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6. AUTHOR(S)		5. FUNDING NUMBERS		7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) ROCKY MOUNTAIN ARSENAL (CO.), PRRMA	
9. SPONSORING, MONITORING AGENCY NAME(S) AND ADDRESS(ES) ARMY ENGINEER WATERWAYS EXPERIMENT STATION		10. SPONSORING, MONITORING AGENCY REPORT NUMBER 87320R01		11. SUPPLEMENTARY NOTES	
12a. DISTRIBUTION / AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED		12b. DISTRIBUTION CODE		13. ABSTRACT (Maximum 200 words) THIS REPORT IS THE SECOND IN A SERIES OF REPORTS PREPARED TO DOCUMENT AND ASSESS THE STATUS AND OVERALL OPERATIONAL PERFORMANCE OF THE NORTH BOUNDARY CONTAINMENT/TREATMENT SYSTEM. THE REPORT CONSISTS OF THREE VOLUMES: VOLUME I IS THE MAIN TEXT; VOLUME II CONTAINS THE HYDROGEOLOGIC AND CONTAMINANT DISTRIBUTION PLATES; AND VOLUME III CONTAINS THE DATABASES DEVELOPED TO SUPPORT THE EVALUATIONS AND ASSESSMENTS MADE DURING THE STUDY. THE OBJECTIVES OF THE REPORT INCLUDE: 1. ASSESS THE CONTINUING EFFECTIVENESS OF THE NORTH BOUNDARY SYSTEM IN PREVENTING OFF-POST MIGRATION OF CONTAMINATED GROUND WATER 2. DOCUMENT SYSTEM OPERATING PARAMETERS 3. IDENTIFY AND DOCUMENT SYSTEM IMPROVEMENTS 4. IDENTIFY AND DOCUMENT OPERATIONAL IMPROVEMENTS THAT WILL ENHANCE LONG-TERM EFFECTIVENESS. DATA IN VOLUME II INCLUDE WEEKLY ADSORBER FLOWS, WATER QUALITY, AND WATER	
14. SUBJECT TERMS GROUNDWATER		15. NUMBER OF PAGES		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED		18. SECURITY CLASSIFICATION OF THIS PAGE		19. SECURITY CLASSIFICATION OF ABSTRACT	
20. LIMITATION OF ABSTRACT					

**ROCKY MOUNTAIN ARSENAL
NORTH BOUNDARY CONTAINMENT/TREATMENT SYSTEM
OPERATIONAL ASSESSMENT REPORT**

FY85/FY86

**VOLUME II
PLATES**

by

**Program Manager Staff Office
Program Manager, Rocky Mountain Arsenal
Contamination Cleanup
Aberdeen Proving Ground, Maryland 21010-5401**

June 1987

93-25183



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**ROCKY MOUNTAIN ARSENAL
CONTAMINANT/TREATMENT SYSTEM
ASSESSMENT REPORT**

35/FY86

**VOLUME II
DATES**

by

**Manager Staff Office
Rocky Mountain Arsenal
Contamination Cleanup
Boulder, Maryland 21010-5401**

June 1987

93-25183
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Vol II

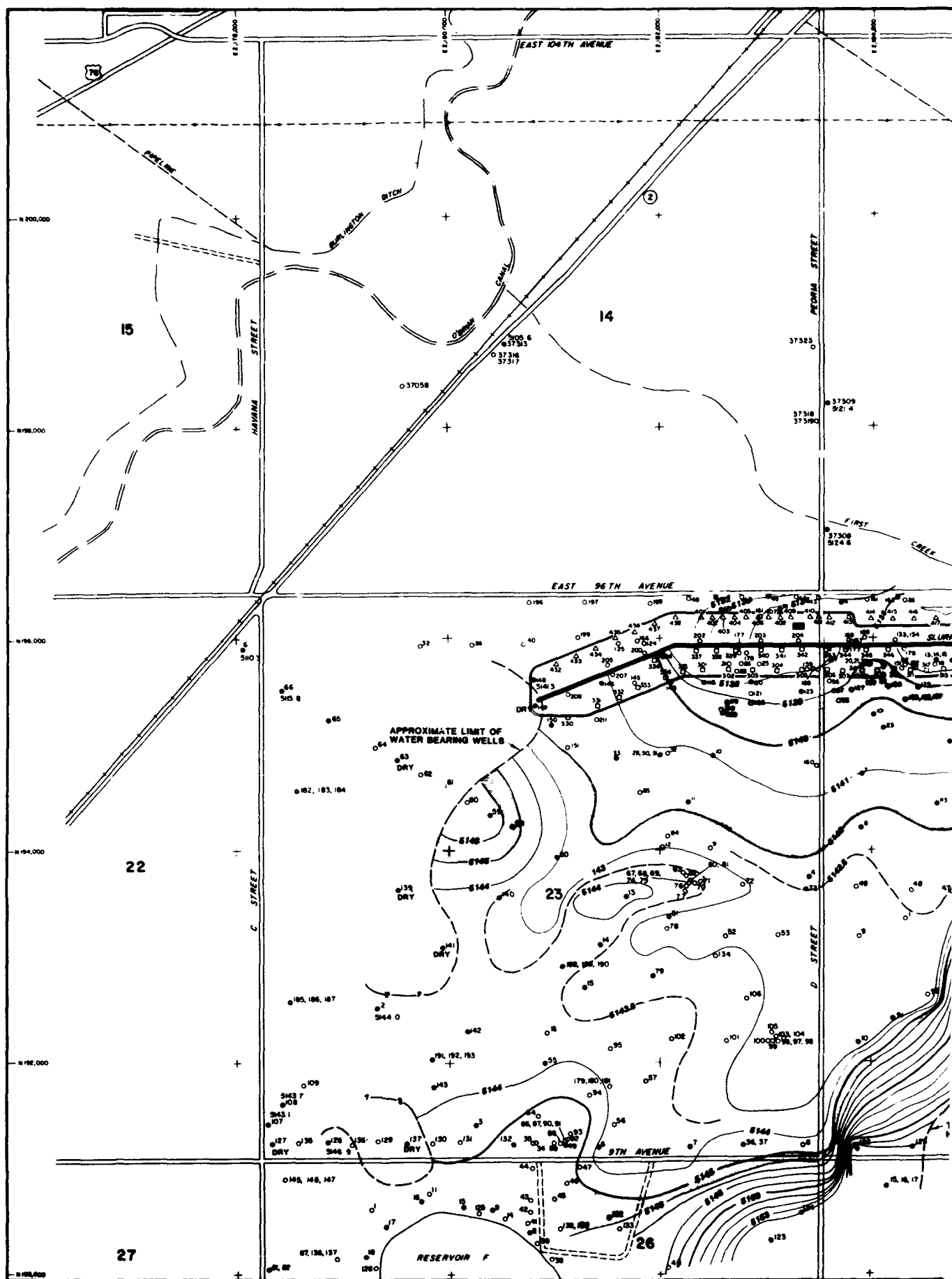
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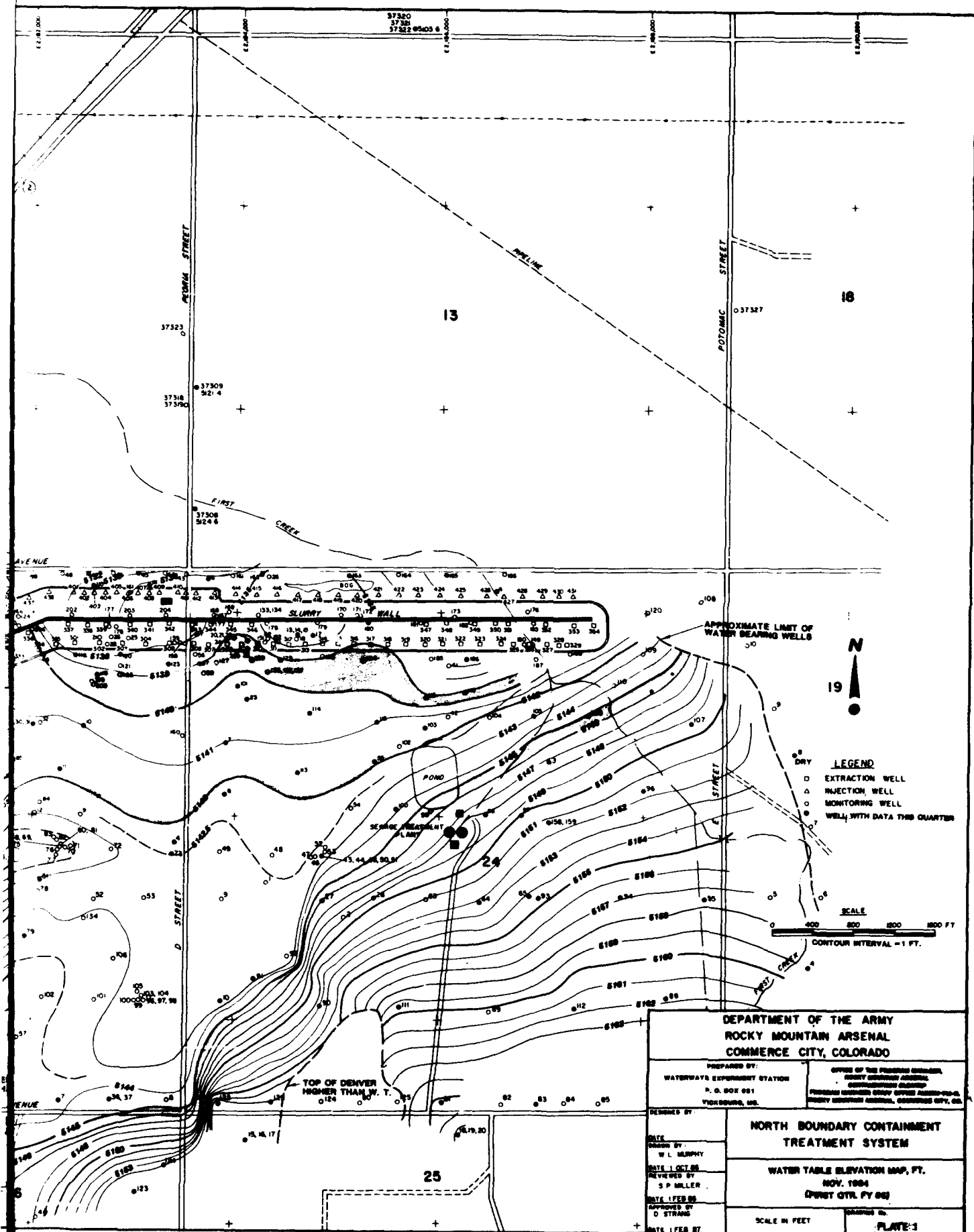
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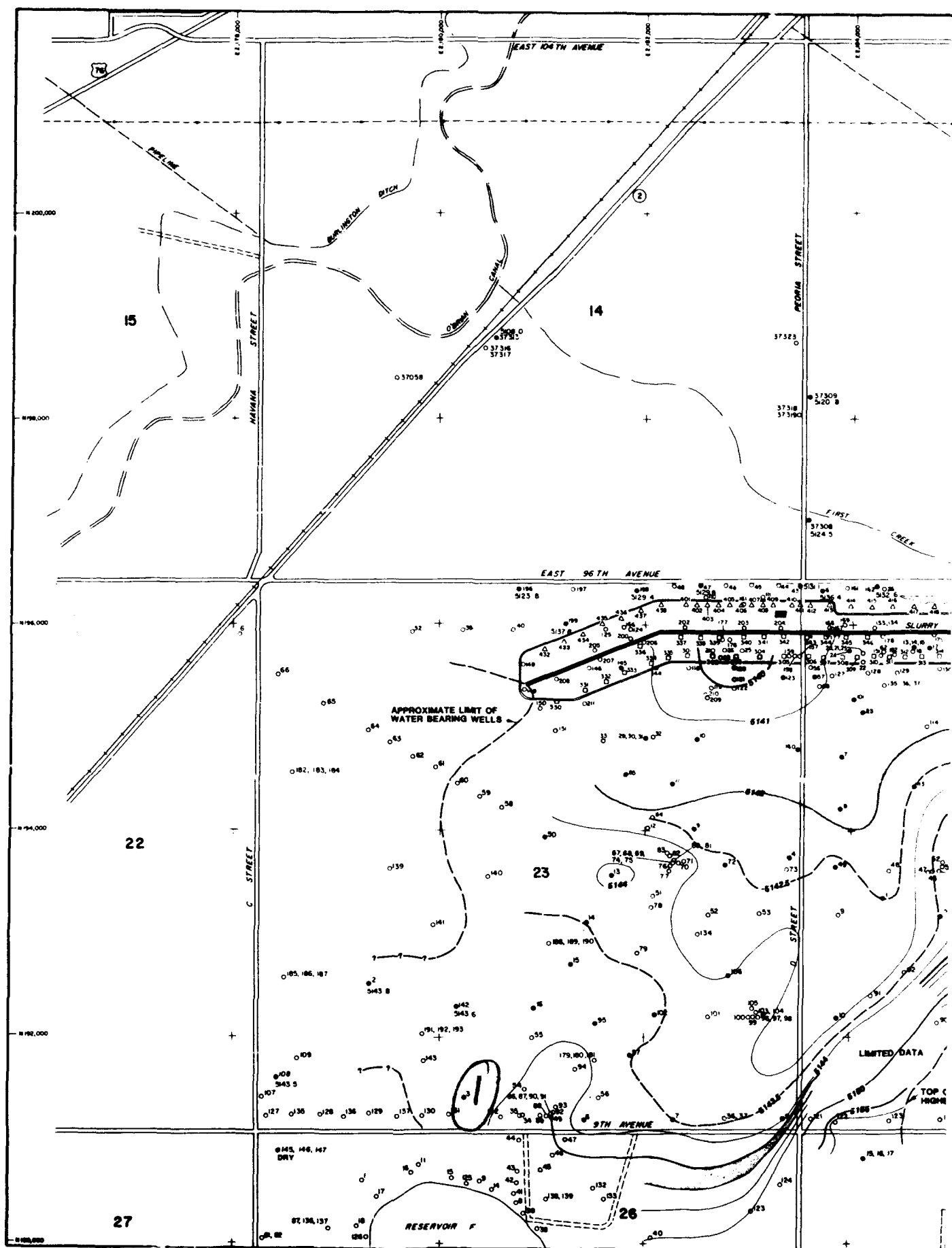
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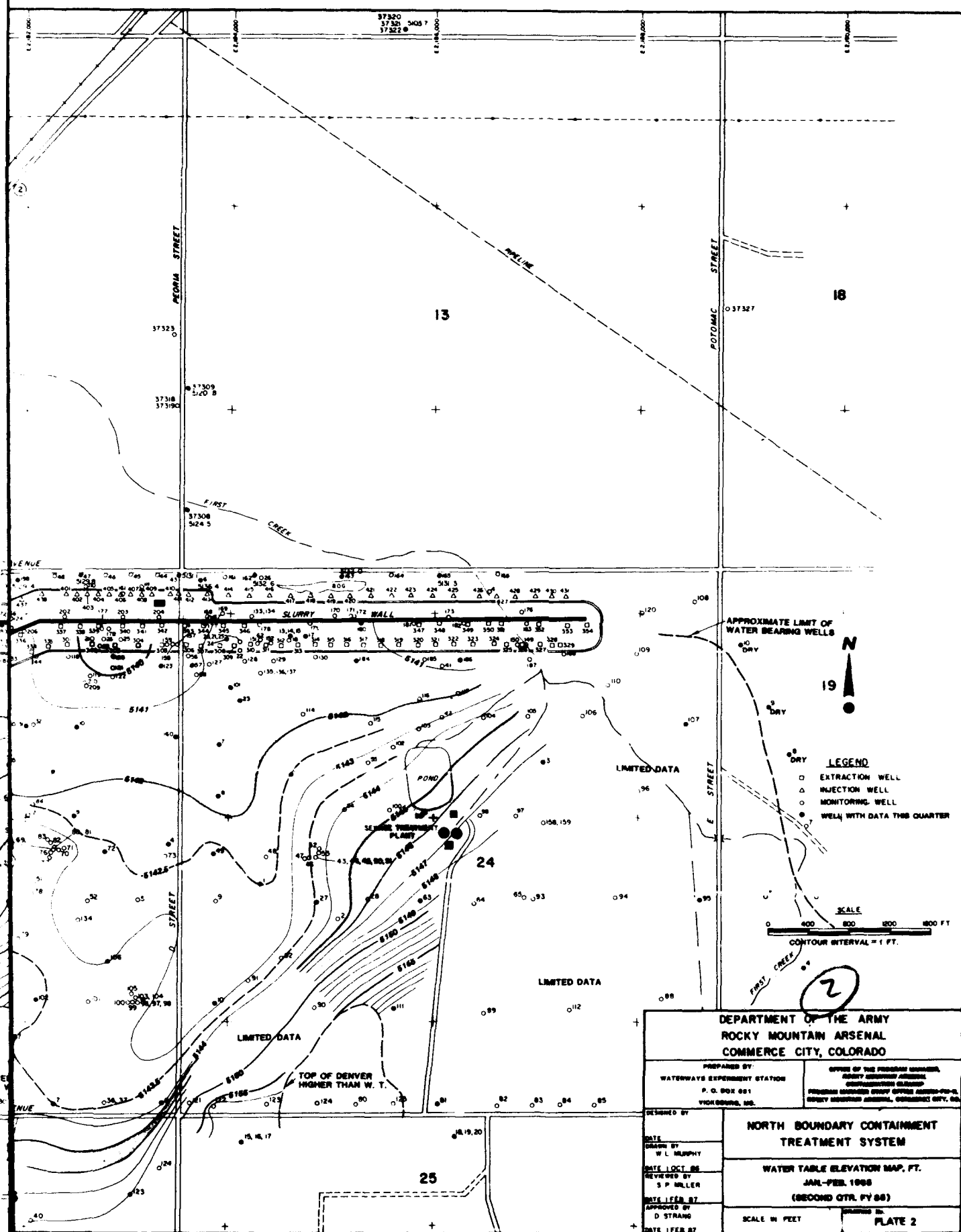
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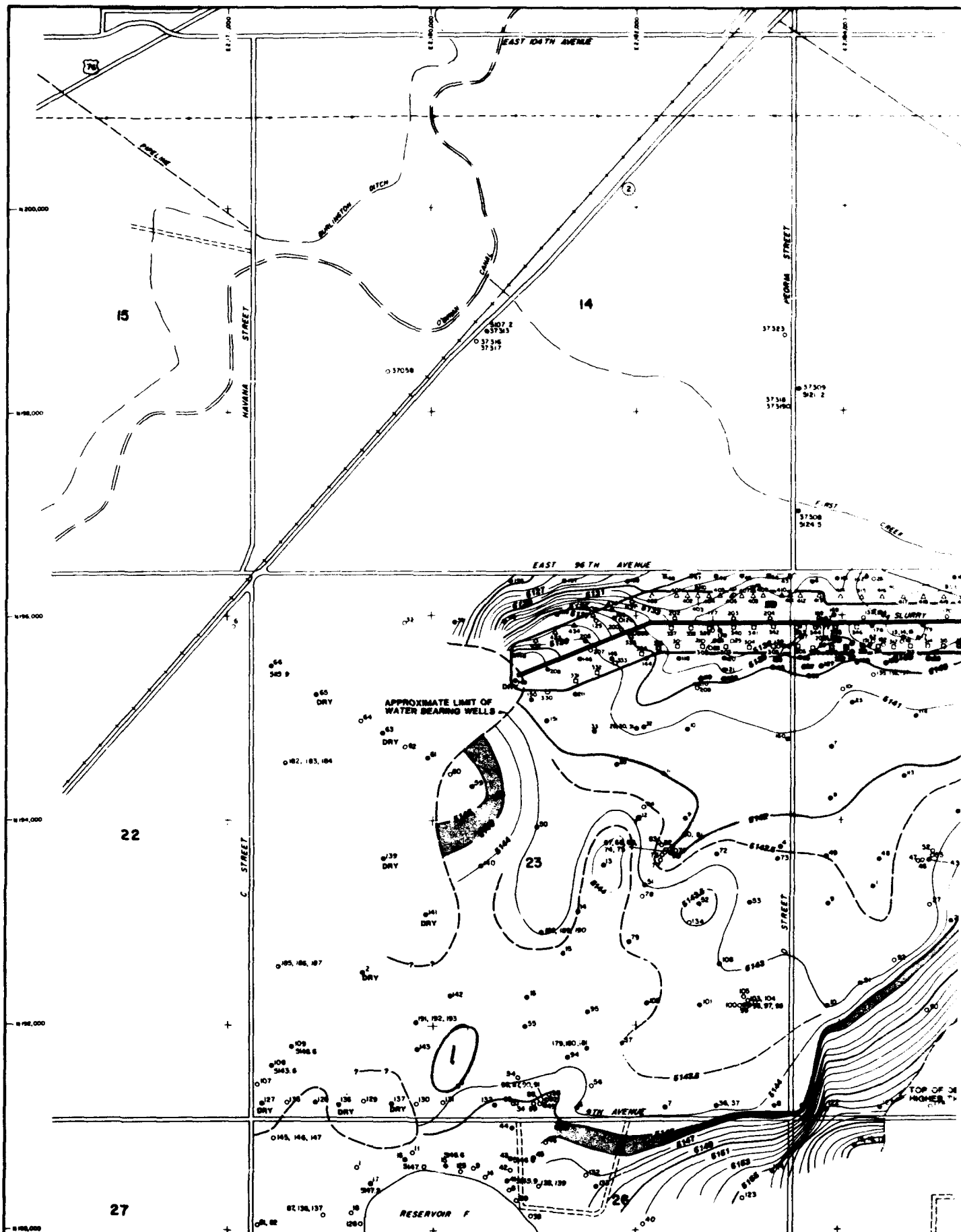
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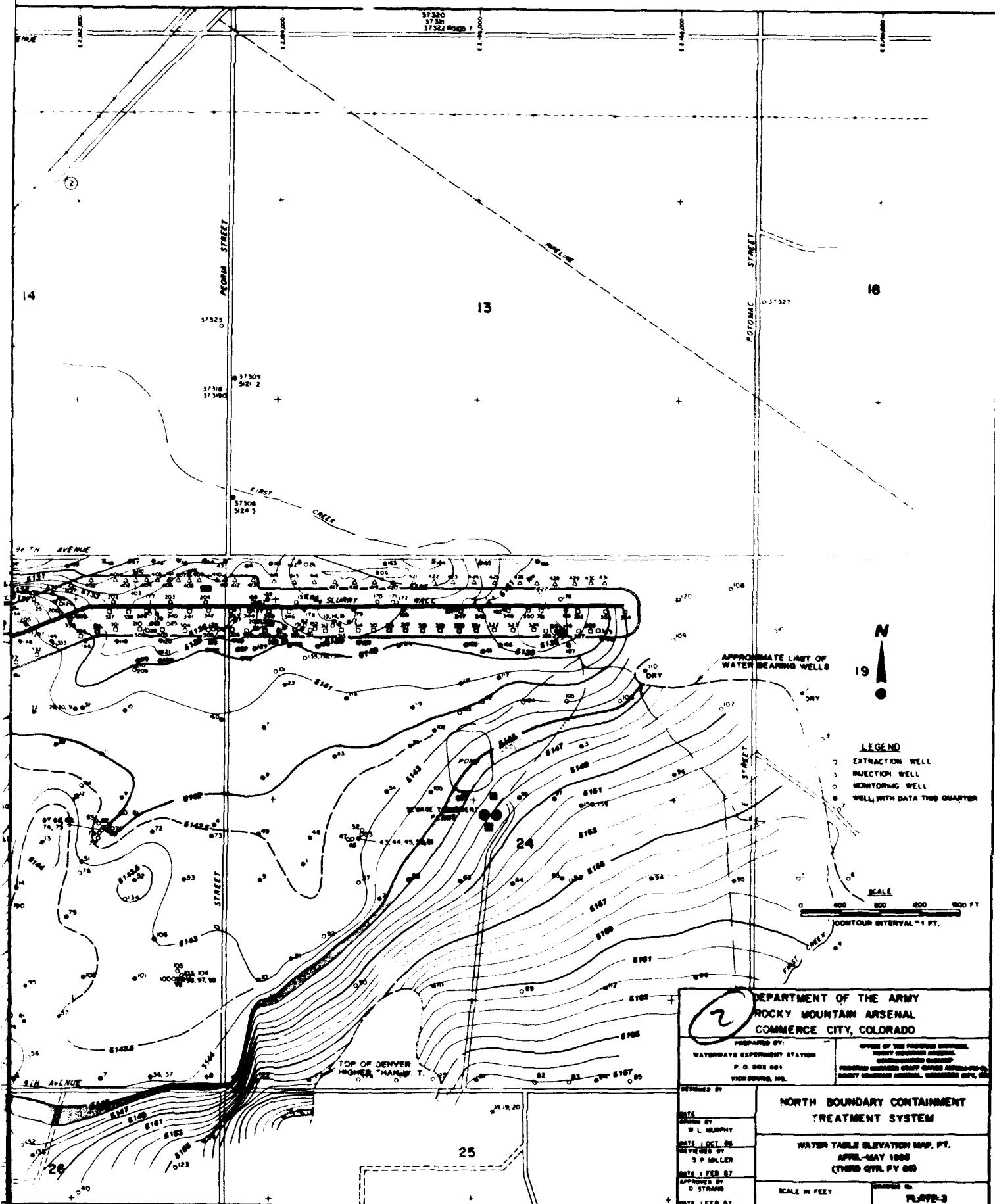


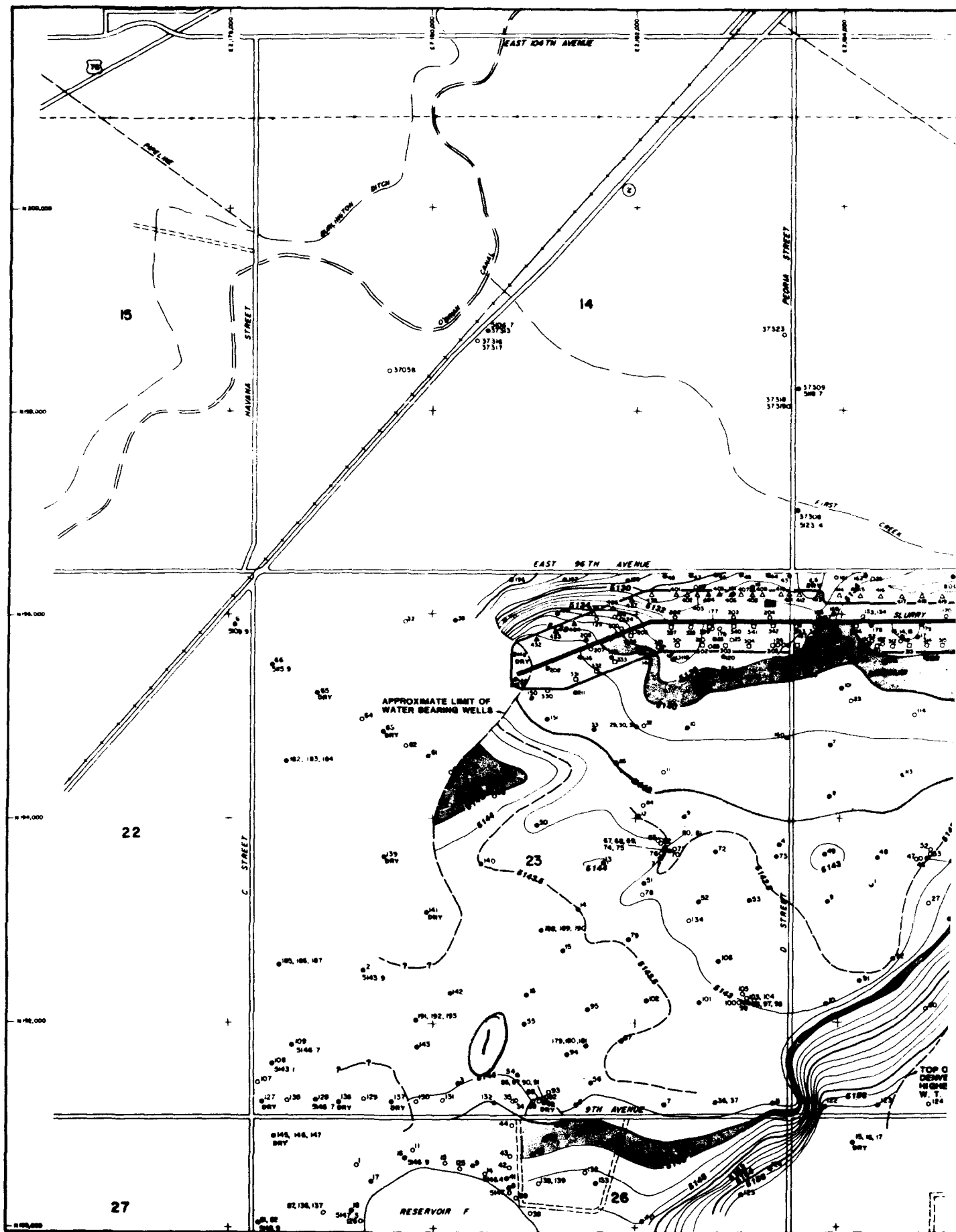


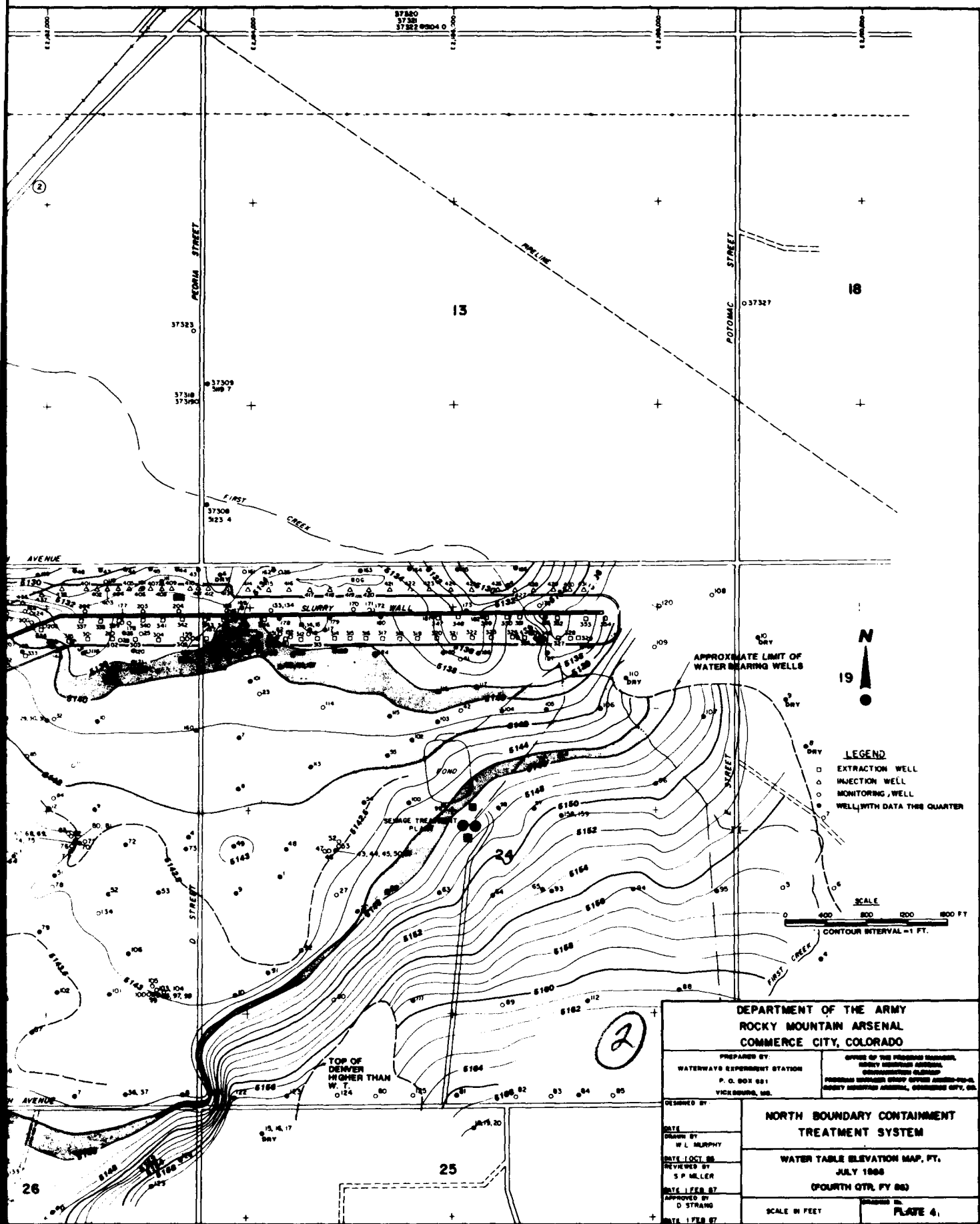


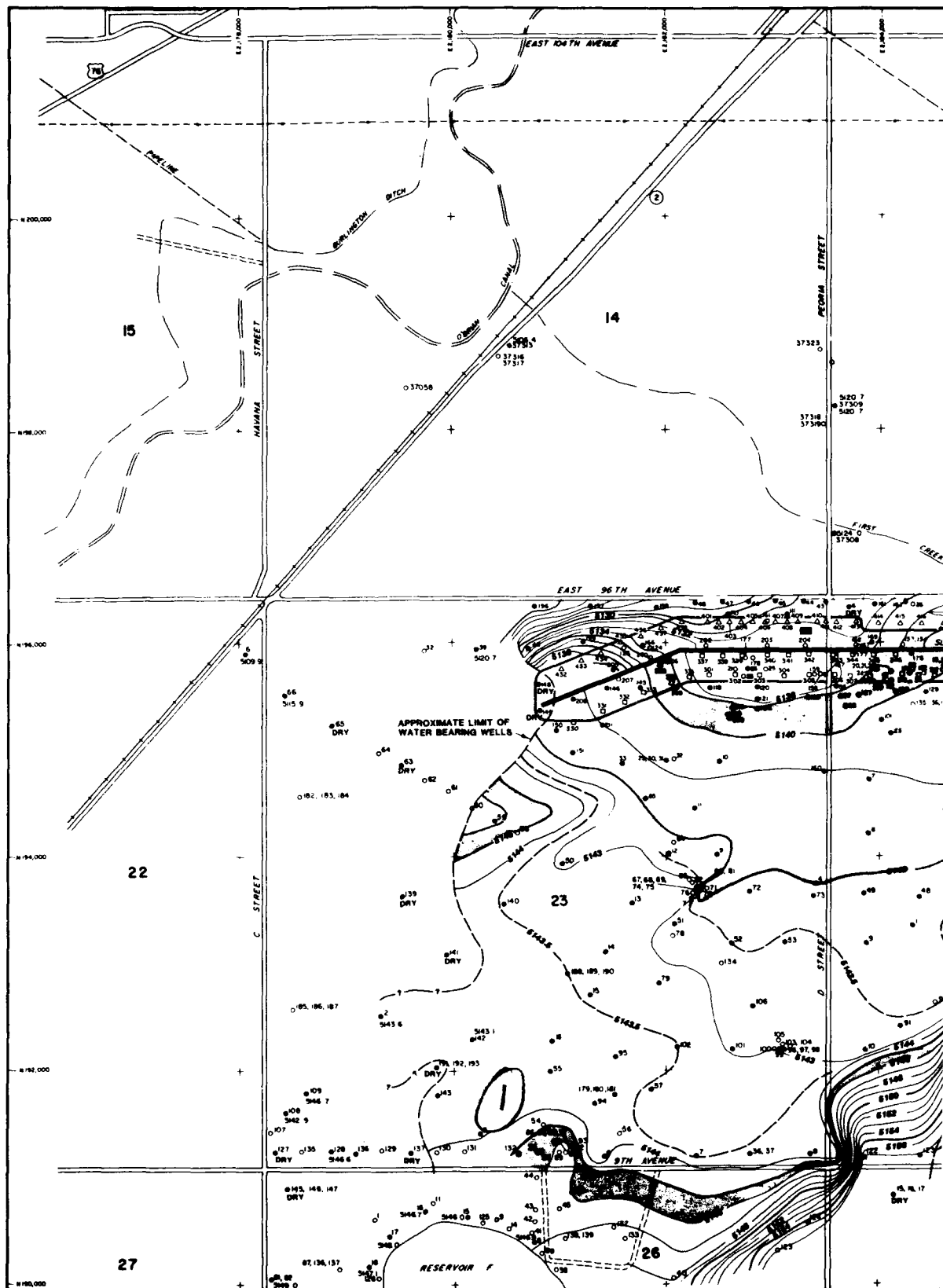


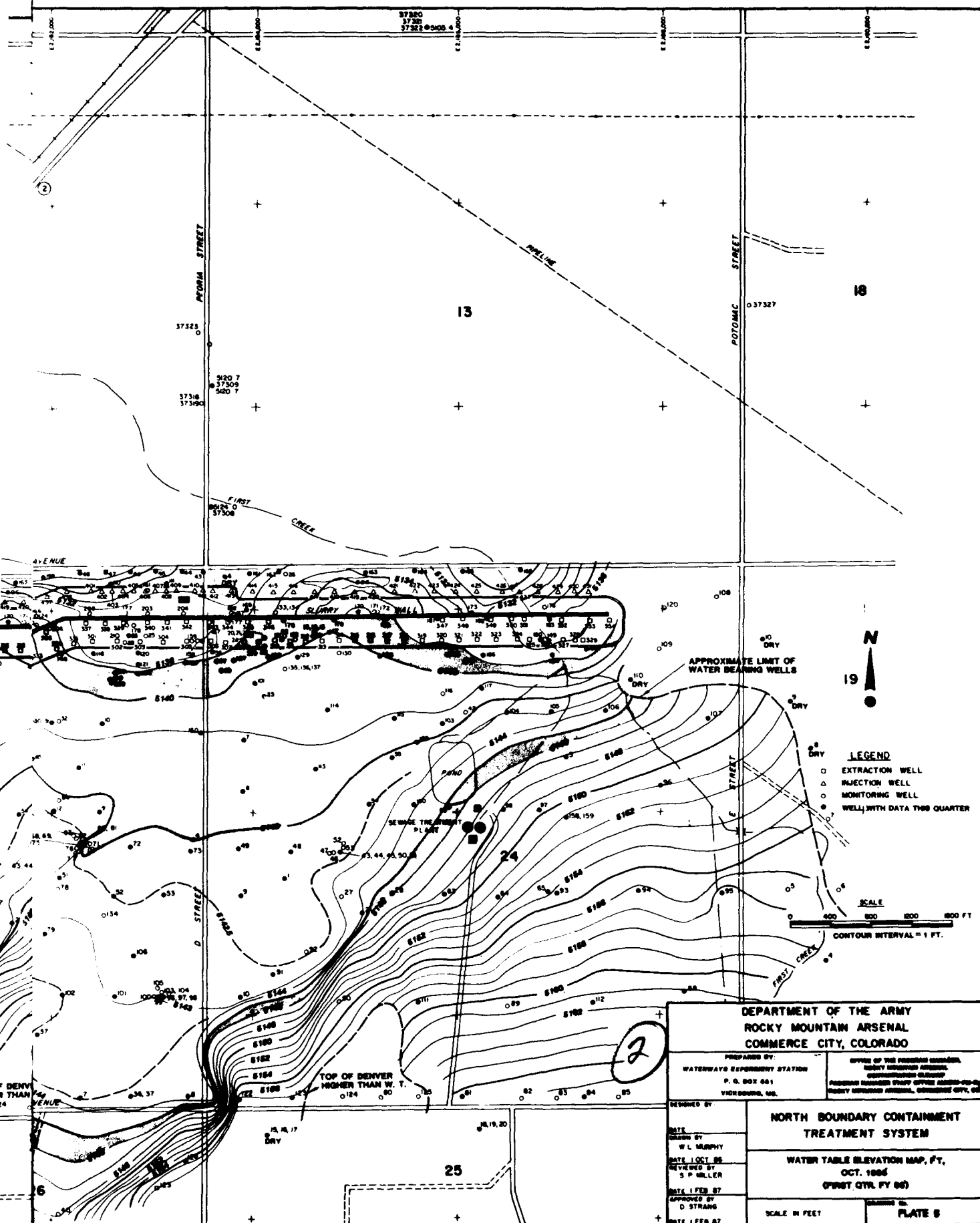












DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY:
WATERWAYS EXPERIMENT STATION
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VICTORVILLE, CALIF.

OFFICE OF THE PROGRAM MANAGER,
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO
FEDERAL BUREAU OF INVESTIGATION
COMMERCIAL DISTRICT OFFICE, COMMERCE CITY, COLORADO

DESIGNED BY

DATE

DESIGNED BY

DATE OCT 85

REVIEWED BY

S P MILLER

DATE 1 FEB 87

APPROVED BY

D STRANG

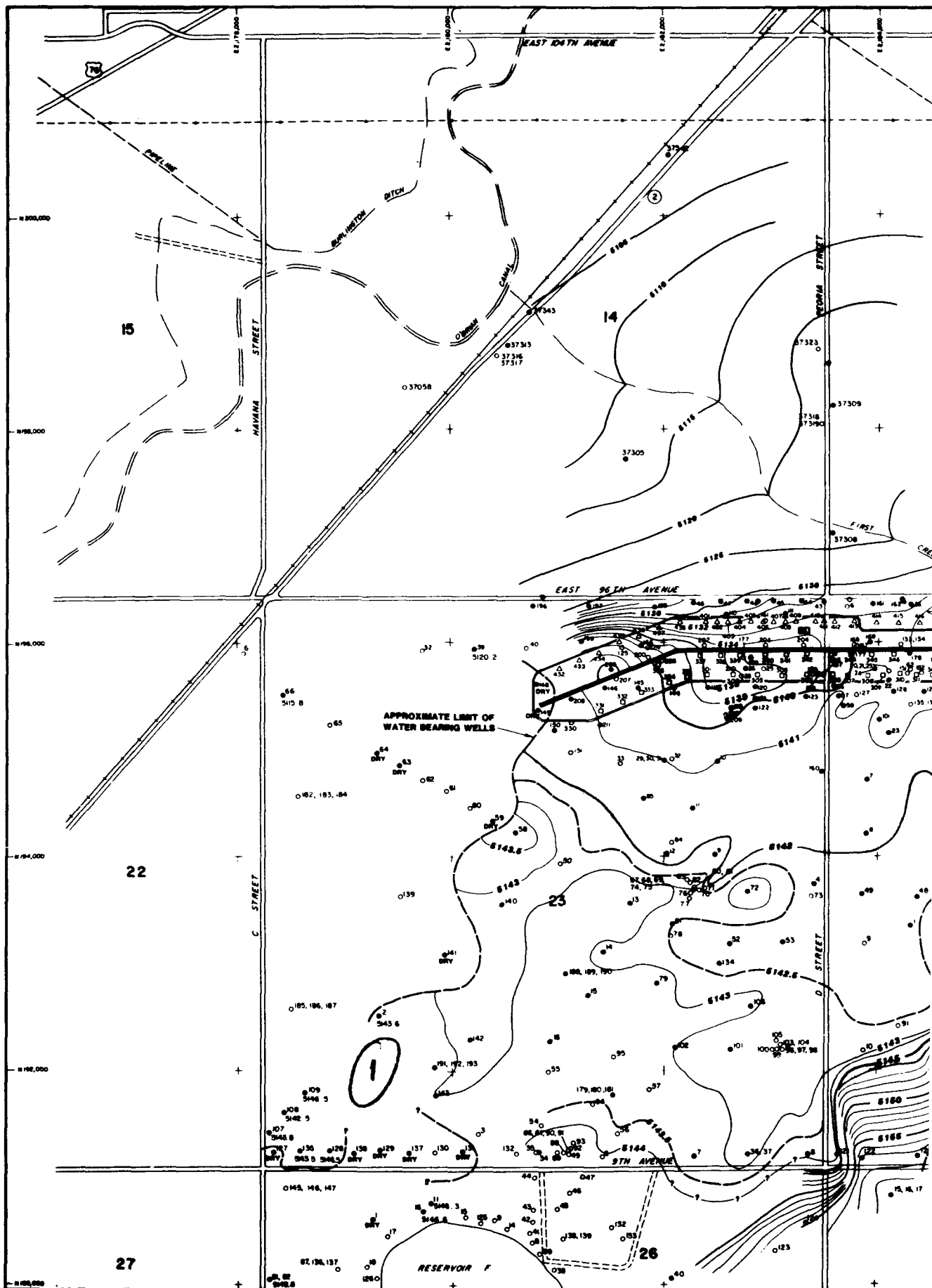
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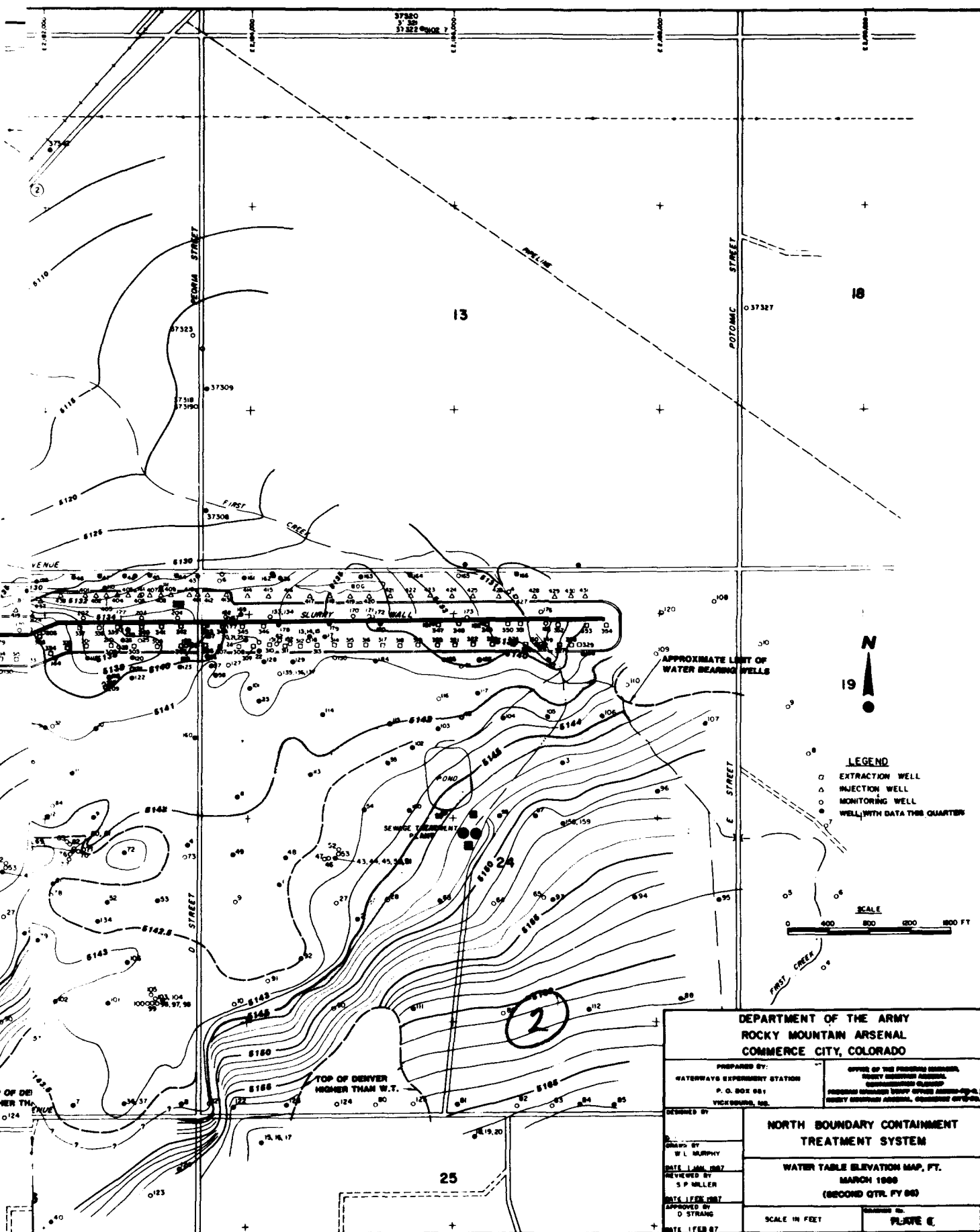
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TREATMENT SYSTEM

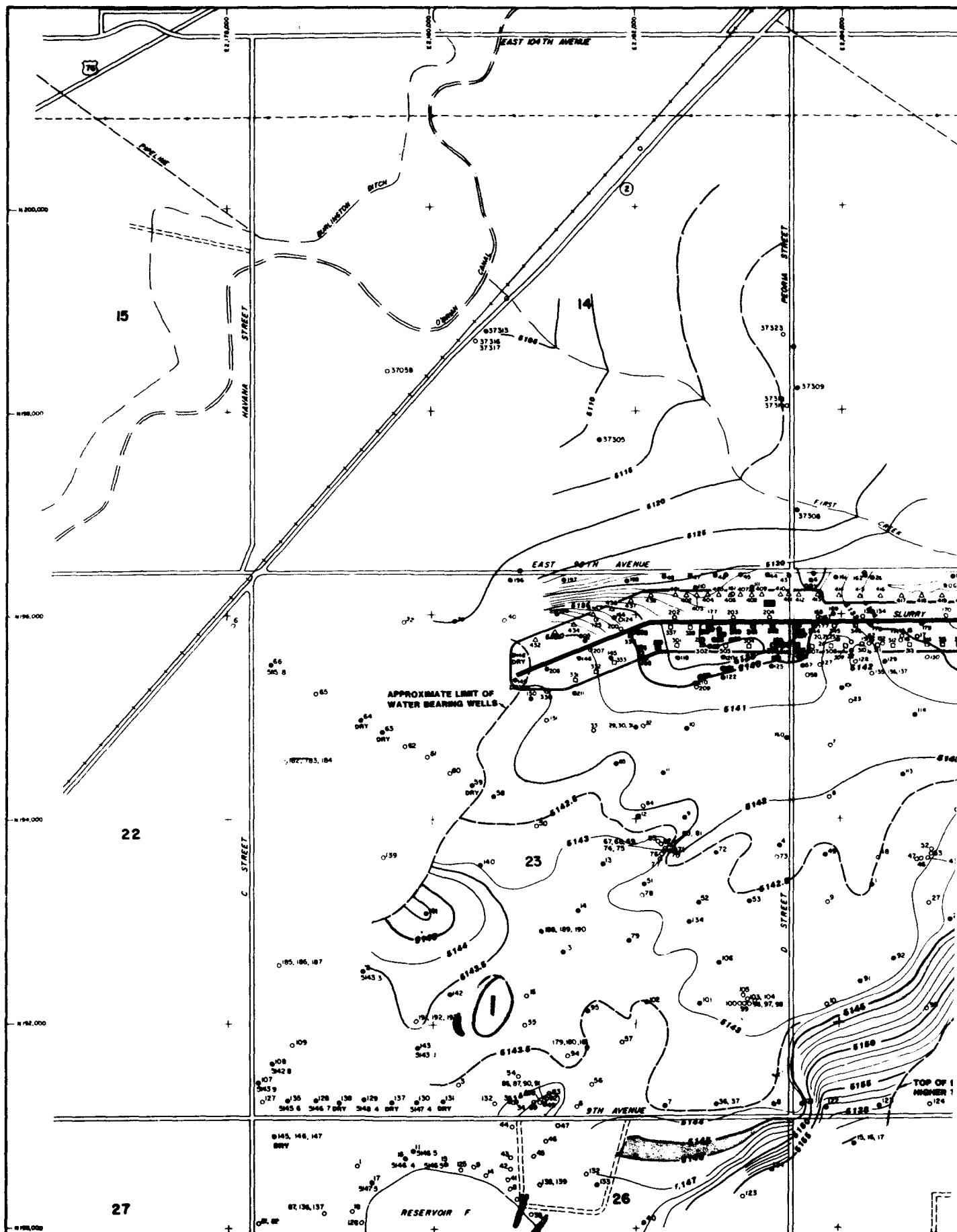
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OCT. 1985
(FIRST QTR. FY 86)

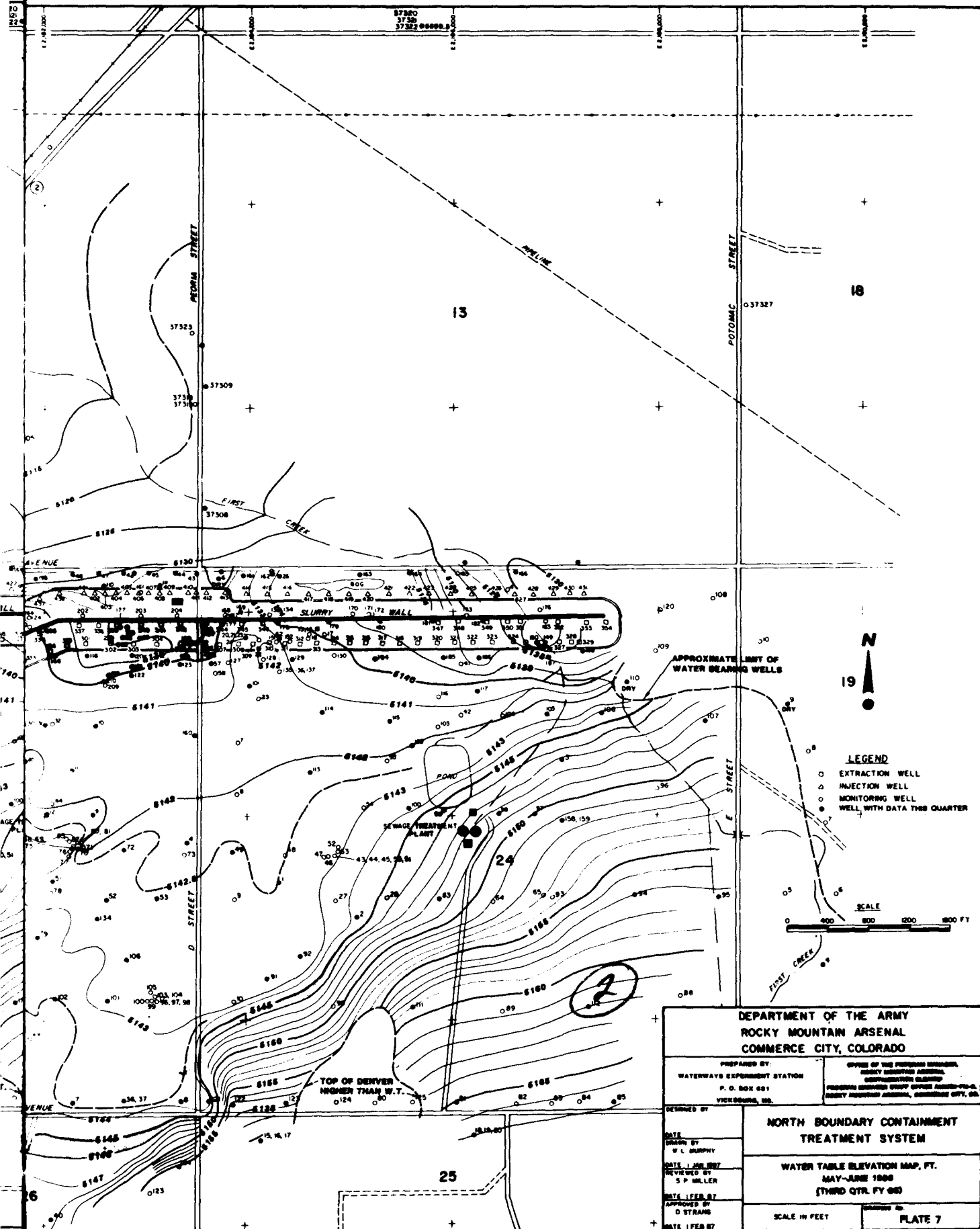
SCALE IN FEET

PLATE 8









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ROCKY MOUNTAIN ARSENAL
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VICTOR, CO.

OFFICE OF THE REGIONAL ENGINEER,
ARMY DISTRICT OFFICE,
ROCKY MOUNTAIN ARSENAL,
COMMERCE CITY, CO.

DESIGNED BY

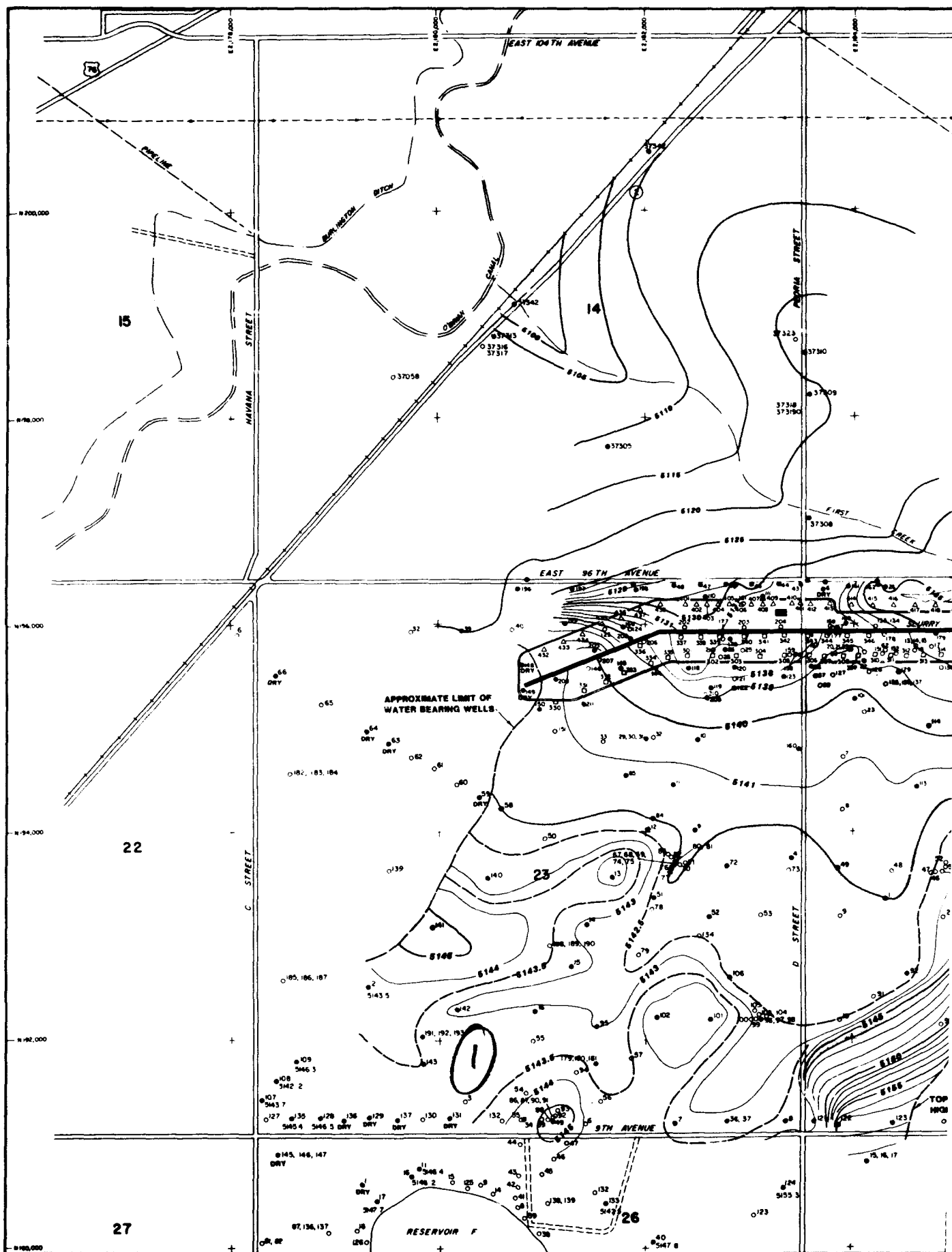
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DRAWN BY
W. L. GURPHY
DATE 1 JAN 67
REVIEWED BY
S. P. MILLER
DATE 1 FEB 67
APPROVED BY
O. STRANG
DATE 1 FEB 67

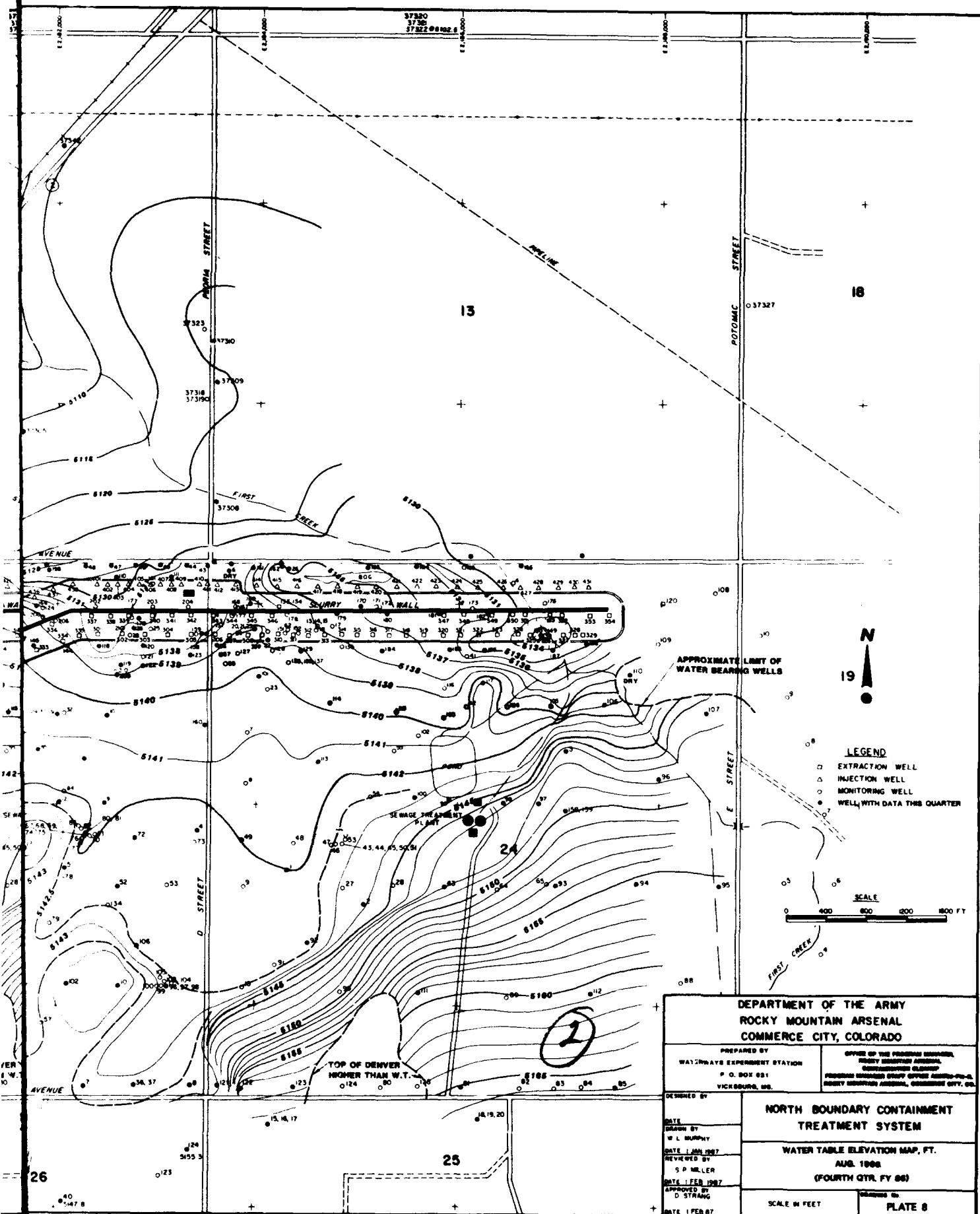
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

WATER TABLE ELEVATION MAP, FT.
MAY-JUNE 1966
(THIRD QTR. FY 66)

SCALE IN FEET

PLATE 7





- LEGEND**
- EXTRACTION WELL
 - △ INJECTION WELL
 - MONITORING WELL
 - WELL WITH DATA THIS QUARTER



**DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO**

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 651
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER,
ROCKY MOUNTAIN ARSENAL
REPRODUCTION CLERK
PROGRAM MANAGER GROUP OFFICE 400-40-4,
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

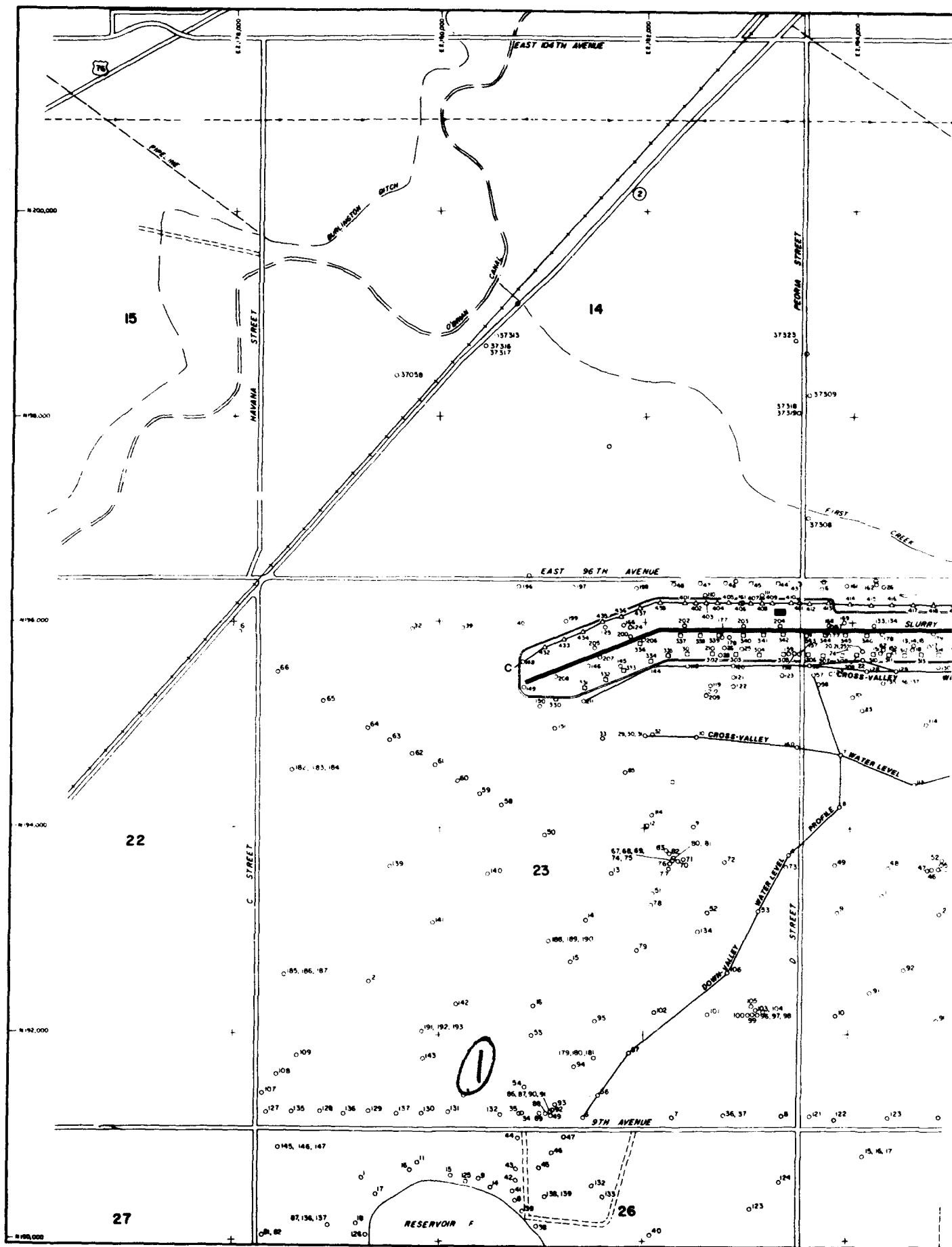
DATE
DRAWN BY
W. L. BURNETT
DATE 1 JAN 1987
REVIEWED BY
S. P. MILLER
DATE 1 FEB 1987
APPROVED BY
D. STRANG
DATE 1 FEB 87

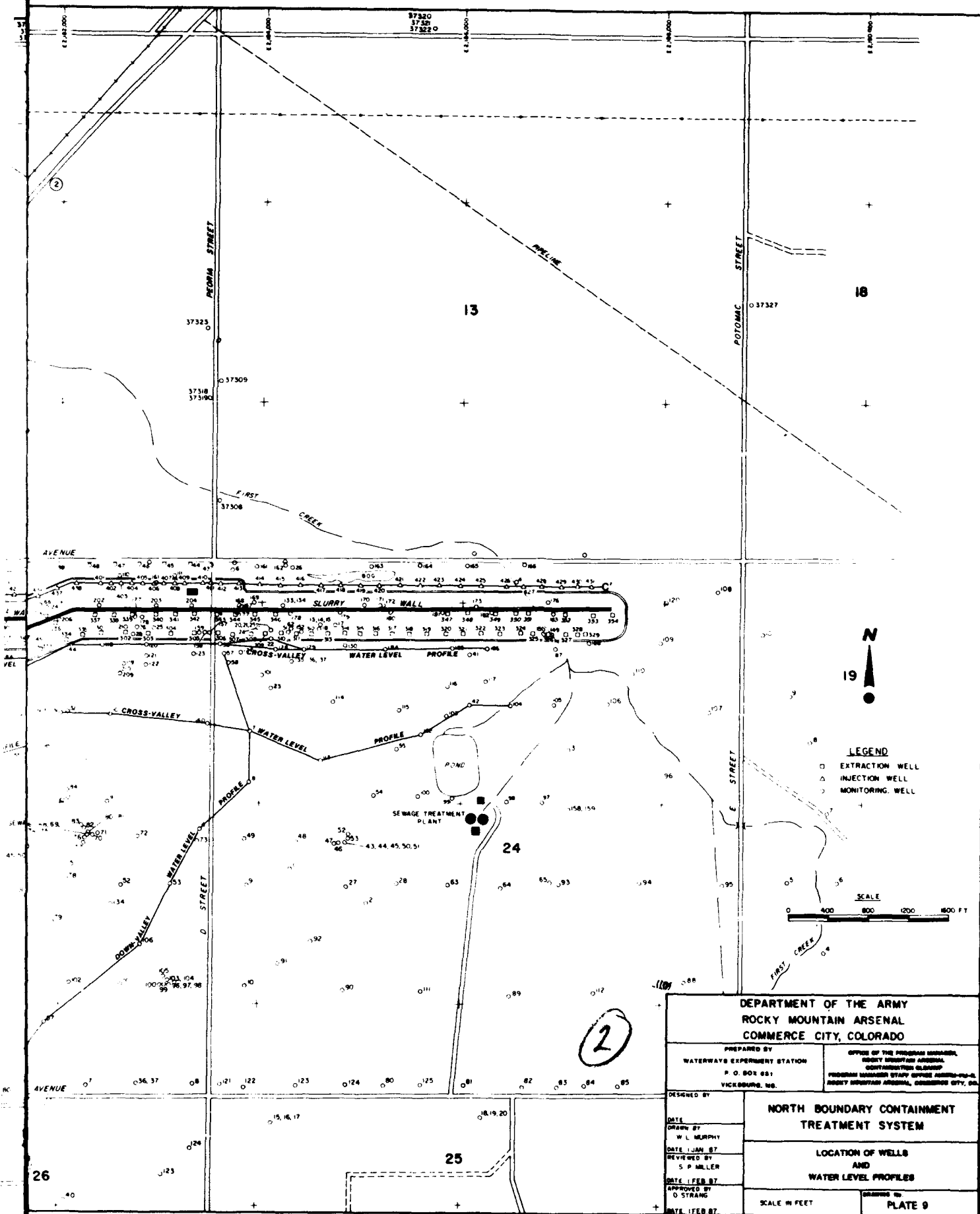
**NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM**

**WATER TABLE ELEVATION MAP, FT.
AUG. 1986
(FOURTH QTR. FY 86)**

SCALE IN FEET

PLATE 8





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ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

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VICKSBURG, MS.

