




**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><br>Bates Pit                      | <b>MINE/PROSPECTING ID#:</b><br>M-1977-387   | <b>MINERAL:</b><br>Sand and gravel                                 | <b>COUNTY:</b><br>Prowers   |
| <b>INSPECTION TYPE:</b><br>Monitoring               | <b>INSPECTOR(S):</b><br>Amy Eschberger   | <b>INSP. DATE:</b><br>March 26, 2019                               | <b>INSP. TIME:</b><br>12:15 |
| <b>OPERATOR:</b><br>Prowers County                  | <b>OPERATOR REPRESENTATIVE:</b><br>Mark Dorenkamp  | <b>TYPE OF OPERATION:</b><br>112c - Construction Regular Operation |                             |
| <b>REASON FOR INSPECTION:</b><br>Normal I&E Program | <b>BOND CALCULATION TYPE:</b><br>None  | <b>BOND AMOUNT:</b><br>\$0.00                                      |                             |
| <b>DATE OF COMPLAINT:</b><br>NA                     | <b>POST INSP. CONTACTS:</b><br>None  | <b>JOINT INSP. AGENCY:</b><br>None                                 |                             |
| <b>WEATHER:</b><br>Clear                            | <b>INSPECTOR'S SIGNATURE:</b><br> | <b>SIGNATURE DATE:</b><br>June 3, 2019                             |                             |

**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>N</u>   |
| (PW) PROCESSING WASTE/TAILING---- <u>Y</u> | (SF) PROCESSING FACILITIES----- <u>N</u> | (TS) TOPSOIL----- <u>Y</u>      |
| (MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>   | (FW) FISH & WILDLIFE----- <u>N</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>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

## **OBSERVATIONS**

This was a normal monitoring inspection of the Bates Pit (Permit No. M-1977-387) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). Mr. Mark Dorenkamp represented the operator during the inspection. The site is located approximately 5 miles northwest of Holly, CO in Prowers County. Access to the site is from the west off Co Rd 31. **Photos 1-10** taken during the inspection are included with this report.

This is a 112c operation permitted for 30 acres to mine sand and gravel for use in county road construction and maintenance (see enclosed mining and reclamation plan maps). The operation began mining from an existing gravel pit (approximately 9 acres in size) in the northeastern portion of the permit area. The sand and gravel deposit outcrops at the surface in the northern portion of the permit area, and thins out toward the southern end of the permit area. The operation does not intend to mine the western portion of the permit area. This area will primarily be utilized for stockpiling. The maximum mining depth is approximately 40 feet (at the northern edge of the pit). No material washing or screening is anticipated for the operation. Very little topsoil was salvaged during previous mining activities. Only a small topsoil stockpile was left at the northern edge of the existing pit. The operation has committed to salvaging topsoil from any additional disturbed land and stockpiling it in the western portion of the permit area. Due to the limited amount of topsoil generally available at the site, the operation has also committed to importing additional topsoil for reclamation.

The approved post-mining land use for the site is rangeland. The reclamation plan includes grading northern, eastern, and southern pit slopes to 3H:1V, and grading western pit slopes to 5H:1V. The taller northern pit slopes will have 1-3 inches of topsoil replaced, while the rest of the site will have 4-6 inches of topsoil replaced. The operation will incorporate 6,000 pounds of manure per acre into the topsoil. Discing and drill-seeding will occur perpendicular to pit slopes to provide furrows for water retention and erosion control. The disturbed land will be revegetated with a rangeland grass and legume mixture including Blue grama, Buffalograss, Sideoats grama, Sand dropseed, Three-awn, and Sainfoin. All haul roads on site will be reclaimed except for the northernmost access road off Co Rd 31.

At the time of the inspection, the weather was clear and sunny, and the ground was mostly dry. A permit sign was posted at the main site entrance off of Co Rd 31. The permit boundary corners were delineated with large metal posts painted yellow. The site was not active during the inspection. The operation was approved for intermittent status in 2014 to operate for less than 180 days per year. The active mining face is located at the northwestern edge of the pit, daylighting to the southeast. The active pit wall is approximately 12-15 feet in height with near vertical to 1H:1V slopes. The eastern pit wall is approximately 20-25 feet in height, and has been graded to 3H:1V or flatter. The majority of the eastern pit wall has been retopsoiled and revegetated. However, there are a few areas where tracks have been left on the slopes by fourwheelers. These areas may need to be reseeded for reclamation.

