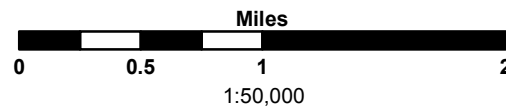


### Legend

- Retort Water Pipeline
- Research Mine Water Pipeline



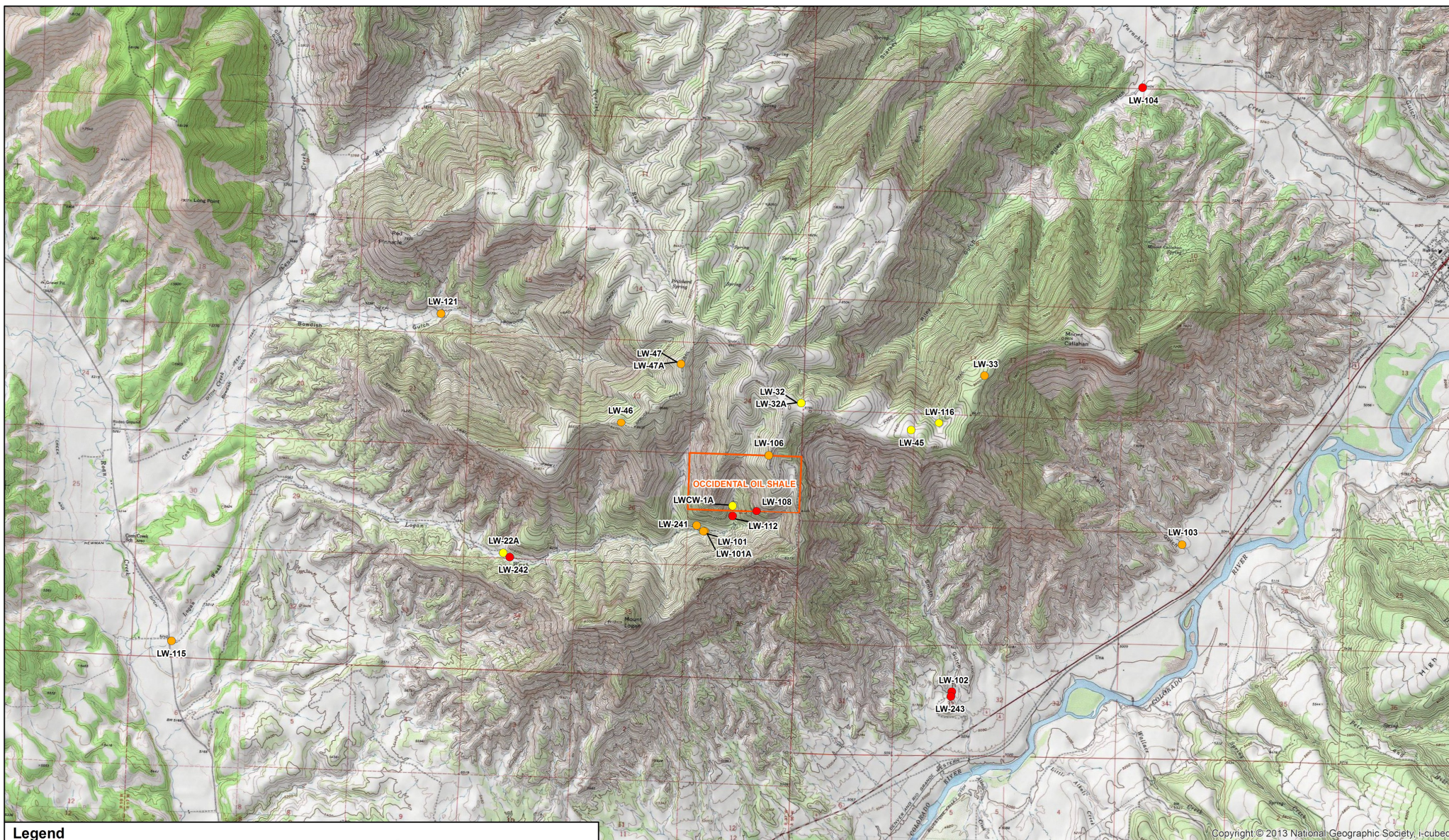
**Figure 2. Logan Wash Mine Facilities  
(Unreclaimed areas noted)**

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# Legend

- Well - Not abandoned
- Well - Abandoned
- Well - Could not be located; Potentially abandoned

Note: a single well was found where LW-32 and LW-32A are shown. This wells designation is unknown.