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ROCKY MOUNTAIN ARSENAL
CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE, 4000-10-1
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

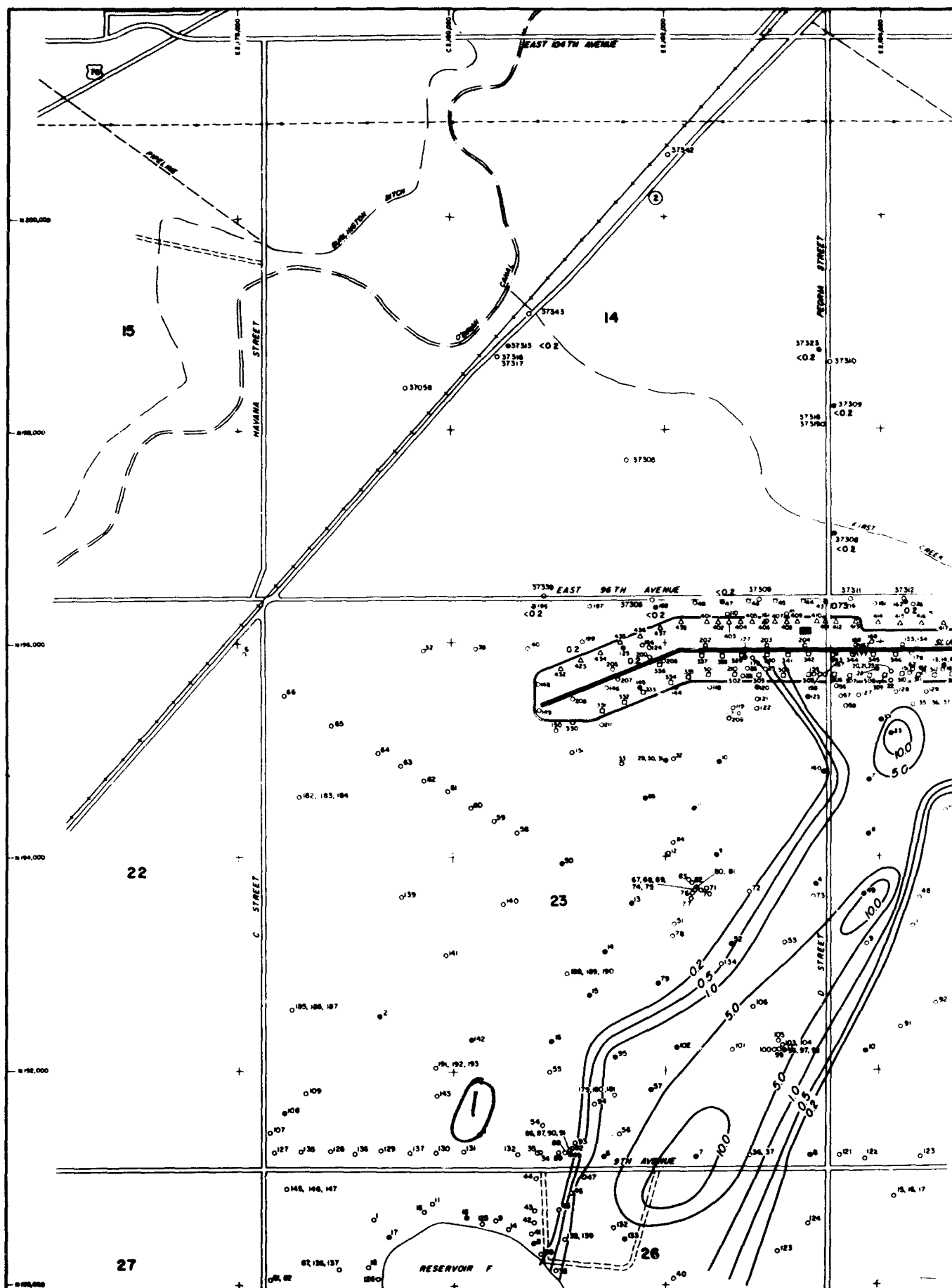
DATE
DRAWN BY
W. L. MURPHY
DATE JAN 87
REVIEWED BY
S. P. MILLER
DATE FEB 87
APPROVED BY
D. STRANG
DATE FEB 87

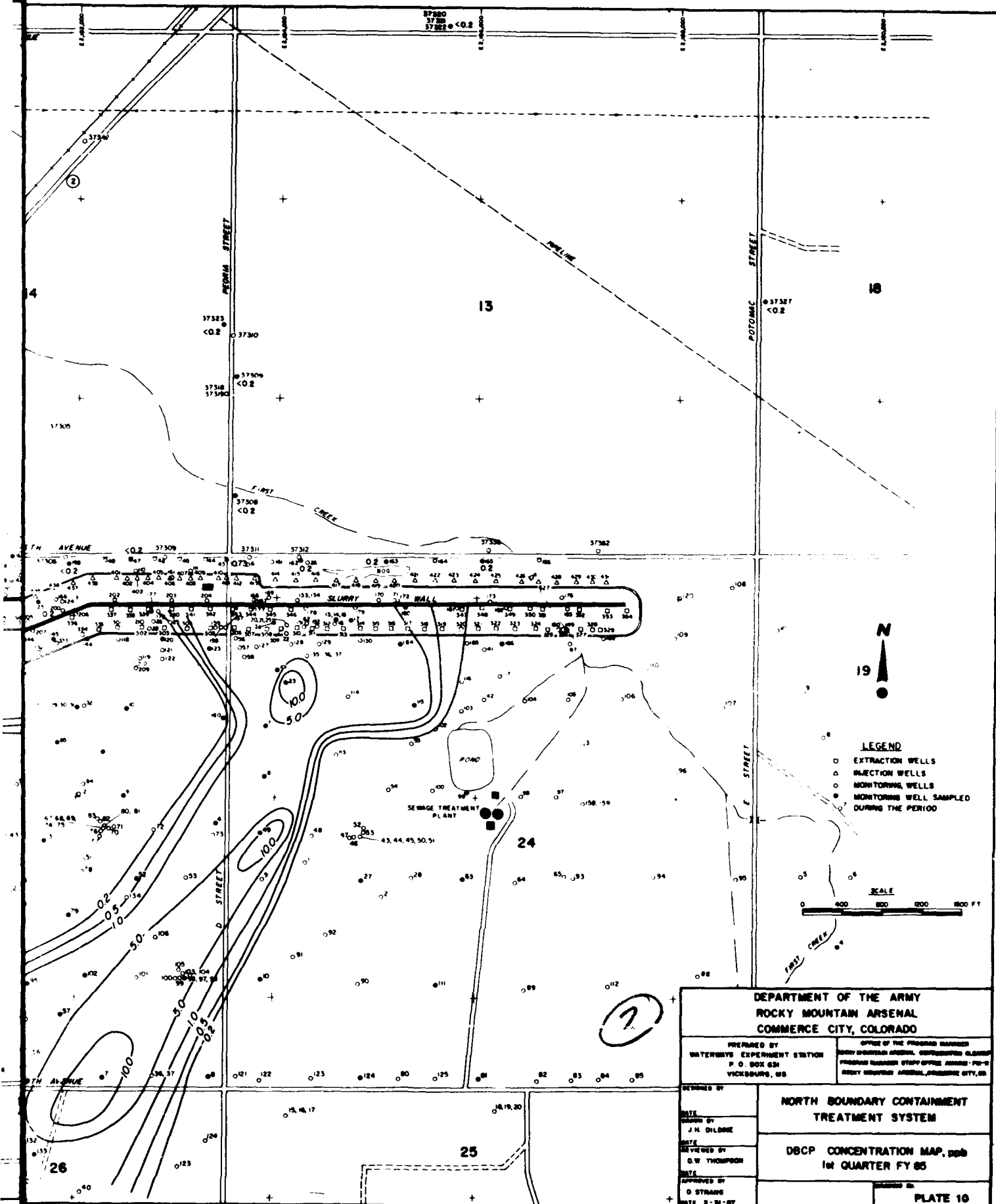
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TREATMENT SYSTEM

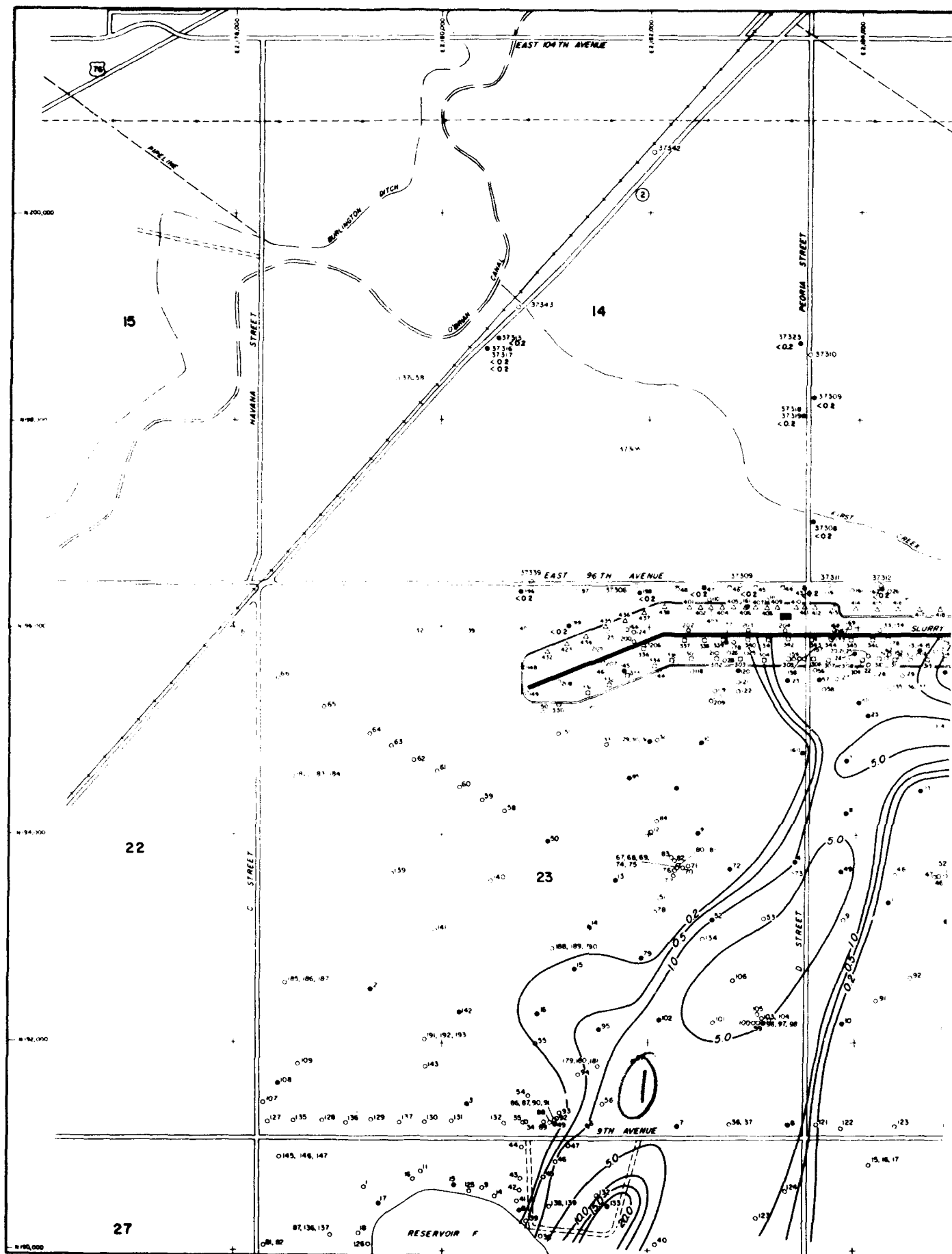
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AND
WATER LEVEL PROFILES

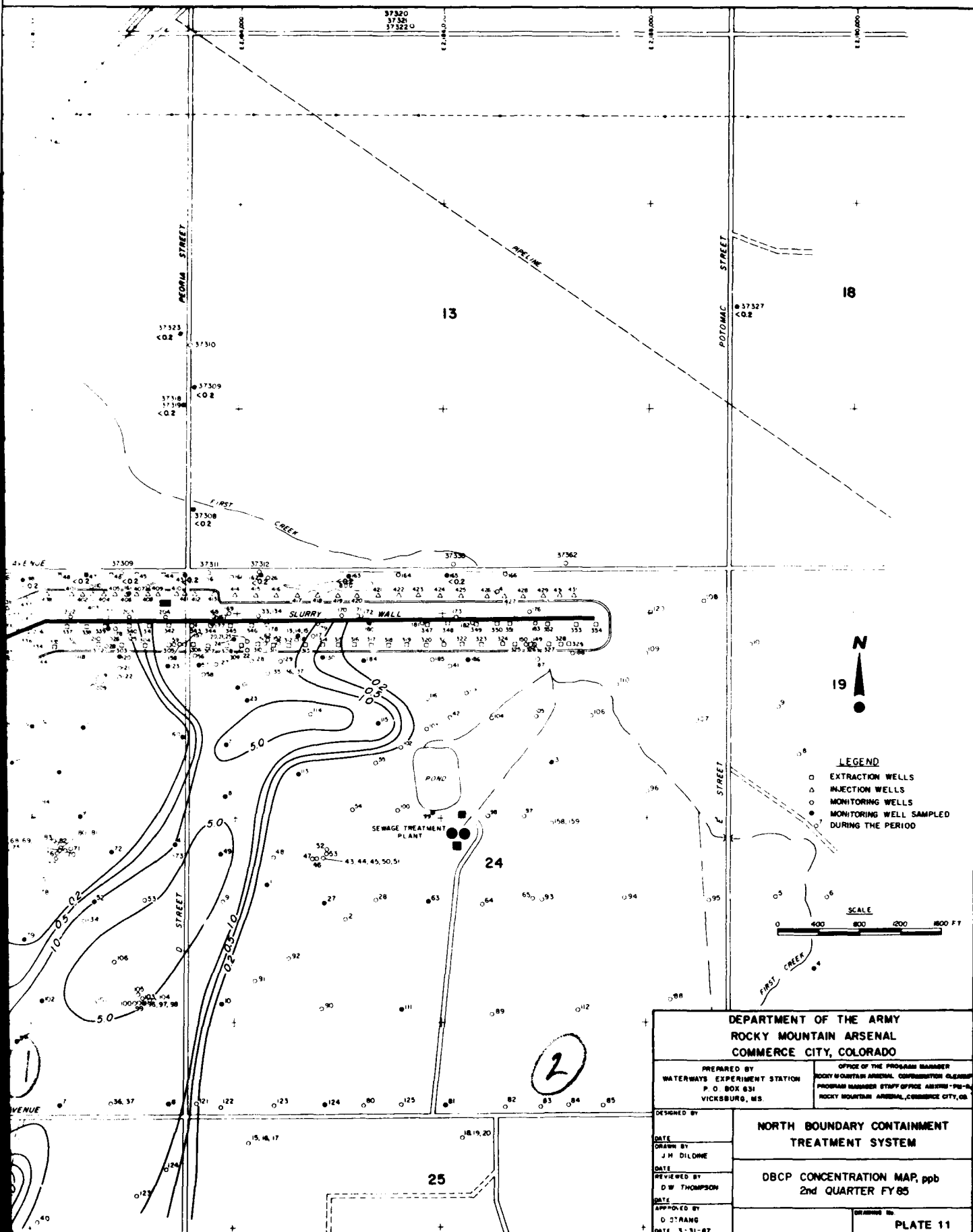
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DRAWING NO.
PLATE 9

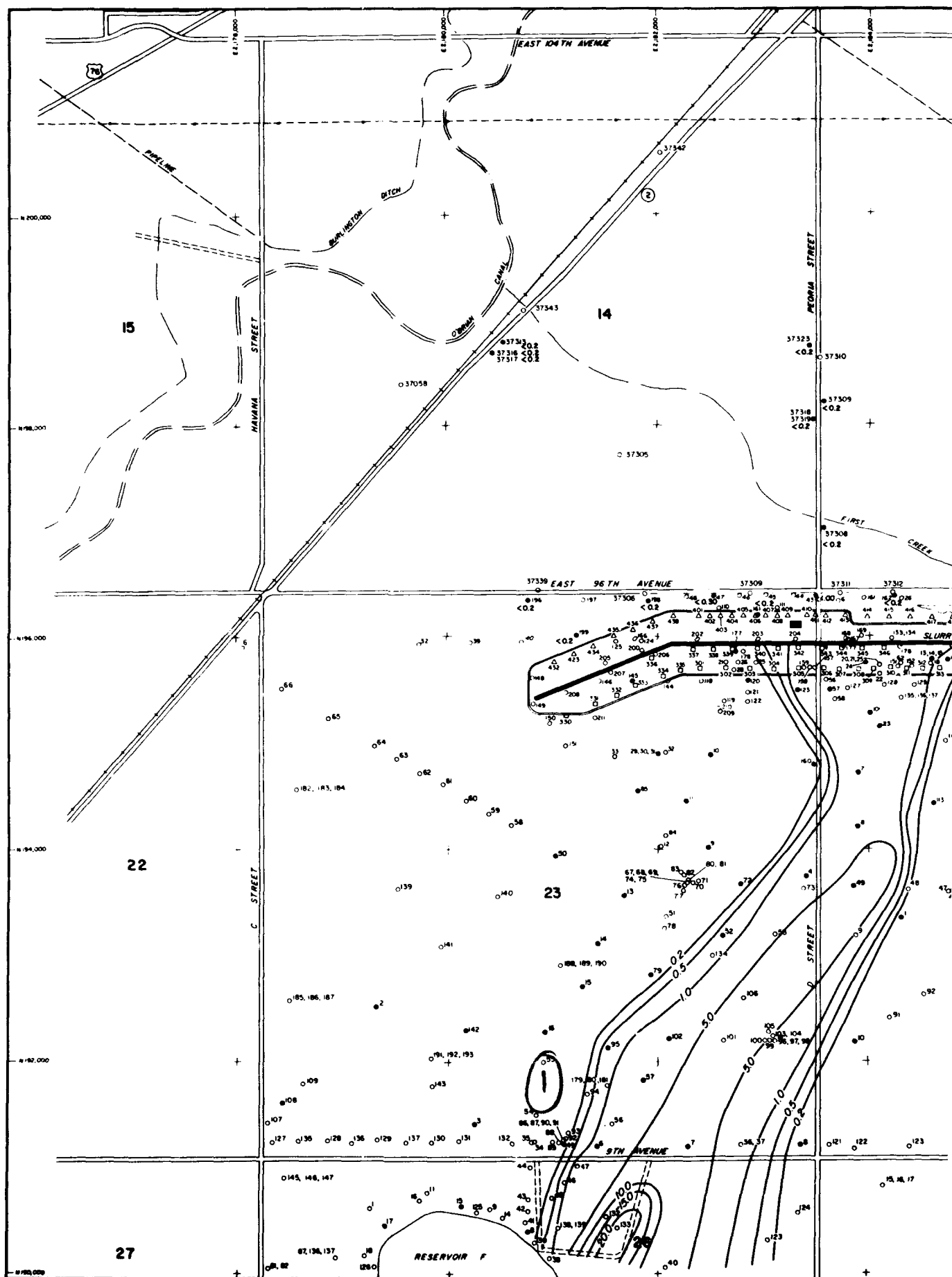


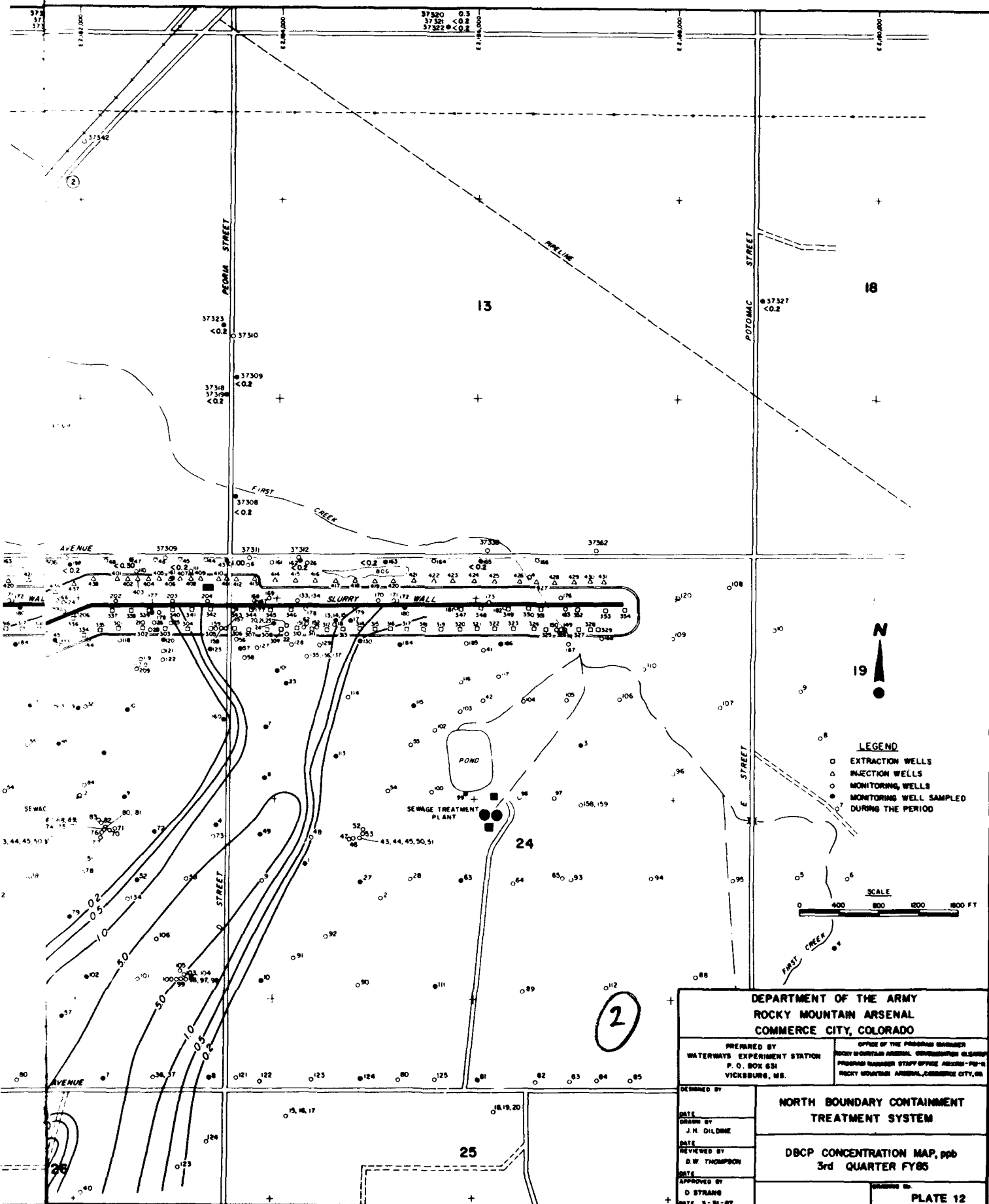


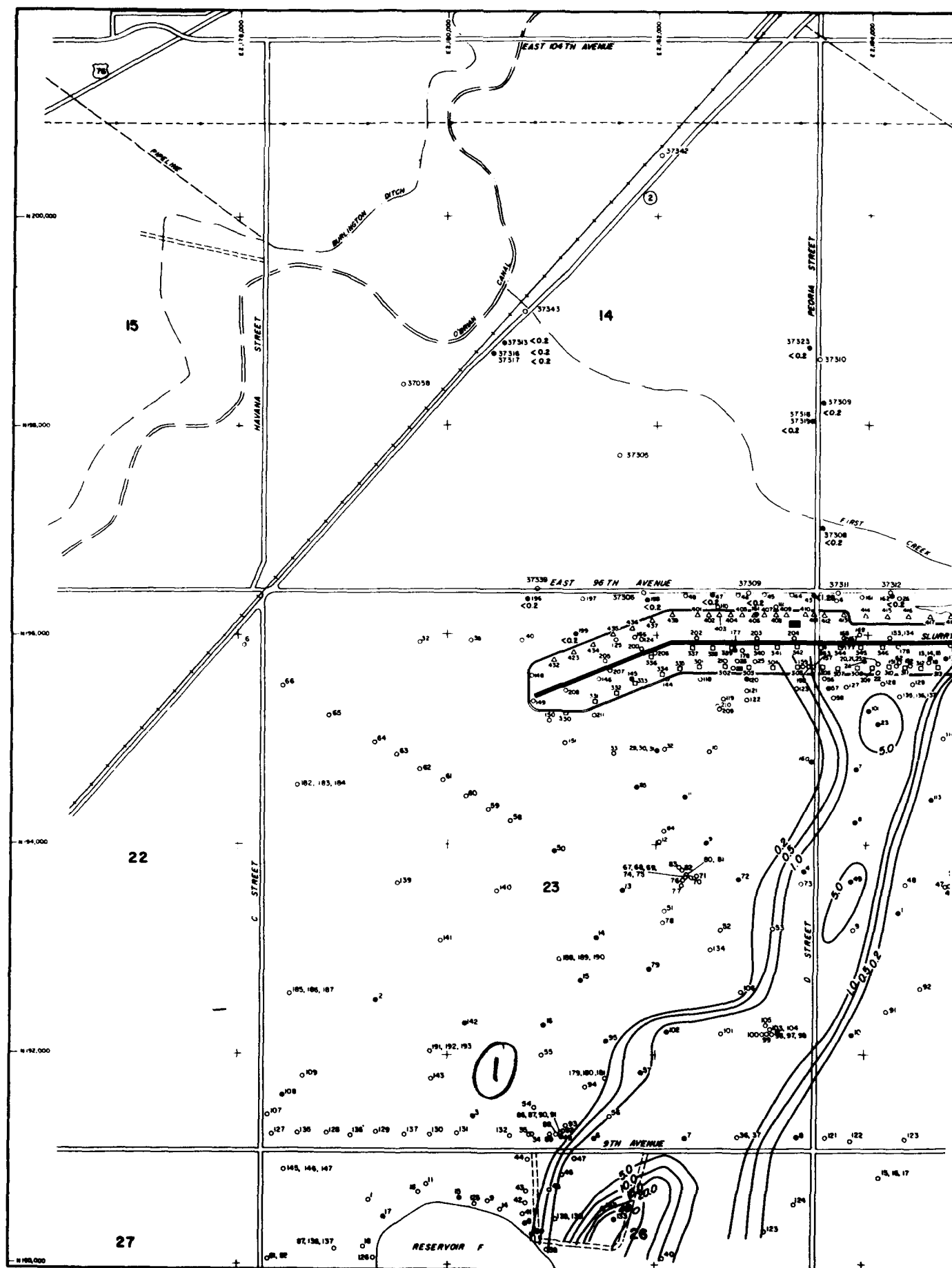


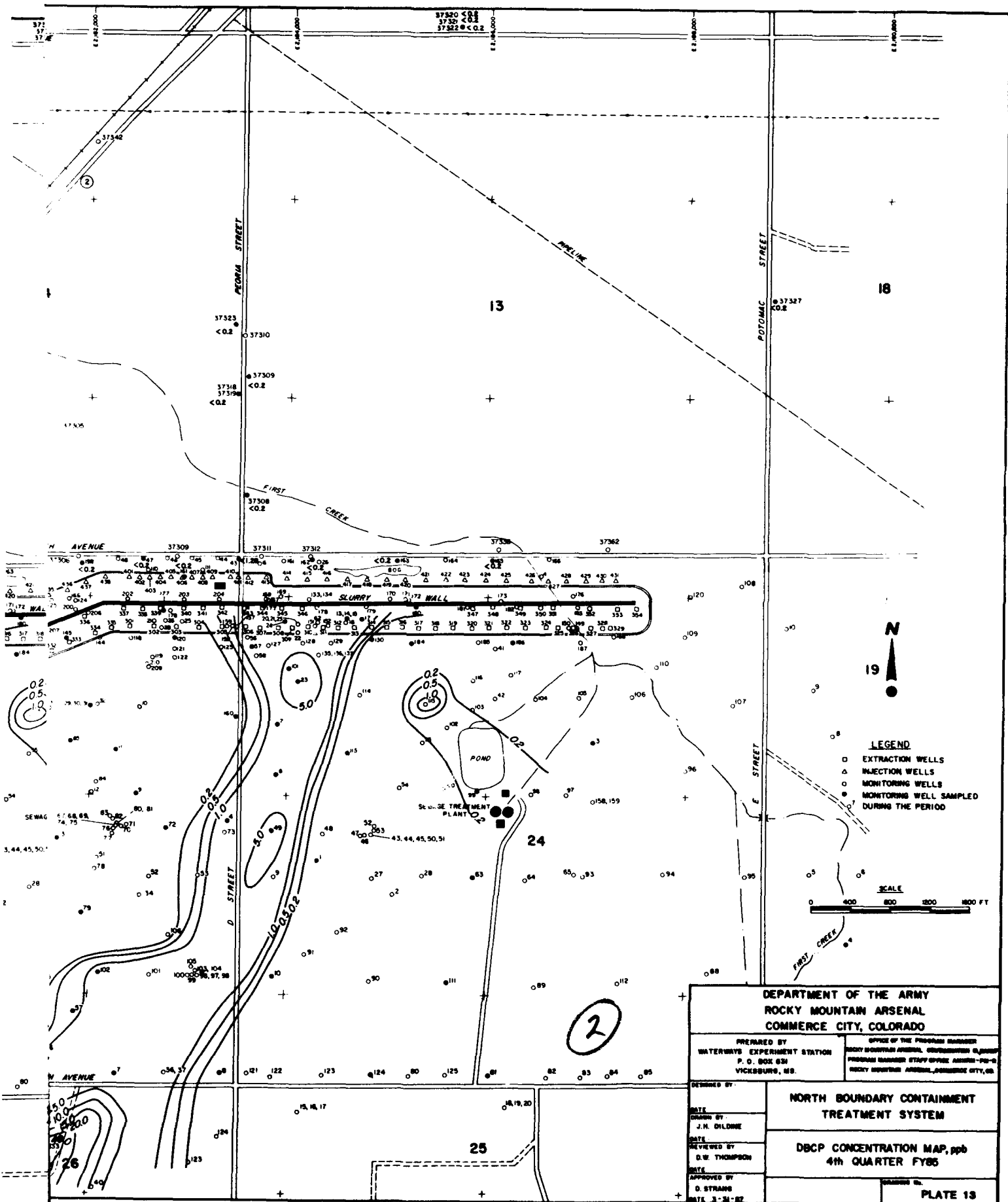


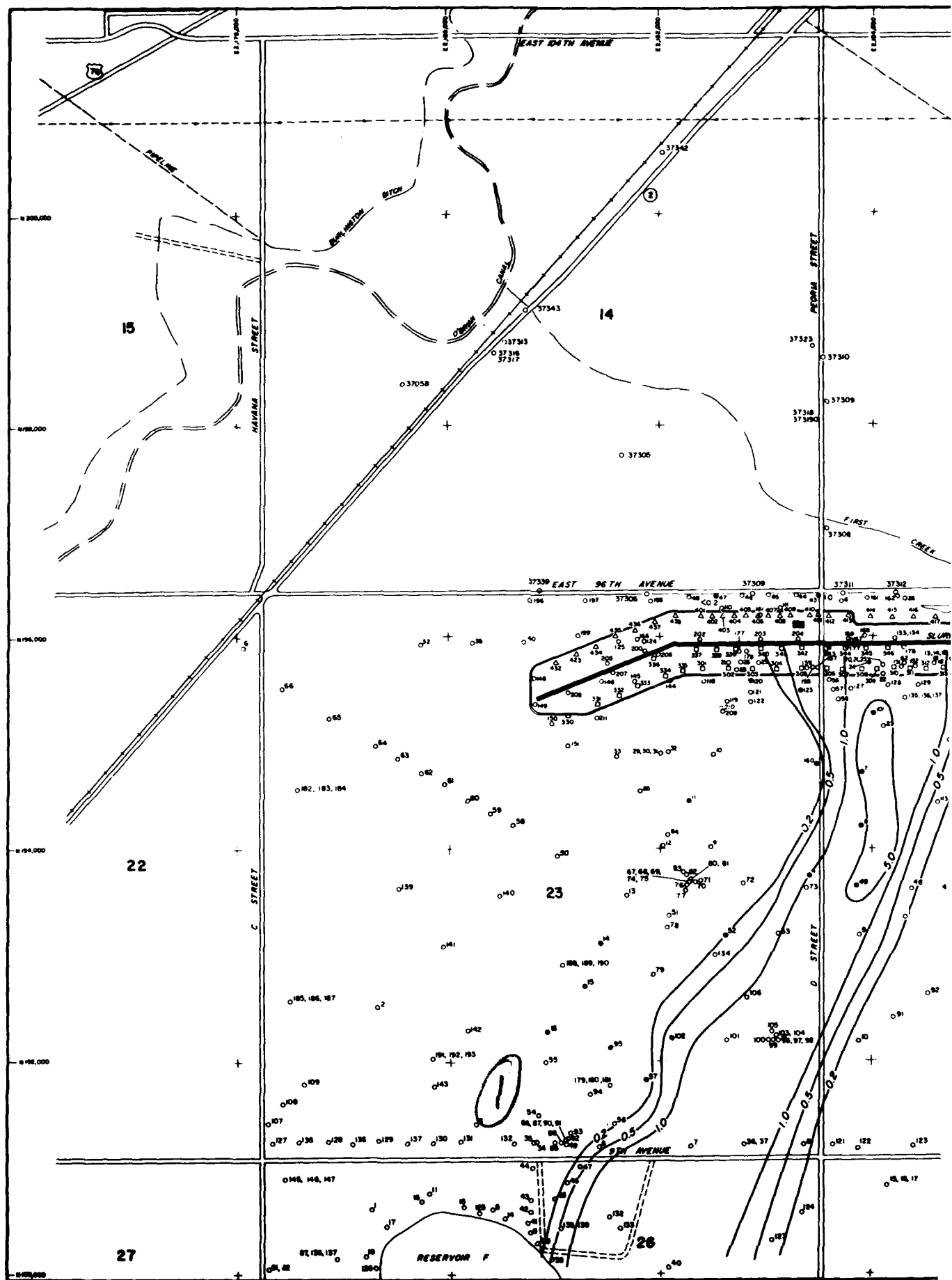
DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 831 VICKSBURG, MS.	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO. PROGRAM MANAGER STAFF OFFICE ARS-PM-1 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DESIGNED BY DATE DRAWN BY J. H. DILONE DATE REVIEWED BY D. W. THOMPSON DATE APPROVED BY O. STRANG DATE 3-31-87	NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM DBCP CONCENTRATION MAP, ppb 2nd QUARTER FY 85 DRAWING NO. PLATE 11

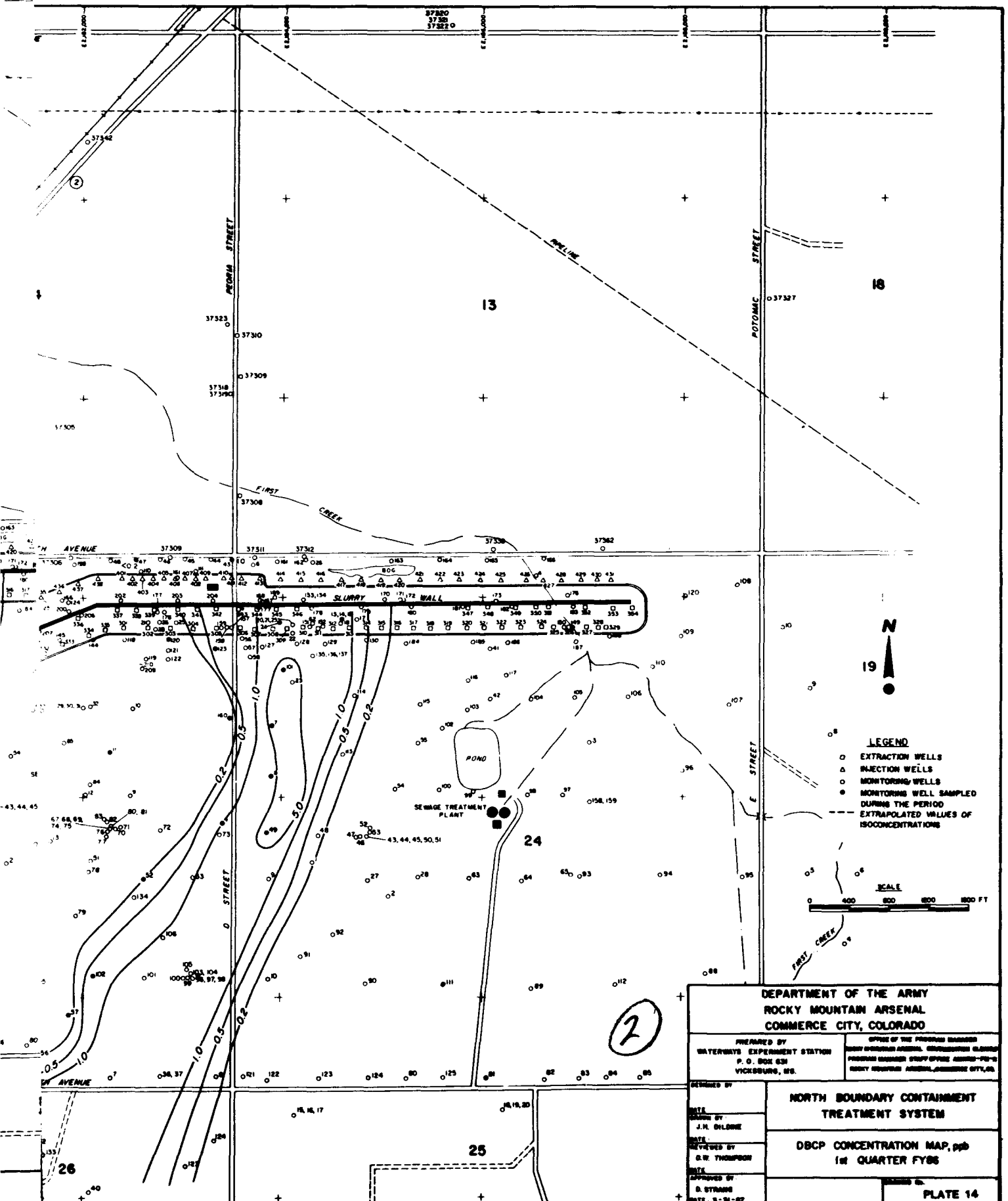












LEGEND

- EXTRACTION WELLS
- △ INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD
- - - - - EXTRAPOLATED VALUES OF ISOCONCENTRATIONS

SCALE

0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 630
VICKSBURG, MS

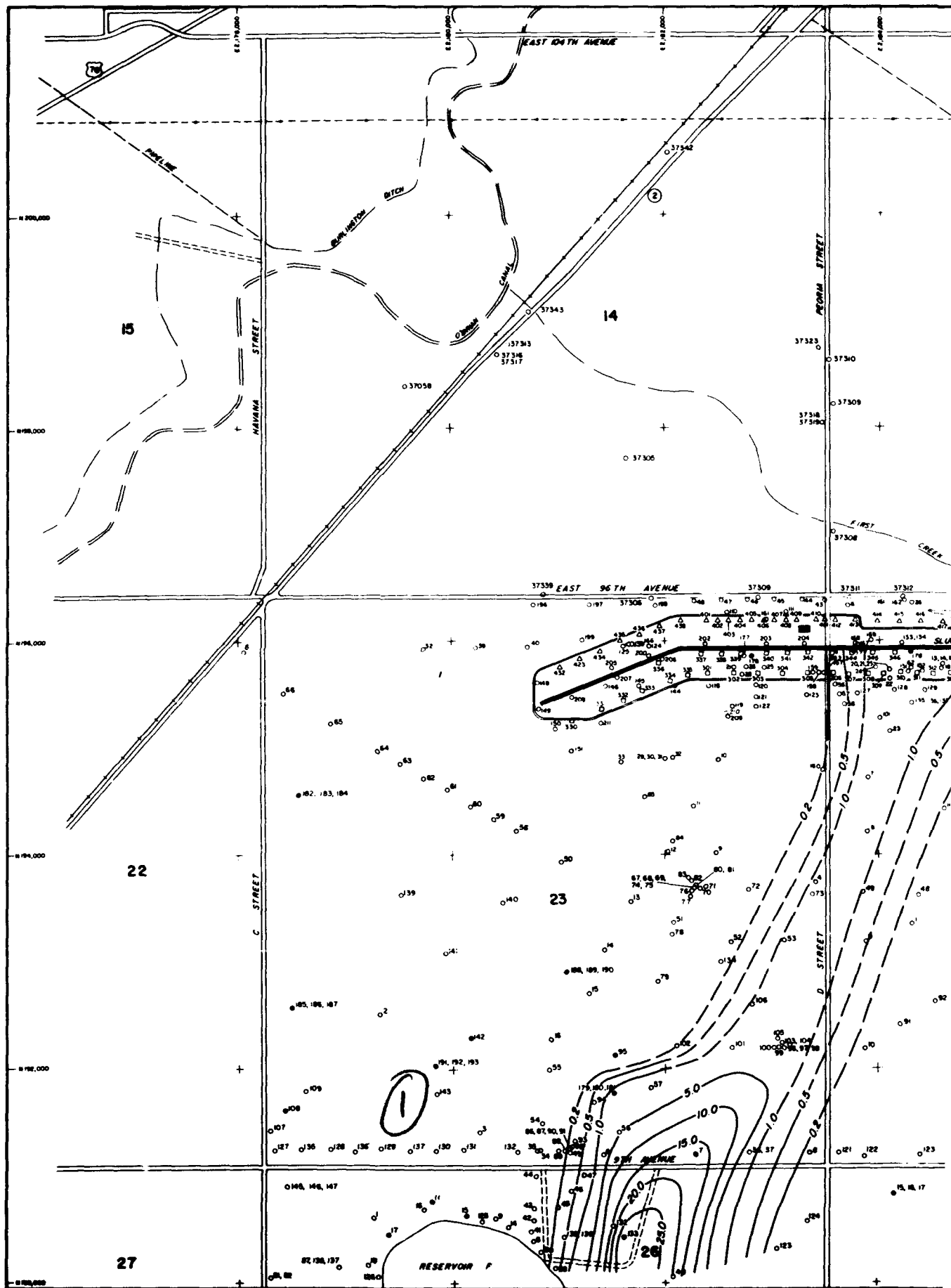
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ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE (PMSO)
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

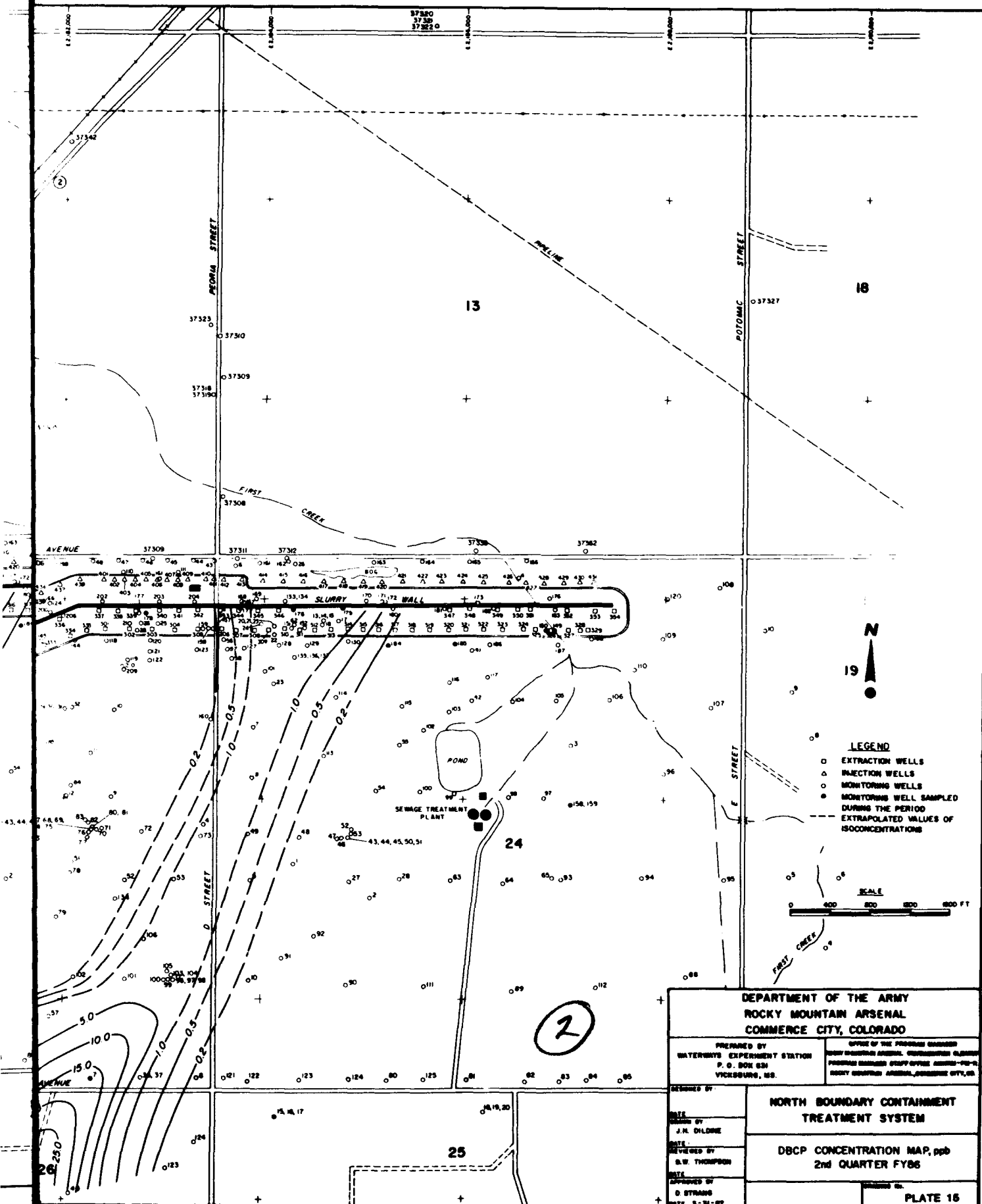
DESIGNED BY
DATE
DRAWN BY
J.H. GILMORE
DATE
REVIEWED BY
G.R. THOMPSON
DATE
APPROVED BY
D. STRANGE
DATE 8-24-82

NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

DBCP CONCENTRATION MAP, pgs
1st QUARTER FY88

PLATE 14





LEGEND

- EXTRACTION WELLS
- △ INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD
- - - - - EXTRAPOLATED VALUES OF ISOCONCENTRATIONS

SCALE

0 200 400 600 800 FT

DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
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P. O. BOX 634
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCIAL DISTRICT
PO BOX 634, OFFICE ADDRESS-PO-6
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE
J.M. DOLINE

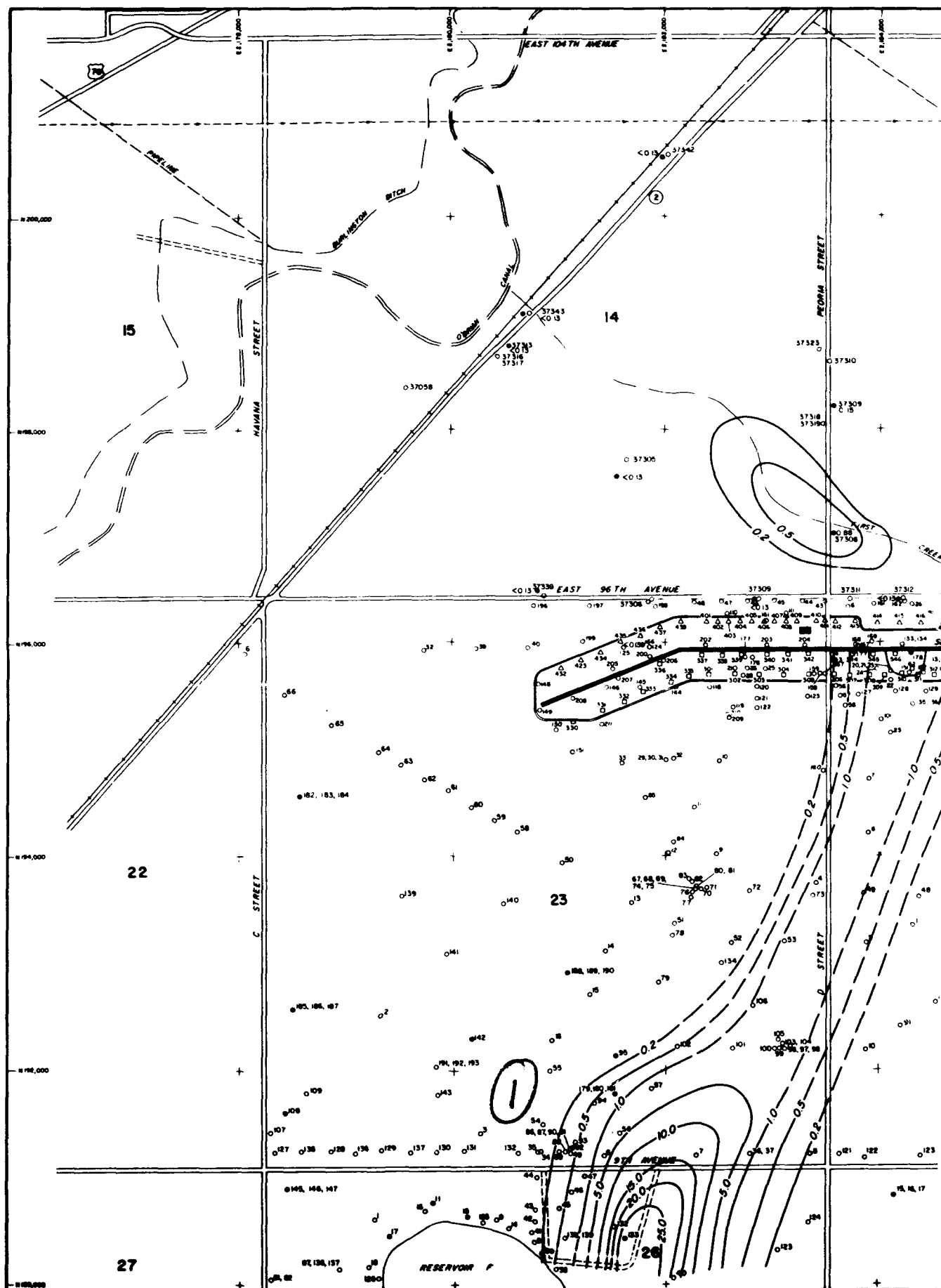
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S.W. THOMPSON

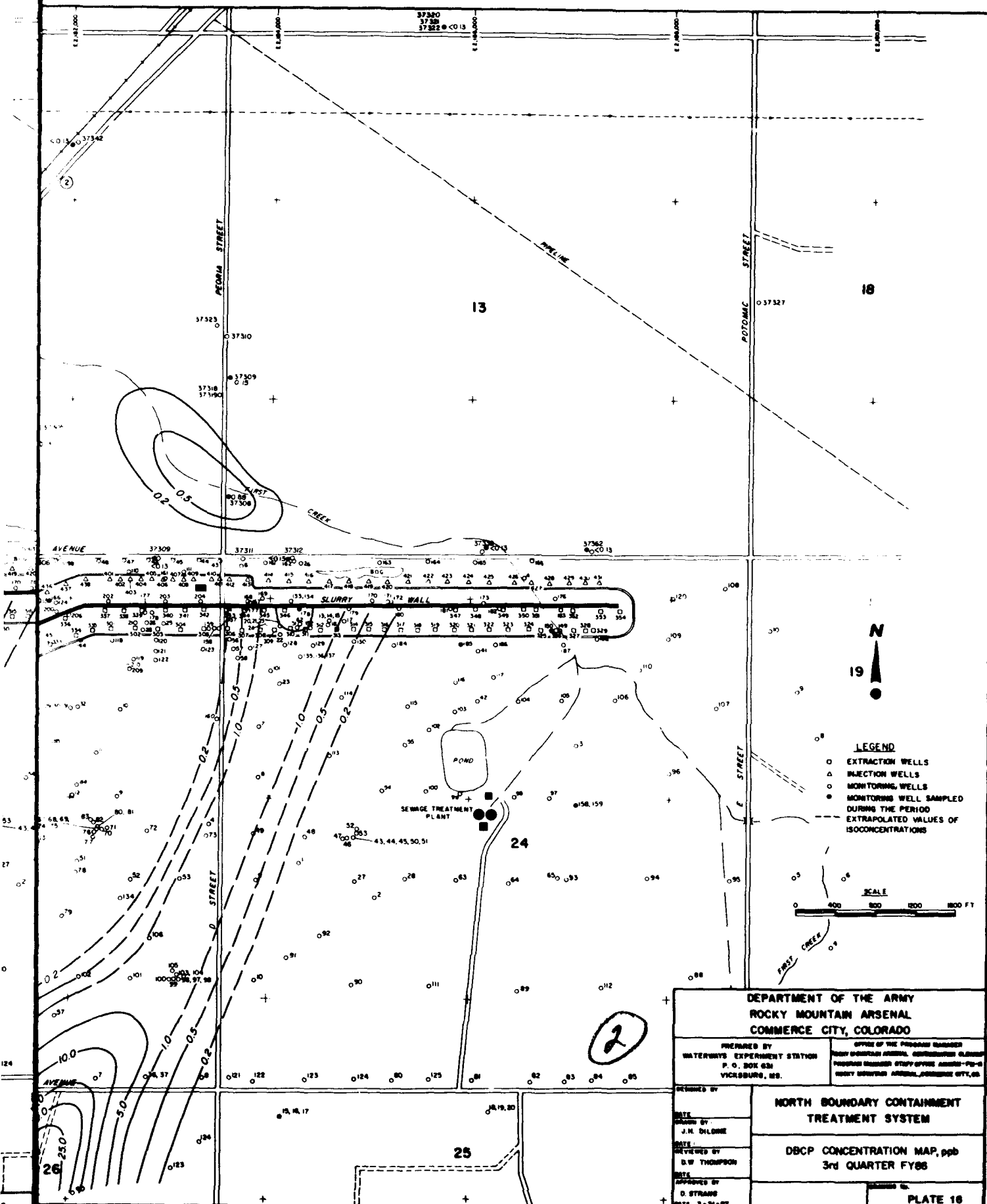
DATE
D. STRANG
174 8-21-82

**NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM**

**DBCP CONCENTRATION MAP, ppb
2nd QUARTER FY86**

PLATE 15





LEGEND

- EXTRACTION WELLS
- △ INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD
- - - - - EXTRAPOLATED VALUES OF ISOCONCENTRATIONS

SCALE

0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

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ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE ARSENAL-PM-1
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

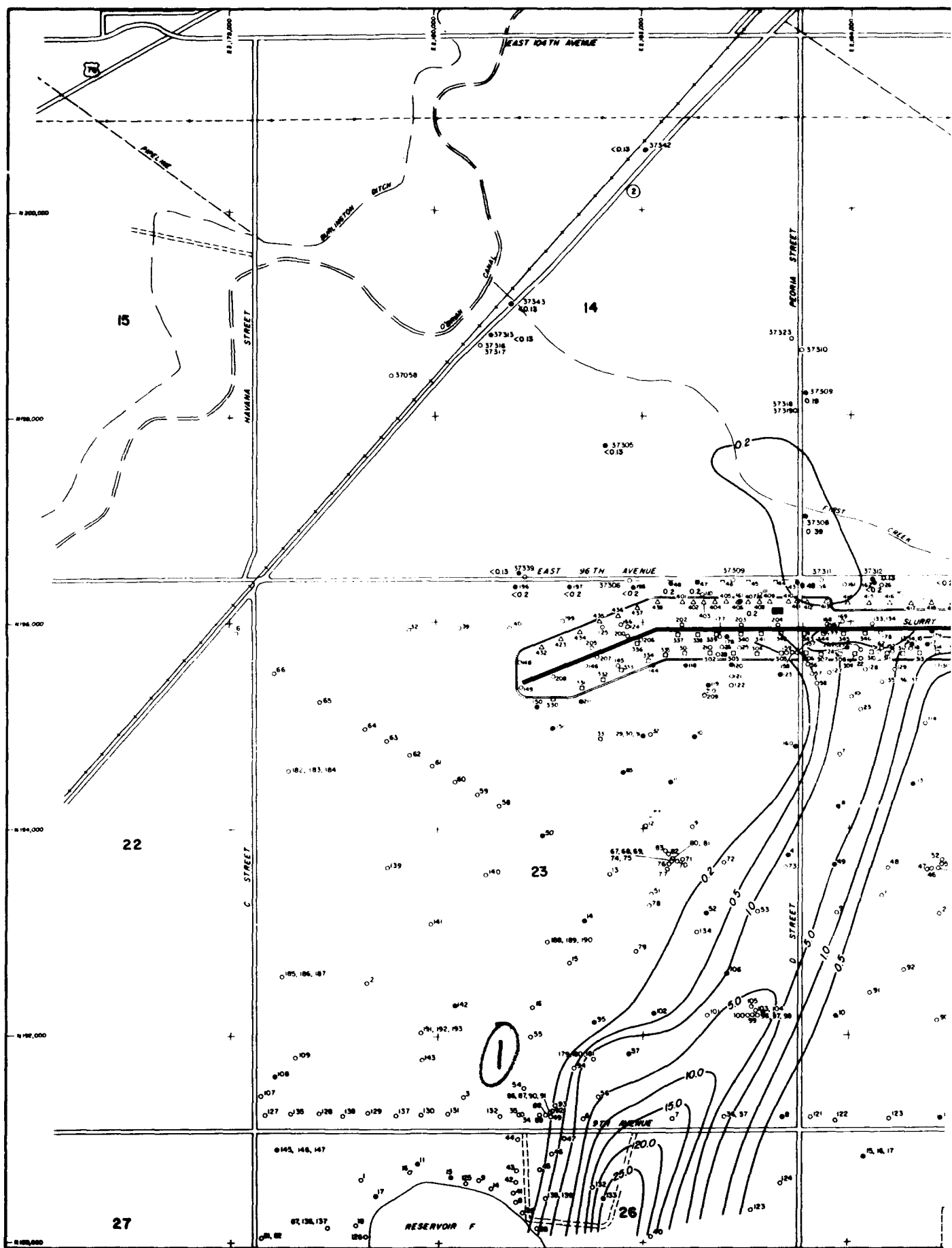
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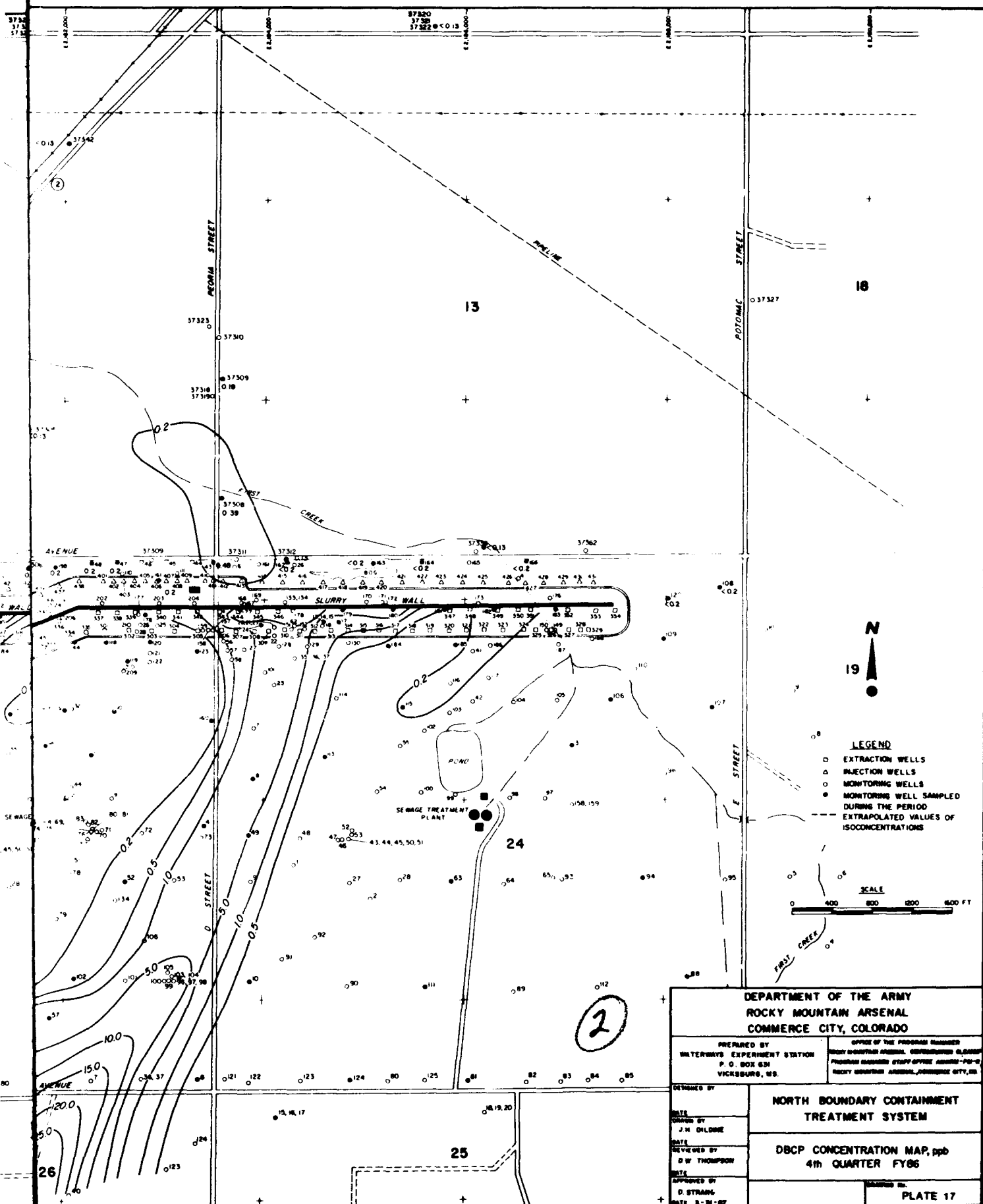
DATE
J.M. DILONE
DATE
D.W. THOMPSON
DATE
D. STRANG
DATE 2-21-67

NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

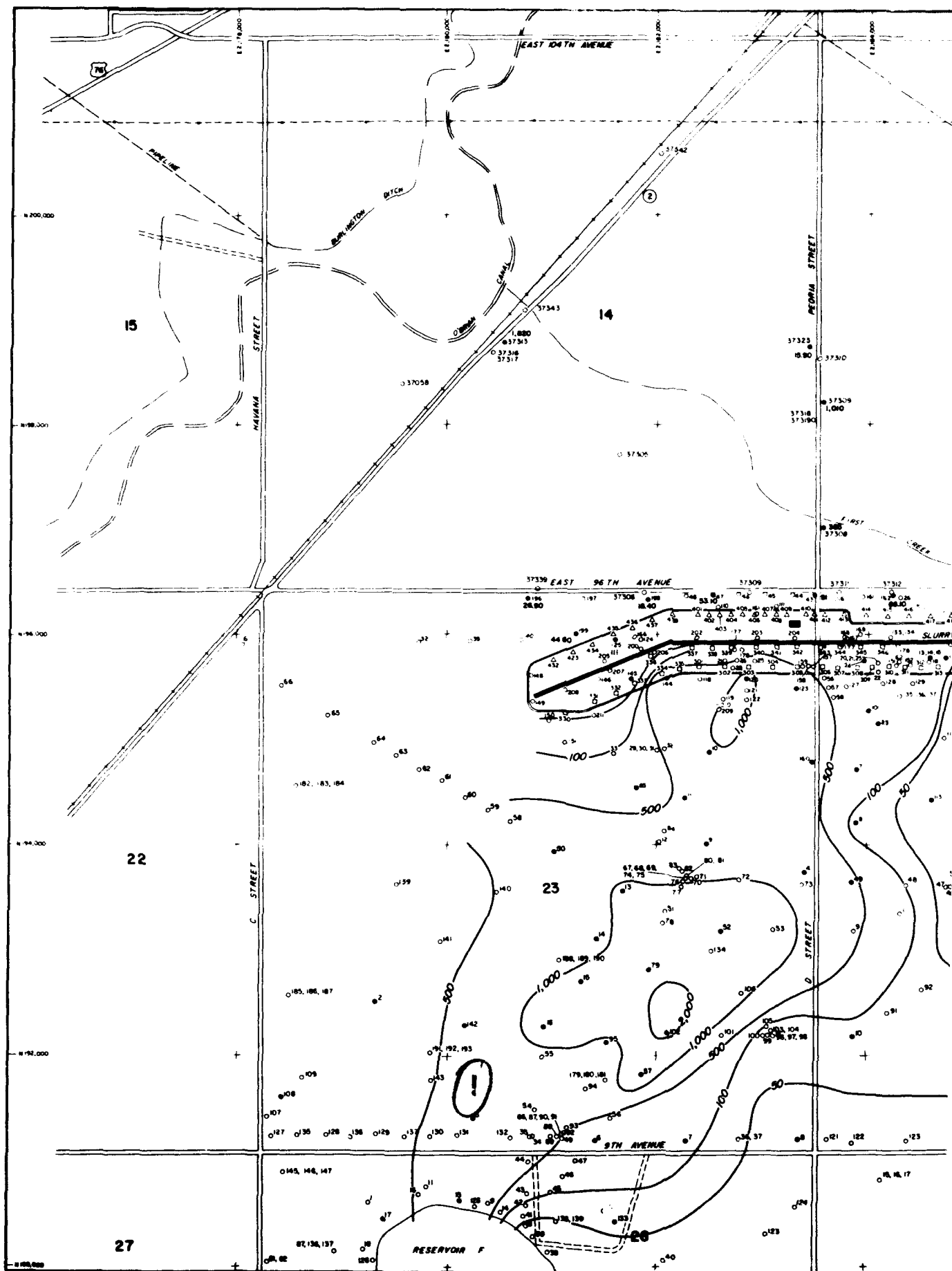
DBCP CONCENTRATION MAP, ppb
3rd QUARTER FY66

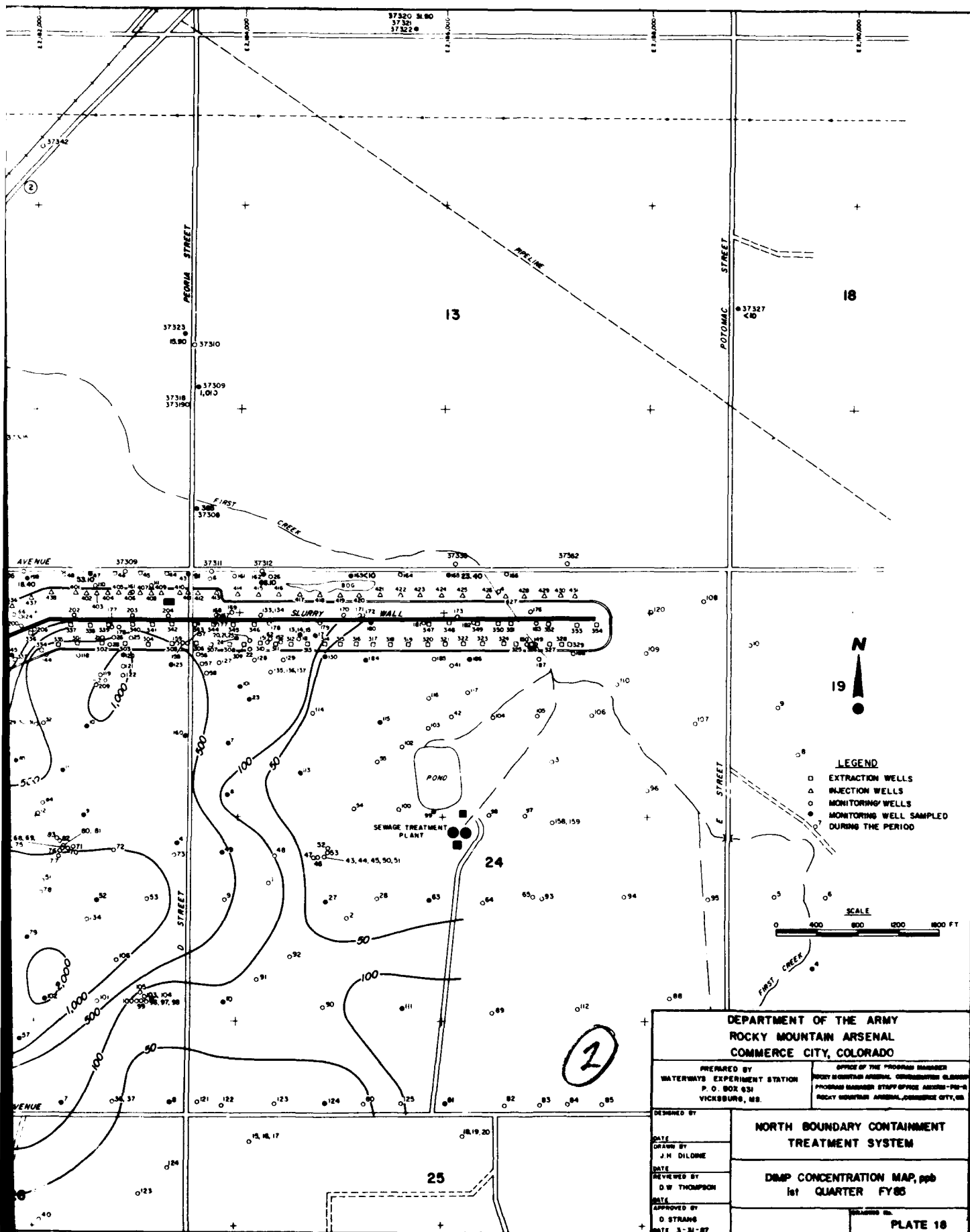
PLATE 16





DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
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DESIGNED BY DATE CHECKED BY J. H. CHILDS DATE REVIEWED BY D. W. THOMPSON DATE APPROVED BY D. STRAIN DATE 8-28-87	NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM DBCP CONCENTRATION MAP, ppb 4th QUARTER FY86 PLATE 17





DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

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WATERWAYS EXPERIMENT STATION
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VICKSBURG, MS.

