

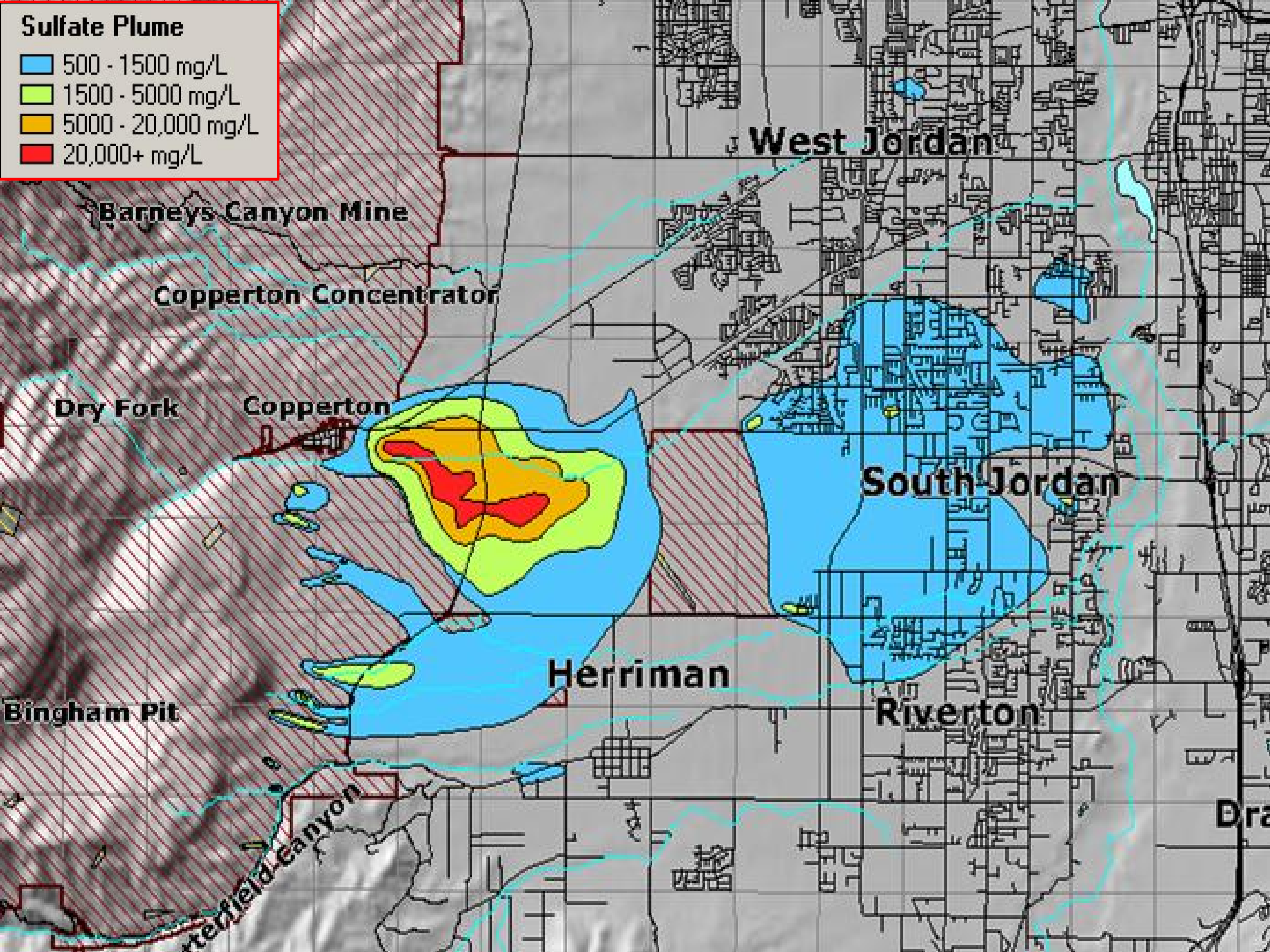
Jordan Valley Water Conservancy District

Southwest Jordan Valley Groundwater Project

October 12, 2005

Sulfate Plume

- 500 - 1500 mg/L
- 1500 - 5000 mg/L
- 5000 - 20,000 mg/L
- 20,000+ mg/L



Barneys Canyon Mine

Copperton Concentrator

Dry Fork

Copperton

West Jordan

South Jordan

Herriman

Riverton

Bingham Pit

Barneys Canyon

Dra

Southwest Groundwater Project Status

Agreements with Trustee and Kennecott Signed –
August 31, 2004

Zone B Reverse Osmosis Treatment Plant
Complete and Operational – Spring 2009

Southwest Groundwater Project

2004 Project Activities

- Signed agreement with Trustee and Kennecott
- Signed agreement with Kennecott
- Negotiated an agreement with Carollo Engineers

Southwest Groundwater Project

2005 Project Activities

- 1) Created a project web page
- 2) Continued construction of Zone B finished water pipeline (7800 South)
- 3) Acquired Deep Well Sites
- 4) Drilled three exploratory wells
- 5) Designed and began construction of Zone A finished water pipeline

Cont.

Southwest Groundwater Project

2005 Project Activities

- 6) Began engineering design of:
 - Reverse osmosis treatment plant
 - Feed water collection pipelines
- 7) Prepared deep well drilling specifications
- 8) Submit Jordan River UPDES permit
- 9) Submit deep well conditional use permits

1) Created a project web site



Welcome!

[Publications](#)

[District Information](#)

[Water Information](#)

[Conservation](#)

[Contact Us](#)

[Text-only version](#)

Welcome to Jordan Valley Water Conservancy District's Web site. Jordan Valley Water is primarily a wholesaler of water, serving much of Salt Lake County and other areas. For more information about who Jordan Valley is and what we do, visit the [District Information](#) section of this Web site.



- [2003 Water Quality Report](#)
- [2003 Annual Report](#)
- [Bids and Proposals](#)
- [Board Members](#)
- [Budget](#)
- [Disclaimer](#)
- [Employment](#)
- [Fluoridation Information](#)
- [Links](#)
- [Meeting Schedule](#) (Board of Trustees, Conservation Committee and Executive Committee)
- [Public Hearings/Legal Notices](#)
- [Sign Up for New Water Service](#)
- [Southwest Jordan Valley Groundwater](#)

[Our Member & Contracting Agencies:](#)

- [Bluffdale City](#)
- [Department of Corrections](#)
- [Department of Public Safety](#)
- [Draper City](#)
- [Granger-Hunter ID](#)
- [Herriman City](#)
- [Hexcel Corporation](#)
- [Kearns ID](#)
- [Magna Water Company](#)
- [Metropolitan Water*](#)
- [Midvale City](#)
- [Riverton City](#)
- [Sandy City*](#)
- [City of South Jordan](#)
- [South Salt Lake](#)
- [Taylorsville-Bennion ID](#)
- [WaterPro, Inc.](#)
- [West Jordan City](#)
- [White City Water Improvement District](#)
- [Willow Creek Country Club*](#)



SOUTHWEST JORDAN VALLEY GROUNDWATER PROJECT

Background Information

SWGWP - Home

Background

Claim

Proposal

Approval

Elements

Deliveries

Stakeholders

Disposal

Selenium

Well Drilling - New

Schedule - New

Press

Glossary

Contacts/Links

Photos - New

Background & Summary

More than 100 years of mining have created contamination in the southwest portion of the Salt Lake Valley aquifer.

The first map below shows two zones of contamination. The second map below shows the wells that will be used to contain and remediate the plumes. Also shown are the facilities that will be used for treatment and distribution of potable water. The Zone A facilities will be constructed and operated by [Kennecott Utah Copper](#). Zone B facilities will be constructed and operated by Jordan Valley Water.



[Zones of Contamination](#)



[Project Facilities](#)

Click image to view a larger version.

Jordan Valley Water Conservancy District

(801) 565-4300

swjvgwp@jvwcd.org



Sulfate - the Contaminant

The contaminant that was introduced to the aquifer by mining activities is sulfate, SO₄. Sulfate can cause a laxative effect on humans. Infants and travelers not accustomed to the water are especially susceptible to being affected with diarrhea.

The drinking water sulfate concentration standard to protect human health is 500 mg/L. Milligrams per liter (mg/L) is similar to parts per million



SOUTHWEST JORDAN VALLEY GROUNDWATER PROJECT

Well Drilling

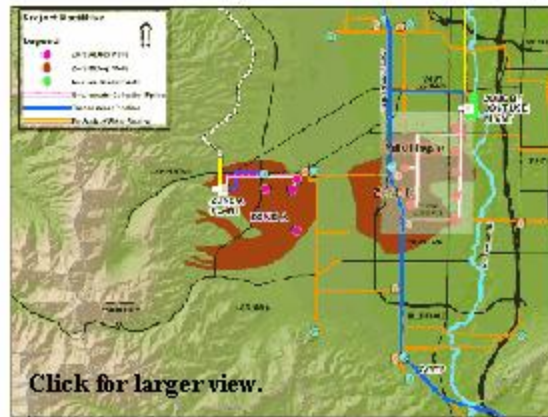
- SWGWP - Home
- Background
- Claim
- Proposal
- Approval
- Elements
- Deliveries
- Stakeholders
- Disposal
- Selenium
- Well Drilling - New**
- Schedule - New
- Press
- Glossary
- Contacts/Links
- Photos - New

Wells

Well Drilling

The Zone B facilities are to include seven deep wells and two to five shallow wells. The shallow wells are to be located near the reverse osmosis treatment plant. The deep wells are to be located at the following locations:

- 8773 South 1300 West
- 9100 South 1300 West
- 9800 South 1300 West
- 10621 South 1300 West
- 11300 South 1300 West
- 11000 South 2700 West
- 10195 South 3200 West



Well Drilling Schedule

The shallow wells are to be drilled during the fall and winter of 2005-2006.