0 0.5 1 2 Miles  
1:50,000



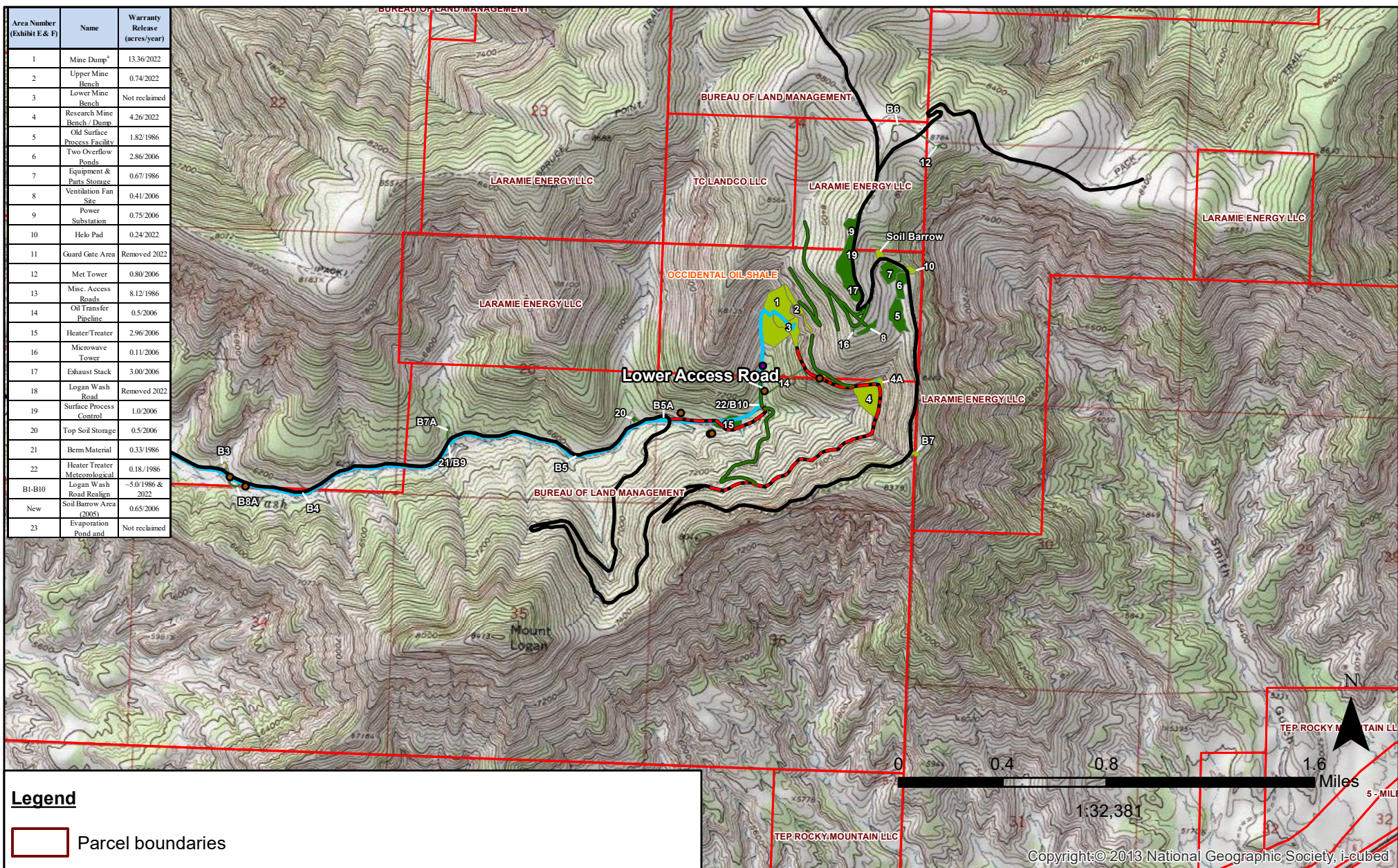
Figure 3. Logan Wash Mine Wells

Garfield County, Colorado



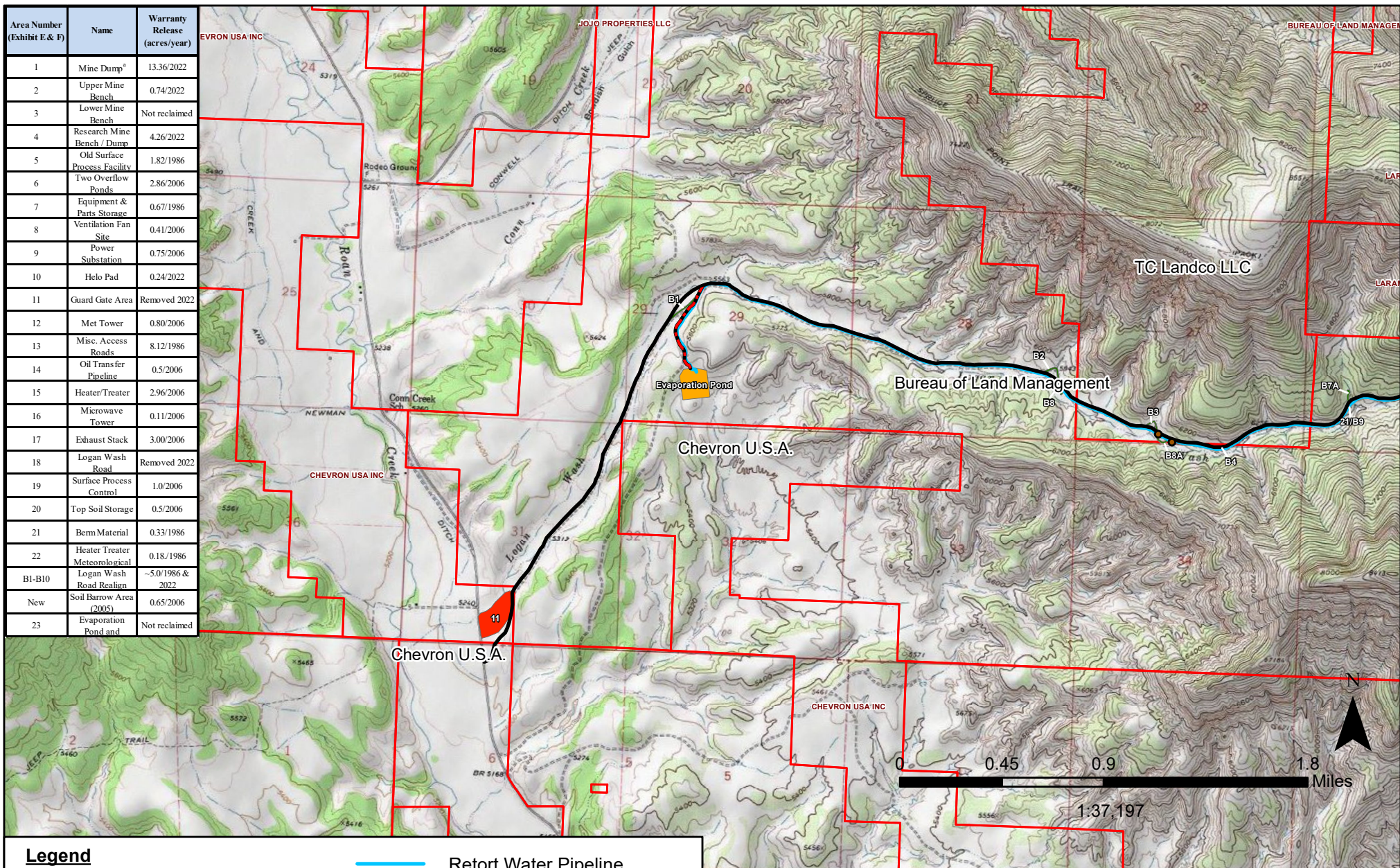
Copyright © 2013 National Geographic Society, i-cubed







Area Number (Exhibit E & F)	Name	Warranty Release (acres/year)
1	Mine Dump*	13.36/2022
2	Upper Mine Bench	0.74/2022
3	Lower Mine Bench	Not reclaimed
4	Research Mine Bench / Dump	4.26/2022
5	Old Surface Process Facility	1.82/1986
6	Two Overflow Ponds	2.86/2006
7	Equipment & Parts Storage	0.67/1986
8	Ventilation Fan Site	0.41/2006
9	Power Substation	0.75/2006
10	Helo Pad	0.24/2022
11	Guard Gate Area	Removed 2022
12	Met Tower	0.80/2006
13	Misc. Access Roads	8.12/1986
14	Oil Transfer Pipeline	0.5/2006
15	Heater/Treater	2.96/2006
16	Microwave Tower	0.11/2006
17	Exhaust Stack	3.00/2006
18	Logan Wash Road	Removed 2022
19	Surface Process Control	1.0/2006
20	Top Soil Storage	0.5/2006
21	Berm Material	0.33/1986
22	Heater Treater Meteorological	0.18/1986
B1-B10	Logan Wash Road Realignment	~5.0/1986 & 2022
New	Soil Barrow Area (2005)	0.65/2006
23	Evaporation Pond and	Not reclaimed



