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

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

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

MINE NAME: Henderson Mine	**MINE/PROSPECTING ID#:** M-1977-342	**MINERAL:** Molybdenum	**COUNTY:** Clear Creek, Grand
INSPECTION TYPE: Monitoring	**WEATHER:** Clear	**INSP. DATE:** August 27, 2024	**INSP. TIME:** 09:00
OPERATOR: Climax Molybdenum Company	**OPERATOR REPRESENTATIVE:** Miguel Hamarat	**TYPE OF OPERATION:** 112d-3 - Designated Mining Operation	
REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:** None	**BOND AMOUNT:** $143,264,468.00	
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None	
INSPECTOR(S): Nikie Gagnon	**INSPECTOR'S SIGNATURE:** Nikie Gagnon	**SIGNATURE DATE:** September 18, 2024	

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

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

OBSERVATIONS

The Henderson Mill was inspected by Nikie Gagnon, representing the Division of Reclamation, Mining and Safety (Division) as part of the Division's normal monitoring inspection program. Miguel Hamarat representing the Operator (Climax Molybdenum- Henderson Operations (Henderson) accompanied the Division during the inspection.

The primary focus of this inspection was to observe the onsite gravel pit and topsoil storage areas, seep spoils collection area and the reclamation test plots.

Gravel Pit Area

The gravel pit was originally developed in the 1970s for construction of the Henderson Mill. Over the years, the operation utilized the pit for sand and gravel for various projects at the site. Mr. Hamarat stated the last time material was excavated from the pit was 2012. The gravel pit is located along the eastern permit boundary and is split into two distinct areas. north and south. The south area, near the entrance, is currently utilized as a stockpile area. The mining pit is located on the north side. The pit floor is relatively flat and contains a few stockpiles of mined material. Two highwalls areas, each approximately 600 feet long, were observed along the east side of the pit. A small area of ponded stormwater was noted in front of one of the highwalls. The Operator stated they will regrade the pit floor to allow better drainage of stormwater. The reclamation plan calls for grading the slopes to 3H:1V , topsoiling and seeding. The Division observed a slope on the south end of the pit that has been graded to 3H:1V, but no other reclamation work has been completed to date. A vegetated berm of topsoil sits above the highwalls that will be utilized in reclamation.

An exposed groundwater pond was observed in the southeast corner of the pit area. According to a 2011 letter from the Colorado Division of Water Resources submitted to the Division, the pond was approximately 2.64 acres prior to December 31, 1980. During this inspection, the Division observed the pond and determined it is approximately 1.5 acres, which was confirmed by recent Google imagery. No additional groundwater exposure has occurred since 1980, therefore no well permit, plan for augmentation, or substitute water supply plan is required for the pond.

Topsoil Stockpiles

The Division reviewed Amendment 6 (AM-6), Amendment 8 (AM-8) and Technical Revision 17 (TR-17) for information on topsoil stockpile storage locations and volumes. The topsoil estimates in AM-6 indicate 6.5 million cubic yards (CY) of topsoil is available on site for reclamation, 500,000 CY in current topsoil stockpiles and 6 million CY in future topsoil stockpile areas. TR-17 approved the addition of the Ranger Gulch Topsoil storage location, which has a volume of 3.5 million CY. According to AM-6, the slopes of the topsoil stockpiles will be no steeper than 3H:1V and will be seeded and vegetated when soil is not being placed on them.

During this inspection, the Division observed six topsoil stockpile locations depicted on the most recent update to the Reclamation Plan Map in AM-8. Mr. Hamarat stated that approximately 4.9 million CY of cover will be required for reclamation. He estimated that 2.5 CY is stockpiled now and the remaining topsoil required to achieve a 2-foot cover for reclamation will come from the future stockpiles within the permit area, including a hill on the north end of Ute Park and a hill east of the Ranger Gulch area on the north end of the Tailings Storage Facility (TSF).

Ute Park Stockpile: Topsoil salvaged during the initial construction of the TSF is stored in a berm along the eastern edge of Ute park. The berm is vegetated and stable. Weeds are well controlled in this area. Additionally, according to the map in AM-6, a future topsoil area is located on the north end of Ute Park that could be used for reclamation.

