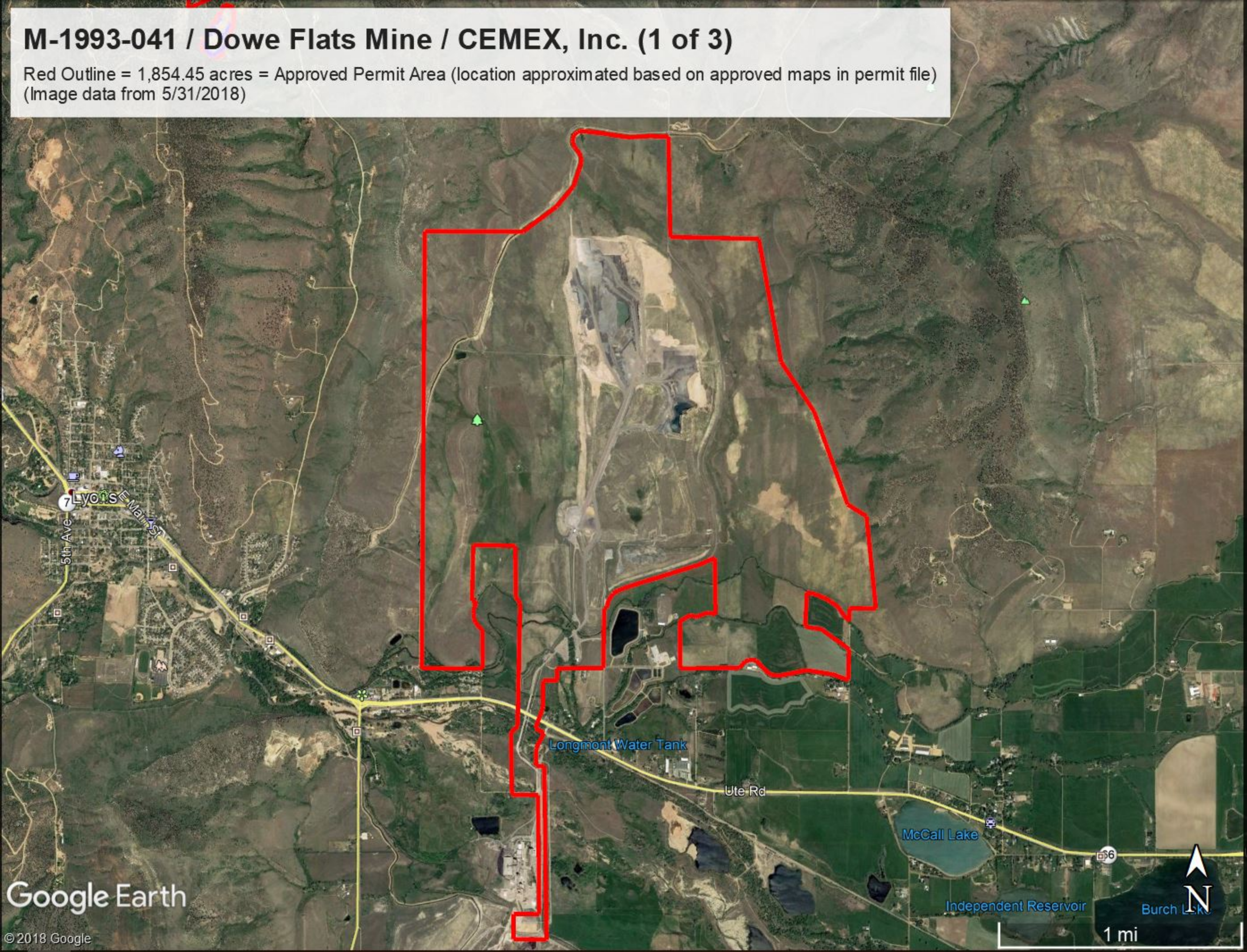






# M-1993-041 / Dowe Flats Mine / CEMEX, Inc. (1 of 3)

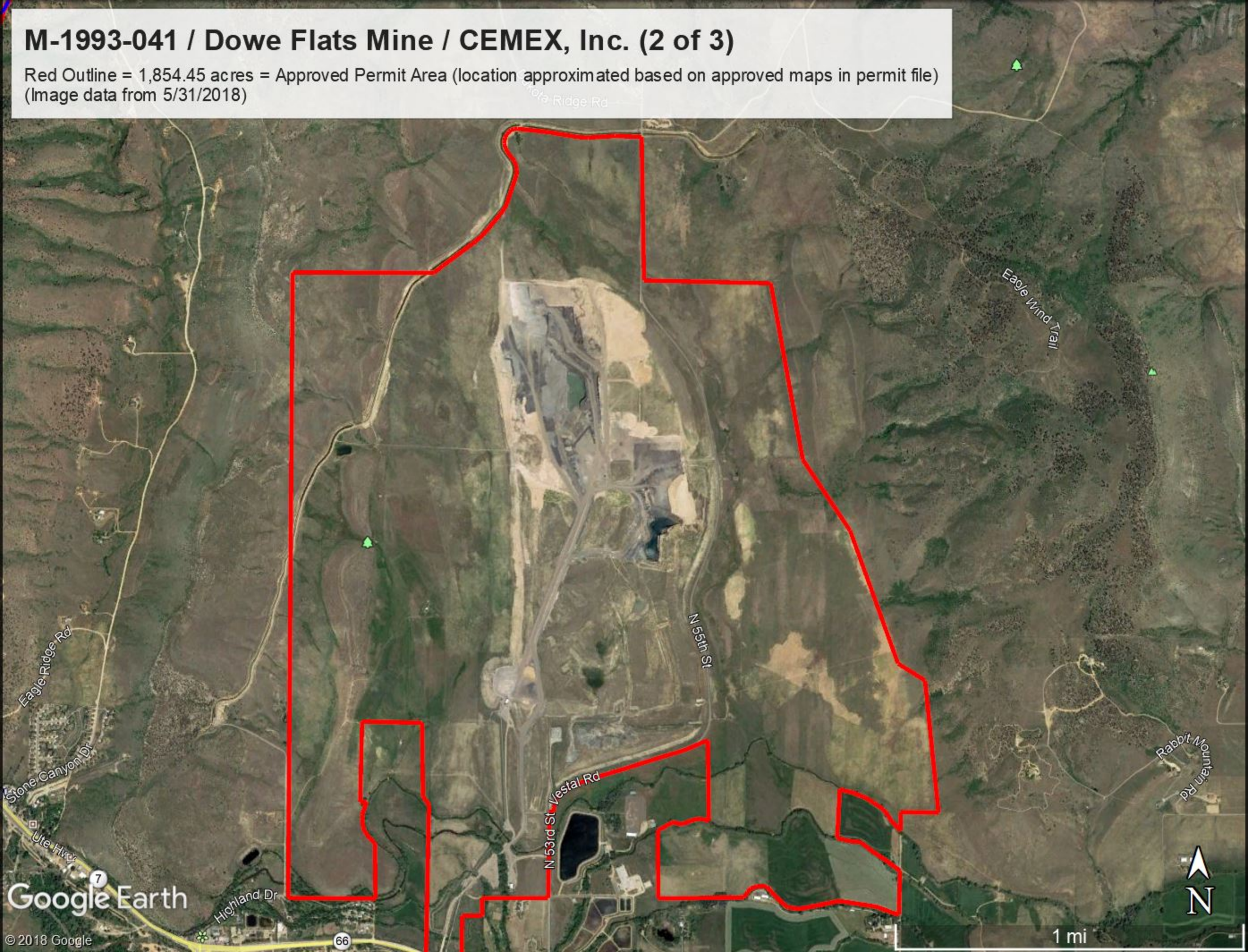
Red Outline = 1,854.45 acres = Approved Permit Area (location approximated based on approved maps in permit file)  
(Image data from 5/31/2018)