### Legend

Parcel boundaries

### Permit Reclamation Areas

In use; not under reclamation

Reclaimed and released

Removed from Reclamation Plan

— Retort Water Pipeline

◆ Monitoring Well

### Roads

— Not to be reclaimed

— Reclaimed

- - - In use; not under reclamation

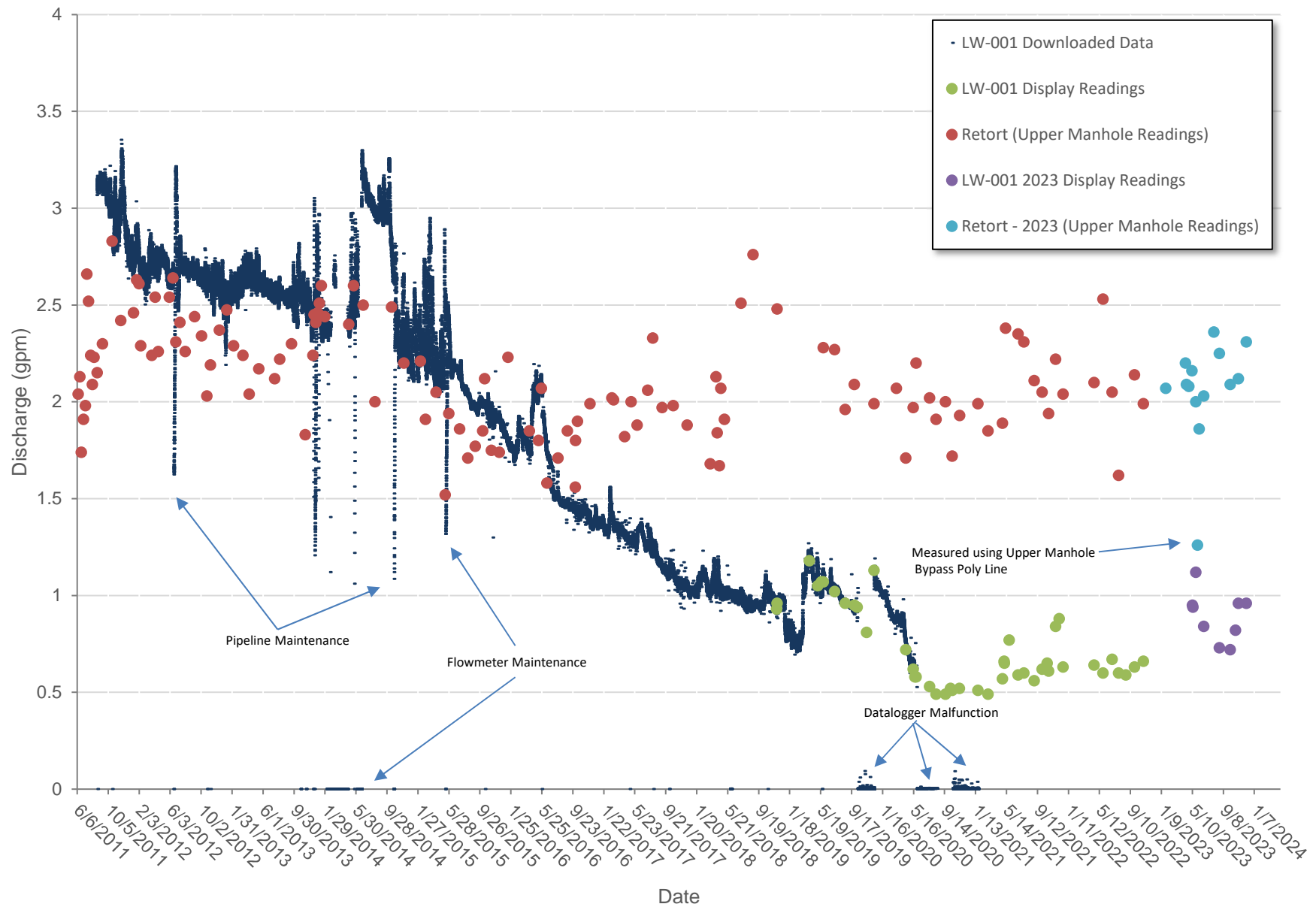
**Figure 4B. Logan Wash Mine Reclamation Status West Area**

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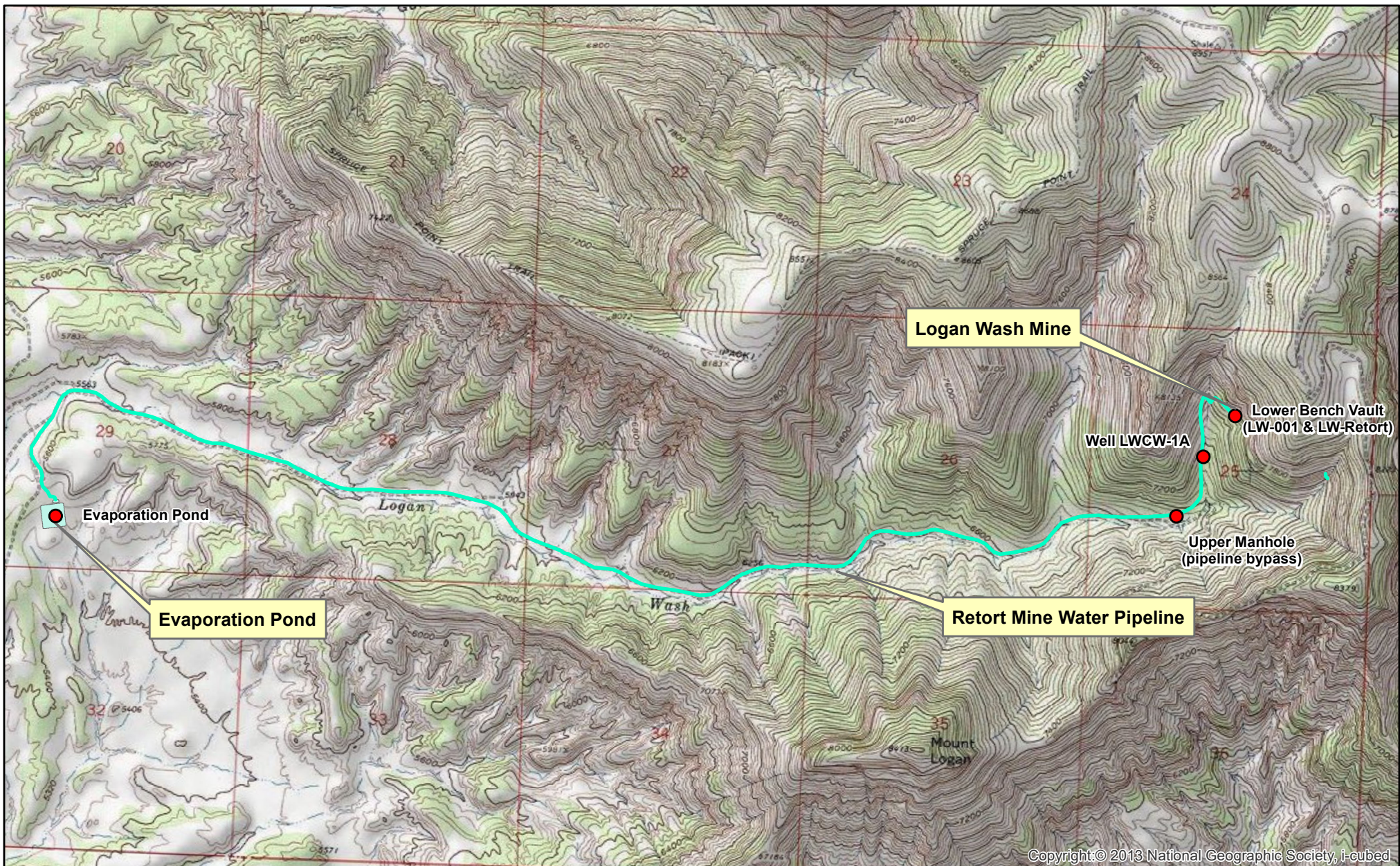




