



1313 Sherman Street, Room 215  
Denver, CO 80203

## MEMO

**DATE:** March 18, 2015

**TO:** Mined Land Reclamation Board

**FROM:** Tyler O'Donnell *TVO*  
Environmental Protection Specialist

**RE:** Aggregate Industries – WCR, Inc., DRMS Permit No. M-2004-031, Hazeltine Mine  
Enforcement Hearing

Consideration of a possible violation, corrective actions, and civil penalties, for failure to minimize disturbance to the prevailing hydrologic balance in the surrounding area and failure to protect areas outside the affected land from damage.

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The Board packet contains the following documents:

1. Written complaint from the adjacent land owner – September 13, 2011
2. DRMS inspection report – October 5, 2011
3. DRMS inspection report – March 27, 2014
4. DRMS inspection report – May 27, 2014
5. DRMS inspection report – October 31, 2014
6. DRMS RTB letter – February 3, 2015
7. DRMS Board presentation PowerPoint
8. DRMS enforcement hearing document list



ajw  
dbz  
tak

fr

**EQUITY FUNDING, LLC**

5040 ACOMA STREET  
DENVER, CO 80216-2010  
OFFICE: (303) 295-1216 FAX (303) 295-1256  
E-mail: FredsDeal@aol.com

September 13, 2011

Mr. Tony Waldron  
Division of Minerals and Geology  
Minerals Section  
1313 Sherman Street  
Suite 215  
Denver, Colorado 80203

RECEIVED

SEP 14 2011  
to Division of Reclamation,  
Mining and Safety

Re: Flooded Land - 7909 E. 104<sup>th</sup> Avenue Henderson, CO.

Dear Mr. Waldron,

This letter is in regards to the above referenced property that we own. It is a 4.49 acre parcel of land in the SW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 9, T-2-S, R-67-W, 6th PM Adams County Colorado, approximately 105th Ave. and the Fulton Ditch. This land adjoins Aggregate Industries, Inc., Hazeltine Mine (Permit # M-2004-031). Their reclamation plan calls for development of the site as a water storage reservoir area with a slurry wall liner. Our property lies just east of the slurry wall liner installed by Aggregate Industries, Inc. in 2004. In addition, they redirected the Bull Seep to the east side of the slurry wall from its historic course to the west.

Prior to Aggregate Industries, Inc. installation of the slurry wall liner in 2004, our property was dry with a rudimentary road system and a number of outbuildings. Please see EXHIBIT A and B. Since the installation of Aggregate Industries, Inc. slurry wall liner, our property has become unusable due to the amount of water accumulating on it. Most of the site is now a swamp area that was historically dry. In the spring of 2010, I contacted Mr. Mike Refer, Vice President of Aggregate Industries, Inc., to discuss the flooding of our property. He maintained that the flooding of our property was not the result of Aggregate Industries, Inc. slurry wall and that it was the direct result of the LaFarge and The City of Denver's activities approximately 1/4 mile to the north of our property. In the fall of 2010, we engaged Mr. Stevan L. O'Brian, President of Environment, Inc. and his company, to evaluate the site and attempt to determine the source of the elevated ground water problems on our property. After an on-site evaluation and review of Colorado State records it is his expert opinion is that the elevated ground water on our property was the direct result of the installation of the slurry wall adjacent to our property and the redirection of the Bull Seep east of its original location, which is now directly adjacent to our property, and that it was NOT caused by the activities of LaFarge/City of Denver's activities over 1,000 feet from our property.

We have included Environment, Inc.'s report dated March 31, 2011, explaining their findings that there has been a steady increase of ground water elevations east of the mine since the completion of Aggregate, Industries, Inc. slurry wall. Combined with the relocation of the Bull Seep, our property has standing water on it most of the year. Photos included in the report show the condition of the property in 2004 (Exhibit A) before

the slurry wall installation and photos from 2009 (Exhibit C) showing our property underwater. The fact is that until the slurry wall was installed, the ground water table (from the monitoring data submitted with Annual Reports to the D.R.M.S.) went from being 7.50 feet deep in 2005 to flooding our property in 2007.

In April of 2011, we provided Mr. Refer with a copy of the Environment, Inc. report. We had a meeting with Mr. Refer on July 7, 2011 to discuss the report and its findings. He continues to maintain that the flooding of our property is the fault of the LaFarge/City of Denver's activities and not the responsibility of Aggregate Industries, Inc.

This property used to be a dry usable property. It now has anywhere from 6 inches to 2 feet of standing water on it surface. There is now wetland vegetation where it never existed prior to the mining activities. Our property has become absolutely worthless due to this ground water contamination. The only activity that could have caused this, is the mining activities that you regulate.

We are requesting that an investigation by the State of Colorado's Division of Reclamation, Mining and Safety be conducted and require that Aggregate Industries, Inc. resolve the negative impacts their mines have had and is having on our property to the prevailing hydraulic balance as required by CRS 34-32.5-116(4)(h).

Please feel free to call me at the above office number (303) 295-1216 ext 113 or my cell phone at (303)918-1215. Steve O'Brian of Environment, Inc. (303) 423-7297 can also answer any questions you may have.

Yours truly,

  
Fred Orr  
Manager

Enclosures

cc: Environment, Inc., Steve O'Brian  
Aggregate Industries, Mike Refer  
file



# EQUITY FUNDING, LLC

5040 ACOMA STREET  
DENVER CO 80216-2010  
(303) 295-1313; FAX (303) 295-1256  
fredsdeal@aol.com

March 31, 2011

Mr. Mike Refer, Vice President  
Aggregate Industries-WCR, Inc.  
P.O. Box 5588  
Denver, CO 80217-5588

Dear Mr. Refer;

RE: Adams County Parcel #172109400001

We own a parcel of land along the east side of your Hazeltine Mine at where 105th Ave would intersect the Fulton Ditch. In the past couple of years we have begun to notice that we can no longer use the parcel due to the increased amount of water that accumulates on the land. Steve O'Brian of Environment, Inc., was asked to look at the site and do research to try to find out why this is happening. Attached is his preliminary report discussing some of his findings and recommendations.

I propose that we open a discussion to find a way to resolve this problem that will benefit both parties without getting the government involved. I propose having a meeting at the site to discuss our concerns and allow everyone to see the site. I would like to have this problem resolved by mid-summer. Please contact me at (303) 295-1313 as soon as possible to setup the meeting and gain access to the property.

Sincerely,



Fred Orr  
Manager

cc Environment, Inc.  
File

enclosure

# Environment, Inc.

LARRY E. O'BRIAN  
FOUNDER

STEVAN L. O'BRIAN  
PRESIDENT

7985 VANCE DRIVE, SUITE 205A  
ARVADA, COLORADO 80003  
303-423-7297  
FAX 303-423-7599

March 31, 2011

Mr. Fred Orr  
Equity Funding  
5040 Acoma St.  
Denver, CO 80216

Dear Mr. Orr;

RE: Adams County Parcel # 172109400001  
Elevated Ground water problem

Per your request I have researched and prepared the following information for a 4.49 acres ± parcel of land located in the SW¼SE¼ of Section 9, Township 2 South, Range 67 West, 6th P.M. Adams County. This parcel lies immediately east of Aggregate Industries Hazeltine Mine (State Permit # M-2004-031), between the Bull Seep and the Fulton Ditch. Attached is a copy of an Adams County Assessor's Parcel Map showing the site in relation to surrounding properties.

I reviewed Aggregates Industries (AI), Division of Reclamation, Mining & Safety file to find site specific information they may have sent to the state to help determine the possible cause of the increased ground water elevation. In particular their permit document, the Annual Reports and yearly groundwater monitoring data submitted from September 2005 to October 2010. From this file I found that in 2004 AI completed installing a slurry wall and relocating the Bull Seep along the west side of the subject property. That no groundwater elevation control structure was built along the up gradient side along slurry wall and that prior to completing the slurry wall groundwater table was fairly deep in this area at seven plus feet. After that the groundwater table between the Fulton Ditch and the slurry wall has steadily increased until today the groundwater table has reached the surface of the land.

An example of the change is shown in the data collected for monitoring well MW2 (O.S.E. Permit #255775) from 2005 to 2010. This well is located just to the west of the property adjacent to the slurry wall. While the well is not on the property it is the closest to the site and shows a marked increase in the ground water table. The records submitted as part of the annual reports for those years show the ground water was 7.50 feet below the



surface on 6/7/04 but by 6/8/05 it was only 18.6 inches below, a change of 5.85 feet in one year. By 10/2/06 water was 3 inches above the ground surface and after that the well was flooded or inaccessible suggesting the groundwater had reached the surface.

Comparing the two photos I have attached, one from 2004 and one from 2009 shows that approximately 2.50 acres of the property is now covered with water or wetland vegetation that did not exist prior to Aggregates Industries installing the slurry wall and relocating the Bull Seep.

My conclusion is that the slurry wall is backing up ground water and causing the flooding. This is consistent with the note for 6/8/2005 in AI's monitoring reports where the observer noted "...substantial amount of water in relocated ditch due to slurry wall...". Bull Seep may be contributing to the flooding from surface flows or from an inadequate channel carrying capacity, but the elevated groundwater is from a much greater system wide problem. The monitoring reports did not show a significant groundwater change after relocation of Bull Seep until the slurry wall was complete. This effectively blocks the flow of groundwater across the Hazeltine Pit site increasing the groundwater table outside their site. With no place to go or a structure like a French Drain to regulate the groundwater level it began to rise until reaching the ground surface and flooding your property. The industry has been dealing with this problem along the South Platte River from 88th Ave to 132nd Ave for a couple of years so it is not a new problem. According to State Law it is Aggregate Industries responsibility to correct this problem and return the groundwater table to its historic elevations on the subject property.

My recommendation is that you contact Mike Refer of Aggregate Industries (303) 985-1070, to work out a solution that mutually benefits both parties. If this can not be accomplished then I think your only recourse is to file a complaint with the Division of Reclamation, Mining & Safety on the grounds that AI has failed to minimize disturbance to the prevailing Hydrologic balance on the surrounding properties.

If you have any questions please call me.

Sincerely,  
Environment, Inc.

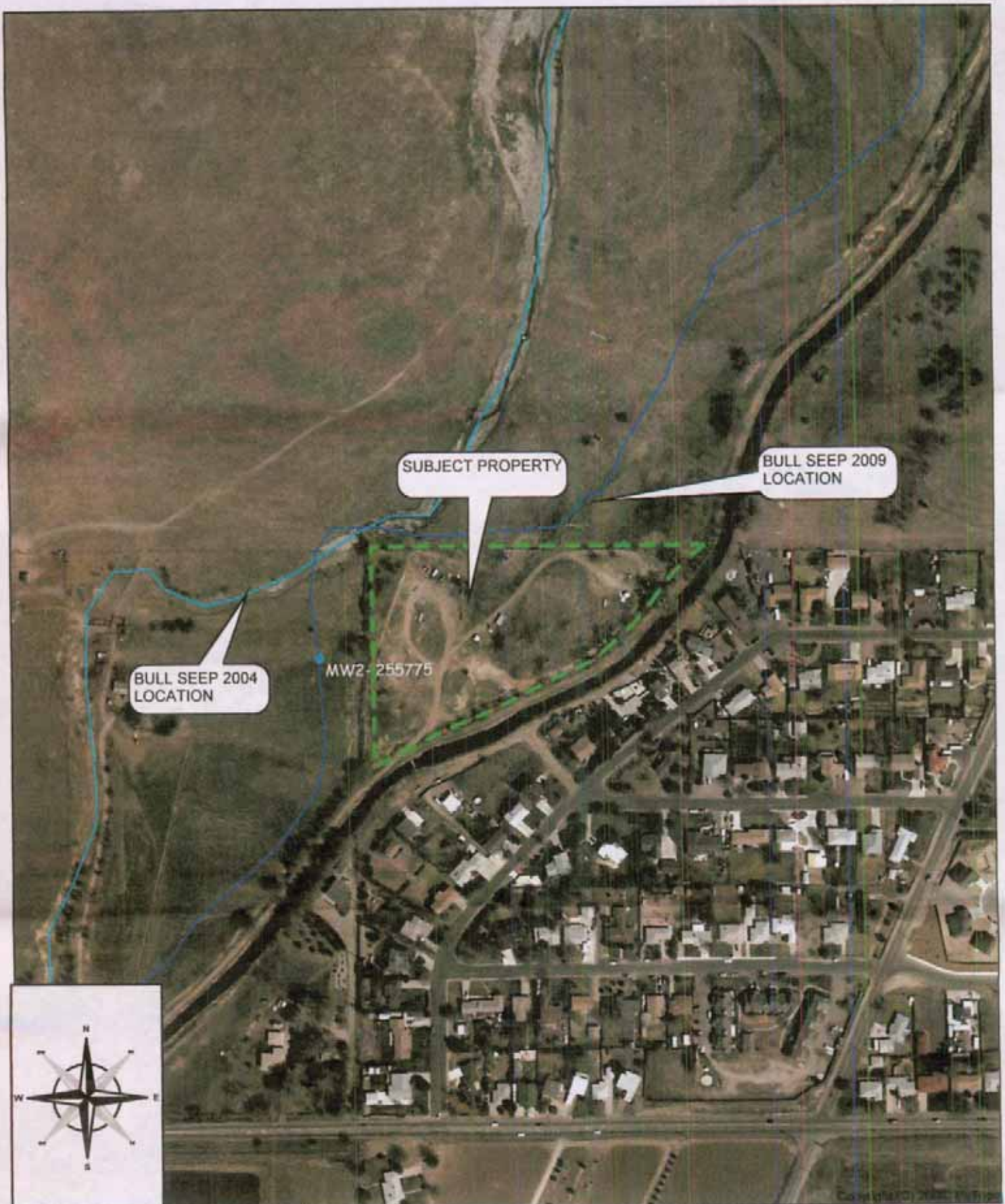


Stevan L. O'Brian  
President

cc file



# EXHIBIT A



Name: EASTLAKE SE SE,  
CO  
Date: 03/29/11  
Scale: 1 inch = 300 ft.

PART OF THE NW/4SE/4, SECTION 9,  
T-2-S, R-67-W, ADAMS COUNTY,  
COLORADO

**EQUITY FUNDING  
ADAMS COUNTY PROPERTY**

**FIGURE A - JANUARY 2004 PHOTO**





# Adams County Web Mapping

## EXHIBIT B



- Legend**
- County Boundary
  - Adjacent Counties
  - Township
  - Streets
  - Hwy outline
  - Road outline
  - Interstates
  - US, State Hwys
  - Tollways
  - Streets/Roads
  - Parcels
  - 2008 West Aerials
  - 2008 East Aerials



Scale: 1:3,619

Map center: 3170463, 1748903

1050 ft.

700

350

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



# EXHIBIT C



Name: EASTLAKE SE, CO

Date: 03/29/11

Scale: 1 inch = 300 ft.