The deep well sites are to have exploratory wells drilled in the spring and summer of 2005. Production wells are to be drilled beginning in the fall of 2005 through the spring of 2006.

[Click here to view pictures of the Well Drilling](#)

Groundwater Level Monitoring

Well owners that are concerned about water levels for wells that are located near Zone B well sites may request that their well water level be monitored by Jordan Valley Water. Water level monitoring will be performed by the District during the pump testing of the Zone B deep wells. Well owners interested in having their water level monitored may contact the Jordan Valley Water at 565-4300 or send an email to swjvgwp@jvwcd.org.





SOUTHWEST JORDAN VALLEY GROUNDWATER PROJECT

[SWGWP - Home](#)

[Background](#)

[Claim](#)

[Proposal](#)

[Approval](#)

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[Deliveries](#)

[Stakeholders](#)

[Disposal](#)

[Selenium](#)

[Well Drilling - New](#)

[Schedule - New](#)

[Press](#)

[Glossary](#)

[Contacts/Links](#)

[Photos - New](#)

Exploratory Well Drilling Photo Album

- March 2005 - 8773 South 1300 West



- March 2005 - 10621 South 1300 West



[\[SWGWP - Home\]](#) [\[Background\]](#) [\[Claim\]](#) [\[Proposal\]](#) [\[Approval\]](#) [\[Elements\]](#) [\[Deliveries\]](#)

[\[Stakeholders\]](#) [\[Disposal\]](#) [\[Selenium\]](#) [\[Well Drilling - New\]](#) [\[Schedule - New\]](#) [\[Press\]](#)

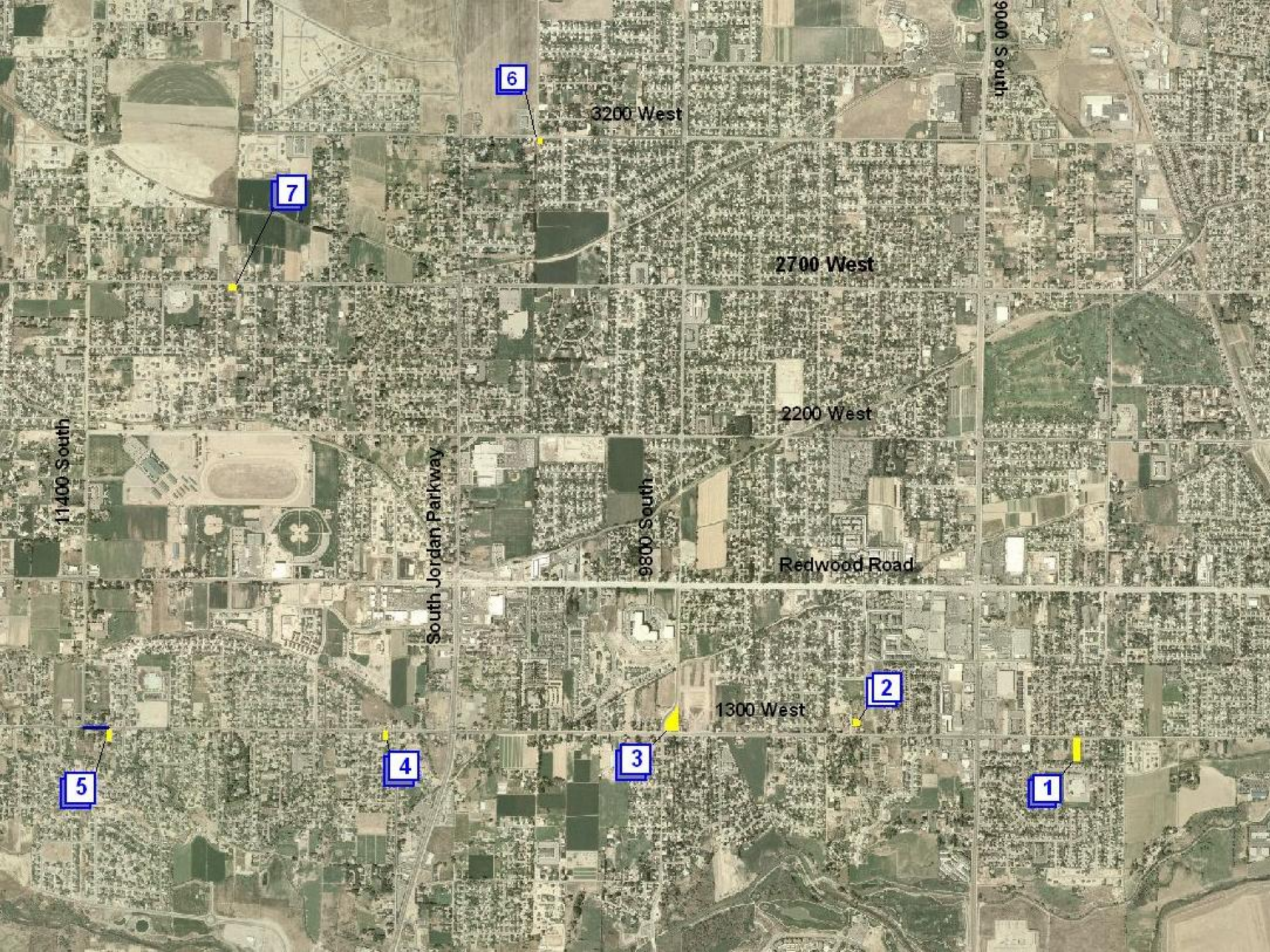
[\[Glossary\]](#) [\[Contacts/Links\]](#) [\[Photos - New\]](#) [\[Exploratory Well Drilling\]](#) [\[10621 South\]](#)

2) Continued construction of Zone B finished water pipeline (7800 South)