Figure 5. Logan Wash Mine LW-001 and LW-Retort Discharge







● Sampled Locations

0 0.25 0.5 1 Miles  
1:30,000



**Figure 6. Logan Wash Mine  
Biannual Mine-Water Sampling Locations**

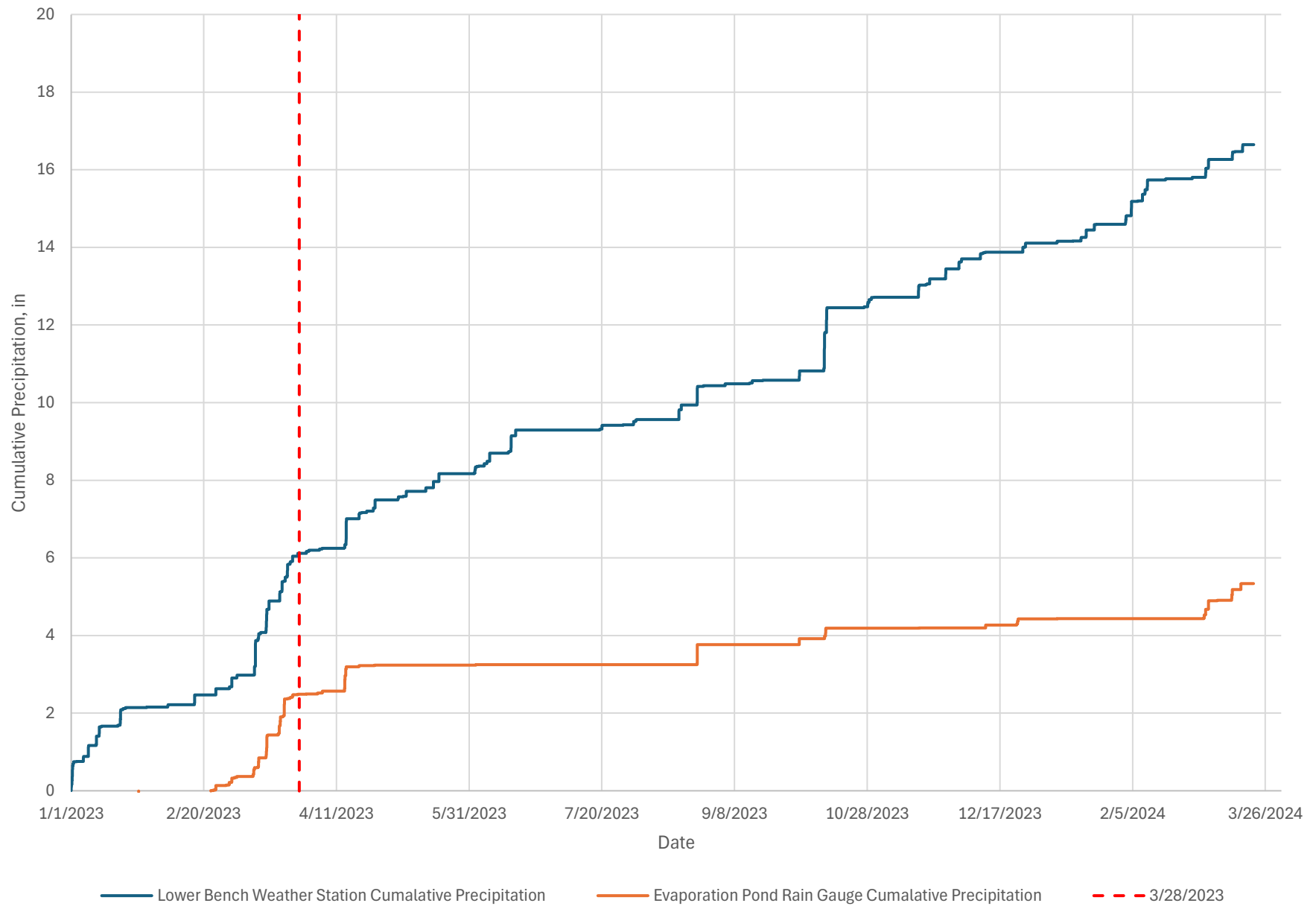
Garfield County, Colorado



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Figure 7. Logan Wash Mine 2023 Precipitation





UTILITY NOTIFICATION CENTER  
OF COLORADO  
CALL 811  
THREE WORKING DAYS BEFORE YOU DIG, GRADE OR  
EXCAVATE FOR THE MARKING OF UNDERGROUND UTILITIES.

PREPARED BY JEK  
REVIEWED BY JEK  
DATE 06-26-2018  
SCALE NO SCALE  
JOB NO. 18020.02

DATE	DESCRIPTION	BY	CHK
09-11-18	CHANGED SECONDARY 80 MIL LINER TO 60 MIL LINER	JEK	JEK

LOGAN WASH MINE  
EVAPORATION POND RELINING PROJECT  
OCCIDENTAL OIL SHALE, INC.