Ranger Gulch Stockpile. This location was approved under TR-17. The area is relatively flat gently sloping to the northeast. The topsoil in this area is stored as valley fill and was observed to be coarser material that will be utilized in reclamation. The northeastern end of the fill area is vegetated. New material was recently placed adjacent to the road and is not revegetated. No evidence of erosion was observed.

North Stockpile: This location contains three topsoil storage benches on the northwestern side of the TSF. The benches are stable and vegetated. The Division observed the slope of the top bench and noted that is steeper than a 3H:1V on the east side and vegetation is sparse. Topsoil movement on the slope will be contained on the 2nd bench, however, the Division recommends that the Operator regrade the slope and overseed to ensure stability. One larger erosion rill was noted on the northeast side of the top bench. This area should be investigated and repaired as needed.

Patches of Canada thistle plants were observed on top of the stockpile. These are Class B noxious weeds and need to be treated.

Topsoil Shop Locations: On the western side of the TSF in an area known as the Topsoil Shop, two small topsoil locations are depicted on the Reclamation Plan Map in AM-8. During this inspection, the Division observed a vegetated slope above the shop, but Mr. Hamarat was unsure if topsoil is stored in this location. The map in AM-6 shows approximately 100,000 CY of storage, however, in a follow-up email from Mr. Hamarat, he stated that these two locations contain an insignificant volume of topsoil.

Weimer Pass Stockpile: A crescent shaped topsoil storage area was observed in the southwest corner of the TSF. The berm is stable and vegetated.

The Reclamation Plan Map in AM-8 depicts a large round topsoil location at the southern end of the TSF. Mr. Hamarat informed the Division that the location is not being utilized for topsoil storage.

Following the inspection, Mr. Hamarat provided the following stockpile estimates which indicate 2.15 CY of topsoil is currently stockpiled in four areas:

- North – 1,300,000 CY
- Ranger Gulch – 500,000 CY
- Ute Park Below 1-Dam – 300,000 CY
- Weimer Pass – 50,000 CY

Based on a review of the permit file, and observations during this inspection, the Division requests that the Operator submit a Technical Revision to update the topsoil stockpile location map and provide an estimate of the volumes within each location.

Seep Spoils Collection Area

The Division observed the Seep Spoils Collection Area located at the toe of Dam-1 between the Ultimate Canal Pipeline and the Primary Seepwater Detention Area in Ute Park. The spoil area was approved under TR-33. Tailings are excavated from the ponds and canals in the Ute Park Seep Water Collection area and hauled to the spoil area to drain and dry. A drain is embedded in the cobble base that discharges into the Primary Detention Area. The spoil material is then used to replace rills on the dam or placed back onto the TSF.

Reclamation Test Plots

The Division observed the operator installing stormwater vaults, instrumentation and monitoring sensors on the reclamation test plots on the north end of Dam-1. This is an ongoing study to inform future reclamation of the TSF. Monitoring will include precipitation, wind speed, infiltration and pore water pressure.

This concludes the Division's report. A subset of the photographs taken during inspection are attached. Any questions or comments regarding this inspection report should be forwarded to Nikie Gagnon at the Colorado Division of Reclamation, Mining and Safety at 720-527-1640, or email at nikie.gagnon@state.co.us.

PHOTOGRAPHS

Photo 1: Looking north across the gravel pit floor.

Photo 2: Looking south at a regraded slope on the southern end of the gravel pit.

Photo 3: Looking at the groundwater pond in the southeast corner of the gravel pit.

Photo 4: Looking at a highwall on the eastern side of the gravel pit.

Photo 5: Standing water observed at the base of the highwall on the east side of the pit.

Photo 6: Looking across the north end of the gravel pit.

Photo 7: Looking south at the berm above the highwall on the north end of the gravel pit.

Photo 8: View from the north end looking south across the gravel pit.

Photo 9: Looking south across the seep spoils collection area on the north end of the Ute Park.

Photo 10: Looking at test plots on 1-Dam. Workers observed installing water collection vaults and monitoring instrumentation.

Photo 11: Looking south at the test plots on the north end of the Tailings Storage Facility.

Photo 12: Southern end of the Ute Park Topsoil Stockpile Area 1 on the east side of the permit area.

Photo 13: Northern end of the Ute Park Topsoil Stockpile Area 1 on the east side of the permit area.

Photo 14: Looking at a future topsoil stockpile area on the northeast end of Ute Park depicted on the AM-8 reclamation map.

