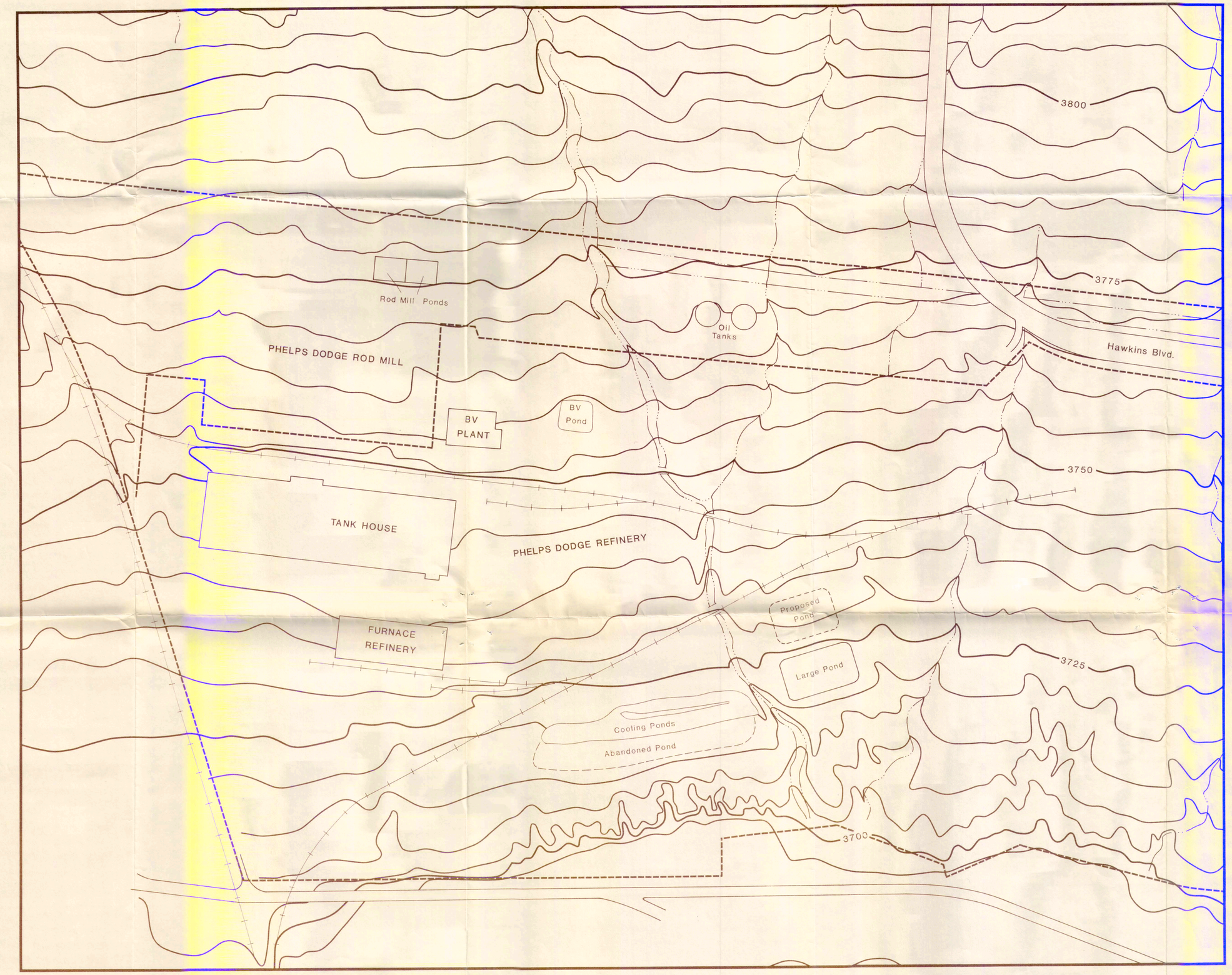


Explanation

Itermittent Stream or Drainage Ditch

Contour Line

Plant Boundary

Elevations based on United States Geologic Survey Datum

Topographic data taken from the Director of Planning City of El Paso, Texas Map dated Jan. 1956

Scale

0 200 400

Feet

Phelps Dodge Inc.