**Rhino Engineering**  
Rhino Engineering, Inc.  
PO Box 810  
Cedaredge CO 81413  
(970) 241-6027  
info@rhinoengineers.com  
www.rhinoengineers.com



SHEET

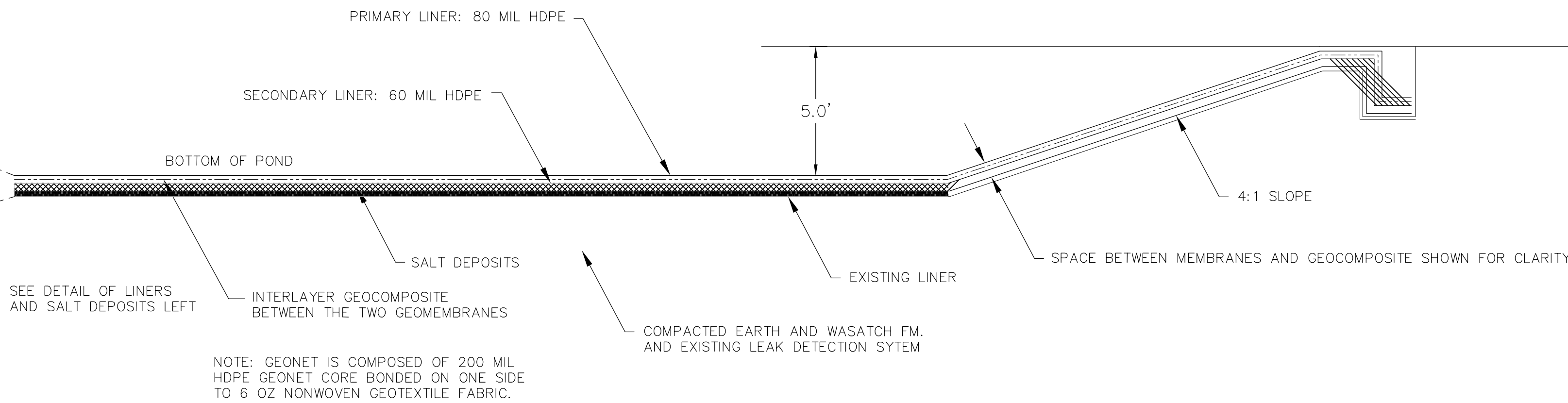
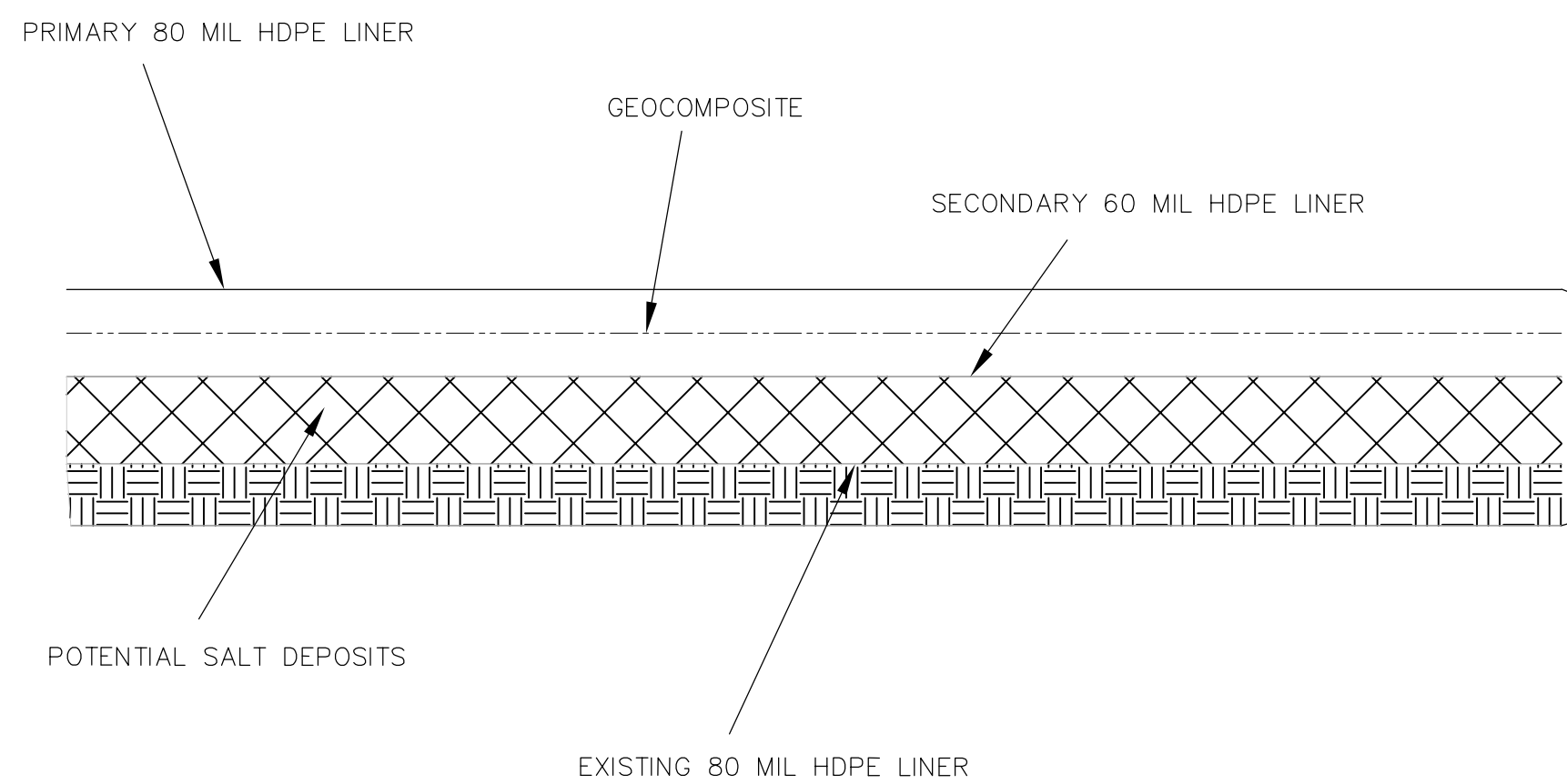
