

**Leviathan Mine
October 2011
TAC Meeting
Lahontan Water Board**

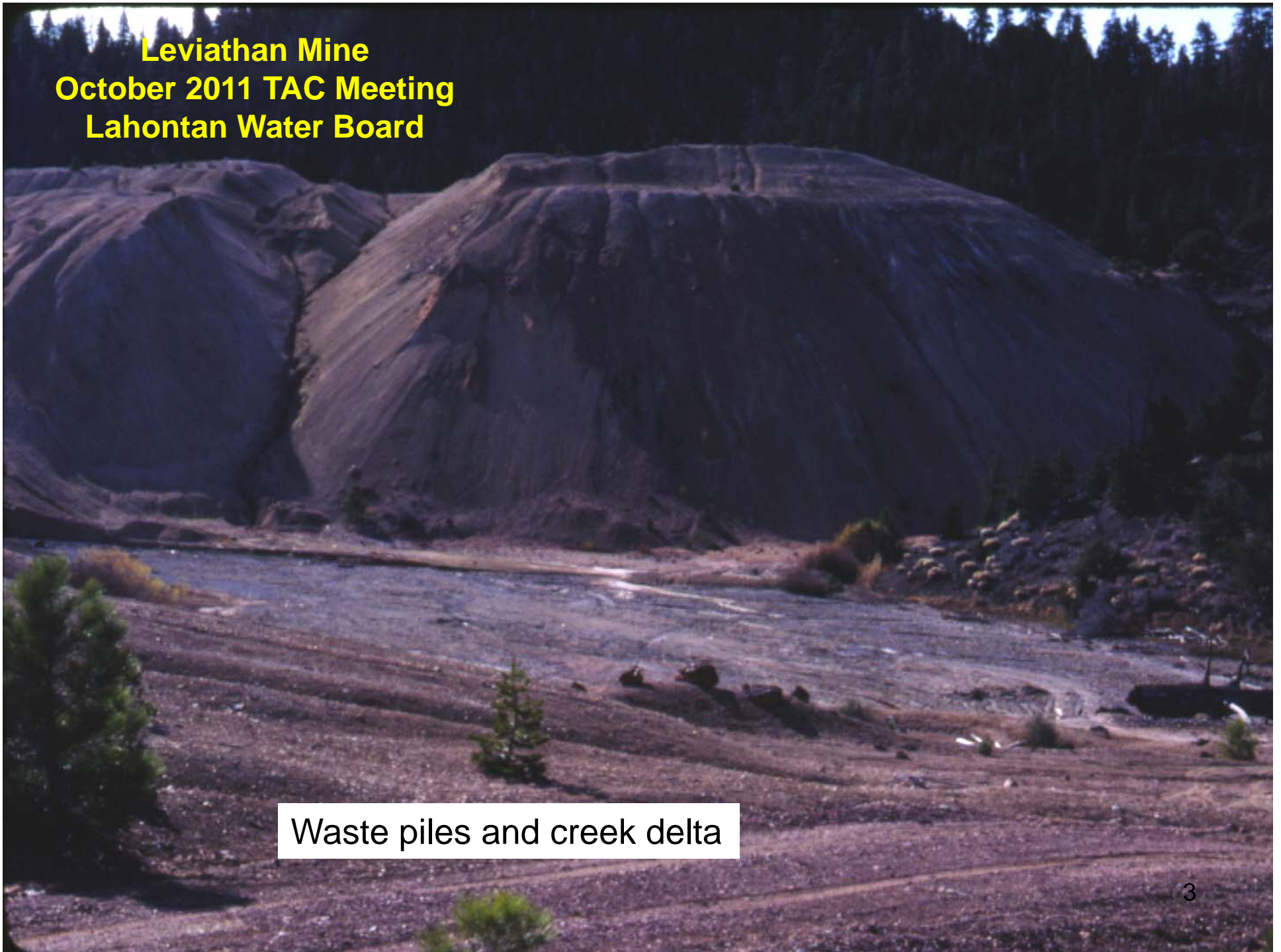


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Leviathan Creek thru mine waste

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Waste piles and creek delta

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Leviathan Creek joining
Mountaineer Creek



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Tasks in 2011:

- Spring and Summer Pond Water Treatment Operations
- Flow and Meteorological Monitoring
- Maintenance
- Paving

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Crusher Road Seep





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In 2011, approximately 1082 tons of sludge generated in 2010 from 6.7 million gallons of AMD were hauled off site for disposal.

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Pit Clarifier ready for treated AMD

A photograph of a water treatment facility at the Leviathan Mine. In the foreground, a large, shallow pond contains murky, reddish-brown water. In the middle ground, several large, white cylindrical storage tanks are arranged in a row, with yellow ladders and pipes connecting them. To the left, there are several white utility buildings and a white pickup truck. The background features a steep, sandy hillside with sparse green trees under a clear blue sky.