El Paso, Texas

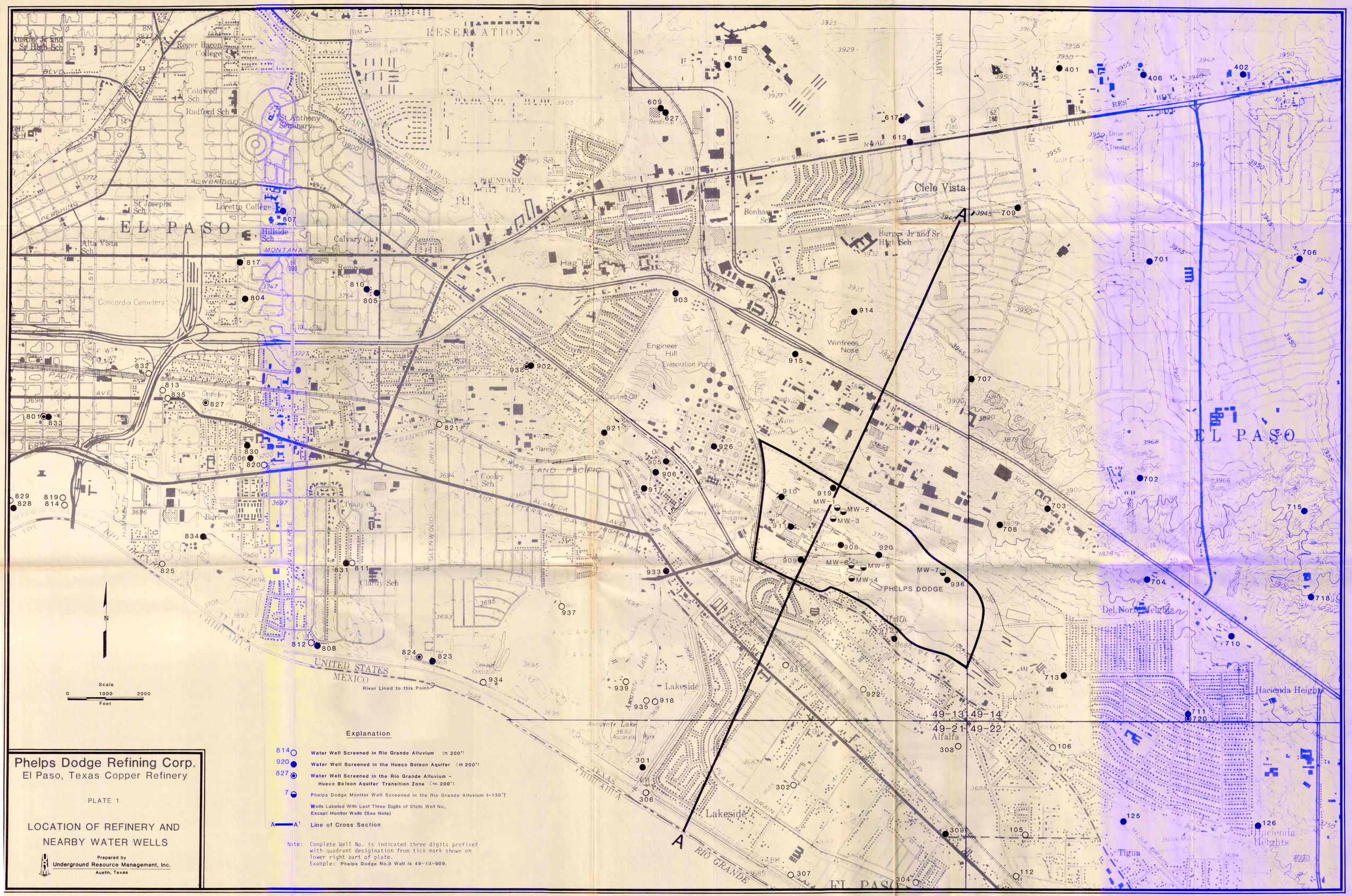
PLATE 2

TOPOGRAPHIC MAP

Prepared by

Underground Resource Management, Inc.

Austin, Texas



Explanation

814 ○ Water Well Screened in Rio Grande Alluvium (≃ 200')

920 ● Water Well Screened in the Hueco Bolson Aquifer (≃ 200')

827 ◉ Water Well Screened in the Rio Grande Alluvium – Hueco Bolson Aquifer Transition Zone (≃ 200')

7 ◒ Phelps Dodge Monitor Well Screened in the Rio Grande Alluvium (~130')

Wells Labeled With Last Three Digits of State Well No., Except Monitor Wells (See Note)