PART OF THE NW/4SE/4, SECTION 9,  
T-2-S, R-67-W, ADAMS COUNTY,  
COLORADO

**EQUITY FUNDING  
ADAMS COUNTY PROPERTY**

**FIGURE B - JUNE 2009 PHOTO**






**COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY**  
**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> Hazeltine Mine	<b>MINE/PROSPECTING ID#:</b> M-2004-031	<b>MINERAL:</b> SDG	<b>COUNTY:</b> Adams
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> David Bird, Tom Kaldenbach	<b>INSP. DATE:</b> 05 Oct 2011	<b>INSP. TIME:</b> 14:00
<b>OPERATOR:</b> Aggregate Industries – WCR, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Connie Davis, Trey Poulson, Kip Raines, Mike Refer, Rich Tocher (TetraTech)	<b>TYPE OF OPERATION:</b> 112(c)	

<b>REASON FOR INSPECTION:</b> Citizen Complaint	<b>BOND CALCULATION TYPE:</b> NN	<b>BOND AMOUNT:</b> \$670,602
<b>DATE OF COMPLAINT:</b> 14 September 2011	<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> November 4, 2011

**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 TOPICS:** HB, OD

**PROBLEM/POSSIBLE VIOLATION:** (PB) The slurry wall installed in 2005, lacking means of ground water conveyance around the pit, is causing ground water mounding and elevated ground water levels upgradient of the site. This is causing the water table to rise to the point that areas that were dry before the slurry wall installation are now saturated, and in some places inundated. This represents an Enforcement Problem, and could escalate to a Possible Violation if allowed to continue unabated. The following sections of the Colorado Mined Land Reclamation Act apply: (1) §34-32.5-116(4)(h) for failure to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quality and quantity of water in surface and groundwater systems during the mining operation, and (2) §34-32.5-116(4)(i) for failure to protect areas outside of the affected land from slides or damage occurring during the mining operation.

**CORRECTIVE ACTIONS:** To relieve the ground water mounding situation, the operator must provide a means of conveyance around the pit, outside of the slurry wall, that will maintain the ground water table at a level that will prevent water table rises and saturation / inundation of the upgradient ground. The operator must provide a plan to the Division in the form of a Technical Revision within 60 days of the date of this report, the installation of which must be completed within 90 days of final Division approval of the plan. The TR must contain cost estimates to allow the Division to calculate bonding requirements.

**CORRECTIVE ACTION DUE DATE:** Plan/Technical Revision by 04 January 2012. Installation within 90 days following Division approval of plan.



**INSPECTION TOPICS: RV**

**PROBLEM/POSSIBLE VIOLATION:** (PB) There are state-listed noxious weeds present on site. This is a problem for failure to employ weed control methods for state listed noxious weed species within the permitted area, and to reduce the spread of weeds to nearby areas as required by Section 3.1.10 (6) of the rule.

**CORRECTIVE ACTIONS:** Implement approved weed control measures before the weeds have an opportunity to become established in the Spring of 2012, and provide proof to the Division that this has been done.

**CORRECTIVE ACTION DUE DATE:** April 1, 2012

**OBSERVATIONS**

This inspection was conducted on 5 October 2011 by David Bird of DRMS in response to a written complaint received 14 September 2011 from Mr. Fred Orr of Equity Funding, LLC. Also attending the inspection were Connie Davis, Trey Poulson, Kip Raines and Mike Refer of Aggregate Industries and Rich Tocher of Tetra Tech. On 27 September 2011, David Bird and Tom Kaldenbach of DRMS met with Mr. Orr outside of the permit area to observe the ground conditions and hear Mr. Orr's side of the story.

The site is located in Adams County approximately 6 miles northeast of Commerce City. The property is bordered on the west by the South Platte River, on the south by 104<sup>th</sup> Avenue, and on the east by the Fulton Ditch. Sand and gravel are the commodities of interest at this mine. The total permit area is listed in the DRMS database as 203.9 acres, and the post-mining land use is designated as pasture land. The Division holds financial warranty in the amount of \$670,602 for the operation.

According to company monitoring records, a slurry wall was installed around the site in May or June 2005. The complaint from Mr. Orr alleges that his land was dry before the slurry wall, but after the slurry wall the property "has become unusable due to the amount of water accumulating on it. Most of the site is now a swamp area that was historically dry." We walked the property and observed sizable areas of inundation, standing water, and well-established wetlands. An aerial photo provided by Mr. Orr dated January 2004 shows clearly that the land in question was dry at that time. The latest Google Earth aerial from 2011 now shows substantial visible areas of standing water. Also observed were several large dead trees that Mr. Orr said were living before the slurry wall was installed, suggesting that the elevated ground water conditions killed the trees. The photograph from 2004 appears to indicate that these trees, located near the northwest fringe of the subject property, were alive at that time.

A hydrologic feature of interest is the Bull Seep, a ditch that borders the permit area on the east side. Before the establishment of the current permit boundary, the Bull seep was located farther to the west, but after granting of the Hazeltine permit the seep was relocated eastward just outside the perimeter of the permit boundary. Aggregate Industries alleges that activities by Lafarge inside the Howe pit permit area, immediately to the north, resulted in narrowing and constriction of that section of the Bull Seep that is inside the Howe permit area, and therefore the seep can no longer convey water around the Hazeltine pit as it has in the past.

The timing of the slurry wall installation with the rise in ground water levels demonstrates that the slurry wall is very effectively preventing ground water from flowing into the pit, but at the same time the slurry wall is causing ground water mounding on the upgradient side of the slurry wall. With no subsurface drain to convey the ground water, the ground water table has risen to the point that it is ponding on the ground surface. The

report by Environment, Inc. (attached) corroborates this conclusion. The Bull Seep is able to convey some of the ponded water around the Hazeltine pit, but the current configuration of the seep does not allow it to drain the upgradient ground and maintain historical ground water elevations in the same manner that a deeper feature such as a French Drain might.

It is the determination of the Division that, in order to relieve the ground water mounding situation, the operator must provide a means of ground water conveyance around the pit, outside of the slurry wall, that will maintain the ground water table at a level that will prevent water table rises and saturation / inundation of the upgradient land. The operator has more than one option available with which to achieve this. The most effective option, with perhaps the highest probability of long-term success, is to install a French Drain around the eastern perimeter of the slurry wall. Alternatively, the operator can deepen and/or widen the Bull Seep to allow it capture ground water at greater depth than it is currently. The operator must submit a plan to the Division within 60 days of this report. Installation of the chosen option must be completed within 90 days of final Division approval of the plan.

Another problem that was observed on the Hazeltine site is an infestation of weeds. The operator is advised that weed control measures must be implemented in time to prevent a re-emergence of this infestation in the Spring of 2012. The Division will check the success of the weed control program in the Spring of 2012.



**PHOTOGRAPHS**

















































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

Connie Davis  
Aggregate Industries – WCR, Inc.  
1707 Cole Blvd., Ste 100  
Golden, CO 80401

cc: Fred Orr, Manager, Equity Funding, LLC  
Steve O'Brian, Environment, Inc.



**COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY**  
**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> Hazeltine Mine	<b>MINE/PROSPECTING ID#:</b> M-2004-031	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Adams
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Tyler V. O'Donnell	<b>INSP. DATE:</b> March 27, 2014	<b>INSP. TIME:</b> 16:00
<b>OPERATOR:</b> Aggregate Industries - WCR, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Connie Davis	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	

<b>REASON FOR INSPECTION:</b> Citizen Complaint	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$670,602.00
<b>DATE OF COMPLAINT:</b> March 19, 2014	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> <i>Tyler O'Donnell</i>	<b>SIGNATURE DATE:</b> April 11, 2014

**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:** Hydrologic Balance

**PROBLEM/POSSIBLE VIOLATION:** Problem: Failure to minimize the disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area pursuant to 34-32.5-116(4)(h), and failure to protect areas outside of the affected land from slides or damage occurring during the mining operation pursuant to 34-32.5-116(4)(i). The Division cannot evaluate the effectiveness of TR-02 at mitigating the damage done to the prevailing hydrologic balance if the Agridrain is not operating properly.

**CORRECTIVE ACTIONS:** The Operator shall submit a Technical Revision within 30 days of the date of this report. The Operator must provide a plan to the Division with a weekly monitoring and maintenance plan for the Agridrain which will be reported annually to the Division. The revision shall also include a revised inlet screen design to prevent the Agridrain from excessive clogging. The monitoring plan must also contain an evaluation of the Agridrain's performance at relieving impacts to the prevailing hydrologic balance.

**CORRECTIVE ACTION DUE DATE:** 5/09/2014



### **OBSERVATIONS**

This inspection was conducted by Tyler O'Donnell and Tom Kaldenbach of the Division of Reclamation, Mining and Safety (Division/DRMS). The inspection was conducted as a follow-up to a citizen complaint about flooding on the adjacent landowner's property, owned by Fred Orr. The Division received an initial written complaint from Mr. Orr on September 14, 2011. The complaint explained that the Orr's property has been flooded since a slurry wall was constructed at the Hazeltine Mine in 2005. The Division received a more recent complaint from Mr. Orr by phone on or about March 19, 2014 explaining the property he owned was still submerged. Aggregate Industries - WCR, Inc., The Operator, was represented by Connie Davis during the inspection. Aggregate Industries - WCR, Inc.'s Contractor, Nick Silbaugh was present during the inspection. Fred Orr was present during the majority of the inspection. Steve O'Brian with Environment, Inc., the consultant representing Fred Orr, was present during the inspection. The inspection was conducted to observe conditions on Mr. Orr's property and observe the operation of an Agridrain that the Operator installed in August 2013 in an effort to drain Mr. Orr's Property.

The Hazeltine Mine is located in Adams County approximately 3 miles south of Henderson Colorado, just north of 104th Ave. and east of the South Platte River. The Hazeltine Mine is a 203.90-acre 112 Construction Materials Reclamation Permit. The approved post-mining land use is developed water resource. At the time of the inspection it was sunny. The majority of the mine was dry, the northeastern corner of the Hazeltine Mine had water stored in the pit.

The Division cited a problem in the October 5, 2011 inspection report for failure to minimize disturbance to the prevailing hydrologic balance pursuant to C.R.S. 34-32.5-116(4)(h). The Operator submitted TR-01 to provide a method of mitigating the effects to the prevailing hydrologic balance. TR-01 was submitted May 4, 2012 and was approved January 1, 2013. TR-02 was submitted to incorporate the Agridrain which is a permanent structure. The Agridrain is located in the northeastern part of the reservoir, in mining phase 1B. The Agridrain was installed as a surface water control structure. TR-02 proposed that the Agridrain would lower the water level near the Orr property to an elevation of 5038.59 feet above sea level. TR-02 was approved on July 1, 2013; the approval of TR-02 supersedes TR-01. The Operator's representative stated that the construction of the Agridrain was completed in August 2013. Exhibit A of TR-02 identifies the following elevations:

Location	Elevation (ft) above sea level
Highest point of the Orr property	5042.5
Lowest point of the Orr property	5038.5
Proposed water elevation outside of the surly wall	5038.59

The inspection began at the Orr property. The inspection consisted of a visual examination of the Orr property and a discussion of the ongoing issues detailed in the written complaint. The visual inspection of the Orr property found that the land surface was wet. Portions of the Orr property were supporting hydrophytic vegetation. The Division believes the lowest point of the Orr property is located in the northwest corner with an approximate elevation of 5038.5 feet. The northwest corner of the Orr property was submerged (see photo 1). Based on visual estimates portions of the Orr property was covered by 1 to 2 feet of water

Following the investigation at the Orr property, the Division entered the mine site to observe the operation of the Agridrain. Water was flowing through the Agridrain, but the screen on the inlet pipe was clogged. The Operator's contractor cleared debris from the inlet screen of the Agridrain, resulting in an increased flow through the Agridrain. The Operator's contractor stated that the Agridrain would function better when the inlet screen is cleared of debris. The Operator's contractor committed to providing photos to the Division of the water level at the inlet pipe within a few days after the inspection. The contractor stated that a lower water level will be evident in the photos he plans to provide to the Division. The photos will be compared to the photos the Division took during the inspection (see photos 5 and 6.)

### **CONCLUSION**

At the present time it appears that the Agridrain has not lowered the water level to the elevation predicted in TR-02. The Division believes the Operator has failed to resolve the problem cited in the October 5, 2011 inspection report. That problem was failure to minimize the disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area pursuant to 34-32.5-116(4)(h), and failure to protect areas outside of the affected land from slides or damage occurring during the mining operation pursuant to 34-32.5-116(4)(i). The Operator shall submit an application for a Technical Revision, which sets forth a weekly monitoring and maintenance plan for the Agridrain, with annual reporting of the monitoring results to the Division. The revision shall also include a revised inlet screen design to prevent the Agridrain from becoming blocked by debris. The Operator shall submit the technical revision by May 9, 2014. The Division will conduct a follow up inspection in mid May, 2014 to observe water levels at the Orr property and observe the water level at the Agridrain Inlet.



## PHOTOGRAPHS



**Photo 1:** View looking east/southeast from the west side of the bull seep. The tree in the center of the photo is near the northwest corner of the Orr property.



**Photo 2:** View looking west from north central part of the Orr property.





**Photo 3:** View looking northwest from the ditch access road. The Agridrain is near the center of the photo.



**Photo 4:** The Agridrain outlet on the inside of the Slurry wall.





**Photo 5:** Agridrain inlet on the outside of the slurry wall. This photo was taken after the inlet was cleared of debris. Water depth is estimated to be 2 to 4 inches above the inlet pipe.



**Photo 6:** Agridrain inlet close up. This photo was taken after the inlet was cleared of debris.

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

Connie Davis  
Aggregate Industries - WCR, Inc.  
1707 Cole Blvd., Ste. 100  
Golden, CO 80401

CC: Tom Kaldenbach, DRMS  
Tony Waldron, DRMS

Steve O'Brian  
Environment, Inc.  
7985 Vance Dr., #205A  
Arvada, CO 80003

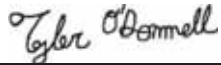
Fred Orr  
Equity Funding, LLC  
5040 Acoma St  
Denver, CO 80216





**COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY**  
**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> Hazeltine Mine	<b>MINE/PROSPECTING ID#:</b> M-2004-031	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Adams
<b>INSPECTION TYPE:</b> Mineral Monitoring	<b>INSPECTOR(S):</b> Tyler V. O'Donnell	<b>INSP. DATE:</b> May 27, 2014	<b>INSP. TIME:</b> 13:30
<b>OPERATOR:</b> Aggregate Industries - WCR, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Connie Davis	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	
<b>REASON FOR INSPECTION:</b> Citizen Complaint	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$670,602.00	
<b>DATE OF COMPLAINT:</b> March 19, 2014	<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> June 4, 2014	

**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:** Hydrologic Balance

**PROBLEM/POSSIBLE VIOLATION:** Problem: The slurry wall installed in 2005, lacking means of ground water conveyance around the pit, is causing ground water mounding and elevated ground water levels upgradient of the site. This is causing the water table to rise to the point that areas that were dry before the slurry wall installation are now saturated, and in some places inundated. This represents an Enforcement Problem, and could escalate to a Possible Violation if allowed to continue unabated. The following sections of the Colorado Mined Land Reclamation Act apply: (1) §34-32.5-116(4)(h) for failure to minimize disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quality and quantity of water in surface and groundwater systems during the mining operation, and (2) §34-32.5-116(4)(i) for failure to protect areas outside of the affected land from slides or damage occurring during the mining operation.