# M-1993-041 / Dowe Flats Mine / CEMEX, Inc. (2 of 3)

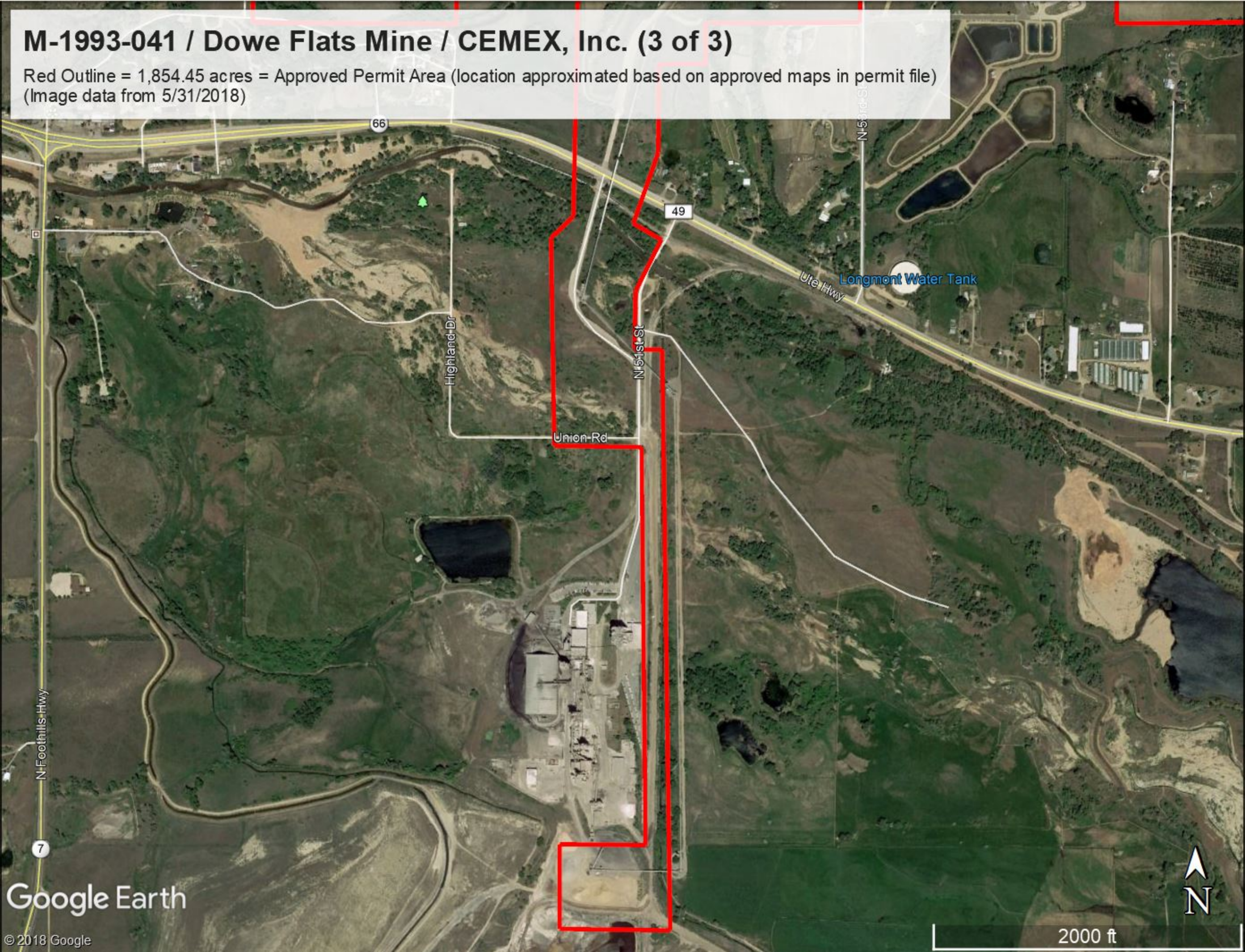
Red Outline = 1,854.45 acres = Approved Permit Area (location approximated based on approved maps in permit file)  
(Image data from 5/31/2018)