A——A' Line of Cross Section

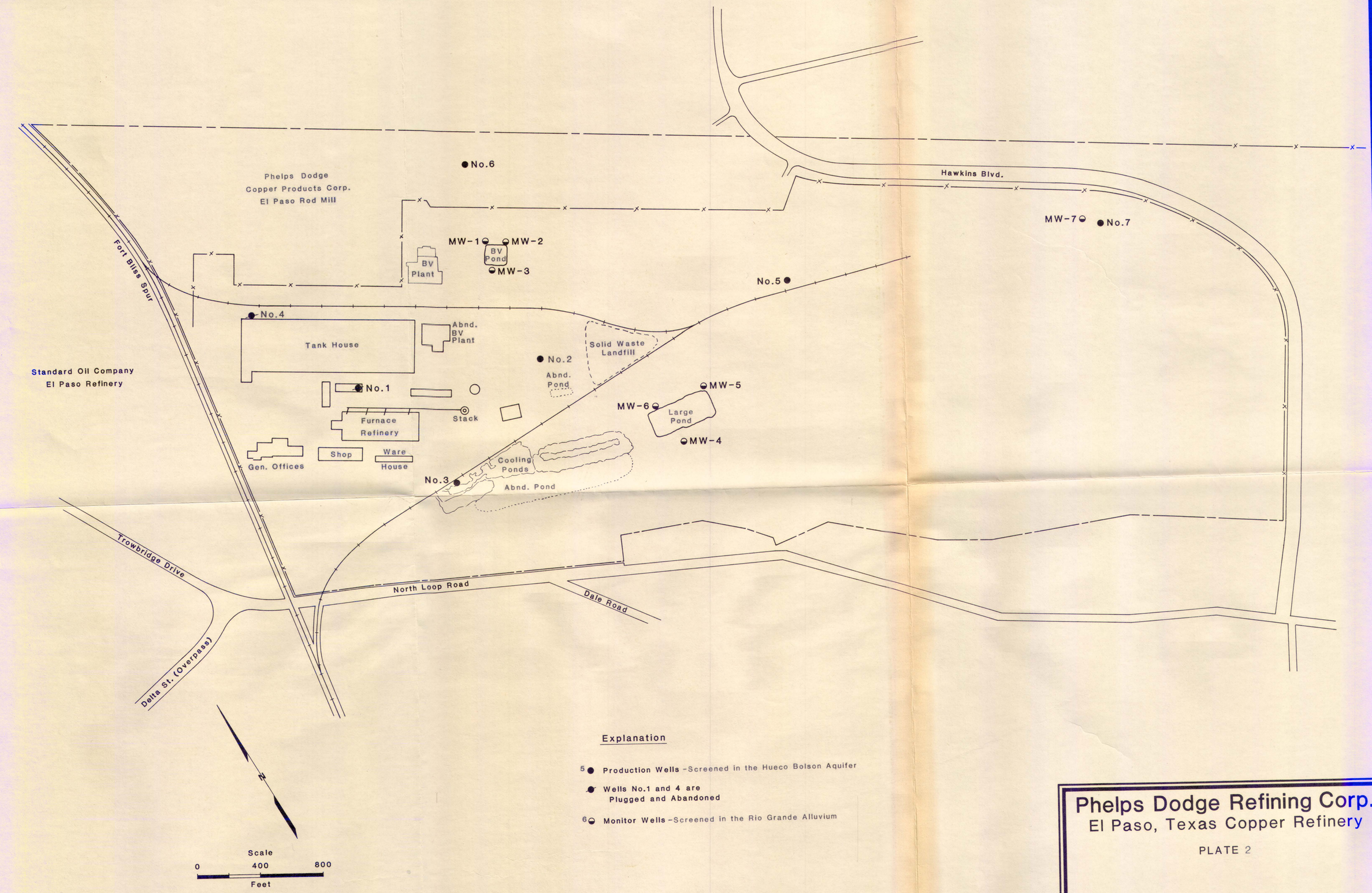
Note: Complete Well No. is indicated three digits prefixed with quadrant designation from tick mark shown on lower right part of plate.
Example: Phelps Dodge No.3 Well is 49-13-909.