The northeastern pit wall is approximately 25-30 feet in height. The top 5-8 feet of the northeastern pit wall has near vertical slopes, while the bottom of this wall has 1H:1V to 2H:1V slopes. Grasses and shrubs are volunteering across much of the base of the northeastern pit wall. The top edges of the northeastern pit wall appear to be very close to the permit boundary, which would make it difficult for the operator to cut and fill the pit wall to the approved reclamation slope of 3H:1V without creating offsite damage (disturbance outside the approved permit boundary). Therefore, to reclaim the site in accordance with the approved plan, the operator will need to either find a way to backfill the steeper portions of the pit wall, or submit an Amendment application to increase the permit area to allow enough room to cut and fill this portion of the pit wall. One benefit of submitting an Amendment application is there are no limits to the amount of acreage that could be added – which may be beneficial to the operator considering the current permit area is nearly mined out.

Another option would be to submit a Technical Revision (see enclosed form) to revise the approved reclamation plan just for the northeastern pit wall. This revised plan might include changing the reclamation slope gradient to 2H:1V for this portion of the pit wall, which is the current slope gradient for much of its base. To get the steeper top 5-8 feet graded from near vertical to 2H:1V, the operation could potentially cut and fill this portion of the pit wall without disturbing land outside the existing permit boundary. The Technical Revision would need to explain how changing the reclamation slope for the northeastern pit wall from 3H:1V to 2H:1V would provide for a stable configuration of the reclaimed area consistent with the approved post-mining land use of rangeland. The Technical Revision would also need to include a revised reclamation plan map. Several sand and gravel stockpiles were stored on the pit floor, including one large sand stockpile near the center of the pit. Topsoil stockpiles were stored at the northern edge of the pit and in the western portion of the permit area. These stockpiles appeared to be stable with good grass cover.

The Division estimates the operation has disturbed the majority of the 30 acre permit area in some form. Given the proximity of the pit to the northern, eastern, and southern permit boundaries, the operation will need to be very careful not to disturb land outside these boundaries during mining or reclamation.

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 looking east at topsoil stockpile stored adjacent to access road in western portion of permit area.



**Photo 2.** View looking south at topsoil stockpile stored south of access road in western portion of permit area.





**Photo 3.** View looking south across portion of southern pit wall which has been graded to 3H:1V or flatter but not yet retopsoiled and revegetated.



**Photo 4.** View looking northwest at active mining face along northwestern edge of pit, approximately 12-15 feet in height with near vertical to 1H:1V slopes.





**Photo 5.** View looking east at large sand stockpile stored on pit floor.



**Photo 6.** View looking north at rock stockpile stored on pit floor.





**Photo 7.** View looking northeast at northeastern pit wall, approximately 25-30 feet in height. The top 5-8 feet of this wall (indicated) has near vertical slopes, while the bottom portion has 1H:1V to 2H:1V slopes.



**Photo 8.** View looking east at eastern pit wall which has been graded to 3H:1V, retopsoiled, and revegetated.





**Photo 9.** View looking northeast at portion of reclaimed eastern pit wall which has been redisturbed by fourwheelers.



**Photo 10.** View looking southwest across western edge of pit. The western pit wall will need to be graded to 5H:1V for reclamation according to the approved plan.