3) Acquired Deep Well Sites



6

3200 West

11400 South

7

2700 West

11400 South

South Jordan Parkway

9800 South

2200 West

Redwood Road

2

1300 West

3

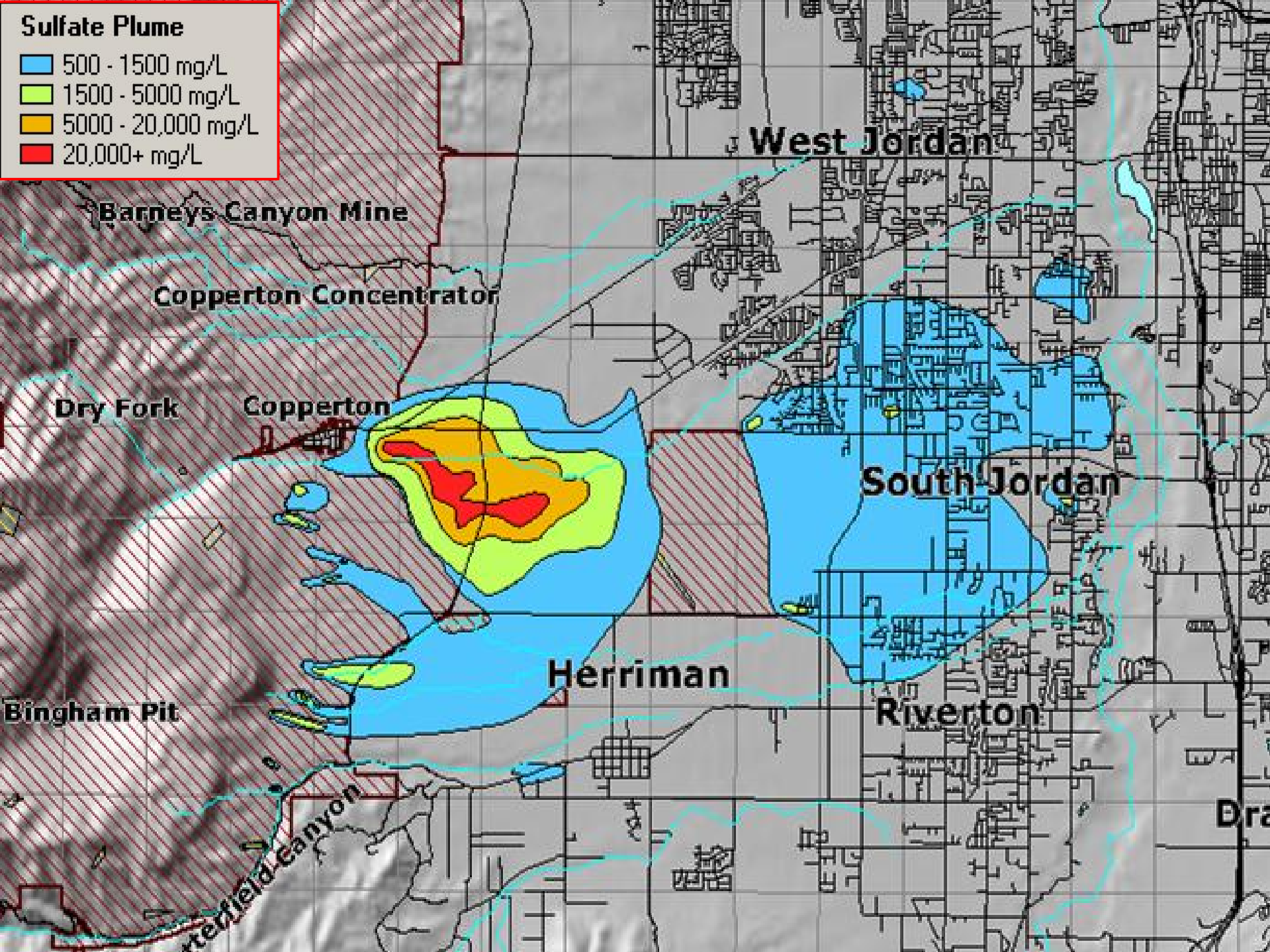
4

5

1

Sulfate Plume

- 500 - 1500 mg/L
- 1500 - 5000 mg/L
- 5000 - 20,000 mg/L
- 20,000+ mg/L



Barneys Canyon Mine

Copperton Concentrator

Dry Fork

Copperton

West Jordan

South Jordan

Herriman

Riverton

Bingham Pit

Jordan River

Draper

4) Drilled three exploratory wells



