# M-1993-041 / Dowe Flats Mine / CEMEX, Inc. (3 of 3)

Red Outline = 1,854.45 acres = Approved Permit Area (location approximated based on approved maps in permit file)  
(Image data from 5/31/2018)





- (a) on any affected land being used or proposed to be used by the Operator for the deposit or disposal of refuse until after the cessation of operations productive of such refuse;
- (b) on lands proposed for future mining;
- (c) within depressed haulage roads or final cuts while such roads or final cuts are being used or made;
- (d) where permanent pools or lakes have been formed; and
- (e) on any affected land so long as the chemical and physical characteristics of the surface and immediately underlying material of such affected land are toxic, deficient in plant nutrients, or composed of sand, gravel, shale, or stone to such an extent as to seriously inhibit plant growth and such condition cannot feasibly be remedied by chemical treatment, fertilization, replacement of overburden, or like measures.

116(4)(q)(III)

116(4)(8)

- (9) Where adverse characteristics of the surface, not feasibly remedied by artificial measures, would seriously inhibit plant growth, planting may be delayed or provided on substitute acres, depending upon natural corrective processes over a ten (10) year period.

116(4)(r)

### **3.1.11 Buildings and Structures**

If the affected land is owned by a legal entity other than any local, state, or federal entity, any buildings or structures including those constructed or placed on the affected lands in conjunction with the mining operations or which are historic structures as determined by the State Historic Preservation Office may, at the option of the Operator and Landowner and with the approval of the Board, remain on the affected land after reclamation if such buildings or structures will not conflict with the post-mining land use and the structures conform to local building and zoning codes.

### **3.1.12 Signs and Markers**

- (1) At the entrance of the mine site the Operator shall post a sign, which shall be clearly visible from the access road, with a minimum size equaling one hundred and eighty-seven (187) square inches, such as eleven (11) inches in height and seventeen (17) inches in width, with appropriate font size, with the following:
  - (a) the name of the Operator and the operation name;
  - (b) a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and
  - (c) the permit number.
- (2) The boundaries of the affected area will be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries.

- (a) for Limited Impact 110 Operations and Special 111 Operations the permit boundary for the purposes of this Rule shall be considered the affected area;
  - (b) for Regular 112 Reclamation Operations the area proposed to be disturbed by mining operations for which a Financial Warranty and Performance Warranty have been posted shall be the affected area.
- (3) The Office may approve an alternative plan for identifying the boundaries of the affected land if the Operator includes such a plan in the permit application.