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Summer Treatment

- 9.8 million gallons of AMD treated and discharged to Leviathan Creek
- Influent pH range 2.11 – 3.28 SU
- Influent average TDS 9,020 mg/L
- Field and lab data show all USEPA discharge criteria met

- 198 tons lime (dry weight)
- 6,924 gallons diesel
- 335 gallons gasoline
- 147 gallons liquid flocculent
- 4,854 mg lime / liter AMD

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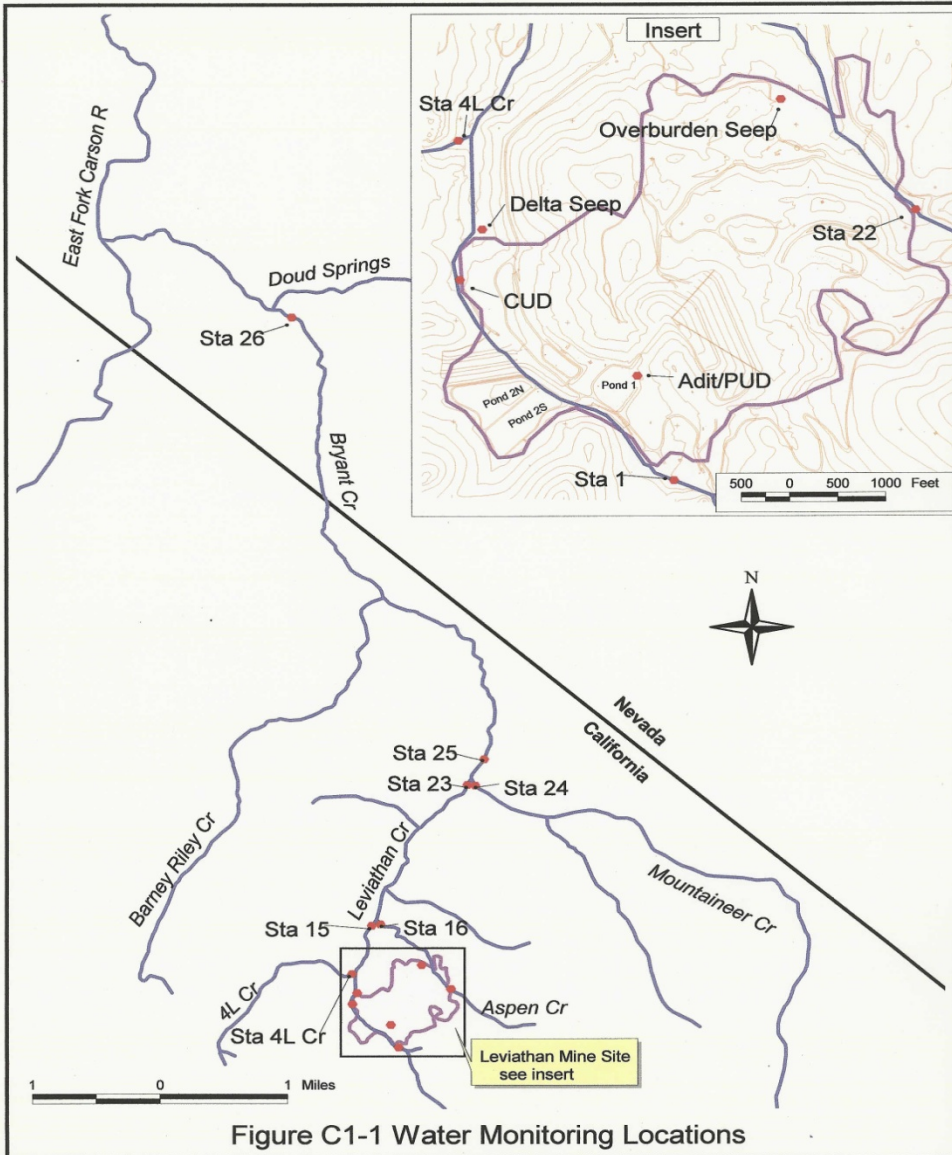
Pond 2N at the end of the 2011 treatment season



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- ~800 – 1,000 tons of sludge will be hauled off site for disposal in 2012

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USGS Stage and Flow Monitoring