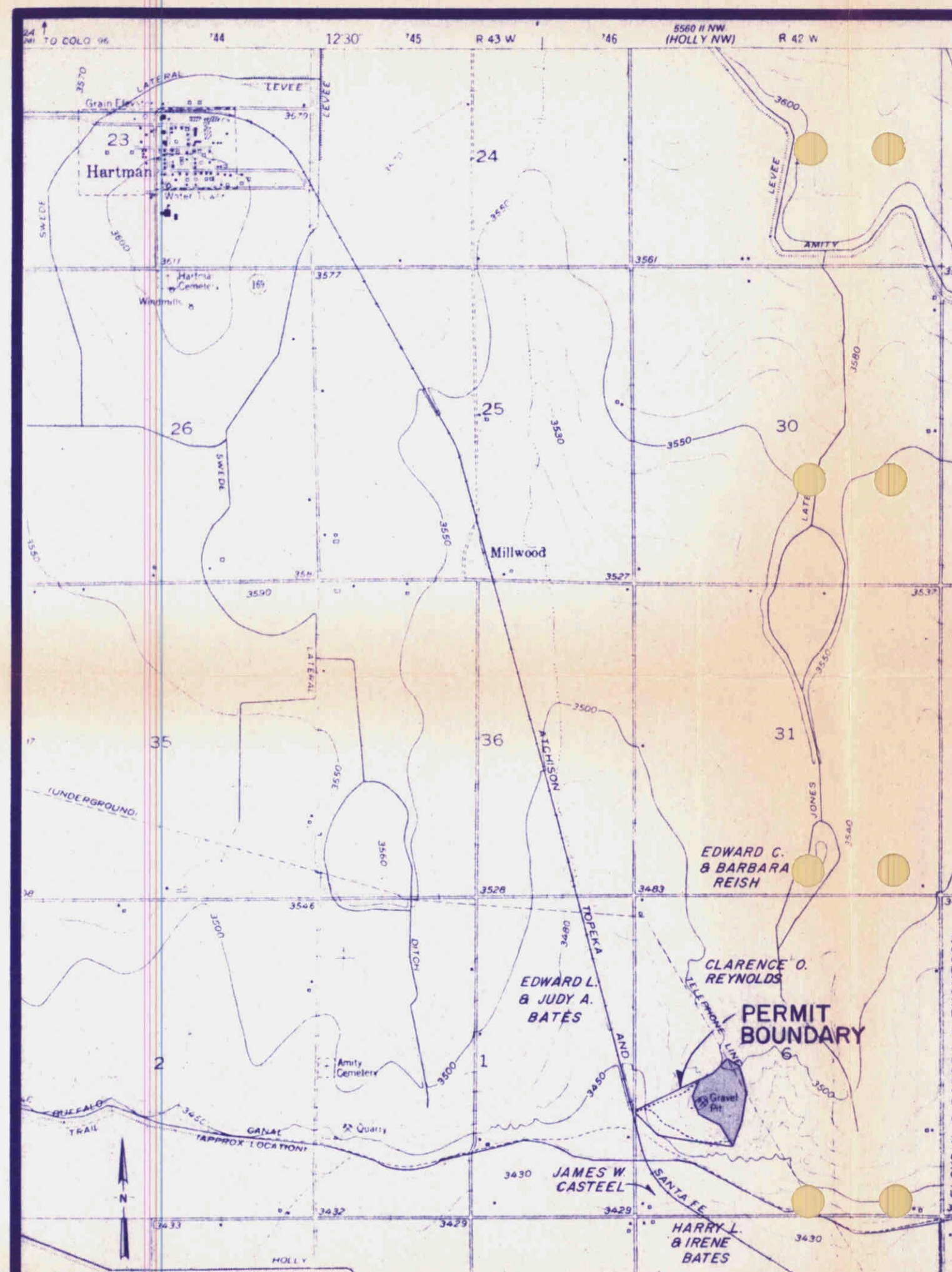
**Inspection Contact Address**

Mark Dorenkamp  
Prowers County  
109 E. Sherman St.  
Lamar, CO 81052