## **OBSERVATIONS**

This inspection was conducted by Tyler O'Donnell of the Division of Reclamation, Mining and Safety (Division/DRMS). This inspection was conducted as a follow-up to the Division's March 27, 2014 inspection. Aggregate Industries - WCR, Inc., The Operator, was represented by Connie Davis during the inspection. Aggregate Industries - WCR, Inc.'s Contractor, Nick Silbaugh was present during the inspection. Fred Orr was present during the inspection. Steve O'Brian with Environment, Inc., the consultant representing Fred Orr, was present during the inspection. The primary reason the Division conducted a follow-up inspection was to verify the performance of the Agridrain, after the Agridrain was cleared of debris during the March 27, 2014 inspection.

The inspection began at the Orr property. The inspection consisted of a visual examination of the Orr property and a discussion of the ongoing issues detailed in the written complaint. The visual inspection of the Orr property found that the land surface was still wet. The Division believes that the water level in the depression in the central part of the Orr property has dropped approximately 4 to 6 inches since the Division's March 27, 2014 inspection. The Division came to this conclusion by comparing photos taken during the March 27, 2014 (see photo 1) inspection and this inspection (see photo 2 and 3).

Following the investigation at the Orr property, the Division entered the mine site with the intention to observe the operation of the Agridrain. The Operator's representative explained to the Division that the haul/mine road to the northeast corner of the mine site was impassible due to recent rains. The Operator's representative stated the best option to access the Agridrain would be to drive on the bike path along the western edge of the permitted mine site. The Division decided not to drive on the bike path to access the northeast corner of the mine site where the Agridrain is located. Therefore the Division was not able to access the Agridrain during the inspection. The Operator's representative provided photos of the new inlet screen design and the staff gauge which will be incorporated into the approved permit through TR-03. The Operator's representative stated they would email the photos of the new inlet screen and the staff gauge to the Division.

## **Conclusion**

Based on observations made during the inspection it appears that the water level on the Orr's property has dropped, drying portions of that land surface that were previously submerged during the March 27, 2014 inspection. However at this time the Division believes that the Operator has failed to resolve the problem cited in the October 5, 2011 inspection report for failure to minimize disturbance to the prevailing hydrologic balance pursuant to C.R.S. 34-32.5-116(4)(h). Although it appears at the present time that the Operator could be making progress resolving this problem. The Division requested the Operator to commit to weekly monitoring of the Agridrain during the March 27, 2014 inspection report. The Operator submitted TR-03 on May 15, 2014. TR-03 will incorporate in to the approved permit a weekly monitoring and maintenance plan for the Agridrain and an improved inlet screen design. TR-03 also incorporated a surface water monitoring gauge (staff gauge at the inlet pipe of the Agridrain). The Operator will report the results of the monitoring plan to the Division monthly. The results of the monitoring and maintenance plan will help the Division determine if the Operator is minimizing the disturbance to the prevailing hydrologic balance.



## PHOTOGRAPHS



**Photo 1:** Photo of the depression in the central part of the Orr property taken on March 27, 2014.



**Photo 2:** Photo of the depression in the central part of the Orr property taken on May 27, 2014.





**Photo 3:** Photo of the depression in the central part of the Orr property taken on May 27, 2014.



**Photo 4:** View looking northwest from the ditch access road. The Agridrain is near the center of the photo.



(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>PB</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>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(SB) COMPLETE INSP---- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	(ST) STIPULATIONS----- <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**

Connie Davis  
Aggregate Industries - WCR, Inc.  
1707 Cole Blvd., Ste. 100  
Golden, CO 80401

CC: Tom Kaldenbach, DRMS

Tony Waldron, DRMS

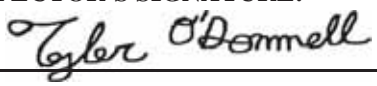
Steve O'Brian  
Environment, Inc.  
7985 Vance Dr., #205A  
Arvada, CO 80003

Fred Orr  
Equity Funding, LLC  
5040 Acoma St  
Denver, CO 80216



**COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY**  
**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> Hazeltine Mine	<b>MINE/PROSPECTING ID#:</b> M-2004-031	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Adams
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Tyler V. O'Donnell	<b>INSP. DATE:</b> October 31, 2014	<b>INSP. TIME:</b> 09:00
<b>OPERATOR:</b> Aggregate Industries - WCR, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Connie Davis	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	
<b>REASON FOR INSPECTION:</b> Citizen Complaint	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$670,602.00	
<b>DATE OF COMPLAINT:</b> On or about March 19, 2014	<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> November 5, 2014	

**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:** Hydrologic Balance and Off-site Damage

**PROBLEM:** Alluvial groundwater is mounding against the slurry wall on the upgradient side of the site and causing flooding on a neighbor's property. A mitigation plan is needed to ensure compliance with C.R.S. 34-32.5-116(4)(h) and (i).

**CORRECTIVE ACTIONS:** Submit to DRMS by November 25, 2014 a groundwater mounding mitigation plan as either a Technical Revision or Amendment to the permit. The plan must include:

- 1) A detailed description of the measures the operator will take to reduce groundwater mounding outside the Hazeltine Mine to a level that eliminates flooding on the Orr property,
- 2) A time schedule for implementing the plan, and
- 3) Enough information for DRMS to estimate the cost of implementing the plan.

**CORRECTIVE ACTION DUE DATE:** 11/25/14



## **OBSERVATIONS**

This inspection was conducted by Tyler O'Donnell of the Division of Reclamation, Mining and Safety (DRMS). The inspection was conducted as a follow-up to a citizen complaint about flooding on the adjacent landowner's property, owned by Fred Orr. DRMS received an initial written complaint from Mr. Orr on September 14, 2011. The complaint explained that the Orr's property has been flooded since a slurry wall was constructed around the Hazeltine Mine in 2005. DRMS received a more recent complaint from Mr. Orr by phone on or about March 19, 2014 explaining that his property adjacent to the Hazeltine mine was still submerged. Aggregate Industries - WCR, Inc., the Operator, was represented by Connie Davis during the inspection. Aggregate Industries - WCR, Inc.'s Contractor, Nick Silbaugh was present during the inspection. Fred Orr was present during the inspection. Steve O'Brian with Environment, Inc., the consultant representing Fred Orr, was also present during the inspection.

The Hazeltine Mine is located in Adams County approximately 3 miles south of Henderson, Colorado, just north of 104th Ave. and east of the South Platte River. The Hazeltine Mine is a 203.90-acre 112 Construction Materials Reclamation Permit. The approved post-mining land use is developed water resource. At the time of the inspection it was sunny. The majority of the mine was dry; the northeastern corner of the Hazeltine Mine had water stored in the pit.

The inspection began at the Orr property. The inspection consisted of a visual examination of the Orr property and a discussion of the ongoing issues detailed in the complaint. The visual inspection of the Orr property found that portions of the land surface remain submerged. DRMS visually estimates that the water level on the Orr property has dropped approximately one foot since the March 27, 2014 inspection (see photo 1 from the March 27, 2014 inspection, compared to photo 2, which was taken during the October 31, 2014 inspection). DRMS believes the lowest point of the Orr property is located in the northwest corner with an approximate elevation of 5,038.5 feet. The northwest corner of the Orr property remains submerged (see photo 3 from the March 27, 2014 inspection, compared to photo 4, which was taken during the October 31, 2014 inspection). It appears that the groundwater elevation in the northwest corner of the Orr property has not changed much since the March 27, 2014 Inspection. Based on visual estimates made during the current inspection, portions of the Orr property were still covered by 1 to 2 feet of water.

Following the investigation at the Orr property, DRMS entered the mine site to observe the operation of the Agridrain that was installed in the northeast end of the Hazeltine Mine for the purpose of draining the Orr Property. Water was flowing through the Agridrain (see photo 5 from the March 27, 2014 inspection compared to photo 6, which was taken during the October 31, 2014 inspection). It appears that the Agridrain has lowered the water level in the surrounding wetlands by approximately one foot.

## **CONCLUSION**

Although it appeared during the current inspection that the Agridrain has lowered the water level to the elevation predicted in Technical Revision No.2 (TR-02), the Orr property remains locally submerged, resulting in the Operator's failure to minimize disturbance to the prevailing hydrologic balance.

The Operator monitors alluvial groundwater levels in three monitoring wells located near the Orr property. Monitoring well MW-2 is located along the west edge of the Orr property. Monitoring wells MW-11A and MW-11B are located near the northeast corner of the Orr property. All three wells showed significant rises in alluvial groundwater levels after the construction of the slurry wall around the Hazeltine Mine in 2005. The water level in MW-2 rose from approximately 5,035 feet in the late winter and spring of 2004 to approximately 5,042 feet in the fall of 2006. MW11-A rose from approximately 5,038 feet in the late winter and spring of

2004 to approximately 5,040.20 feet in the fall of 2005. MW11-B rose from approximately 5,036 feet in the late winter and spring of 2004 to approximately 5039 feet in the fall of 2005. The Operator has indicated in several of the annual reports containing the results of the groundwater monitoring plan that the wells are inaccessible due to saturated conditions at the surface. DRMS believes the saturated conditions at the Orr property and the increases in alluvial groundwater levels in the monitoring wells are the result of alluvial groundwater mounding against the slurry wall.

Based on the observations made during this inspection and review of groundwater monitoring data, DRMS cites the mounding of alluvial groundwater on the outside of the Hazeltine Mine as a problem, and requires as a corrective action that the Operator of the mine submit to DRMS by November 25, 2014 a groundwater mounding mitigation plan. The plan must be submitted as a Technical Revision or Amendment to the permit and must include the following three items:

- 1) A detailed description of the measures the operator will take to reduce groundwater mounding outside of the Hazeltine Mine to a level that eliminates flooding on the Orr property,
- 2) A time schedule for implementing the plan, and
- 3) Enough information for DRMS to estimate the cost of implementing the plan (for establishing the amount of required financial warranty).

If the corrective action is not completed as described above, then DRMS may pursue enforcement action for:

- 1) Failure to minimize disturbance to the prevailing hydrologic balance in the surrounding area (C.R.S. 34-32.5-116(4)(h)), and
- 2) Failure to protect areas outside the affected land from damage (C.R.S. 34-32.5-116(4)(i)).



**PHOTOGRAPHS**



**Photo 1:** Submerged depression on the west side of the Orr property, photo taken on March 27, 2014.



**Photo 2:** Submerged depression on the west side of the Orr property, photo taken on October 31, 2014.





**Photo 3:** Northwest corner of the Orr property, photo taken on March 27, 2014.



**Photo 4:** Northwest corner of the Orr property, photo taken on October 31, 2014.





**Photo 5:** Agridrain, photo taken on March 27, 2014.



**Photo 6:** Agridrain, photo taken on October 31, 2014.

### GENERAL INSPECTION TOPICS

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

(AR) RECORDS----- <u>N</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>N</u>
(HB) HYDROLOGIC BALANCE----- <u>PB</u>	(BG) BACKFILL & GRADING----- <u>N</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>N</u>
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(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>PB</u>	(ST) STIPULATIONS----- <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

Connie Davis  
Aggregate Industries - WCR, Inc.  
1687 Cole Blvd., Ste. 300  
Golden, CO 80401

cc: Tom Kaldenbach, DRMS  
Tony Waldron, DRMS

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Denver, CO 80216





## COLORADO

Division of Reclamation,  
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

February 3, 2015

Connie Davis  
Aggregate Industries - WCR, Inc.  
1687 Cole Blvd., Ste. 300  
Golden, CO 80401

**Re: Aggregate Industries - WCR, Inc., DRMS File No. M-2004-031,  
Hazeltine Mine, Reason to Believe a Violation Exists and Notice of Board Hearing**

Dear Ms. Davis:

The Division of Reclamation, Mining and Safety (Division) inspected land next to the above-referenced site on October 31, 2014 (please see the previously provided inspection report). Based on observations described in the inspection report, the Division has reason to believe the Operator has failed to minimize disturbances to the prevailing hydrologic balance of the surrounding area, and has failed to protect areas outside of the affected area from damages. We believe these are violations of:

- C.R.S. 34-32.5-116(4)(h), for failure to minimize disturbance to the prevailing hydrologic balance.
- C.R.S. 34-32.5-116(4)(i), for failure to protect areas outside of the affected land from slides or damages occurring during the mining operation.

Therefore, the Division has reason to believe that a violation exists to the Mined Land Reclamation Act, C.R.S. 34-32.5-101 *et seq.*, and have scheduled this matter to appear before the Mined Land Reclamation Board.

A Formal Public Hearing will be held during the March 25-26, 2015 Board Meeting for consideration of these possible violations. The hearing will be held in Room 318 of 1313 Sherman Street, Denver, Colorado, beginning at 9:00 a.m. on March 25, 2015 or as soon thereafter as the matter can be considered. At that hearing you will have the opportunity to present your defense.

**This is an important legal proceeding and you must appear in person for this hearing. If you fail to appear, an order and money judgment may be entered against you. In addition, failure to appear at the hearing may result in legal consequences including, but not limited to, loss of party status and your ability to seek reconsideration from the Board or seek judicial appeal in district court.**



February 3, 2015

If the Board finds a violation at this hearing, it may issue a Cease and Desist Order and/or assess a Civil Penalty in the amount of \$100.00 to \$1,000.00 for each day of violation pursuant to C.R.S. 34-32.5-124(7). If you have evidence indicating that the possible violations noted above do not exist or have been corrected, please provide it to the Division as soon as possible or bring it to the hearing.

All parties have an opportunity to review and comment on a draft of the Board's Order before it becomes final. If you wish to do so, you must provide the Board with a written request to review the draft Order prior to or at the time of your hearing, or you must inform the Board orally during the hearing that you request to review the draft Order. The Board's attorney must receive your comments on the draft Order within three calendar days of the date the draft Order is e-mailed, unless that deadline is extended by the Board's attorney. Please submit all comments in writing, by e-mail or fax, to Mr. John Roberts, [jj.roberts@state.co.us](mailto:jj.roberts@state.co.us), fax: (720) 508-6037.

Please note that the Division has requested and will be allowed to review and comment on the draft Board Order.

The Board's agenda may not be finalized until the week of the Board meeting. Therefore, we recommend you contact the Board's Secretary, Johnie Abad, at (303) 866-3567, extension 8136, on Monday March 23, 2015 to confirm the specific date for the hearing.

If you have any questions about this letter or the hearing, please contact Tyler O'Donnell at (303) 866-3567, extension 8131.

Sincerely,



Virginia Brannon  
Division Director

CERTIFIED MAIL NO. 7014 0150 0000 9138 2852  
Return Receipt Requested

cc: Tony Waldron, DRMS  
Tom Kaldenbach, DRMS  
Jeff Fugate, AGO  
Tyler O'Donnell, DRMS



# Aggregate Industries – WCR, Inc. Hazeltine Mine DRMS File No. M-2004-031 Enforcement Hearing

## Possible Violation:

Failure to minimize disturbance to the prevailing hydrologic balance in the surrounding area, and failure to protect areas outside the affected land from damage.