Photo 15: Looking northeast at a future stockpile area east of the Ranger Gulch area on the north end of the TSF.

Photo 16: Looking southwest at the three benches of the North Topsoil Stockpile Area. Erosional rill observed on the top bench noted by red circle.

Photo 17: Looking west across the 2nd bench of the North Topsoil Stockpile Area.

Photo 18: Looking at a vegetated slope on the North Topsoil Stockpile area.

Photo 19: Looking at the east side of the top bench in the North Topsoil Stockpile area. Slope steeper than 3H:1V noted by red arrows.

Photo 20: Patches of Canada thistles observed on the top of the North Topsoil Stockpile Area.

Photo 21: Looking east at the lower bench of the North Topsoil Stockpile Area. TSF in the background.

Photo 22: Looking north across the Ranger Gulch Topsoil Storage Area.

Photo 23: Looking at recently placed material adjacent to the road in the Ranger Gulch Topsoil Storage Area.

Photo 24: Topsoil stockpile location depicted on the Reclamation Map in AM-8, near the Topsoil Shop.

Photo 25: Looking at a Topsoil Storage Location above the southwest corner of the TSA.

Inspection Contact Address

Miguel Hamarat
Climax Molybdenum Company
P.O. Box 68
Empire, CO 80438

Enclosures: Amendment 6 Map of Current and Future Topsoil locations
Amendment 8 Reclamation Plan Map Depicting Topsoil Stockpile Locations
Topsoil Estimates – Email from Miguel Hamarat
2011 DWR Letter regarding exposed water in the gravel pit

CC: Jared Ebert, DRMS

Henderson Operations
Mill Site

Permit #M-77-342
Amendment AM-06

LEGEND

Affected Lands

- Affected Land Boundary
- Disturbance Area
- XCEL Energy Easement

Site Features

- Tailings Impoundment
- Lake/Pond
- Building
- Current Topsoil Stockpiles
- Future Topsoil Stockpiles
- Property Boundary
- Conveyor
- Improved Road
- Unimproved Road
- Trail
- Ultimate Interceptor Canal
- Perennial Stream
- Intermittent Stream

0 700 1,400 2,800 4,200 5,600 Feet

N W E S

Signature 4/21/10 Date

1,000,000 yds³
100,000 yds³
3,000,000 yds³
100,000 yds³
2,000,000 yds³
200,000 yds³
Tailings Impoundment
Dam
Ute Creek Res.
Mill
Williams Fork River
Portal
T2S R78W
T2S R77W
T3S R78W
T3S R77W

Ranger Gulch

Williams Fork River

West Branch Ute Creek

Tailings Impoundment

1:Dam

Forest Service Land

Forest Service Land

SIGNATORY INFORMATION

SIGNATURE

Miguel Hamarat

NAME

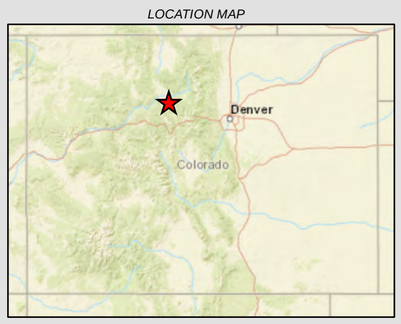
Environmental Manager

TITLE

Pursuant to Rule 6.2.1(2)(b), this map has been prepared under my direction as a registered land surveyor, professional engineer, or other qualified person.

0 500 1,000 2,000 3,000 4,000 Feet

LOCATION MAP



MAP FEATURES

- PROPERTY BOUNDARY
- CURRENT AND POTENTIAL DISTURBANCE AREA
- XCEL ENERGY EASEMENT
- GRAVEL PIT
- LAKE / POND
- PERMITTED TOPSOIL STOCKPILE LOCATION
- AFFECTED LAND BOUNDARY
- PROPOSED ADDITIONAL AFFECTED LAND BOUNDARY
- AM-08 ACREAGE
- RECLAMATION AREAS
- BUILDING
- UNIMPROVED ROAD
- IMPROVED ROAD
- CONVEYOR
- TRAIL
- PERENNIAL STREAM
- INTERMITTENT STREAM
- ULTIMATE INTERCEPTOR CANAL