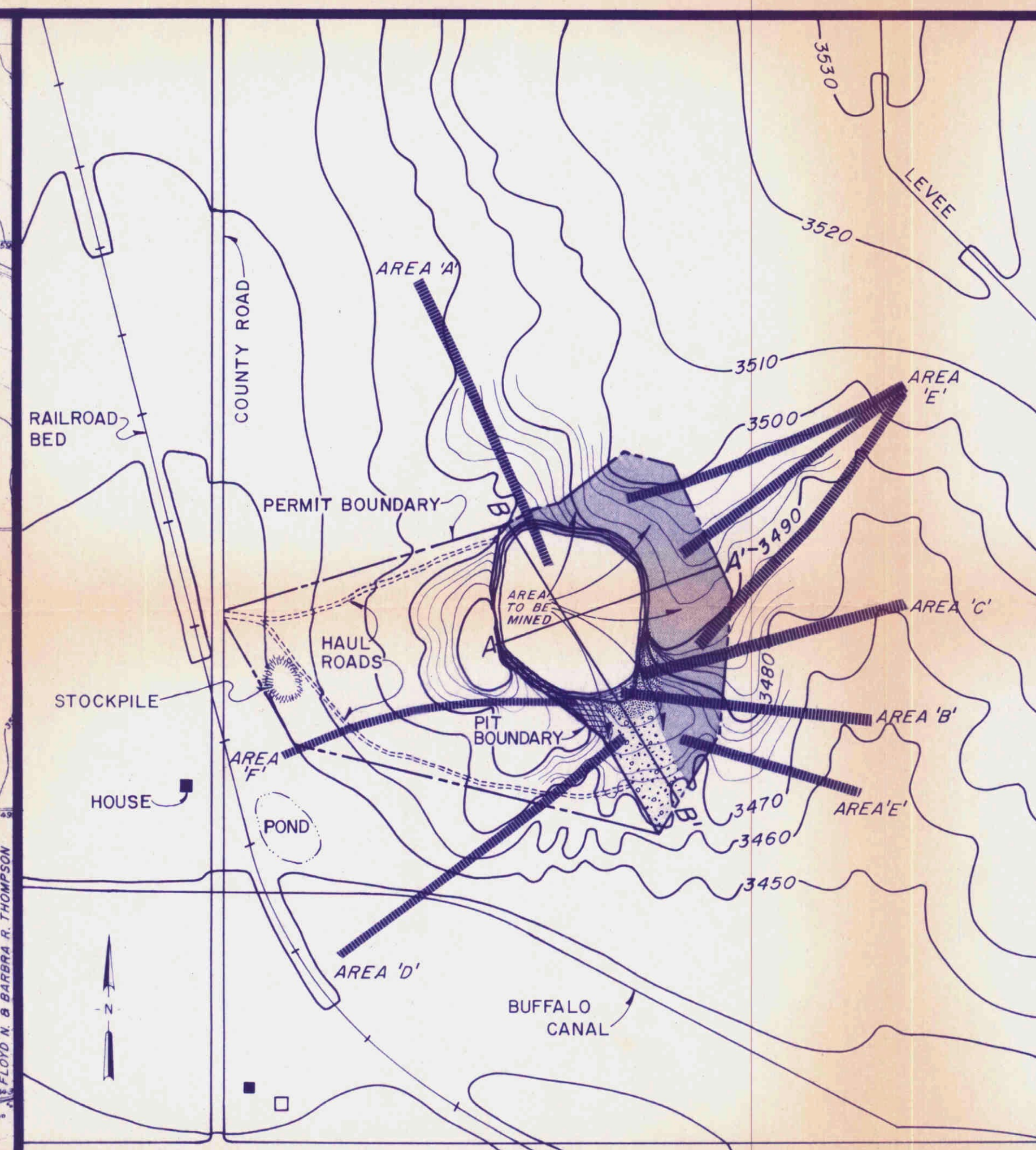
Encls: Approved Mining and Reclamation Plan Maps (one document)  
Technical Revision form