## Mined Land Reclamation Board

March 25, 2015

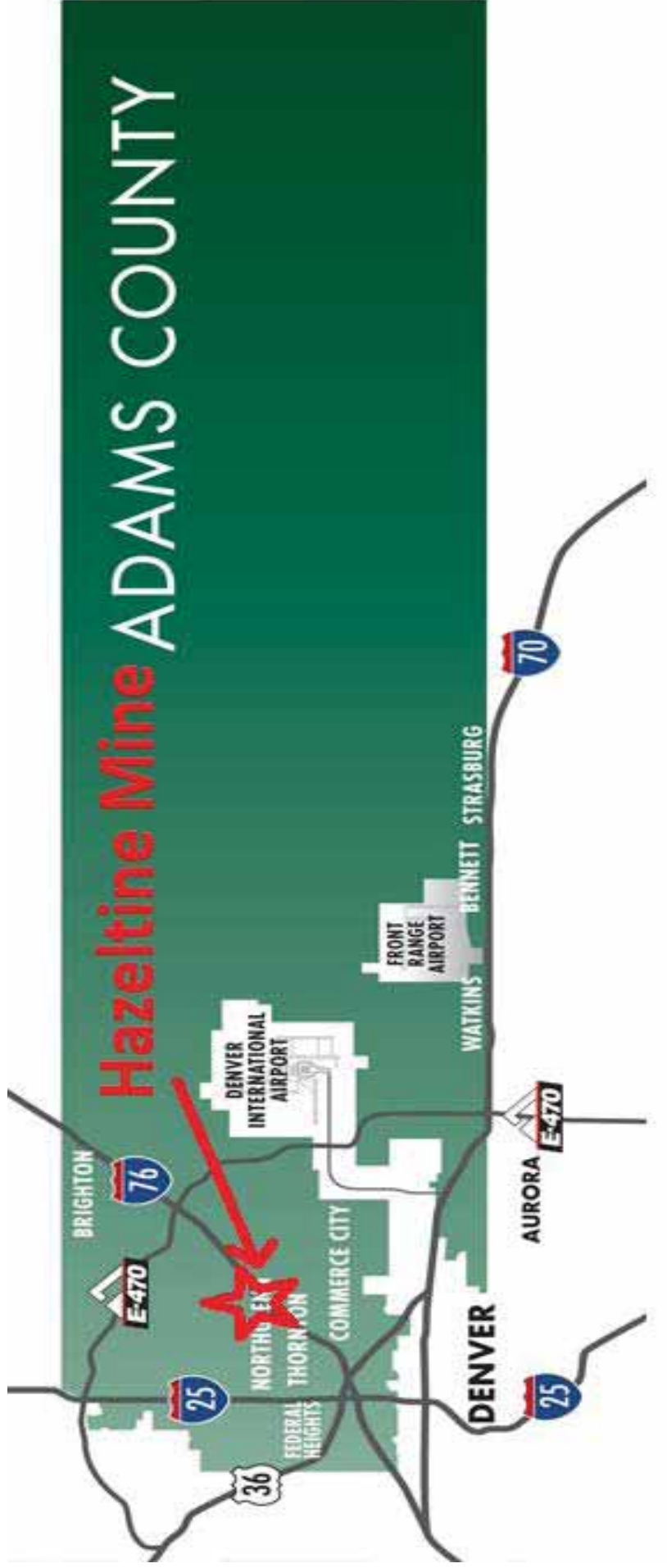
DRMS Staff Presentation by Tyler O'Donnell  
Environmental Protection Specialist

# Hazeltine Mine Summary

- Location: Adams County, 100 feet east of the South Platte River
- Permit area: 203.90 acres
- Post-mining land use: Water storage reservoir lined with a slurry wall (slurry walls are already installed)
  - A slurry wall is a liner that is installed around a pit for preventing water from flowing into the pit during mining.
  - A slurry wall also prevents water from flowing into the pit after mining when the pit is used for water storage.
  - A slurry wall is constructed by excavating a trench around the pit, and then placing a soil–bentonite slurry in the trench.

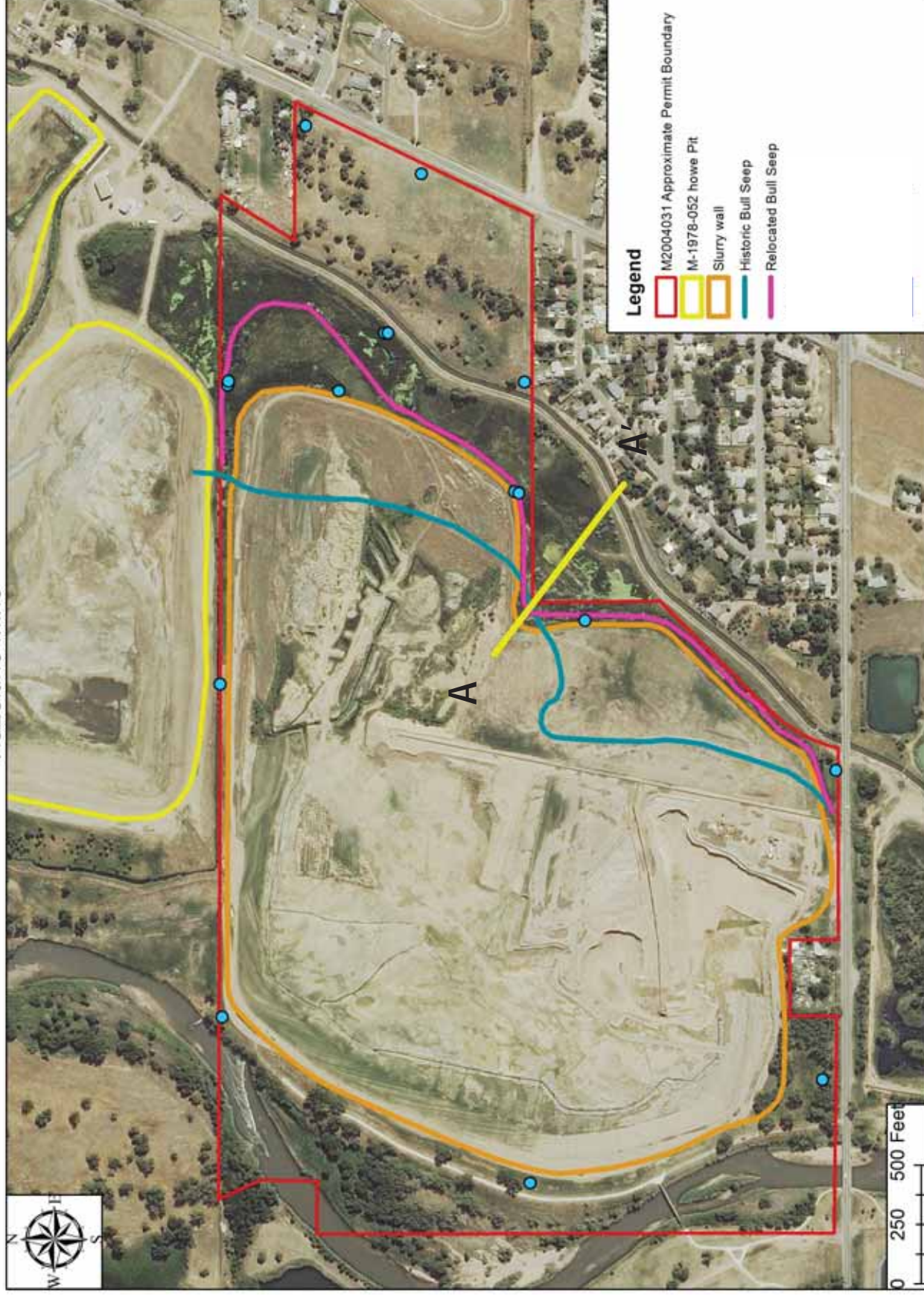


# Hazeltine Mine Location Map



# Site Map

Hazeltine Mine





# Chronology

- 2004 – DRMS issued the Hazeltine 112 Permit.
- Summer 2005 – Slurry wall was installed and completed.
- September 13, 2011 – Complaint from adjacent landowner (Orr) next to Hazeltine Mine.
- October 5, 2011 – DRMS Inspection Report.
  - Found groundwater mounding and saturated conditions on the historically dry property. Operator submitted pumping plan, but later was found infeasible.

# Chronology (continued)

- May 15, 2012 – DRMS Inspection Report
  - Found groundwater mounding and saturated conditions on the historically dry Orr property.
- May 30, 2013 – DRMS Inspection Report
  - Found groundwater mounding and saturated conditions on the historically dry Orr property.
- July 1, 2013 – Approval of TR-02
  - Installation of an Agridrain to control maximum water level.



# Chronology (continued)

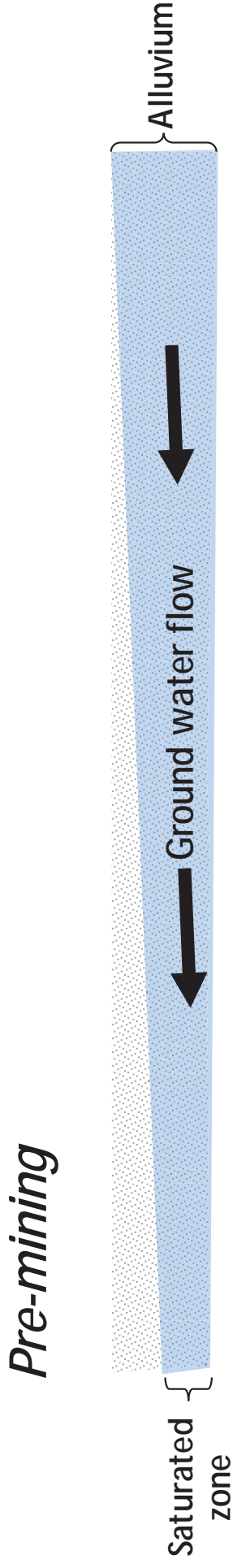
- March 27 and May 27, 2014 – DRMS Inspections
  - Found groundwater mounding and saturated conditions on the historically dry Orr property.
- May 15, 2014 – Approval of TR-03
  - New screen and Agridrain monitoring.

# Chronology (continued)

- October 31, 2014 – DRMS Inspection Report
  - Found groundwater mounding and saturated conditions on the historically dry Orr property.
  - DRMS required submittal of ground water mounding mitigation by Nov. 25, 2014
- February 3, 2015 – RTB letter mailed to Aggregate industries, regarding flooding of Orr property.