### **3.1.13 Spill Reporting**

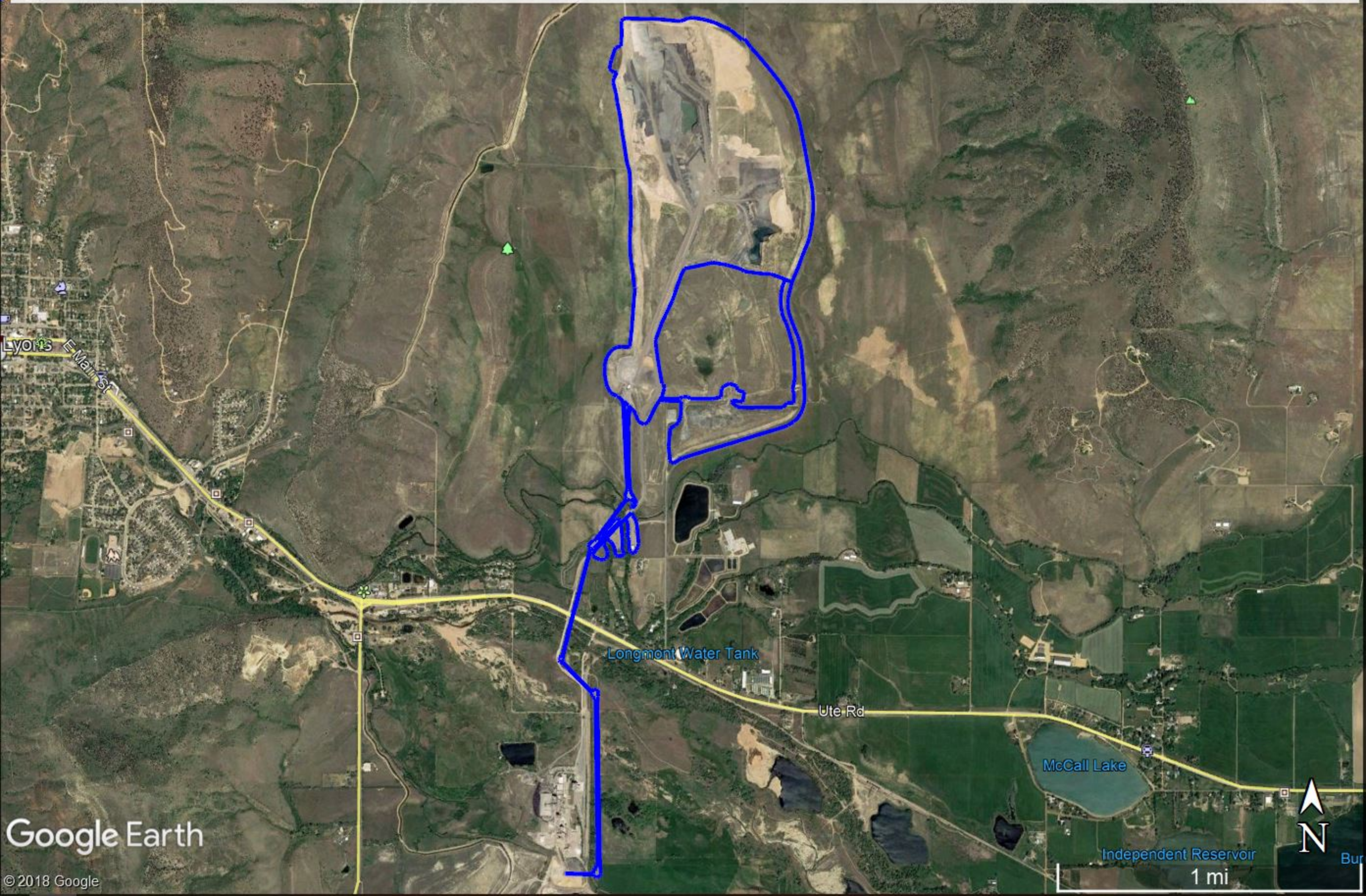
The Operator shall notify the Office of a spill of any toxic or hazardous substance, including spills of petroleum products, that occurs within the mined land permit area or area encompassed by a Notice of Intent and which would be required to be reported to any Division of the Colorado Department of Public Health and the Environment, the National Response Center, the Colorado Emergency Planning Commission, any local Emergency Planning Commission, local Emergency Planning Committee, or the State Oil Inspector. The Operator shall:

- (1) within twenty-four (24) hours of the time the spill is reported to any other agency(ies) with jurisdiction over the spill, notify the Division of Reclamation, Mining and Safety, via phone or email;
- (2) include in the notice any relevant information known at the time contact is made with the Office that would assist the Office in assessing spill seriousness, such as:
  - (a) operation name, DRMS permit number and name of person reporting the spill,
  - (b) telephone number of a responsible company official for the Office staff to use as a contact,
  - (c) date and time of spill,
  - (d) type of material spilled (CAS number if applicable, from the material safety data sheet (MSDS) form),
  - (e) estimate of the amount spilled, whether any material has left the permit area, and where the spilled material went, and
  - (f) initial measures taken to contain and clean up spill.
- (3) copy the Office on any correspondence and/or written reports provided to other agencies. Supplement those reports if necessary to include the information outlined in Rule 3.1.13(2).
- (4) For permits approved prior to the effective date of these Rules, the requirements of Rule 3.13 shall supersede stipulations to permits regarding spill reporting.