Contour Interval: 25 feet

REVISION	DATE	AUTHOR

Climax Molybdenum
A Freeport-McMoRan Company
HENDERSON OPERATIONS
1746 County Road
Empire, Colorado 80438

HENDERSON MILL

Reclamation Plan Map
Exhibit F.A to AM-08

Aquionix EHS Services
5545 West 65th Avenue Unit E
Arvada, CO 80002
303-289-7520
www.aquionix.com

DESIGNED BY: MT(Aquionix)
DRAWN BY: MT(Aquionix)
DATE DRAWN: 2/27/2023

SCALE: 1 inch = 658 feet
COORDINATE SYSTEM: NAD_1983 _UTM_Zone_13N

S:\ArcGIS\Henderson GIS\mxds\mine\DRMS Reports

STATE OF COLORADO

Gagnon - DNR, Nikie <nikie.gagnon@state.co.us>

Topsoil Volumes

1 message

Hamarat, Miguel <mhamarat@fmi.com> Thu, Sep 5, 2024 at 3:23 PM
To: "Gagnon - DNR, Nikie" <nikie.gagnon@state.co.us>

Nikie,

Apologies on the delay in getting this information to you. Here are estimates on quantities of topsoil in each stockpile:

North – 1,300,000 CY

Ranger Gulch – 500,000 CY

Ute Park Below 1-Dam – 300,000 CY

Weimer Pass – 50,000 CY

I'm not seeing actual for the two small stockpiles near the topsoil shop depicted on the map you had. I do see some estimates/projections in some documentation, but I don't think they are very realistic. I can look into that more, but seemed to be pretty insignificant volumes when we were out there.

I've also attached our letter to DWR and their response regarding exposed water in the gravel pit. This shows 2.6 acres prior to 1981. Rough estimate from Google maps of the current area that we looked at, including the small pool to the North of main pond looked to be about 1.5 acres.

Let me know if you needed anything else from our last inspection.

Also, I received approval of TR-36 – thank you for getting that turned around so fast.

Regards,

Miguel

Miguel Hamarat

Environmental Manager

Climax Molybdenum Company

Henderson Operations

Phone: (720) 942-3255

Cell: (303) 476-3632

mhamarat@fmi.com

Climax Molybdenum
A Freeport-McMoRan Company

2 attachments

20110930-Mill-Out-SEO WellPermit2.pdf
2612K

20111108-Mill-In-SEO Response for Gravel Pit.pdf
969K

W. W. Wheeler and Associates, Inc.
Water Resources Engineers

September 30, 2011

Mr. Dick Wolfe, P.E., State Engineer
Colorado Division of Water Resources
1313 Sherman Street, Room 818
Denver, CO 80203

Re: #1070.06 Climax Molybdenum Company – Henderson Operations
Henderson Mill Gravel Pit
Well Permit Application
Division 5, District 51

Dear Dick:

On behalf of the Climax Molybdenum Company (Climax), W. W. Wheeler and Associates, Inc. (Wheeler) is submitting the enclosed application for a gravel pit well permit for the Henderson Mill Gravel Pit located in Grand County south of Parshall, Colorado. The Henderson Mill Gravel Pit is an existing sand and gravel facility that was first developed in the early 1970's as part of the construction of the Henderson Mill facility. The pit is located at the Henderson Operations – Henderson Mill and is entirely within the affected land boundary specified in the Colorado Division of Reclamation, Mining and Safety Reclamation Permit for the Henderson Operations (Permit No. M-77-342). A partial copy of the latest amendment to this permit is enclosed. The entire set of documents that make up the permit is quite voluminous, but can be provided if necessary. Also enclosed is a map showing the current limits of the Affected Land Boundary for Permit No. M-77-342. The general location of the gravel pit is labeled on this map. Figure 1 is a general location map of the gravel pit using USGS quadrangle maps as the base mapping.

Currently, the Henderson Mill Gravel Pit is used occasionally for sand and gravel materials required for the continued operation and maintenance of the Henderson Mill facilities. It is anticipated that any future production from the pit will be from areas above the water table. There is currently exposed groundwater within the Henderson Mill Pit. As shown on Figure 2, the surface area of the water pool is approximately 2.3 acres as measured from a 2010 aerial photo of the mill site. There has been production activity within the gravel pit since January 1, 1981. However, as indicated by the enclosed

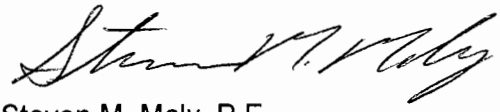
September 1979 map of the gravel pit, there was approximately 2.64 acres of exposed groundwater prior to December 31, 1980. This water pool area is 0.34 acres more than the current water pool area. Therefore, a substitute water supply plan or augmentation plan is not required. The future plan for the pit is to not enlarge the area of exposed groundwater and to not produce from areas below the groundwater level.