Phelps Dodge Refining Corp.
El Paso, Texas Copper Refinery

PLATE 1

LOCATION OF REFINERY AND NEARBY WATER WELLS

Prepared by
Underground Resource Management, Inc.
Austin, Texas



Explanation

5● Production Wells -Screened in the Hueco Bolson Aquifer

● Wells No.1 and 4 are Plugged and Abandoned

6◒ Monitor Wells -Screened in the Rio Grande Alluvium

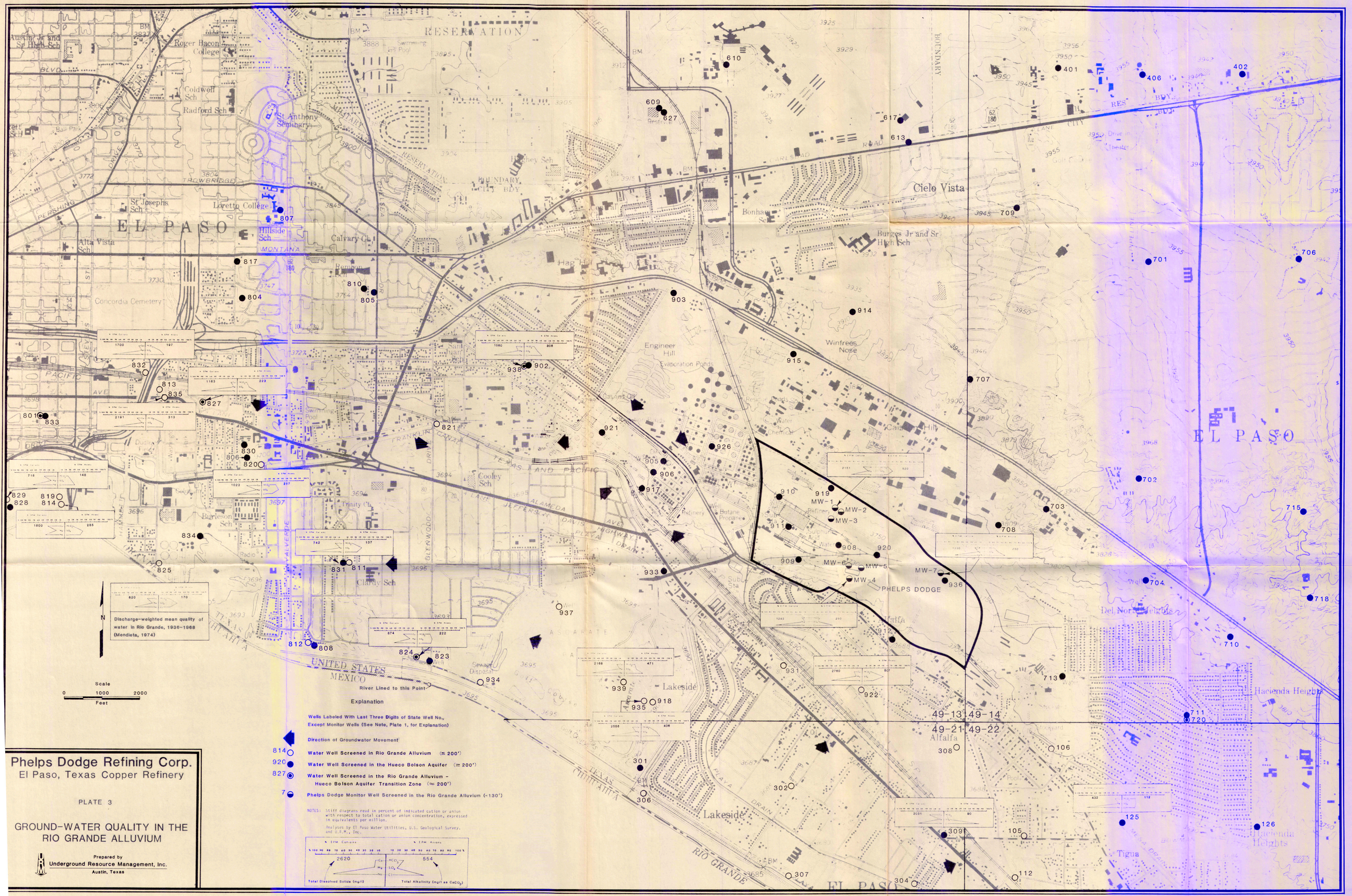
Phelps Dodge Refining Corp.