## M-1993-041 / Dowe Flats Mine / CEMEX, Inc. (1 of 4)

Blue Outline = 385.15 acres = Total Unreclaimed Disturbance (329 acres active pit and crusher areas + 42.6 acres overburden and topsoil stockpiles outside active pit area + 6.7 acres maintenance shop, fuel storage, and equipment storage areas + 6.85 acres conveyor system and assoc. infrastructure)  
(Image data from 5/31/2018)





## M-1993-041 / Dowe Flats Mine / CEMEX, Inc. (2 of 4)

Blue Outline = 385.15 acres = Total Unreclaimed Disturbance (329 acres active pit and crusher areas + 42.6 acres overburden and topsoil stockpiles outside active pit area + 6.7 acres maintenance shop, fuel storage, and equipment storage areas + 6.85 acres conveyor system and assoc. infrastructure)  
(Image data from 5/31/2018)





## M-1993-041 / Dowe Flats Mine / CEMEX, Inc. (3 of 4)

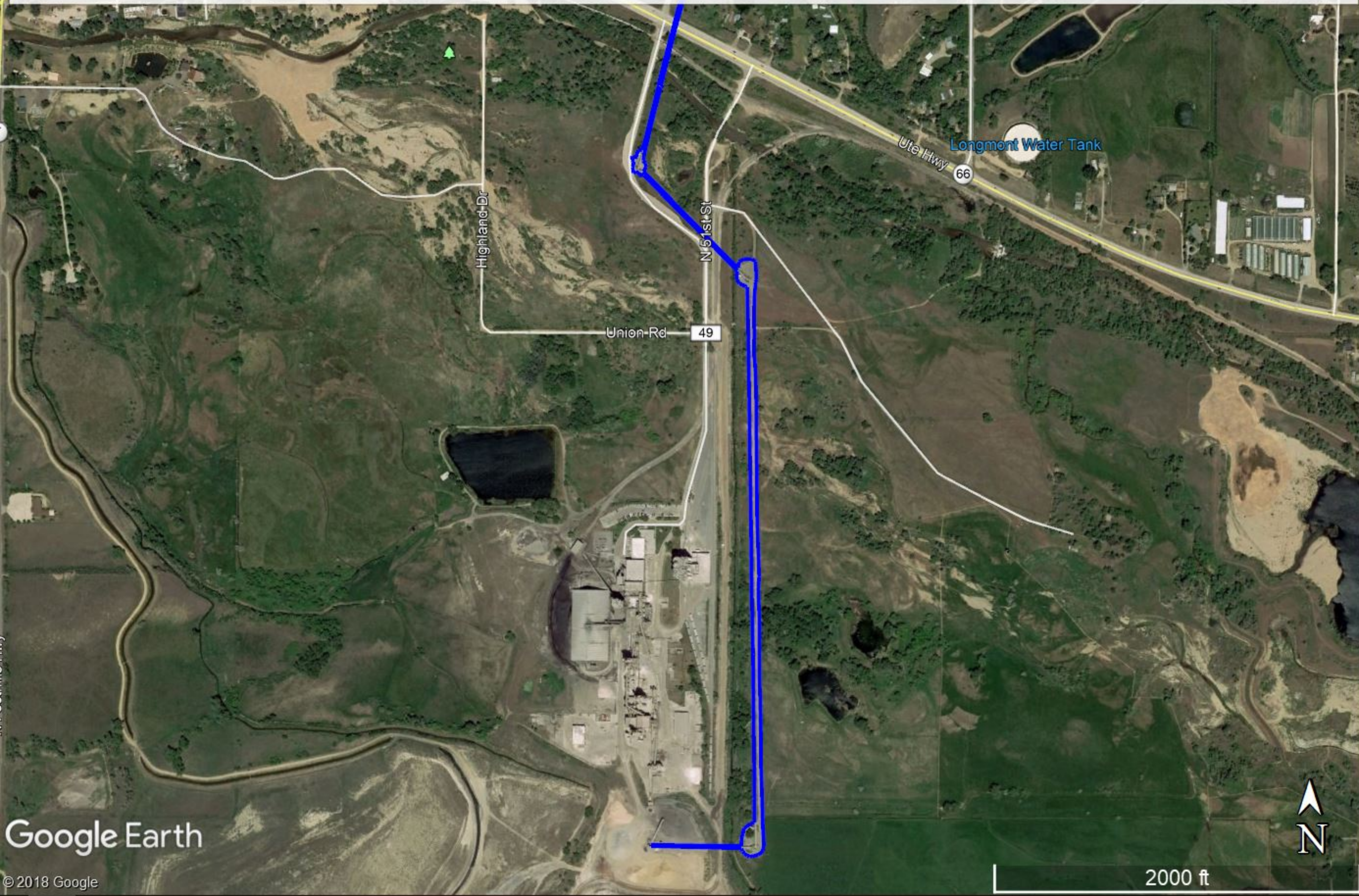
Blue Outline = 385.15 acres = Total Unreclaimed Disturbance (329 acres active pit and crusher areas + 42.6 acres overburden and topsoil stockpiles outside active pit area + 6.7 acres maintenance shop, fuel storage, and equipment storage areas + 6.85 acres conveyor system and assoc. infrastructure)  
(Image data from 5/31/2018)