Using the State well database, we have not identified any wells within 600 feet of the gravel pit that are not owned by Climax Molybdenum Company.

Enclosed is a check in the amount of $100 to cover the well permit application fee. Also enclosed is a letter from the gravel pit owner that authorizes the undersigned to sign the permit application on their behalf. Thank you for your assistance in this matter. Please let us know if you have any questions or require additional information.

Sincerely yours,

W. W. Wheeler and Associates, Inc.



Steven M. Maly, P.E.

CC: Mr. Bryce Romig, Climax Molybdenum Company
Mr. Tim Haynes, Henderson Mill
Mr. Brian Nazarenus, Esq.

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Form No. GWS-27 6/2006

COLORADO DIVISION OF WATER RESOURCES
DEPARTMENT OF NATURAL RESOURCES
1313 Sherman St., Rm 818, Denver, Colorado 80203
Phone: (303) 866-3581

For Office Use only

REVIEW INSTRUCTIONS PRIOR TO COMPLETING FORM

GRAVEL PIT WELL PERMIT APPLICATION

1. TYPE OF PERMIT
   - ☐ NEW PIT(S)
   - ☑ PIT(S) EXIST, CONSTRUCTED AFTER DEC. 31, 1980

2. APPLICANT INFORMATION
   NAME(S) Climax Molybdenum Company - Henderson Operations (c/o Bryce Romig)
   Mailing Address 19302 County Road 3
   City, St. Zip Parshall CO 80468
   Phone (303) 569-3221

3. CONSULTANT/ATTORNEY/OPERATOR CONTACT (If different than #2)
   NAME(S) Steven M. Maly, W. W. Wheeler & Associates, Inc.
   Mailing Address 3700 South Inca Street
   City, St. Zip Englewood CO 80110
   Phone (303) 761-4130

   PIT NAME Henderson Mill Gravel Pit
   DMG NO. M-77-342

4. GENERAL LOCATION OF PIT(S): COUNTY Grand
   NW 1/4 SE 1/4, Sec. 14 Twp. 2 ☐ N. ☑ S., Range 78 ☐ E. ☑ W. 6 P.M.

5. Estimated maximum water surface to be exposed: 3 Acres. Number of Pits 1.

6. Estimated depth of pit(s) 28 Ft. Estimated depth to groundwater 23 Ft.

7. Estimated date to expose groundwater Already Exposed; to complete mining Unknown.

8. ATTACHMENTS: (Check which have been attached.)
   - (a) ☑ Scaled map of pit area with range, township, & section clearly identified (REQUIRED).
   - (b) ☑ Copy of the reclamation permit, if applicable.
   - (c) ☐ Copy of pre 1/15/89 water conservancy dist. or water user assoc. augmentation agreement, if applicable.
   - (d) ☐ Copy of proposed substitute water plan or augmentation plan application, if applicable.
   - (e) ☐ Copy of court approved augmentation plan, if applicable. Case No. _____
   - (f) ☑ Other Owner letter authorizing undersigned. Pre-1981 map of the pit area.

9. Detailed description of any use, other than evaporation, and method of diversion, rate of diversion, and annual amount of diversion of any water withdrawn from the pond.
   There are no plans to develop the pit below the water table in the future.