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PROGRAM MANAGER STAFF OFFICE ARMY-PM-6
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE
DRAWN BY
J. H. DILONE

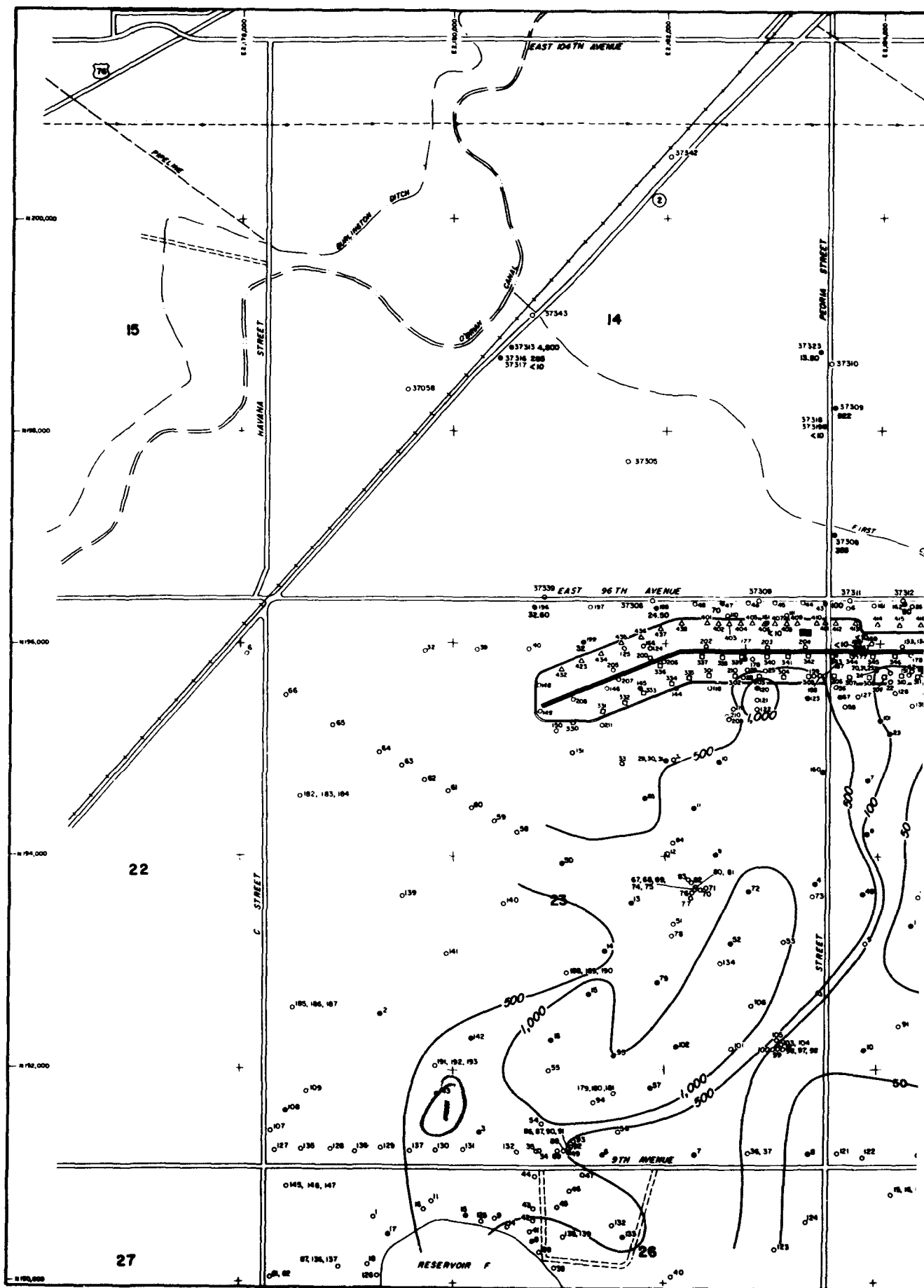
DATE
REVIEWED BY
D. W. THOMPSON

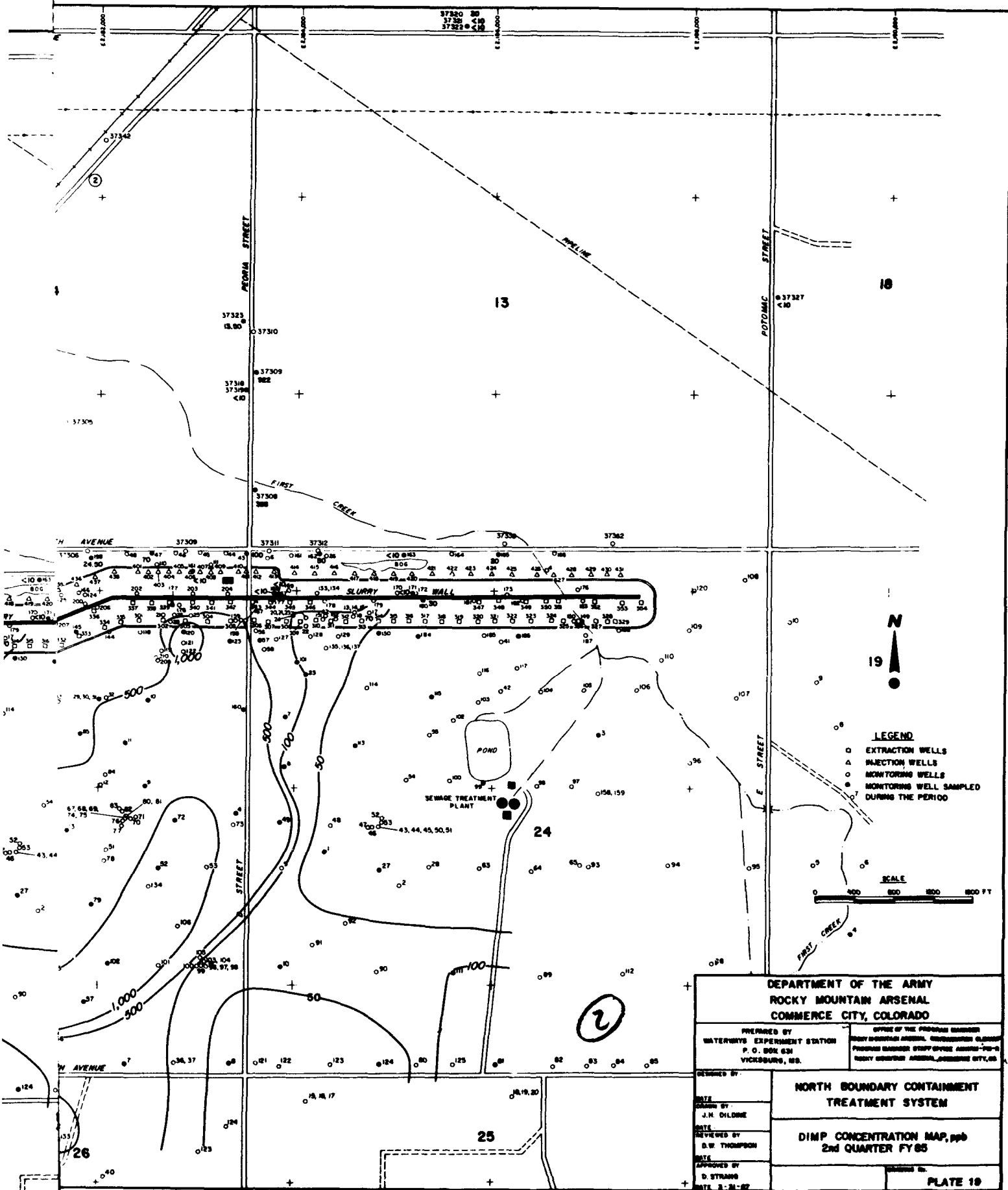
DATE
APPROVED BY
D. STRANG
DATE 3-31-87

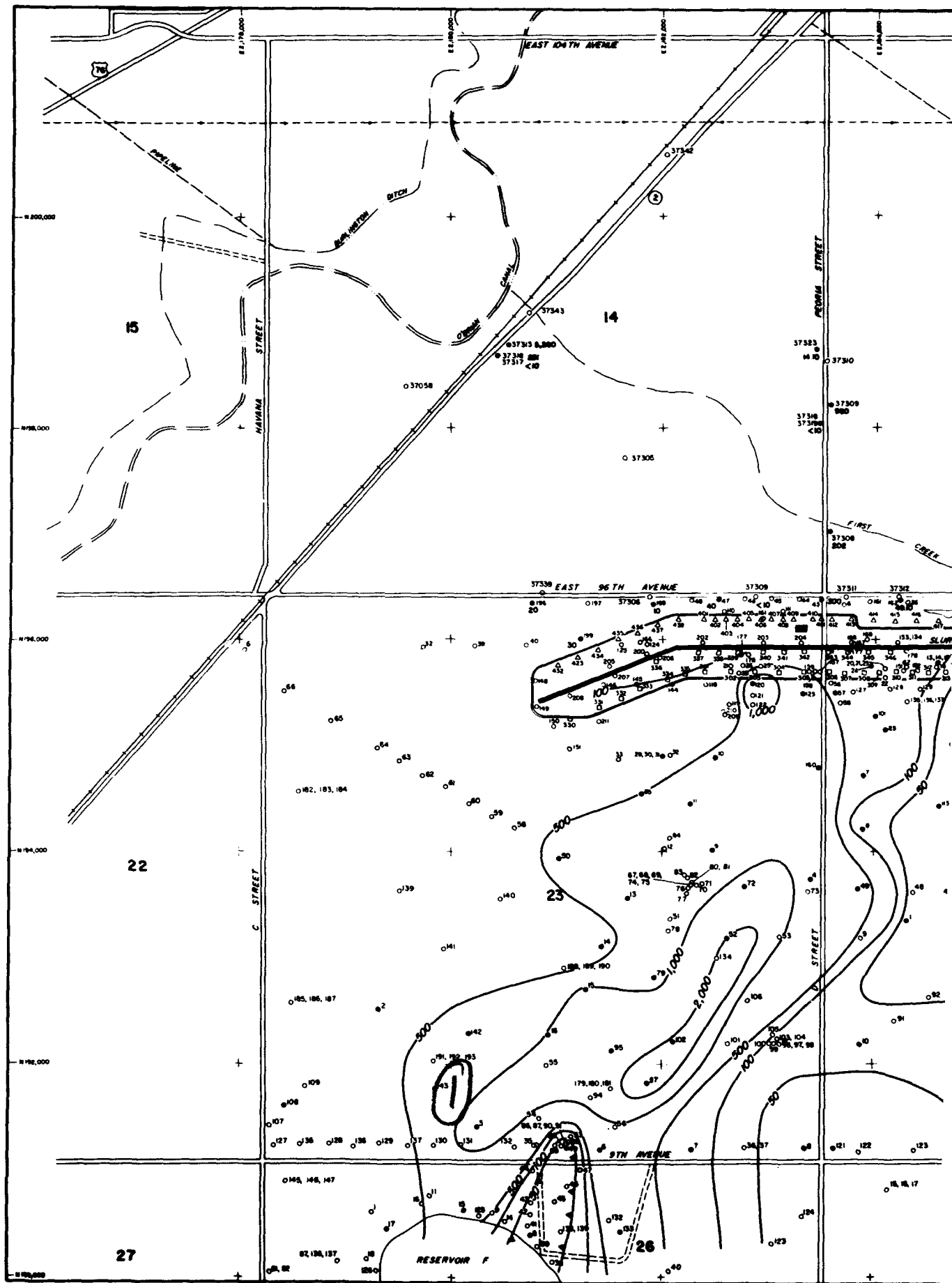
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

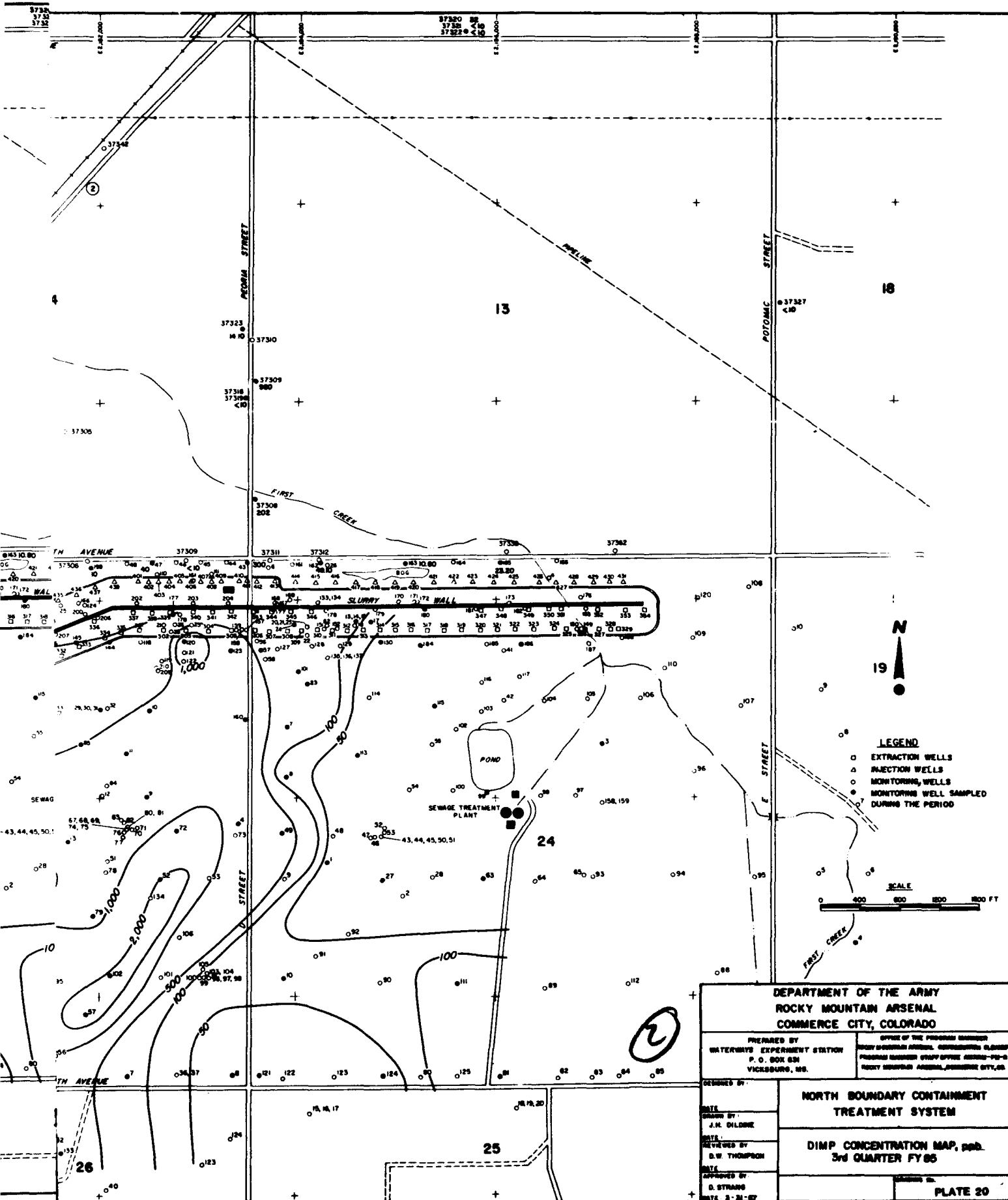
DMP CONCENTRATION MAP, ppb
1st QUARTER FY88

PLATE 18









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ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
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P. O. BOX 631
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OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCIAL BLVD.
PROGRAM MANAGER STAFF OFFICE (CERAM-10-0)
ROCKY MOUNTAIN ARSENAL, COMMERCIAL CITY, CO.

DESIGNED BY:

DATE:

DRAWN BY:

J.M. DILONE

DATE:

REVIEWED BY:

D.W. THOMPSON

DATE:

APPROVED BY:

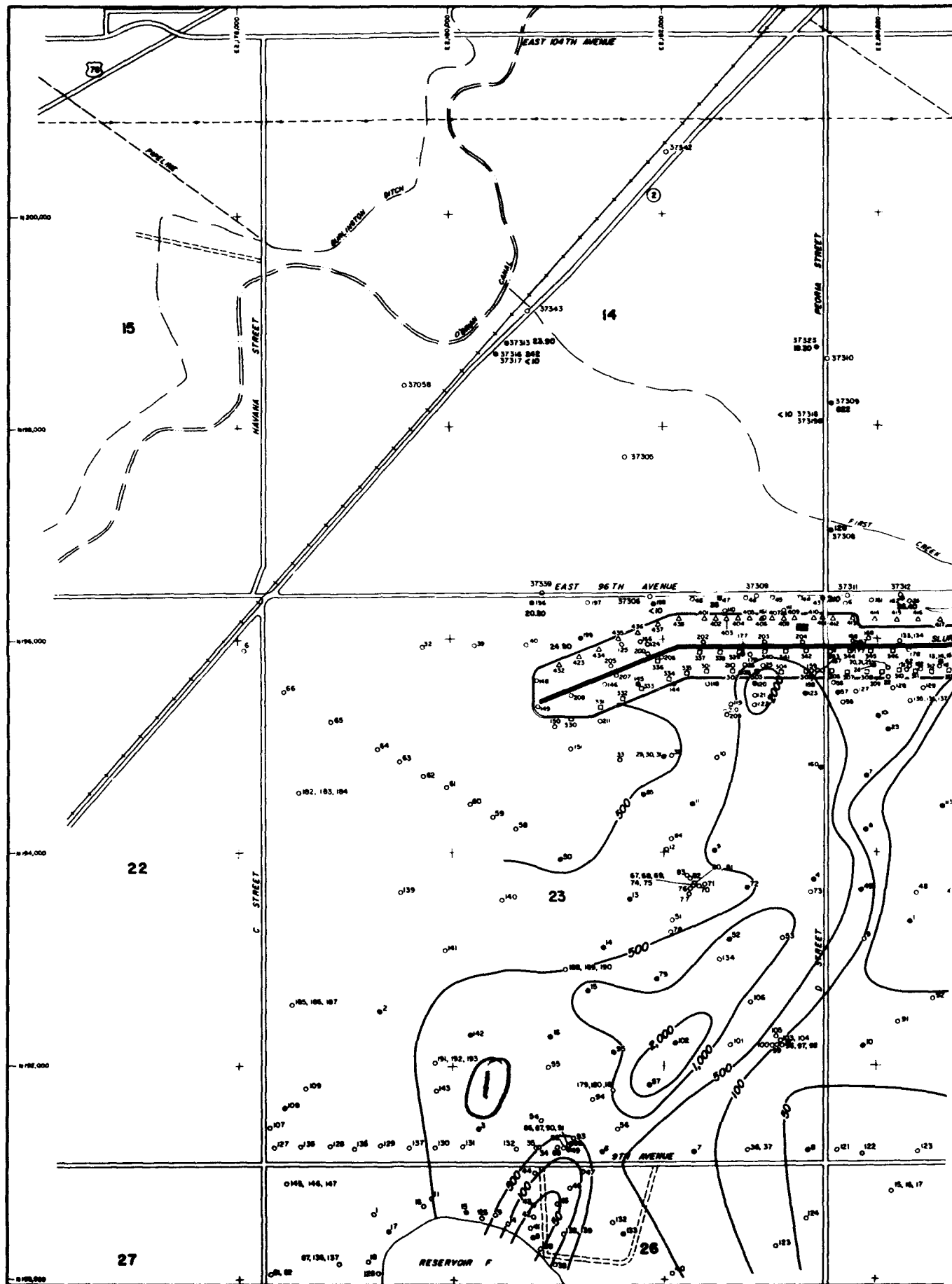
D. STRANG

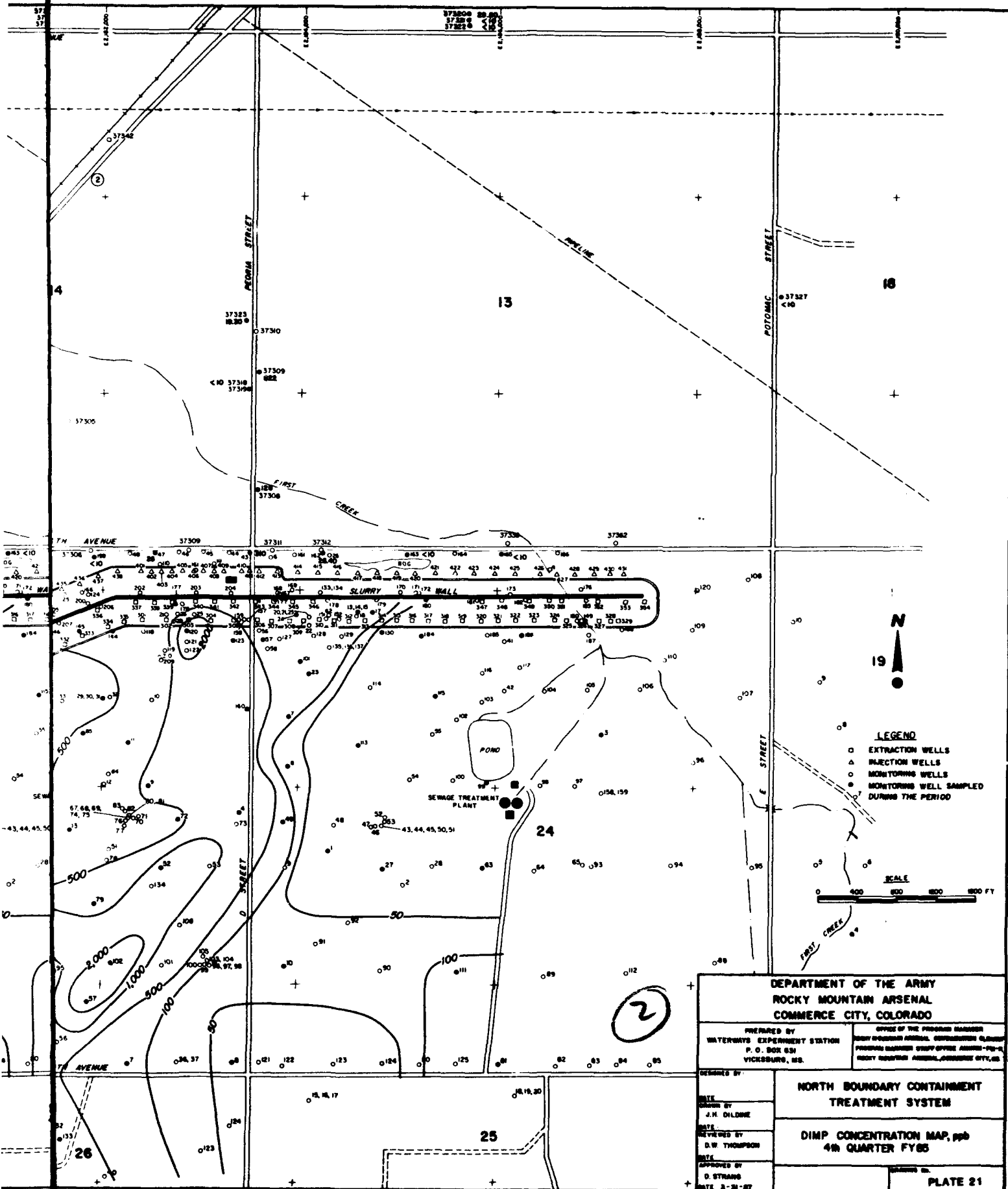
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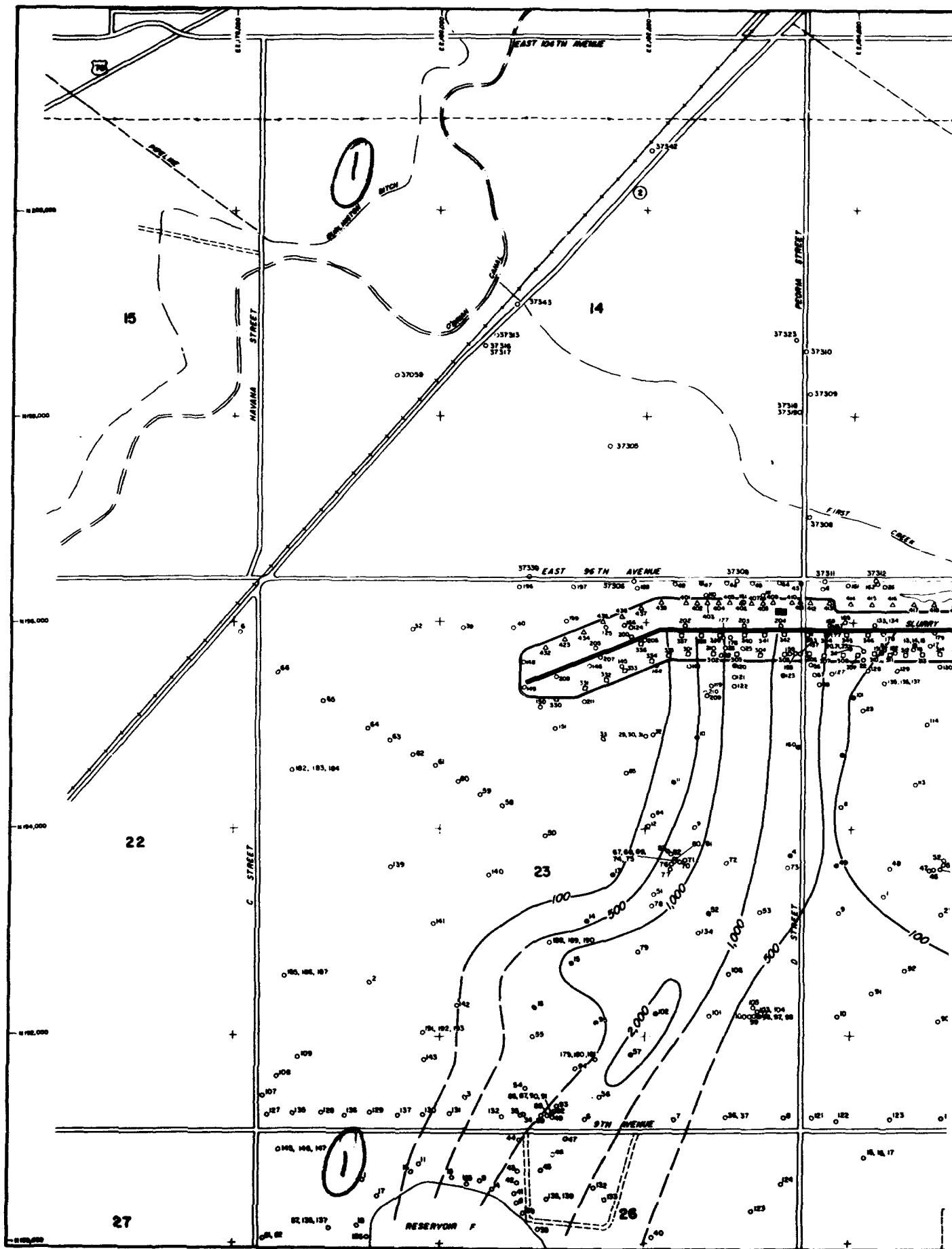
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

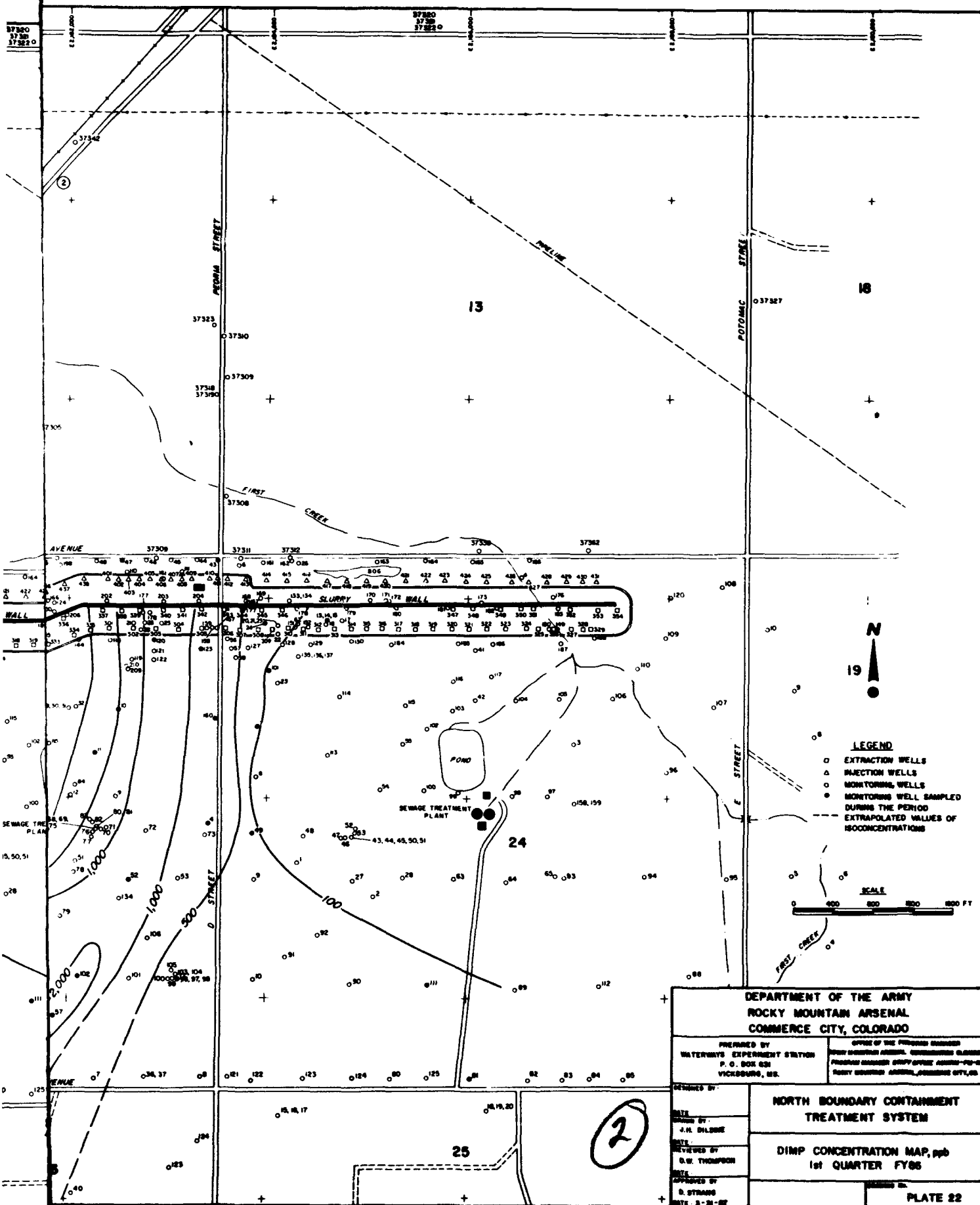
DIMP CONCENTRATION MAP, pgs.
3rd QUARTER FY65

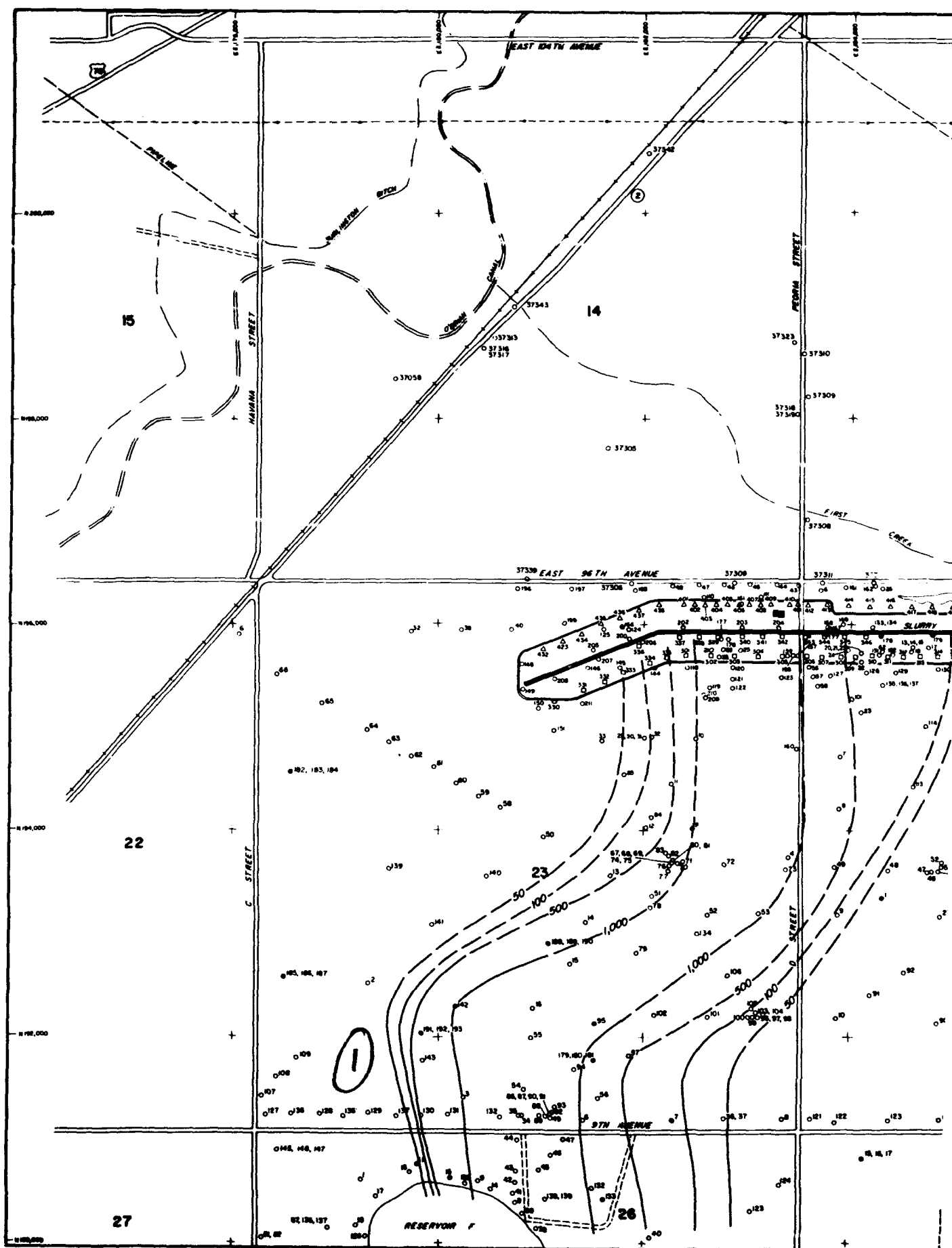
PLATE 20

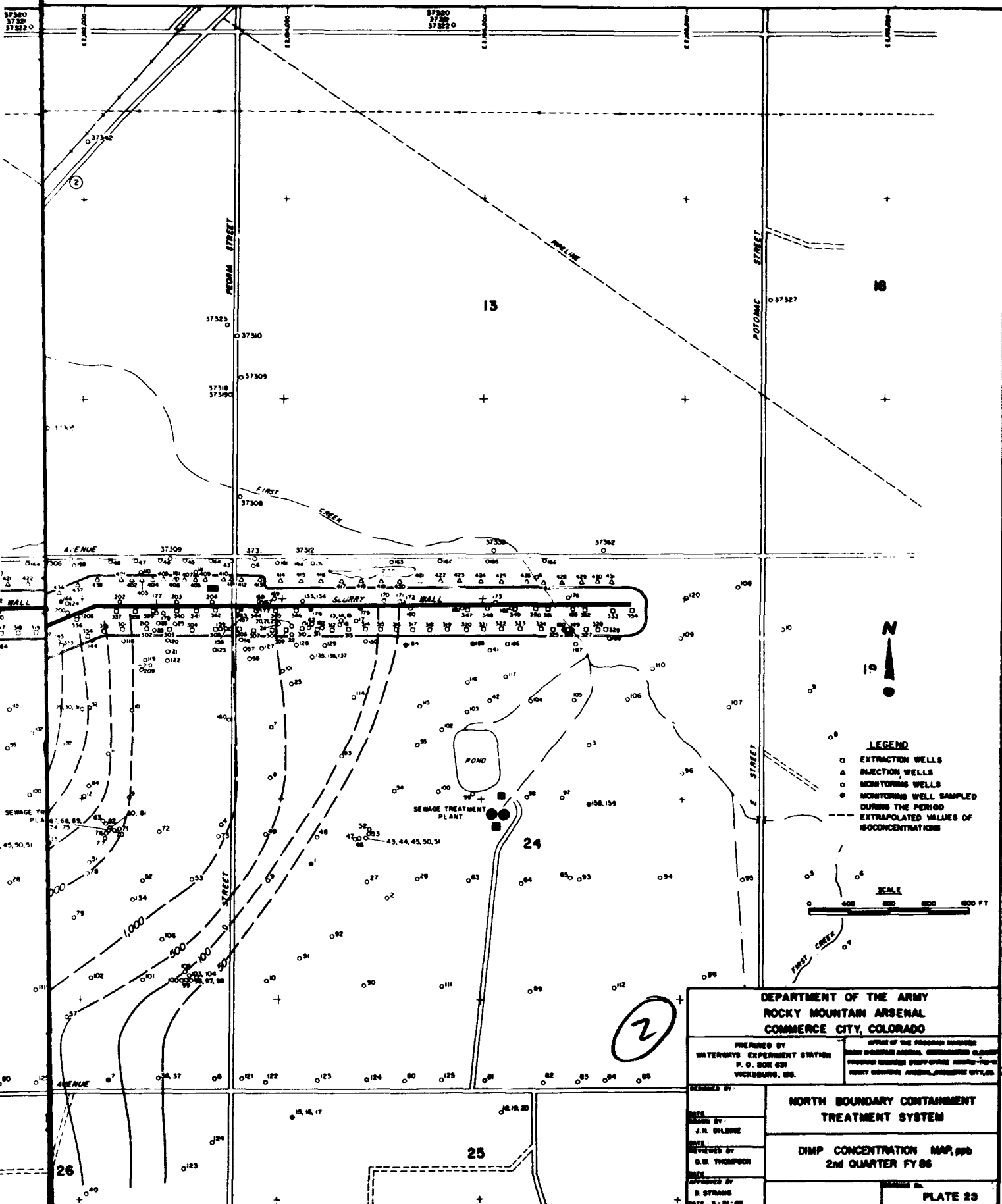












LEGEND

- EXTRACTION WELLS
- △ INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD
- - - - - EXTRAPOLATED VALUES OF ISOCONCENTRATIONS

SCALE

0 400 800 1200 1600 FT

**DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO**

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER: STAFF OFFICE, ARMY-70-0
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY:

DATE:
DRAWN BY:
J.H. DOLBE

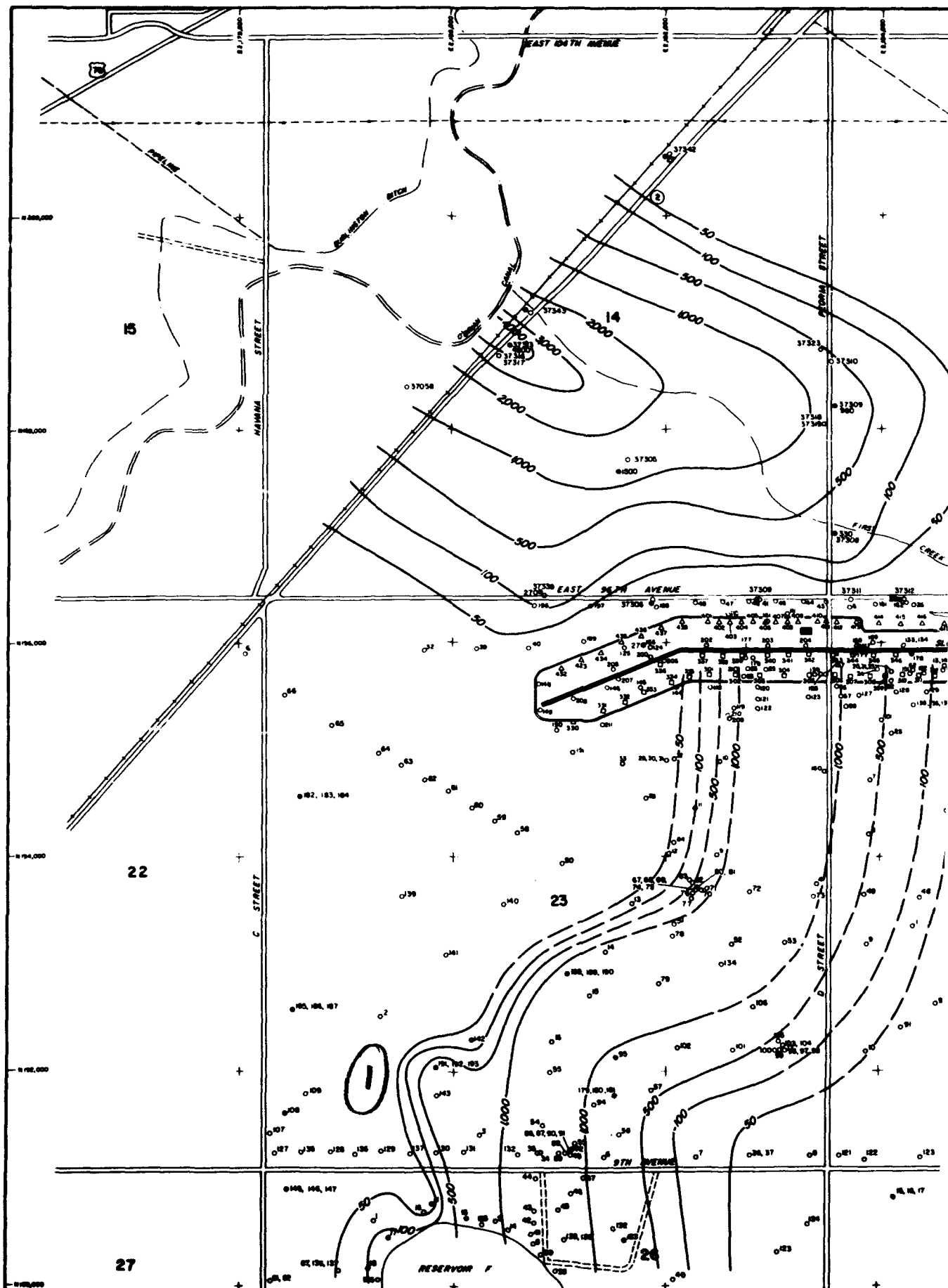
REVIEWED BY:
S.W. THOMPSON

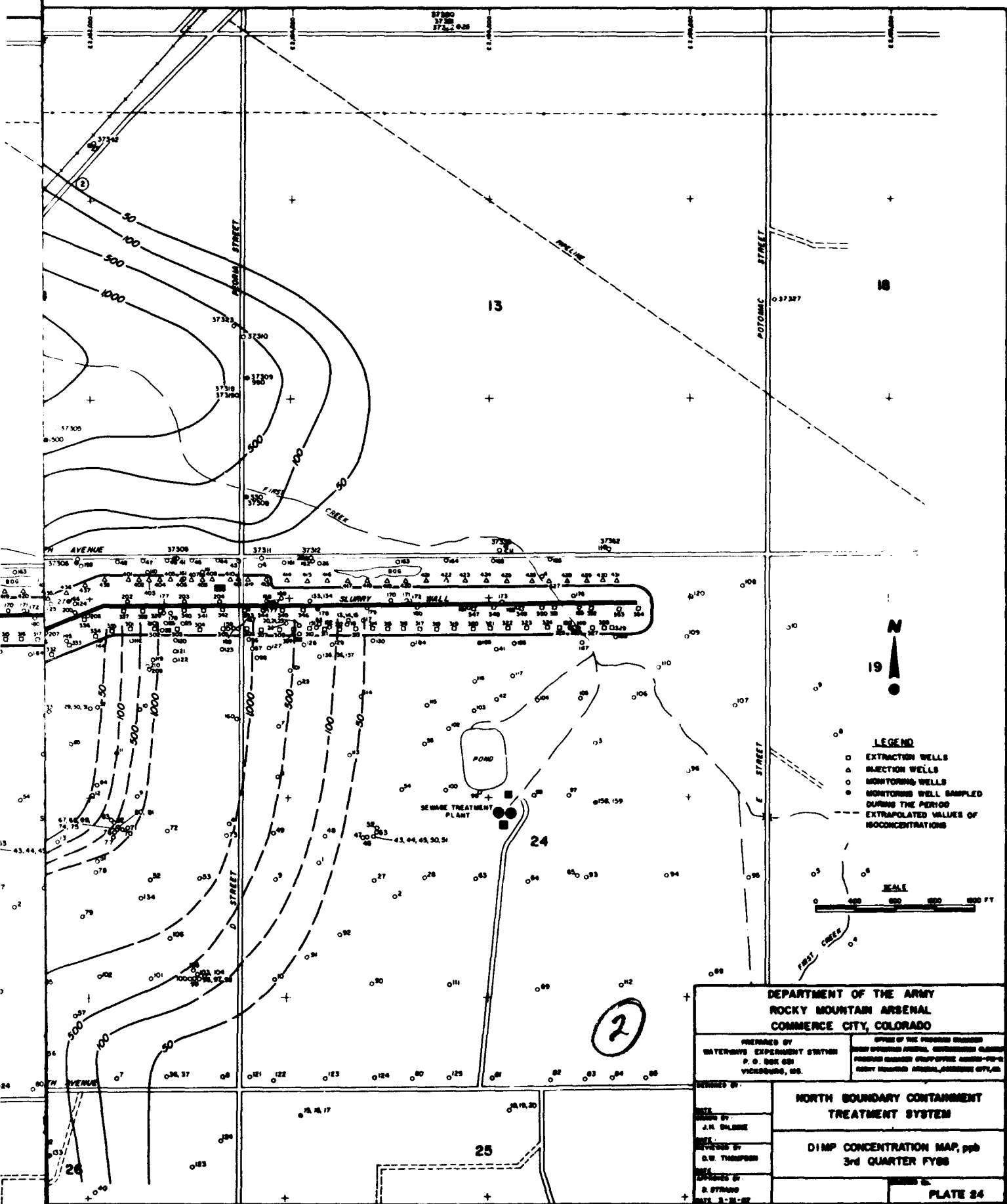
DATE:
APPROVED BY:
S. STRANG
DATE: 3-11-67

**NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM**

**DIMP CONCENTRATION MAP, ppb
2nd QUARTER FY 66**

PLATE 23





DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

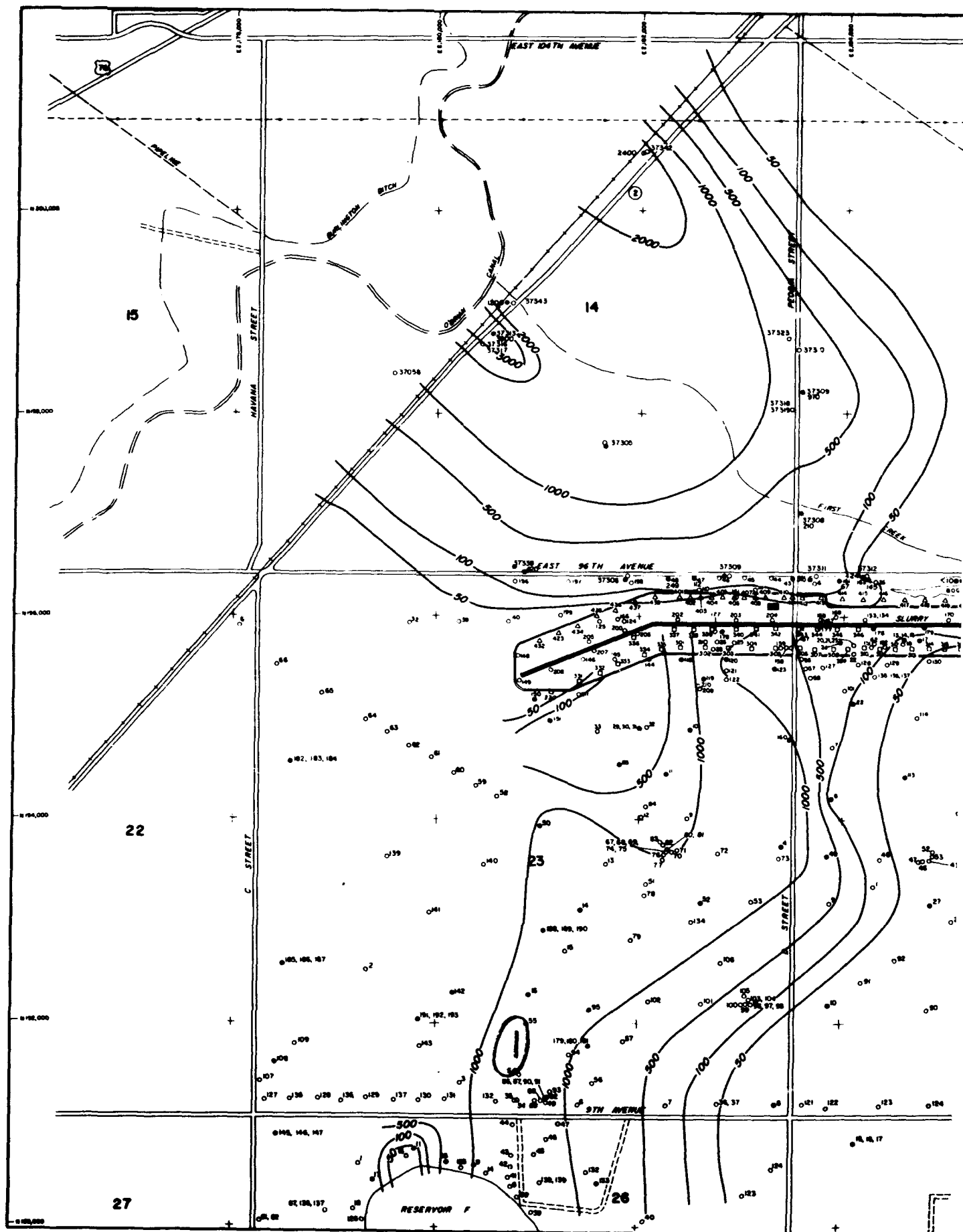
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 681
VICKSBURG, MS.

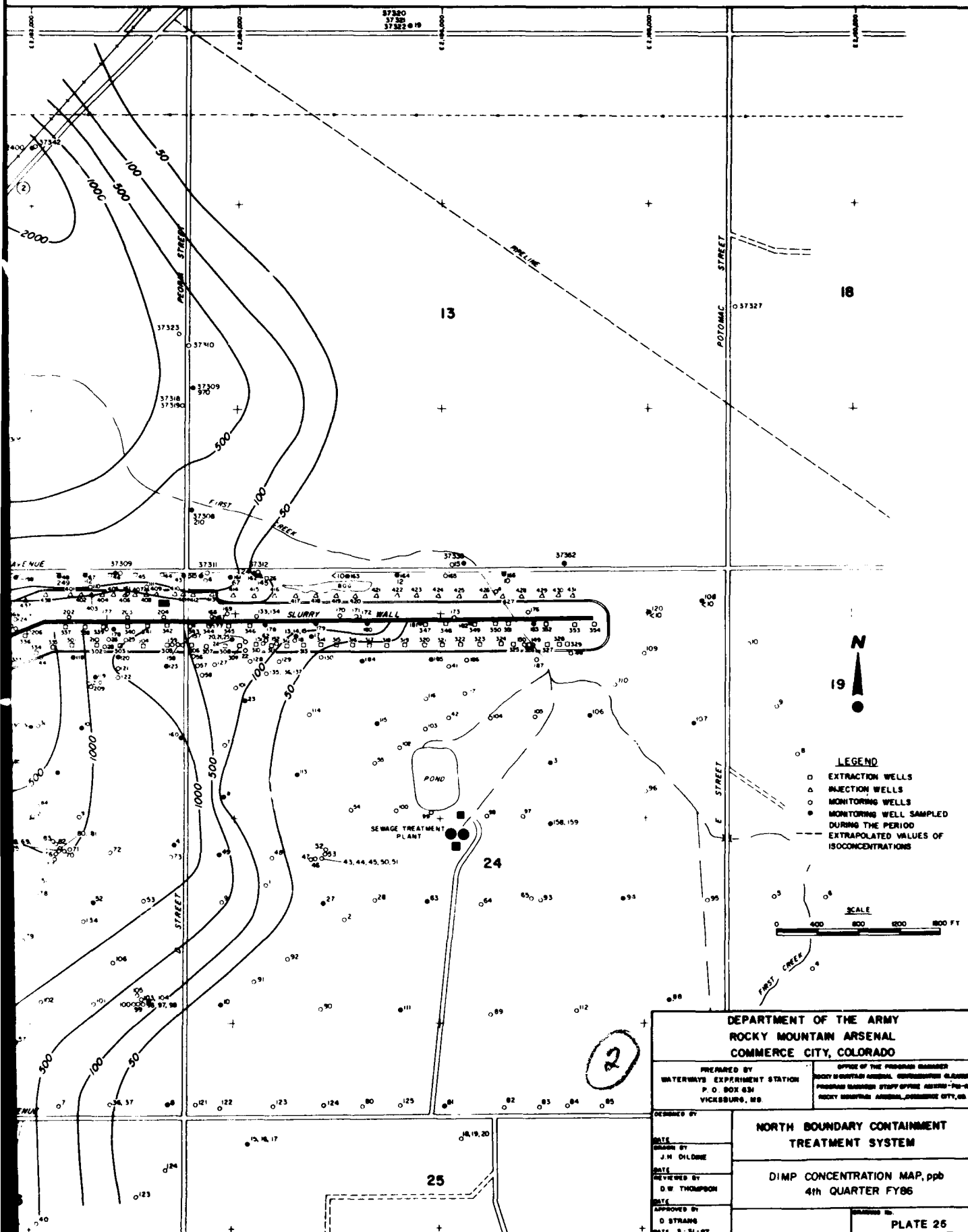
OFFICE OF THE DISTRICT ENGINEER
FOR THE ARSENAL, COMMERCE CITY, COLORADO
FORWARDED UNDER SUPPORTING ORDER-10-1
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

DIMP CONCENTRATION MAP, ppb
3rd QUARTER FY68

PLATE 24





DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 634
VICKSBURG, MS

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE, ARSENAL - P.O. BOX 634
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY

DATE

DESIGNED BY

DATE

DESIGNED BY

DATE

DESIGNED BY

DATE

DESIGNED BY

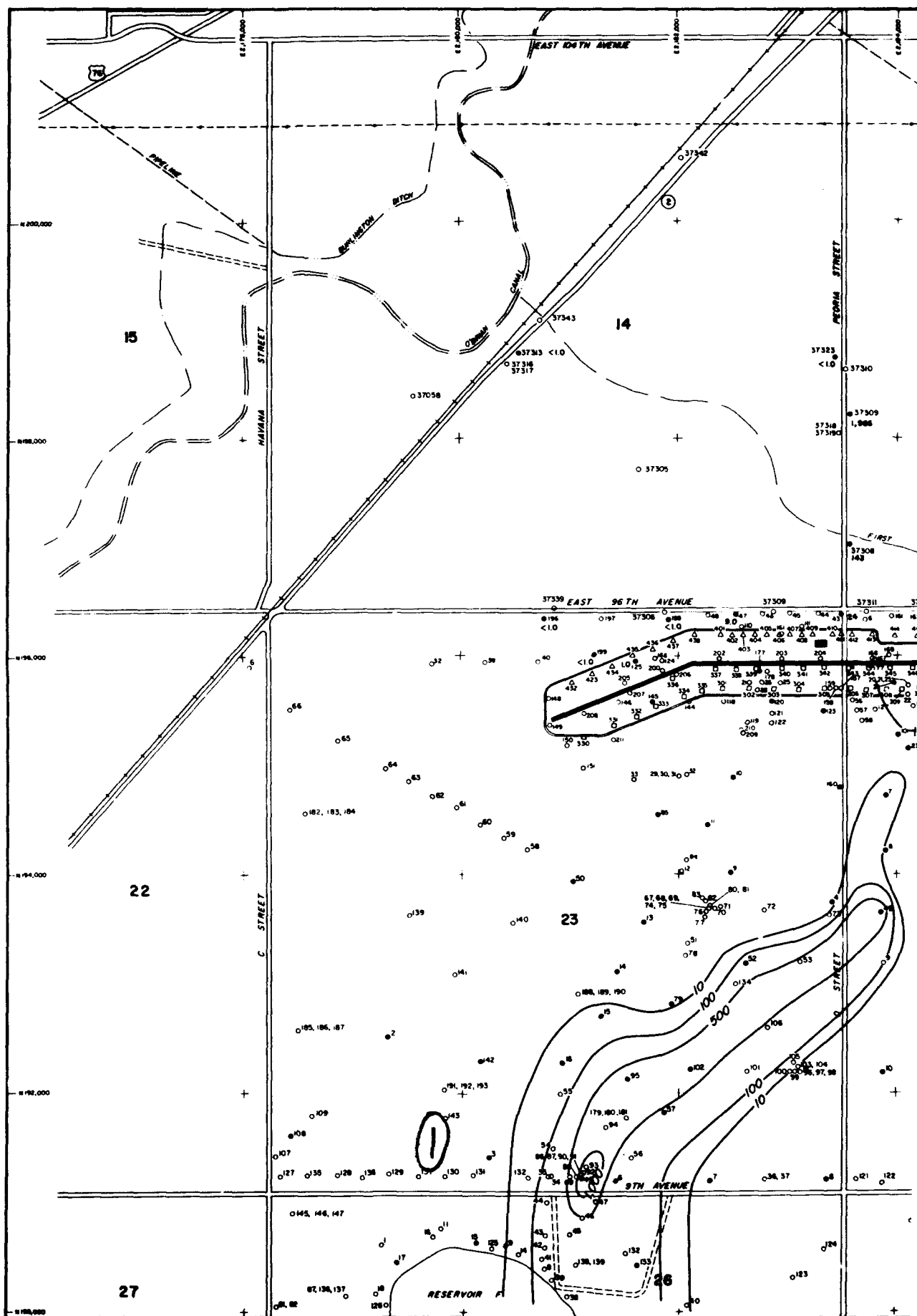
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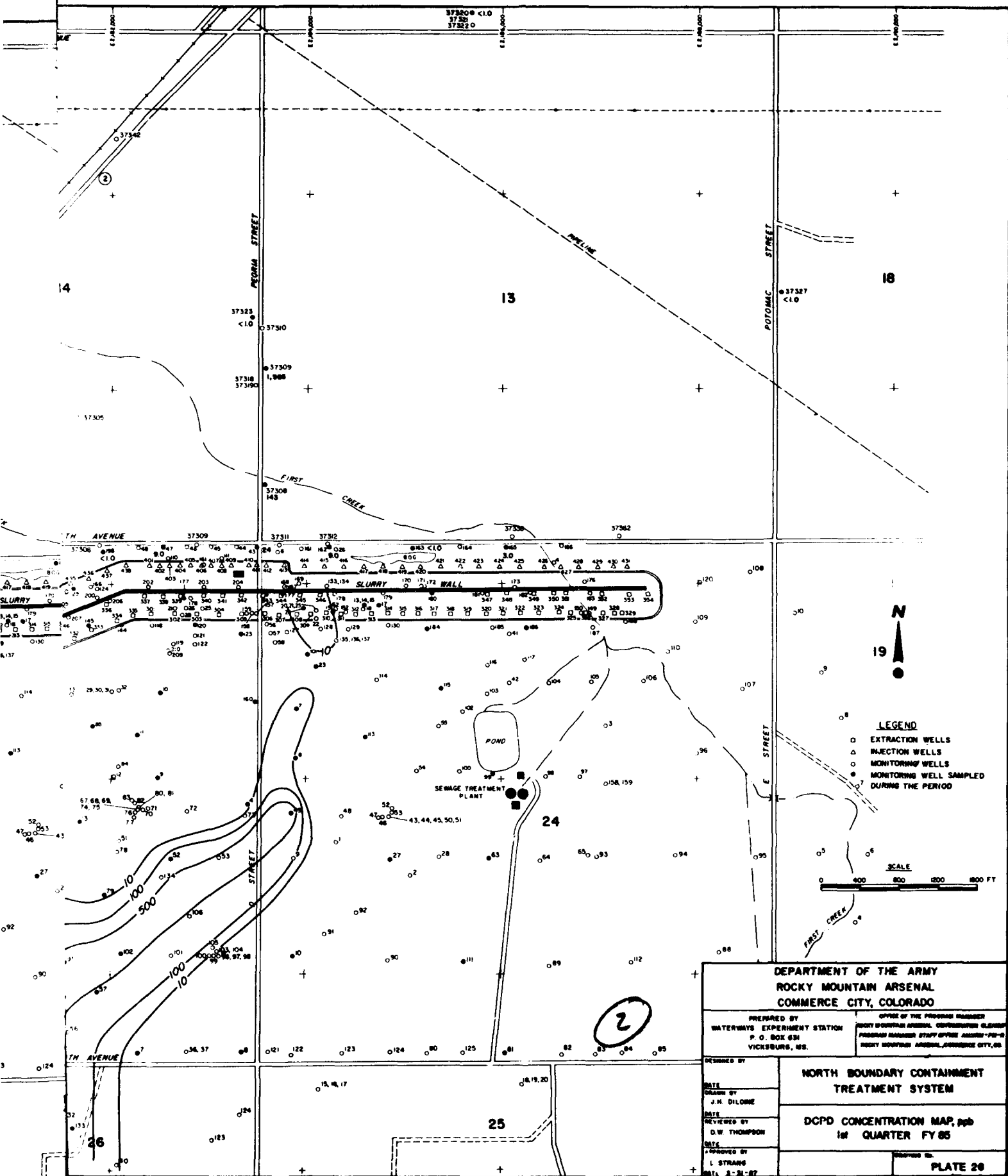
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

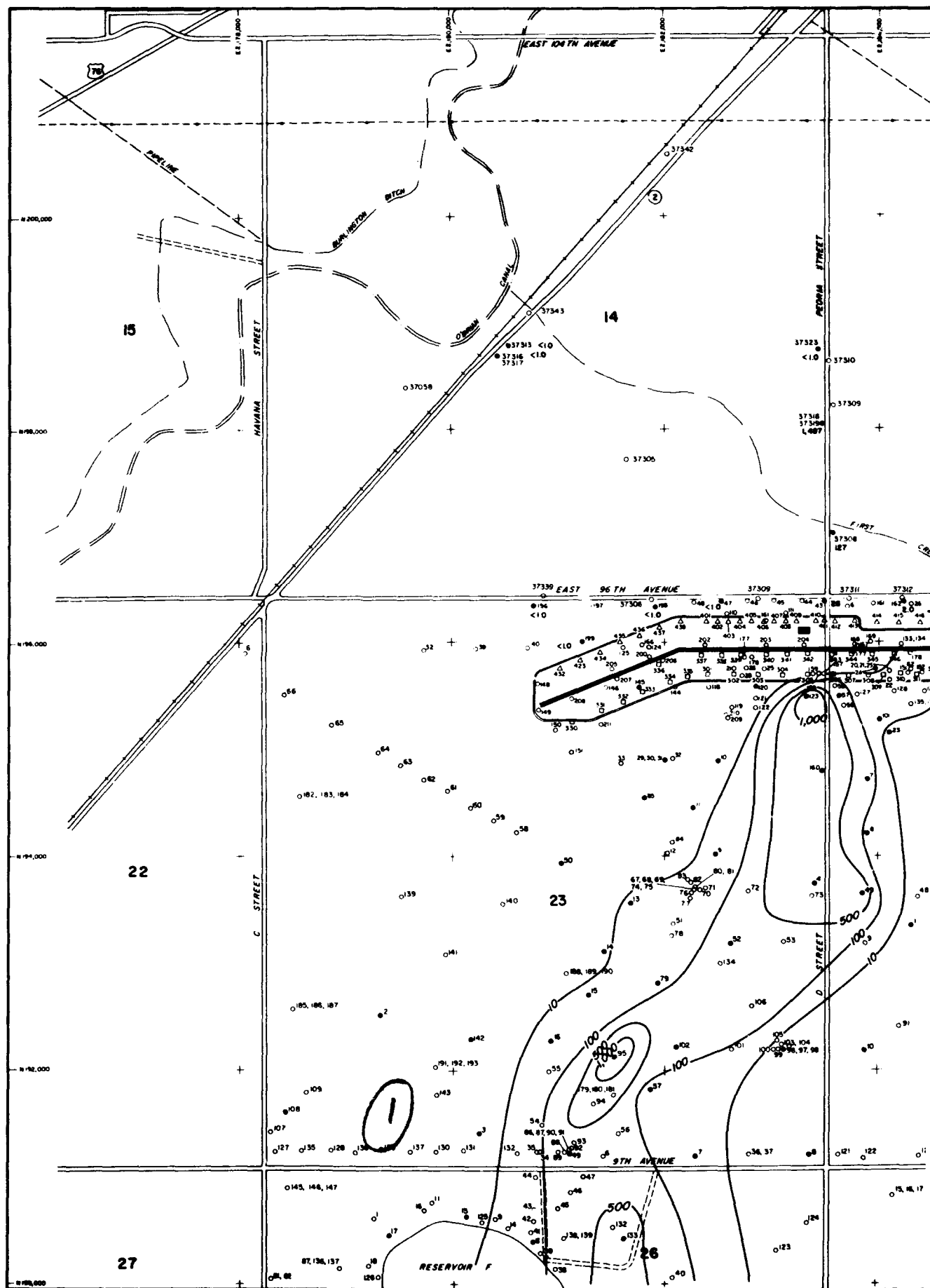
DIMP CONCENTRATION MAP, ppb
4th QUARTER FY86

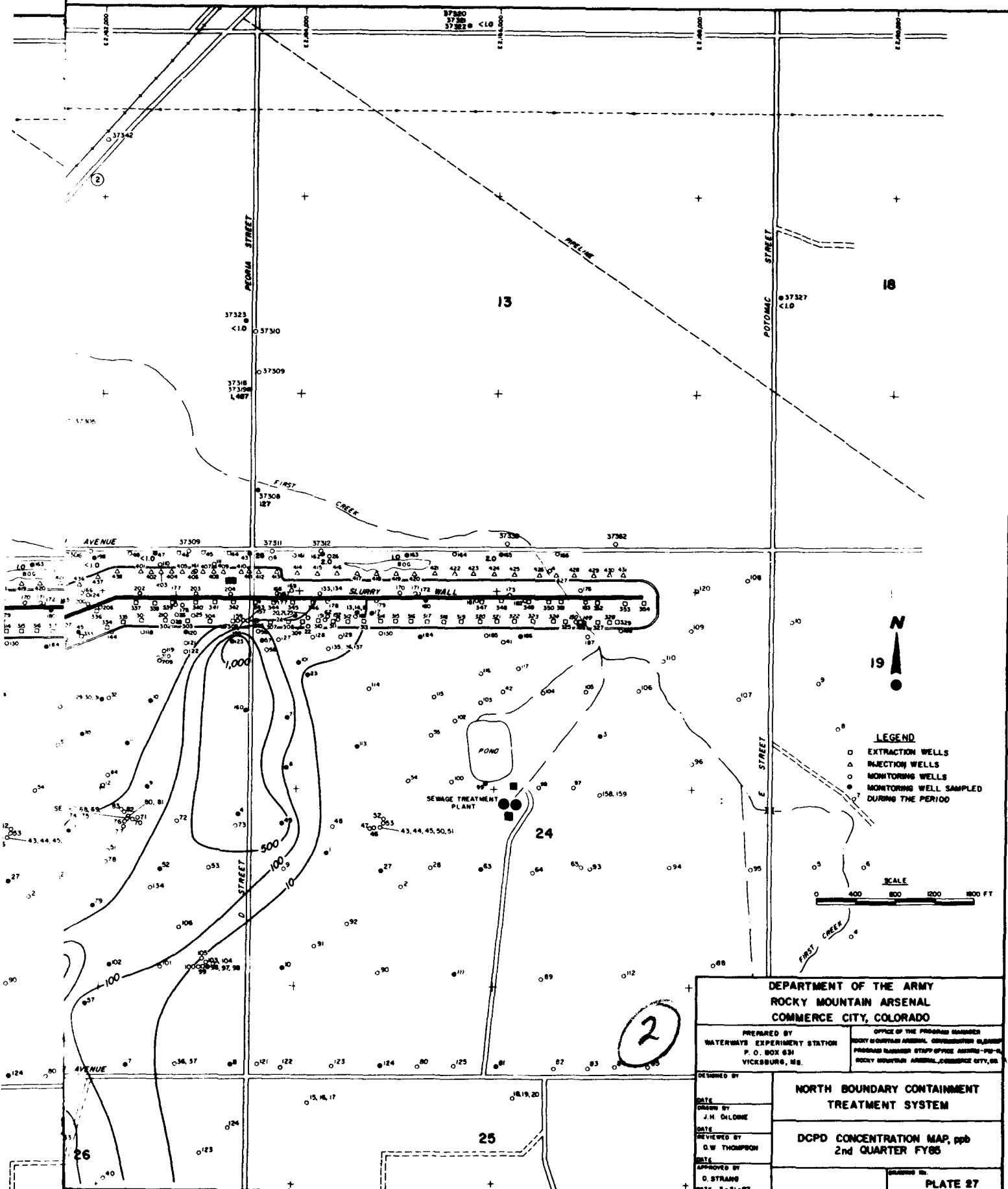
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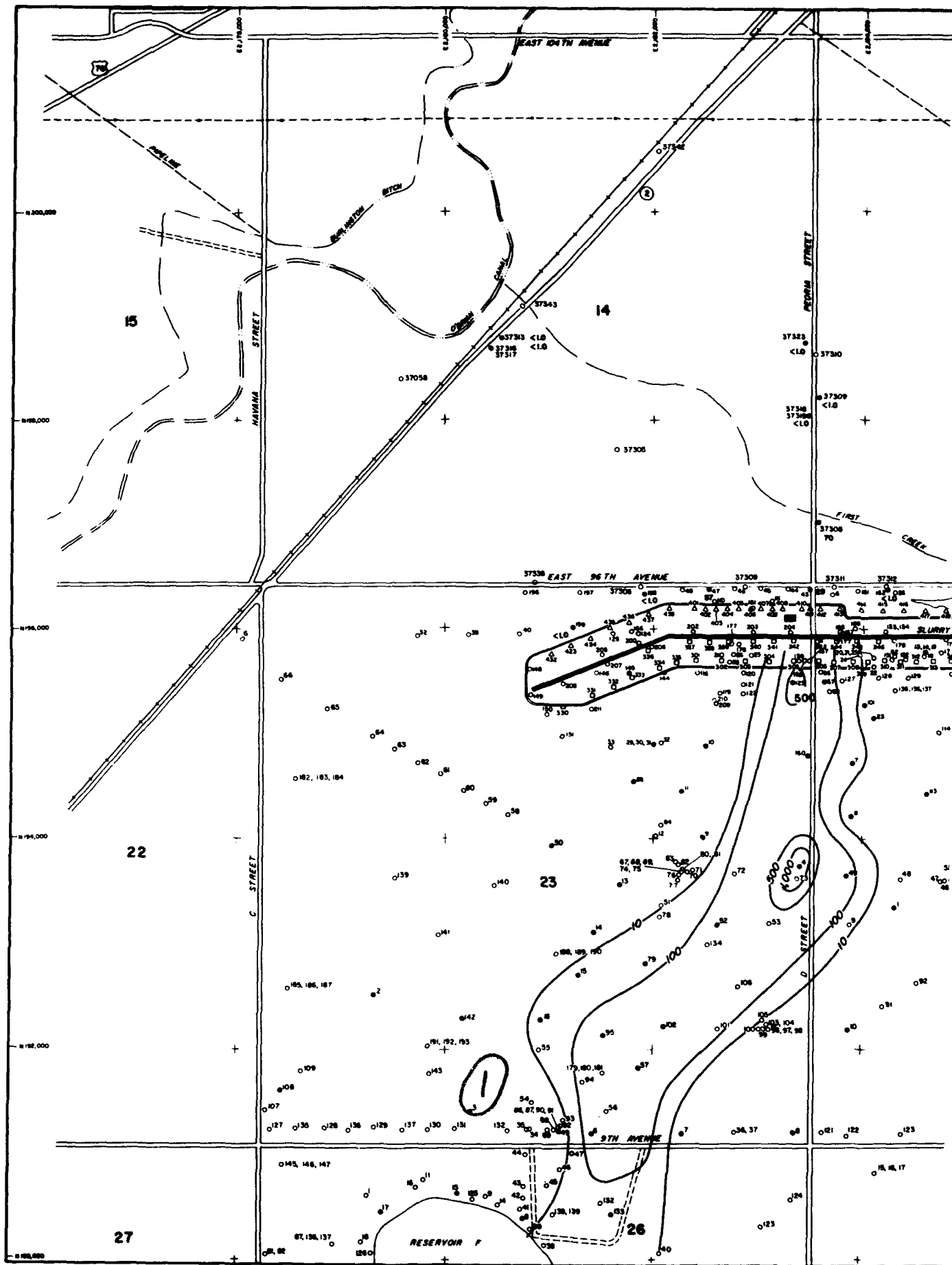
PLATE 25