El Paso, Texas Copper Refinery

PLATE 2

DATA LOCATION MAP

Prepared by
Underground Resource Management, Inc.
Austin, Texas



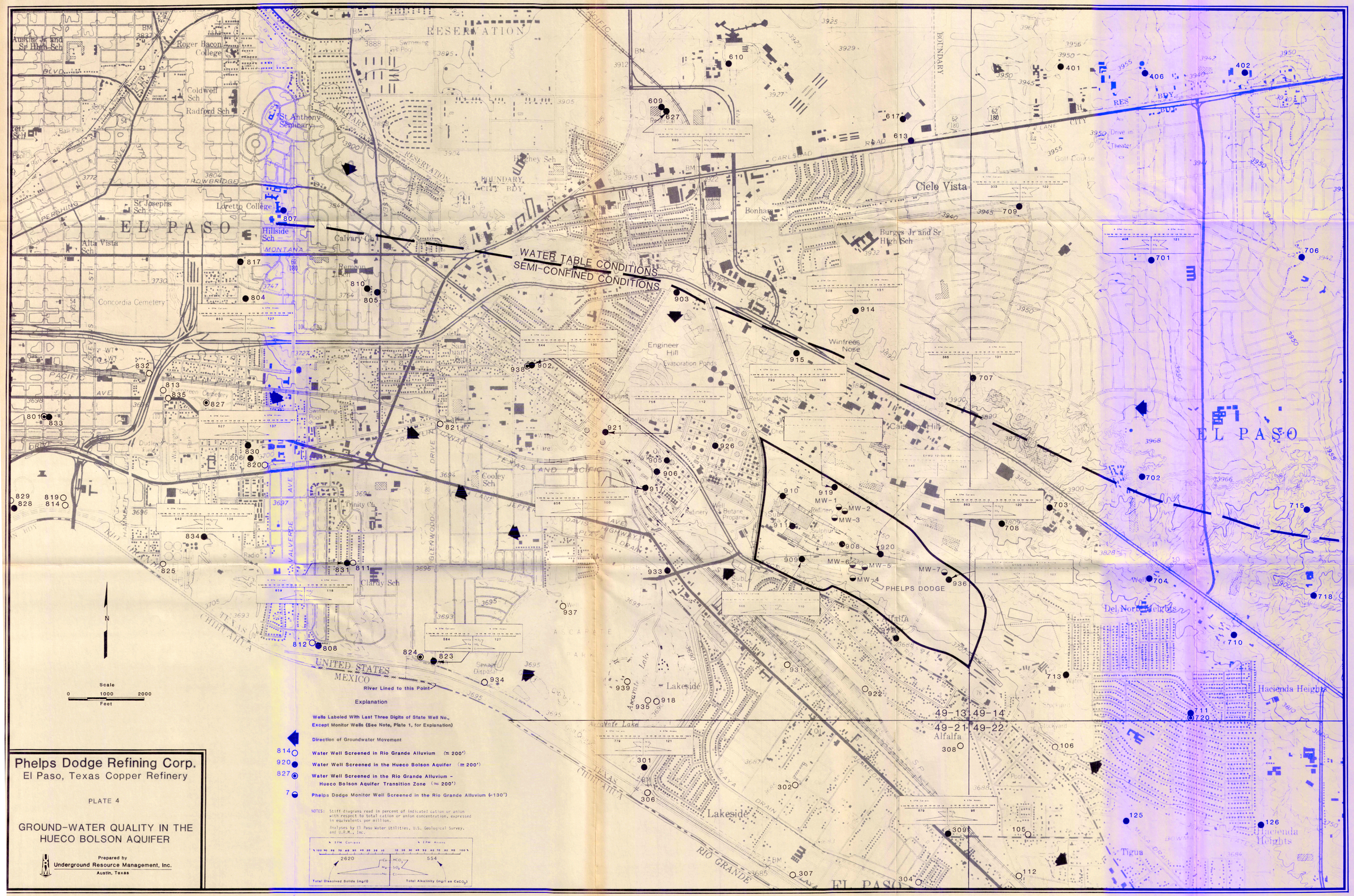
Phelps Dodge Refining Corp.