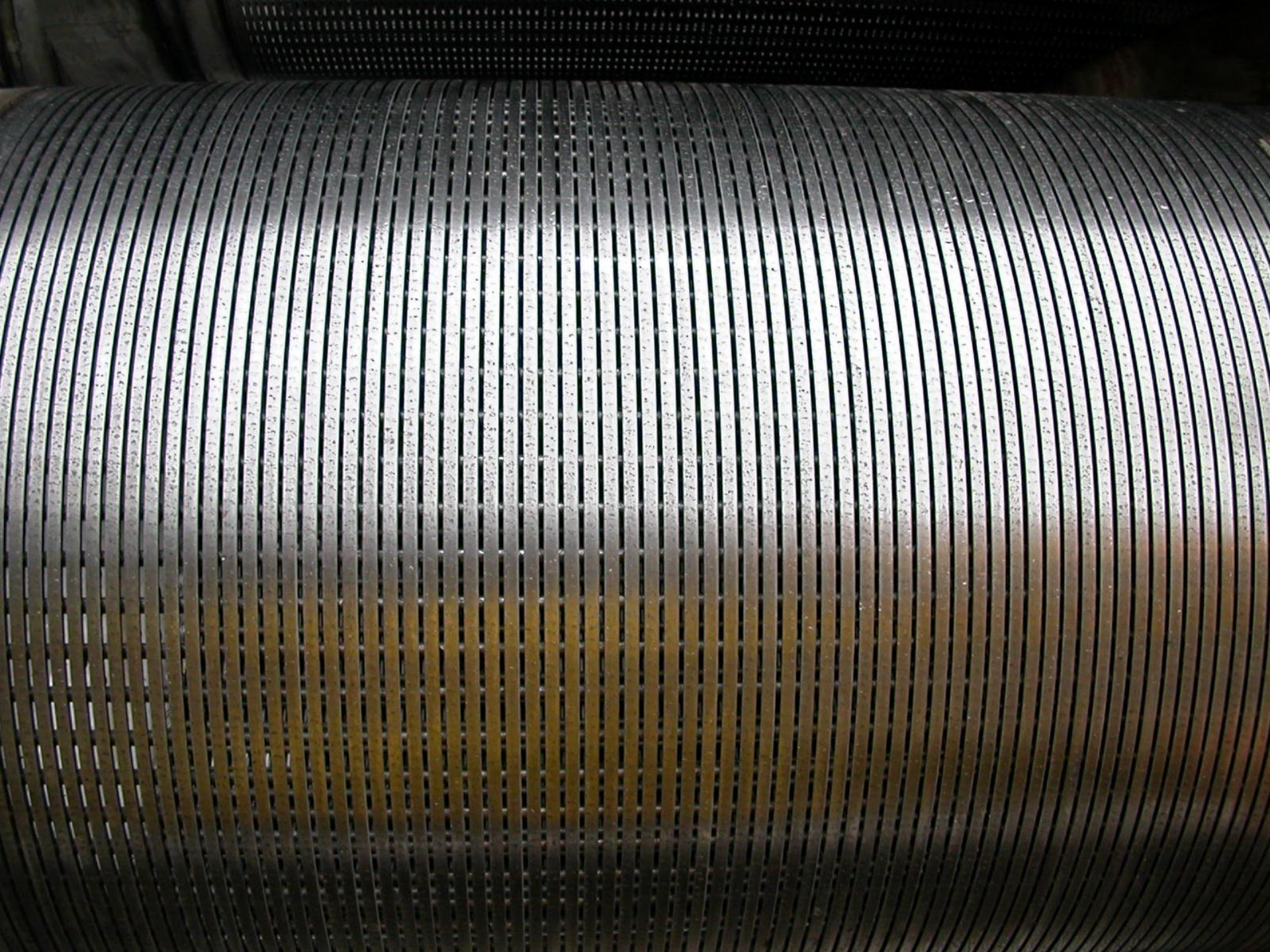




C-12 L004-110

800-462-4517
towmastertrailers.com

CONTRAIL
TOWMASTER TRAILER





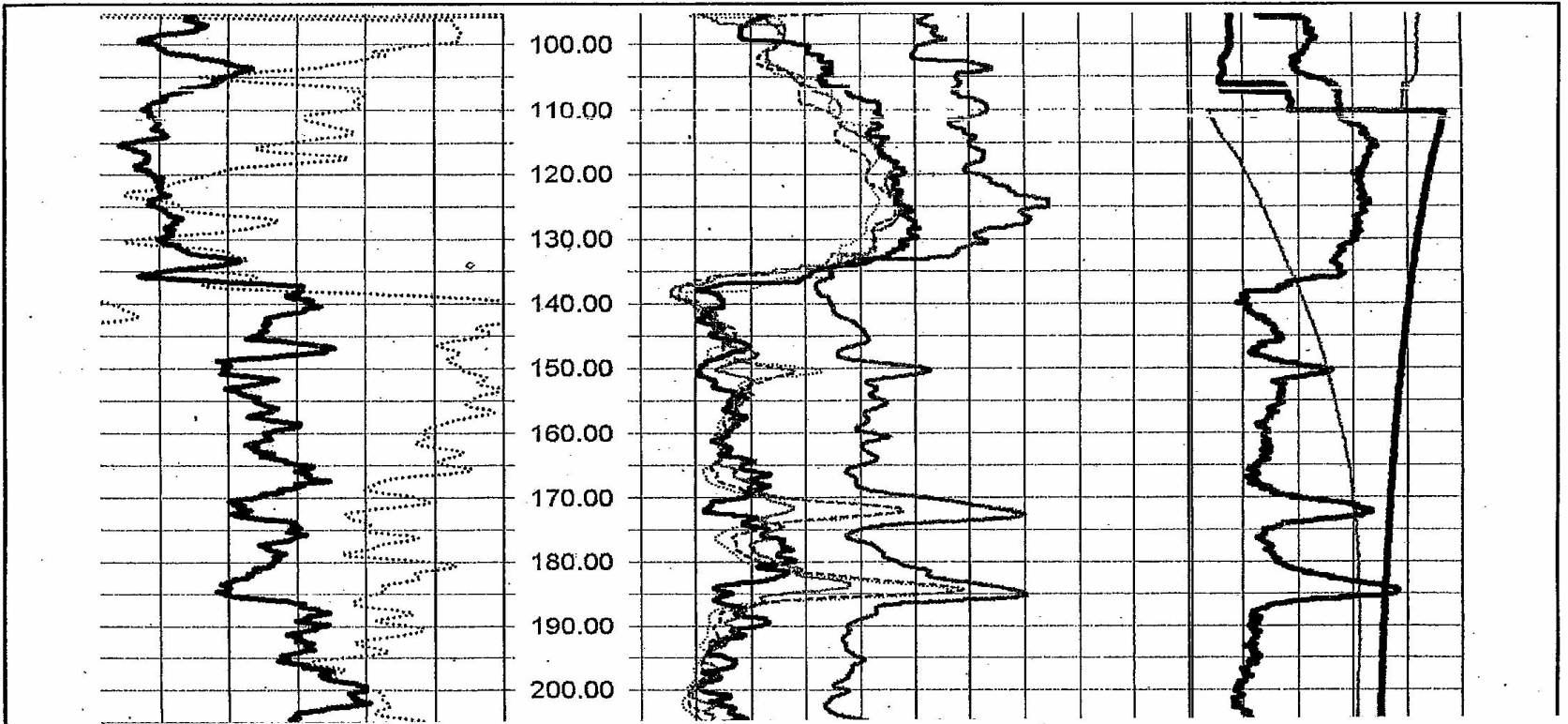


120

140

160

100 - 200
10000

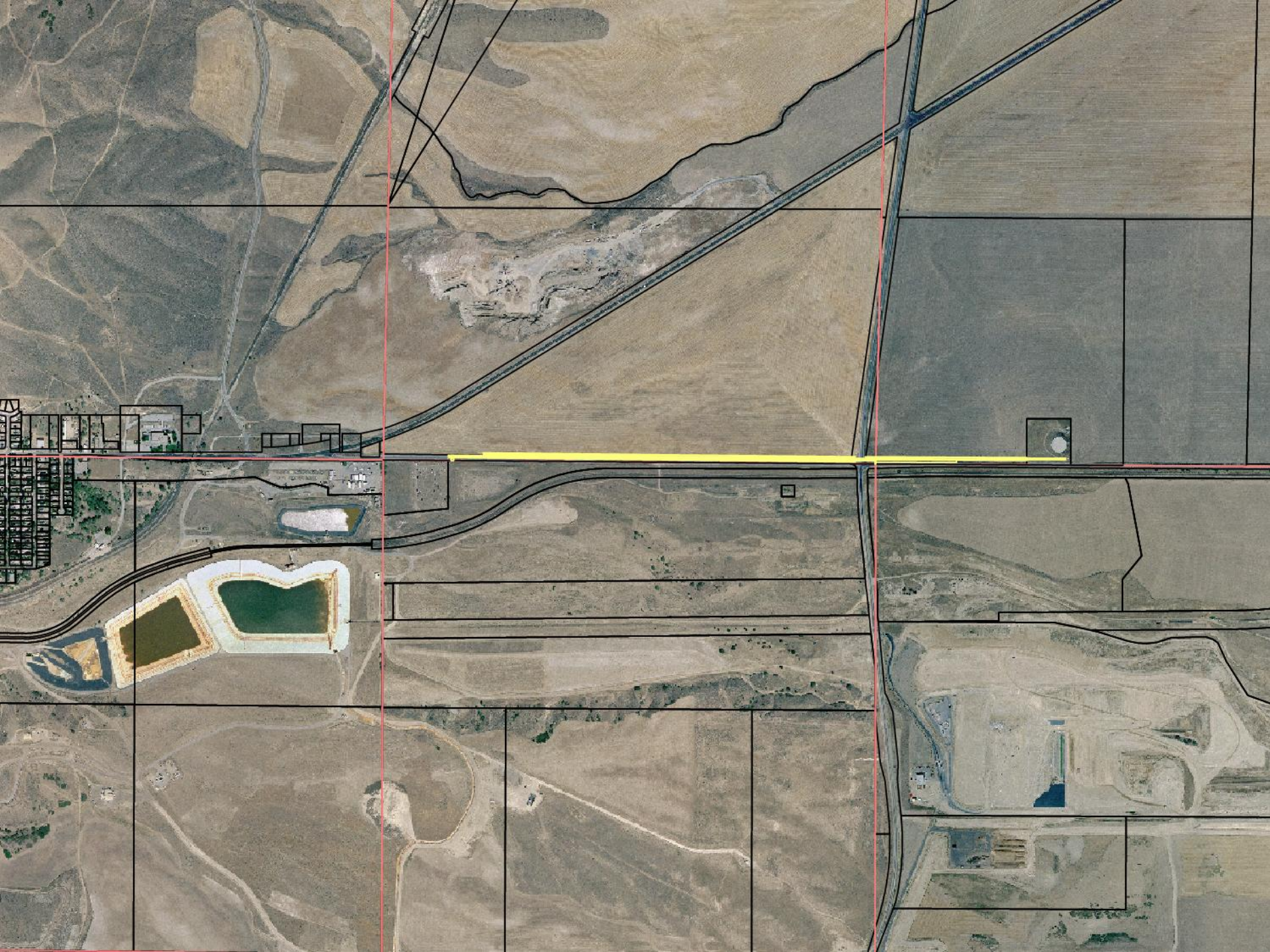


5) Design and begin construction of Zone A
finished water pipeline

1.25 miles of 30-inch diameter steel pipeline

Associated Brigham Contractors

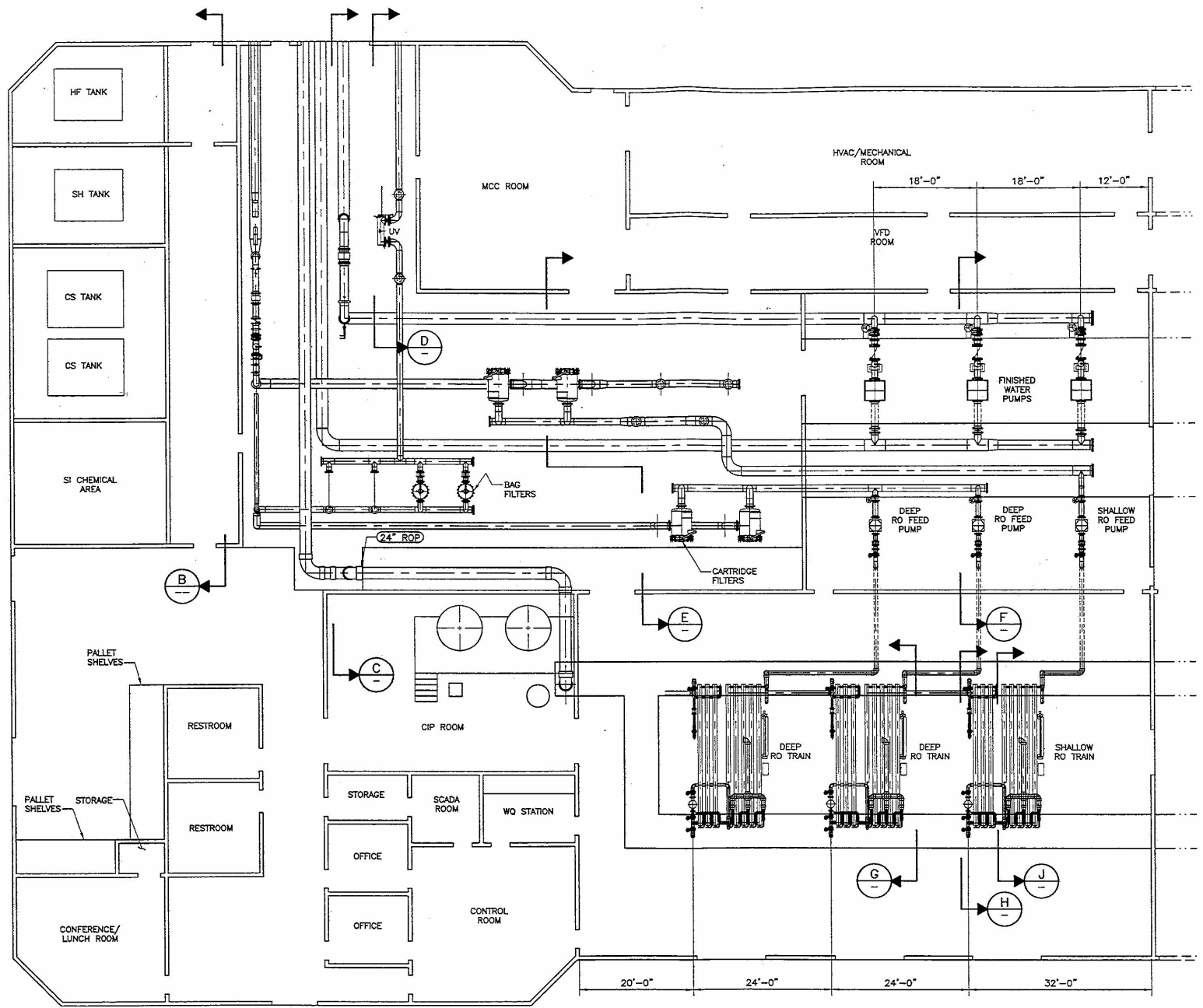
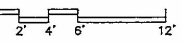
\$1,200,000