# What is Groundwater Mounding?

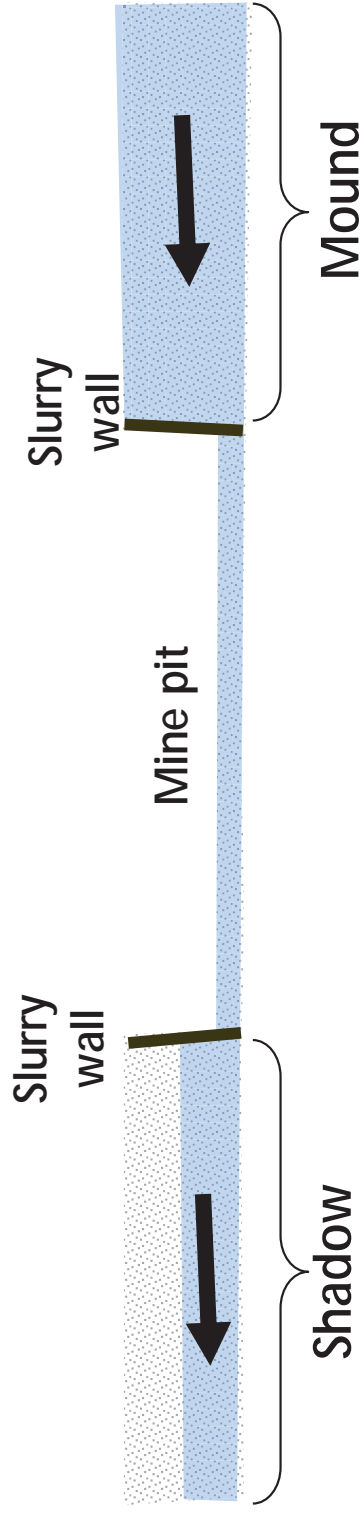


# What is Groundwater Mounding?

*Pre-mining*



*Post-mining*

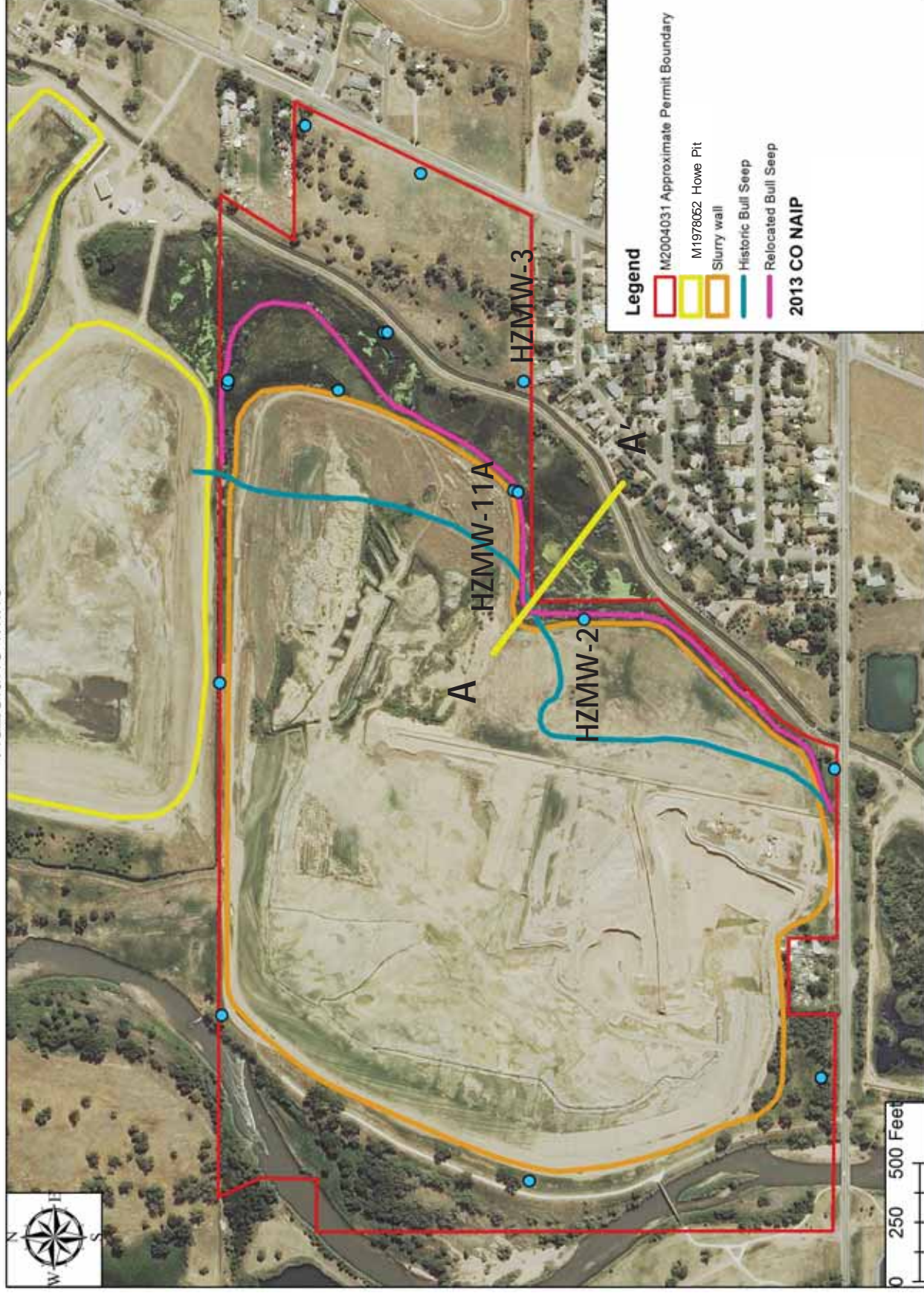


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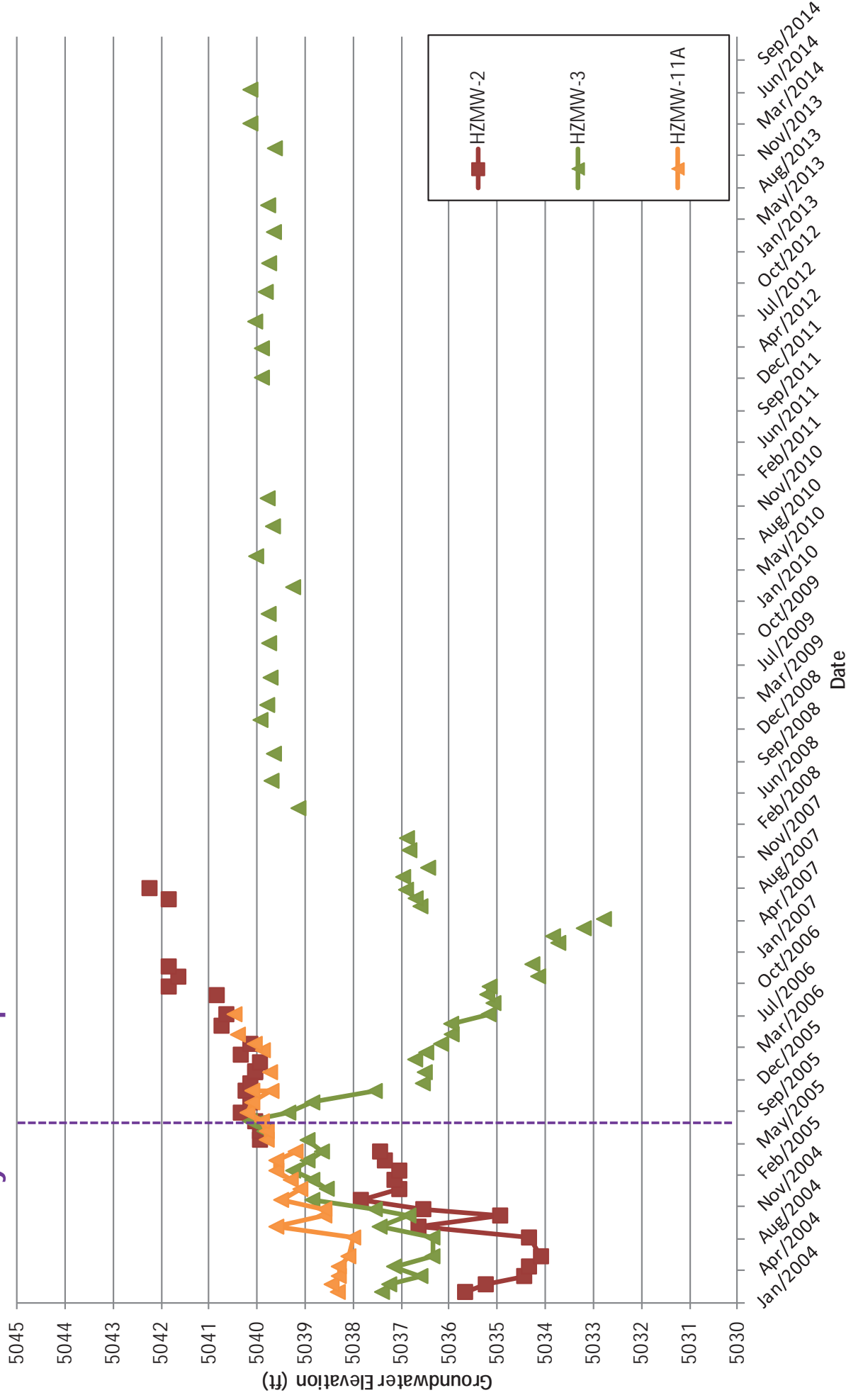
# Groundwater wells Near Orr Property

Hazeltine Mine



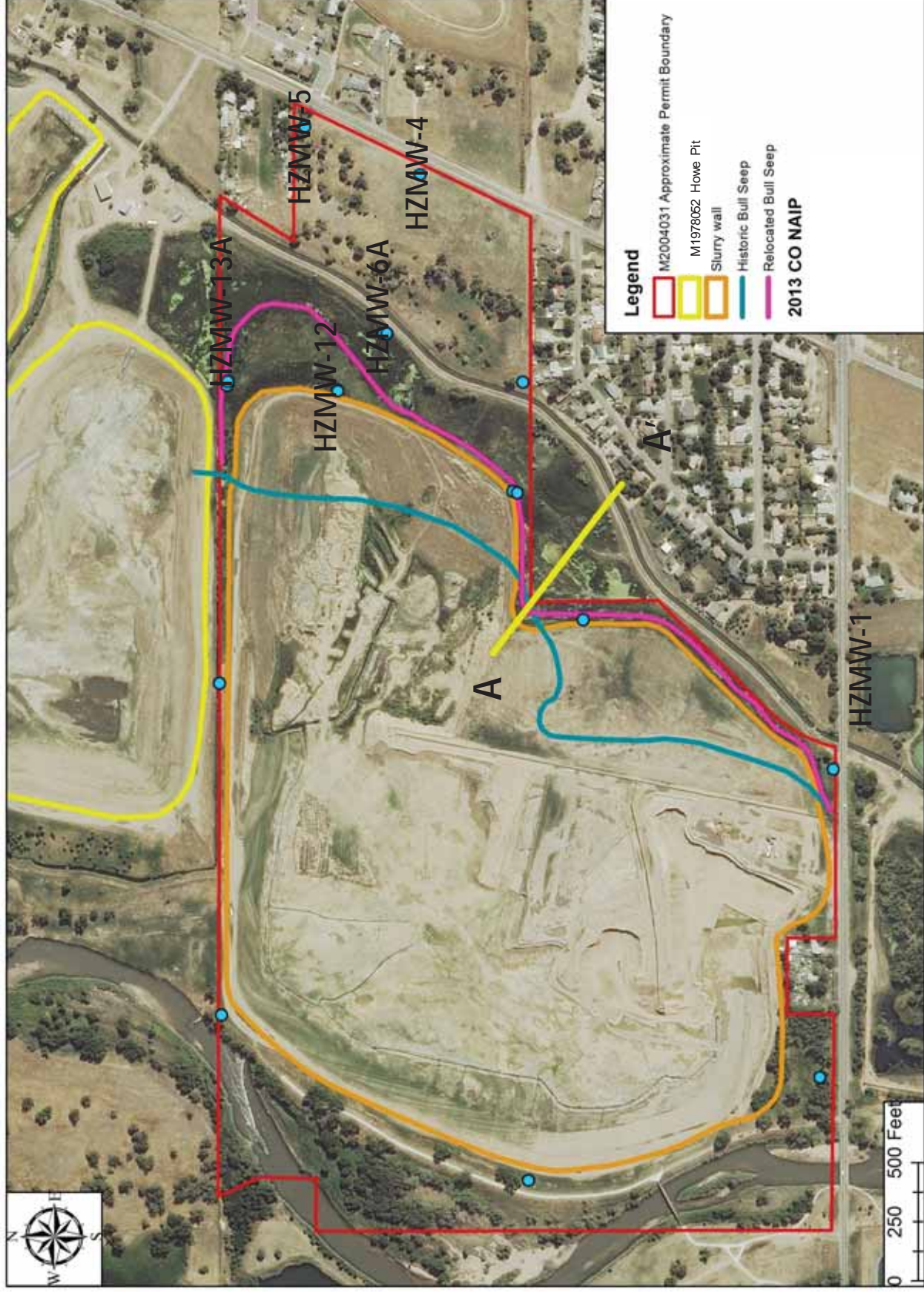
# Groundwater elevation in wells near Orr Property

Slurry wall completed



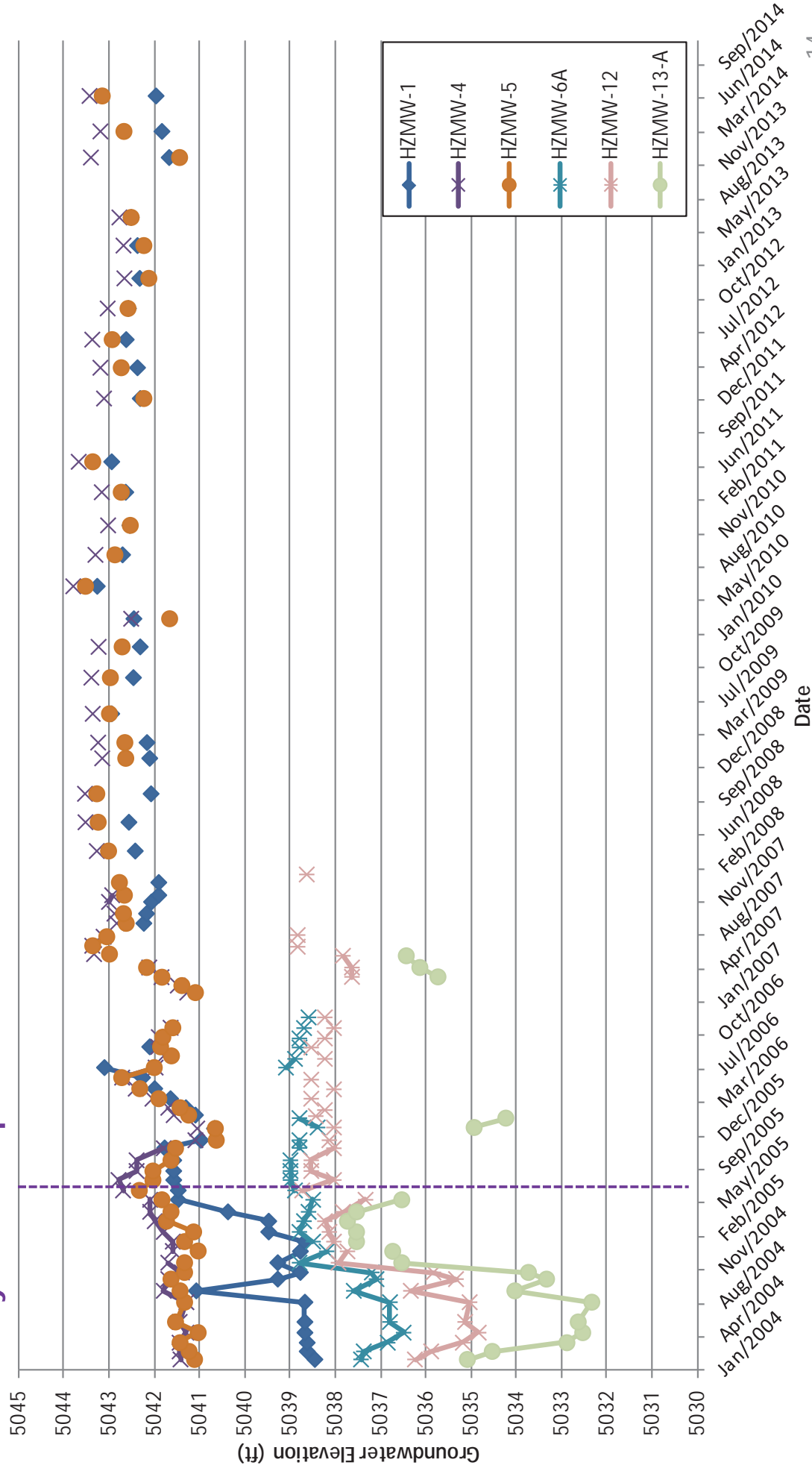


# Groundwater elevation in wells East of the Hazeltine Mine



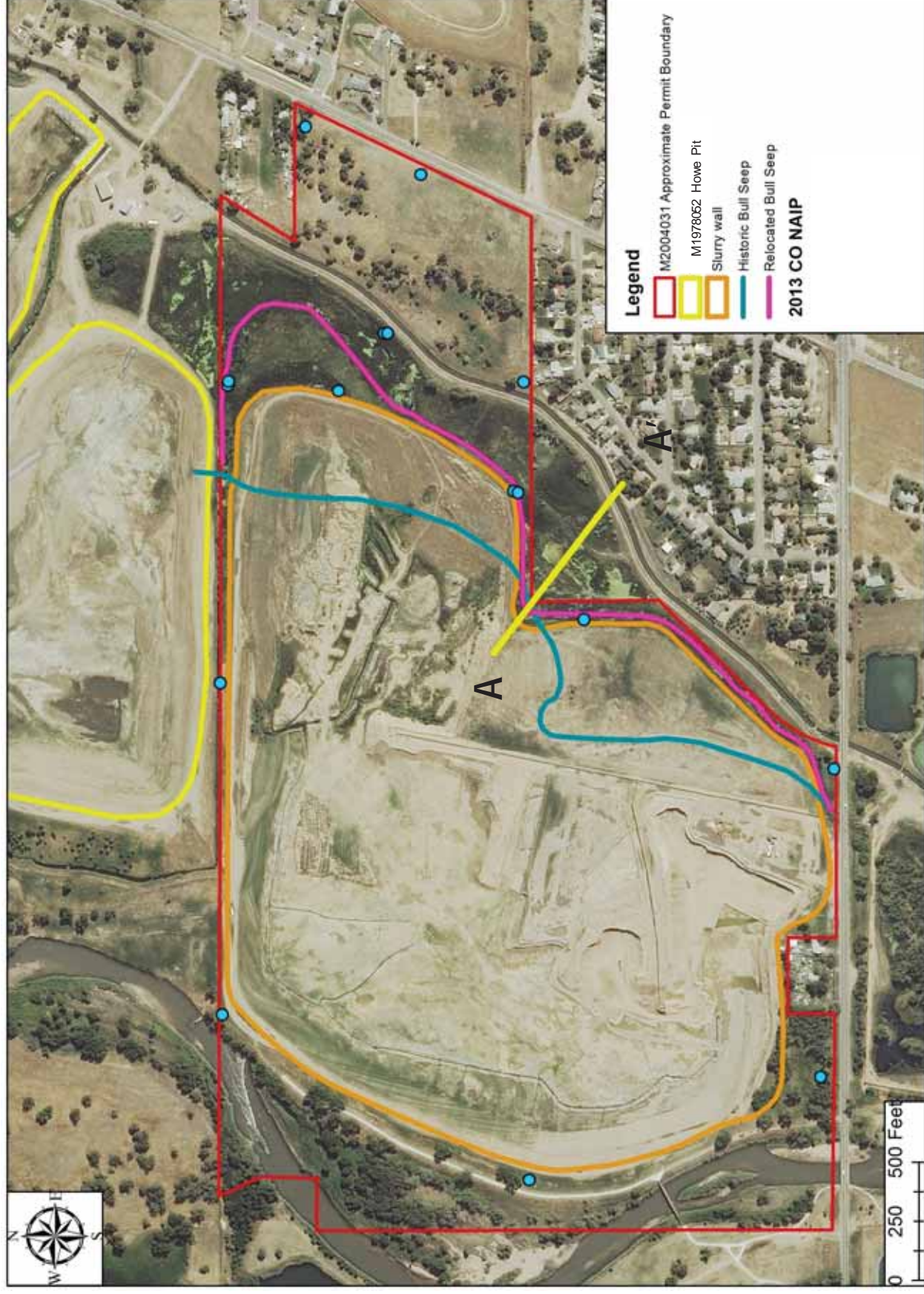
# Groundwater elevation in wells east of the Hazeltime Mine