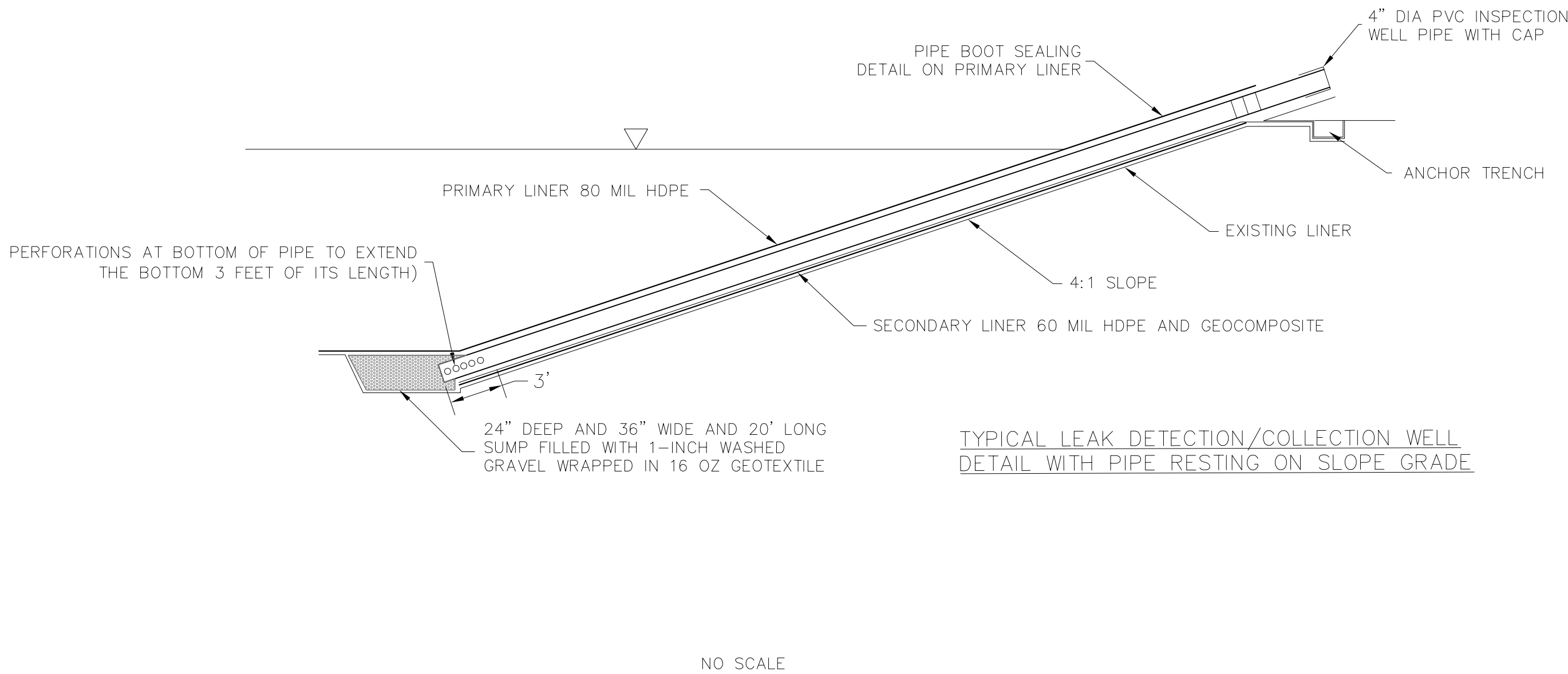
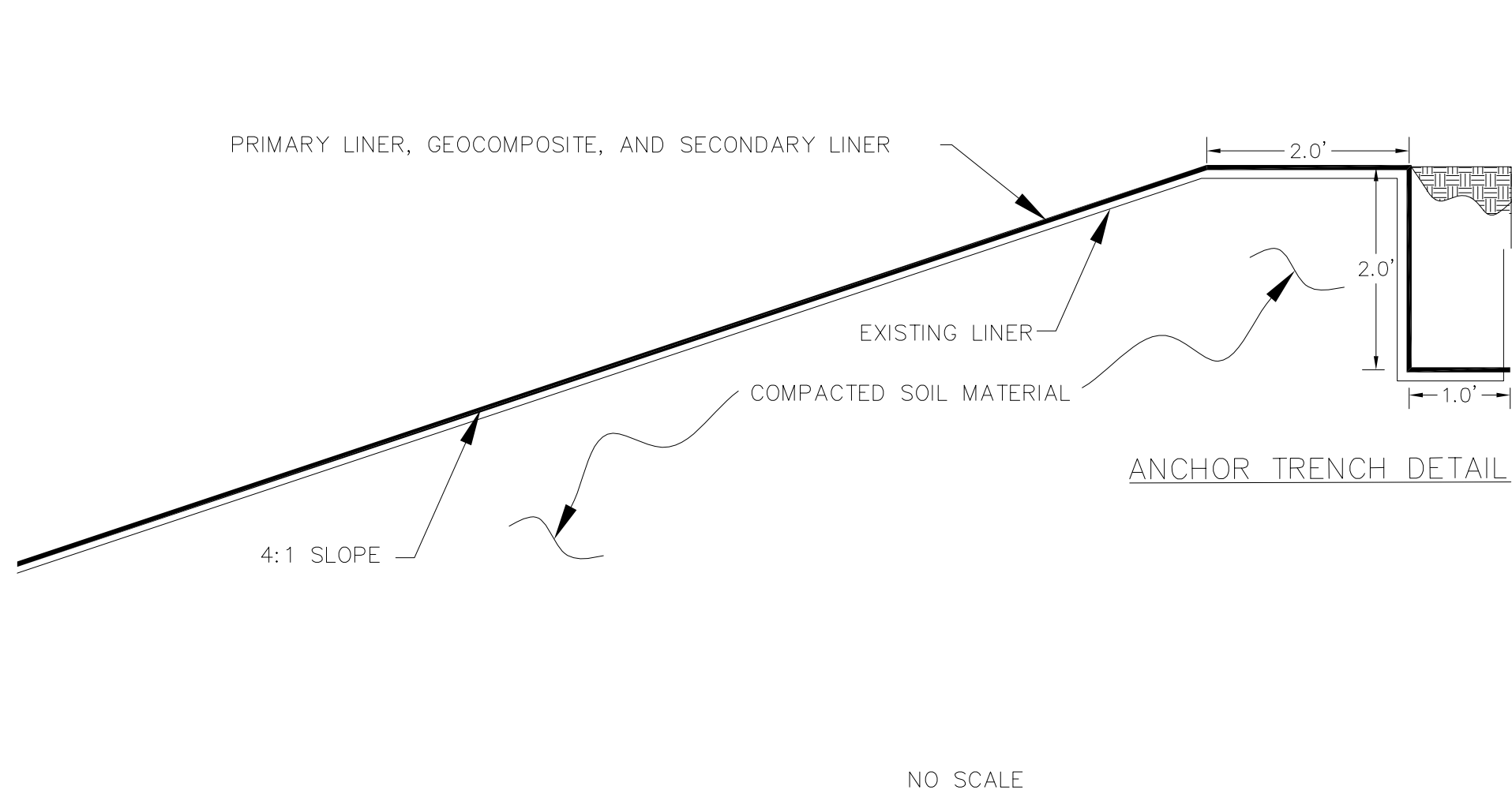
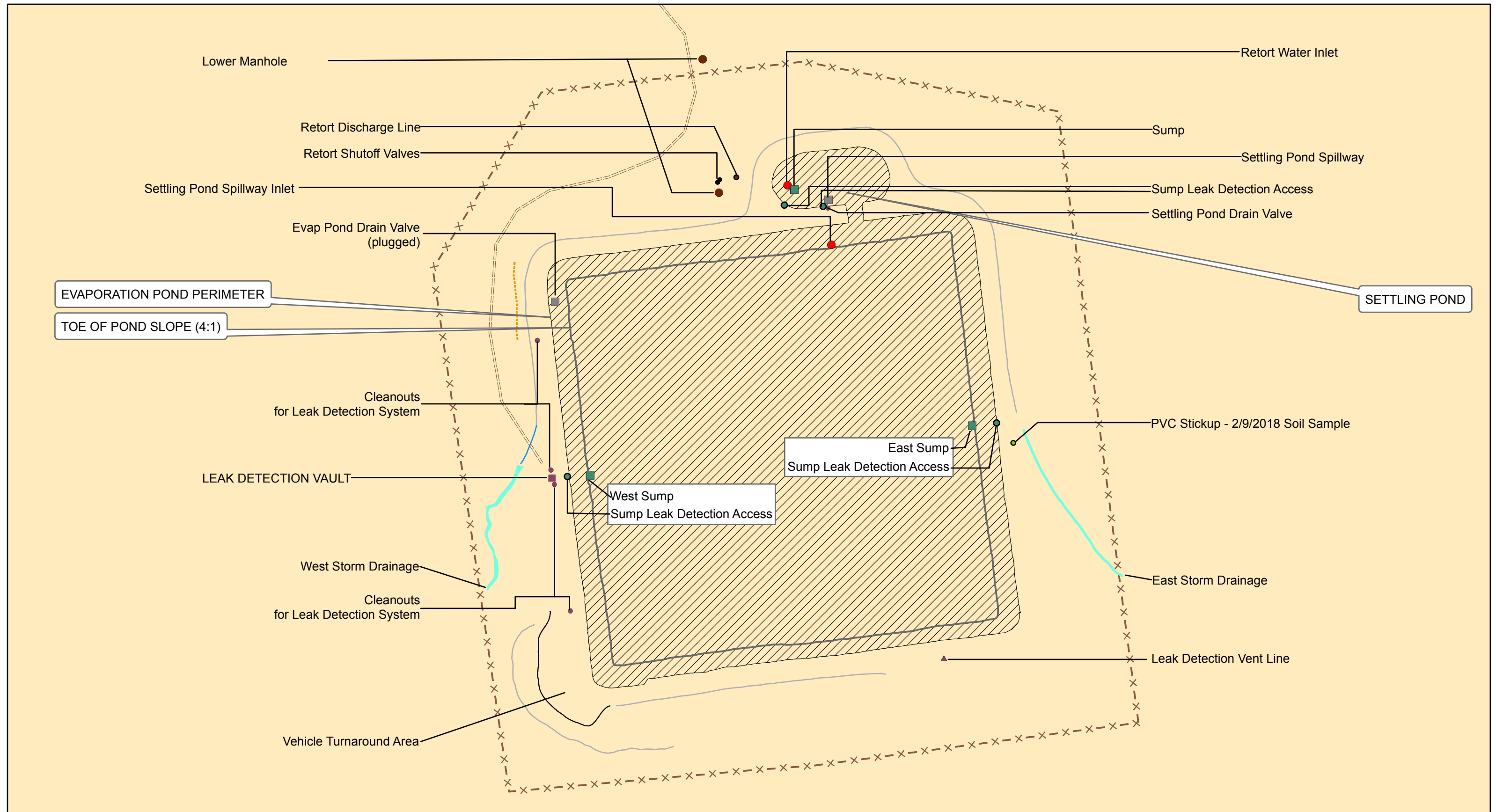