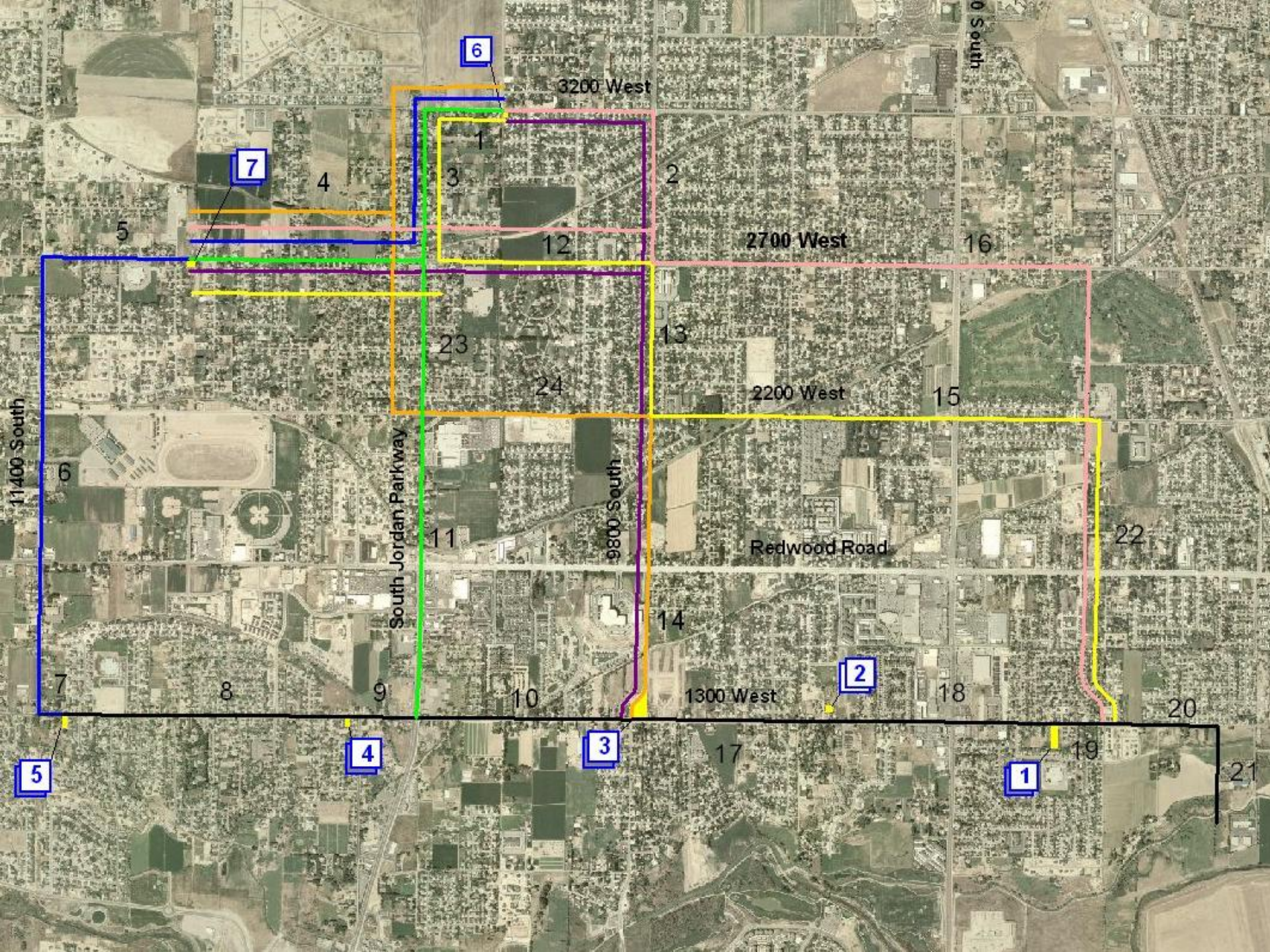


6) Begin engineering design of:

1) Reverse osmosis treatment plant

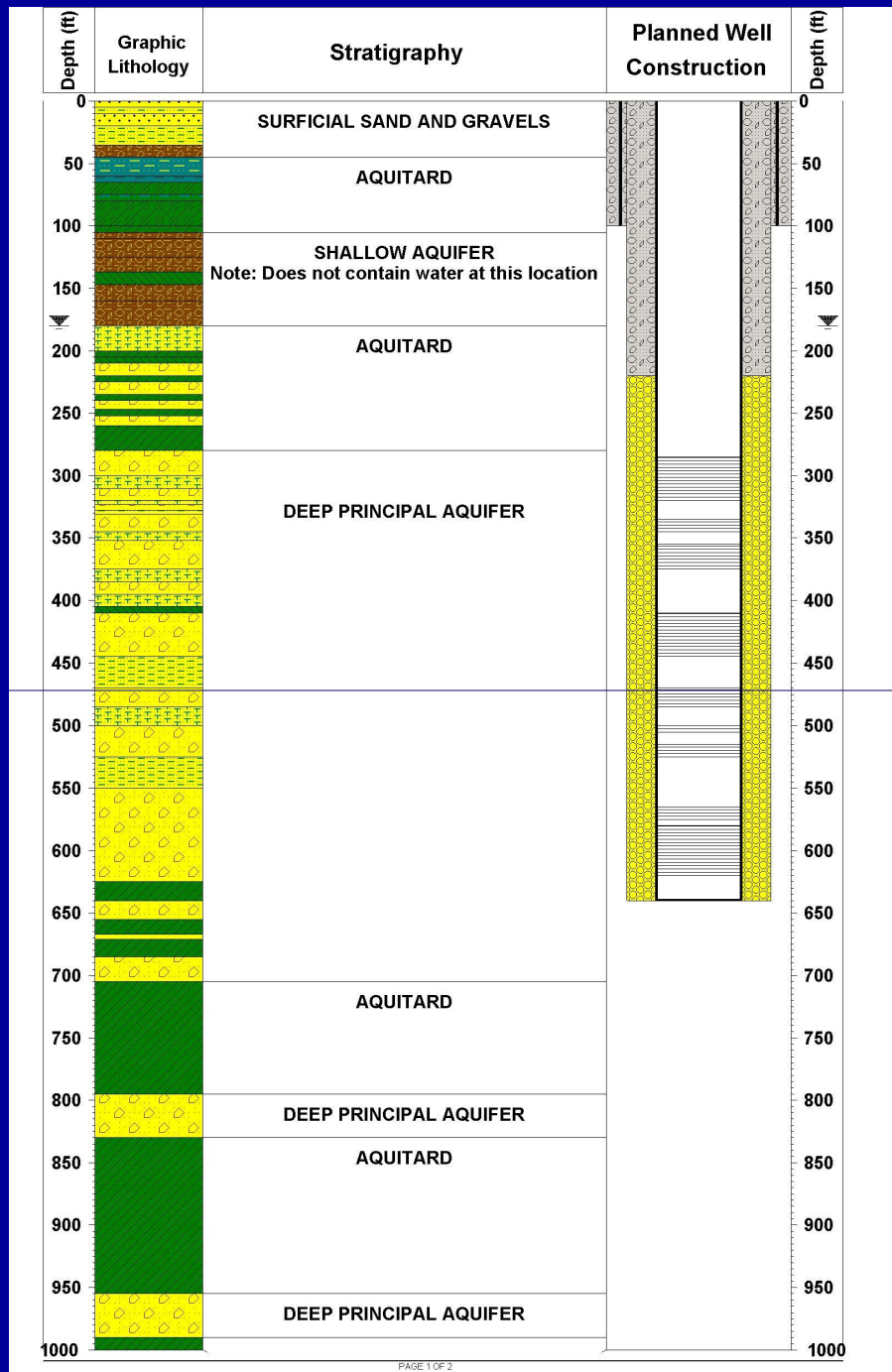
2) Feed water collection pipelines



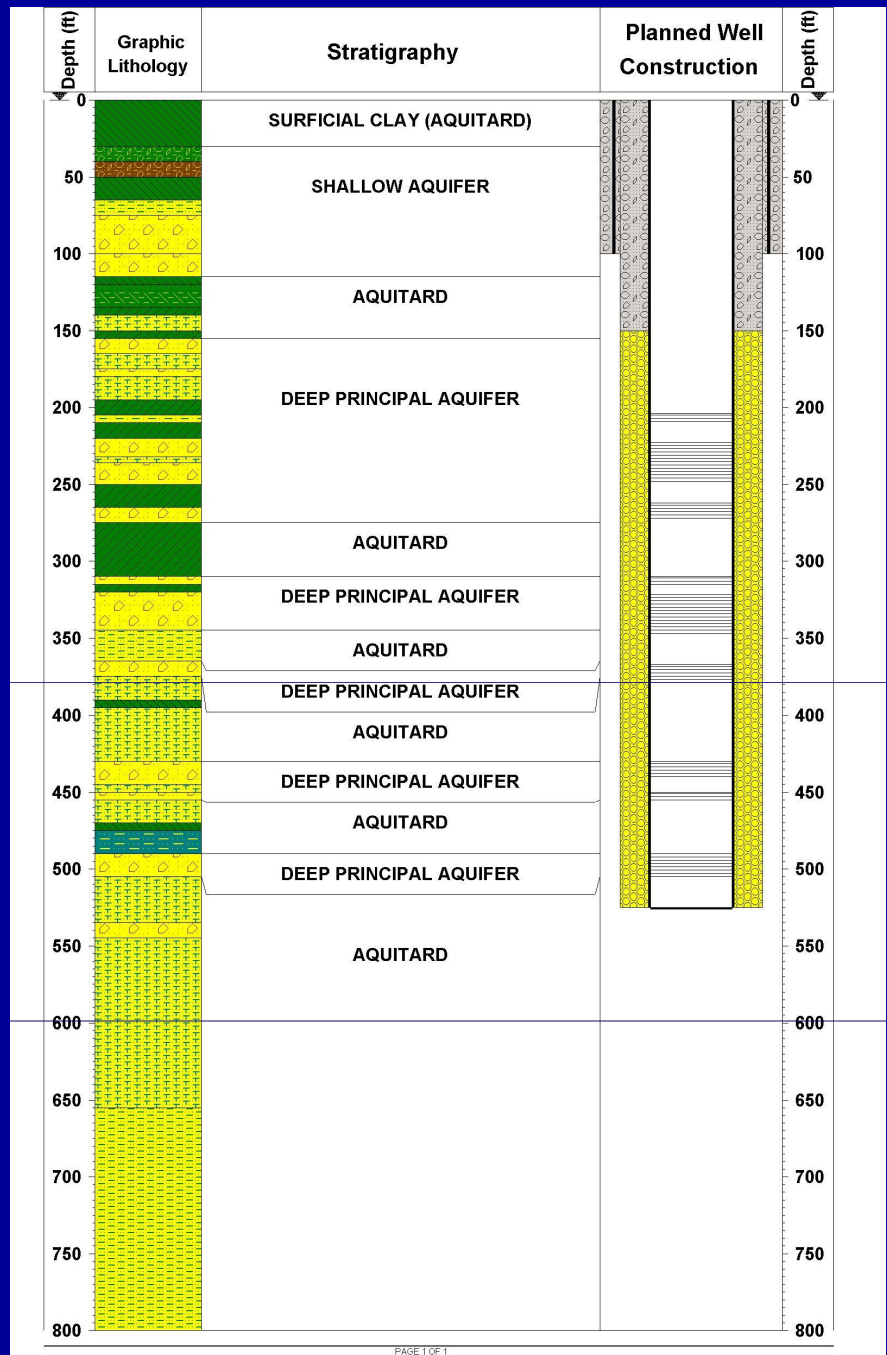


7) Prepare deep well drilling specifications

10200 South 3200 West Well



8773 South 1300 West Well







07/12/2004







! CAUTION

Ensure the "Auto-Overhaul Manual" switch is in the "Overhaul" position. If it is not, when the battery cables are disconnected, the engine will crank and attempt to start.

DIESEL FUEL

DRINK FLUID



8) Submit Jordan River UPDES permit



Discharge Scenarios

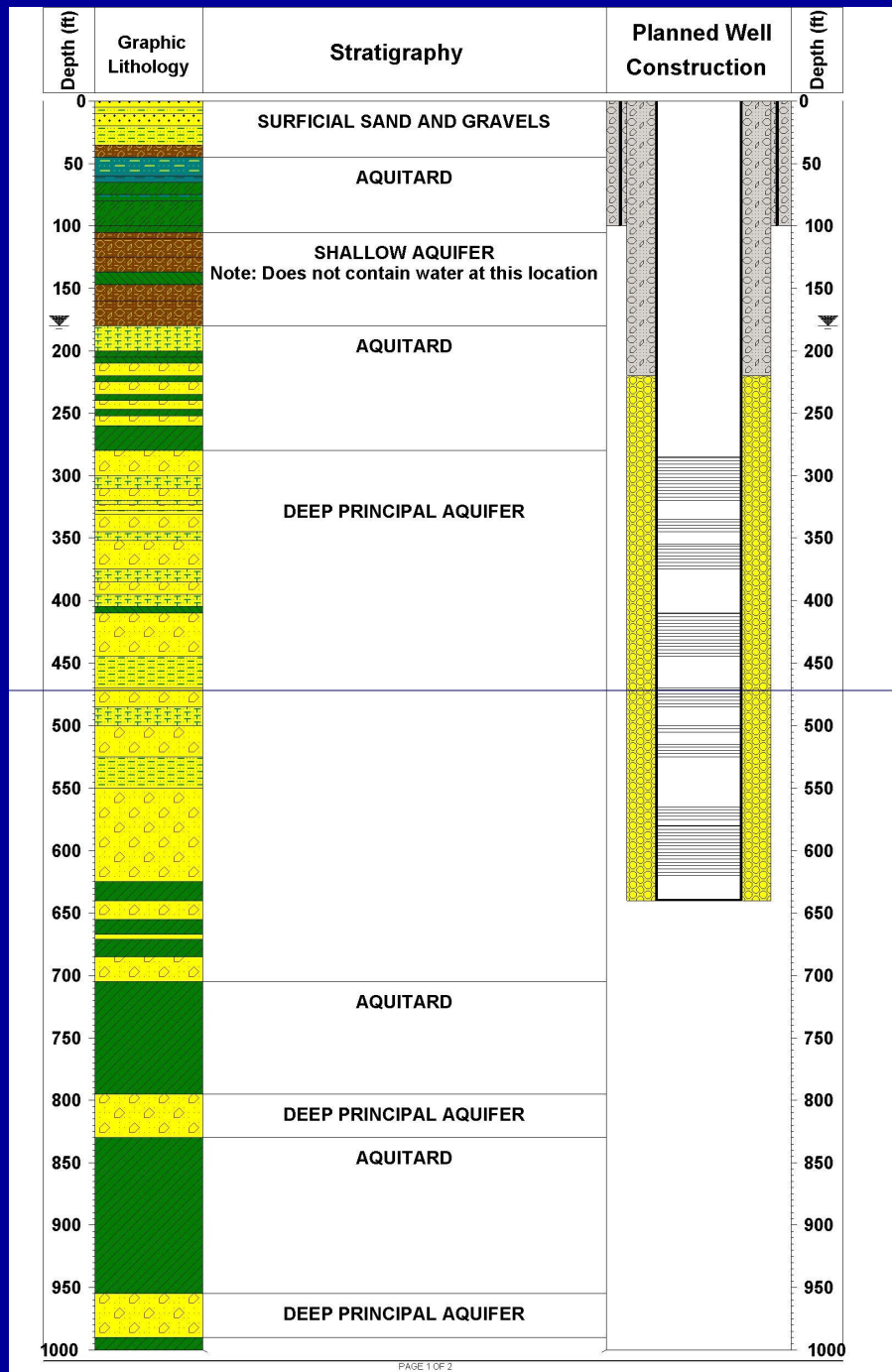
- Initial Well Development
- Treatment Plant Start-up
- Membrane Cleaning

Water Quality Data

- TDS: total dissolved solids (mg/L = ppm)
- Jordan River TDS Standard: 1,200 mg/L
- Native Zone B TDS: 800 mg/L
- Contaminated Zone B TDS: 1,600 mg/L
- Shallow Aquifer: 1,200 mg/L

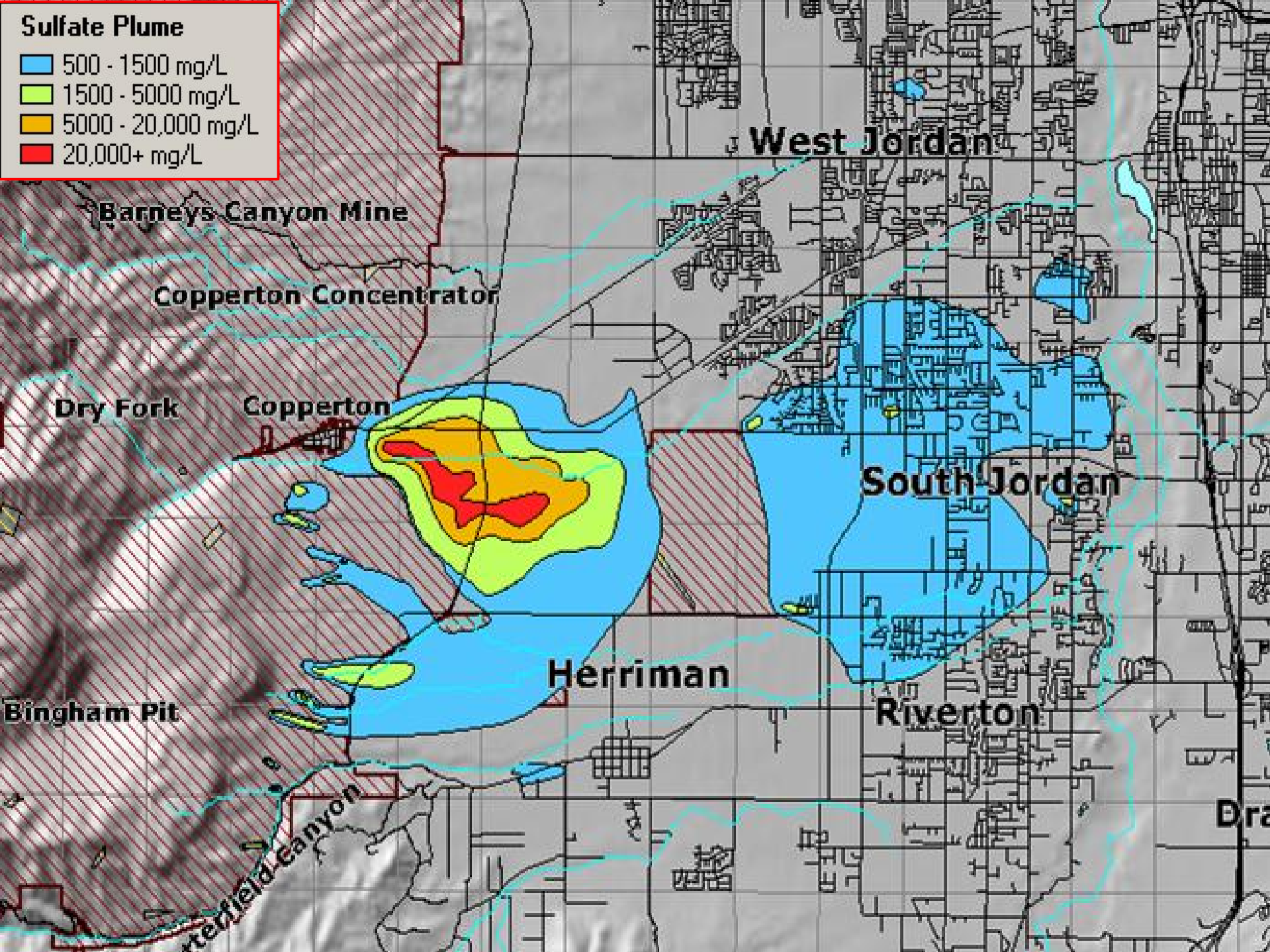
Other parameters: below Jordan River standards