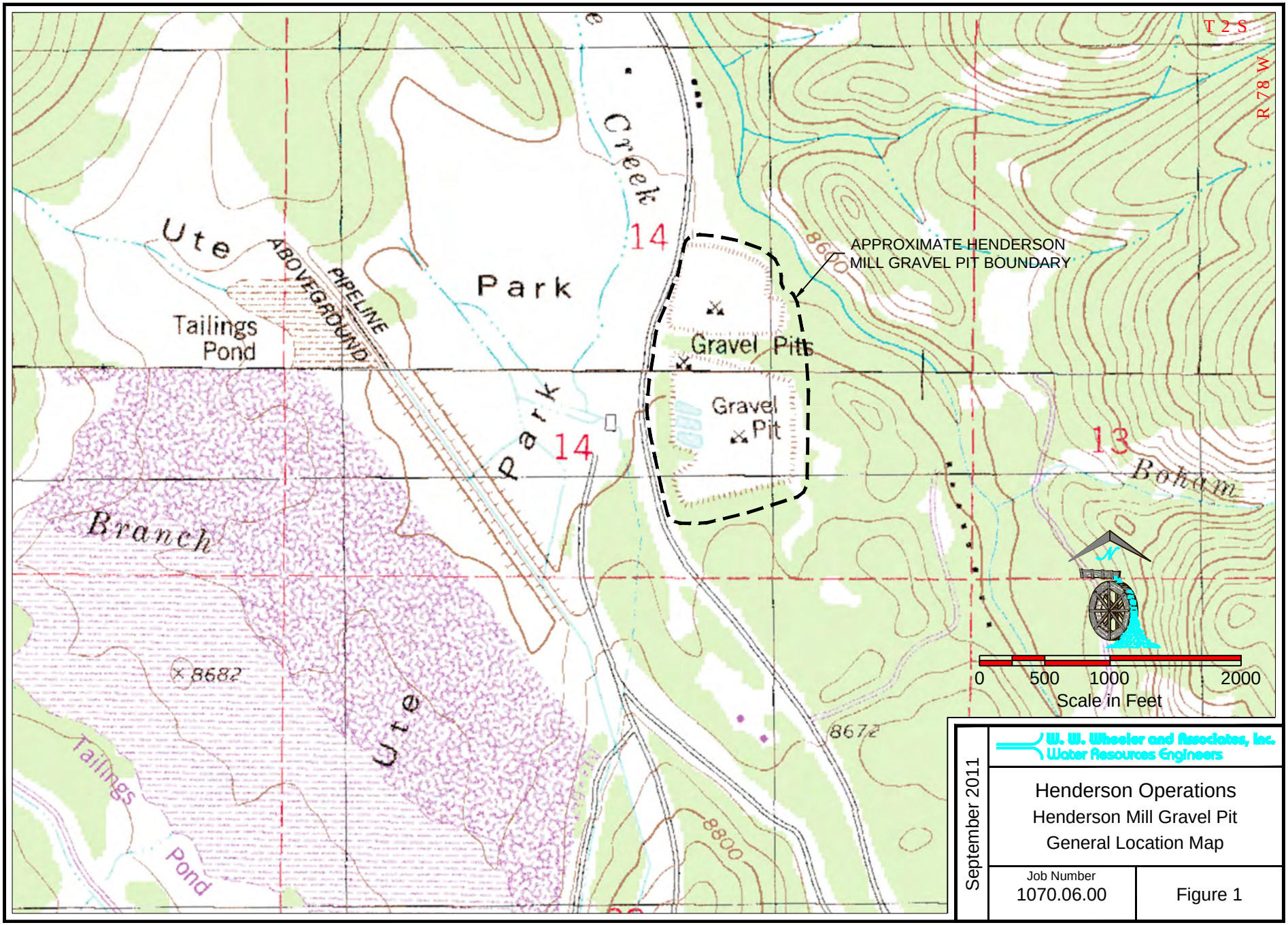
10. I (we) have read the statements made herein and know the contents thereof, and that they are true to my (our) knowledge. [Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

Name/Title (Please type or print)	Signature	Date
Steven M. Maly/ Consultant	Steven M Maly	9/30/11

For Office Use only

Court Case No._____ Div. ____ Co. ____ WD ____ Basin ____ MD ____ Use _____

R:\1000\1070\1070.06\1070.06.00\Henderson Gravel Pit\DRAWINGS\Henderson Well Location Map 9-30-11 09:56am Scott XREFS: Henderson_2010