# M-1993-041 / Dowe Flats Mine / CEMEX, Inc. (4 of 4)

Blue Outline = 385.15 acres = Total Unreclaimed Disturbance (329 acres active pit and crusher areas + 42.6 acres overburden and topsoil stockpiles outside active pit area + 6.7 acres maintenance shop, fuel storage, and equipment storage areas + 6.85 acres conveyor system and assoc. infrastructure)  
(Image data from 5/31/2018)







## COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY

1313 Sherman Street, Room 215, Denver, Colorado 80203 ph(303) 866-3567

### REQUEST FOR TECHNICAL REVISION (TR) COVER SHEET

File No.: M- \_\_\_\_\_ Site Name: \_\_\_\_\_

County \_\_\_\_\_ TR# \_\_\_\_\_ (DRMS Use only)

Permittee: \_\_\_\_\_

Operator (If Other than Permittee): \_\_\_\_\_

Permittee Representative: \_\_\_\_\_

Please provide a brief description of the proposed revision: \_\_\_\_\_

As defined by the Minerals Rules, a Technical Revision (TR) is: “a change in the permit or application which does not have more than a minor effect upon the approved or proposed Reclamation or Environmental Protection Plan.” The Division is charged with determining if the revision as submitted meets this definition. If the Division determines that the proposed revision is beyond the scope of a TR, the Division may require the submittal of a permit amendment to make the required or desired changes to the permit.

The request for a TR is not considered “filed for review” until the appropriate fee is received by the Division (as listed below by permit type). Please submit the appropriate fee with your request to expedite the review process. After the TR is submitted with the appropriate fee, the Division will determine if it is approvable within 30 days. If the Division requires additional information to approve a TR, you will be notified of specific deficiencies that will need to be addressed. If at the end of the 30 day review period there are still outstanding deficiencies, the Division must deny the TR unless the permittee requests additional time, in writing, to provide the required information.

There is no pre-defined format for the submittal of a TR; however, it is up to the permittee to provide sufficient information to the Division to approve the TR request, including updated mining and reclamation plan maps that accurately depict the changes proposed in the requested TR.

Required Fees for Technical Revision by Permit Type - Please mark the correct fee and submit it with your request for a Technical Revision.

<u>Permit Type</u>	<u>Required TR Fee</u>	<u>Submitted</u> (mark only one)
110c, 111, 112 construction materials, and 112 quarries	\$216	<input type="checkbox"/>
112 hard rock (not DMO)	\$175	<input type="checkbox"/>
110d, 112d(1, 2 or 3)	\$1006	<input type="checkbox"/>