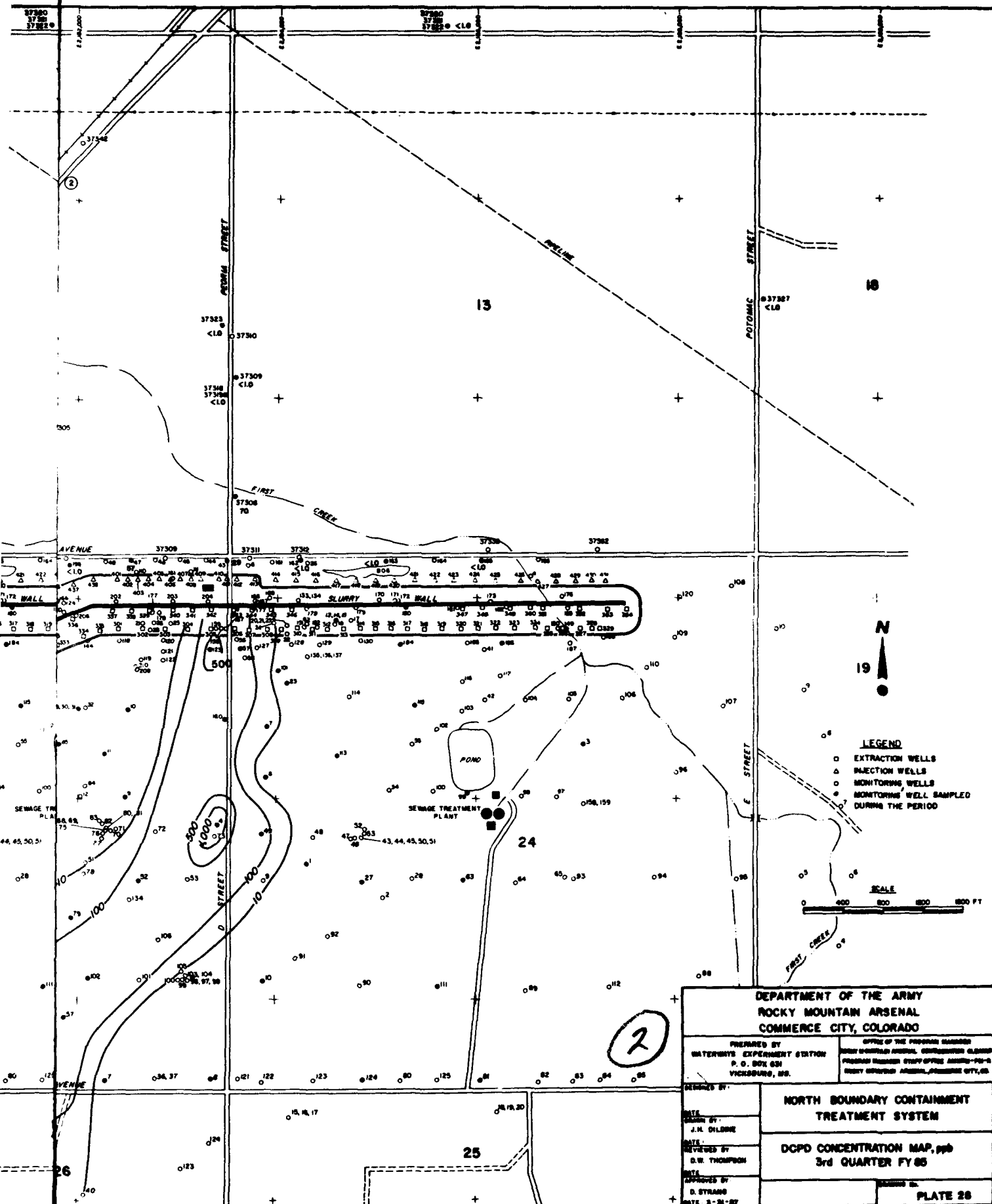


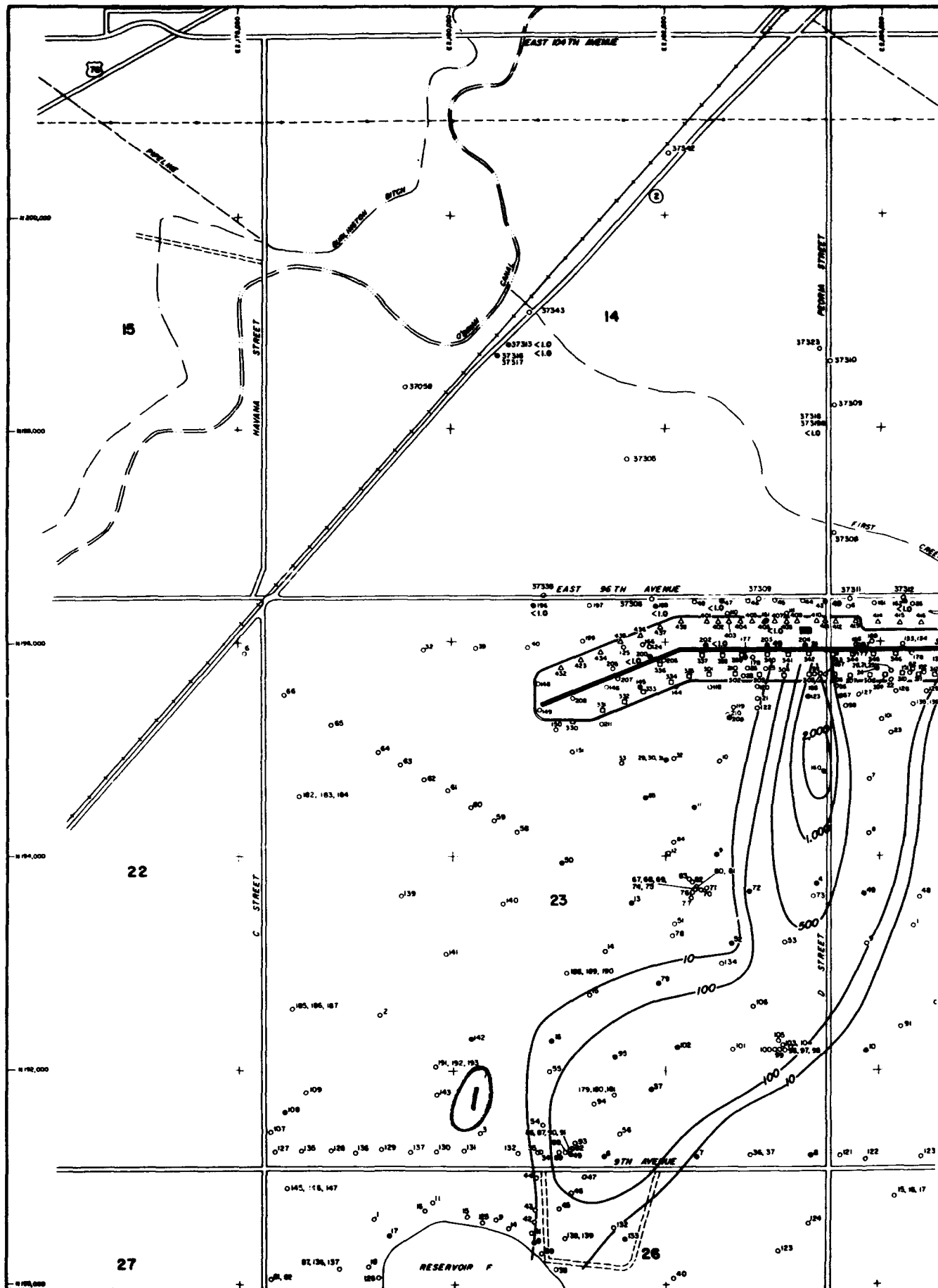


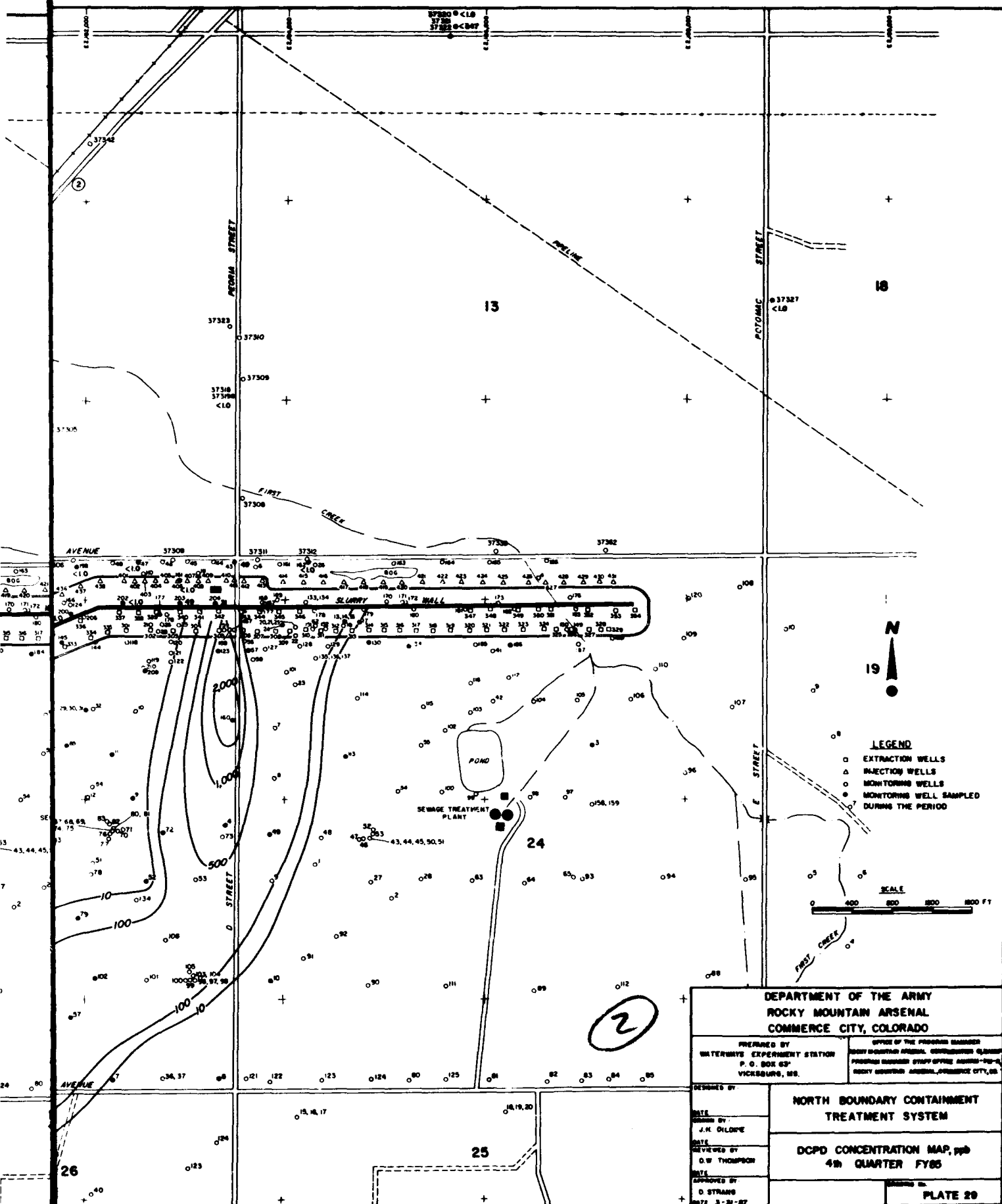


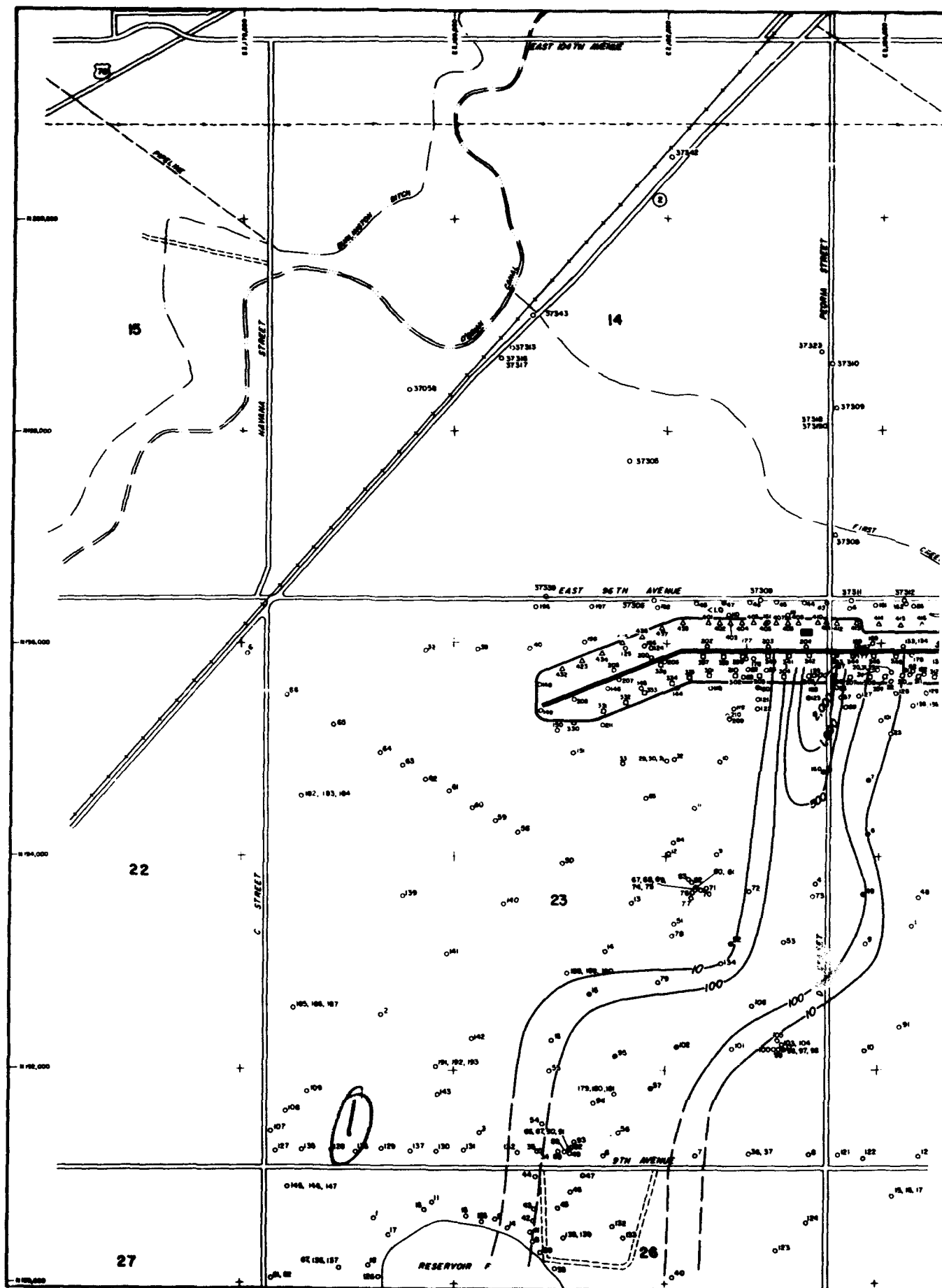


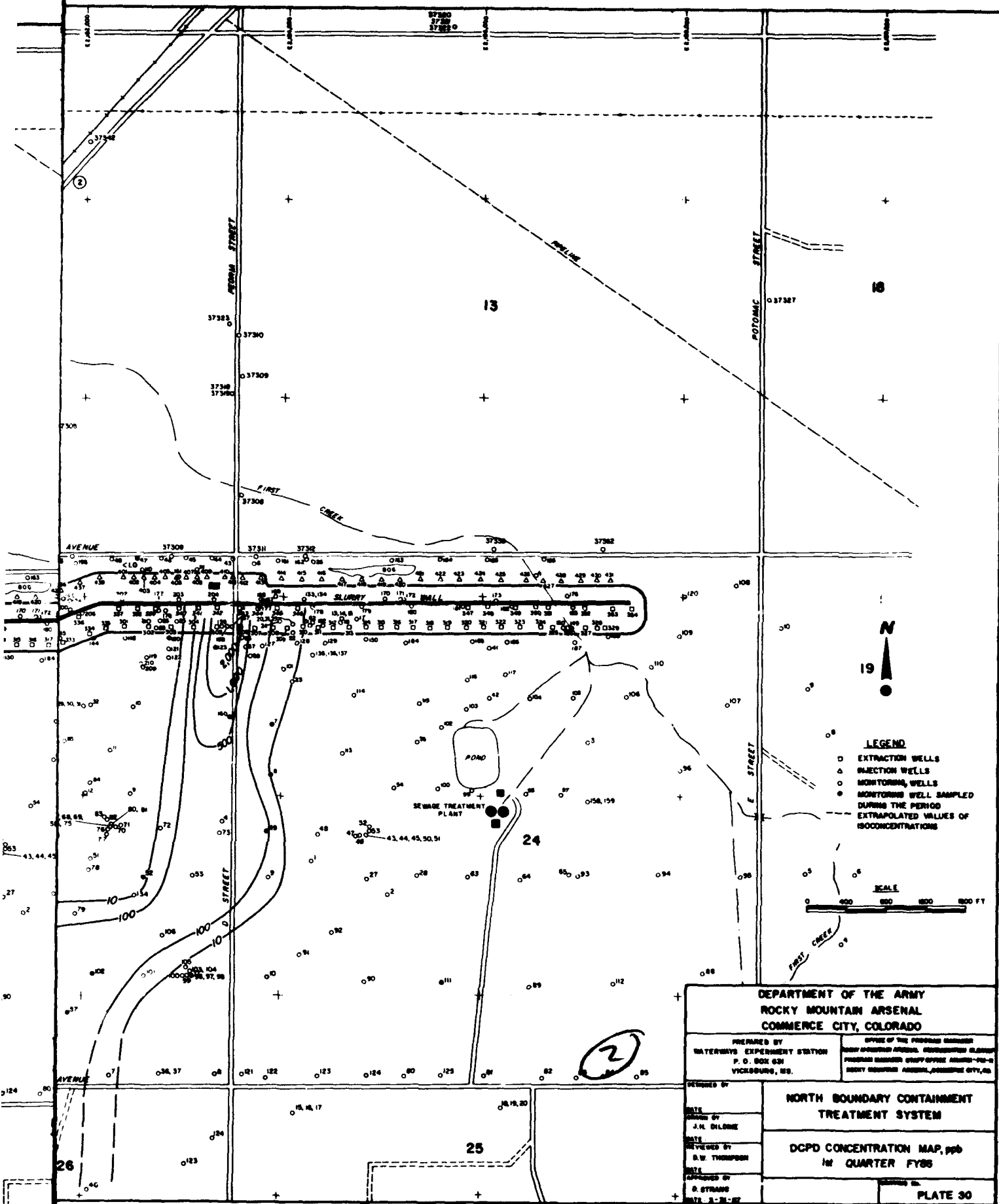


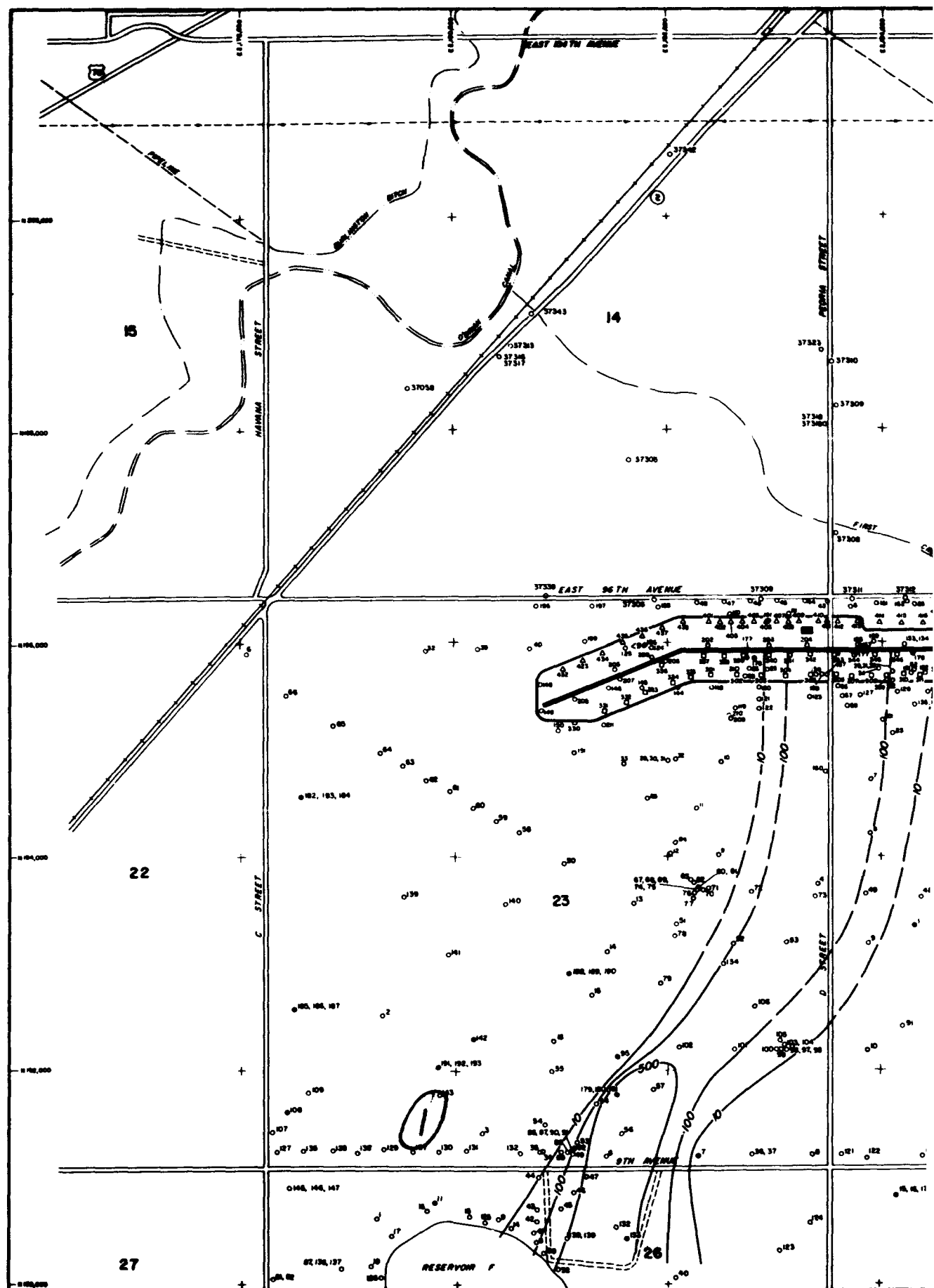


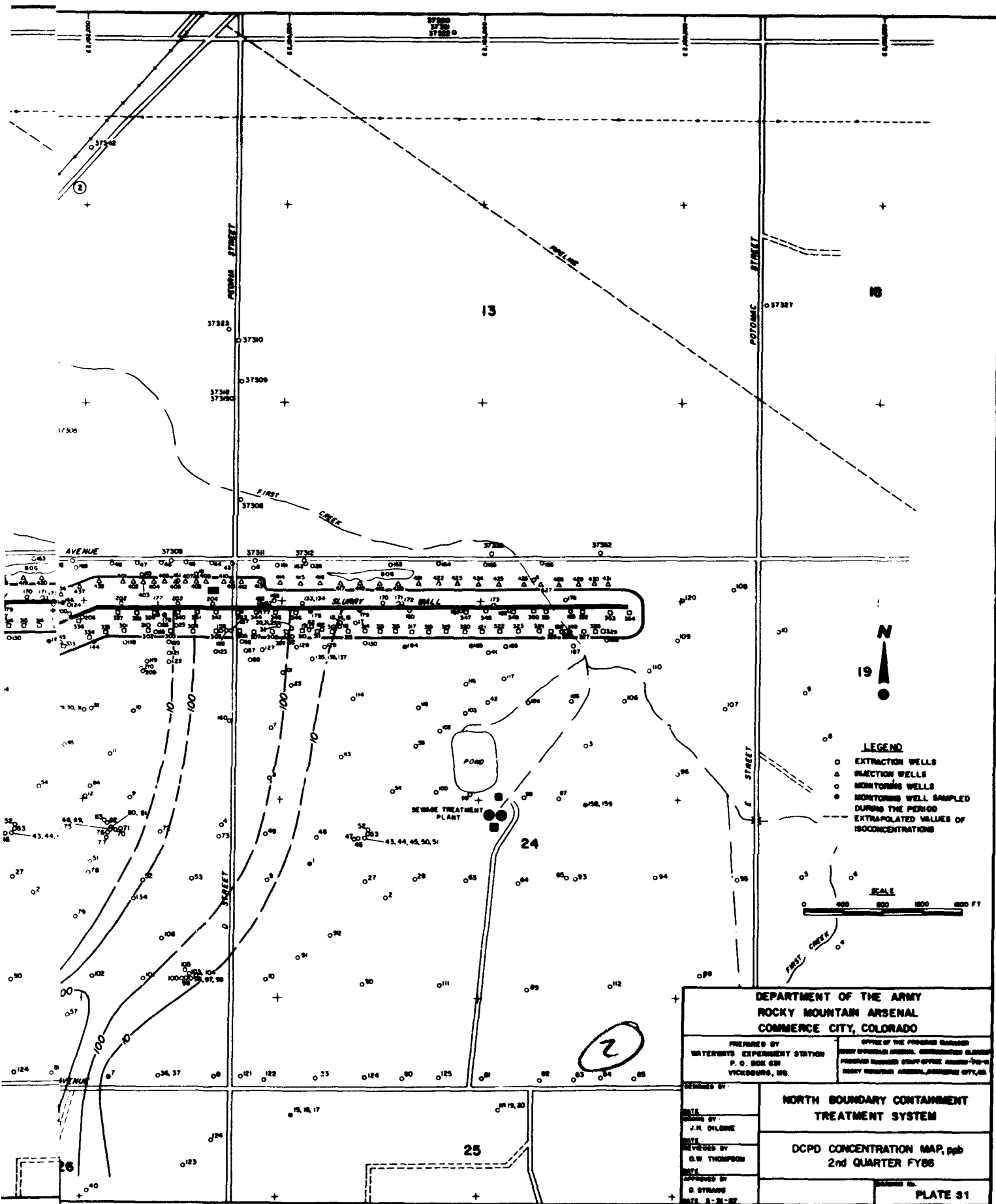












**DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO**

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROJECT ENGINEER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
FOR THE ARMY ENGINEERING CENTER, VICKSBURG, MS.

DESIGNED BY

DATE

DESIGNED BY

J. H. OHLONE

DATE

REVIEWED BY

D. W. THOMPSON

DATE

APPROVED BY

D. STRANG

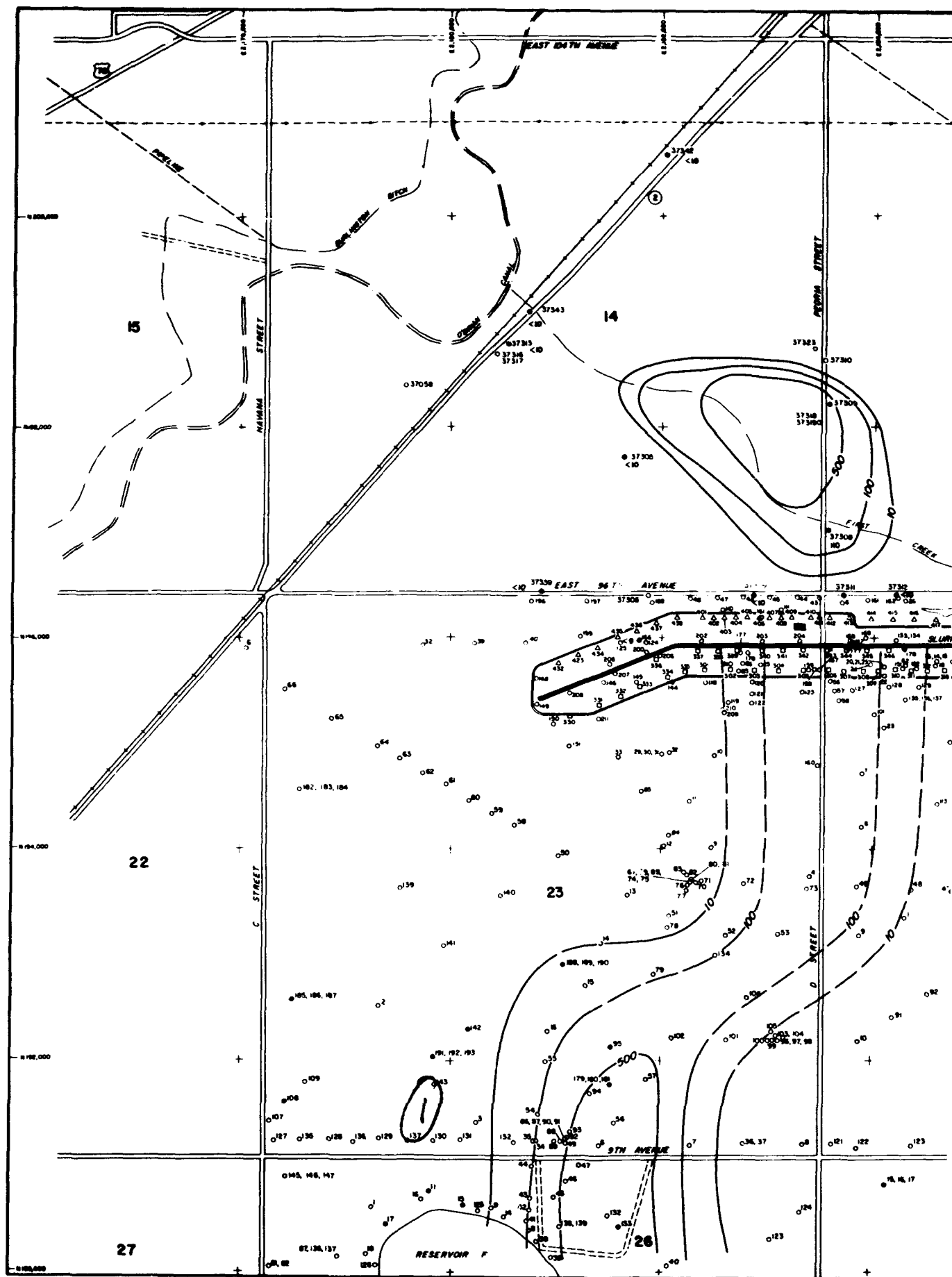
DATE 8-28-87

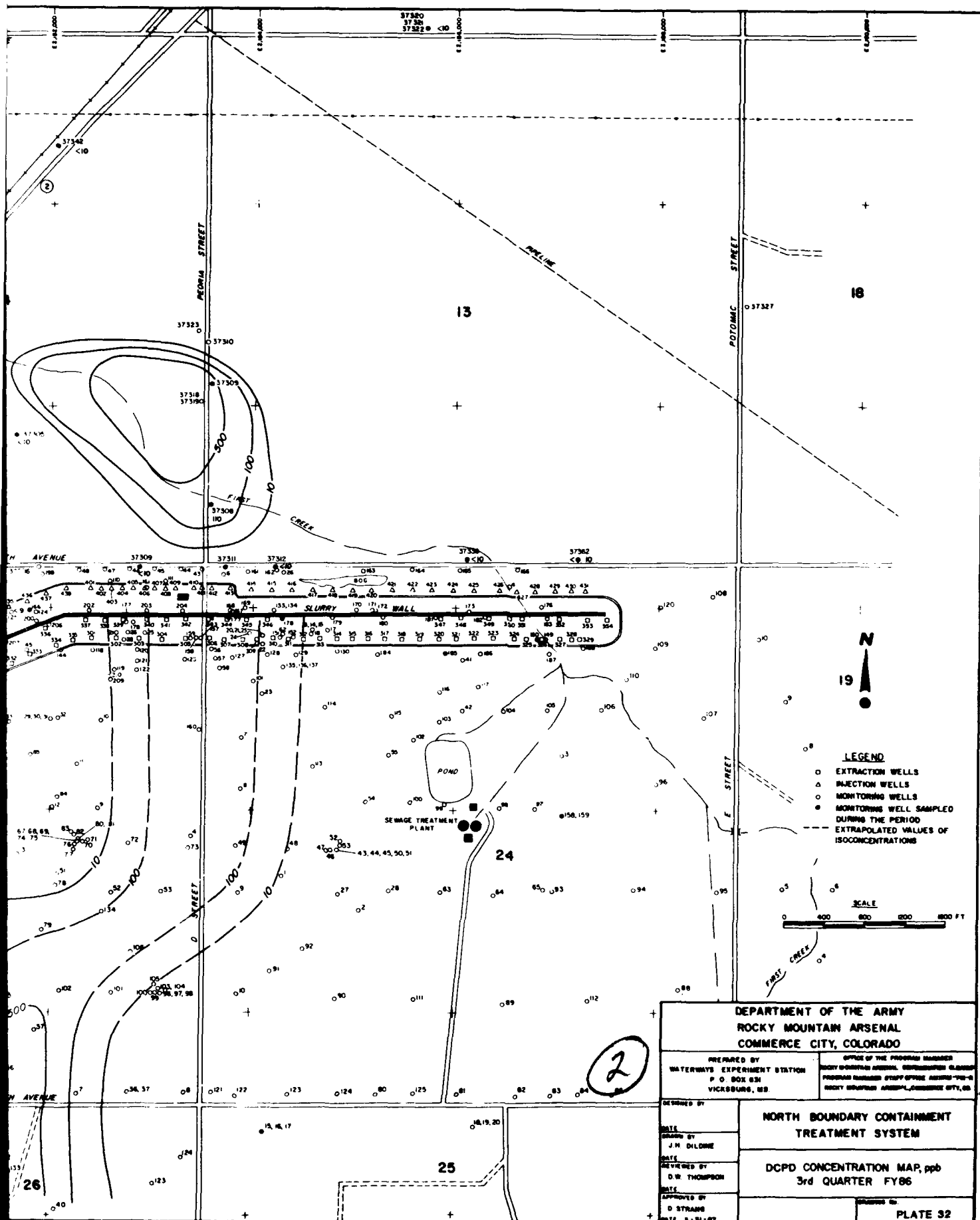
**NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM**

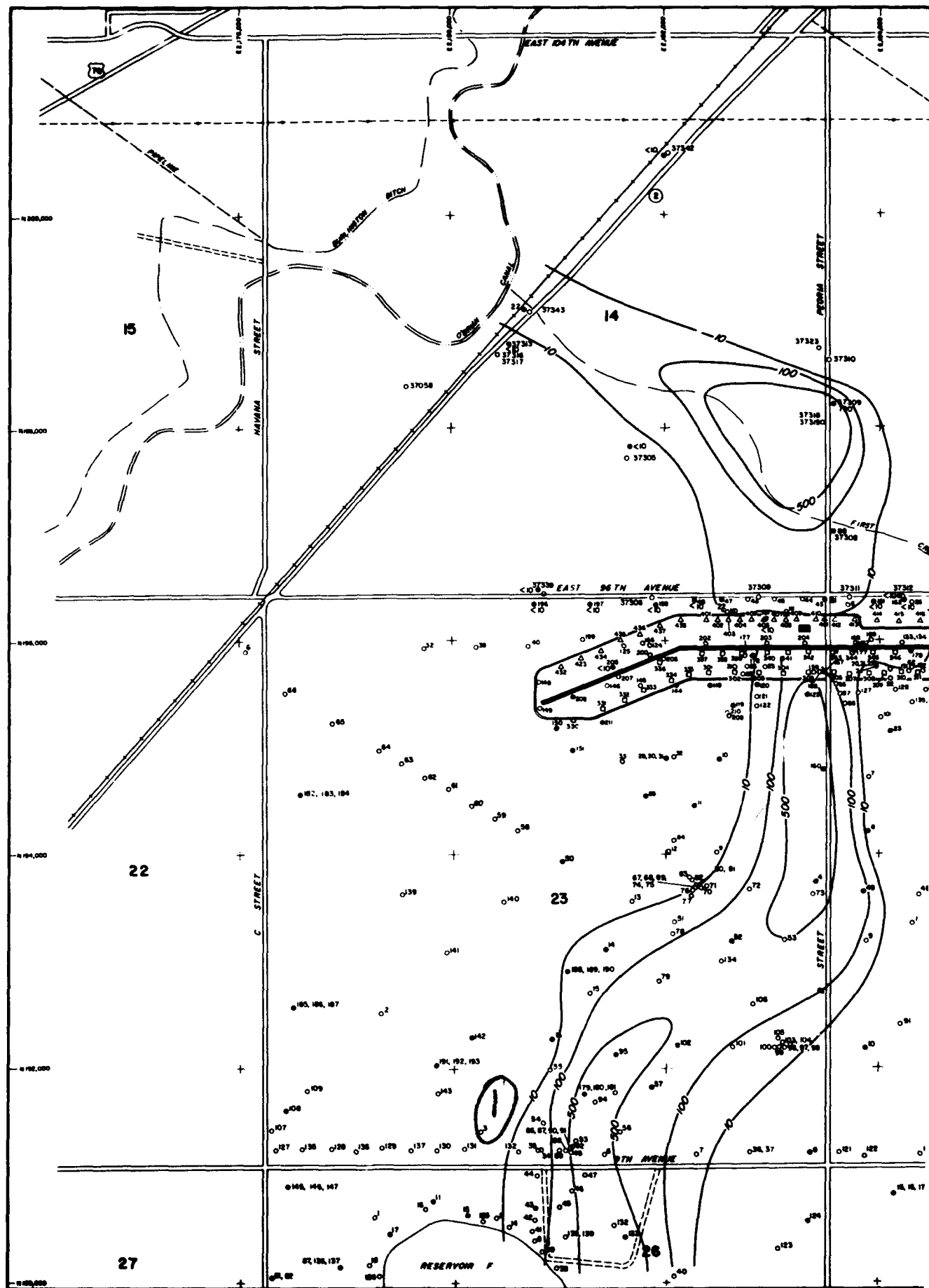
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2nd QUARTER FY88

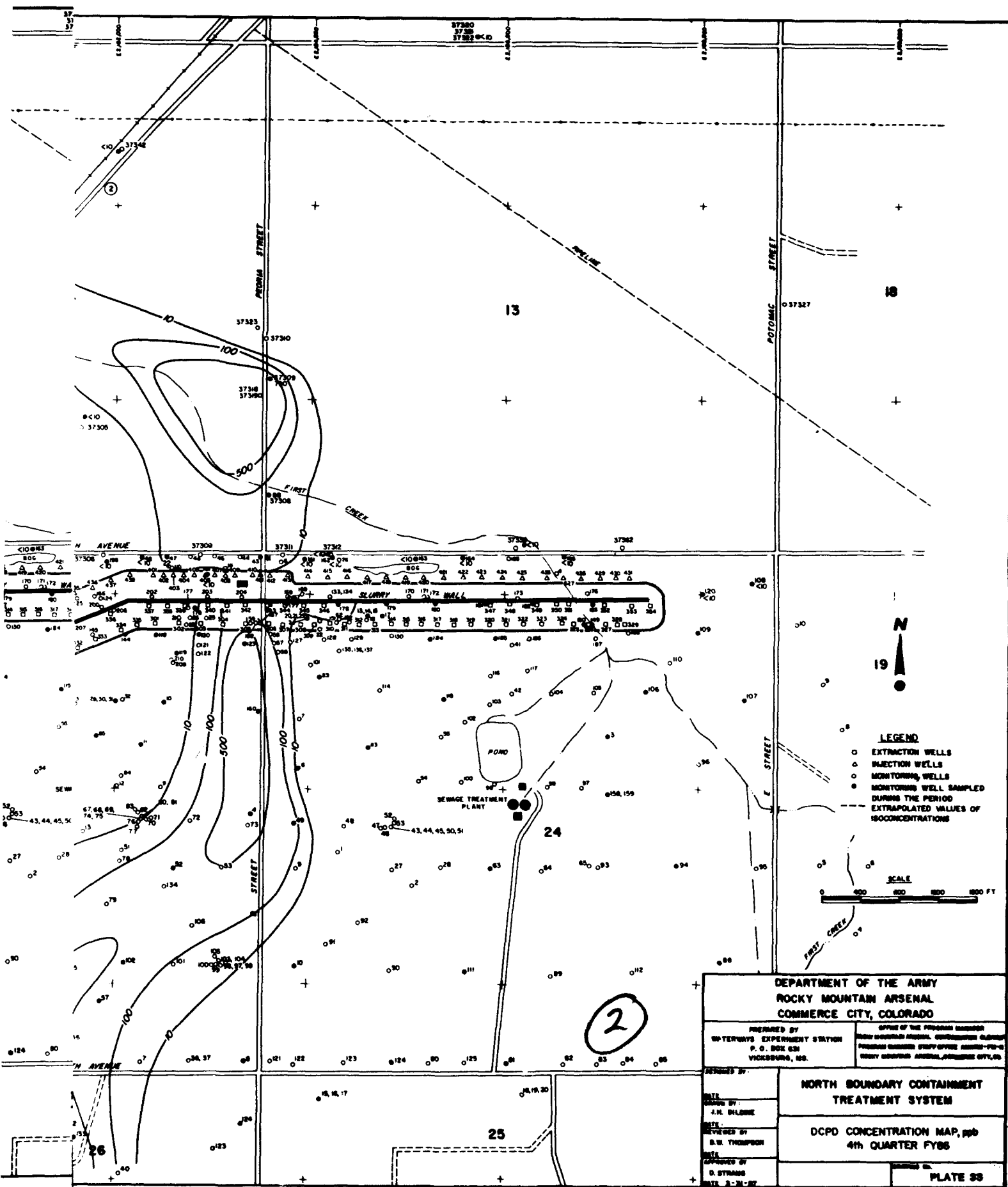
SCALE IN

PLATE 31









DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER (WATERWAYS) ARS-10-10
WATERWAYS ARSENAL, PROGRAM OFFICE

DESIGNED BY:

DATE:

REVIEWED BY:

DATE:

REVIEWED BY:

DATE:

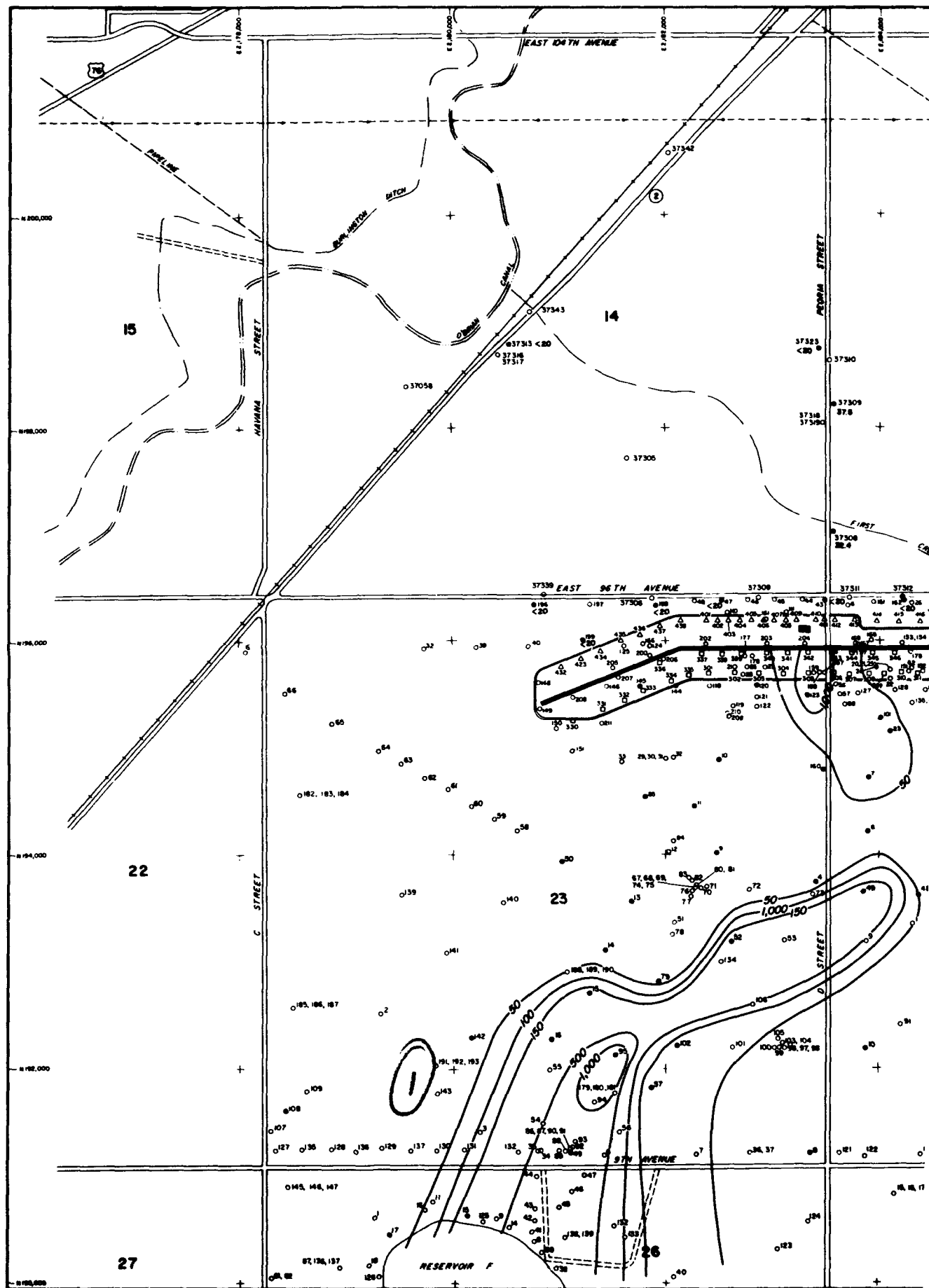
APPROVED BY:

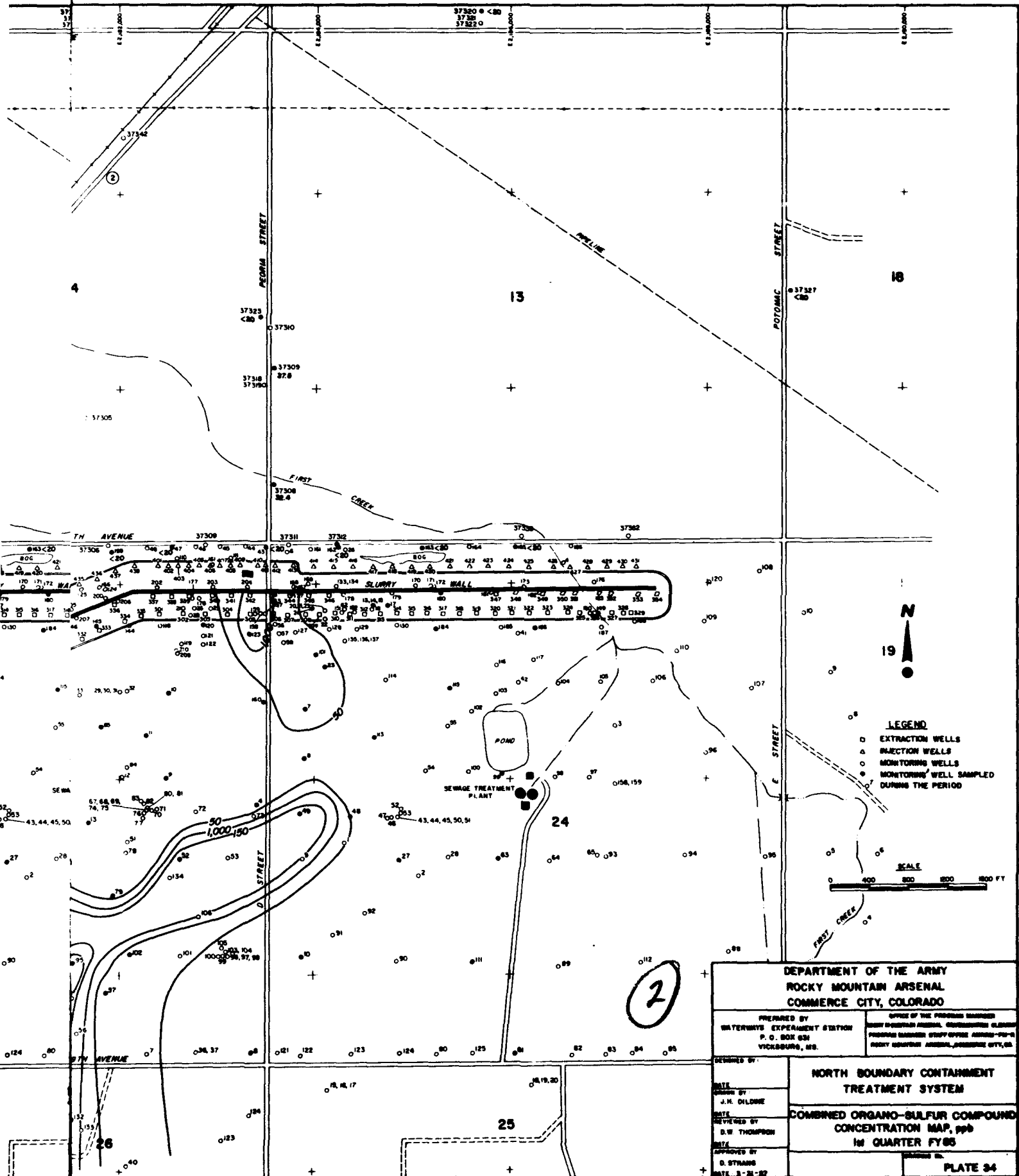
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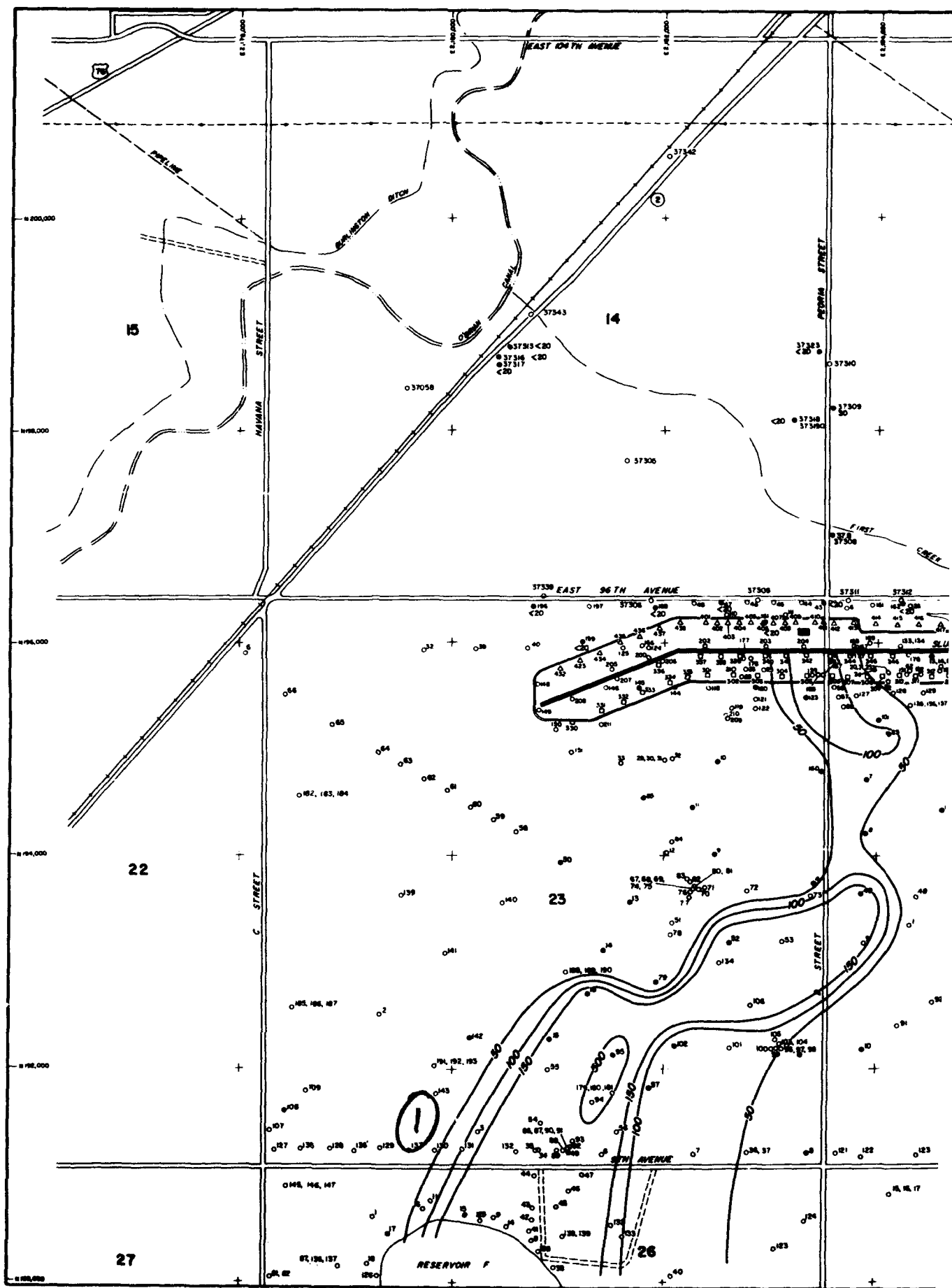
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

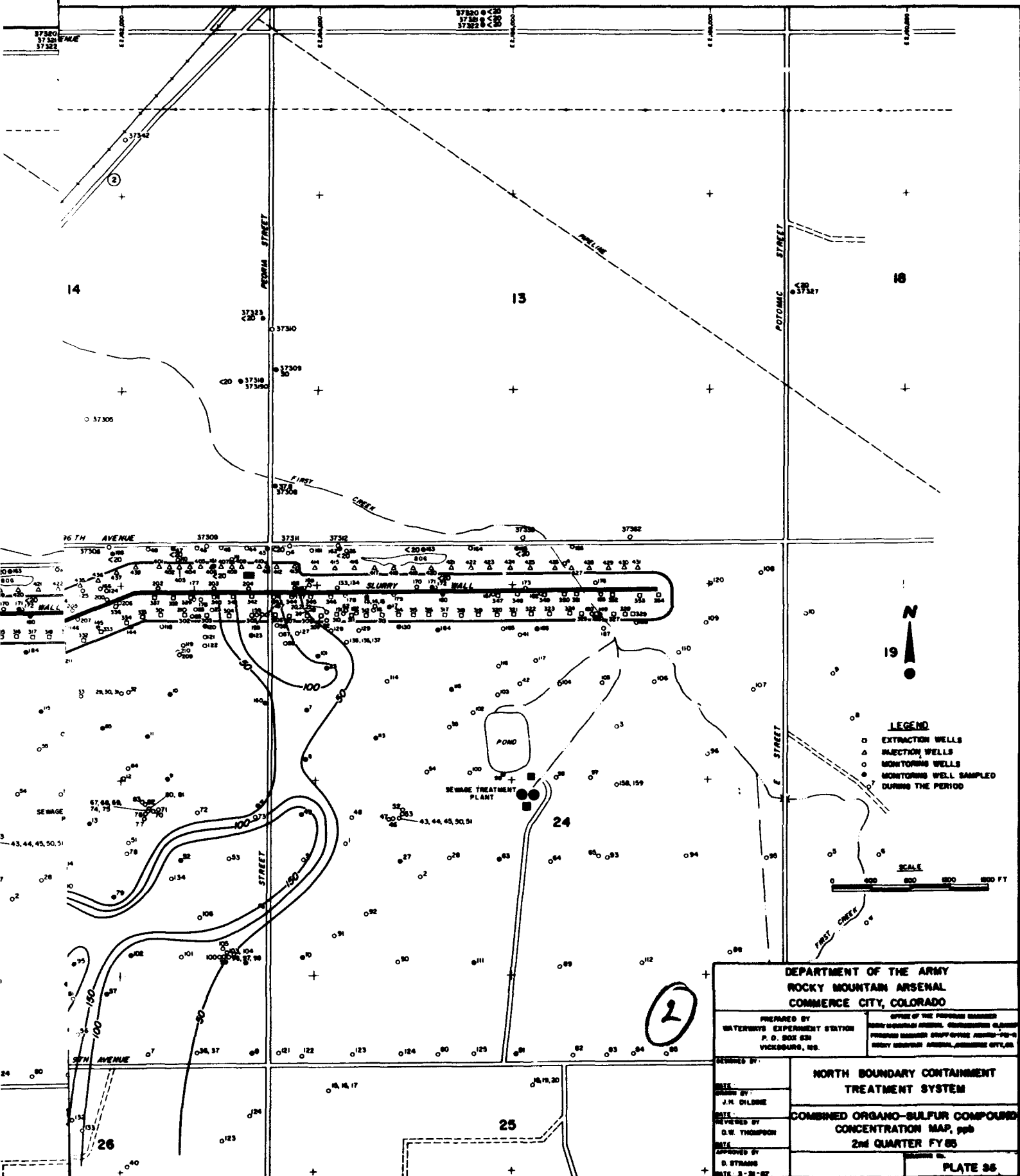
DCPD CONCENTRATION MAP, ppb
4th QUARTER FY86

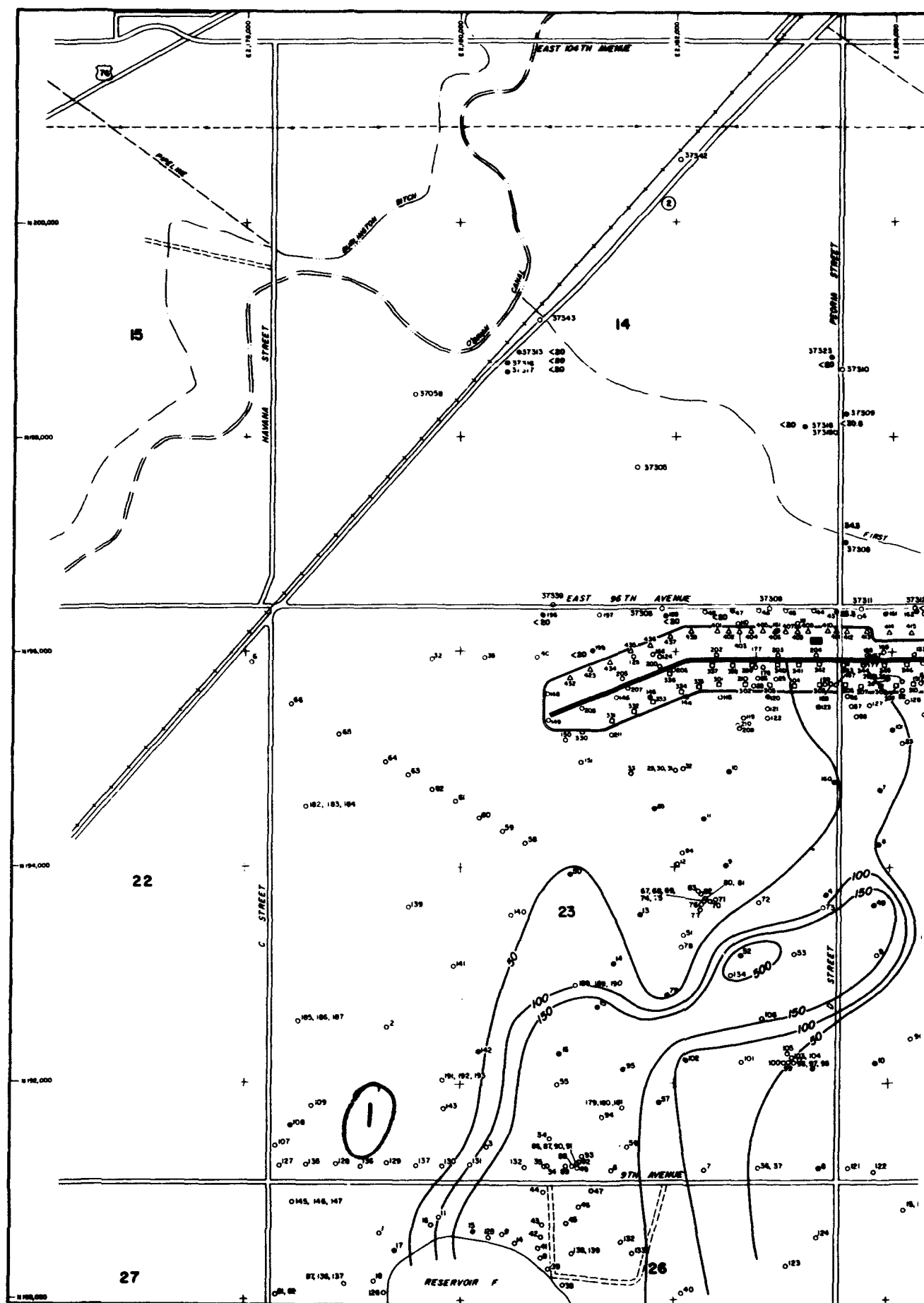
PLATE 33

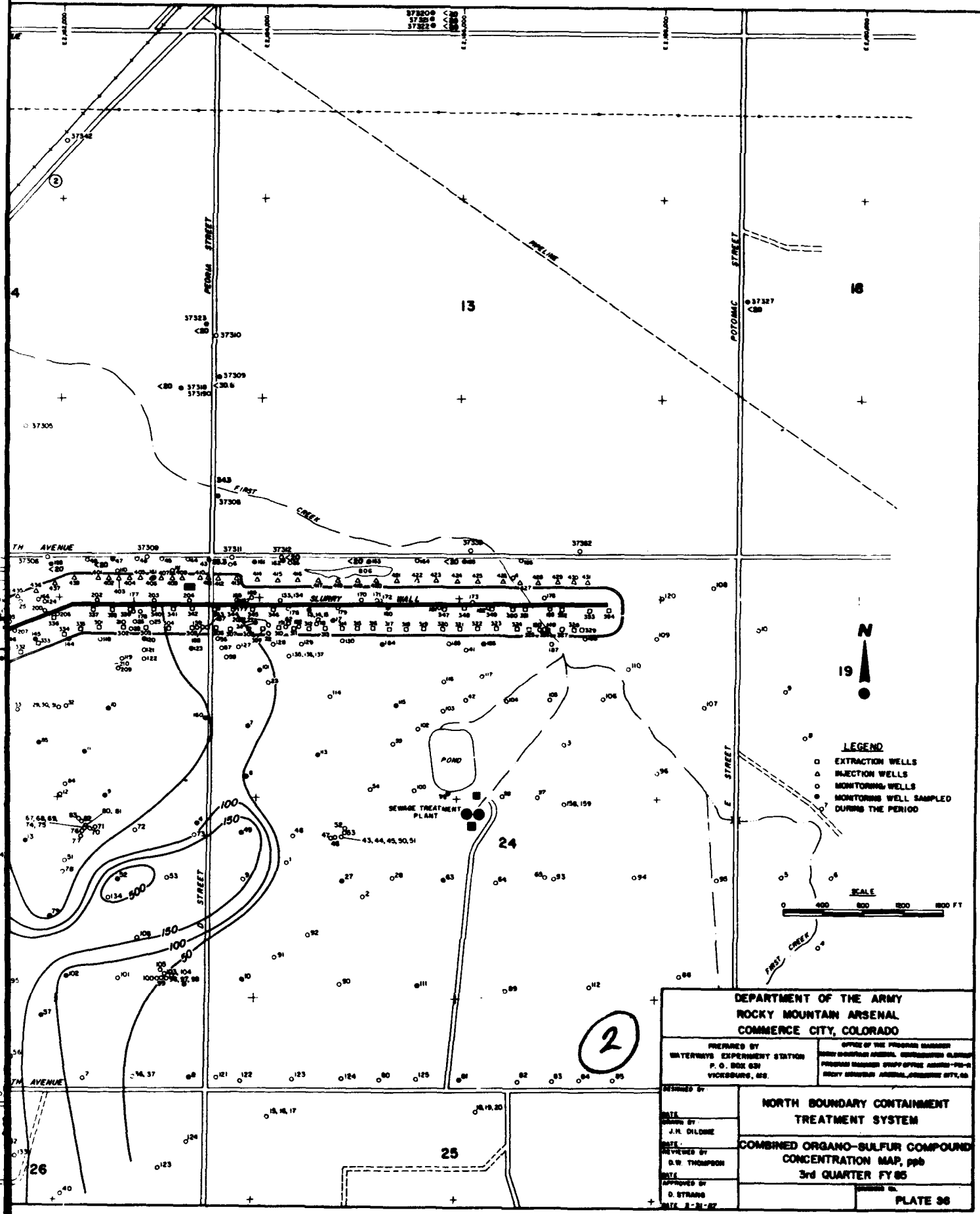








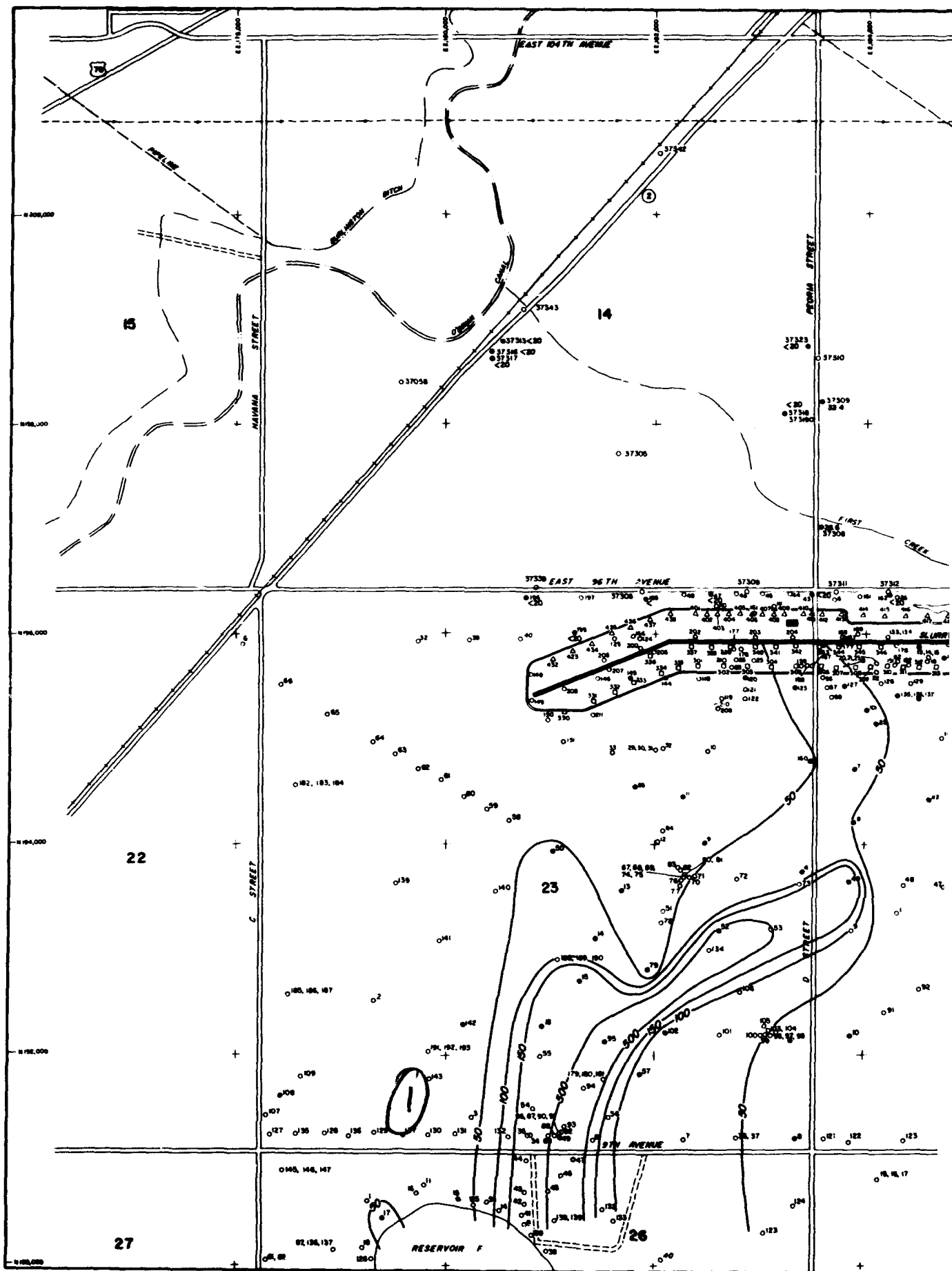


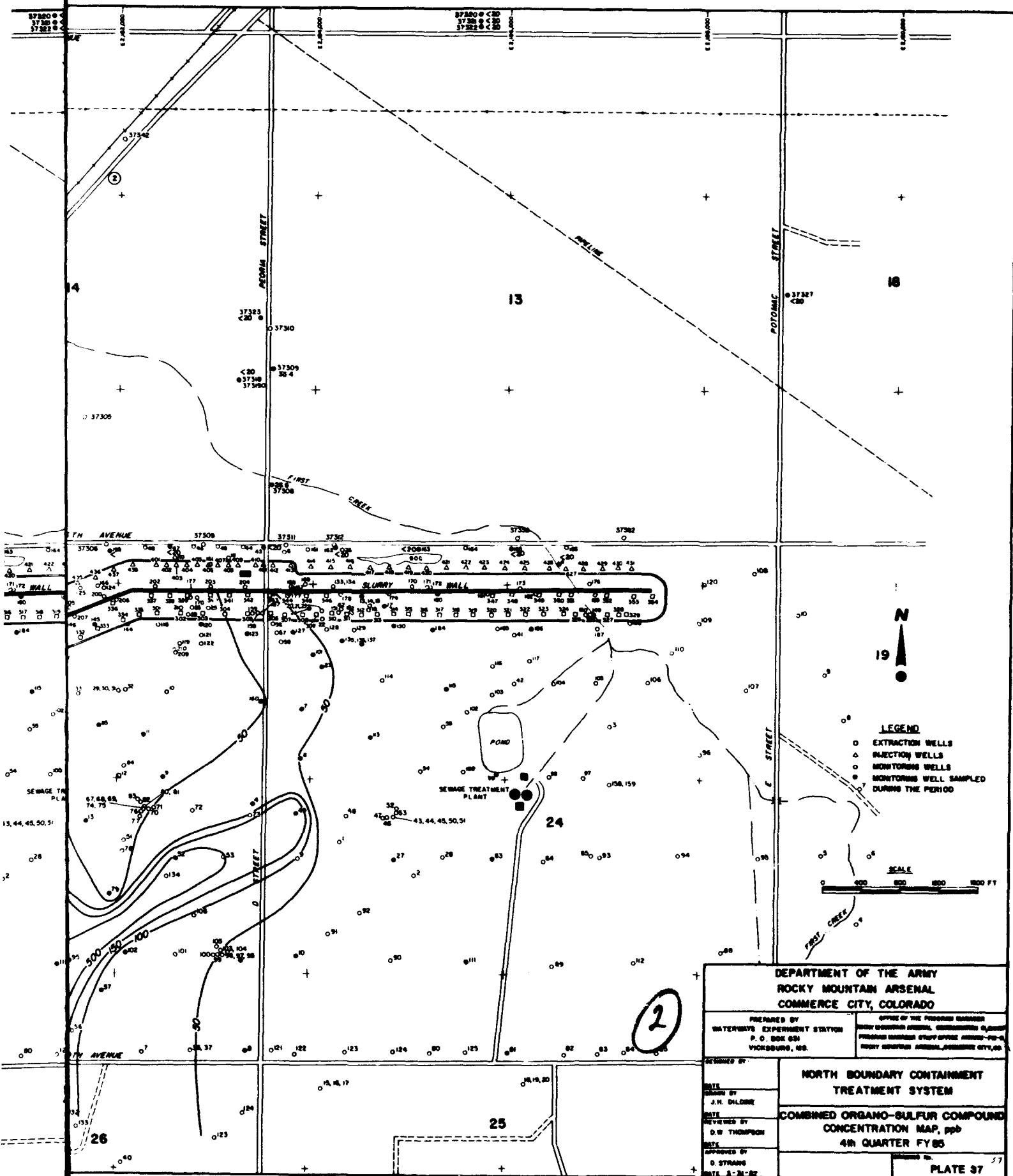


LEGEND
○ EXTRACTION WELLS
△ INJECTION WELLS
● MONITORING WELLS
● MONITORING WELL SAMPLED DURING THE PERIOD

SCALE
0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMENCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 VICKSBURG, MS	OFFICE OF THE PROGRAM MANAGER WATERWAYS EXPERIMENT STATION PROGRAM MANAGER STAFF OFFICE, ARS-10-1 ROCKY MOUNTAIN ARSENAL, COMMENCE CITY, CO
DESIGNED BY J. H. DILLON	NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM
REVIEWED BY D. W. THOMPSON	
APPROVED BY D. STRANG	COMBINED ORGANO-SULFUR COMPOUND CONCENTRATION MAP, ppb 3rd QUARTER FY85
DATE 8-31-87	
PLATE 36	





DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 601
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
FEDERAL BUREAU OF INVESTIGATION
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO

DESIGNED BY

DATE

REVIEWED BY

DATE

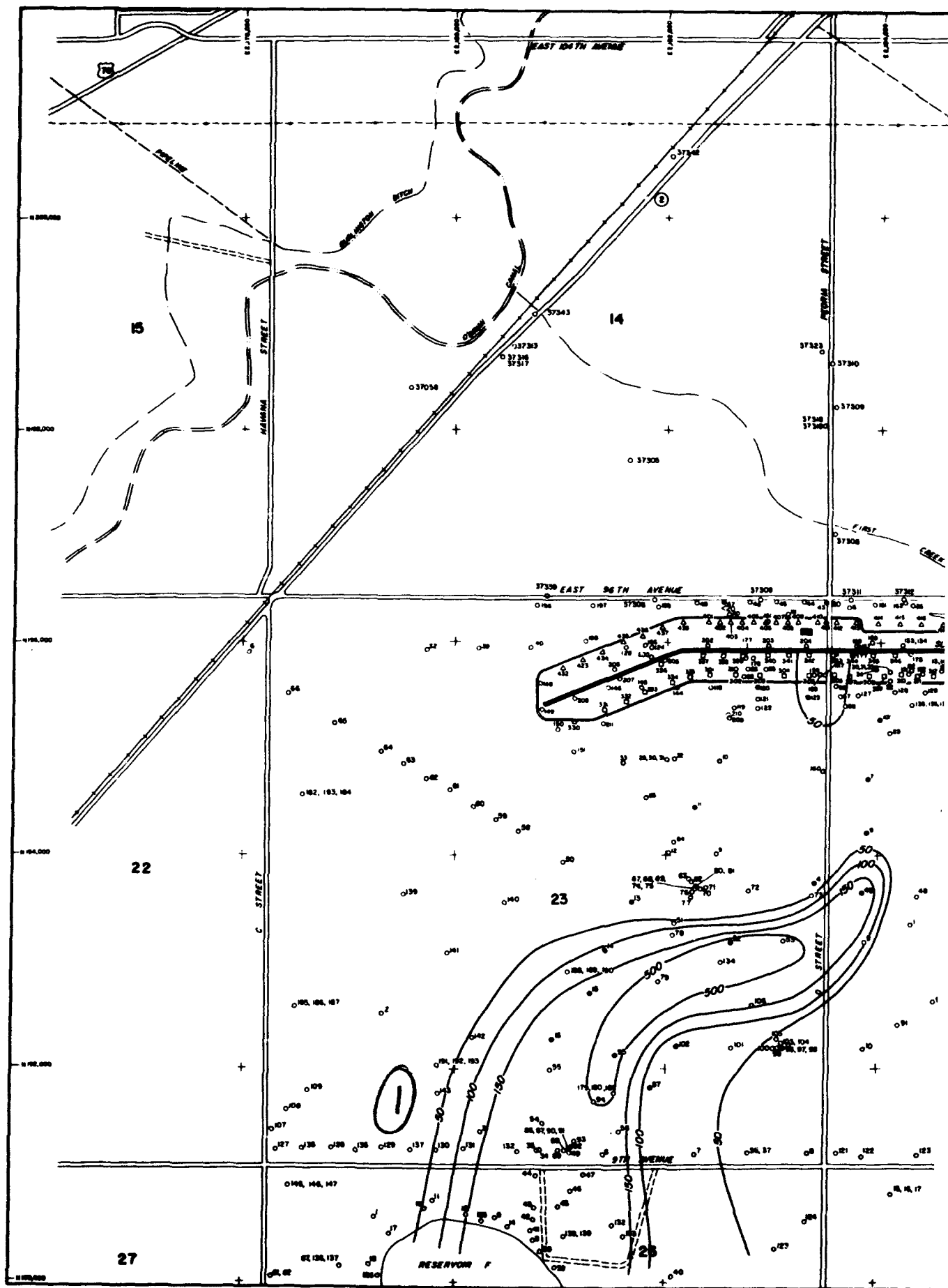
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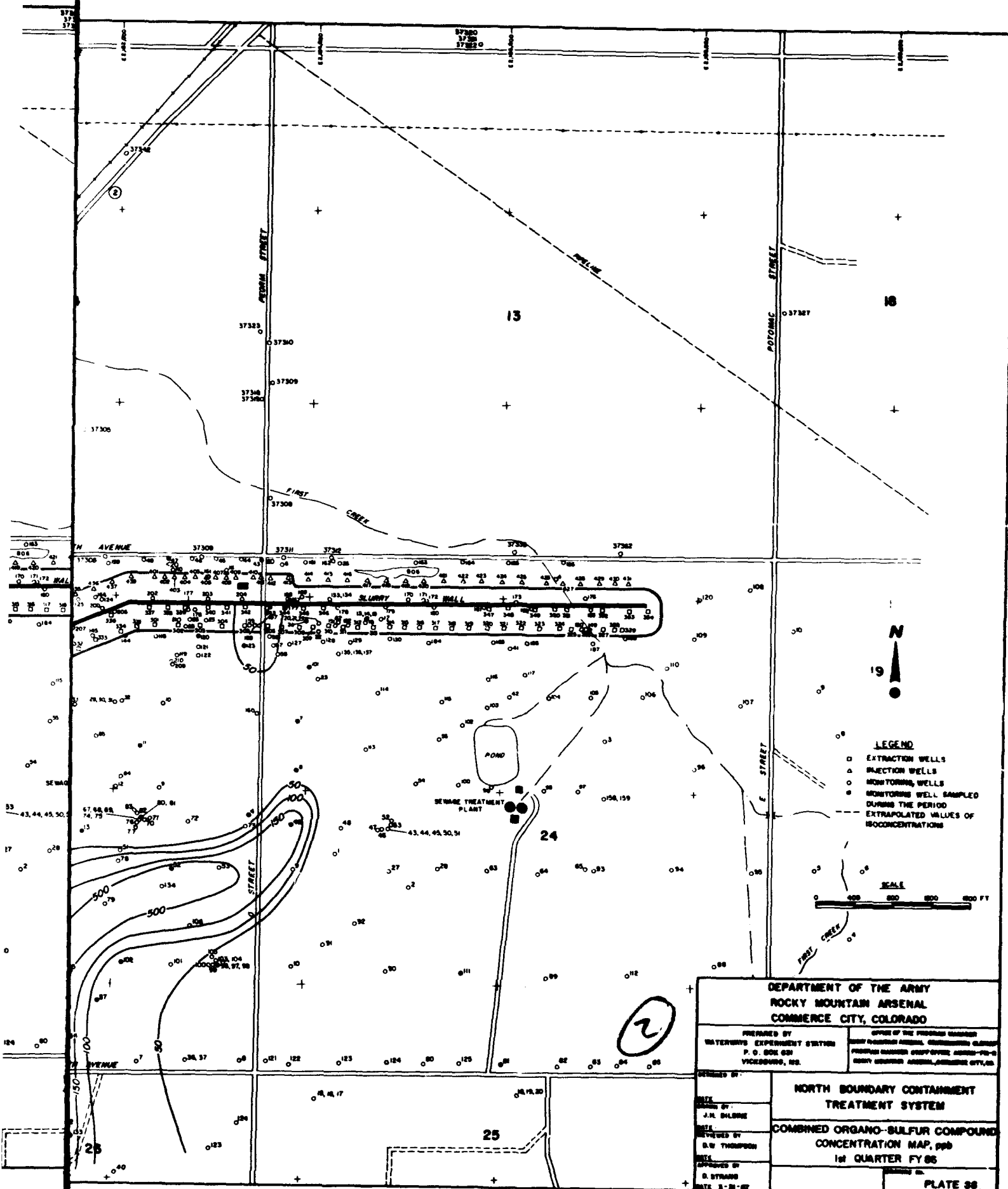
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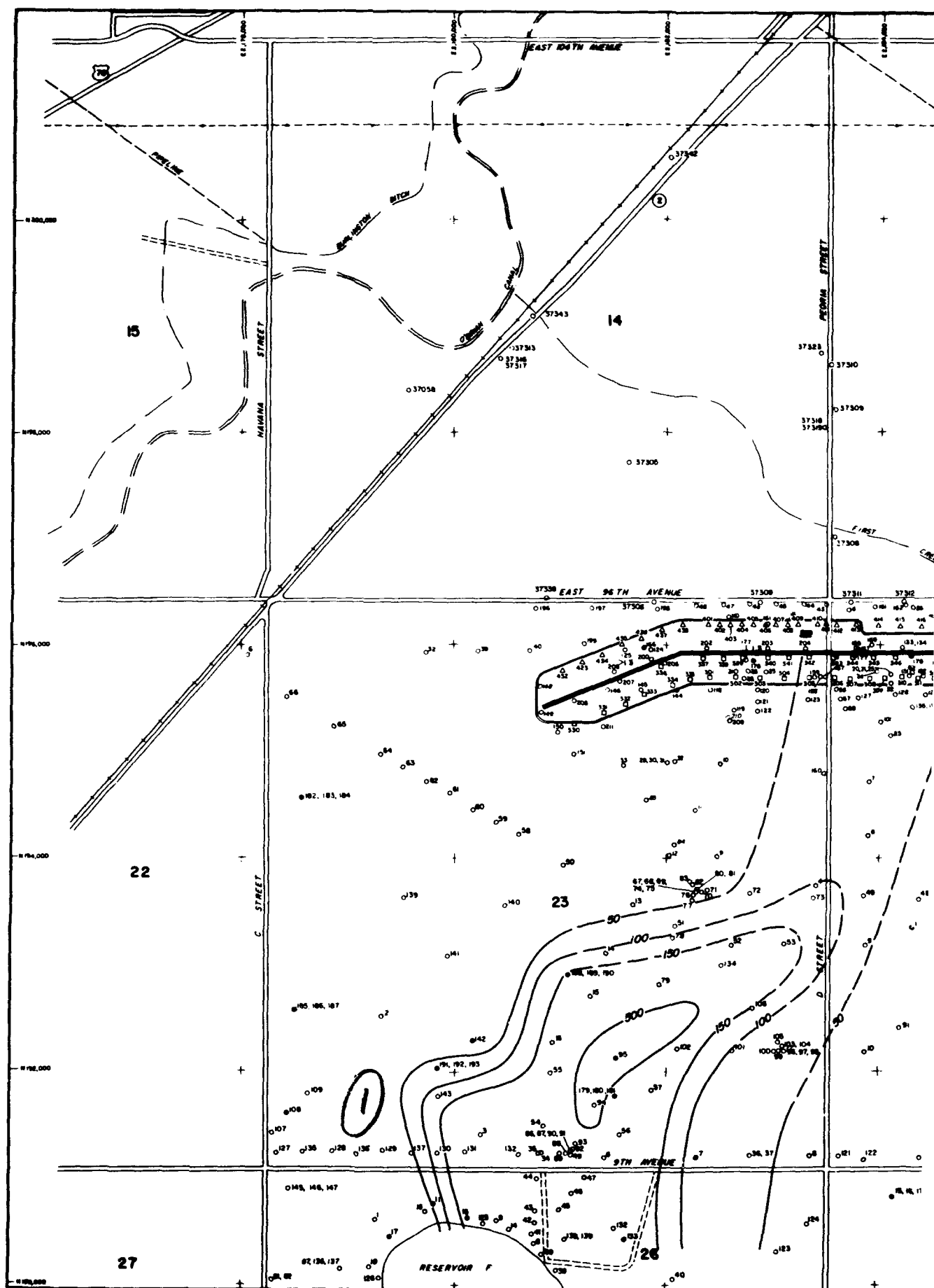
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

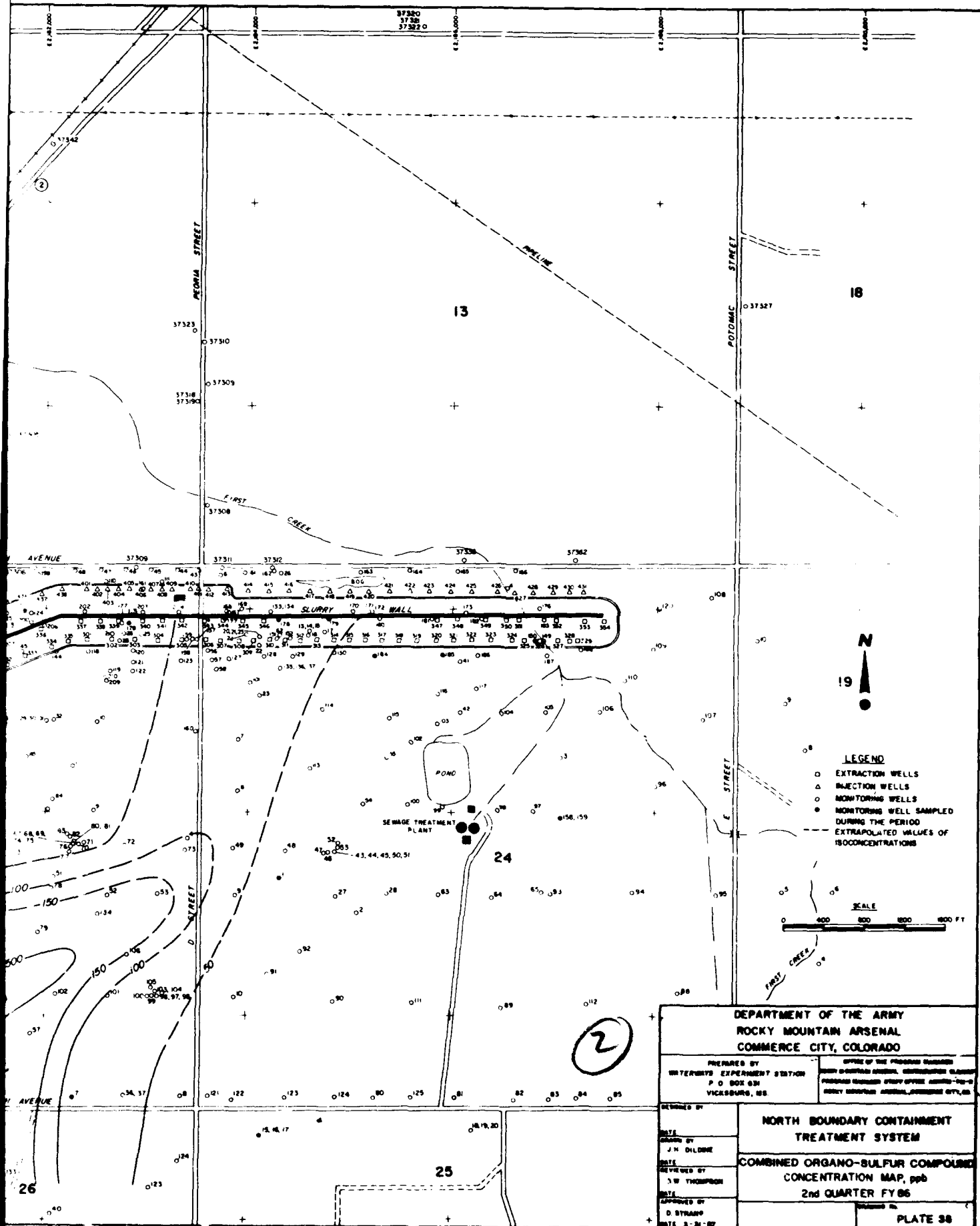
COMBINED ORGANO-SULFUR COMPOUND
CONCENTRATION MAP, ppb
4th QUARTER FY85

PLATE 37









DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
PROGRAM MANAGER STAFF OFFICE, ARSENAL-TO-6
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATA

COLLECTED BY

J. M. DILLON

REVIEWED BY

J. W. THOMPSON

DATA

APPROVED BY

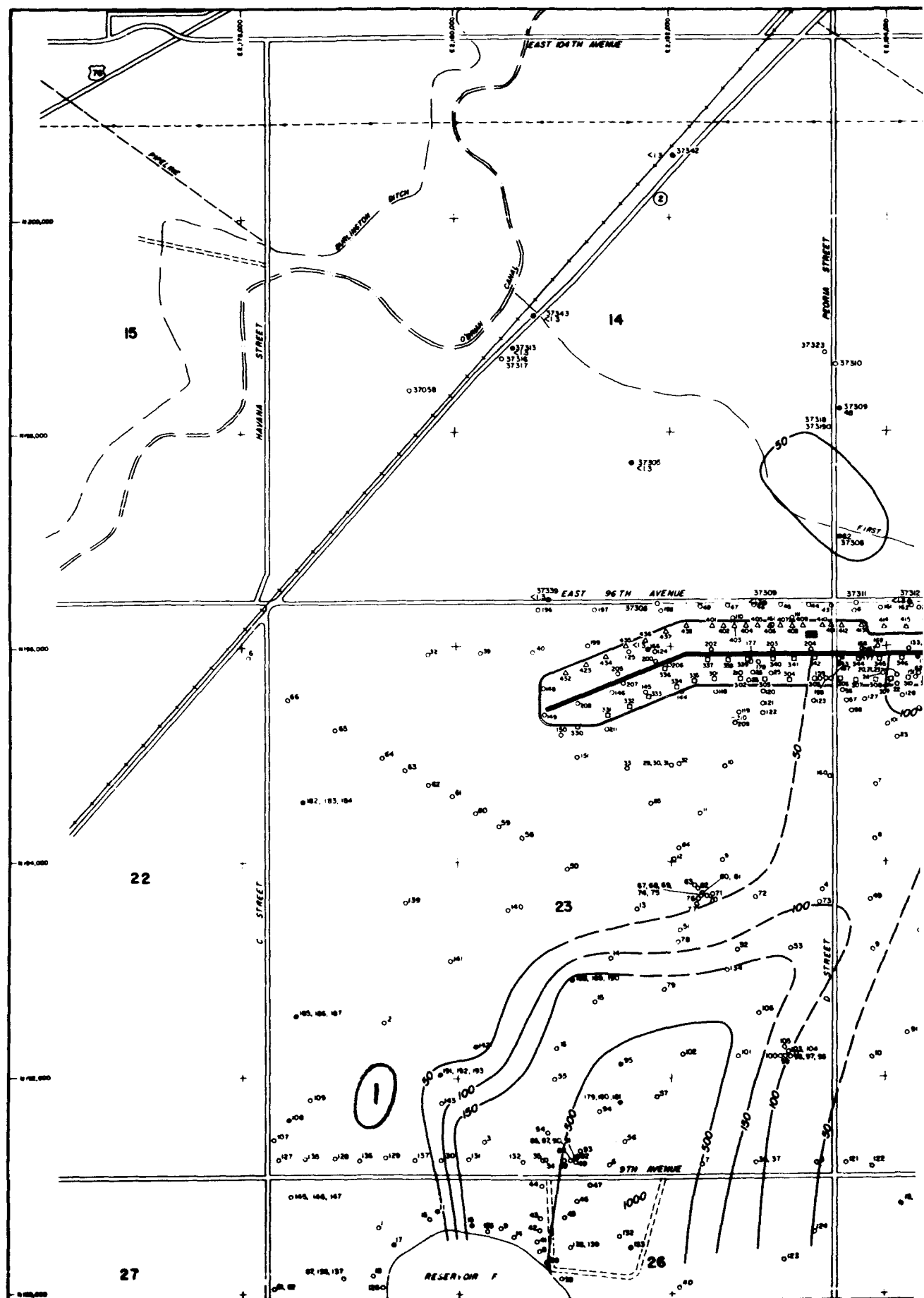
D. STRAIN

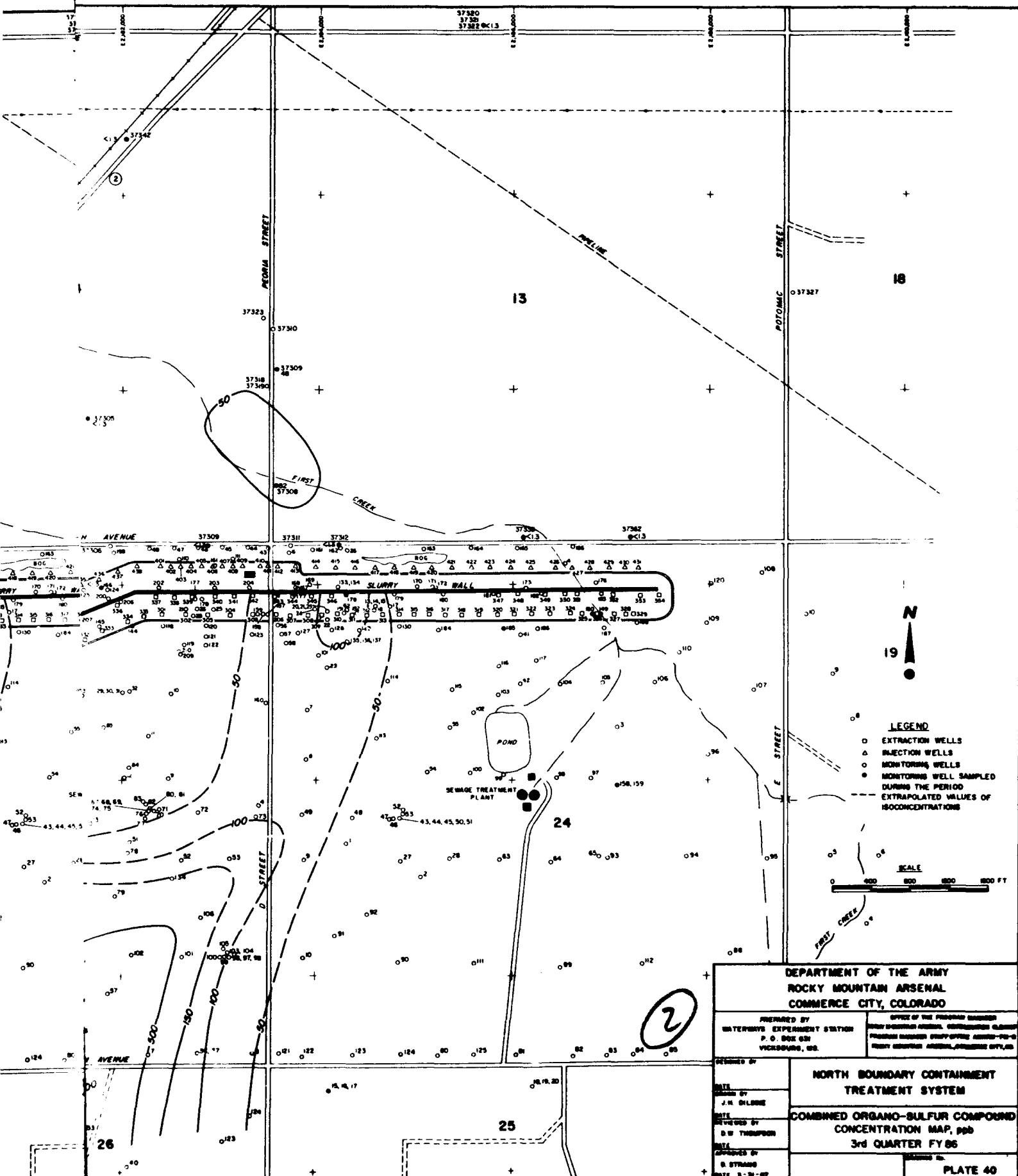
DATE 3-31-82

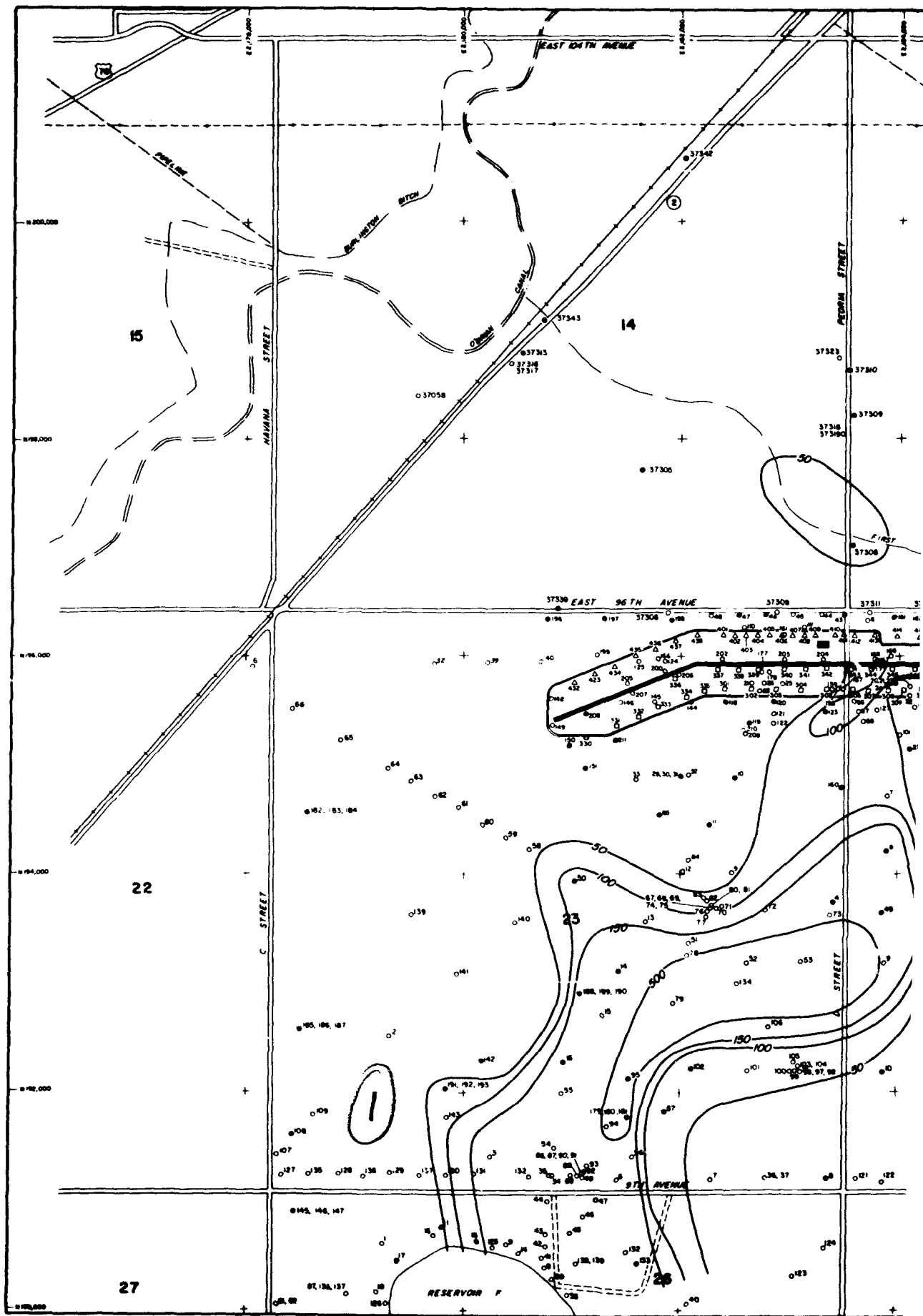
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

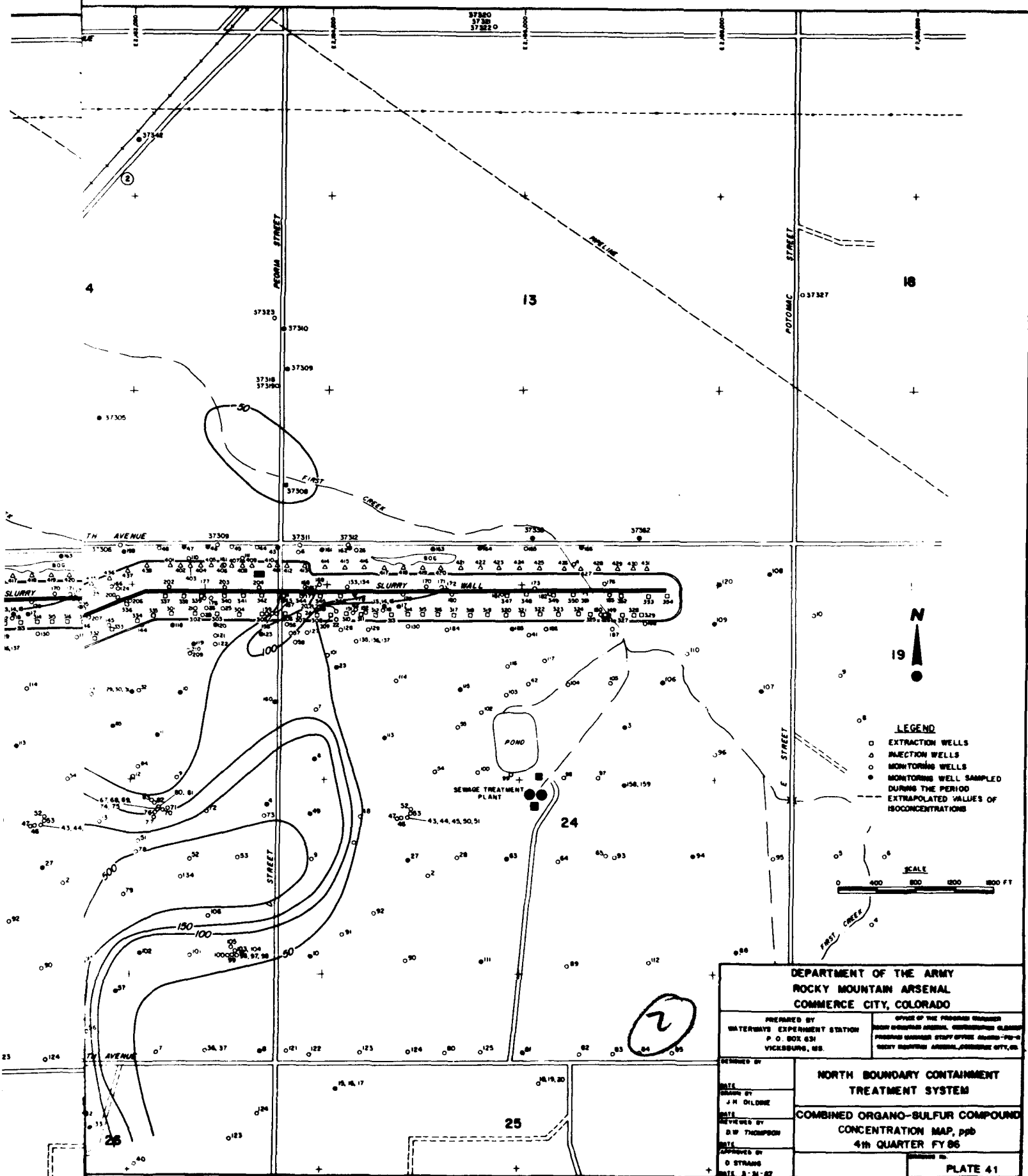
COMBINED ORGANO-SULFUR COMPOUND
CONCENTRATION MAP, ppb
2nd QUARTER FY 86

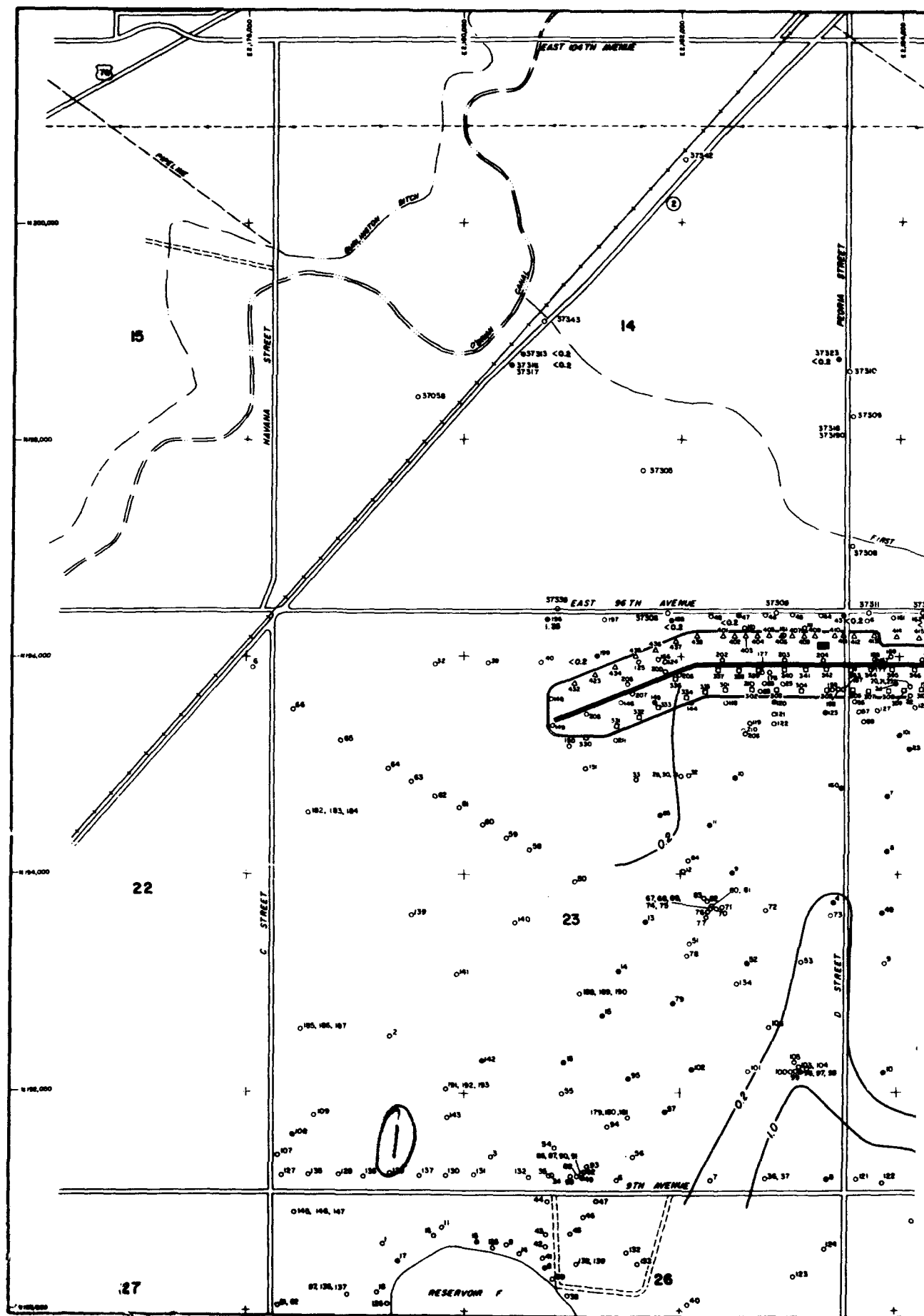
PLATE 38

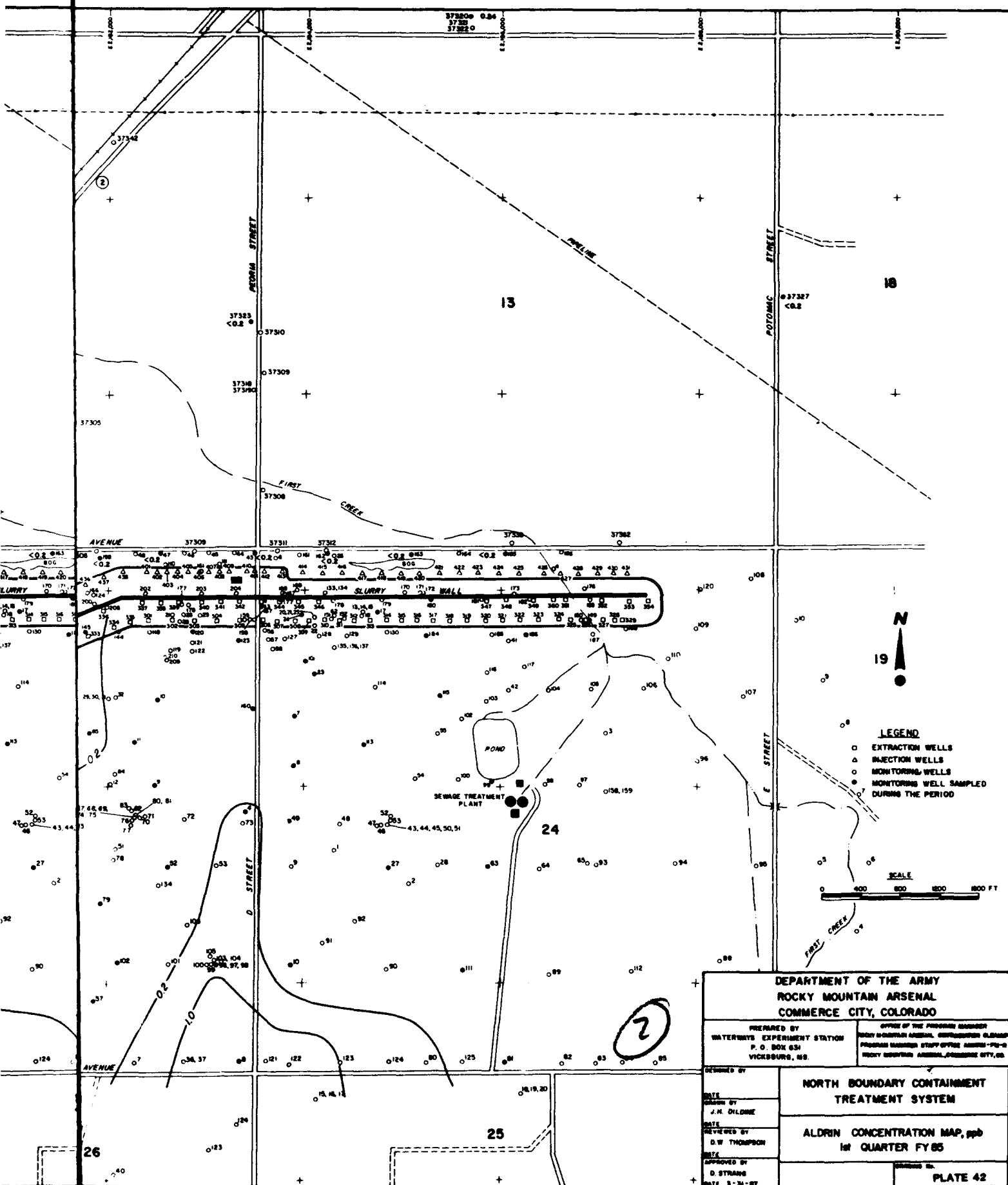




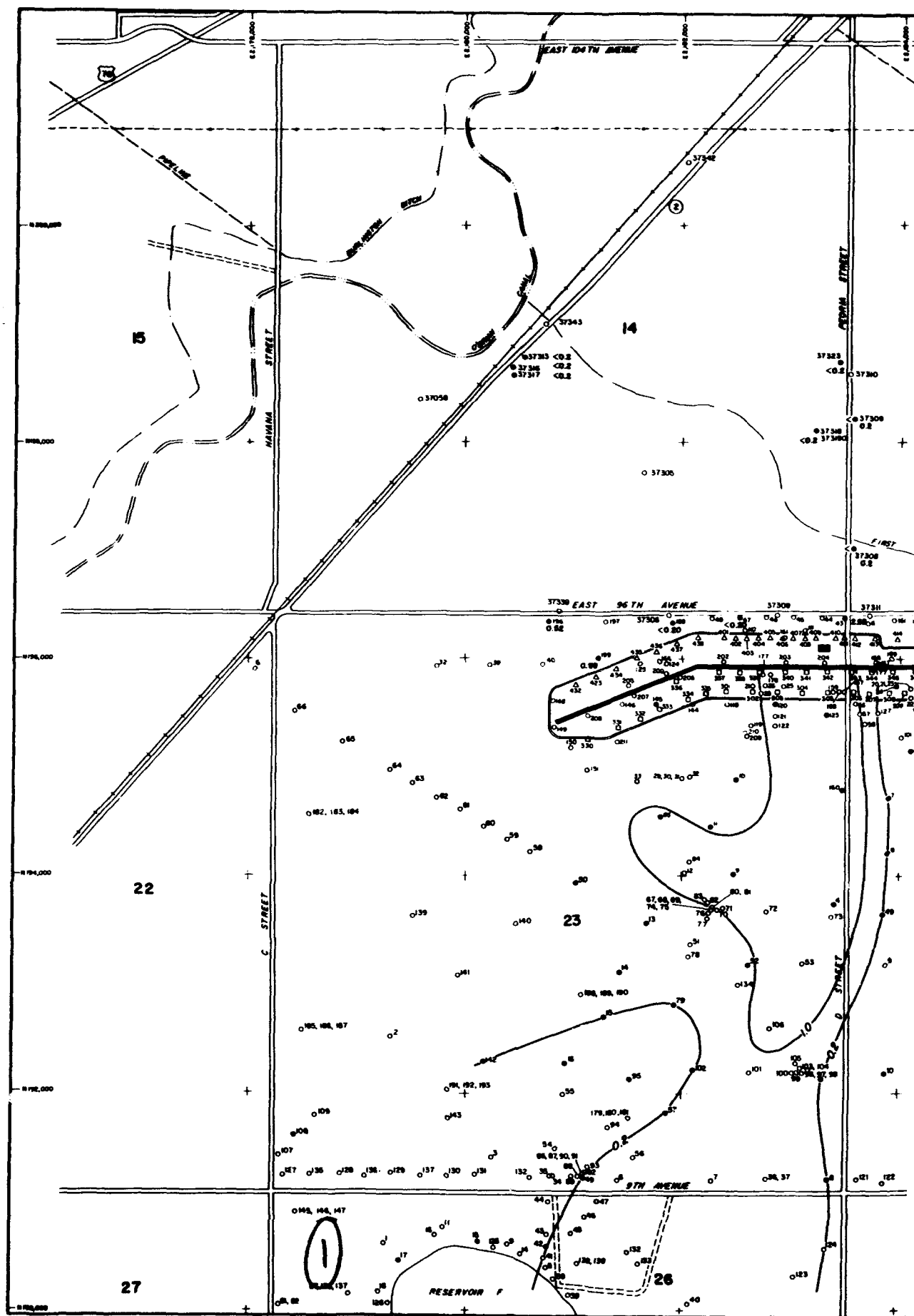


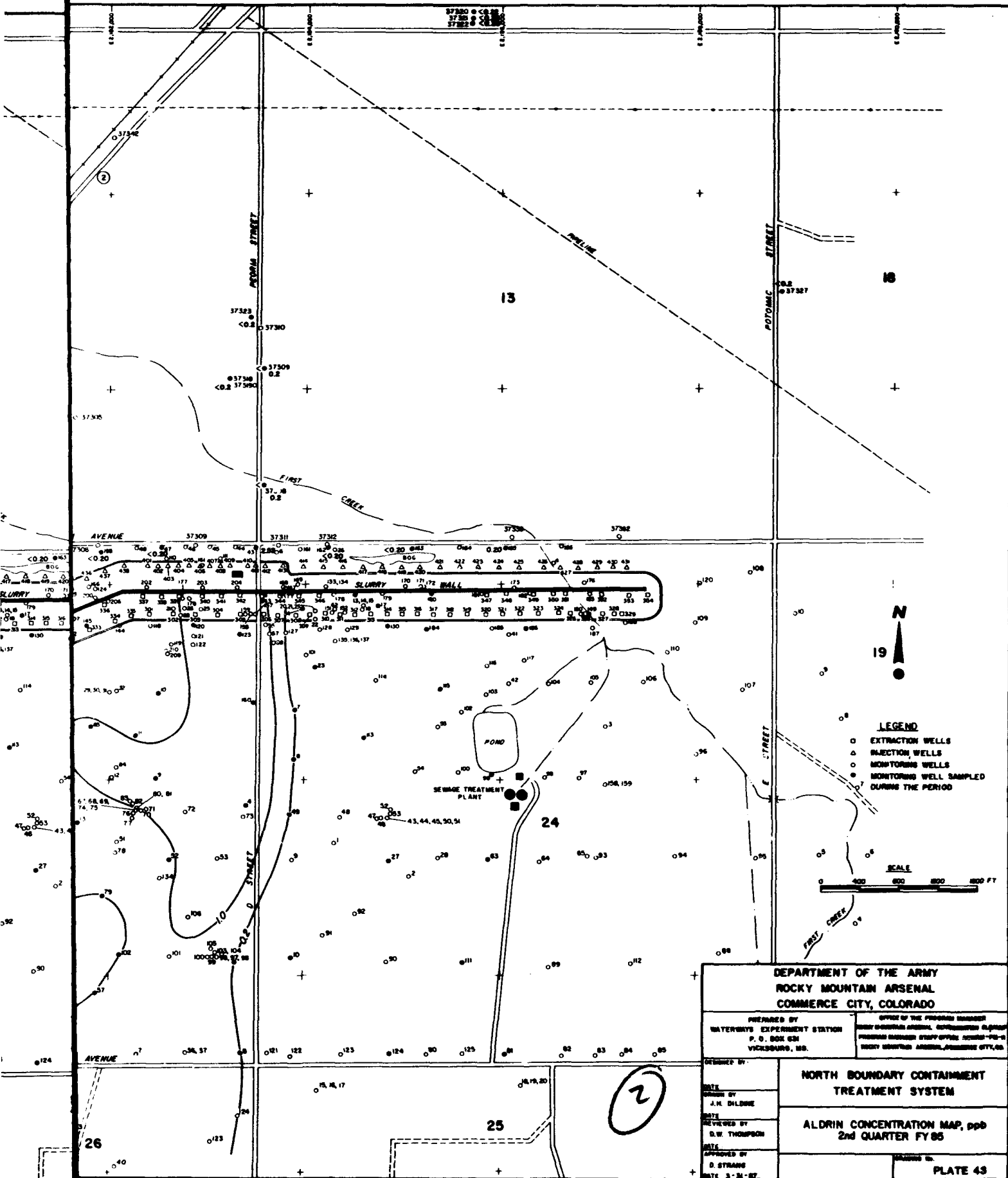


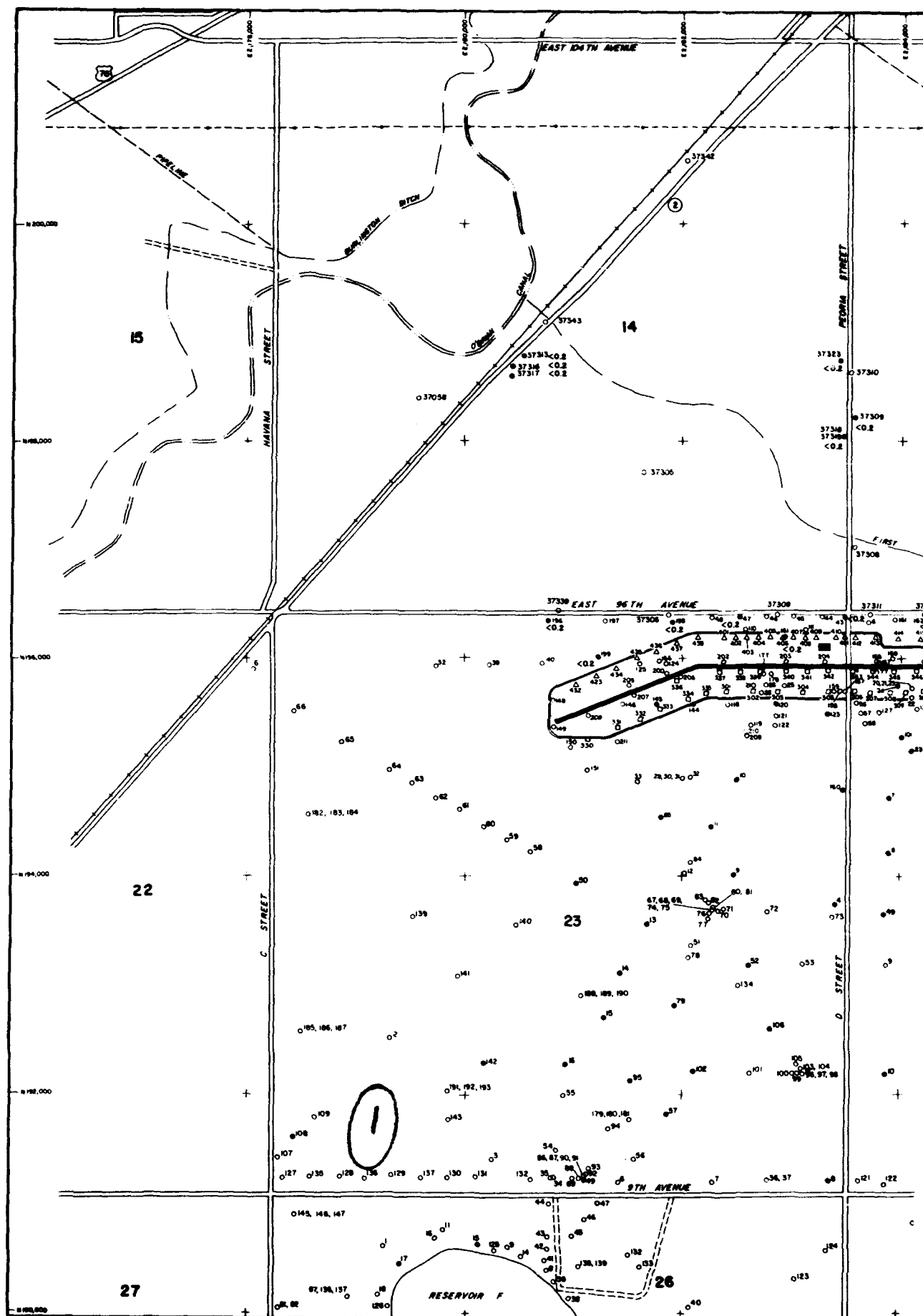


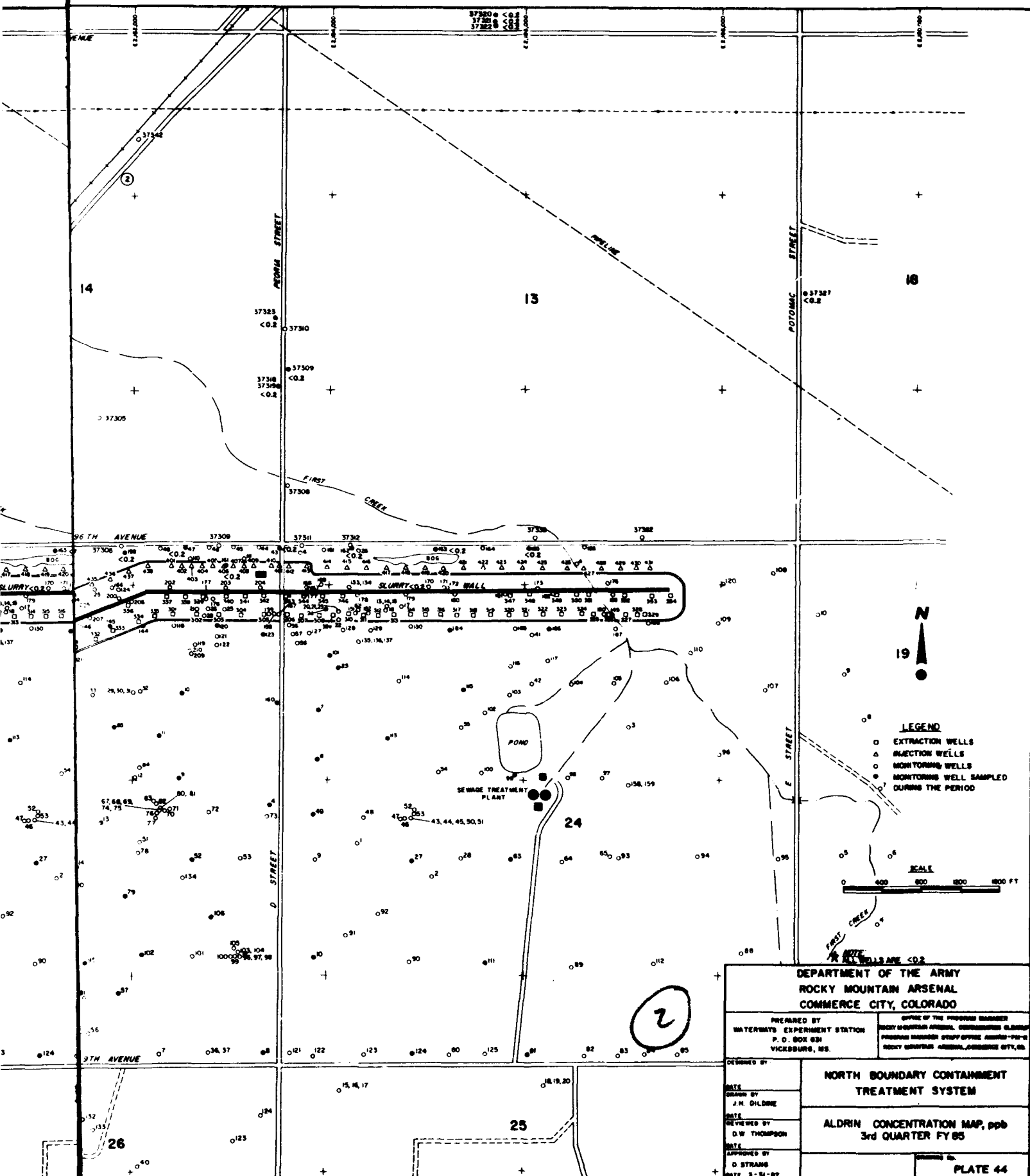


DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 651 VICKSBURG, MS.	OFFICE OF THE PROPOSED ENGINEER ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO PROPOSED ENGINEER STAFF OFFICE ADDRESS - P.O. BOX 651 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DESIGNED BY DATE DRAWN BY J.H. OILONE DATE REVIEWED BY D.W. THOMPSON DATE APPROVED BY D. STRANG DATE 3-11-67	NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM ALDRIN CONCENTRATION MAP, ppb 1st QUARTER FY 65 PLATE 42









DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

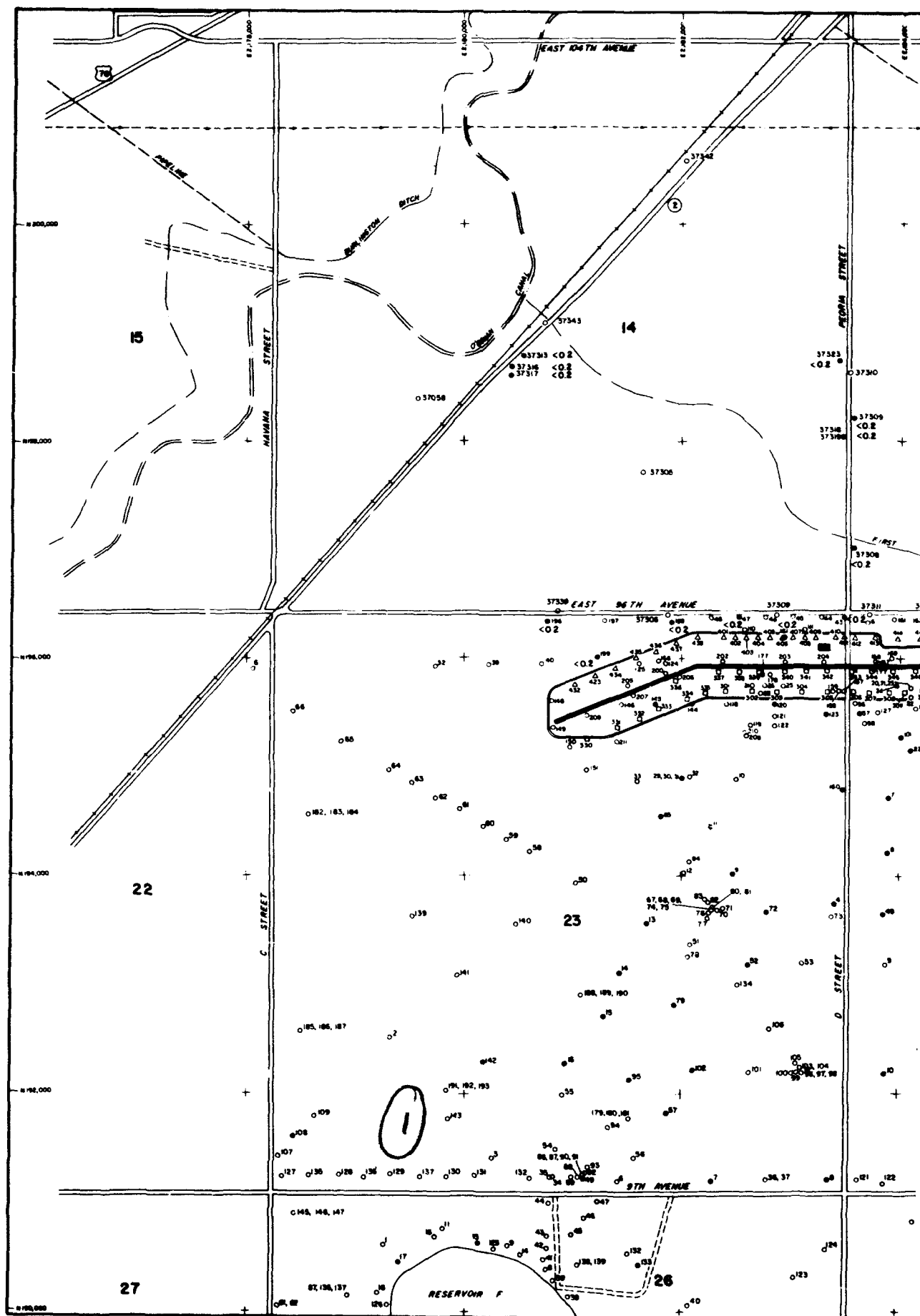
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE, ARSENAL-PD-10
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

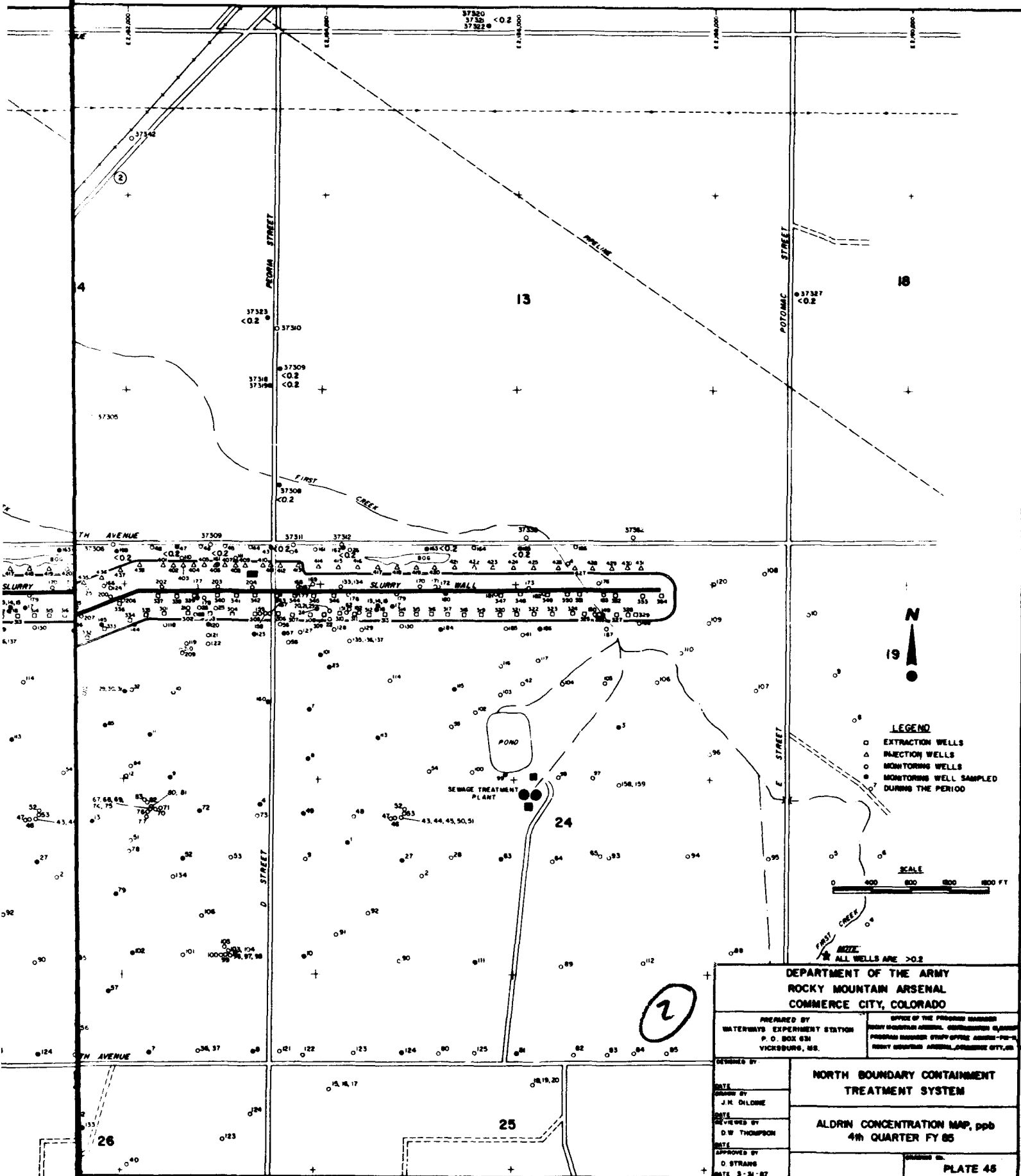
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

ALDRIN CONCENTRATION MAP, pbb
3rd QUARTER FY 65

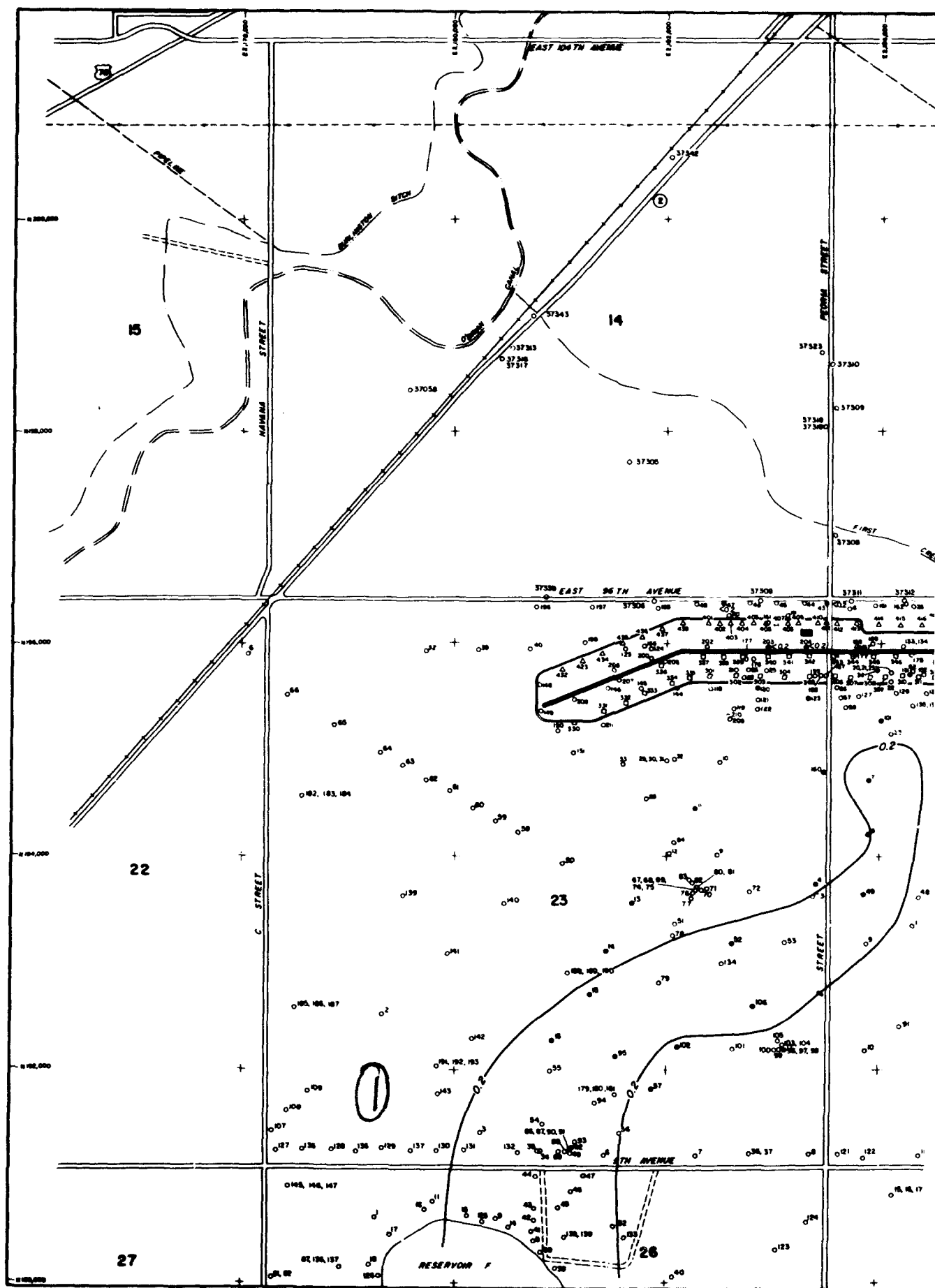
DESIGNED BY
DATE
DRAWN BY
J.M. CHLORE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRANG
DATE 3-31-67