Slurry wall completed

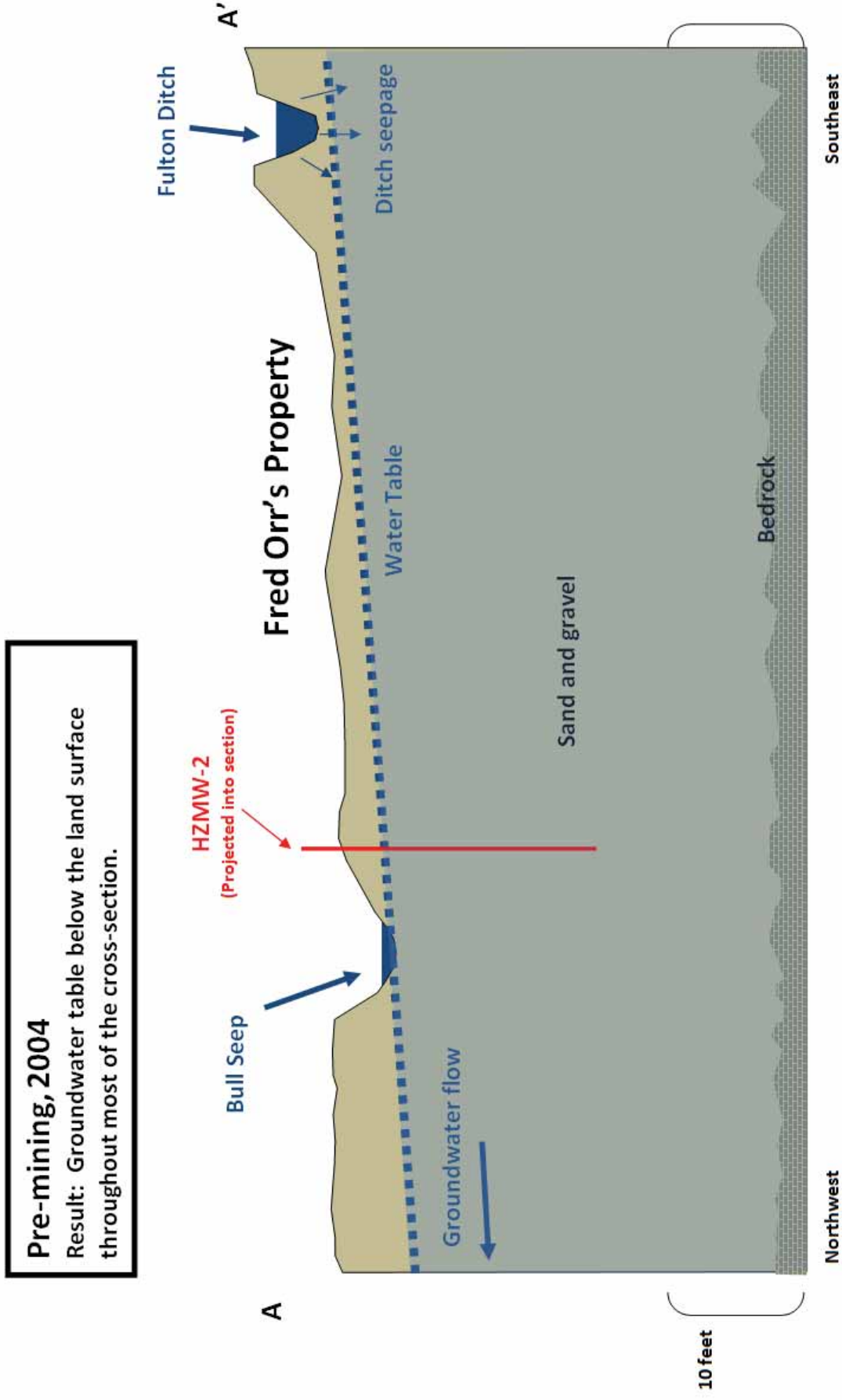




# Groundwater mounding at Hazelatine Mine



# Groundwater mounding at the Hazeltime Mine

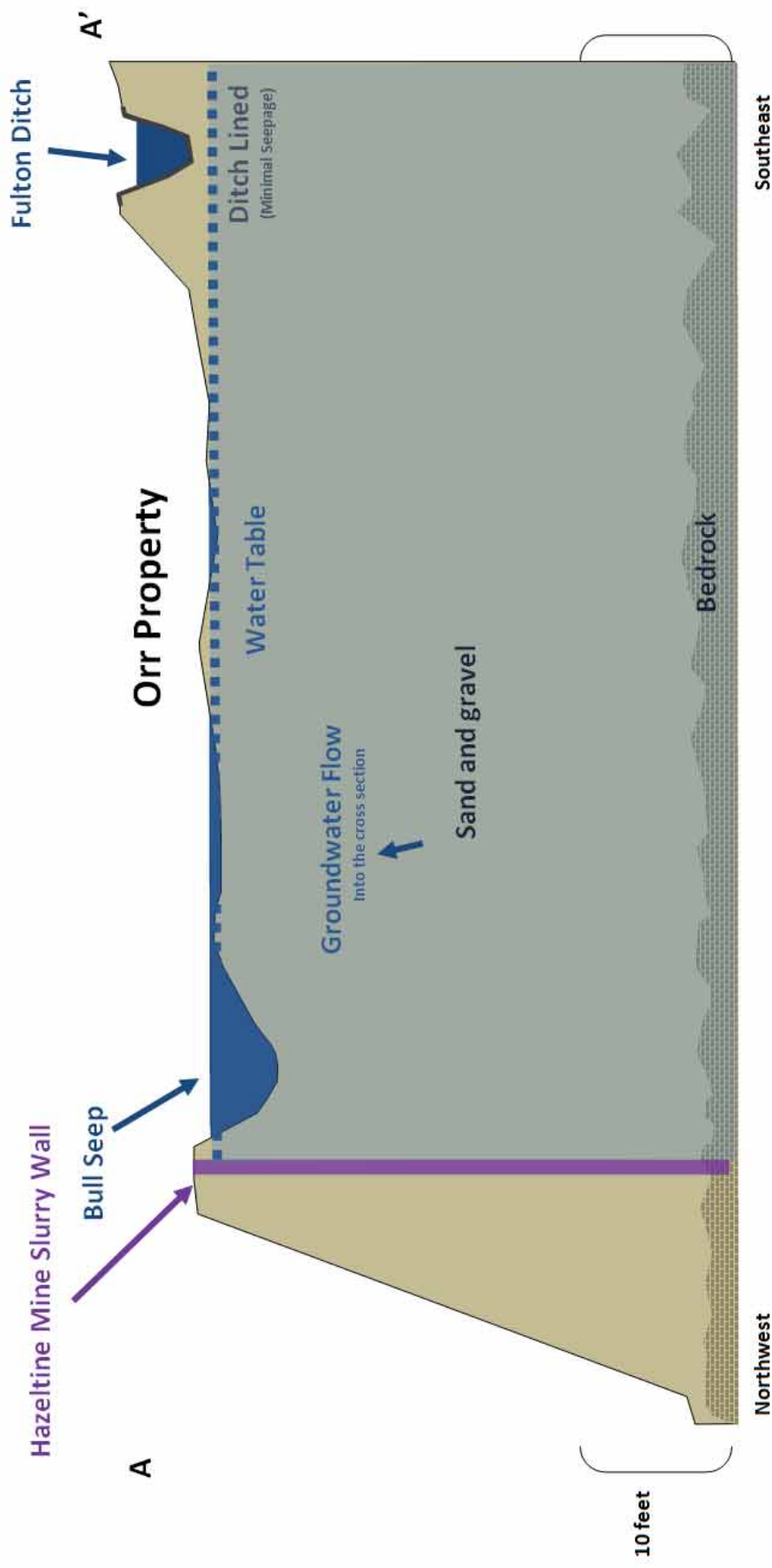




# Groundwater mounding at the Hazeltime Mine

Post-mining, 2014

Result: Groundwater table above the land surface throughout most of the Orr property.