El Paso, Texas Copper Refinery

PLATE 3

GROUND-WATER QUALITY IN THE RIO GRANDE ALLUVIUM

Prepared by
Underground Resource Management, Inc.
Austin, Texas



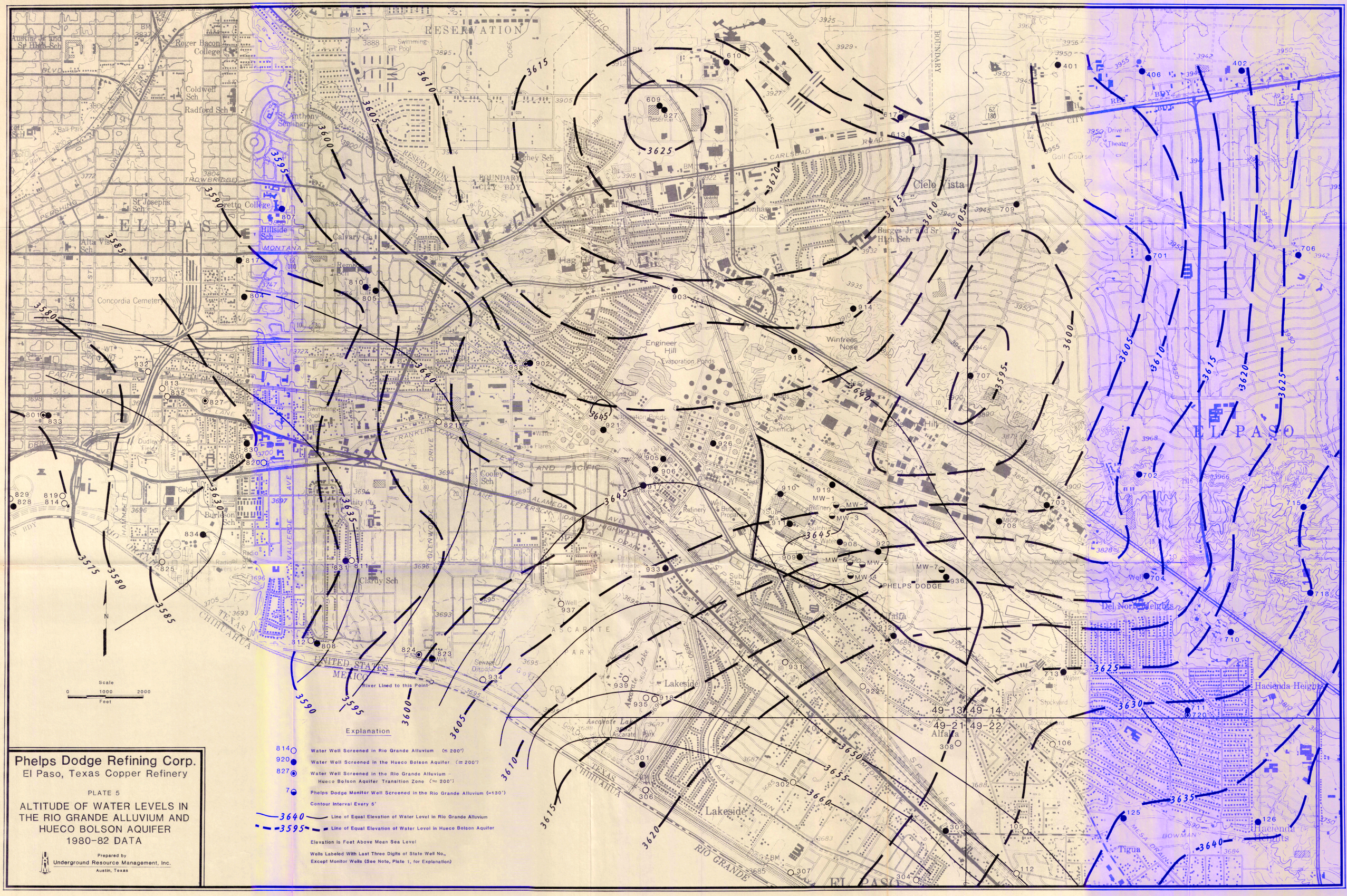
Phelps Dodge Refining Corp.