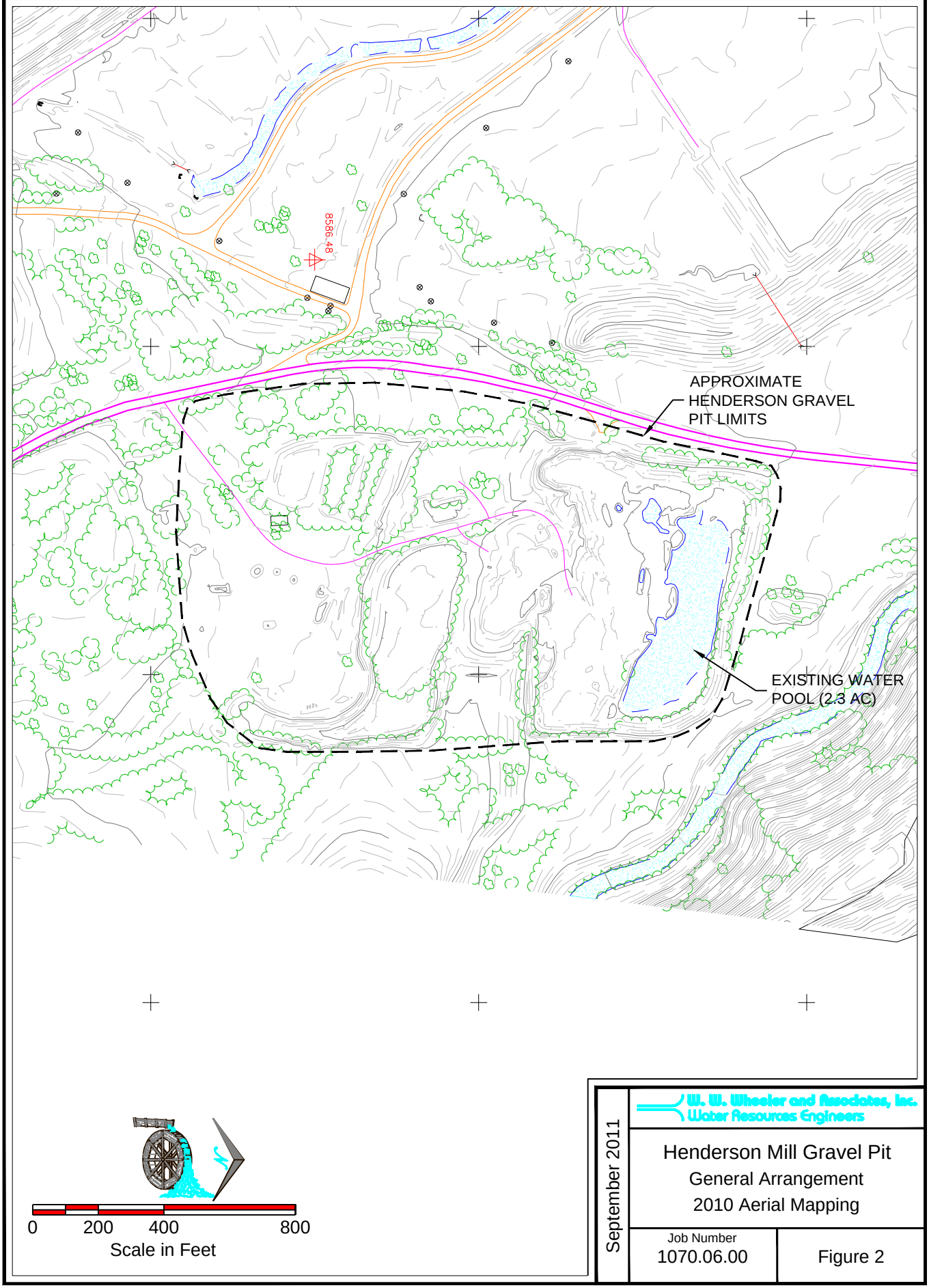
W. W. Wheeler and Associates, Inc.
Water Resources Engineers