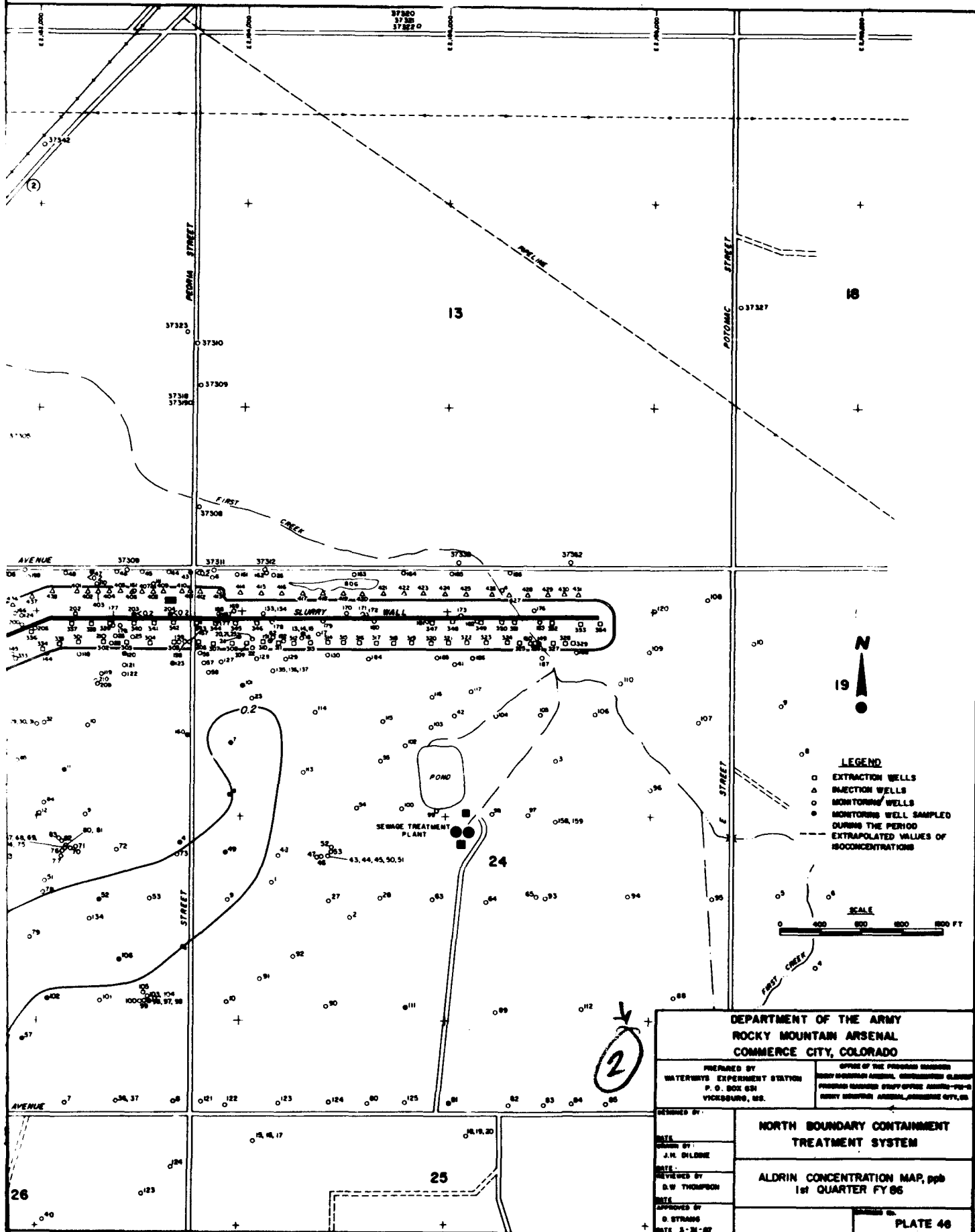
PLATE 44

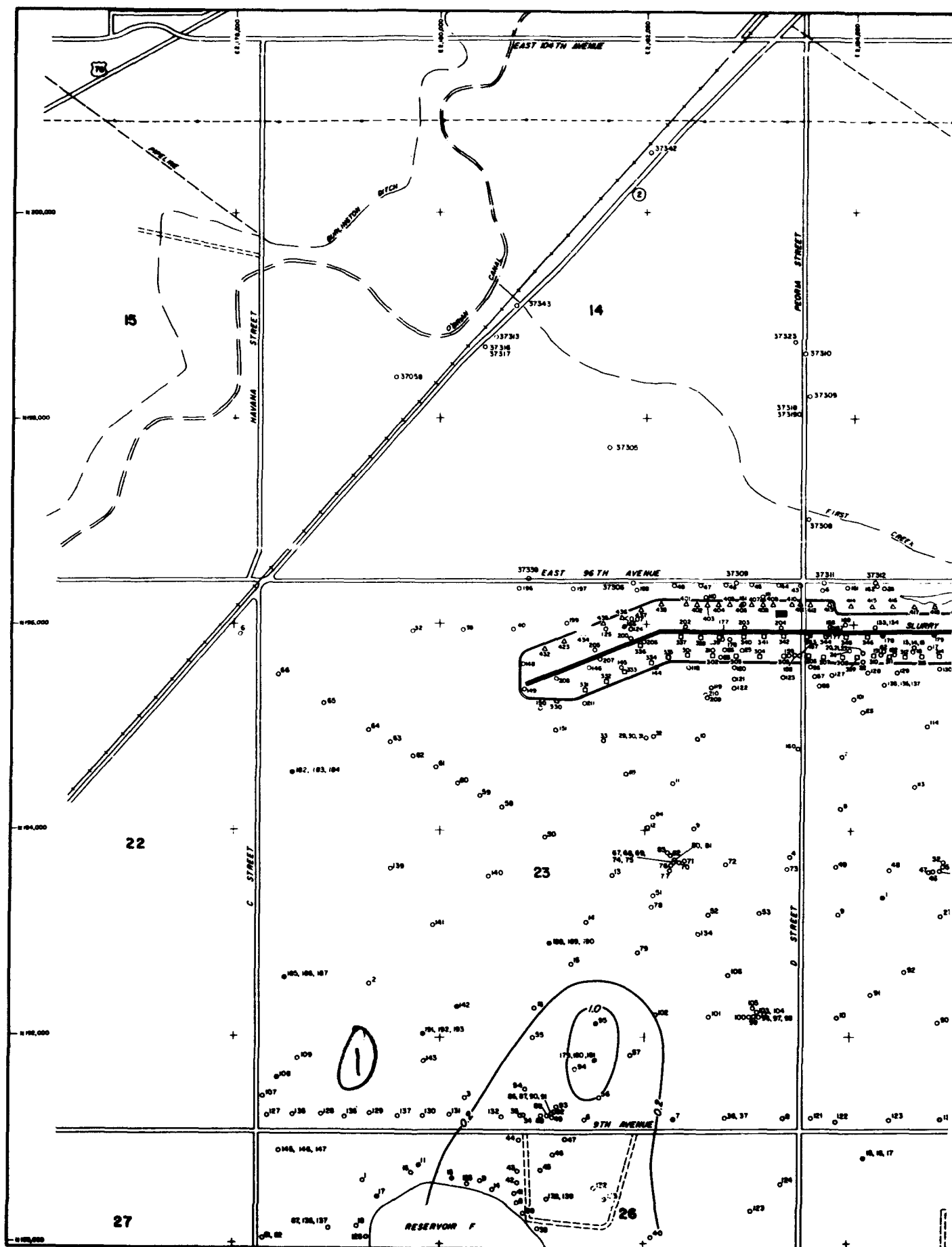


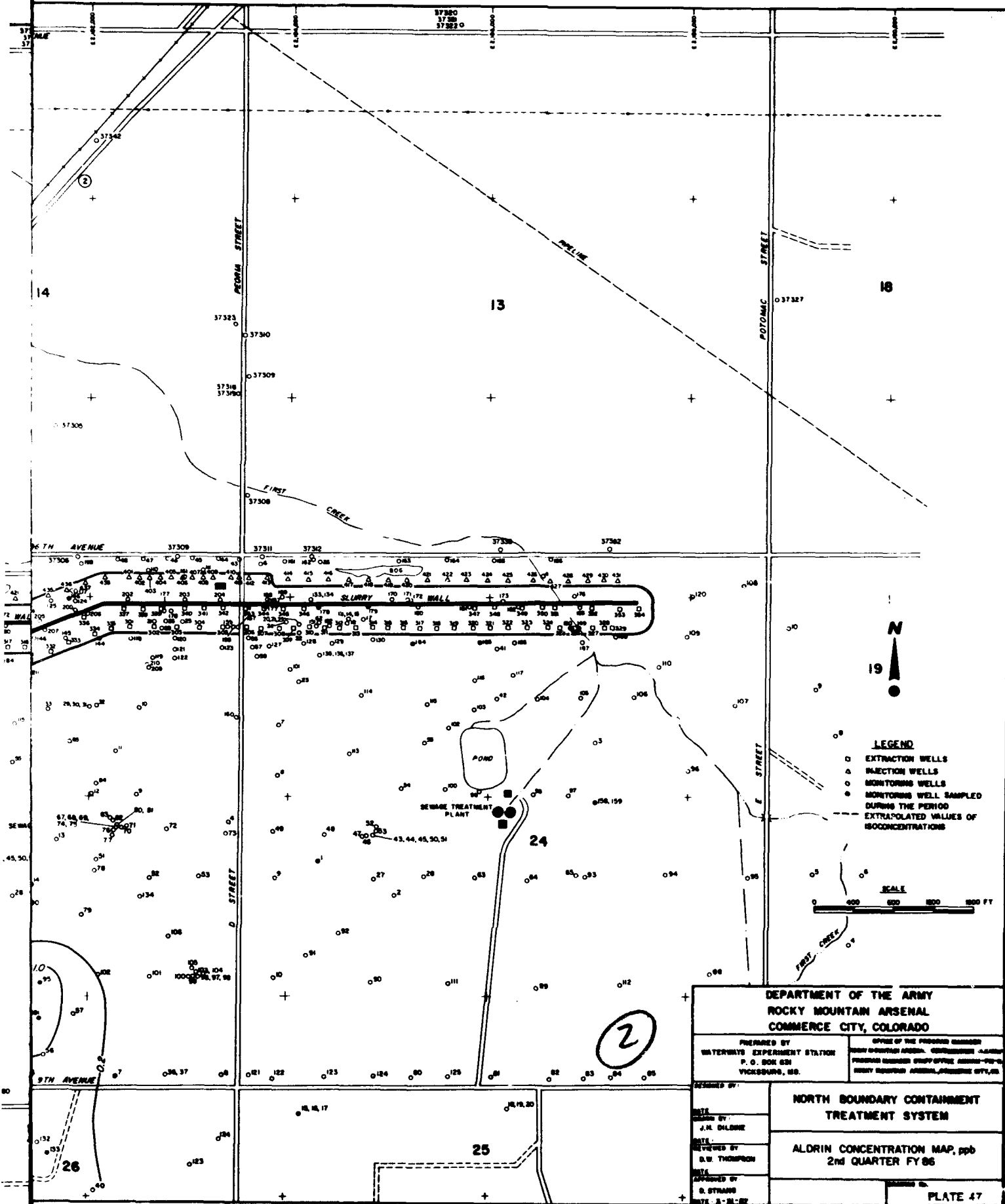


DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 VICKSBURG, MS.	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO PROGRAM MANAGER: STAFF OFFICE ADJUTANT-GENERAL ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM	
ALDRIN CONCENTRATION MAP, ppb 4th QUARTER FY 85	
DESIGNED BY DATE DRAWN BY J. H. CHLOME CHECKED BY D. W. THOMPSON DATE APPROVED BY D. STRAINS DATE 3-31-87	PLATE 45









DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 831
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER: SUPPLY OFFICE, ARSENAL, 1000
ARMY ROAD, ARSENAL, COMMERCE CITY, CO

DESIGNED BY:

DATA
CHECKED BY:
J.H. DILLON

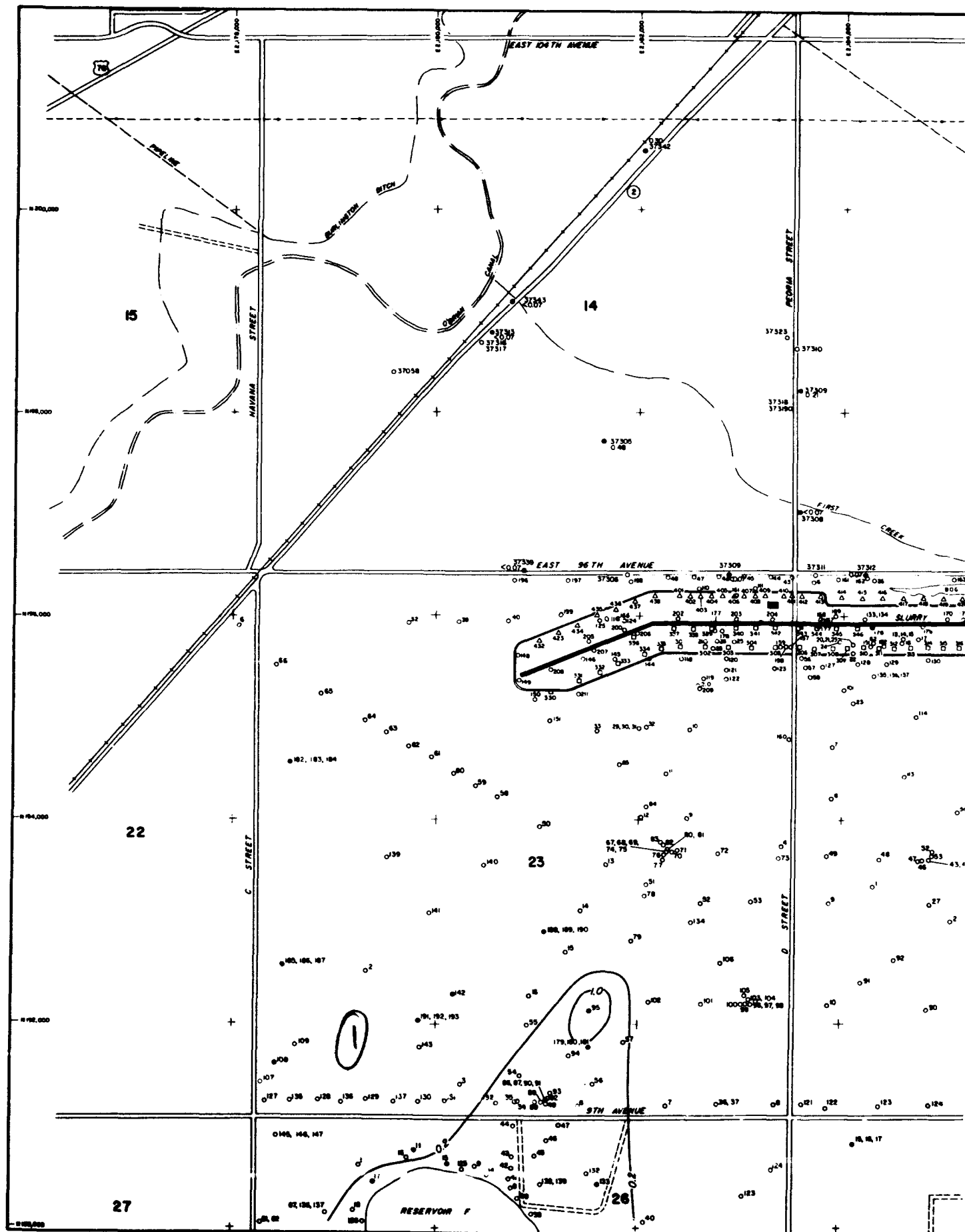
DATA
REVIEWED BY:
D.B. THOMPSON

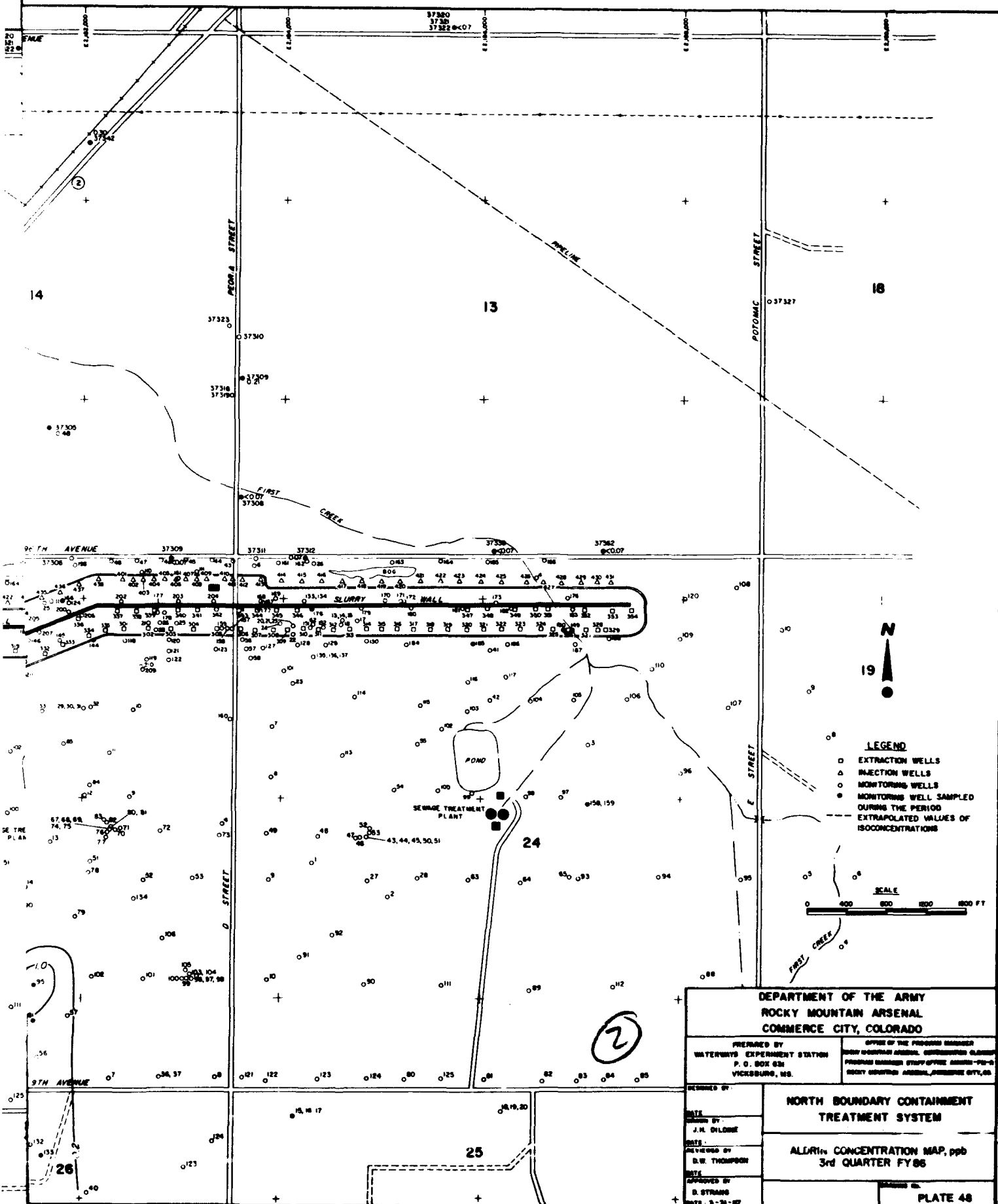
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APPROVED BY:
D. STRANG
DATE: 8-11-87

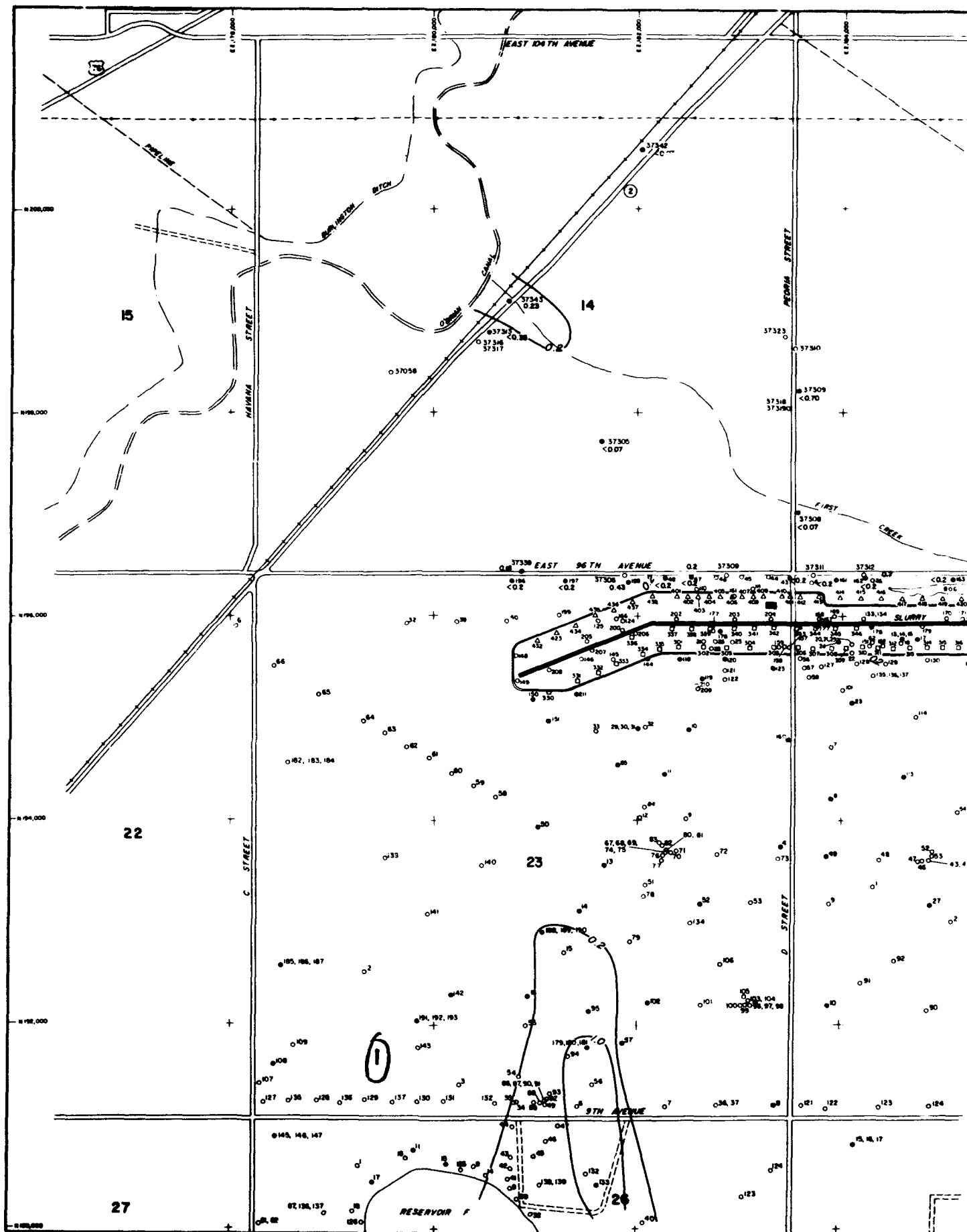
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

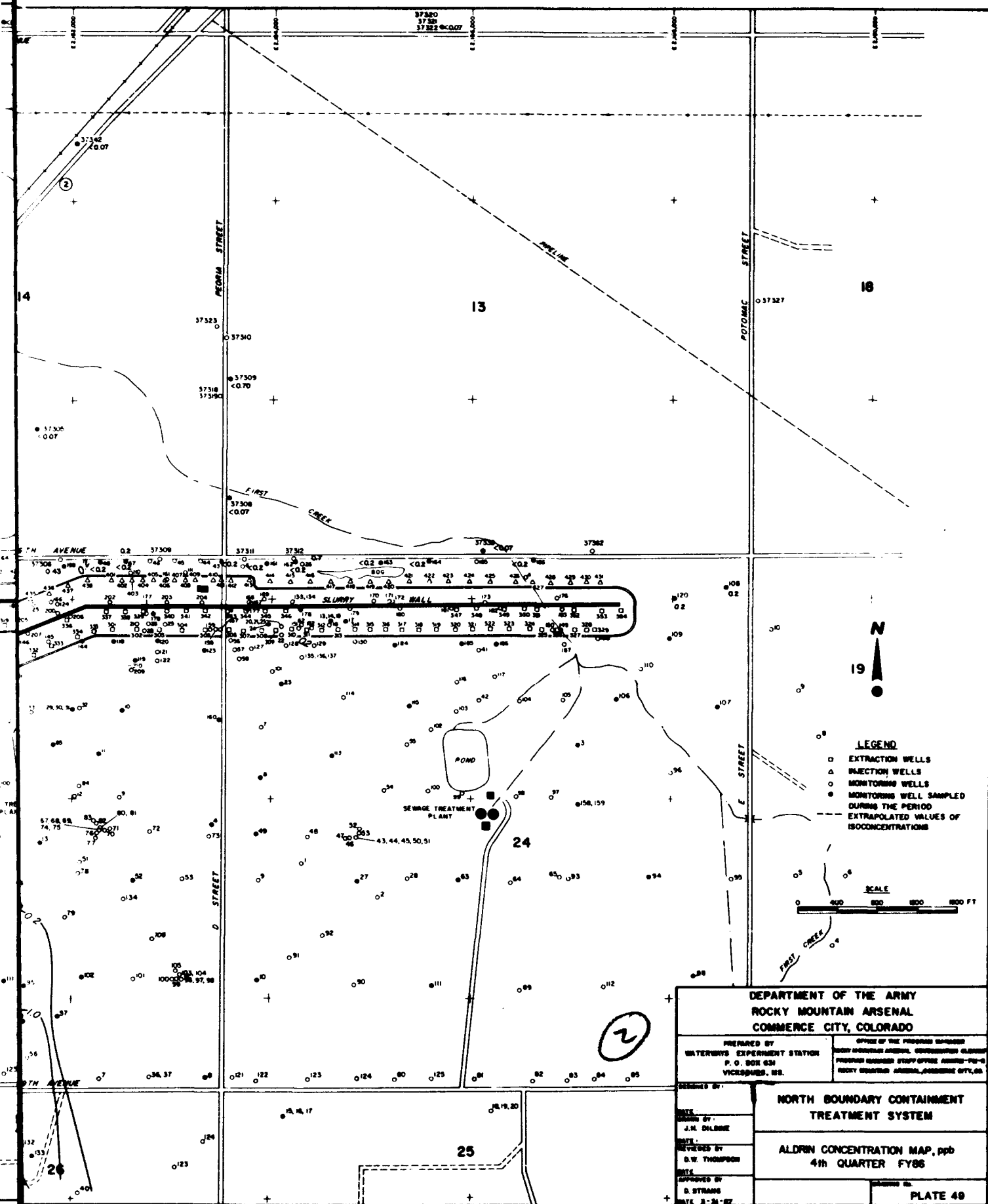
ALDRIN CONCENTRATION MAP, ppb
2nd QUARTER FY 86

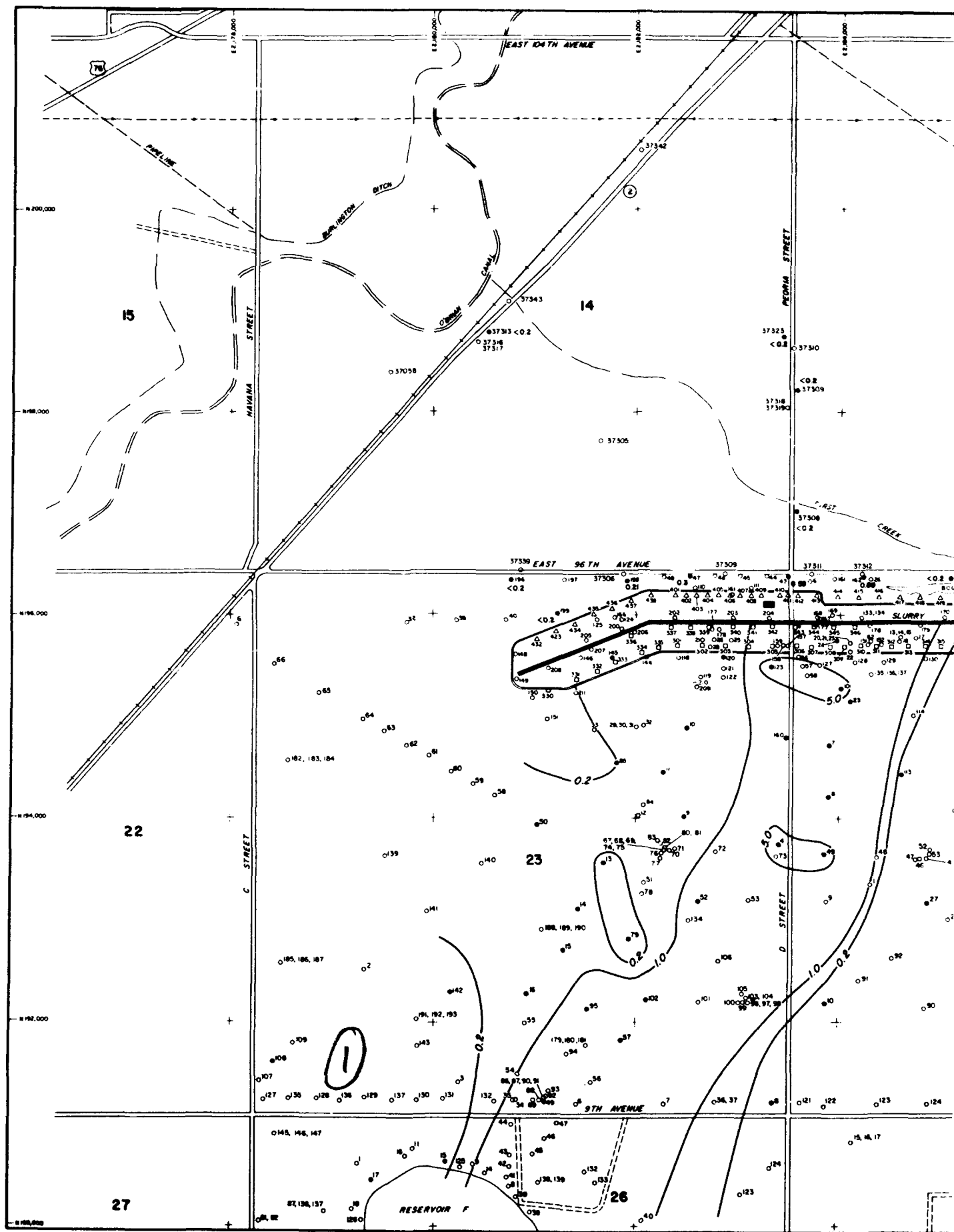
PLATE 47

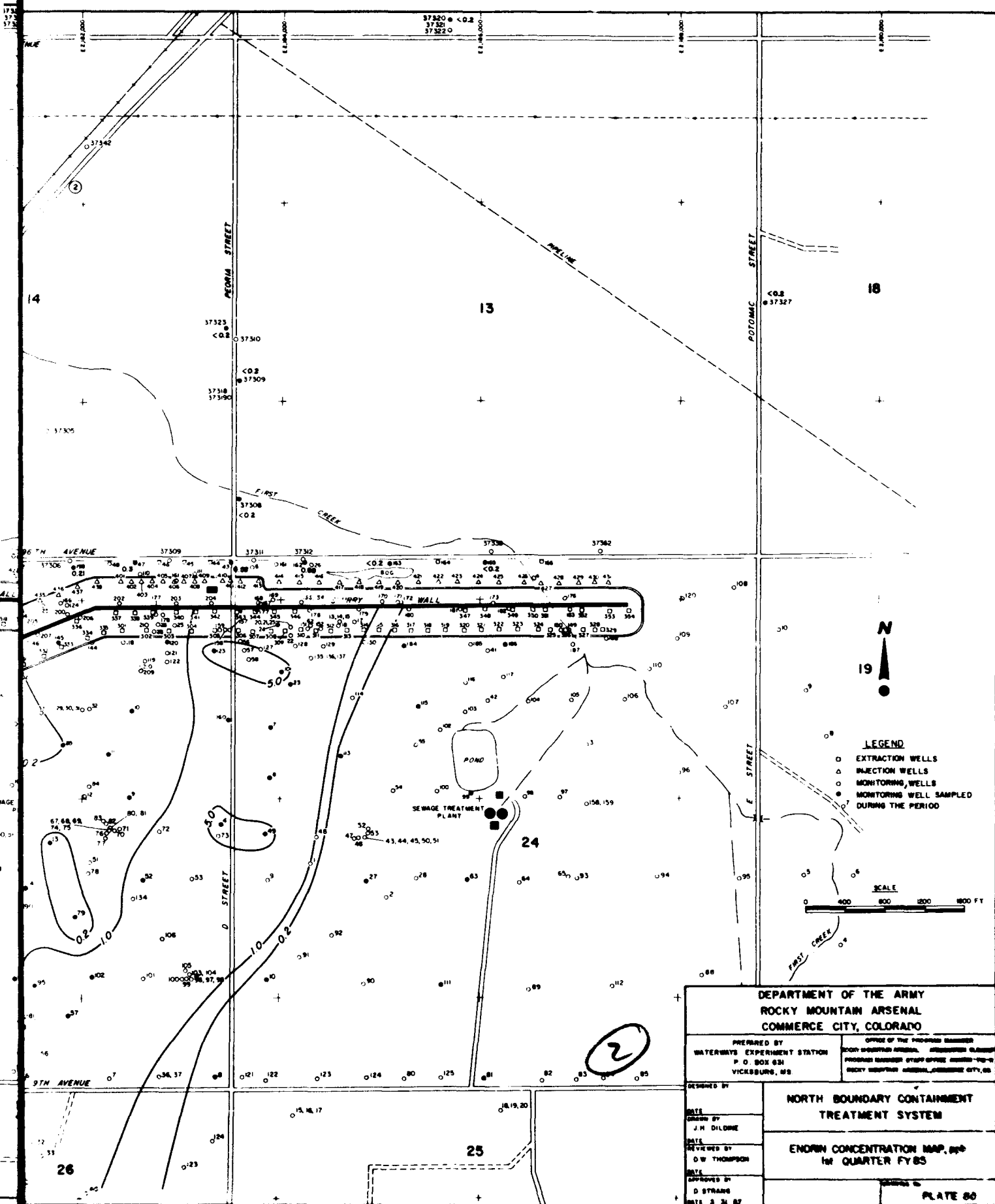


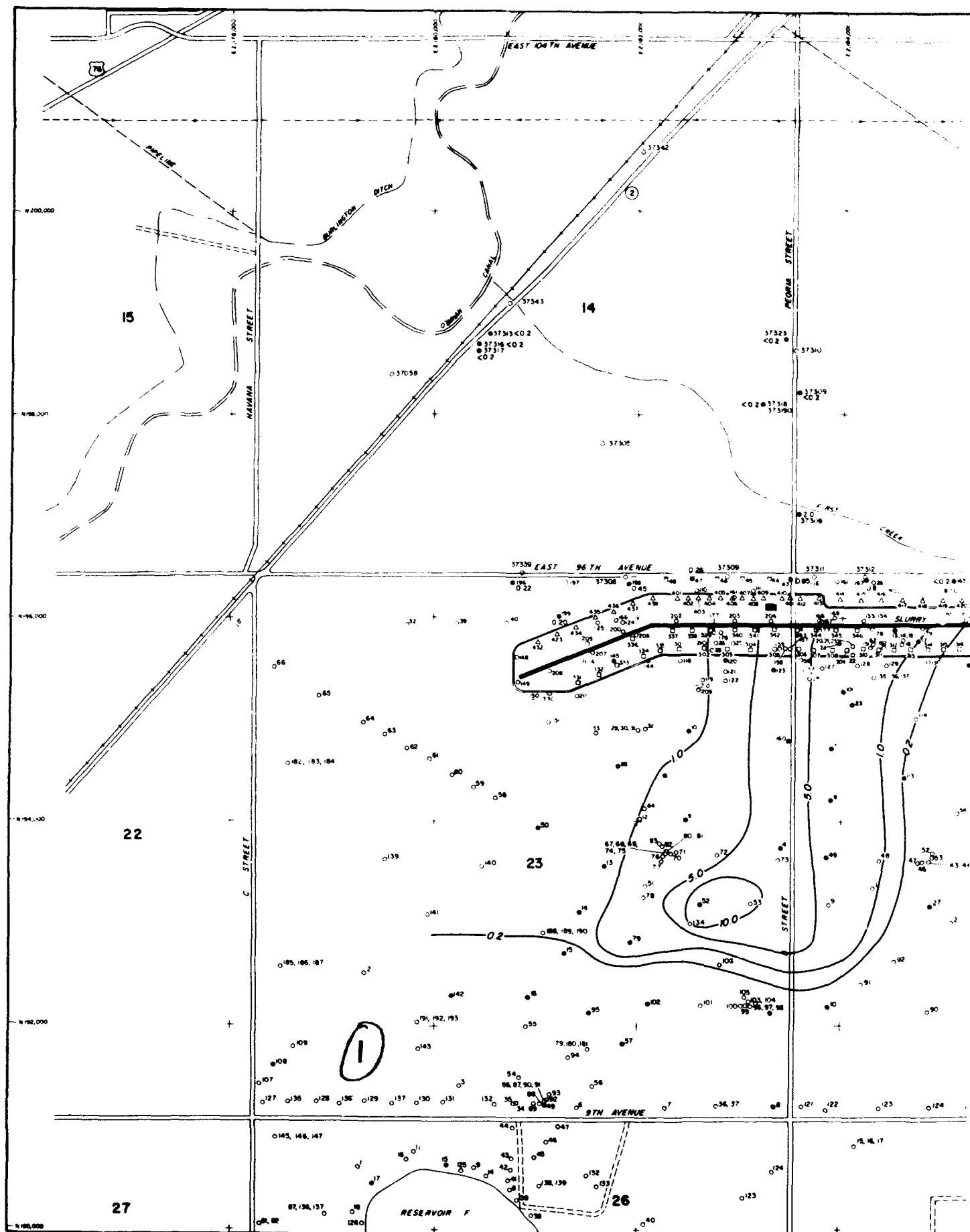


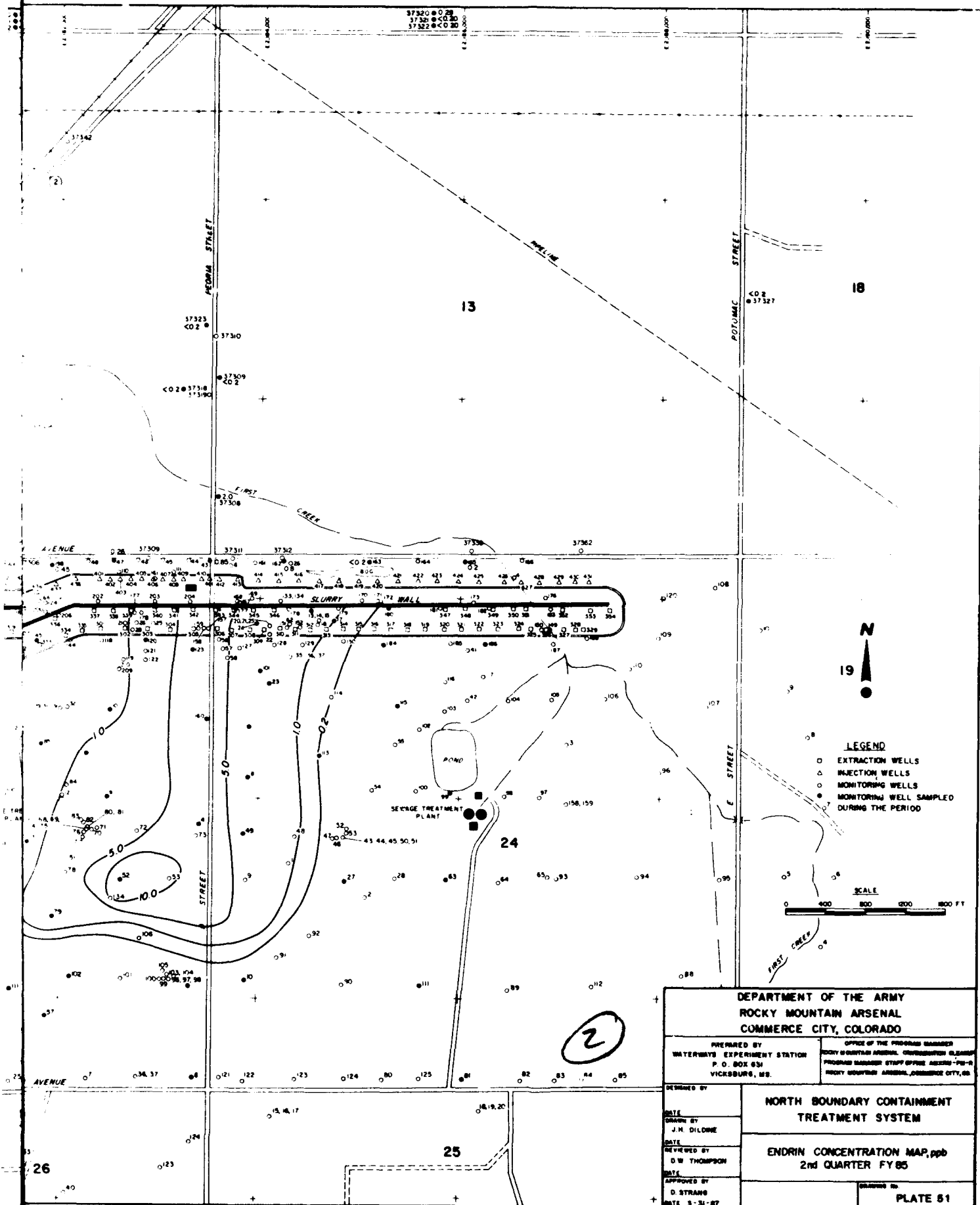


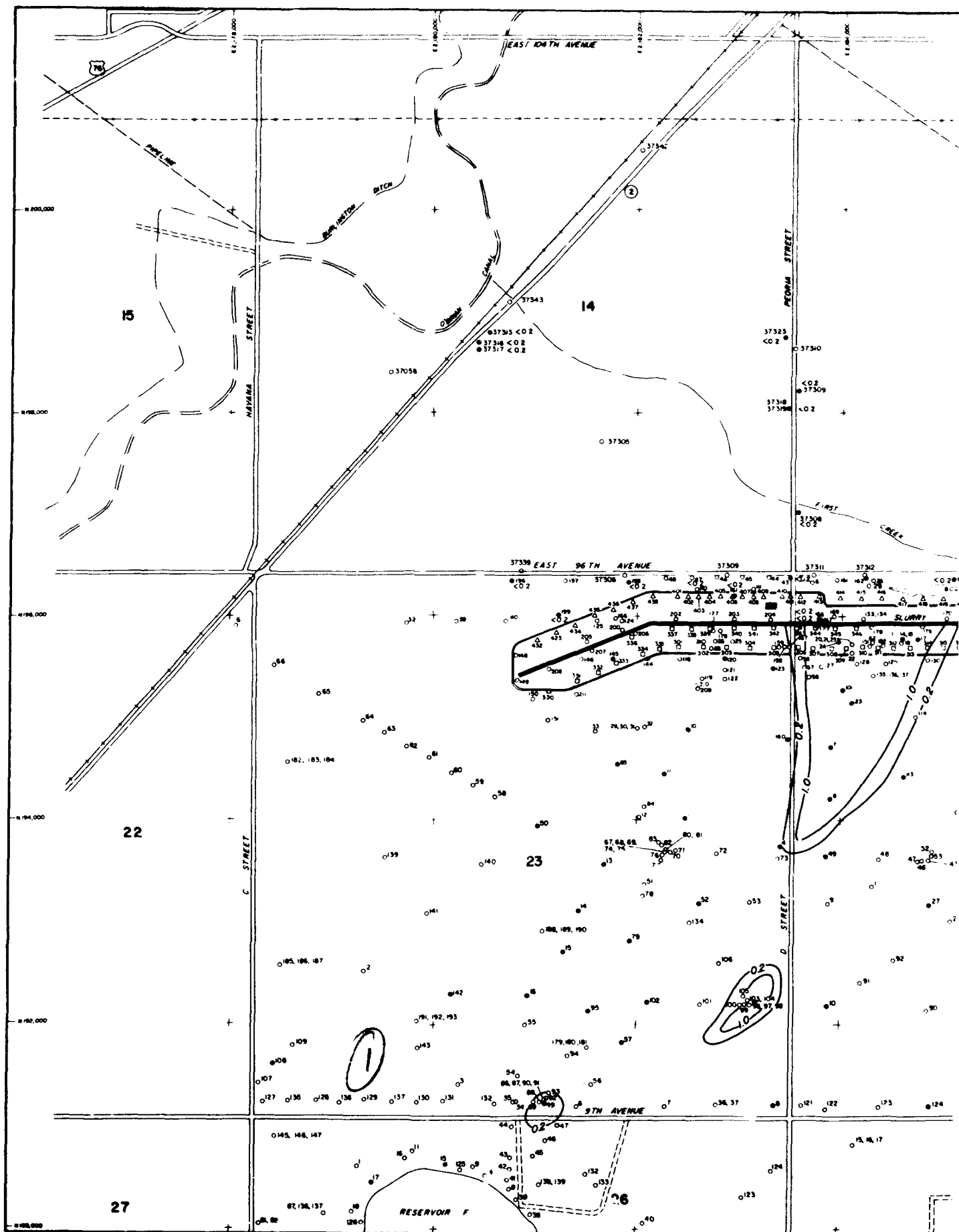


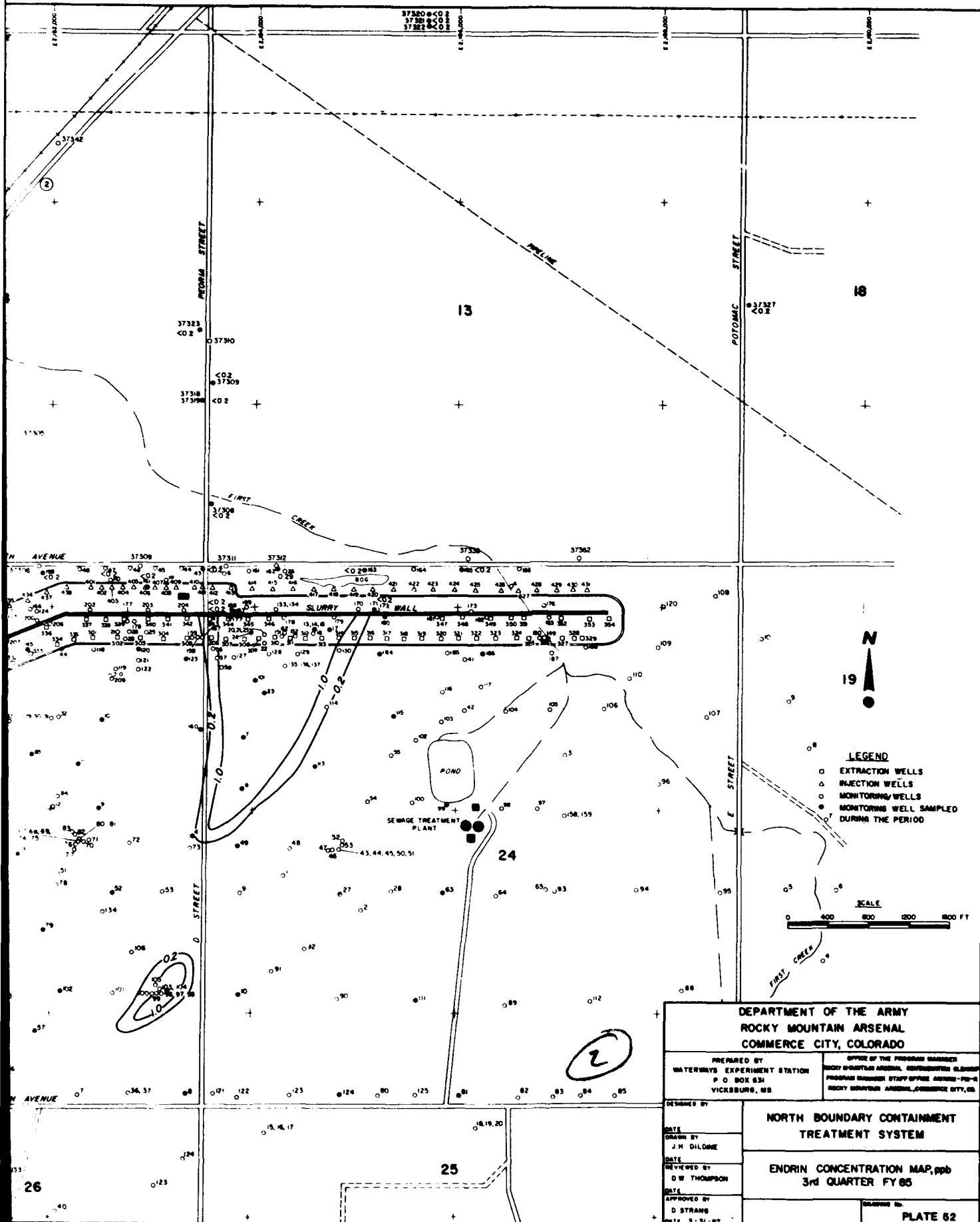


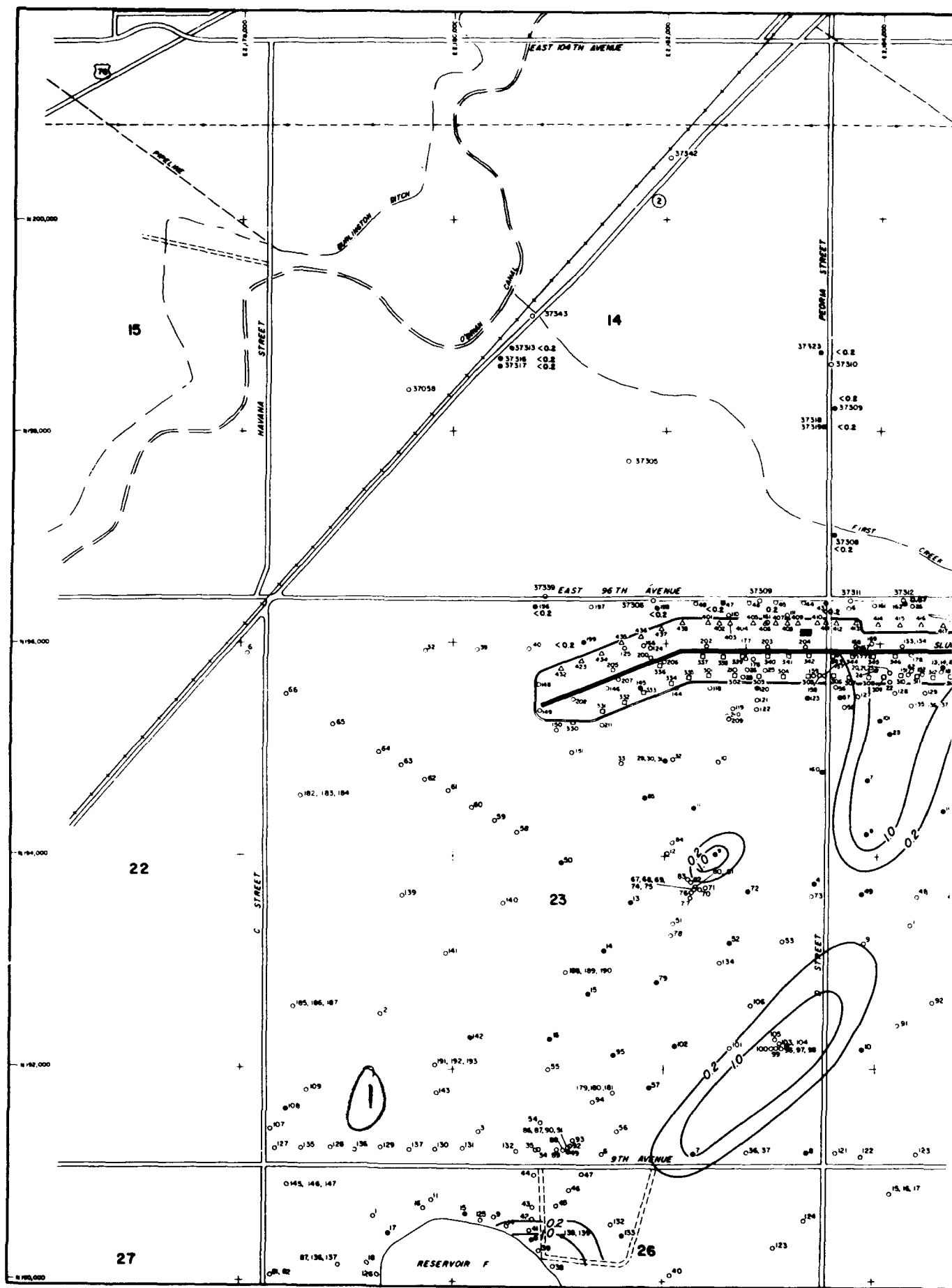


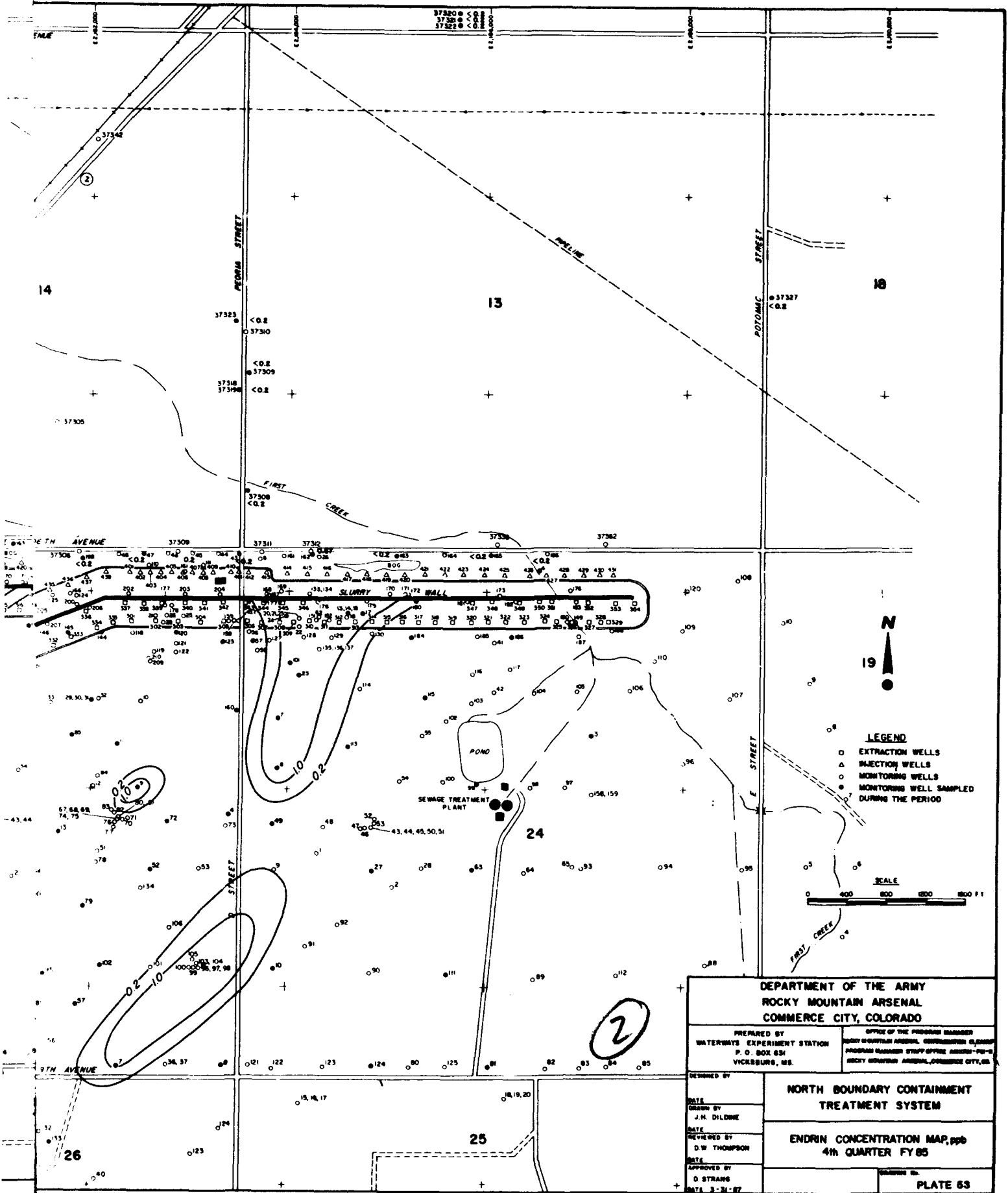












LEGEND

- EXTRACTION WELLS
- △ INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD

SCALE



DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

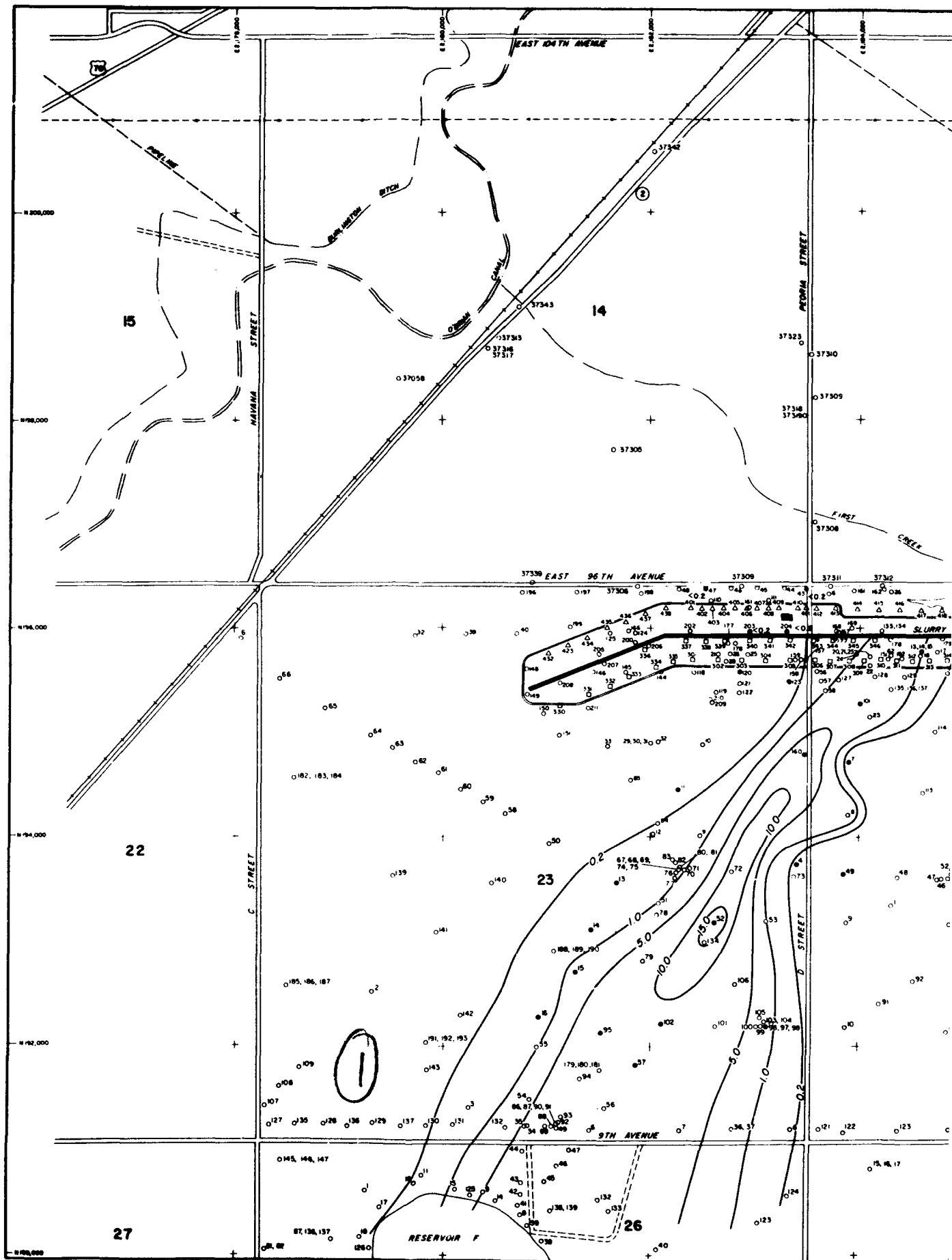
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE, ROOM 100-1
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

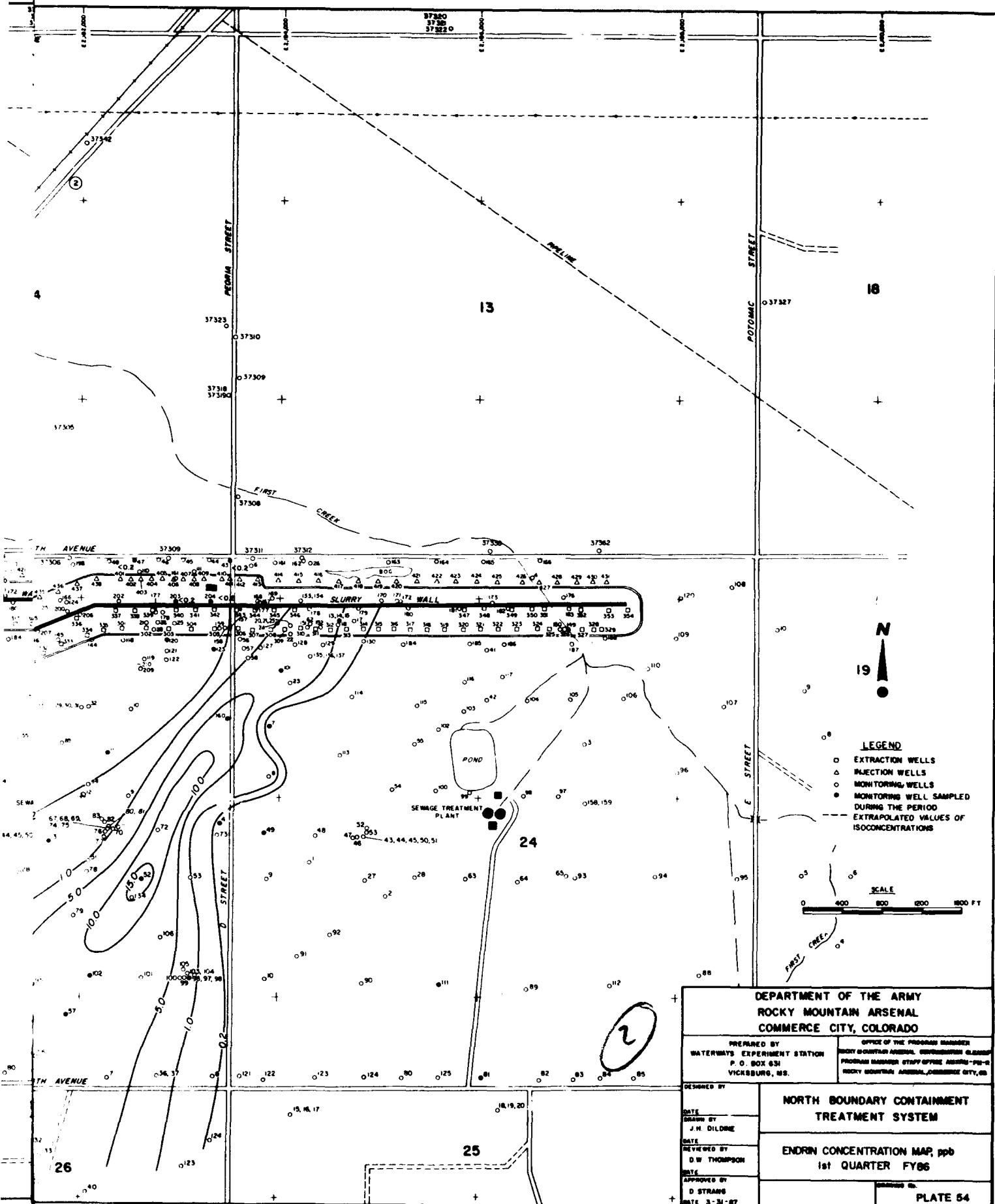
DESIGNED BY
DATE
DRAWN BY
J.H. DILLMORE
DATE
REVIEWED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRANG
DATE 3-21-87

NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

ENDRIN CONCENTRATION MAP, ppb
4th QUARTER FY 85

PLATE 63





DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, ENVIRONMENTAL GROUP
PROGRAM MANAGER STAFF OFFICE (RMSO)-P-10
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY

DATE
DRAWN BY
J. H. DILGHE

DATE
REVIEWED BY
D. W. THOMPSON

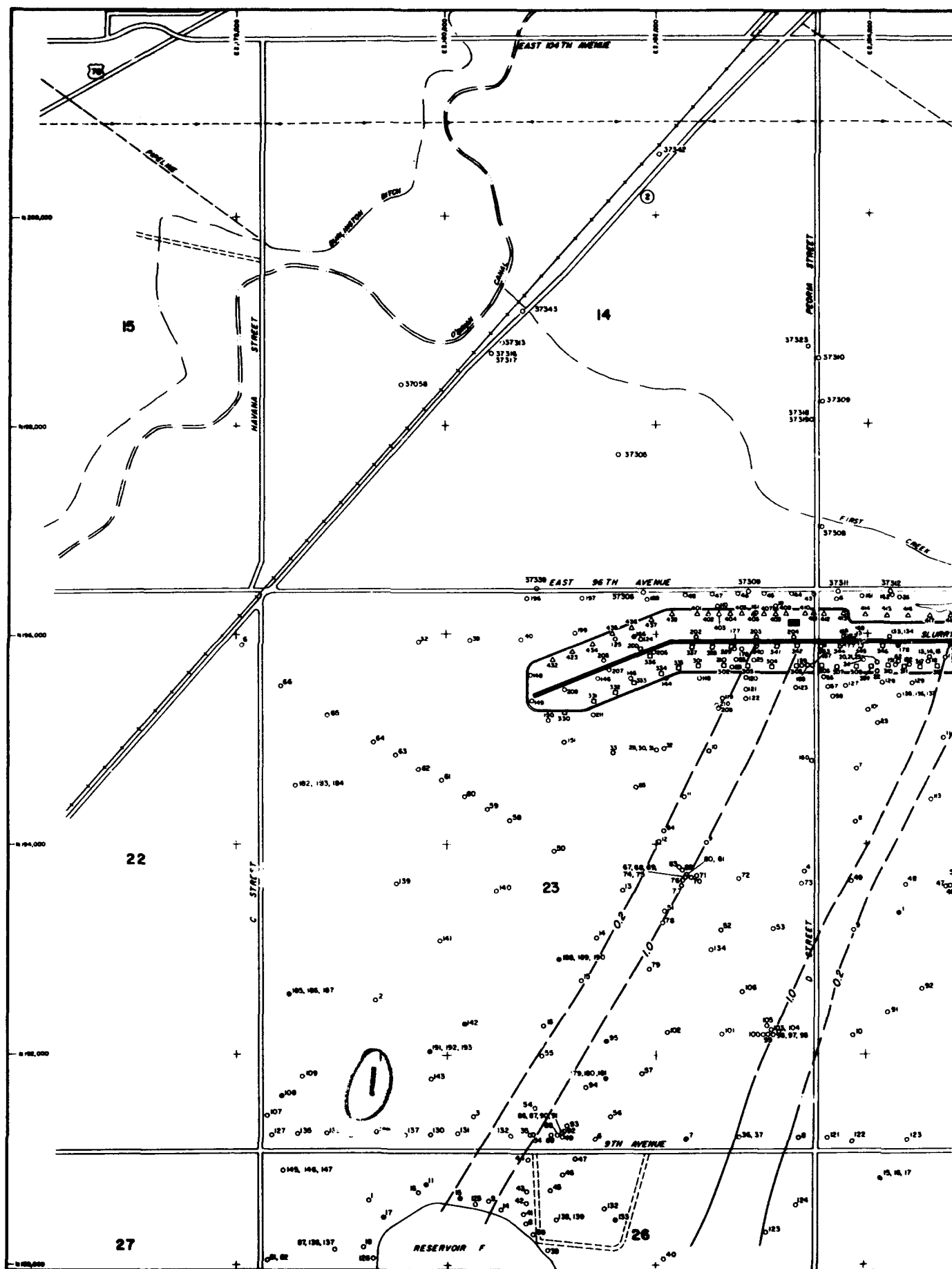
DATE
APPROVED BY
D. STRANG

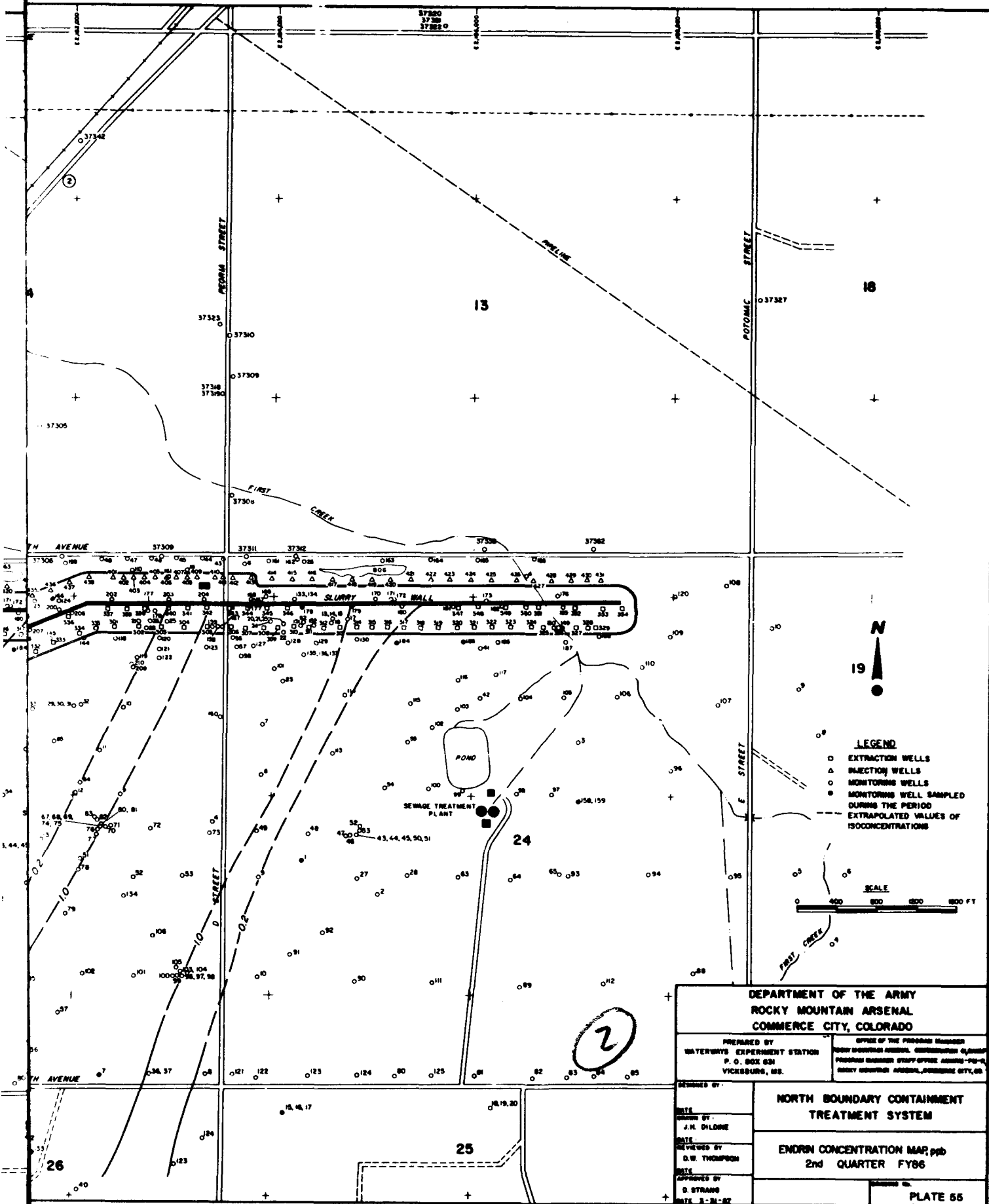
DATE 3-24-87

NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

ENDRIN CONCENTRATION MAP, ppb
1st QUARTER FY86

PLATE 64





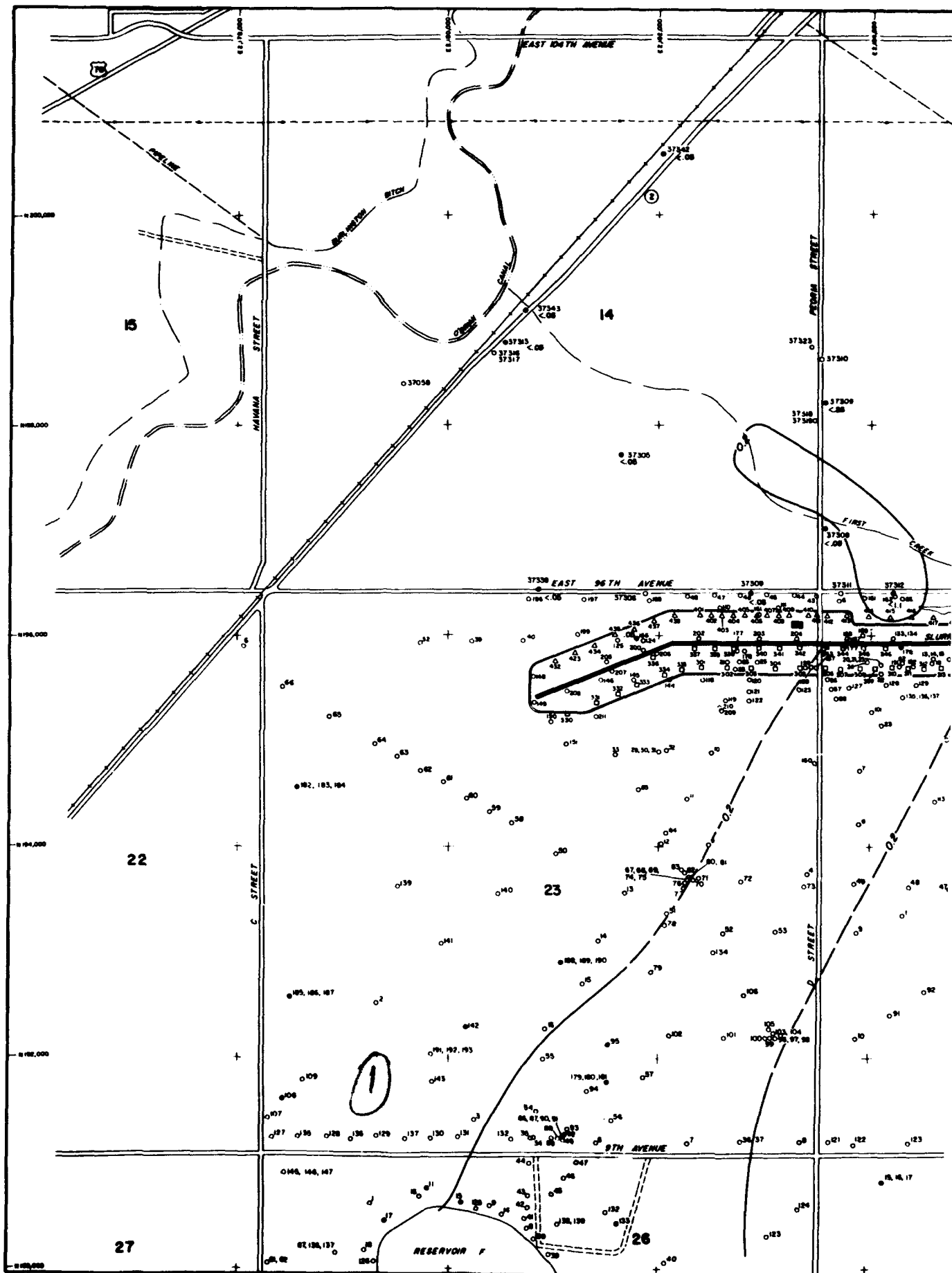
LEGEND

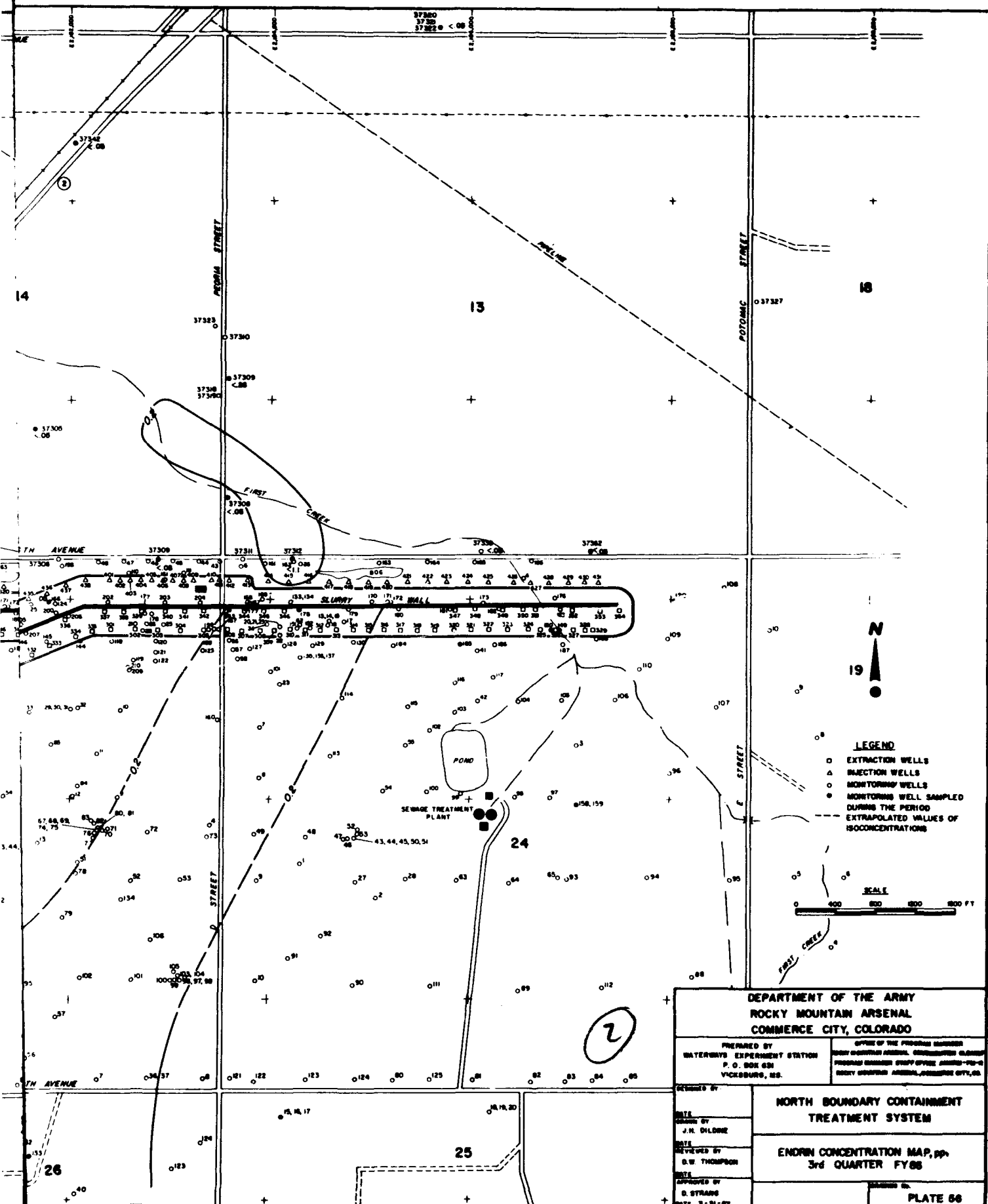
- △ EXTRACTION WELLS
- INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD
- - - - - EXTRAPOLATED VALUES OF ISOCONCENTRATIONS