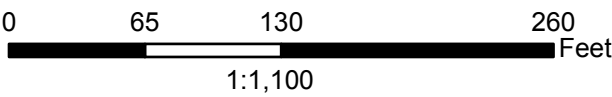
Figure 8. Pond Lining System





**Legend**

- × — Pond Perimeter Wildlife Fence
- Safety Fence
- Low Crossing Swale
- Toe of Cut Slope
- == Access Road

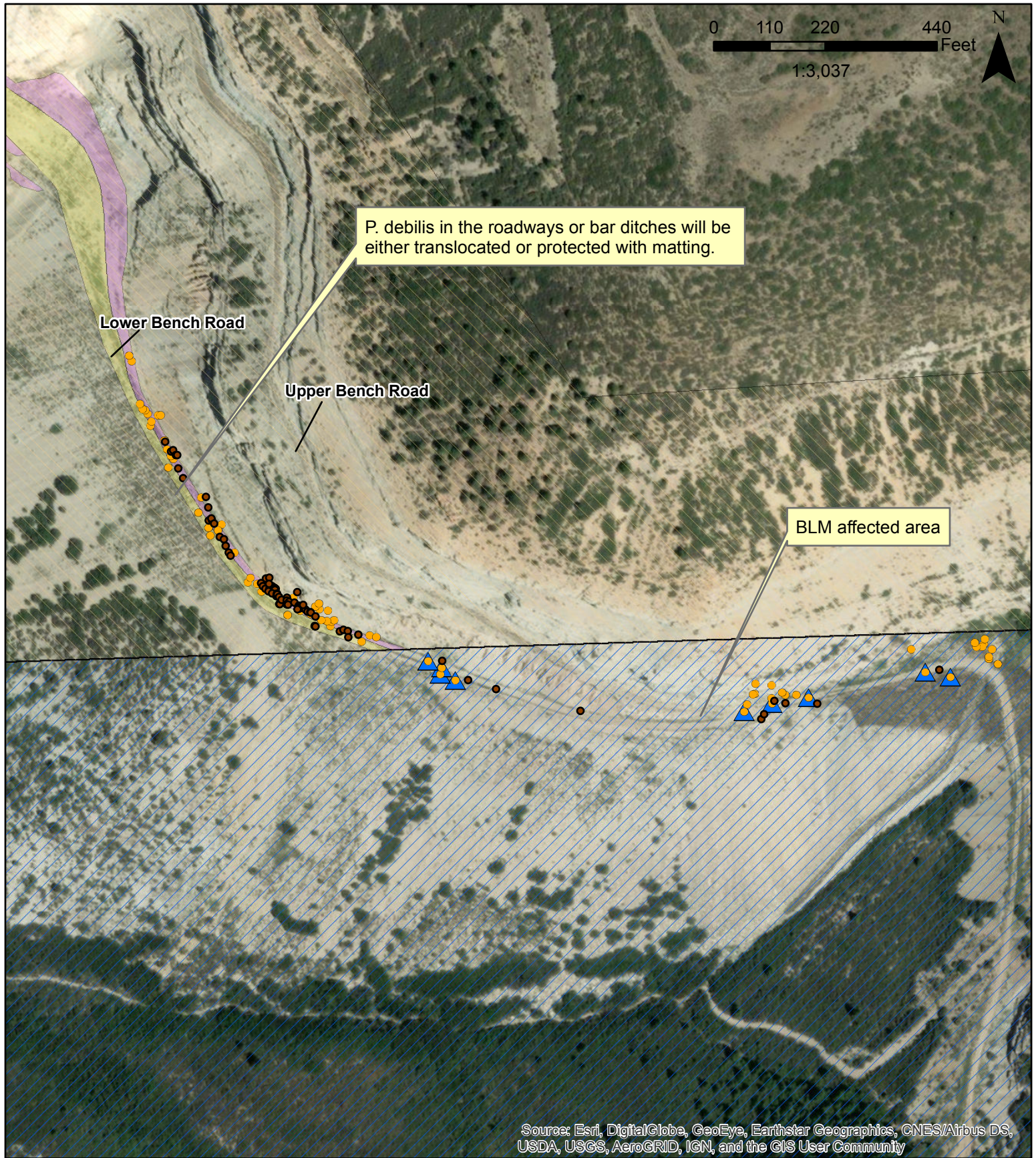


**Figure 9. Logan Wash Mine  
Evaporation Pond Site Map As-Built 2018 Pond Reline Project**








Garfield County, Colorado





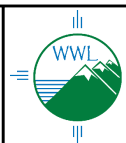


### Legend

- |  |   |   |  |
|--|---|---|--|
|  | Potentially disturbed area                |  | 2015 P. debilis (Location +/- 10 feet) |
|  | Potential transplant area                 |  | 2019 P. debilis survey                 |
|  | CNAP boundary                             |  | Protective barricade or matting        |
|  | Bureau of Land Management (USBLM) parcels |   |  |

**Figure 10. Locations of P. debilis, Proposed Mitigation measures and Potential Transplant Areas**

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**Figure 11**  
**Logan Wash Mine *P. debilis* Transplanting**  
**March 25, 2015**

N 1/2 S. 25 T. 7S R. 97W 6 P.M.  
 Garfield County, Colorado


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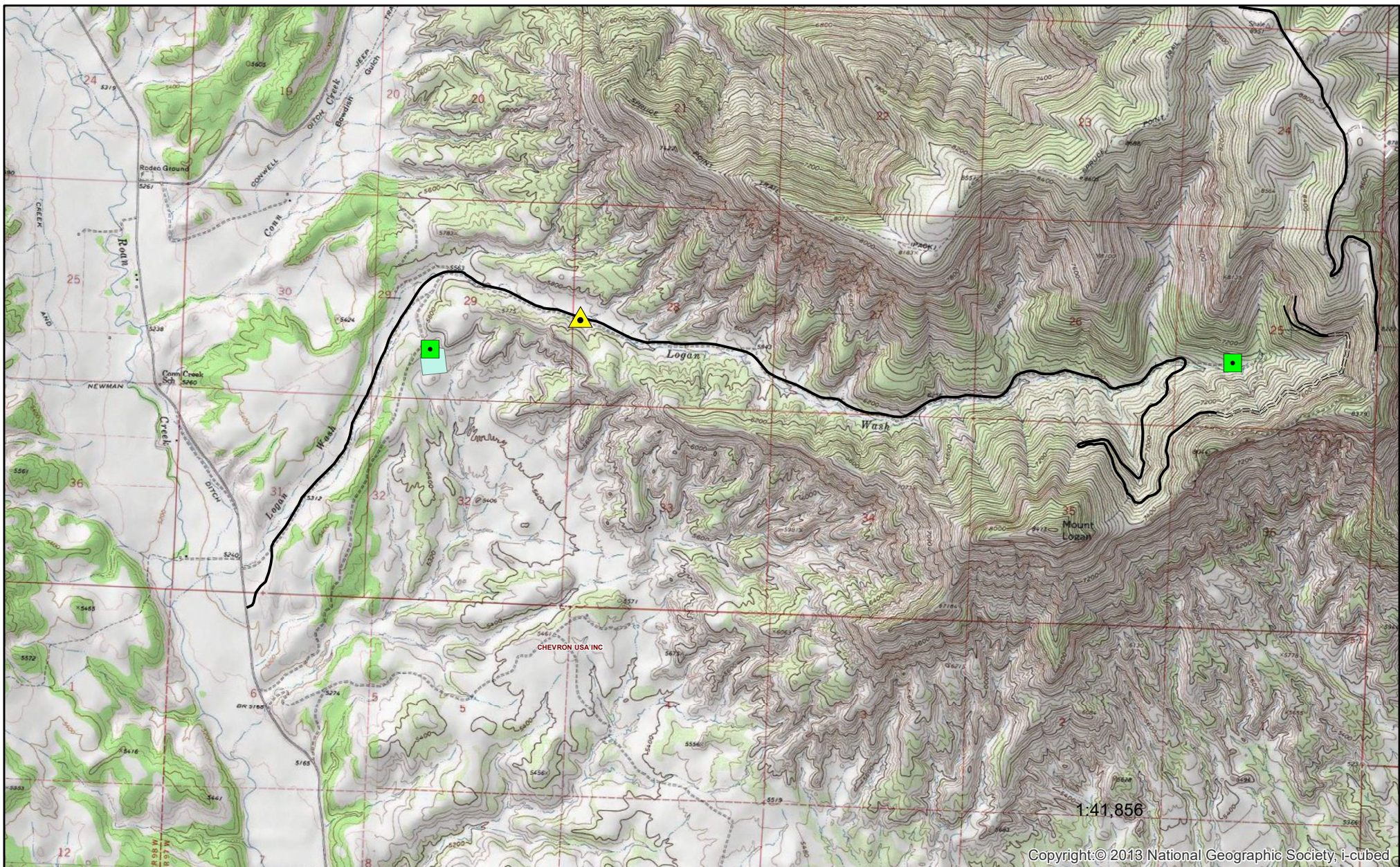
**Legend**

- Original location
- Transplanted location
- CNAP boundary
- Bureau of Land Management (BLM) parcels





0 25 50 100 Feet  
 1:800

Note: The original location of Plant No. 29 was overlooked during the survey.





### Legend

-  Release Point
-  Upper and Lower Manhole
-  Evaporation Pond
-  Logan Wash Road

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**Figure 12. Logan Wash Mine Retort Pipeline Release**