10200 South 3200 West Well



Sulfate Plume

- 500 - 1500 mg/L
- 1500 - 5000 mg/L
- 5000 - 20,000 mg/L
- 20,000+ mg/L



Barneys Canyon Mine

Copperton Concentrator

Dry Fork

Copperton

West Jordan

South Jordan

Herriman

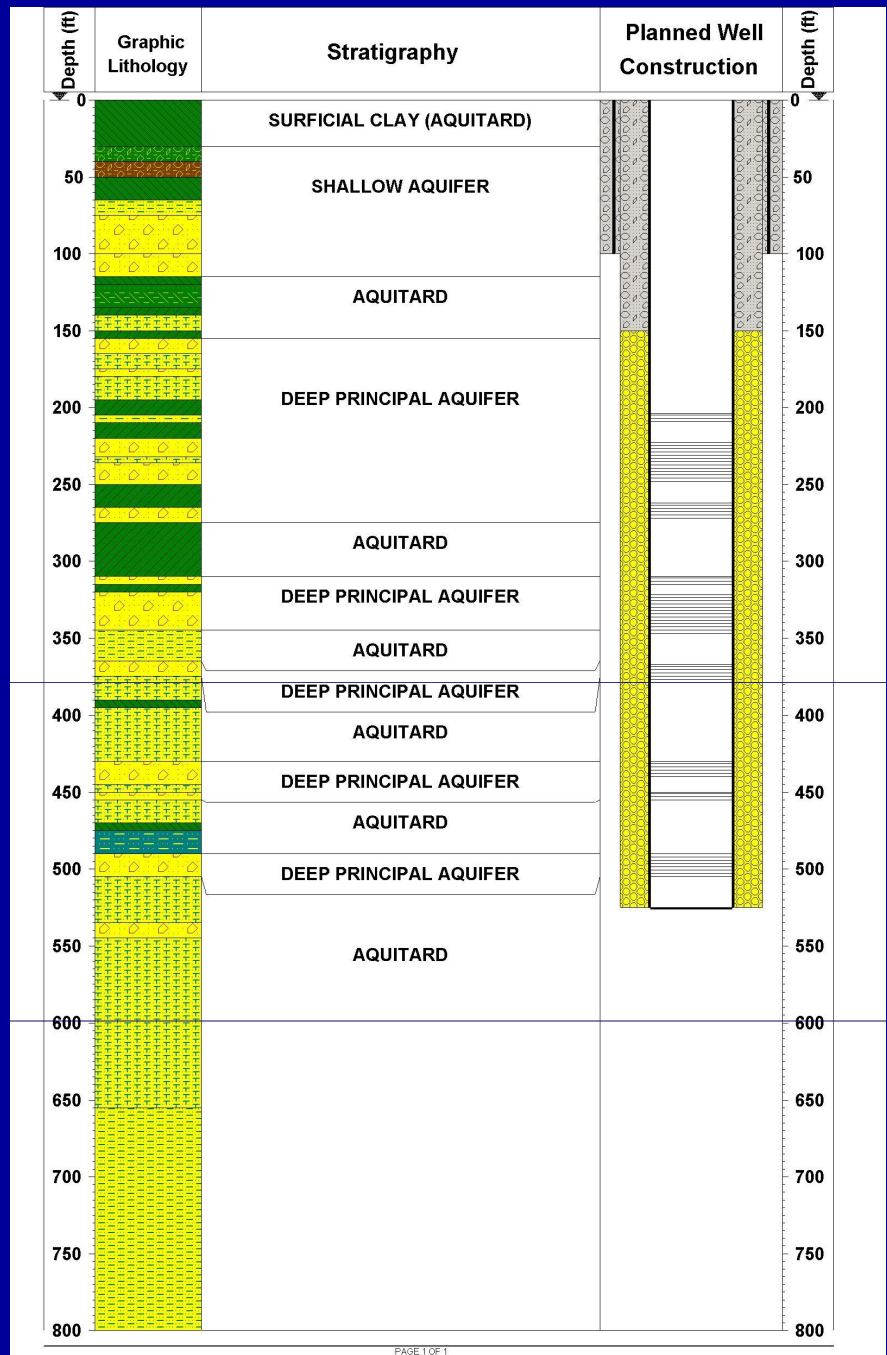
Riverton

Bingham Pit

Jordan River

Draper

8773 South 1300 West Well



Flow Rates

- Jordan River 7-Q-10 (7800 South): 26 cfs
- Well Development: 4 cfs
- Treatment Plant Start-up 13 cfs
- Membrane Cleaning 6.5 cfs

Water Quality Data

- TDS: total dissolved solids (mg/L = ppm)
- Jordan River TDS Standard: 1,200 mg/L
- Native Zone B TDS: 800 mg/L
- Contaminated Zone B TDS: 1,600 mg/L
- Shallow Aquifer: 1,200 mg/L

Other parameters: below Jordan River standards

9) Submit deep well conditional use permits



Jordan Valley Water Conservancy District

David G. Ovard, *CEO, General Manager, Secretary-Treasurer*
Richard P. Bay, *Assistant General Manager, Chief Engineer*
Barton A. Forsyth, *Assistant General Manager, Water Supply/Water Quality*

Board of Trustees

Thomas W. Forsgren, *Chair*
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Dale F. Gardiner
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B. Jeff Rasmussen
Lyle C. Summers
Gary C. Swensen
Steven L. Taggart

August 25, 2005

Resident
1387 W. Polo Ln.
West Jordan, UT 84088

Subject: Construction of a Potable Water Well at 1324 West Polo Lane

Dear Resident:

You are invited to a meeting regarding the construction of a potable water well at 1324 West Polo Lane by Jordan Valley Water Conservancy District (District). In conjunction with the Utah Department of Environmental Quality and Kennecott Utah Copper Corporation, the District is constructing a groundwater remediation project, including a well at the address shown above. The meeting to discuss the well site will be held on the site on Wednesday, August 31, 2005 at 7:00 pm.

Attached to this letter is some information to help you understand the project, including:

- a project fact sheet
- a proposed site plan of the well site
- a vicinity map showing where the well site is
- a photo of a similar well at 1526 East 8600 South

The finished site is to include a one story brick wellhouse with perimeter fencing, a parking lot for maintenance vehicles, and waterwise landscaping along the front and sides of the site. The schedule for the project is as follows:

Well drilling: Fall 2005 – Spring 2006

Wellhouse and Site Construction: Fall 2007 – Summer 2008

Out of necessity to maintain safe drilling operations, the drilling work will be completed round the clock. This will be mitigated by the use of best available engine mufflers and the installation of 20 feet high sound walls. Although the drilling contractor will be on the site for approximately two months, the 24-hour operations typically last three to four weeks.

If you are unable to attend the meeting or have any questions, feel free to contact me at 565-4300 or at swgwp@jvwcd.org.

Sincerely,

Mark G Atencio, P.E.
Senior Engineer



JORDAN VALLEY WATER CONSERVANCY DISTRICT

Southwest Jordan Valley Groundwater Project

Jordan Valley Water Conservancy District is a special service district, a government agency, that provides potable water to 19 member agencies in Salt Lake and northern Utah Counties.

Information about Jordan Valley Water Conservancy District can be found at www.jvwcd.org.