SCALE

0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCIAL CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 VICKSBURG, MS.	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, COMMERCIAL CITY, CO. PROGRAM MANAGER STAFF OFFICE ARSENAL-PO-15 ARSENAL GROUPING ARSENAL, COMMERCIAL CITY, CO.
DESIGNED BY DATE DRAWN BY J.H. DILLON DATE REVIEWED BY D.W. THOMPSON DATE APPROVED BY D. STRANGE DATE 3-24-87	NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM ENDORN CONCENTRATION MAP, ppb 2nd QUARTER FY86 PLATE 55





LEGEND

- EXTRACTION WELLS
- △ INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD
- EXTRAPOLATED VALUES OF ISOCONCENTRATIONS

SCALE

0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

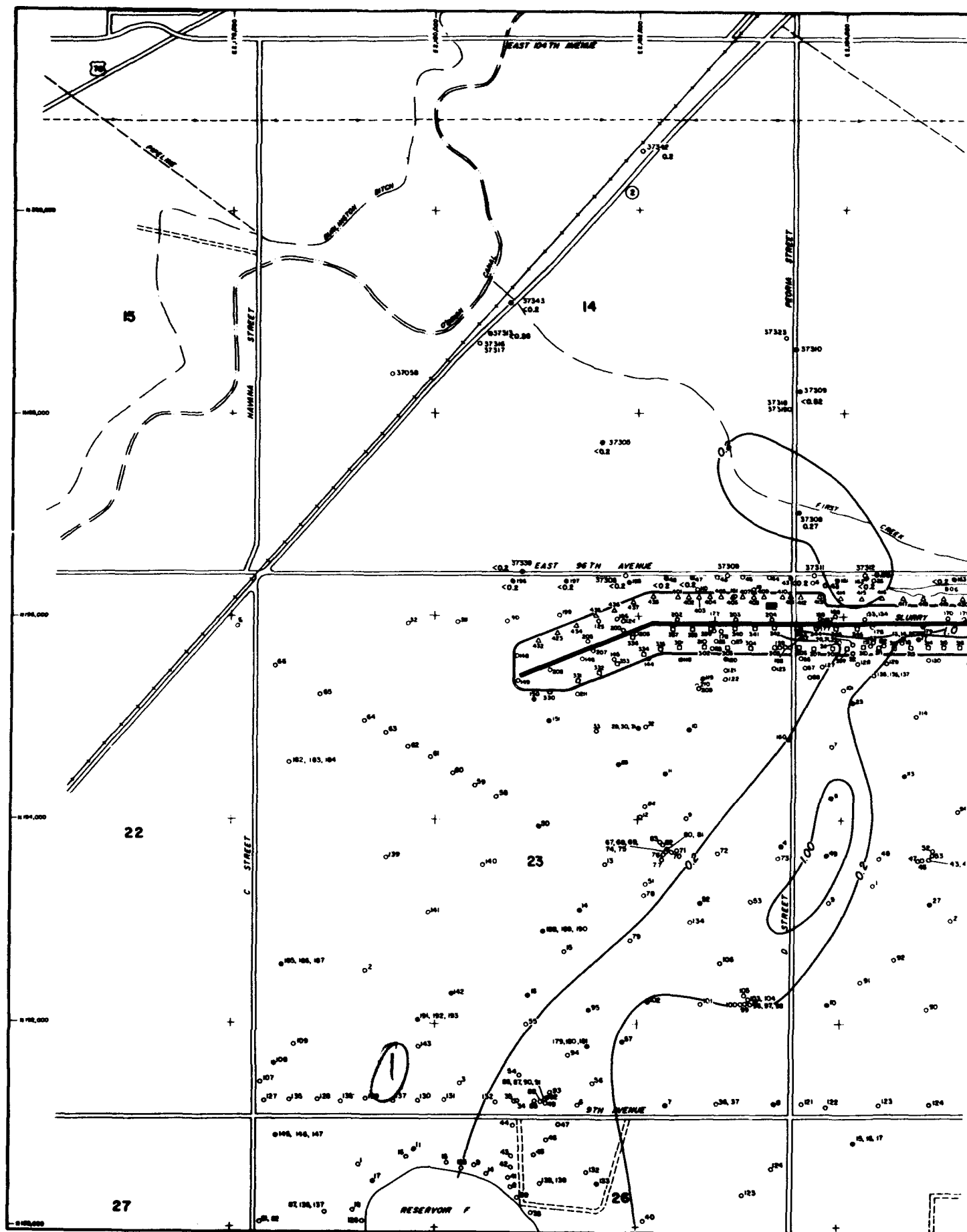
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE, ARSENAL-PM-2
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

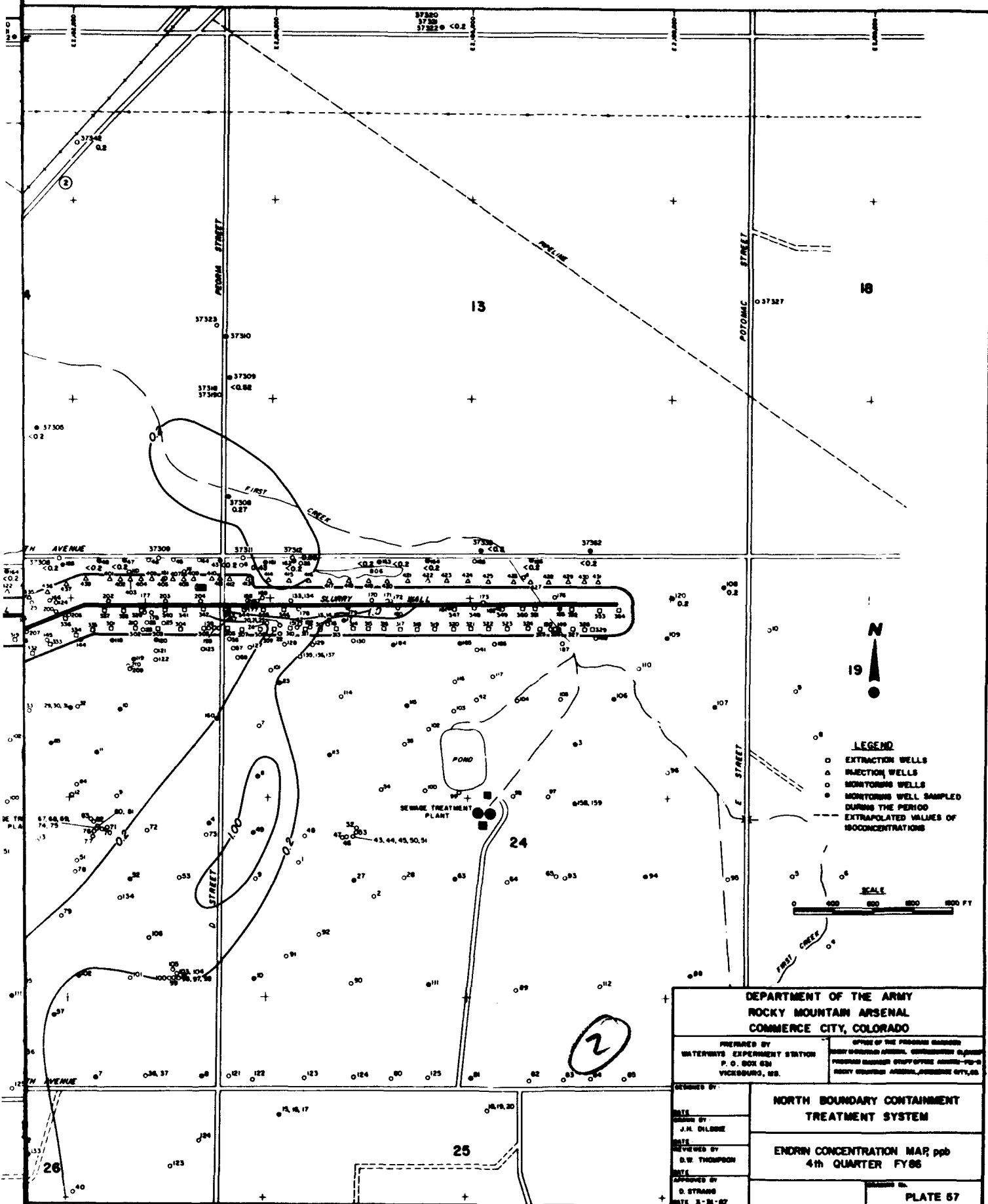
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

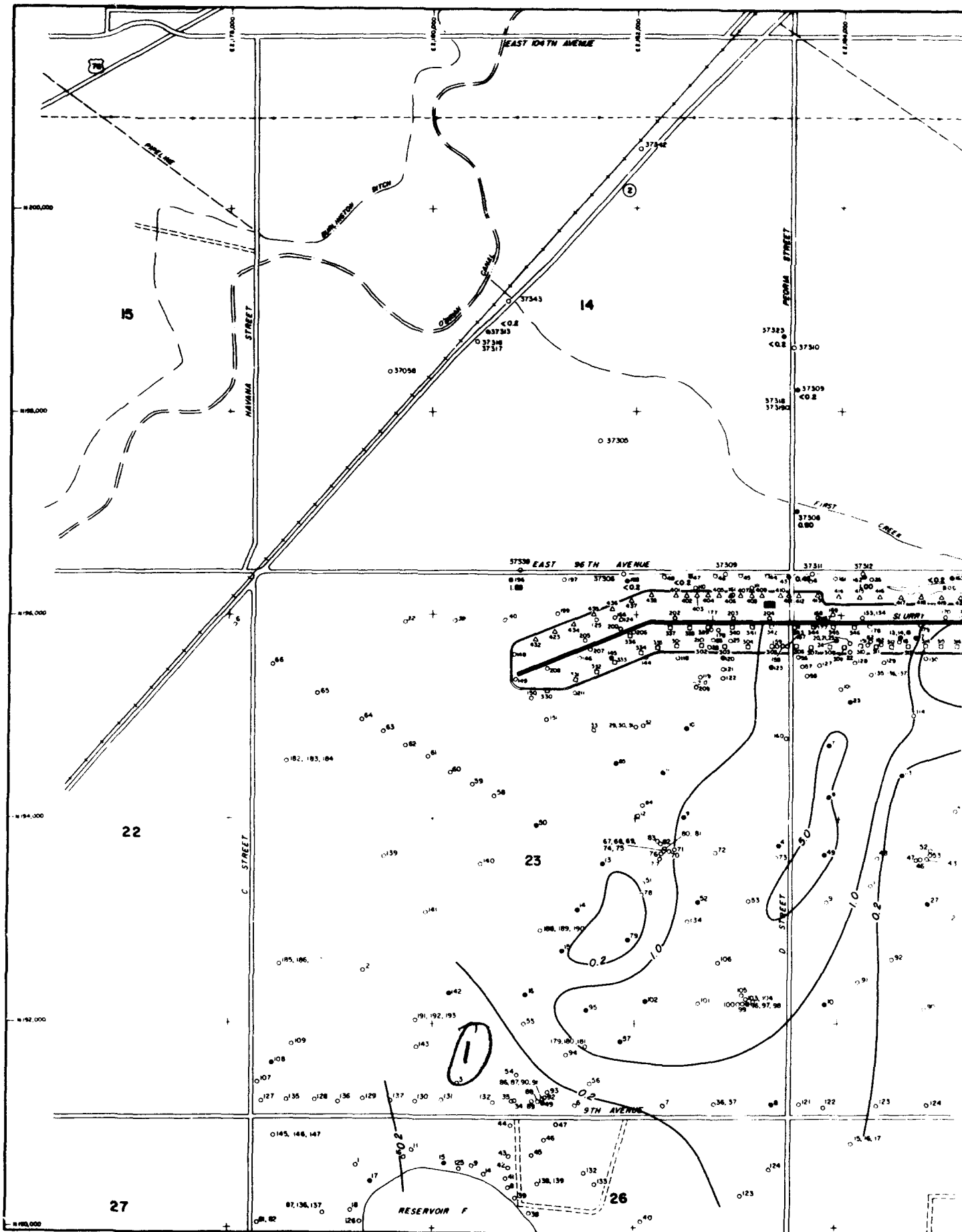
ENDRIN CONCENTRATION MAP, pp.
3rd QUARTER FY68

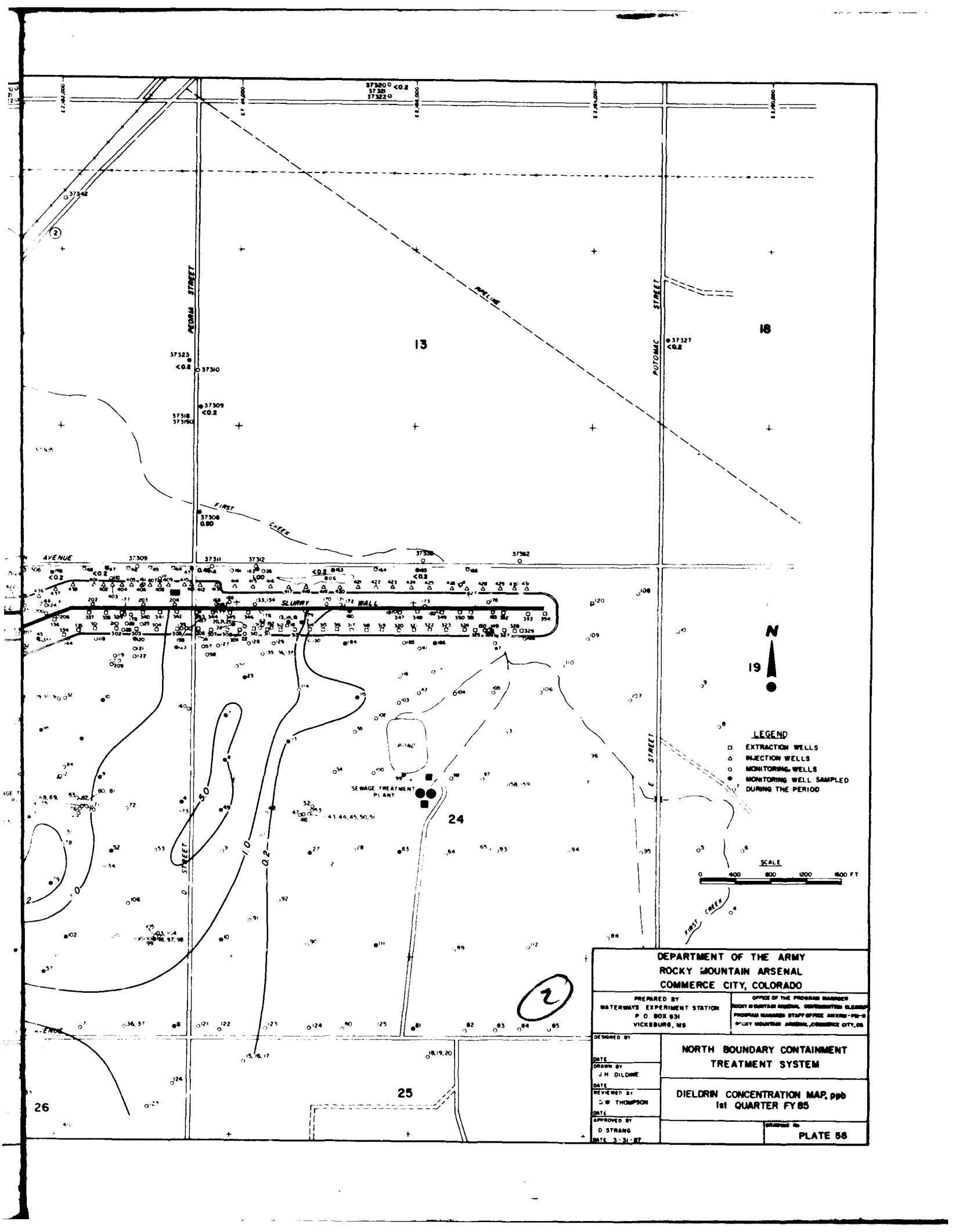
PLATE 66

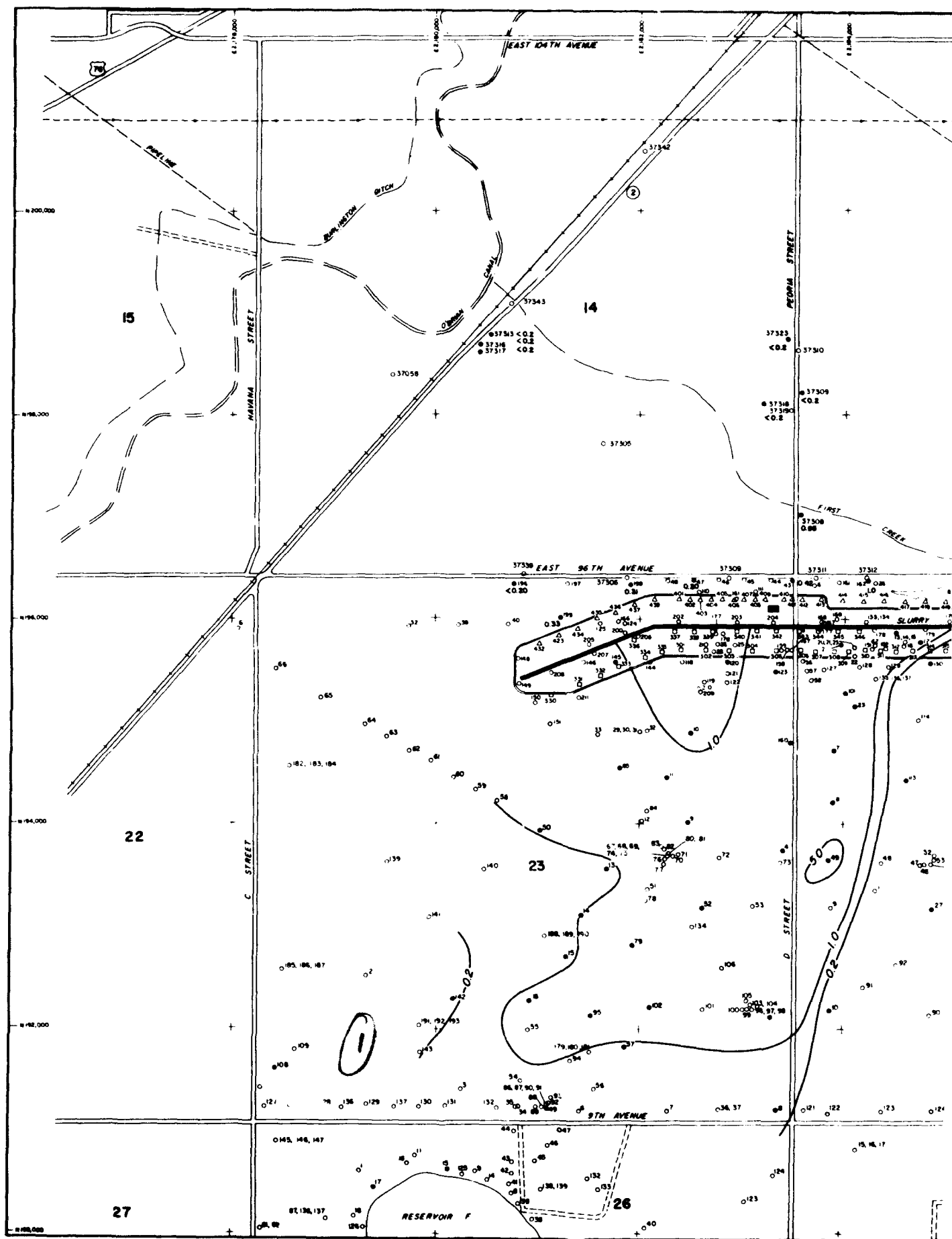
REVIEWED BY
DATE
J.H. DILONE
REVIEWED BY
DATE
S.W. THOMPSON
APPROVED BY
DATE
S. STRANG
DATE
S.-M.-87

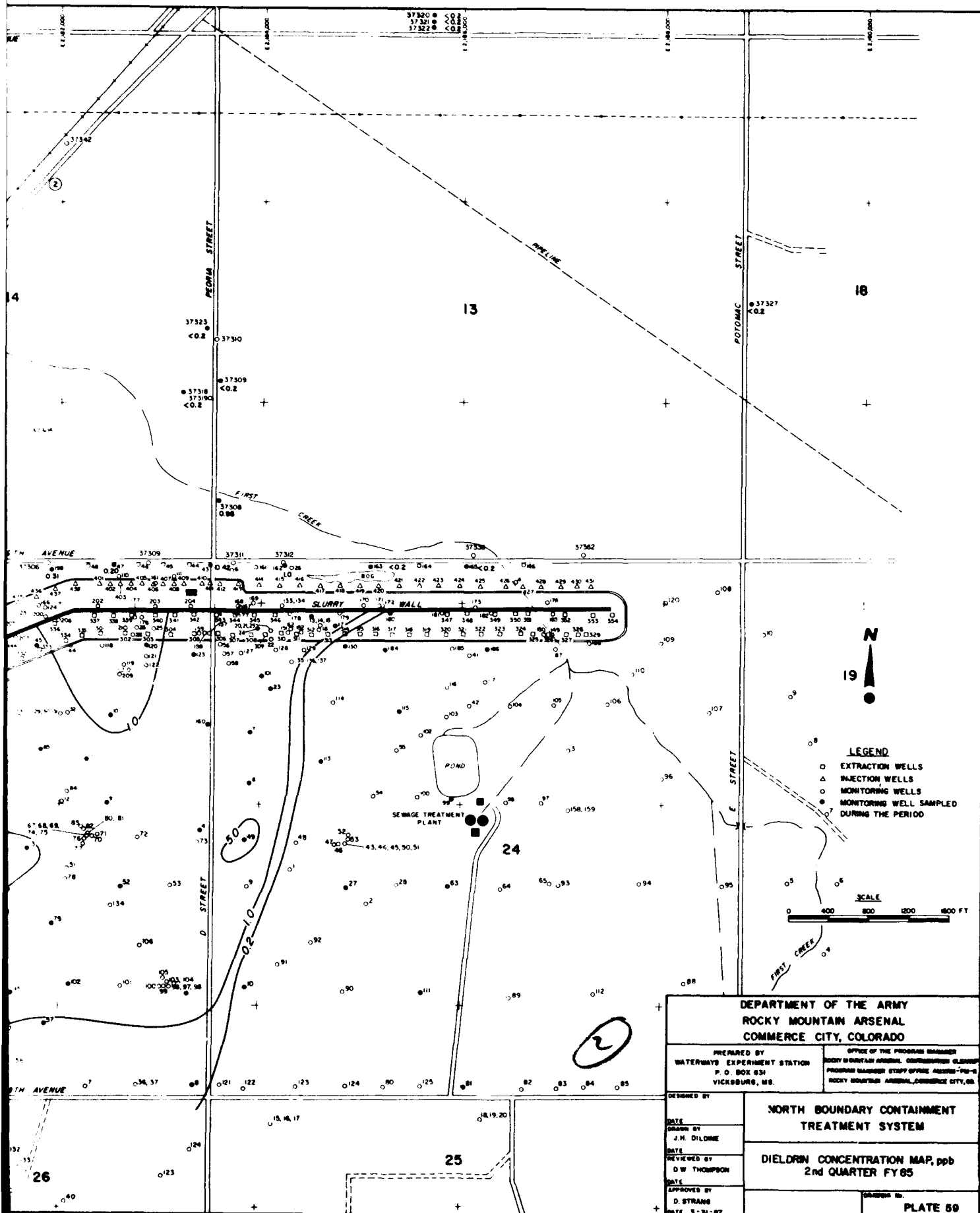












LEGEND

- EXTRACTION WELLS
- INJECTION WELLS
- MONITORING WELLS
- MONITORING WELLS SAMPLED DURING THE PERIOD

SCALE
0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE ARSENAL-PW-1
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE

DRAWN BY

J. M. DILONE

DATE

REVIEWED BY

D. W. THOMPSON

DATE

APPROVED BY

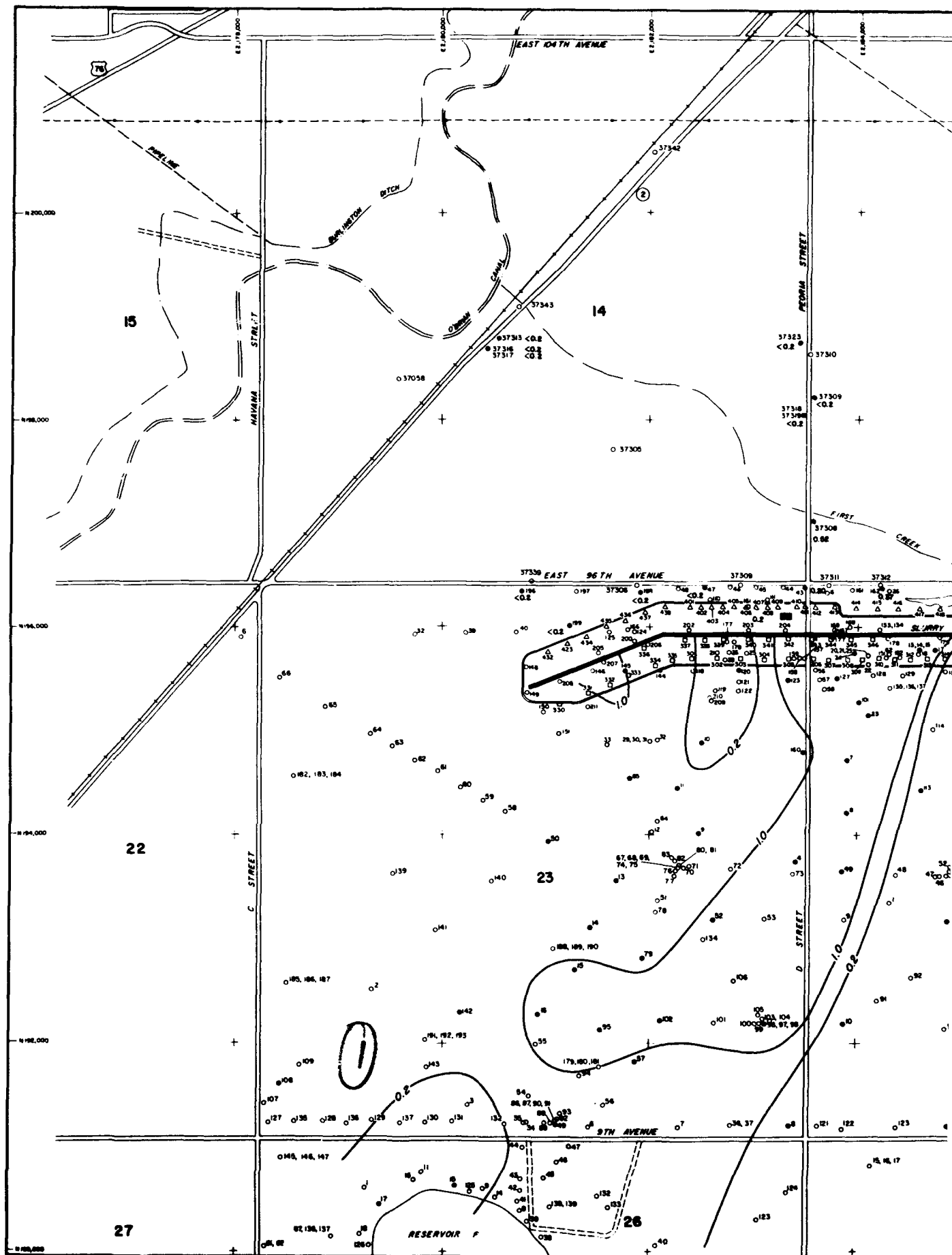
D. STRANG

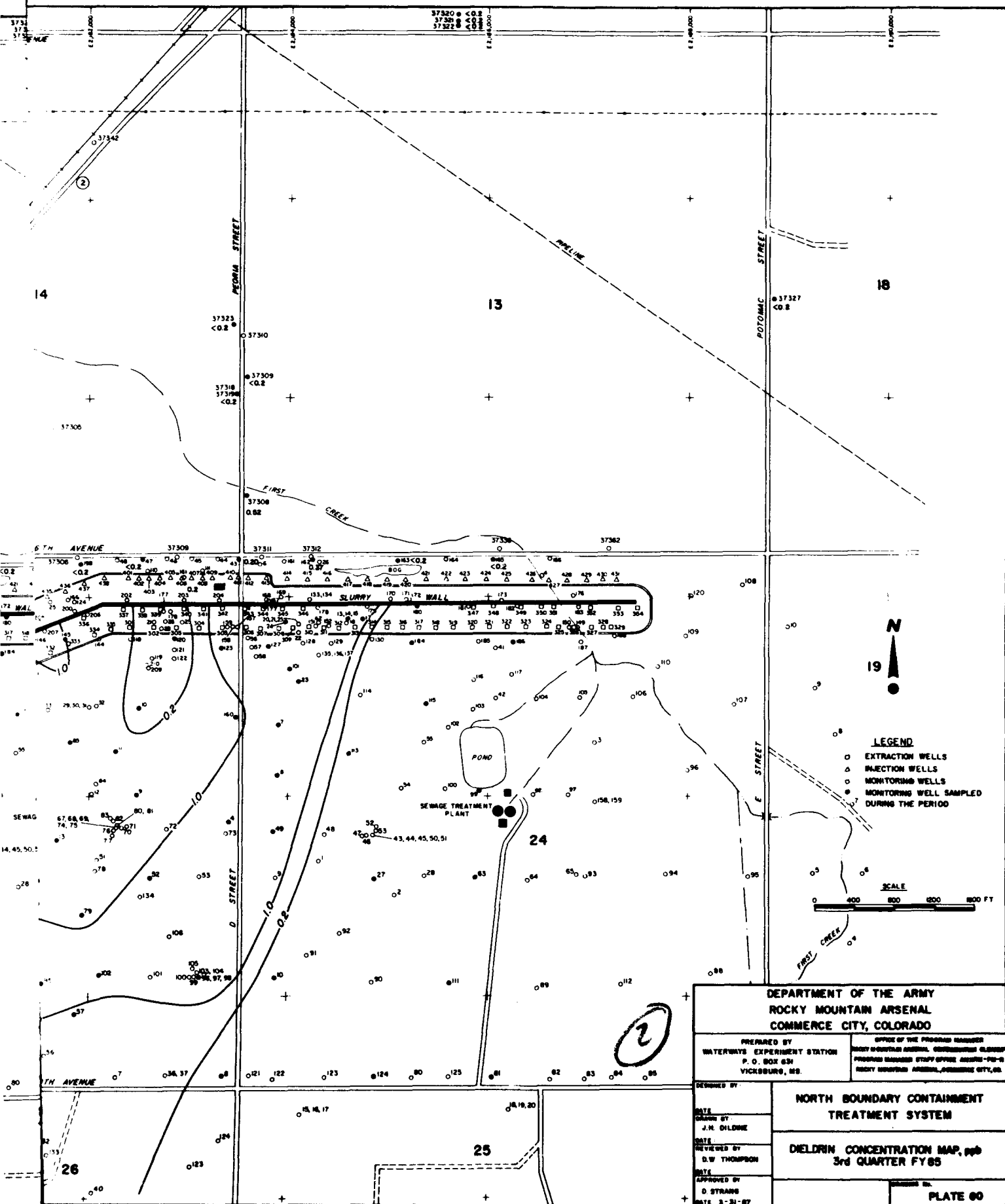
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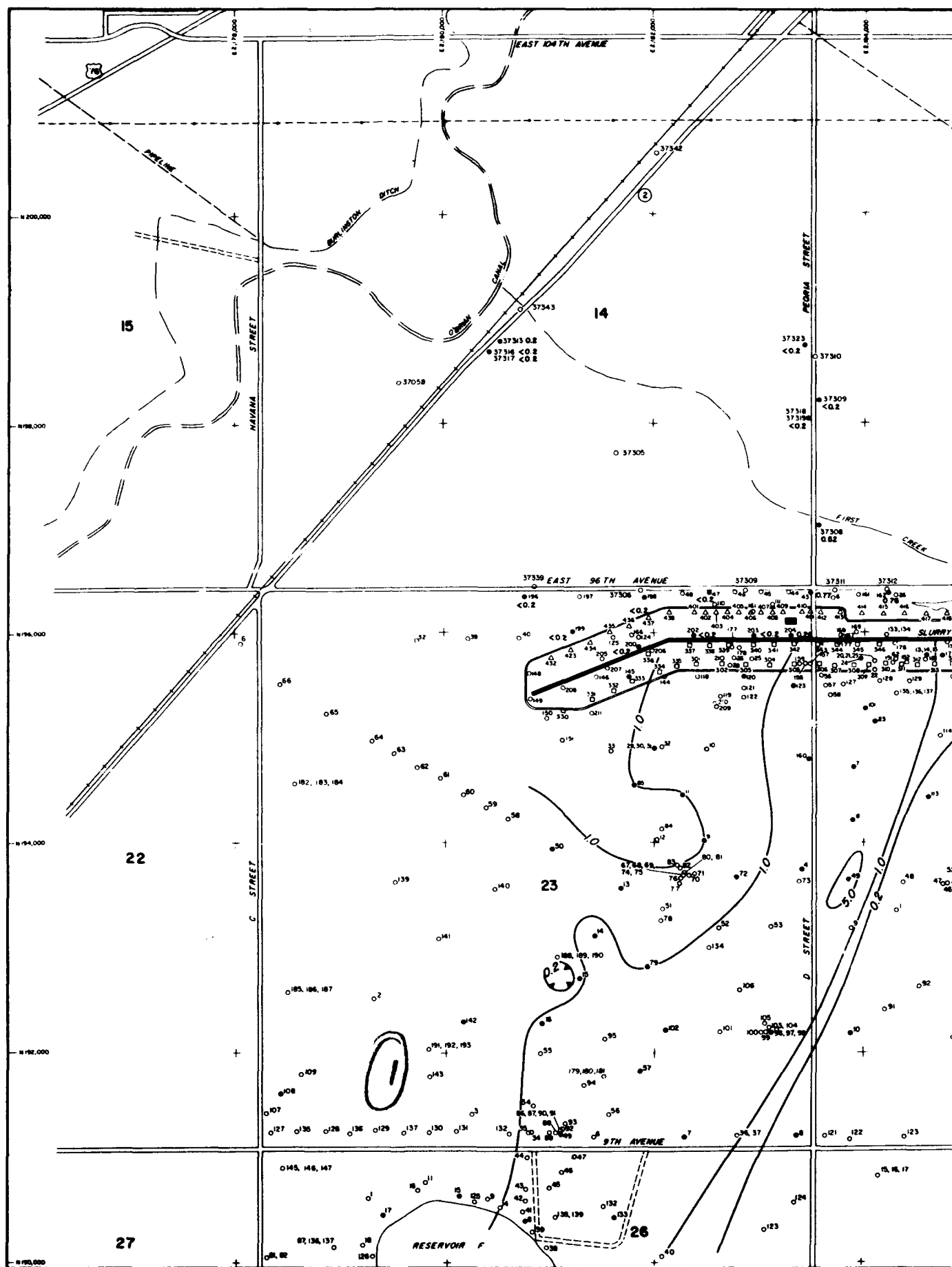
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

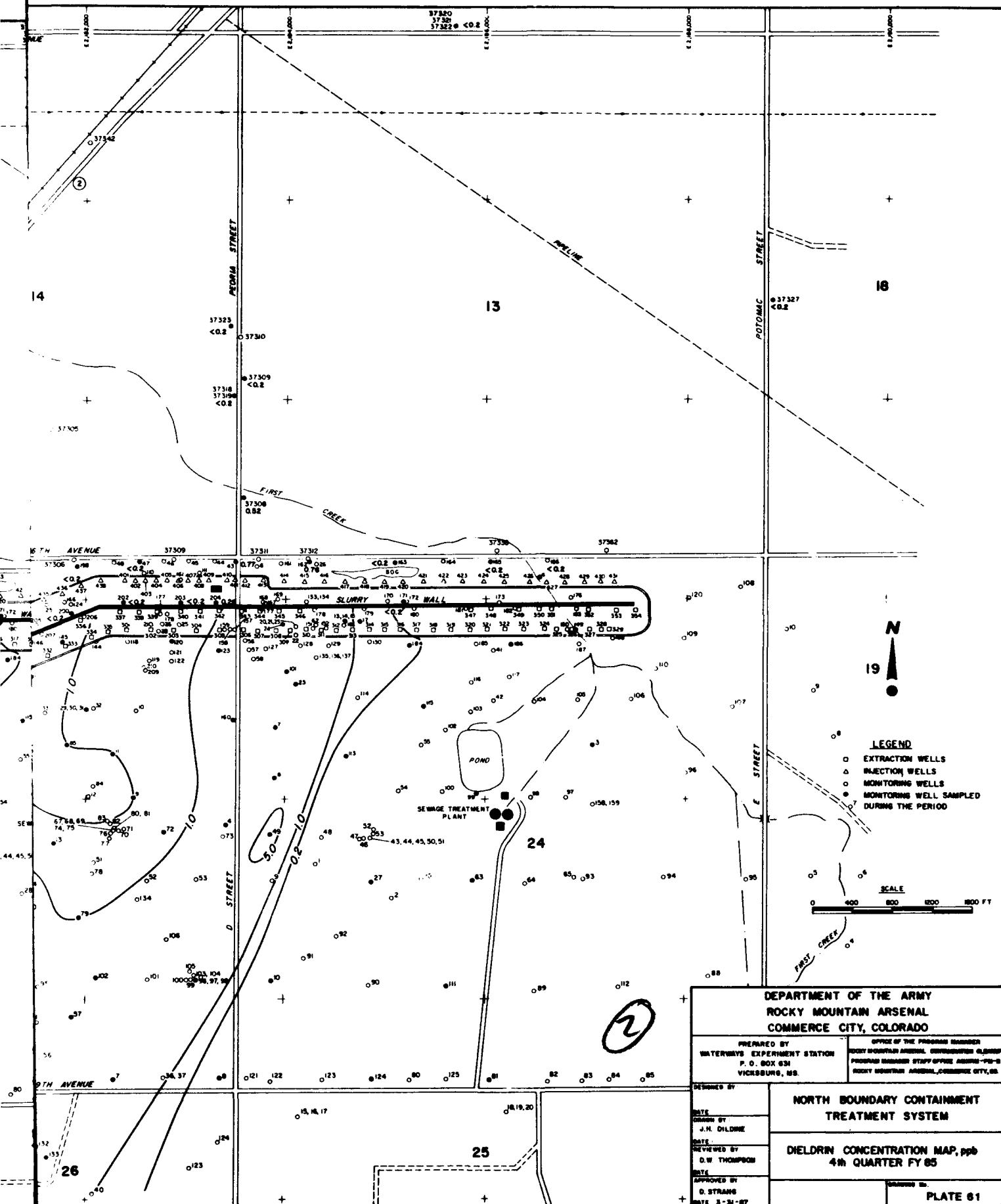
DIELDRIN CONCENTRATION MAP, ppb
2nd QUARTER FY 85

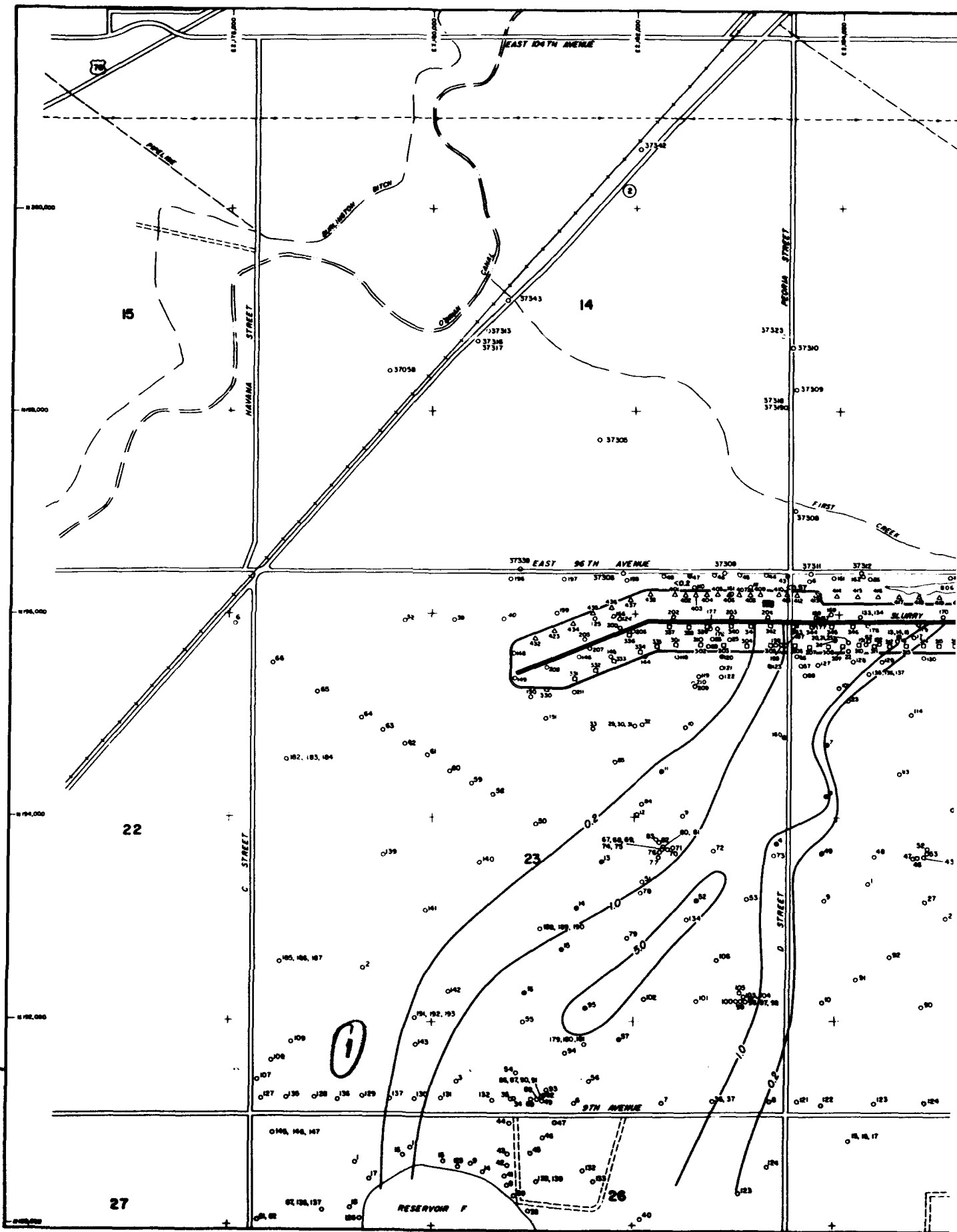
PLATE 59

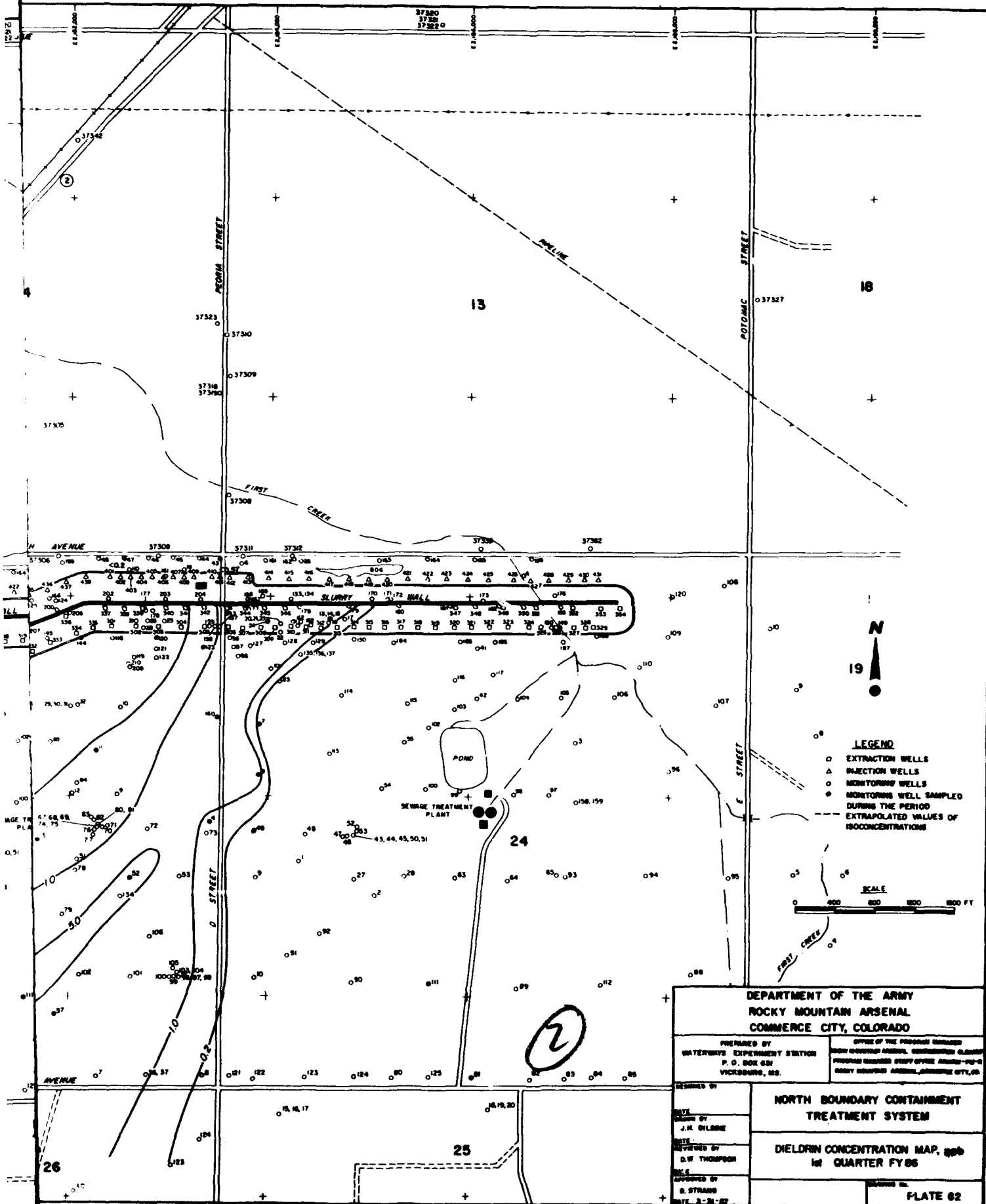


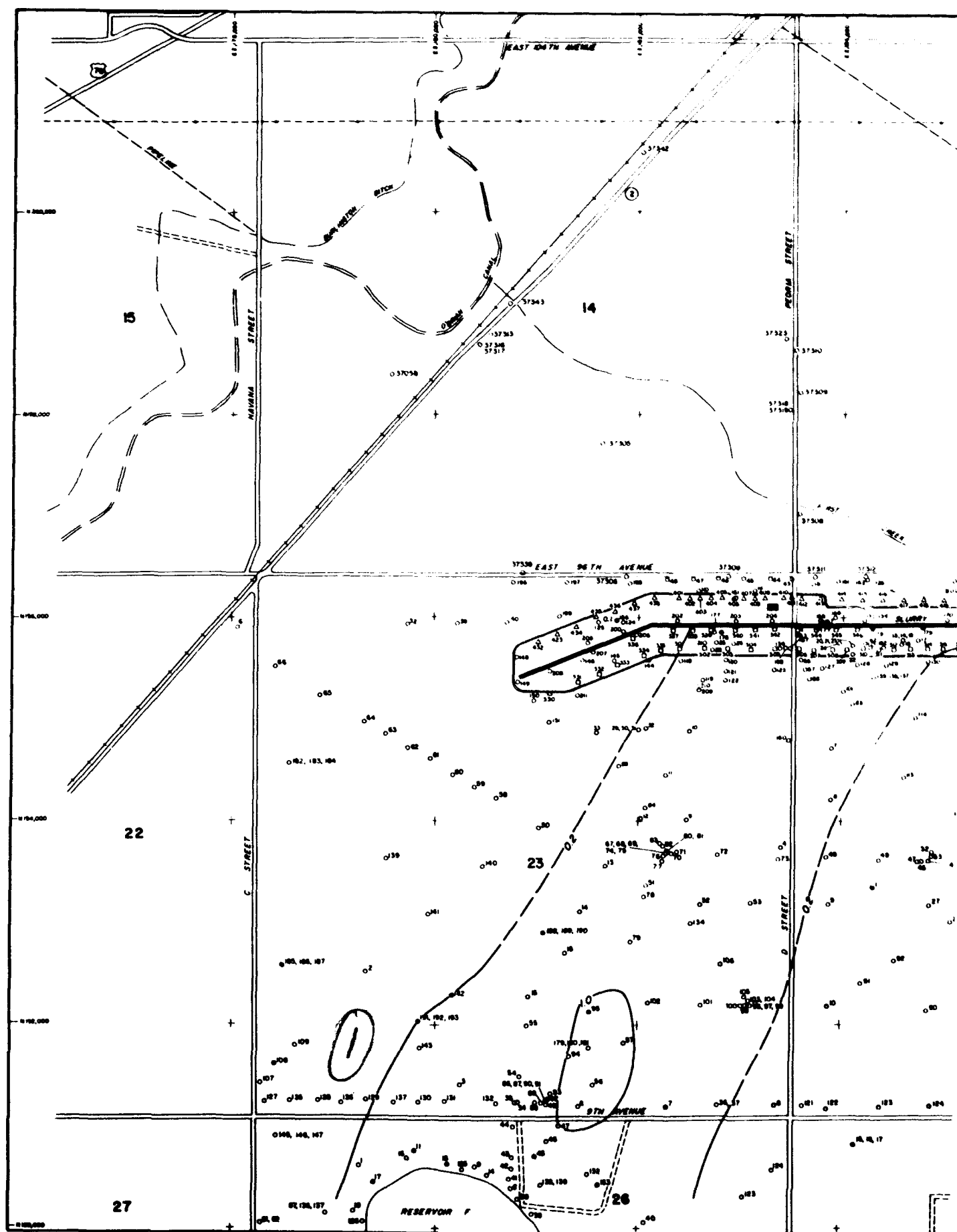


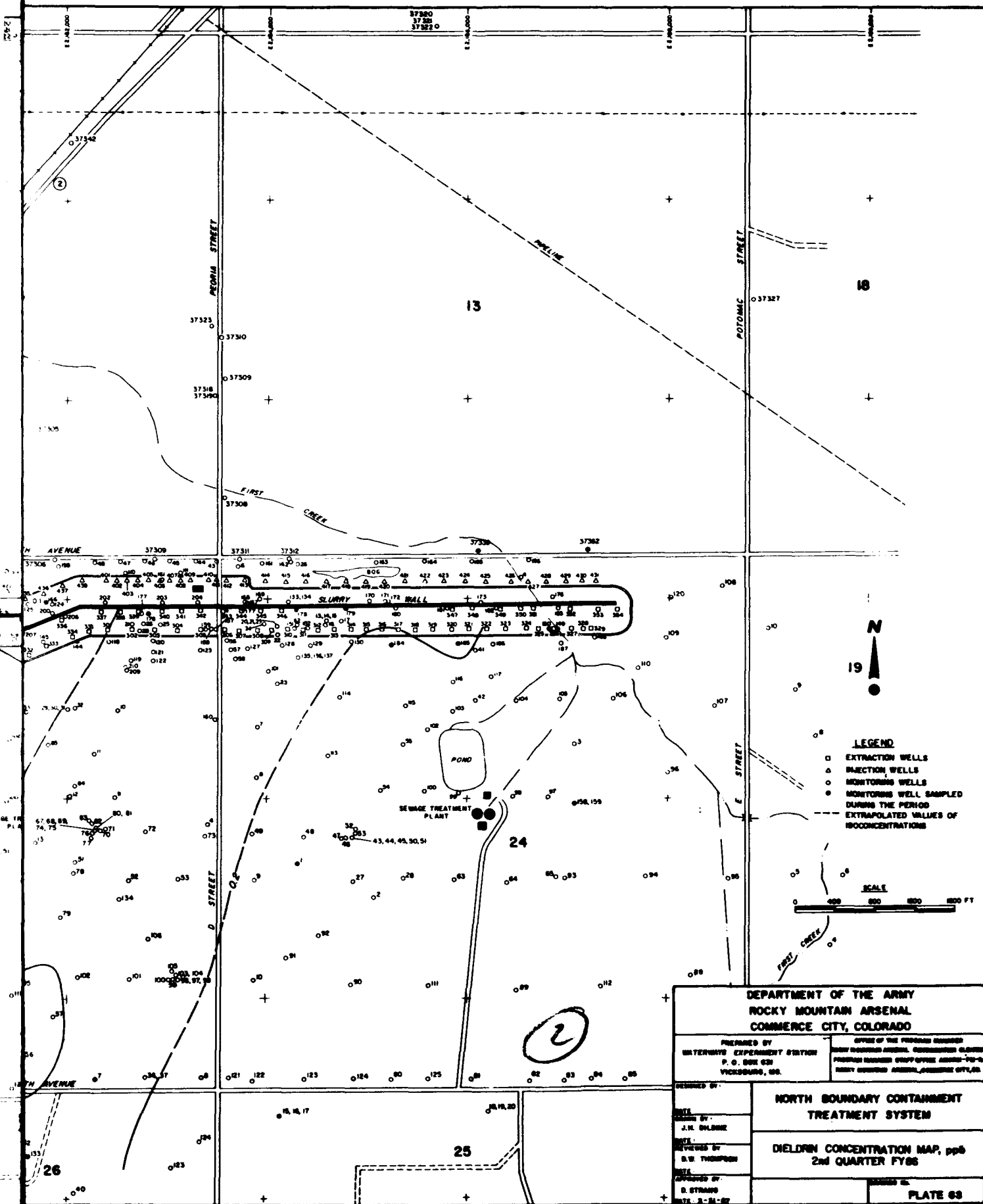


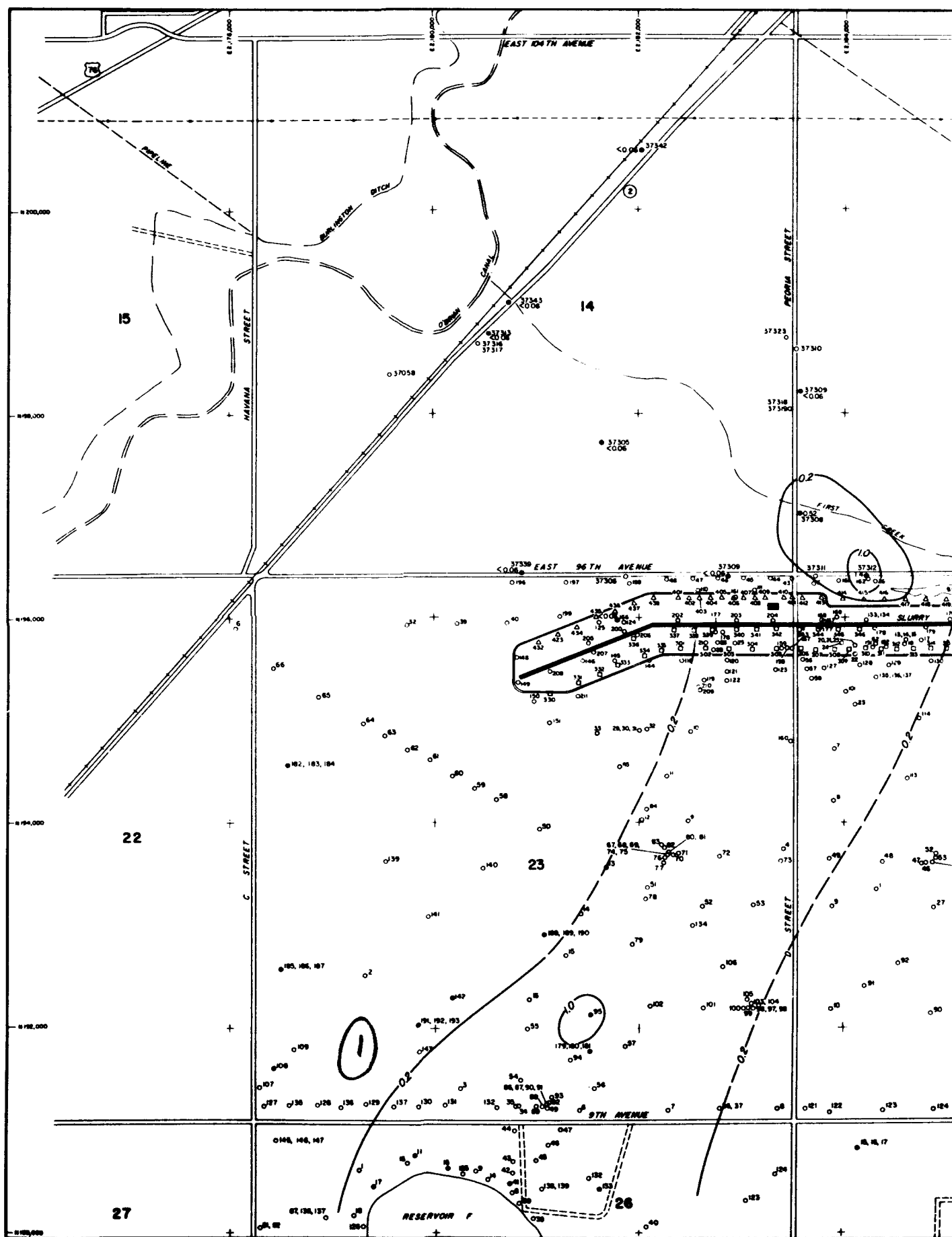


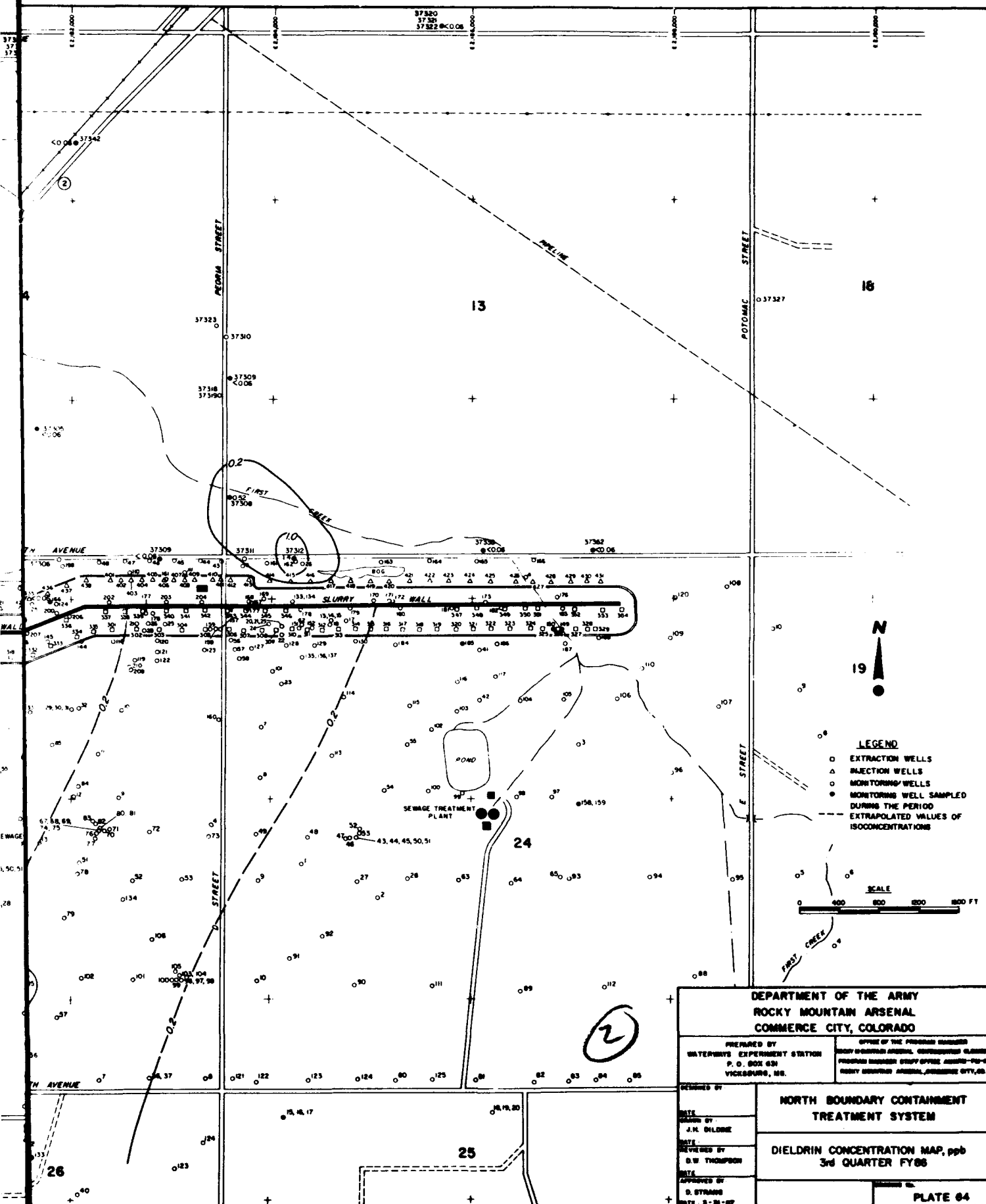












**DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO**

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

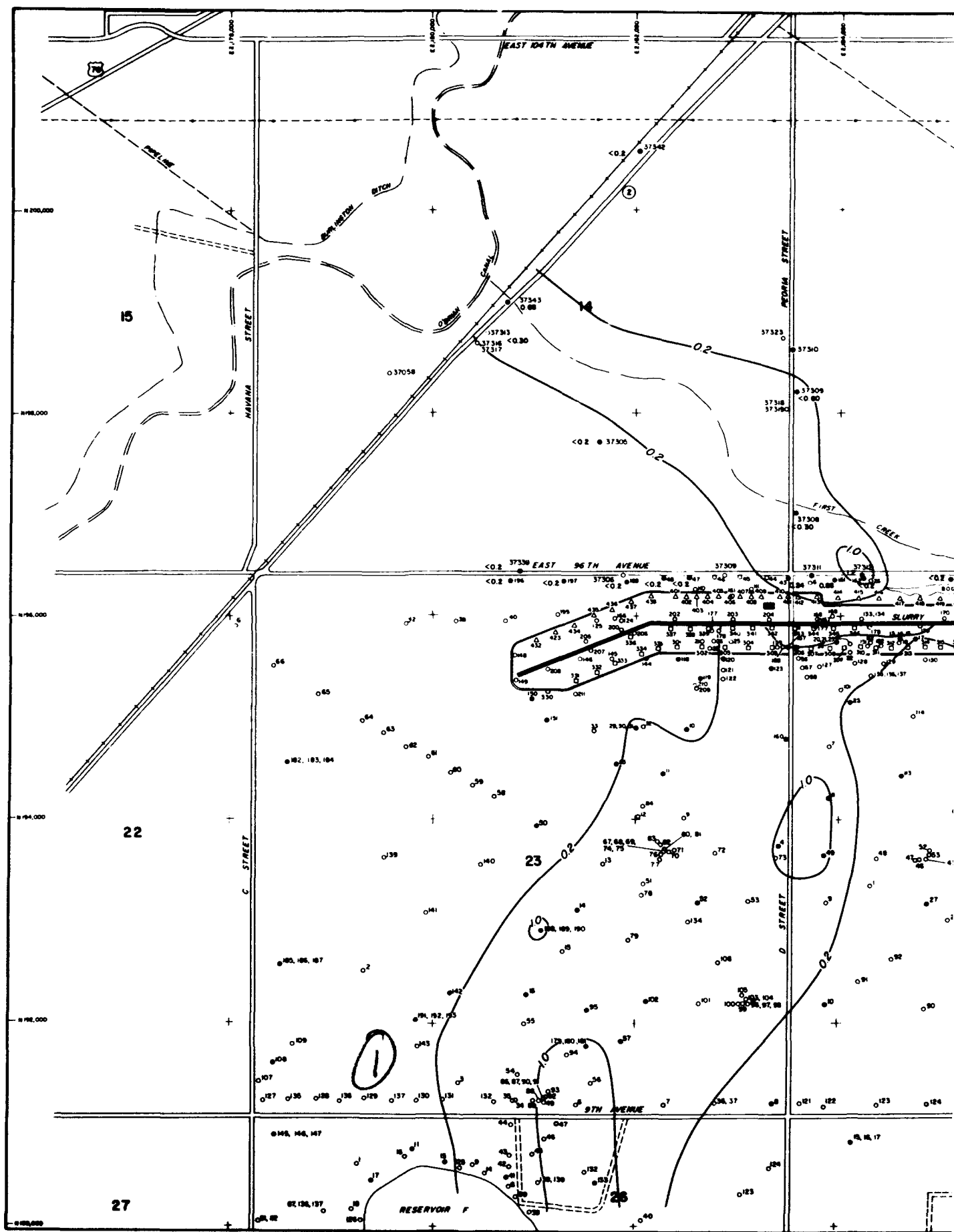
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE ARSENAL-PM-4
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