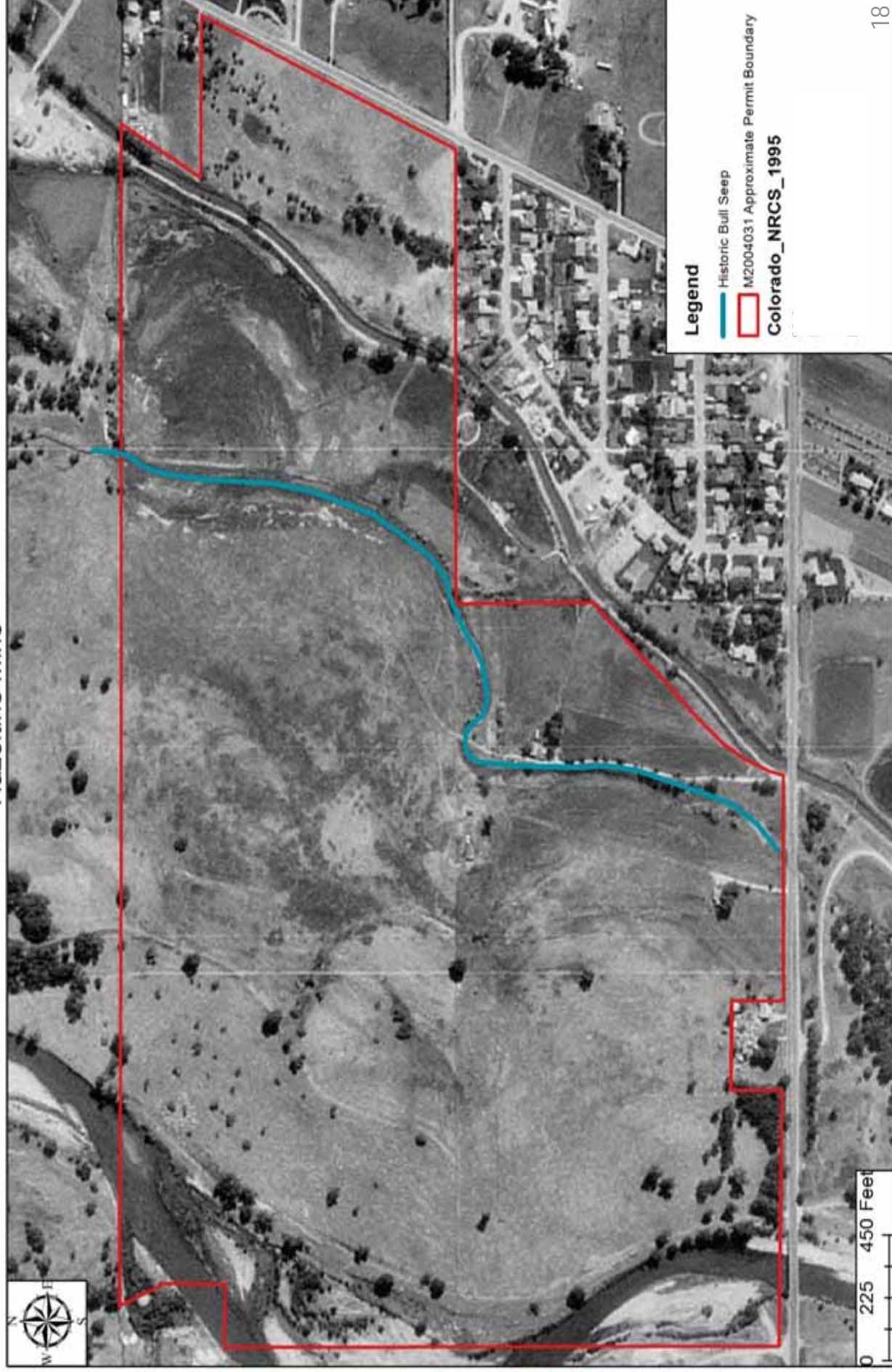


Northwest

Southeast

# Pre-mining Map

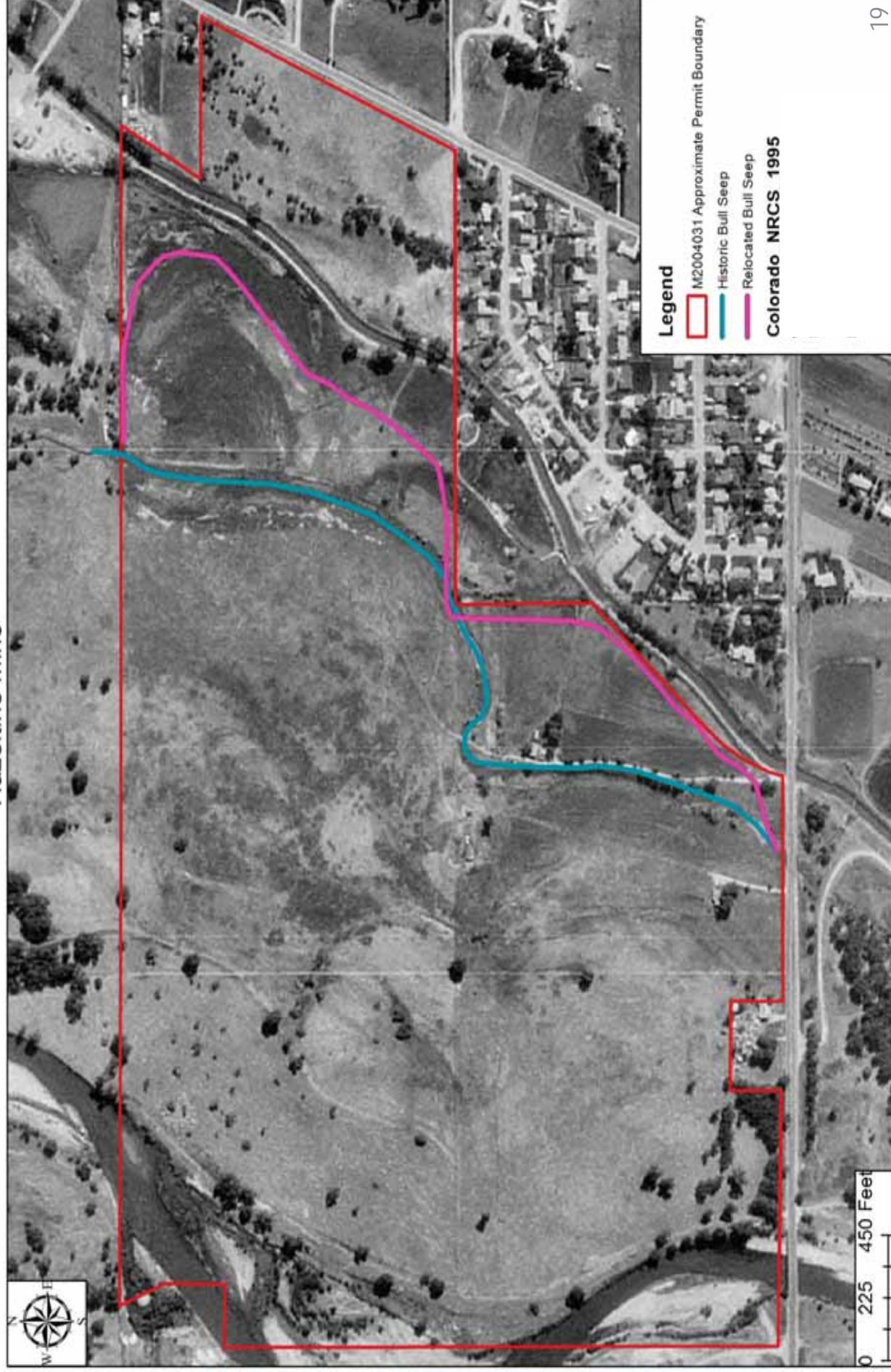
Hazeltine Mine





# Pre-mining Map

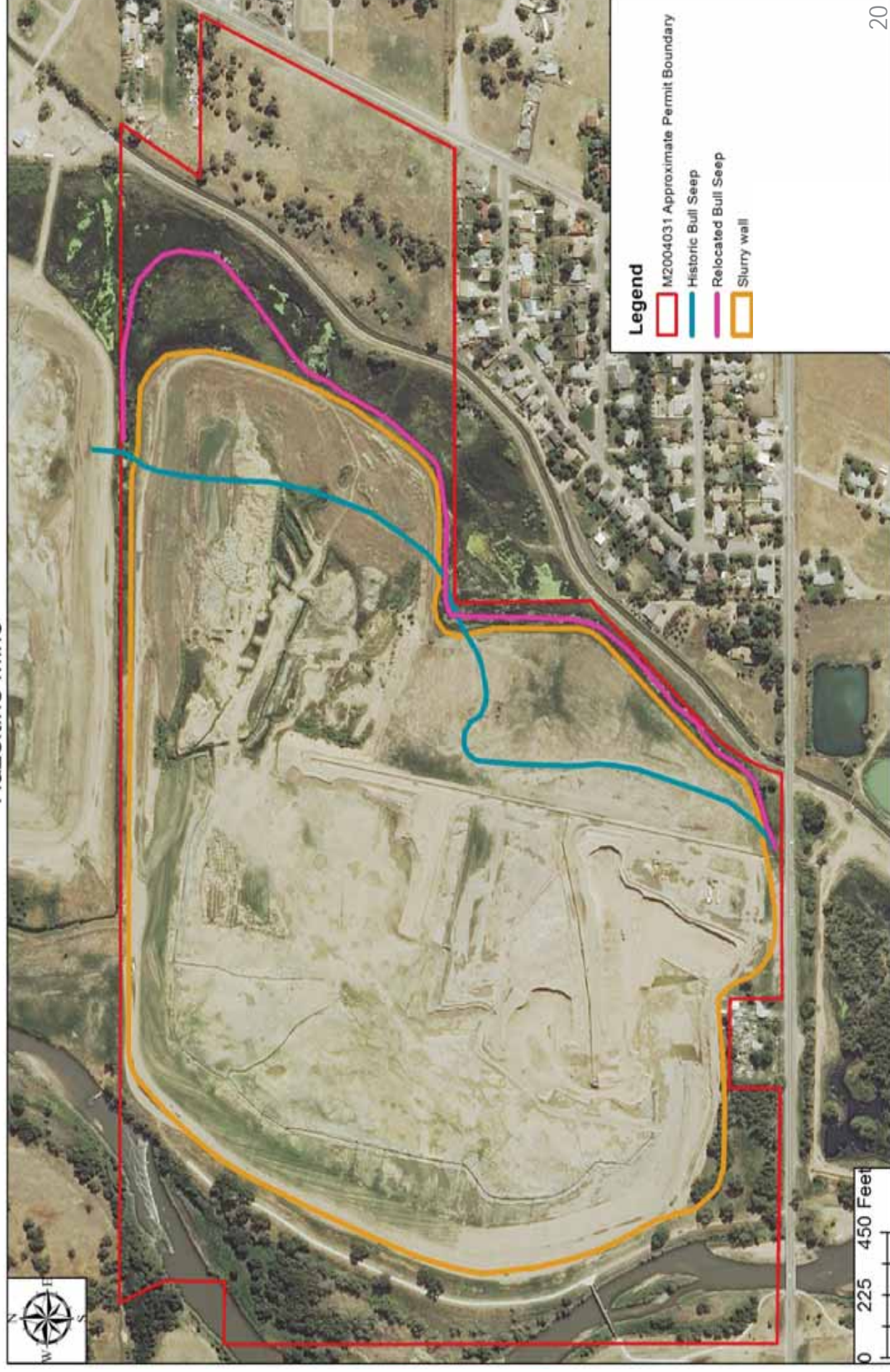
Hazeltine Mine





# Post-mining Map

Hazeltine Mine





# 2002 - Orr Property, Pre-Mining





# 2005 - Orr Property





# 2006 - Orr Property





# 2008- Orr Property





# 2010 - Orr Property





# 2012 - Orr Property





# 2014 - Orr Property



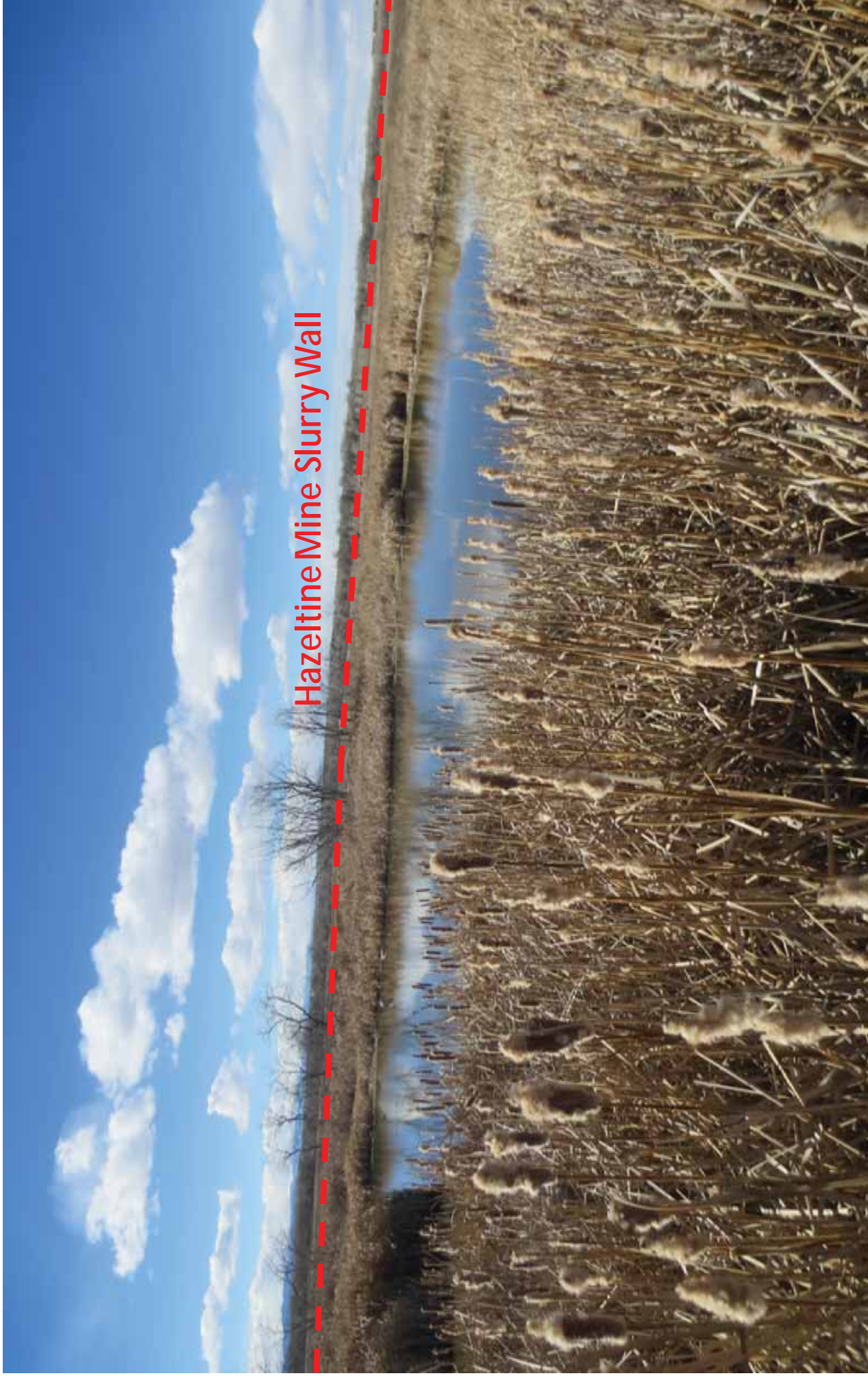


# Inspection May 27, 2014





# Inspection March 27, 2014





# Inspection October 31, 2014





# Inspection October 31, 2014





# Inspection October 31, 2014



Hazeltine Mine Slurry Wall



# C.R.S. 34-32.5-116(4)

- (h) Disturbances to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quality and quantity of water in surface and groundwater systems, both during and after the mining operation and during reclamation, shall be minimized.
- (i) Areas outside of the affected land shall be protected from slides or damage occurring during the mining operation and reclamation.

## Evidence for violation of C.R.S. 34–32.5–116(4)

- Observed flooding in Orr pasture.
- Flooding is caused by groundwater mounding.
- Hazeltine Mine is a major cause of the groundwater mounding, as indicated by the hydrogeologic model (cross-section) and historical data.



# Division Recommendations

## Violation:

Find the Operator in violation of:

- C.R.S. 34–32.5–116(4)(h) for failure to minimize the disturbance to the prevailing hydrologic balance in the surrounding area, and
- C.R.S. 34–32.5–116(4)(i) for failure to protect areas outside of the affected land from damage.
- Violation of a statute constitutes violation of permit provision 1.

# Division Recommendations (continued)

## Civil Penalties:

- Pursuant to C.R.S. 34–32.5–124(7) a person who violates any provision of a permit shall be subject to a civil penalty of not less than \$100.00 per day, nor more than \$1,000.00 per day for each day during which such violation occurs.
- In this matter, the Board may assess a civil penalty of \$14,500.00 to \$145,000.00 for 145 days of violation at \$100.00 to \$1,000.00 per day.



# Division Recommendations (continued)

## Civil Penalties:

- Assess a civil penalty of \$750.00 per day of violation for 145 days for the time period extending from the October 31, 2014 inspection to the date this matter is scheduled for a hearing (March 25, 2015), for a civil penalty amount of \$108,750 with all but \$\_\_\_\_\_ suspended if the Operator complies with the corrective actions.

- Note:

- Failure to submit the unsuspended portion of the civil penalty by the date specified in the Board Order will result in immediate submittal of those penalties to State collections.
- Payment of a civil penalty is due within thirty (30) days of the date the signed Board Order is mailed, unless otherwise specified by the Board in the Board Order.

# Division Recommendations (continued)

- Basis for Recommended unsuspended Civil Penalty amount:
  - Significant environmental damage has occurred.
  - The Operator could have prevented the environmental damage.
  - The Operator did not take significant action to correct the environmental damage when notified in the October 31, 2014 inspection report.



# Division Recommendations (continued)

## Corrective actions:

1. Submit a Temporary Groundwater Mounding Mitigation Plan (“Temporary Plan”) to the Division within 30 days of the mailing date of the Board Order.
  - A. The Temporary Plan shall be submitted in an approvable form, as a technical revision, and implementation of that temporary plan shall commence (“Temporary Plan Commencement”) within 5 days of Division’s approval of the Technical Revision.
  - B. The Temporary Plan shall eliminate flooded conditions on the adjacent Orr property within 60 days of commencement, by controlling groundwater mounding.
  - C. The Temporary Plan shall include weekly monitoring and reporting to the Division of water table elevations in wells HZMW 1 through 7 and 11 through 12, from the time of Temporary Plan Commencement until implementation of the Permanent Groundwater Mounding Mitigation Plan is commenced.
  - D. Weekly monitoring reports shall be submitted to the Division within one week of data collection. De-watering methods may be active (pumping) and/or passive.

# Division Recommendations (continued)

## Corrective actions - continued

2. Submit a Permanent Groundwater Mounding Mitigation Plan ("Permanent Plan") to the Division within 90 days of the effective date of the Board Order.

The Permanent Plan shall be submitted in an approvable form, as an Amendment, and implementation of that permanent plan shall commence ("Permanent Plan Commencement") within 30 days of the Division's approval of the Amendment. The Permanent Plan shall be designed to permanently eliminate groundwater mounding on the south and east sides of Hazeltine Mine within 180 days after Permanent Plan Commencement. De-watering methods shall be passive (no pumps).



# Division Recommendations (continued)

## Corrective actions - continued

### Permanent Groundwater Mounding Mitigation Plan – continued

The Permanent Plan shall include, but not be limited to, the following items:

- a. A detailed narrative description of the plan;
- b. A plan view drawing showing baseline land and water elevations on the Orr property as they exist prior to Temporary Plan Commencement;
- c. A plan view drawing showing all components of the plan;
- d. A groundwater table monitoring plan for verifying success of the Permanent Plan, consisting of one or more wells, and that provides sampling and reporting to the Division on a weekly basis until less frequent sampling and reporting is approved in writing by the Division. Weekly monitoring reports shall be submitted to the Division within one week of data collection;
- e. All supporting calculations, with explanations, of groundwater flow rates through the Orr property before, during, and after plan implementation, with identification of data sources for assumed or measured hydraulic properties of rock and alluvium;
- f. Construction specifications (dimensions, materials, and capacities) for all components of the plan.