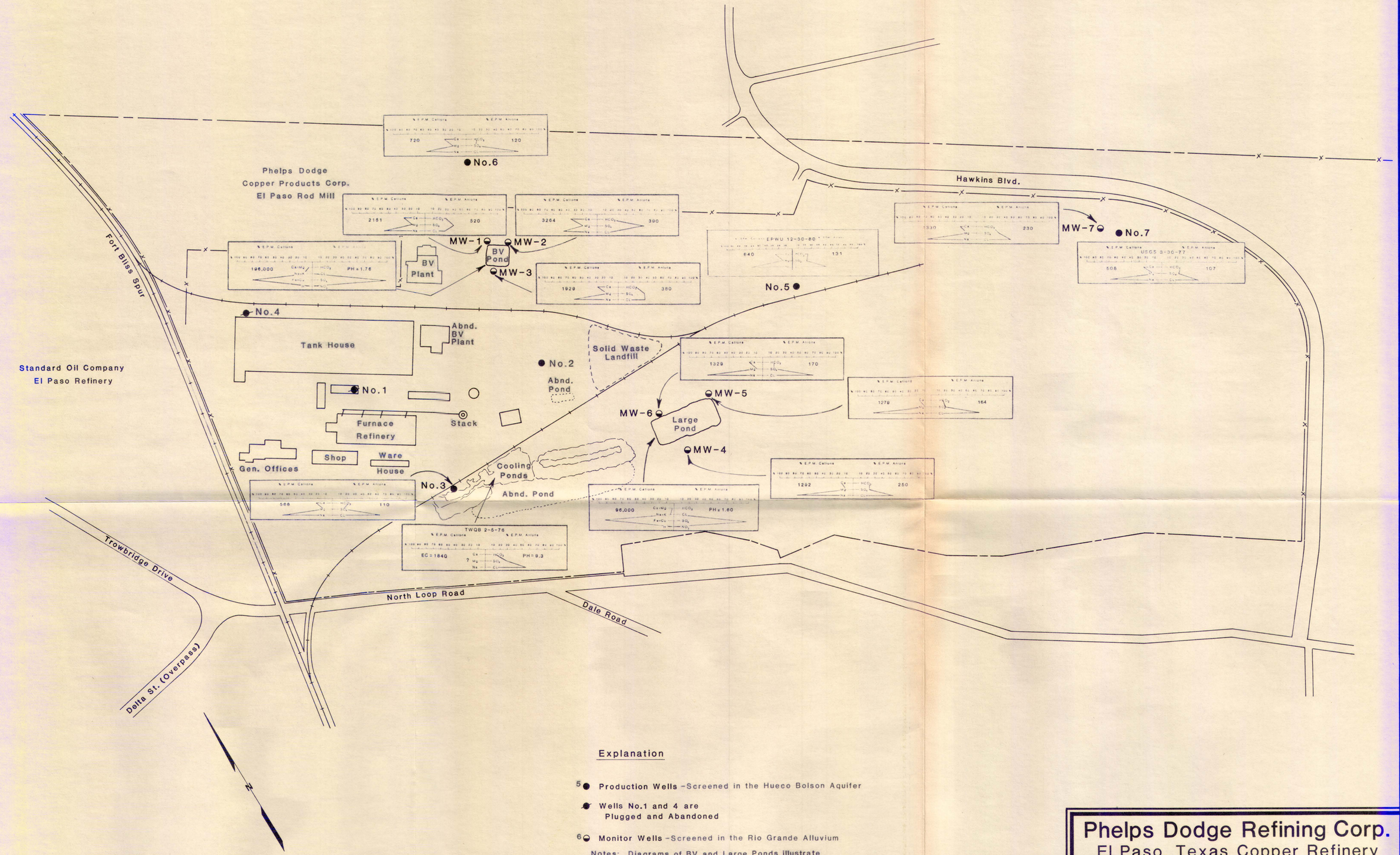
El Paso, Texas Copper Refinery

PLATE 4

GROUND-WATER QUALITY IN THE HUECO BOLSON AQUIFER

Prepared by
Underground Resource Management, Inc.
Austin, Texas


Phelps Dodge Refining Corp.
El Paso, Texas Copper Refinery
PLATE 5
ALTITUDE OF WATER LEVELS IN THE RIO GRANDE ALLUVIUM AND HUECO BOLSON AQUIFER 1980-82 DATA
Prepared by
Underground Resource Management, Inc.
Austin, Texas
Scale
0 1000 2000
Feet
Explanation
Water Well Screened in Rio Grande Alluvium (≤ 200')
Water Well Screened in the Hueco Bolson Aquifer (≥ 200')
Water Well Screened in the Rio Grande Alluvium - Hueco Bolson Aquifer Transition Zone (≈ 200')
Phelps Dodge Monitor Well Screened in the Rio Grande Alluvium (<130')
Contour Interval Every 5'
Line of Equal Elevation of Water Level in Rio Grande Alluvium
Line of Equal Elevation of Water Level in Hueco Bolson Aquifer
Elevation is Feet Above Mean Sea Level
Wells Labeled With Last Three Digits of State Well No., Except Monitor Wells (See Note, Plate 1, for Explanation)
River Lined to this Point
EL PASO
Ciela Vista
Lakeside
Alfalfa
Del Norte Heights
Hacienda Heights
Tigua
Winfrees Nose
Engineer Hill
Evaporation Ponds
Concordia Cemetery
Evergreen Cemetery
Ascarate Lake
Ascarate Park
Hag Hill
Calvary Ch
Hillside Sch
Roger Bacon College
Coldwell Sch
Radford Sch
St Anthony Seminary
St Josephs Sch
Cretto College
Alta Vista Sch
Austin Jr and Sr High Sch
Burleson Sch
Clardy Sch
Cooley Sch
Burges Jr and Sr High Sch
Bonham Sch
Drive in Theater
Golf Course
Swimming Pool
Dudley Field
Radio Towers
Sewage Disposal
Stockyard
Refinery
Chemical
Butane Propane
Sulphur
Water
Flares
Oil
Sub Sta
Well
PHELPS DODGE
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
49-13 49-14
49-21 49-22
UNITED STATES
MEXICO
TEXAS
CHIHUAHUA
RIO GRANDE
TEXAS AND PACIFIC
ATCHISON TOPEKA AND SANTA FE
EL PASO CITY BDY
RESERVATION BDY
3615
3610
3605
3600
3595
3590
3585
3580
3575
3625
3620
3645
3640
3635
3630
3650
3655
3660



Explanation

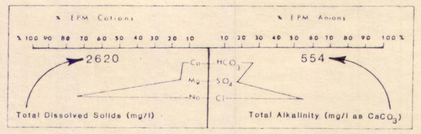
5● Production Wells -Screened in the Hueco Bolson Aquifer

Wells No.1 and 4 are Plugged and Abandoned

6◒ Monitor Wells -Screened in the Rio Grande Alluvium

Notes: Diagrams of BV and Large Ponds illustrate different quality parameters than diagrams of Cooling Ponds and Wells.

Stiff diagrams read in percent of indicated cation or anion with respect to total cation or anion concentration, expressed in equivalents per million.



All values from U.R.M., Inc., unless otherwise shown.