Henderson Operations
Henderson Mill Gravel Pit
General Location Map

September 2011

Job Number
1070.06.00

Figure 1



W. W. Wheeler and Associates, Inc.
Water Resources Engineers

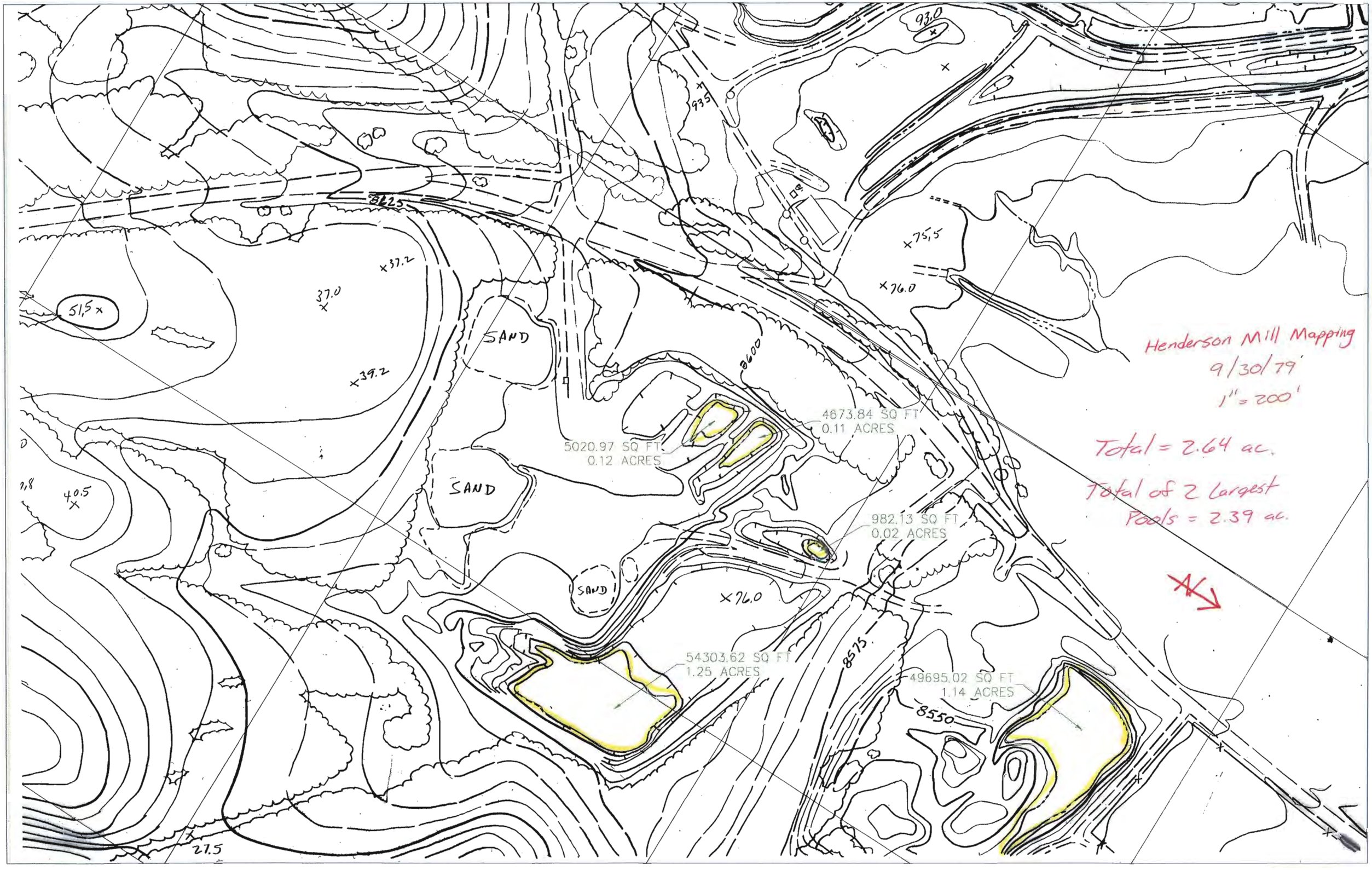
Henderson Mill Gravel Pit
General Arrangement
2010 Aerial Mapping

September 2011

Job Number
1070.06.00

Figure 2

R:\1000\1070\1070.06\1070.06.00\Henderson Gravel Pit\DRAWINGS\Henderson Well Location Map 9-30-11 09:57am Scott XREFS: Henderson_2010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935
8625
51.5 x
37.0
x37.2
SAND
x39.2
3600
4673.84 SQ FT
0.11 ACRES
5020.97 SQ FT.
0.12 ACRES
x75.5
x76.0
Henderson Mill Mapping
9/30/79
1" = 200'
Total = 2.64 ac.
Total of 2 Largest
Pools = 2.39 ac.
40.5
x
SAND
982.13 SQ FT
0.02 ACRES
x76.0
8575
54303.62 SQ FT
1.25 ACRES
49695.02 SQ FT
1.14 ACRES
8550
27.5