CC: Michael Cunningham, DRMS

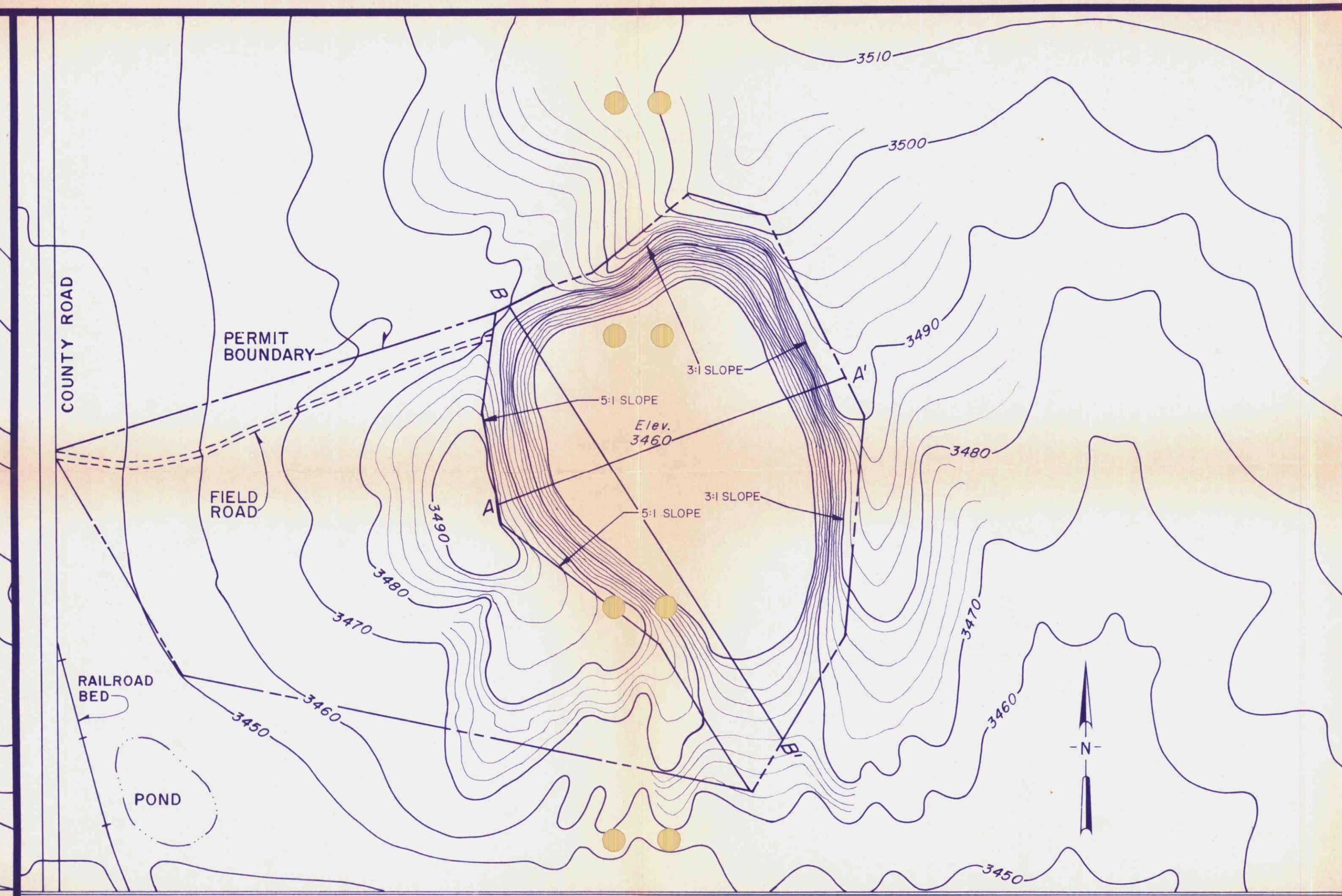




**VICINITY MAP**  
SCALE: 1"=2000'

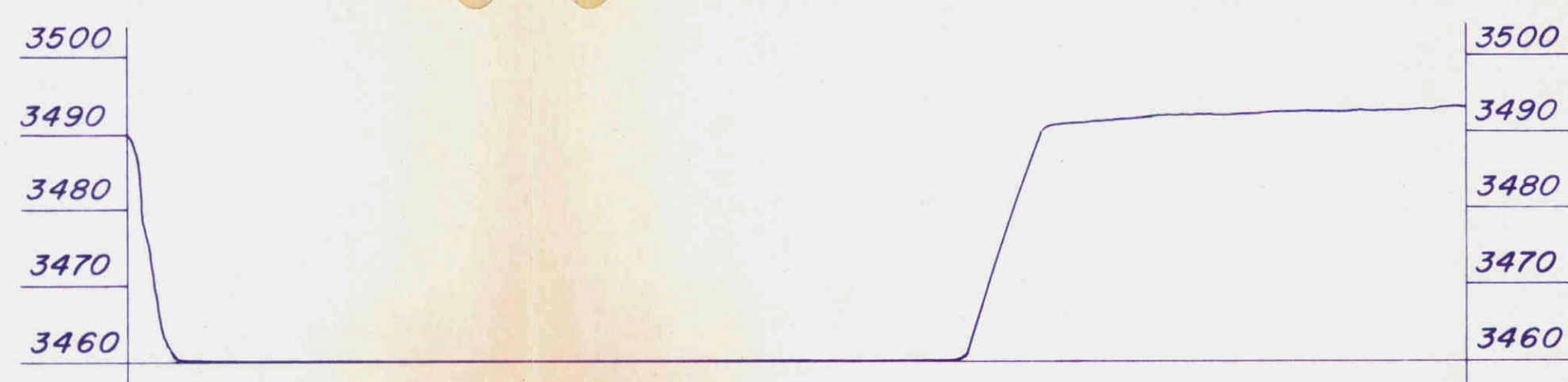


**PRE-MINING & MINING PLAN**  
SCALE: 1"=400'



**RECLAMATION PLAN**  
SCALE: 1"=200'

PIT LOCATION: PORTIONS OF THE NE 1/4 SW 1/4, SE 1/4 SW 1/4 AND NW 1/4 SW 1/4, SEC. 6, T. 23 S, R. 42 W, AS SHOWN.