No SW sampling 2010-11

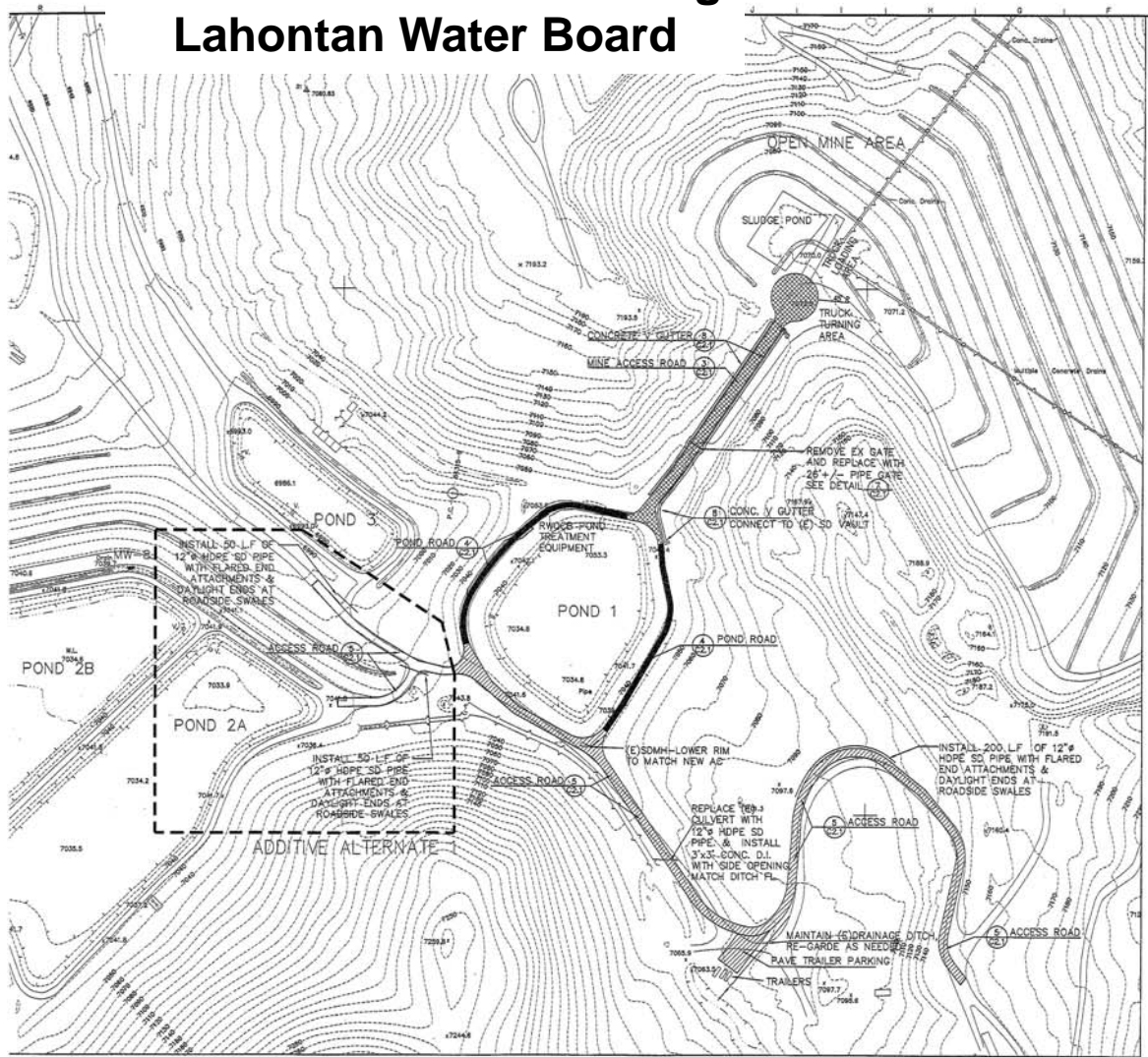


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Maintenance Activities in 2011

- Upgraded plant electrical system
- Paved upper site roads, replaced/added storm water control structures
- Cleaned sediment from V-ditch at Pond 3 and replenished liner cover
- Sprayed for Whitetop
- Perimeter fence repaired
- Relocated pit clarifier effluent line

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PAVING LEGEND

- 20' MINE ACCESS ROAD (3) (7-21)
- 10' POND ROAD (4) (22-1)
- 14' ACCESS ROAD (5) (22-1)

DGS
 Department of General Services
 Design Services Section
 State of California
 Real Estate Services Division
 Professional Services Branch
 707 Third Street, Suite 4-105
 West Sacramento, California 95605
 Project Manager: CONRAD LEWIS
 916.216.1420 Voice
 916.273.4995 Fax
 conrad.lewis@dgs.ca.gov



No.	Date	Description
01	10/3/10	100% WORKING DWG

Project:
**ACCESS ROAD PAVING &
 DRAINAGE IMPROVEMENTS**

LEVIATHAN MINE
 ALPINE COUNTY
 LAHONTAN REGIONAL WATER
 QUALITY CONTROL BOARD

Supervisor	Designed	Drawn	Checked
FP	JF	JF	FP

File Date: 10-20-10 Vout File Number: 11-A-4
 Sheet Title: **SITE PLAN**

Paving activities during 2011 field season

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Lime-cement placement



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Incorporating lime-cement into soil

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Rolling new asphalt

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California access road w/
concrete V-ditch

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New pavement and storm water
control structures