The Southwest Jordan Valley Groundwater Project is addressing groundwater contamination (sulfate) due to historic mining practices. The project will meet the following objectives:

- 1) contain the contaminated plume
- 2) remediate the aquifer
- 3) provide potable water to the affected area

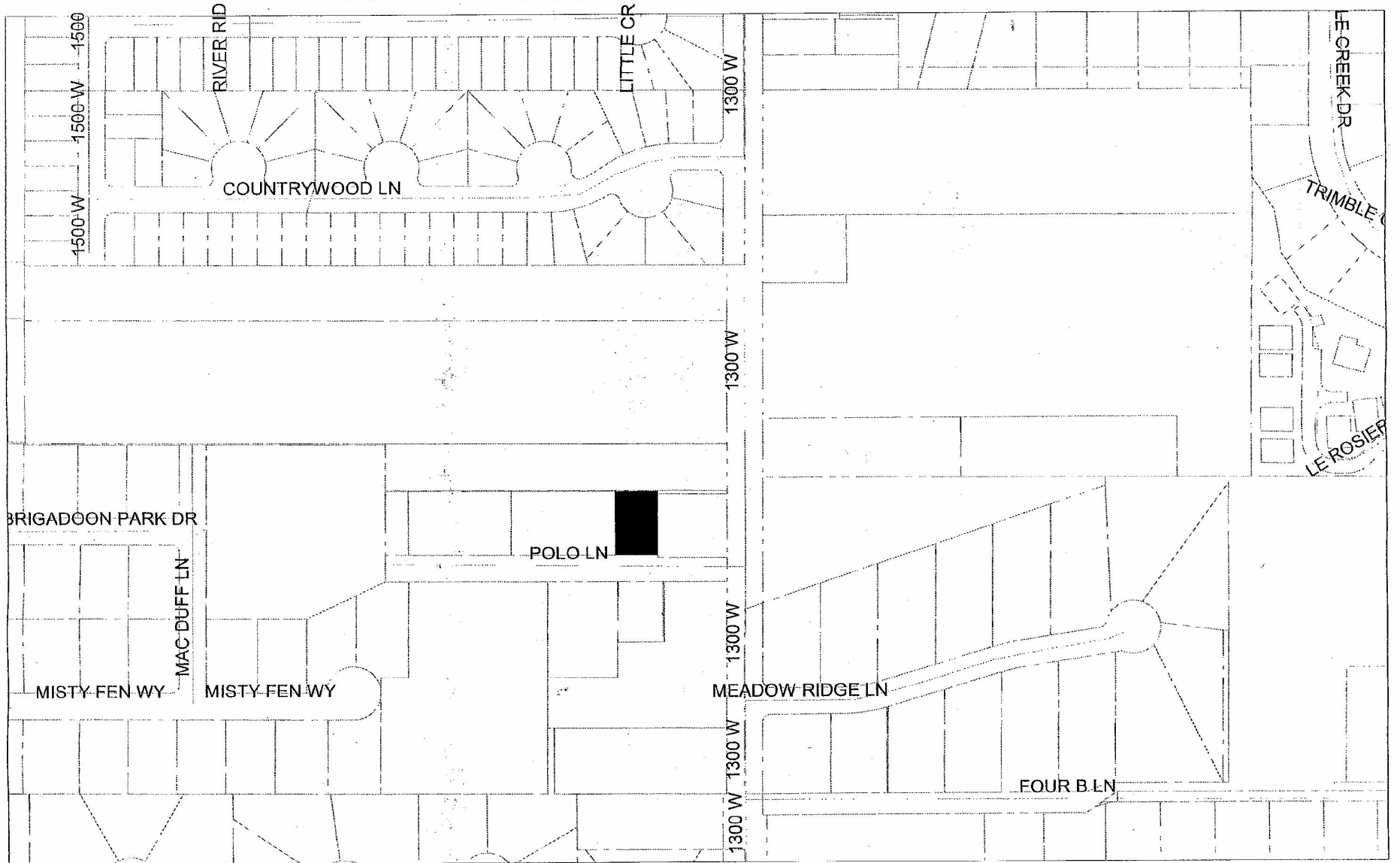
The affected area includes the municipalities of West Jordan, South Jordan, Riverton, and Herriman. Water produced by the project will be available to the municipalities.

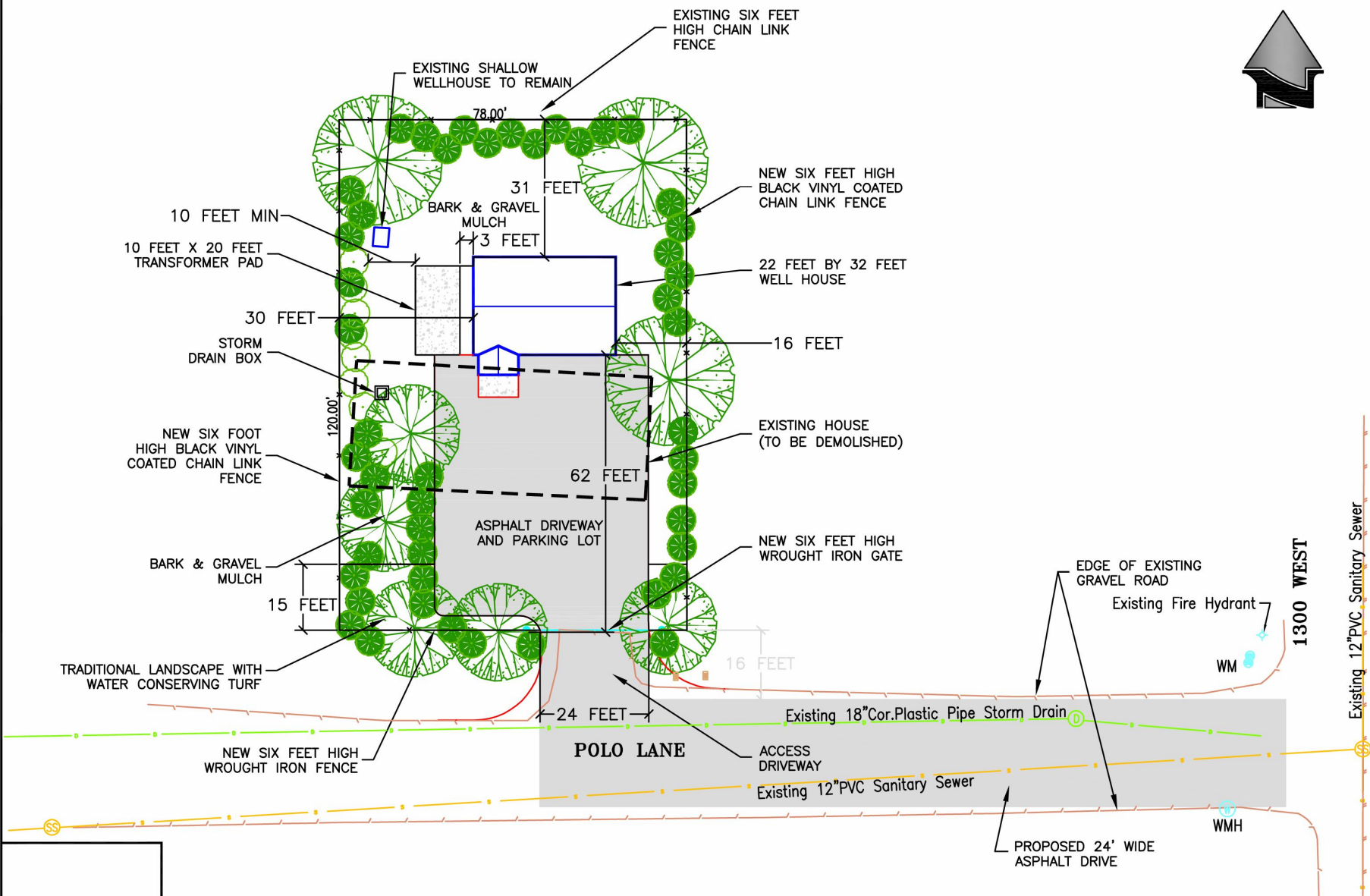
This project is a cooperative effort by Jordan Valley Water Conservancy District and Kennecott Utah Copper Corporation, with approval and oversight by the Utah Department of Environmental Quality.

Information about the project can be found at www.jvwcd.org by clicking on the image shown below:



1324 West Polo Lane Well Site







NIELSEN
4023 sq.ft.

IVERSON
9986 sq.ft.

1300 WEST

29'

86'

31'



**Jordan Valley Water
Conservancy District**
821 S SOUTH 1300 WEST
WEST JORDAN, UTAH 84068-0070
PHONE (801) 565-4300



**SOUTHWEST NEVADA VALLEY
GROUNDWATER
PROJECT**

LINE IS 1/8" AT FULL SIZE (IF NOT 1" = SCALE ACCORDINGLY)

DESIGN: MARK G. ATENCIO
DRAWING: TODD M. PETERSON
REVIEW: MARK G. ATENCIO
APPROVAL:

DEEP WELL SITE #1

WELL PROTECTION ZONES
8773 SOUTH 1300 WEST

SCALE: 1" = 40'

DATE: 8/24/05
PROJECT NUMBER: 03C1030S
DRAWING NUMBER: 1
SHEET NUMBER: 1



SOUTHWEST JORDAN VALLEY

GROUNDWATER

PROJECT