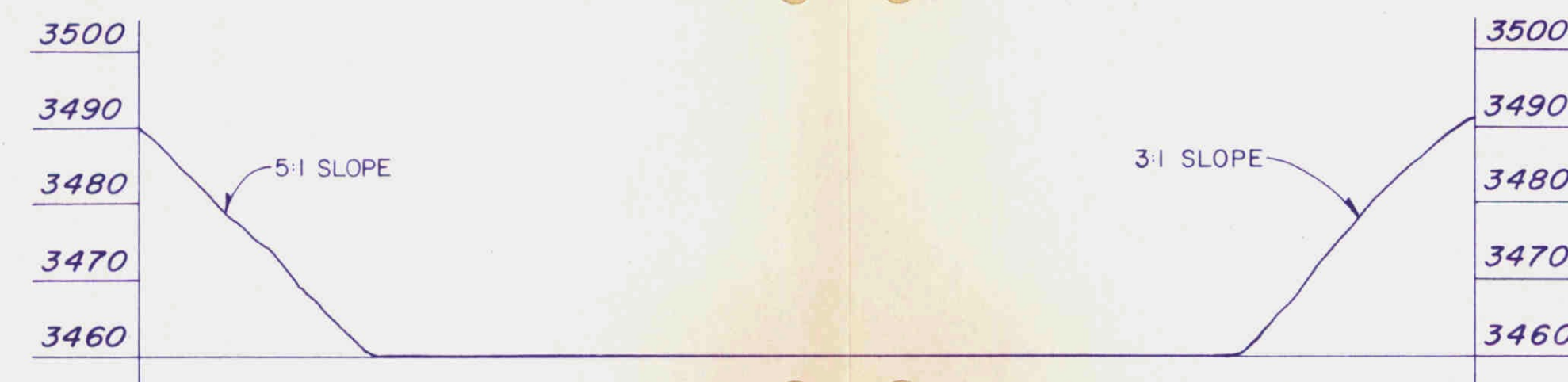
**PRE-MINING SECTION A-A'**

SCALE: HOR. 1"=100'  
VER. 1"=20'



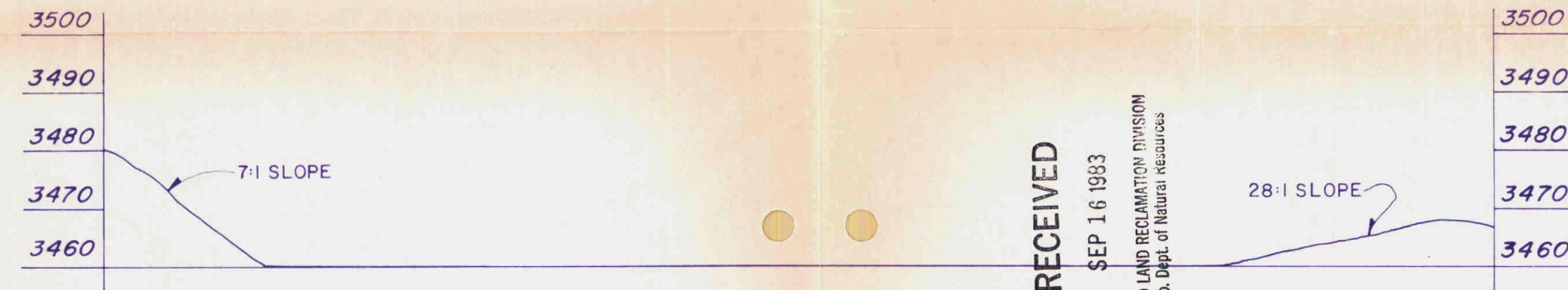
**PRE-MINING SECTION B-B'**

SCALE: HOR. 1"=100'  
VER. 1"=20'



**RECLAMATION SECTION A-A'**

SCALE: HOR. 1"=100'  
VER. 1"=20'



**RECLAMATION SECTION B-B'**

SCALE: HOR. 1"=100'  
VER. 1"=20'

Permit Number *M-77-387*  
Class: *Reclamation*  
Section/Exhibit: *C&F Mining & Reclamation Plans*  
Class: *Reclamation*  
Type/Size: *9-16-83*  
Doc. Type: *Report*  
Application: ☐ Coal ☐ Non-Coal ☐ Hydro ☐ General ☐ Inspection

RECEIVED  
SEP 16 1983  
MINED LAND RECLAMATION DIVISION  
Colo. Dept. of Natural Resources

**PROWERS COUNTY  
REYNOLDS PIT  
MINING & RECLAMATION PLANS**

**RINDAHL & ASSOCIATES**  
2305 S. Syracuse Way  
Denver, Colorado 80231  
303 / 696 - 6846

DATE: 9-7-83  
DRAWN BY: RJA  
CHECKED BY: CJS  
SCALE: AS SHOWN  
SHEET 1 OF 1 SHEETS

*M-77-387*

21060





## 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"/>         |