# Questions?





# South Platte Decision Support System Alluvial Groundwater Model Report

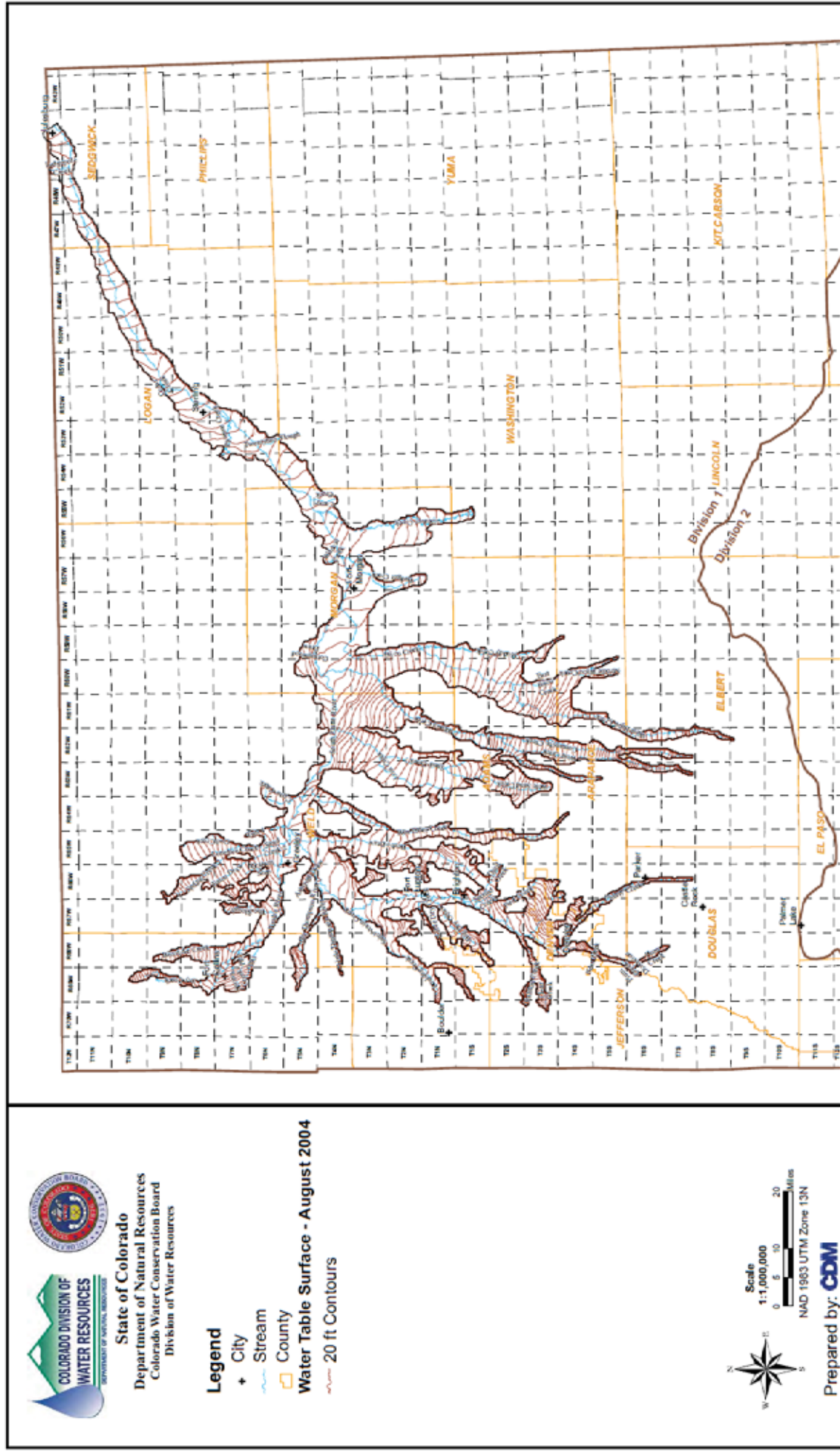


April 2013

Prepared for  
the Colorado Water Conservation Board  
and Colorado Division of Water Resources

**CDM  
Smith**

Figure 4-3: Simulated Water Table Surface August 2004





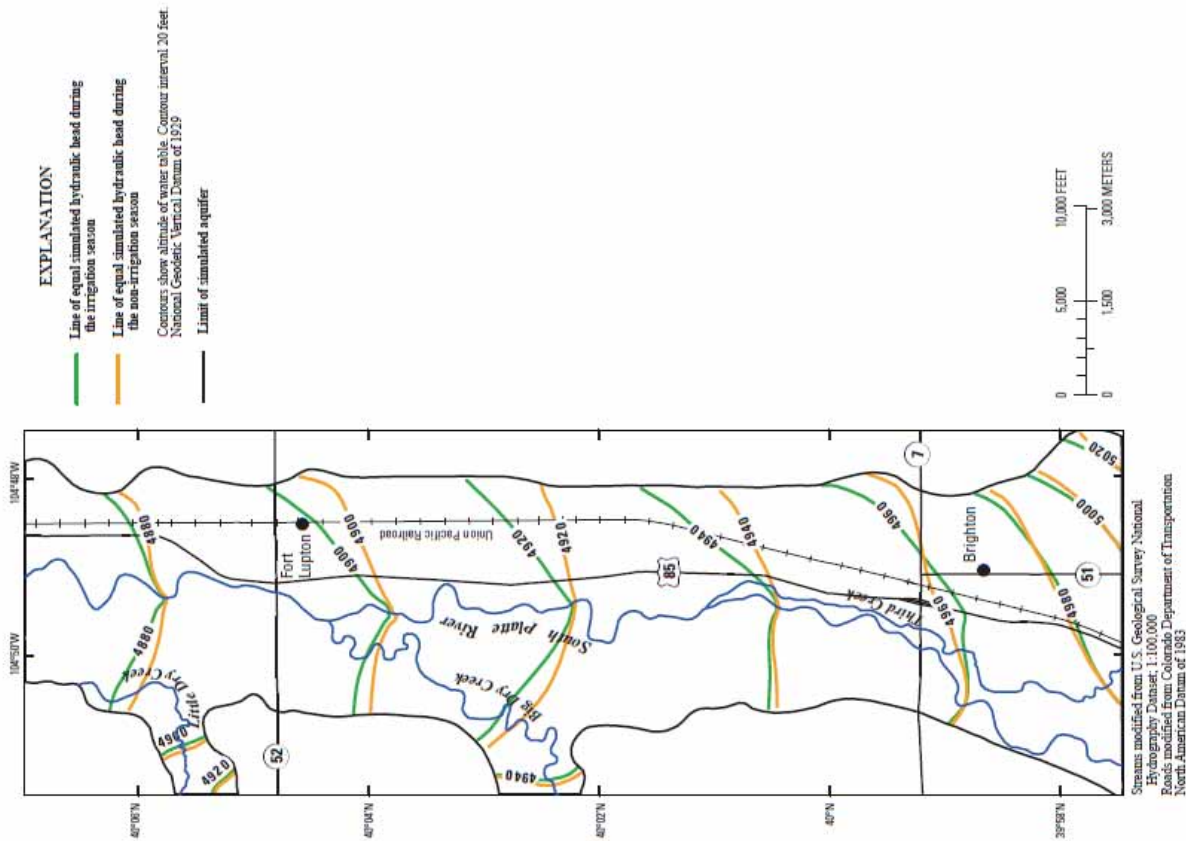
Prepared in cooperation with the City of Fort Lupton and the City of Brighton

## **Land-Use Analysis and Simulated Effects of Land-Use Change and Aggregate Mining on Groundwater Flow in the South Platte River Valley, Brighton to Fort Lupton, Colorado**



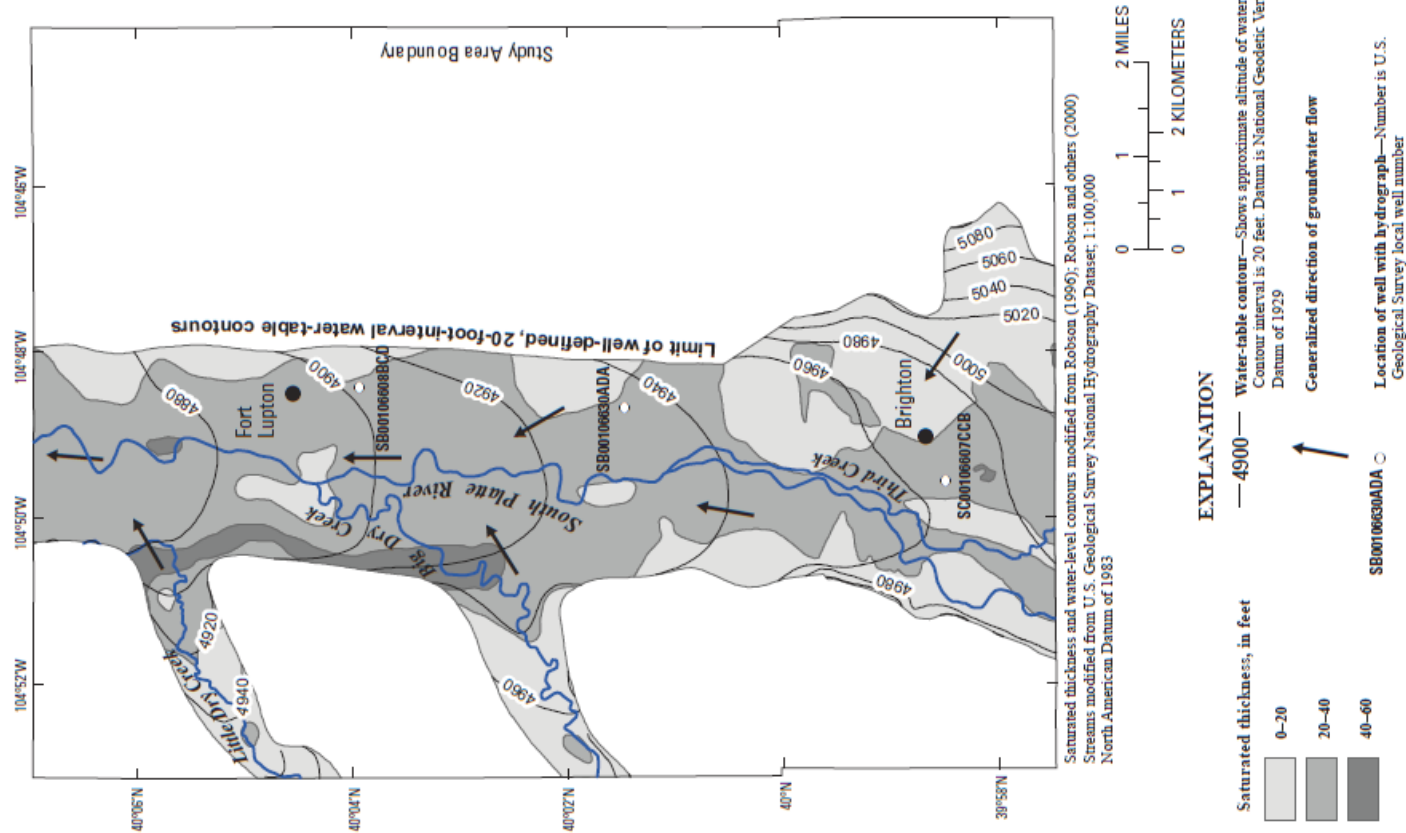
Scientific Investigations Report 2010–5019

U.S. Department of the Interior  
U.S. Geological Survey



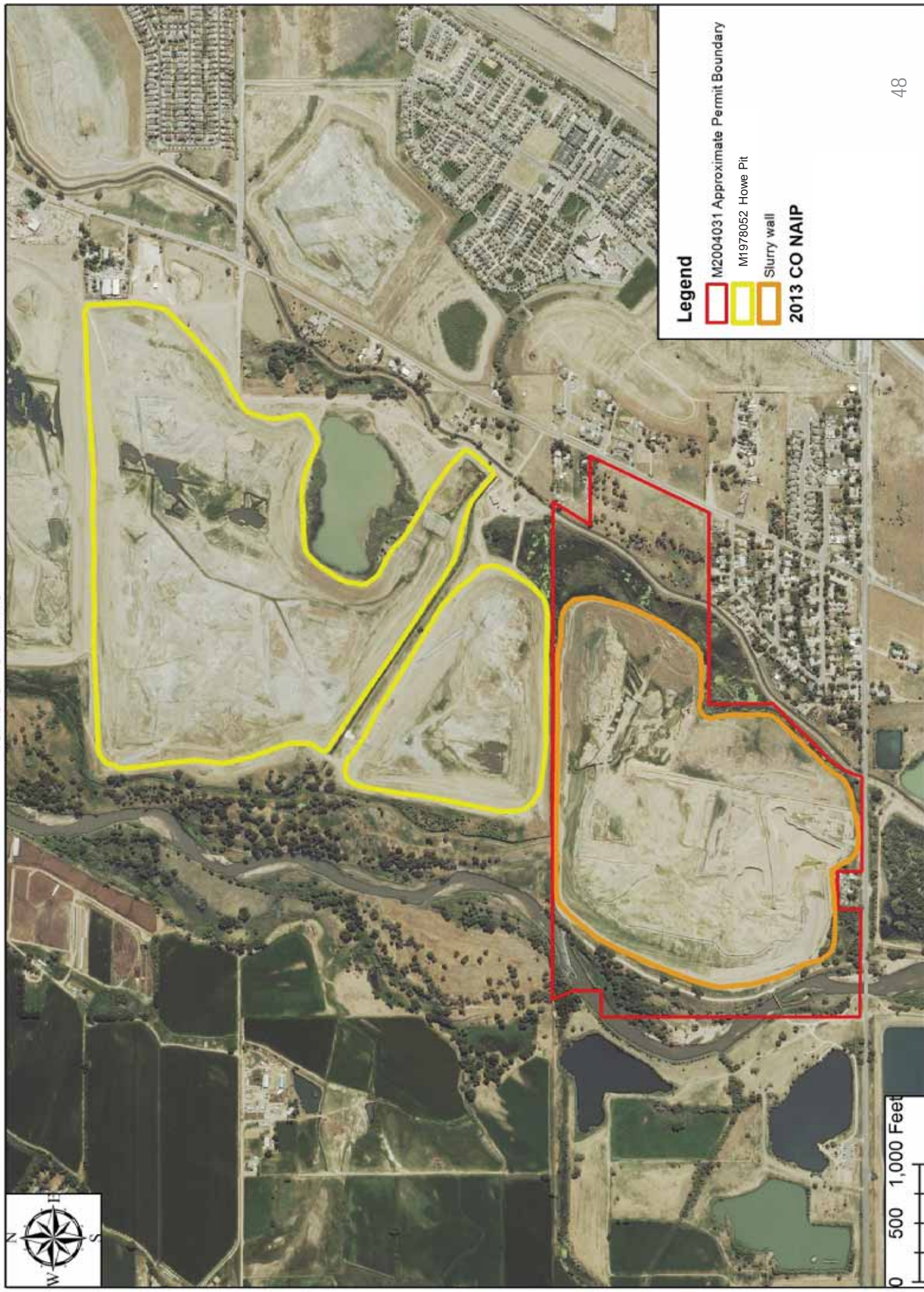
**Figure 29.** Simulated steady-state distributions of hydraulic head in the South Platte alluvial aquifer during the irrigation and non-irrigation seasons in 2000, Brighton to Fort Lupton, Colorado.





**Figure 9.** Saturated thickness and generalized water-table conditions of the South Platte alluvial aquifer, Brighton to Fort Lupton, Colorado.

# Hazeltine Mine



## Legend

- M2004031 Approximate Permit Boundary
- M1978052 Howe Pit
- Slurry wall
- 2013 CO NAIP

0 500 1,000 Feet



<b>M-2004-031 Enforcement Hearing Document List</b>	
<b>Exhibit</b>	<b>Description/date</b>
<b>Groundwater Data</b>	
Annual Reports	2005-2014
<b>Slurry Wall data</b>	
Annual report	2005
<b>Permitting Documents</b>	
M2004031 Approved permit and permit Maps	2004
TR-02	2013
<b>Inspection Reports</b>	
M-2004-031 DRMS inspection report	10/5/2011
M-2004-031 DRMS inspection report	5/15 2012
M-2004-031 DRMS inspection report	5/30/2013
M-2004-031 DRMS inspection report	3/27/2014
M-2004-031 DRMS inspection report	5/27/2014
M-2004-031 DRMS inspection report	10/31/2014
<b>Citizen Complaints</b>	
Fred Orr citizen complaint	Received 9/13/2011
<b>Other Documents</b>	
Flood Hazard Area Delineation South Platte River Adams County, Colorado	Prepared by CMD April 2005
South Platte Decision Support System Alluvial Groundwater Model Report	Prepared by CDM 4/2013
DRMS Schematic pre-mining and post-mining groundwater mounding cross-section	3/2015
Land-Use Analysis and Simulated Effects of Land- use Change and Aggregate Mining on Groundwater Flow in South Platte River Valley Brighton to Fort Lupton, Colorado	Prepared by the U.S. Geological Survey 2010
Historical Google Earth Images	Images of Hazeltine Mine and surrounding lands 2002- 2014