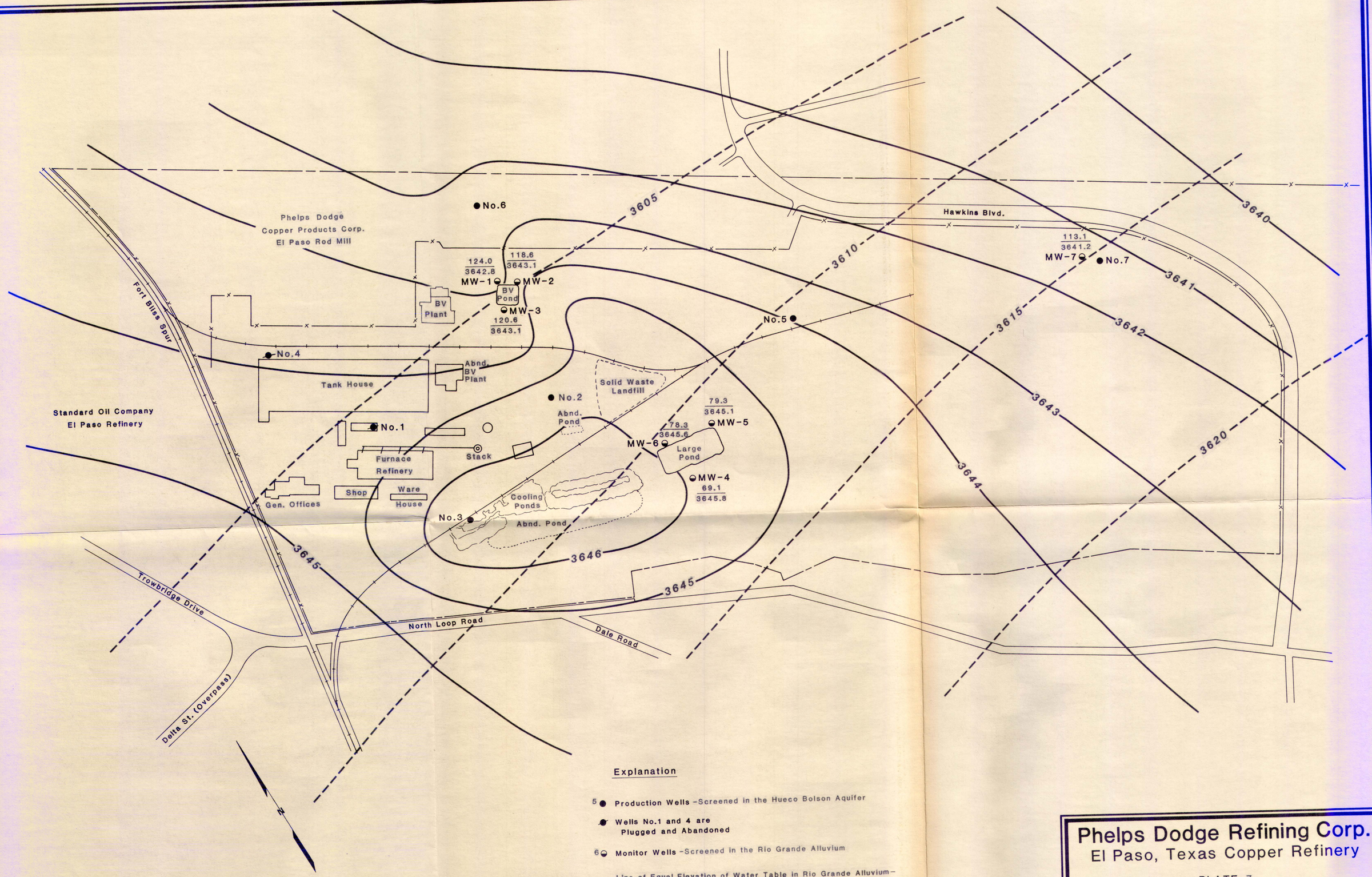
Phelps Dodge Refining Corp.

El Paso, Texas Copper Refinery

PLATE 6

QUALITY OF POND AND GROUND WATERS

Prepared by
Underground Resource Management, Inc.
Austin, Texas



Explanation

5● Production Wells -Screened in the Hueco Bolson Aquifer

Wells No.1 and 4 are Plugged and Abandoned

6◒ Monitor Wells -Screened in the Rio Grande Alluvium

3645 Line of Equal Elevation of Water Table in Rio Grande Alluvium- Contour Interval is 1 Foot

3620 Line of Equal Elevation of Potentiometric Surface in Hueco Bolson Aquifer (Taken from EPWU Data of Jan., 1981)- Contour Interval is 5 Feet

113.1 Depth in Feet to Water Below Land Surface
3641.2 Altitude in Feet of Water Table

Phelps Dodge Refining Corp.

El Paso, Texas Copper Refinery

PLATE 7

ALTITUDE OF GROUND WATERS BENEATH REFINERY

Prepared by
Underground Resource Management, Inc.
Austin, Texas