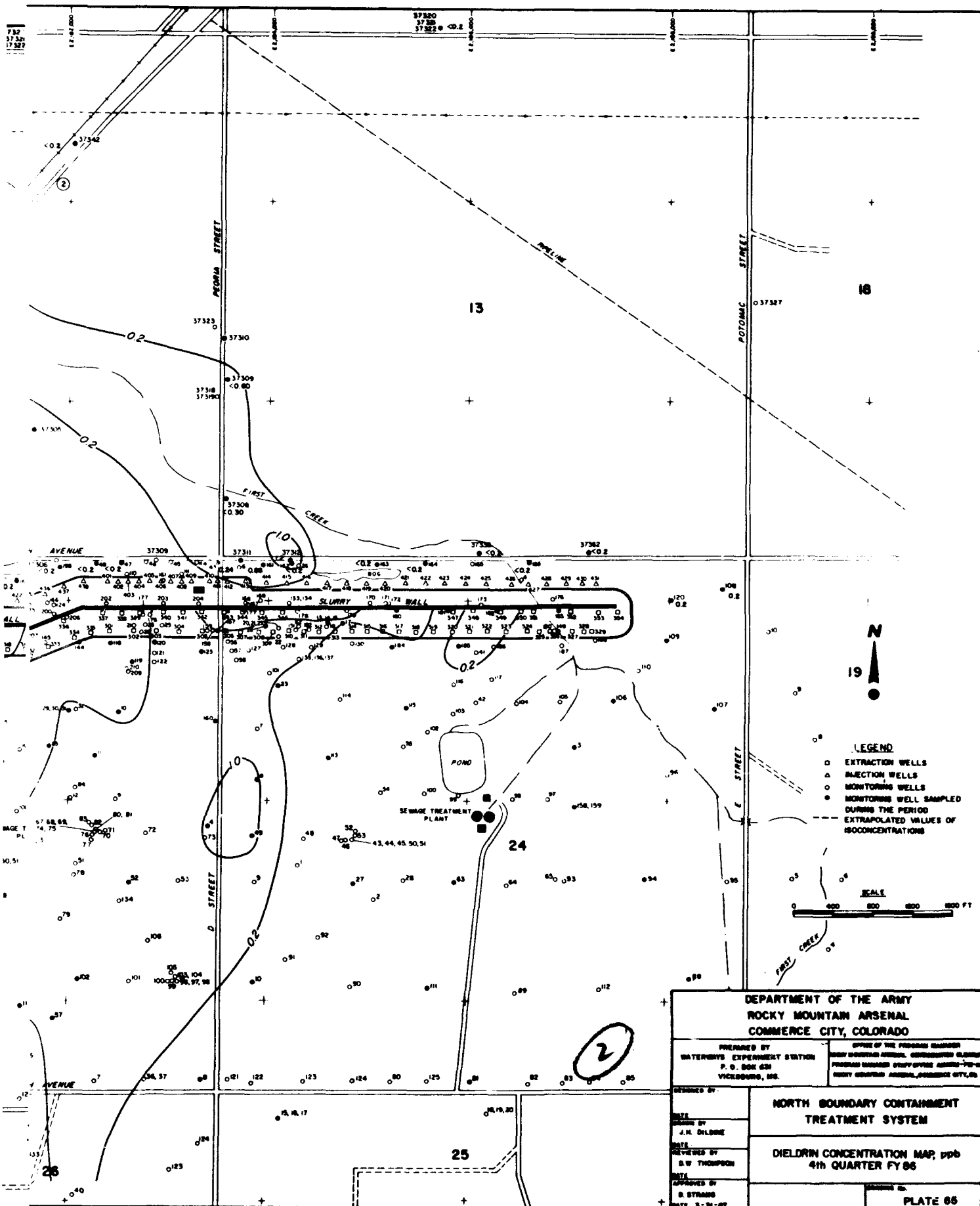
DESIGNED BY
DATE
DRAWN BY
J.H. DYLANE
CHECKED BY
D.W. THOMPSON
DATE
APPROVED BY
D. STRANG
DATE 8-28-67

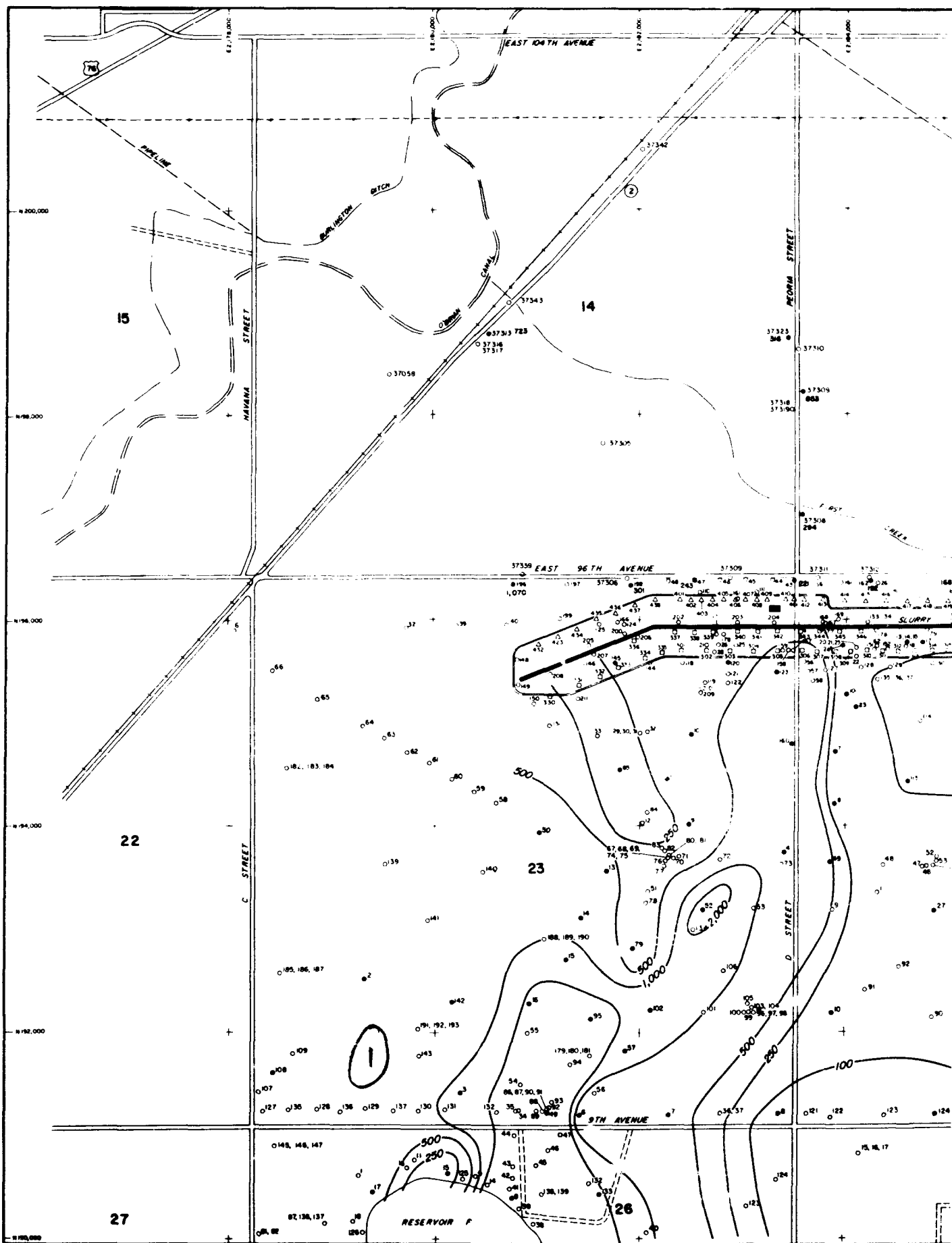
**NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM**

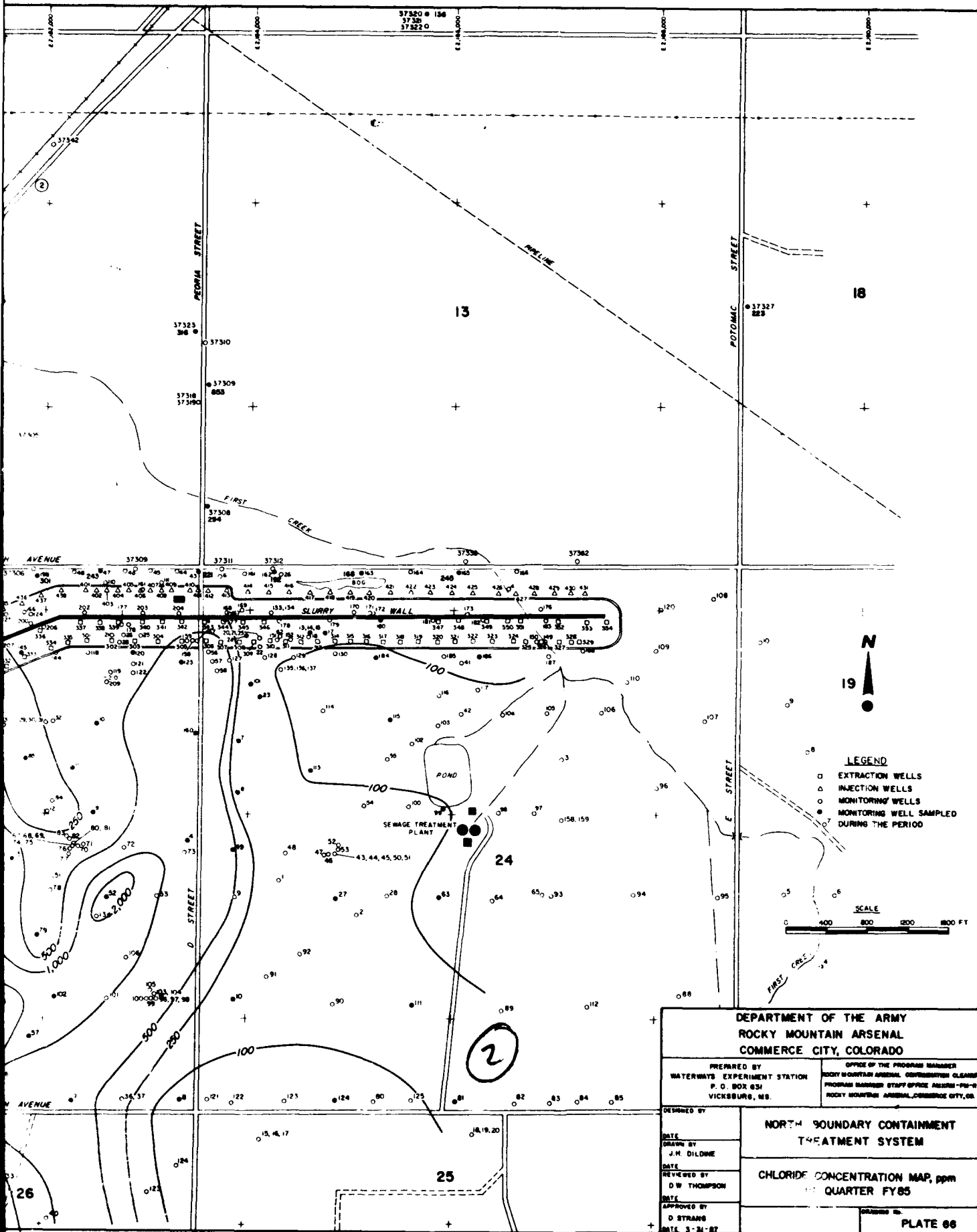
**DIELDRIN CONCENTRATION MAP, ppb
3rd QUARTER FY68**

PLATE 64









DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
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VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE, ALBANY, NY

DESIGNED BY

DATE
DRAWN BY
J. M. DILWINE

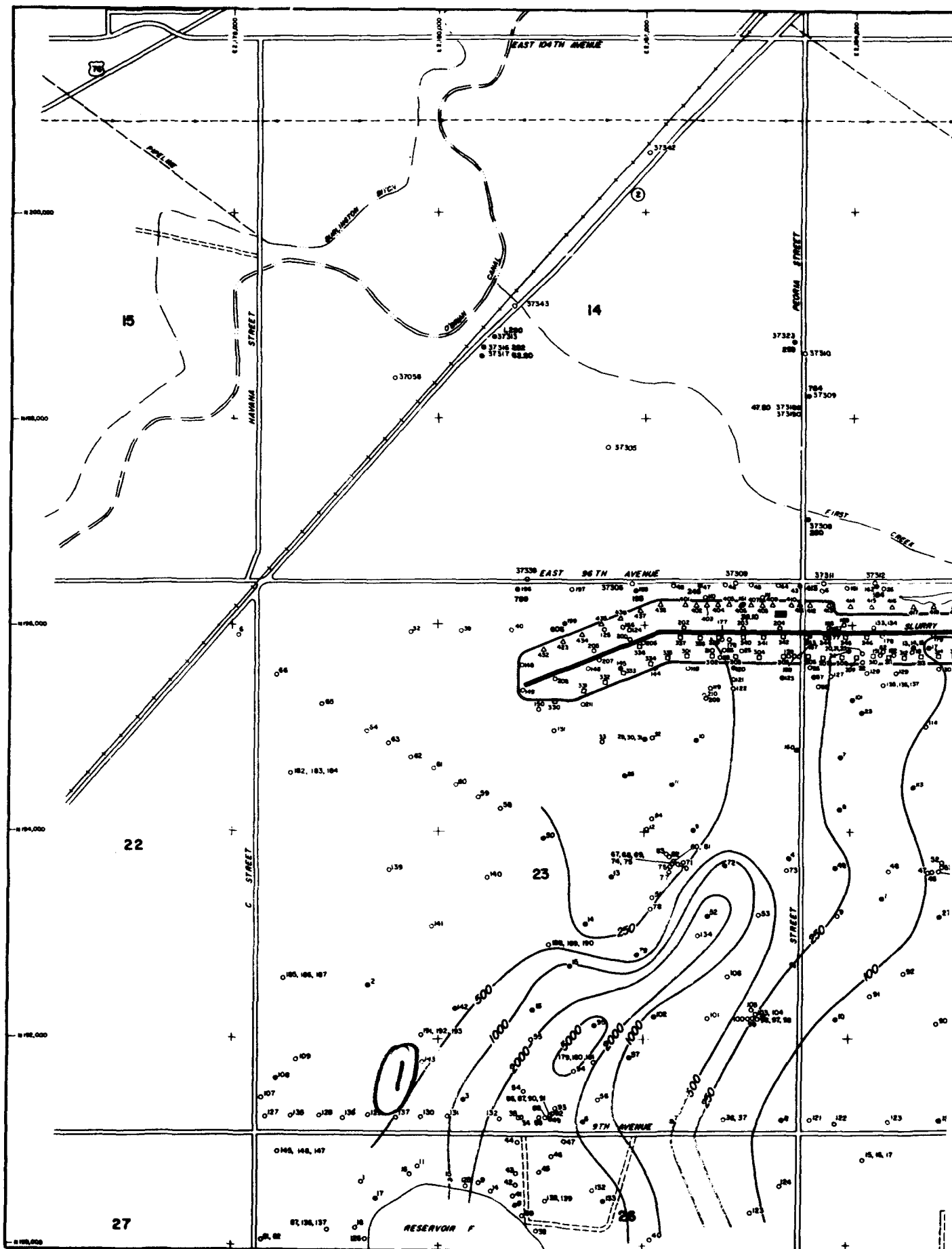
DATE
REVIEWED BY
D. W. THOMPSON

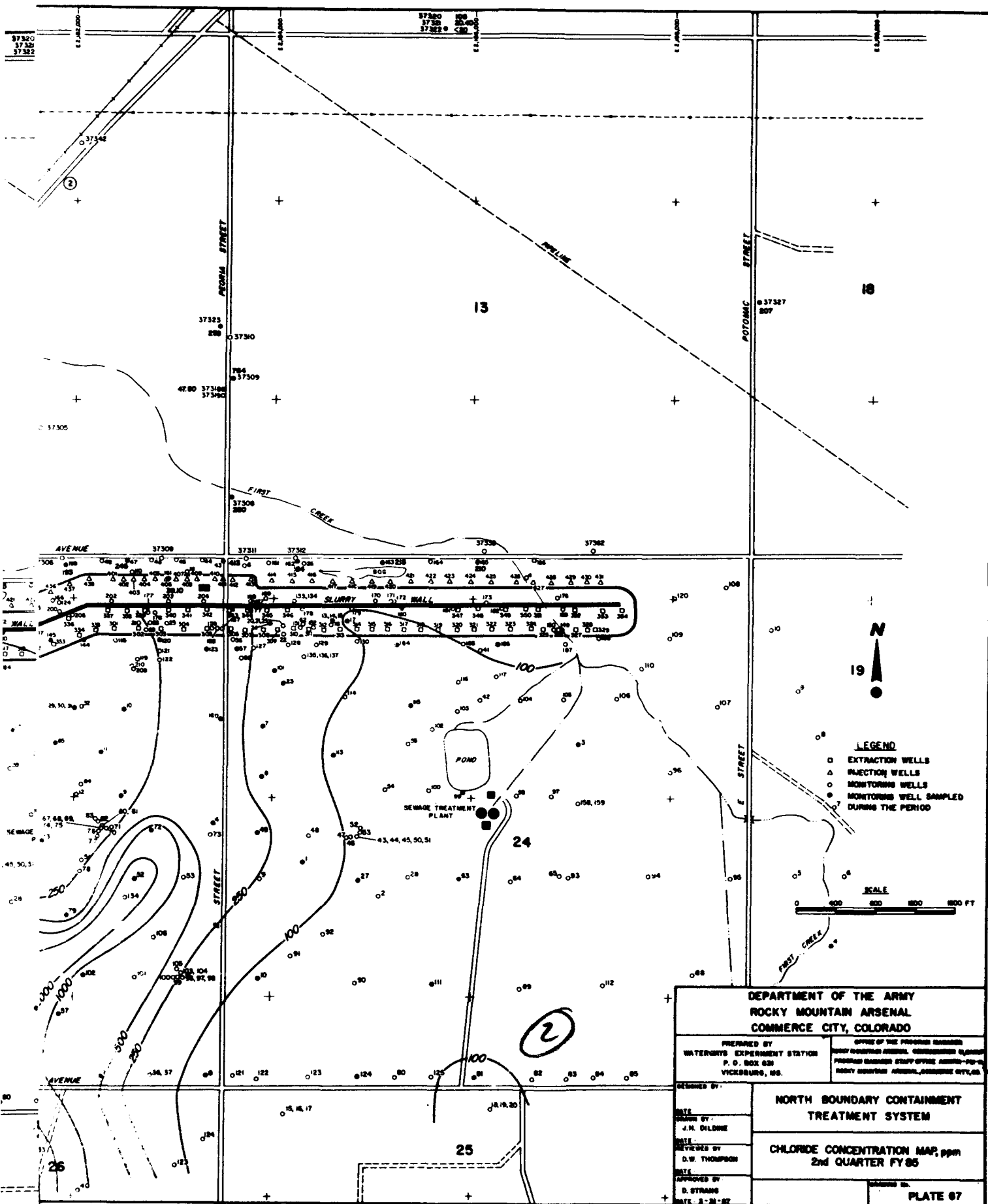
DATE
APPROVED BY
D. STRANG
DATE 3-31-87

NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

CHLORIDE CONCENTRATION MAP, ppm
QUARTER FY85

PLATE 66





DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 636
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER: STAFF OFFICE, ARSENAL-POT-10
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY:

DATE:
DRAWN BY:
J. H. DILLON

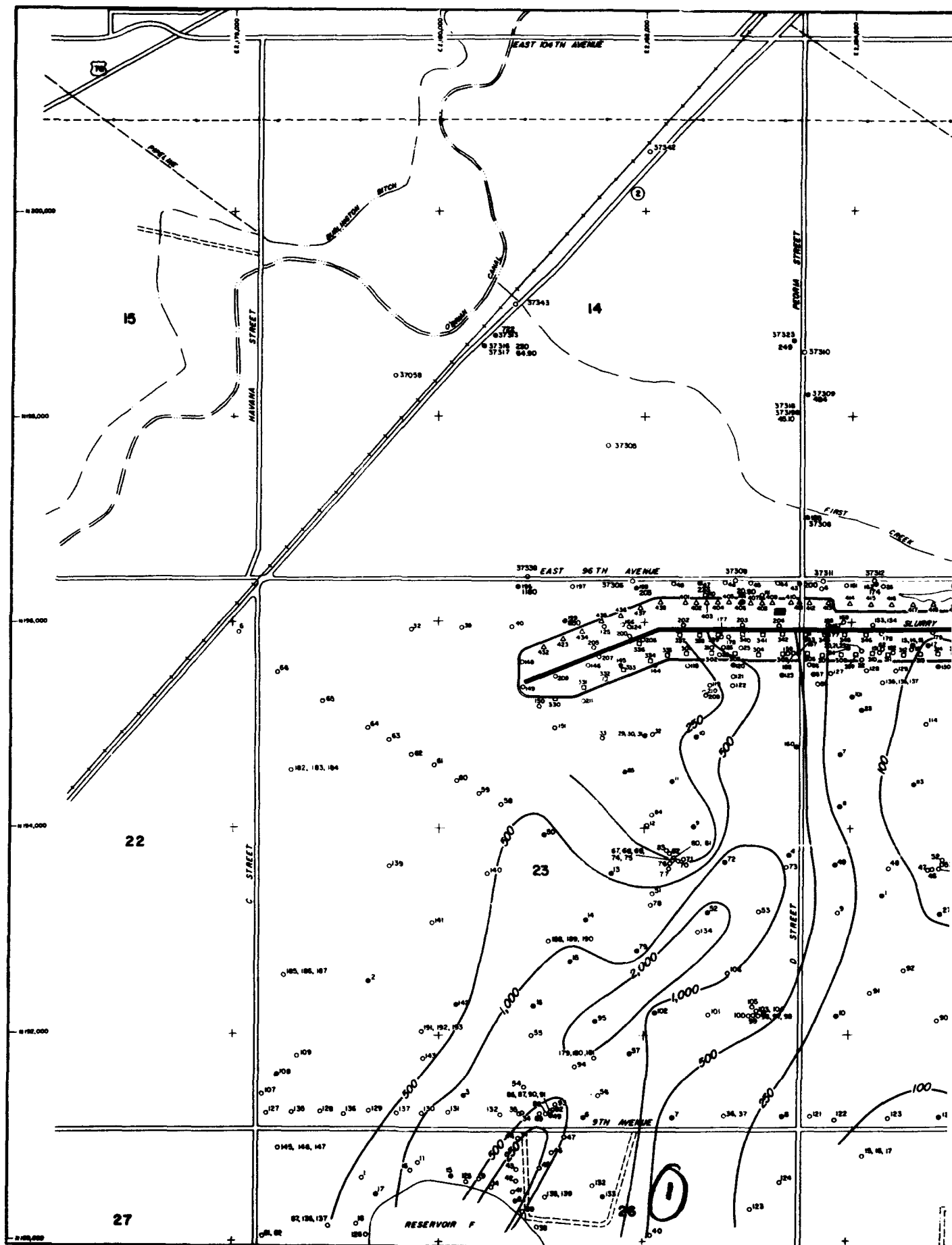
DATE:
REVIEWED BY:
D. W. THOMPSON

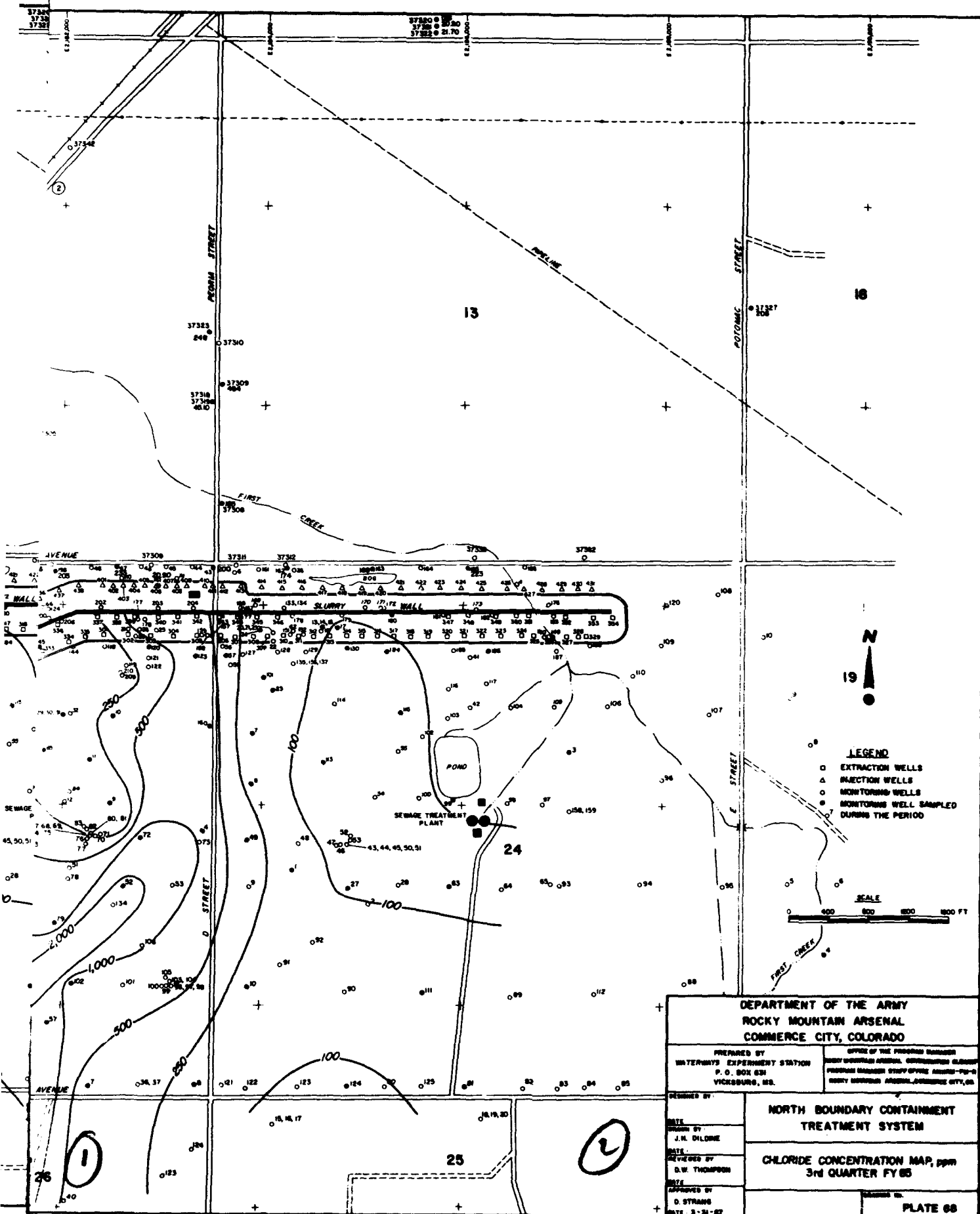
DATE:
APPROVED BY:
D. STRANG
DATE: 2-24-67

NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

CHLORIDE CONCENTRATION MAP, ppm
2nd QUARTER FY 65

PLATE 67





DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

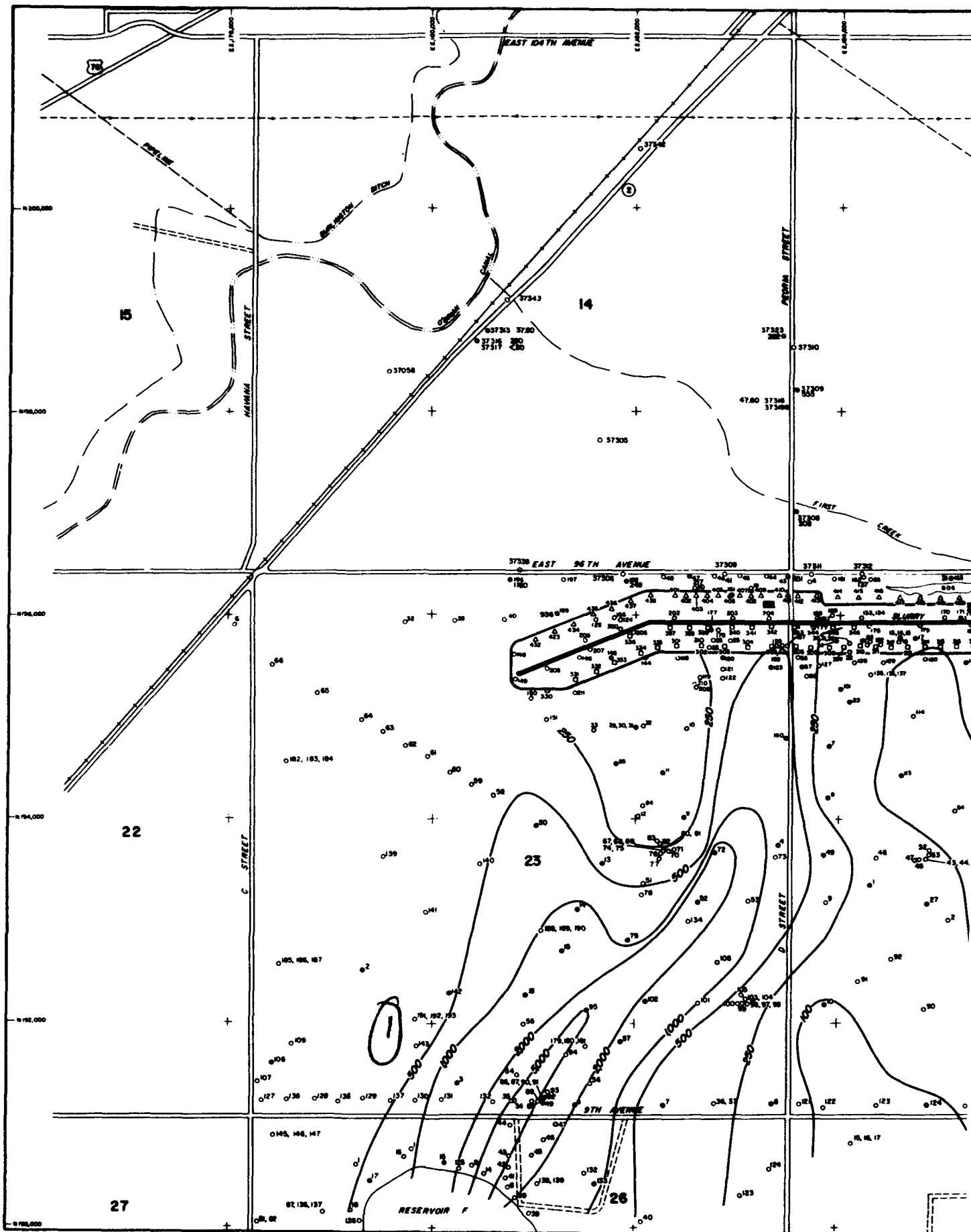
PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 634
VICKSBURG, MS.

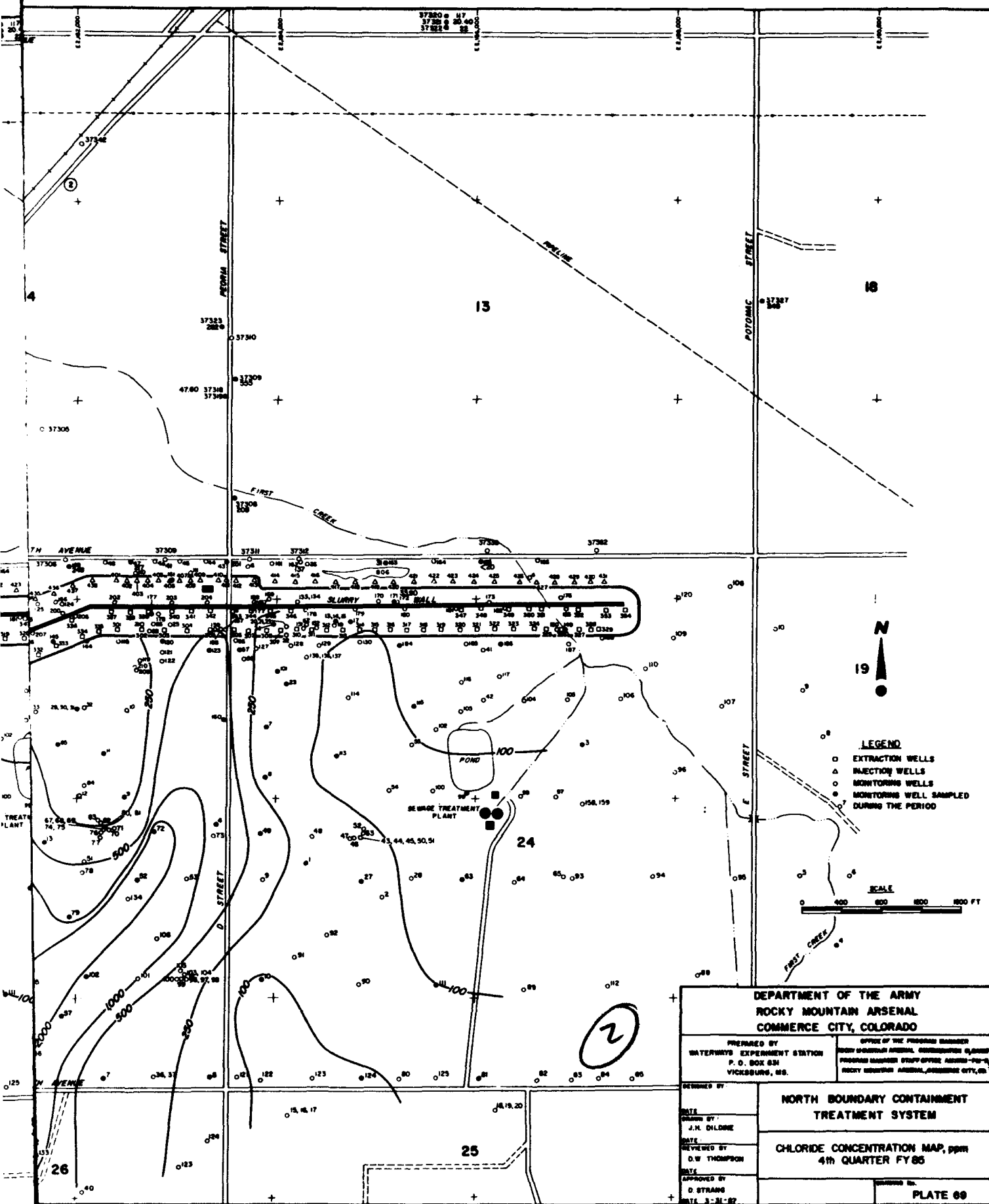
OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
FORWARD RESEARCH STUDY OFFICE, ARSENAL-PUR-6
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

CHLORIDE CONCENTRATION MAP, ppm
3rd QUARTER FY 65

PLATE 68





DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE ADDRESS-PO BOX
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE

DESIGNED BY

DATE

REVIEWED BY

DATE

APPROVED BY

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

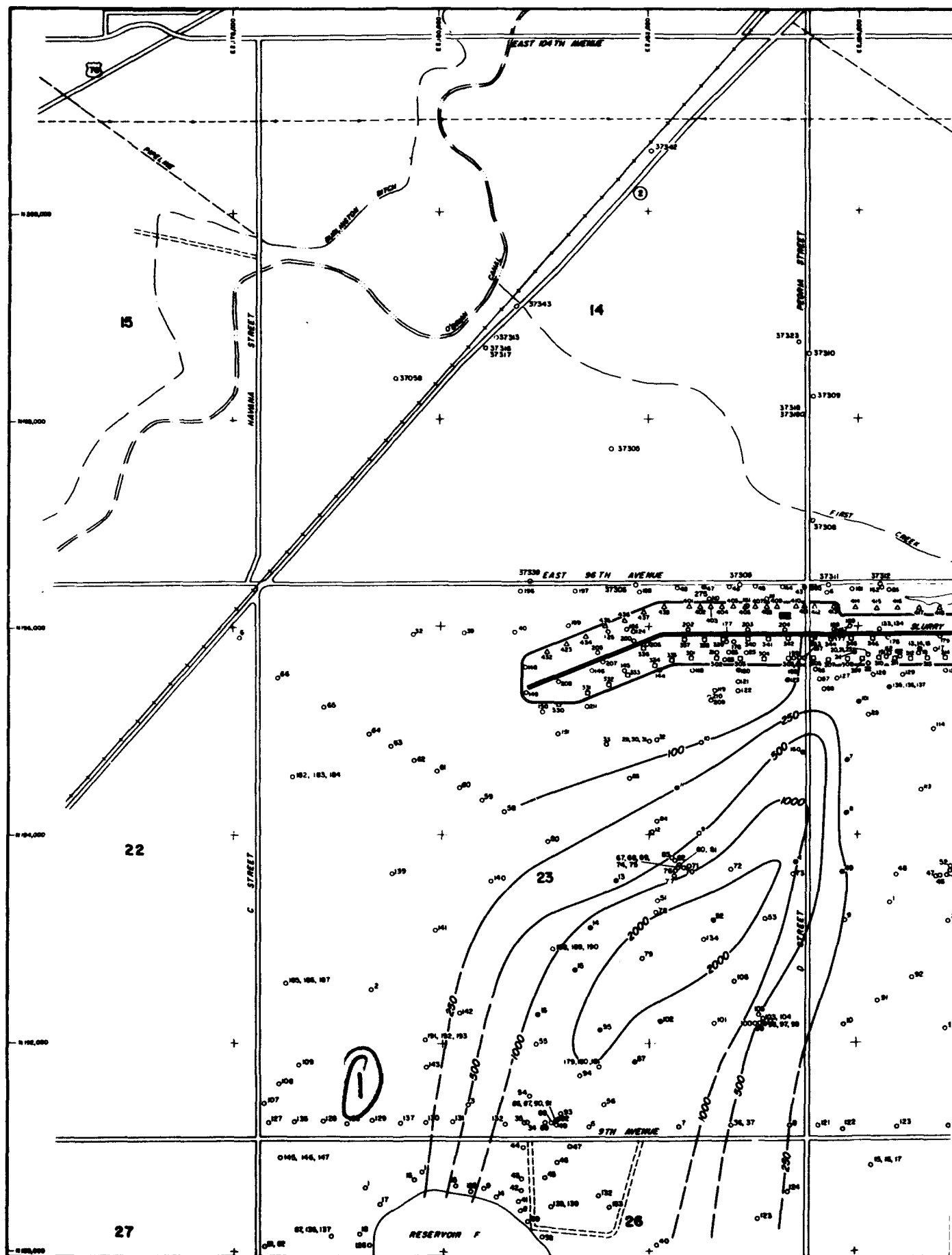
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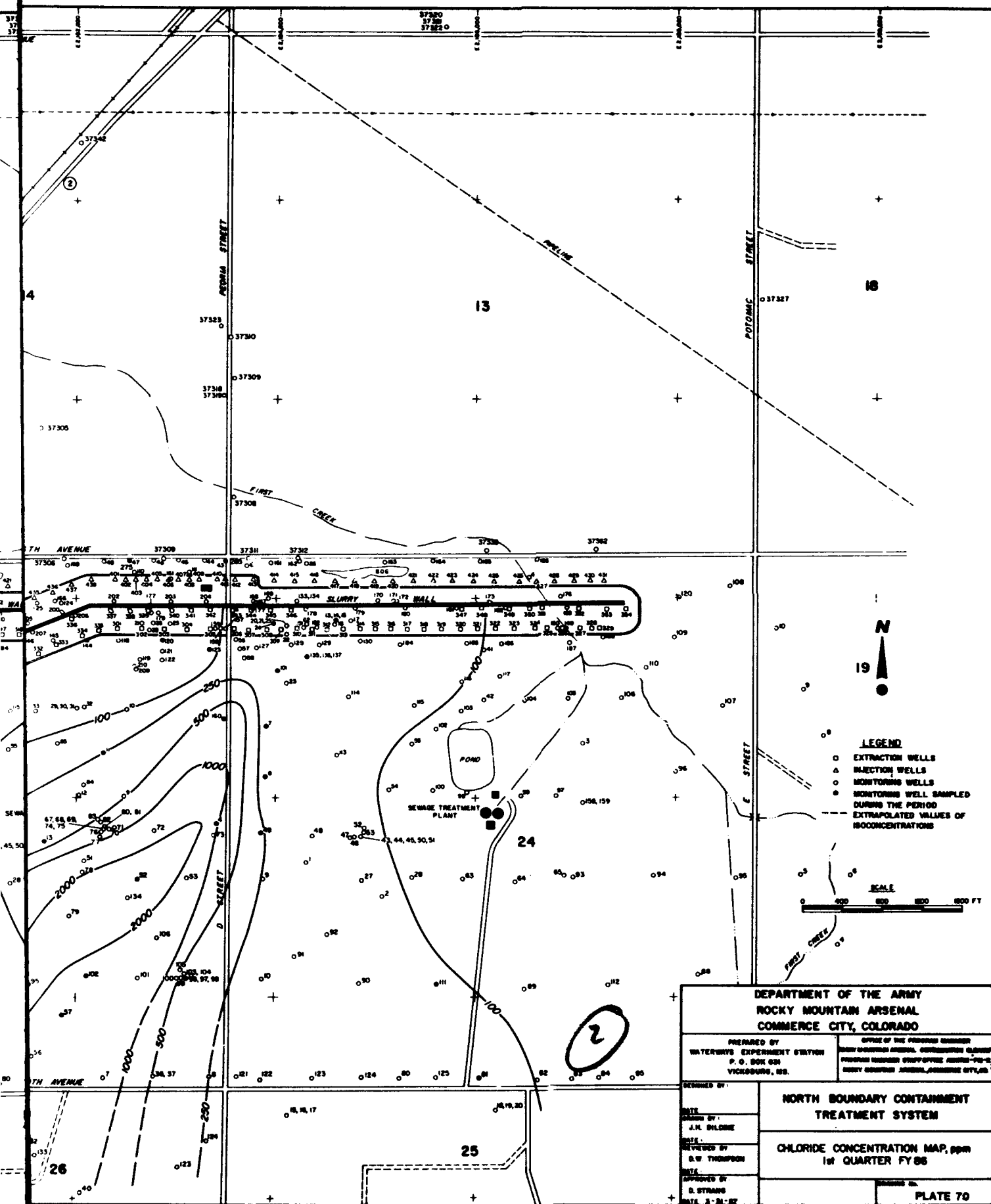
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TREATMENT SYSTEM

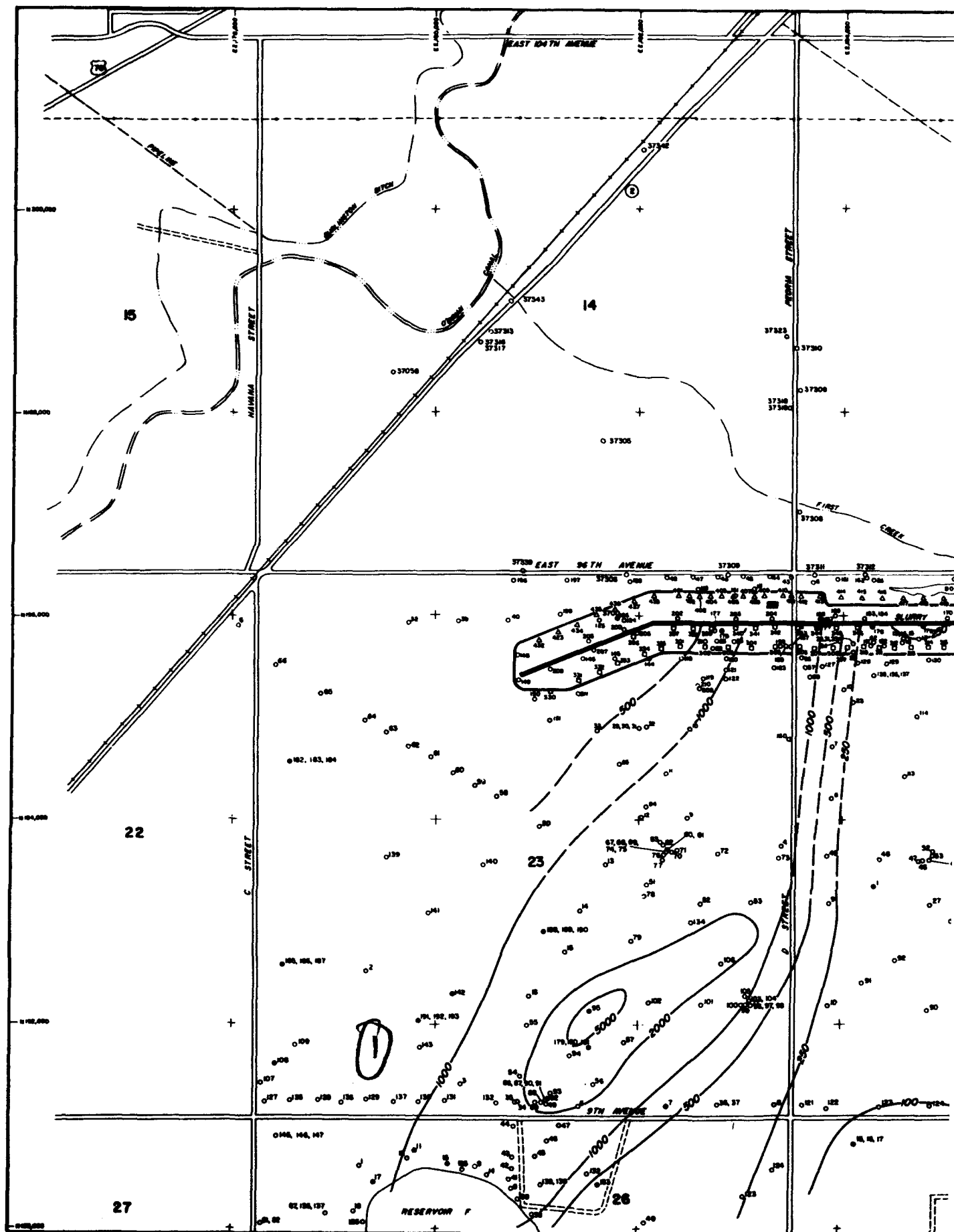
CHLORIDE CONCENTRATION MAP, ppm
4th QUARTER FY 85

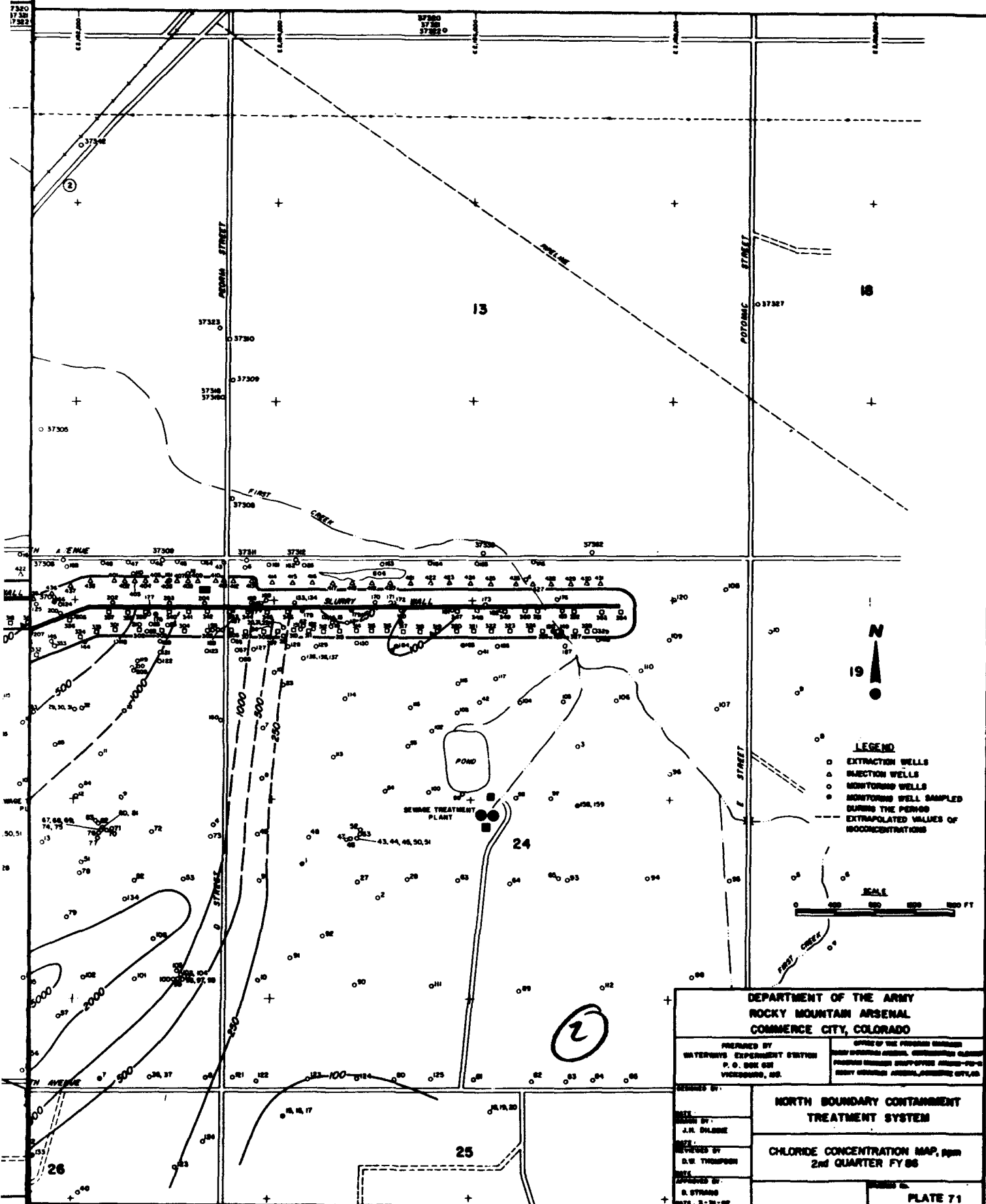
ISSUED BY

PLATE 69

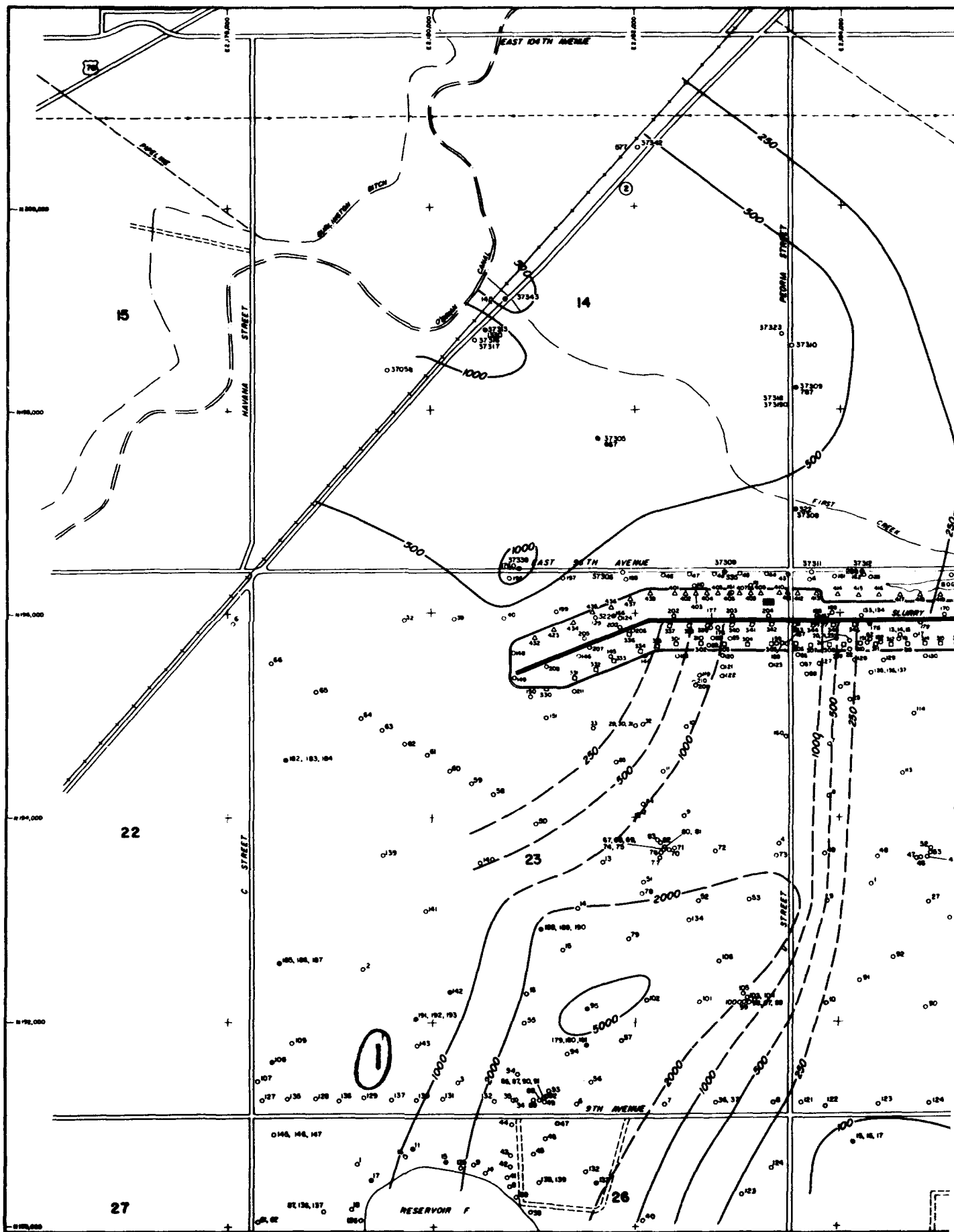


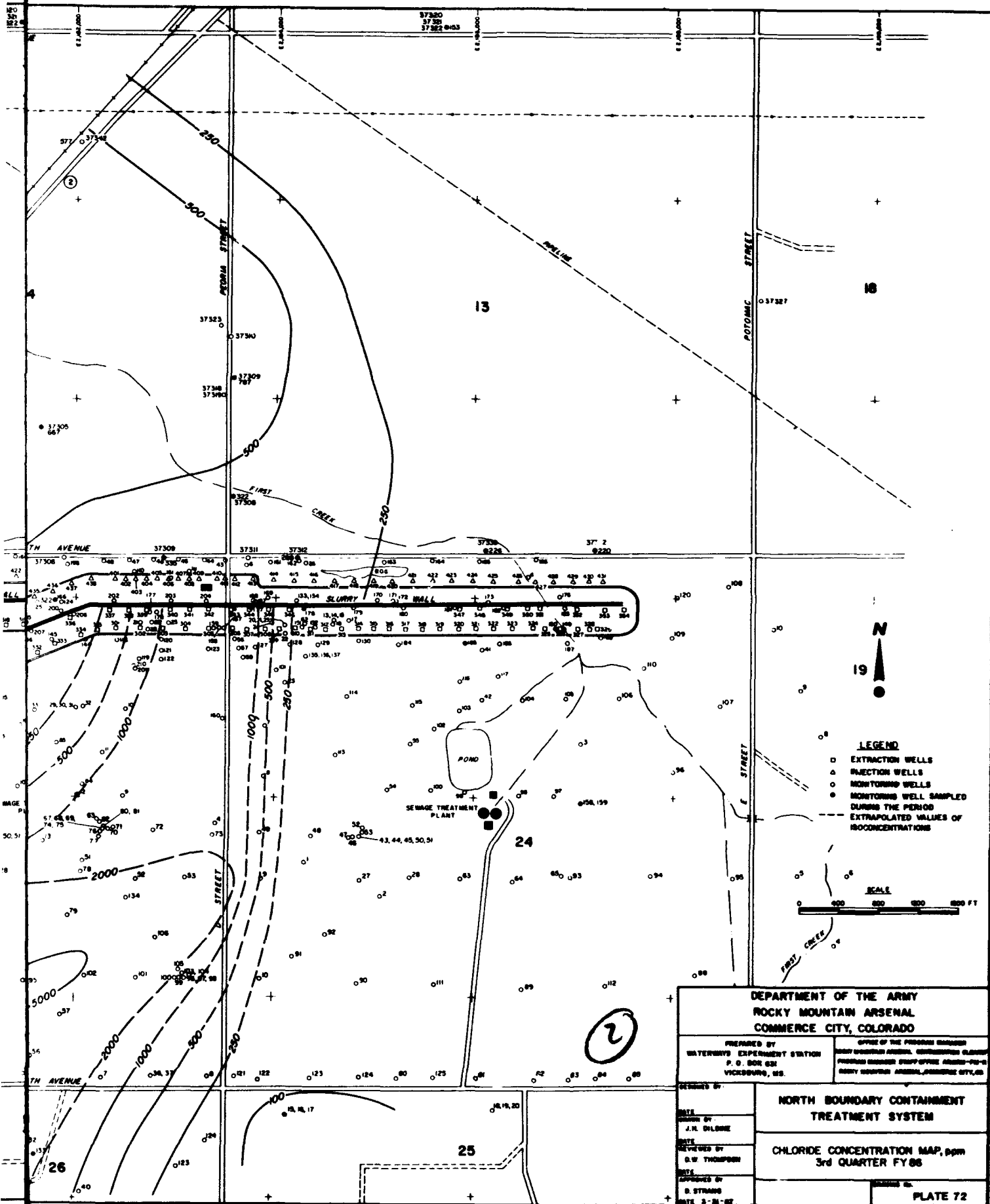


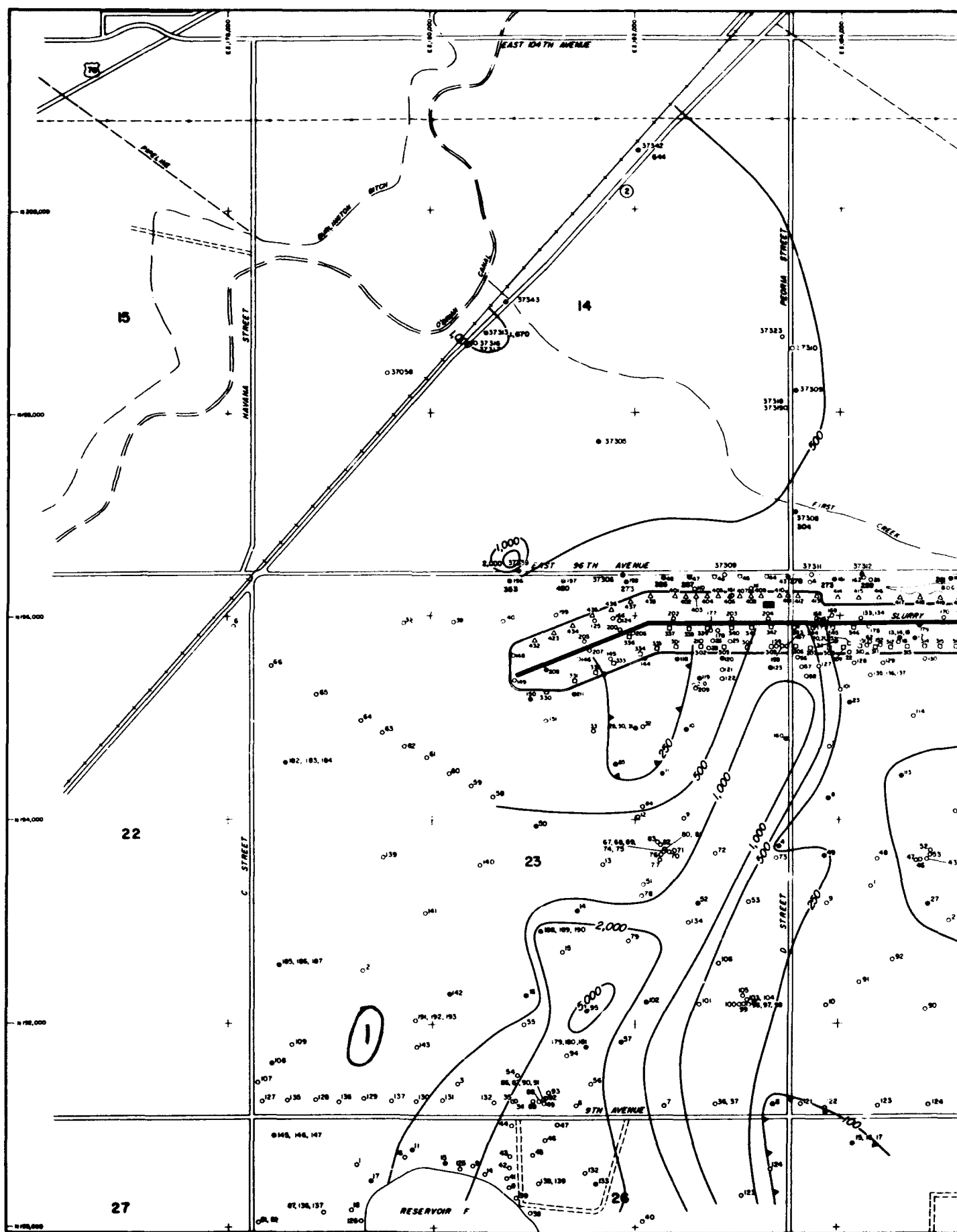


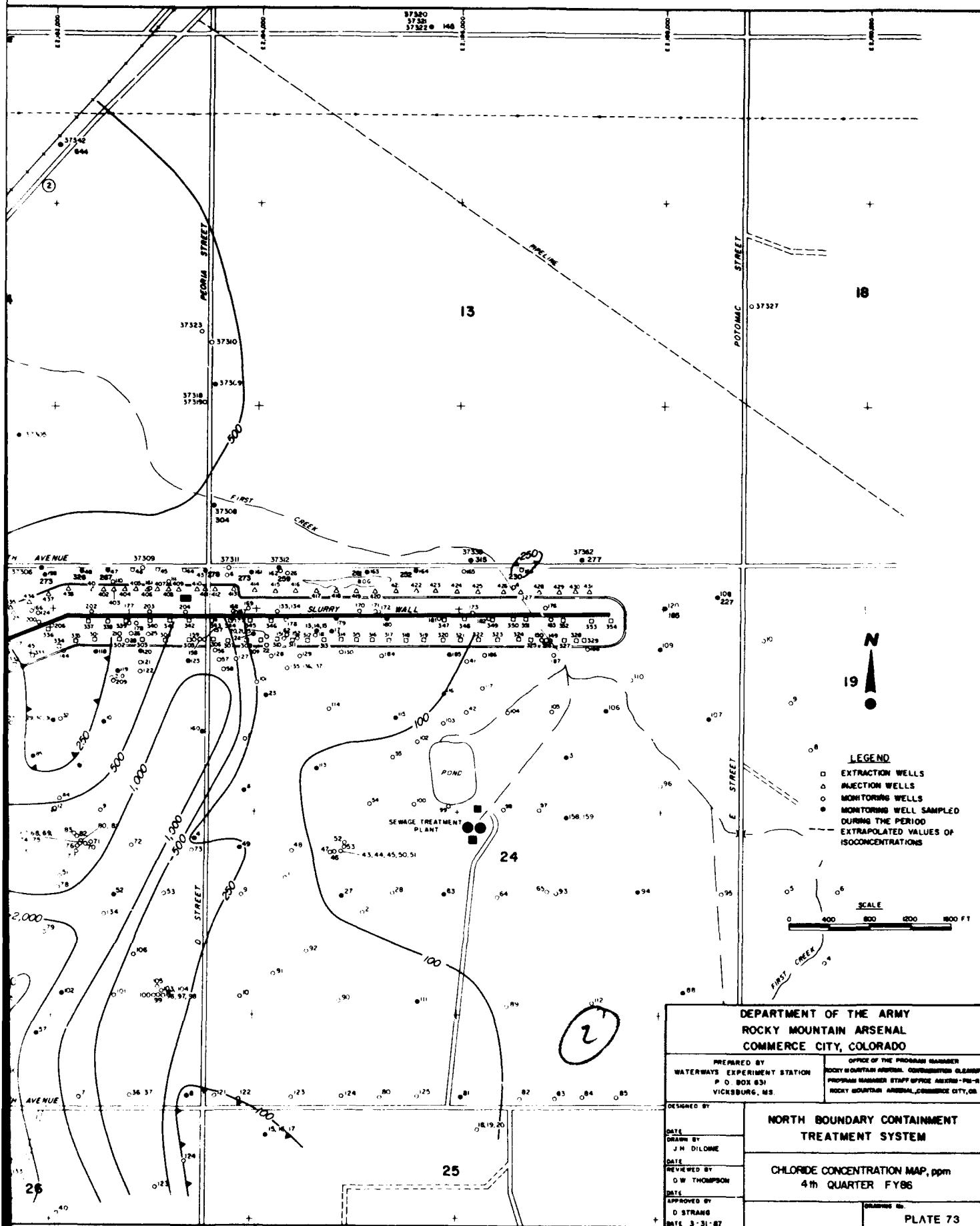


DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCIAL CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 68 VICTORVILLE, CO.	SPONSOR OF THE PROJECT ROCKY MOUNTAIN ARSENAL, COMMERCIAL CITY, COLORADO PROGRAM NUMBER: WWS-68-01 ROCKY MOUNTAIN ARSENAL, COMMERCIAL CITY, CO.
SERIES BY: DATE: BY: J.R. DUNN REVISED BY: DATE: BY: S.W. THOMPSON APPROVED BY: DATE: BY: S. STRONG	
NORTH BOUNDARY CONTAMINANT TREATMENT SYSTEM	
CHLORIDE CONCENTRATION MAP, ppm 2nd QUARTER FY 68	
PLATE 71	









LEGEND

- EXTRACTION WELLS
- INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD
- EXTRAPOLATED VALUES OF ISOCONCENTRATIONS

SCALE

0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE ARSENAL - PM-1
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE
DRAWN BY
J. H. DILWINE

DATE
REVIEWED BY
D. W. THOMPSON

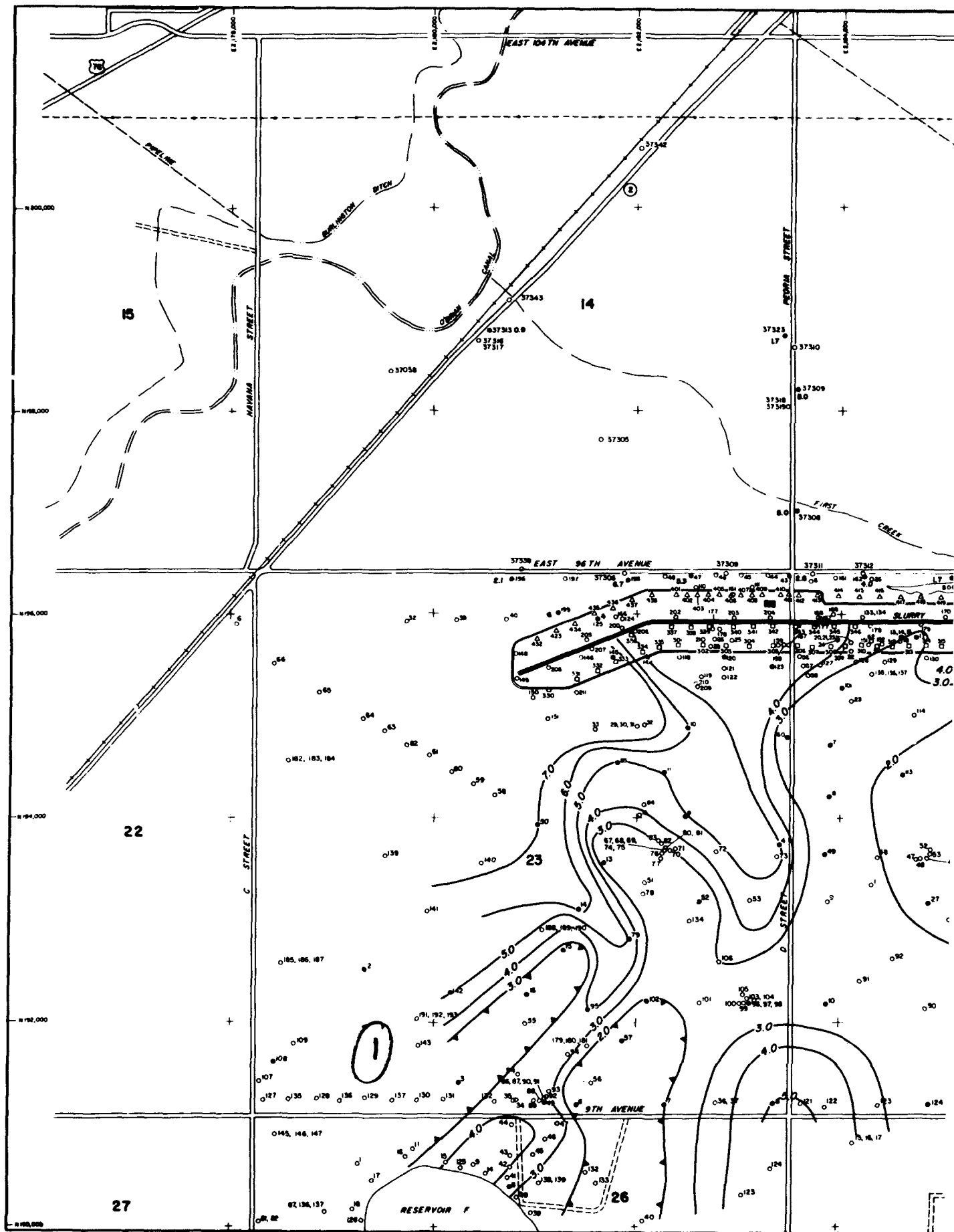
DATE
APPROVED BY
D. STRANG
DATE 3-31-87

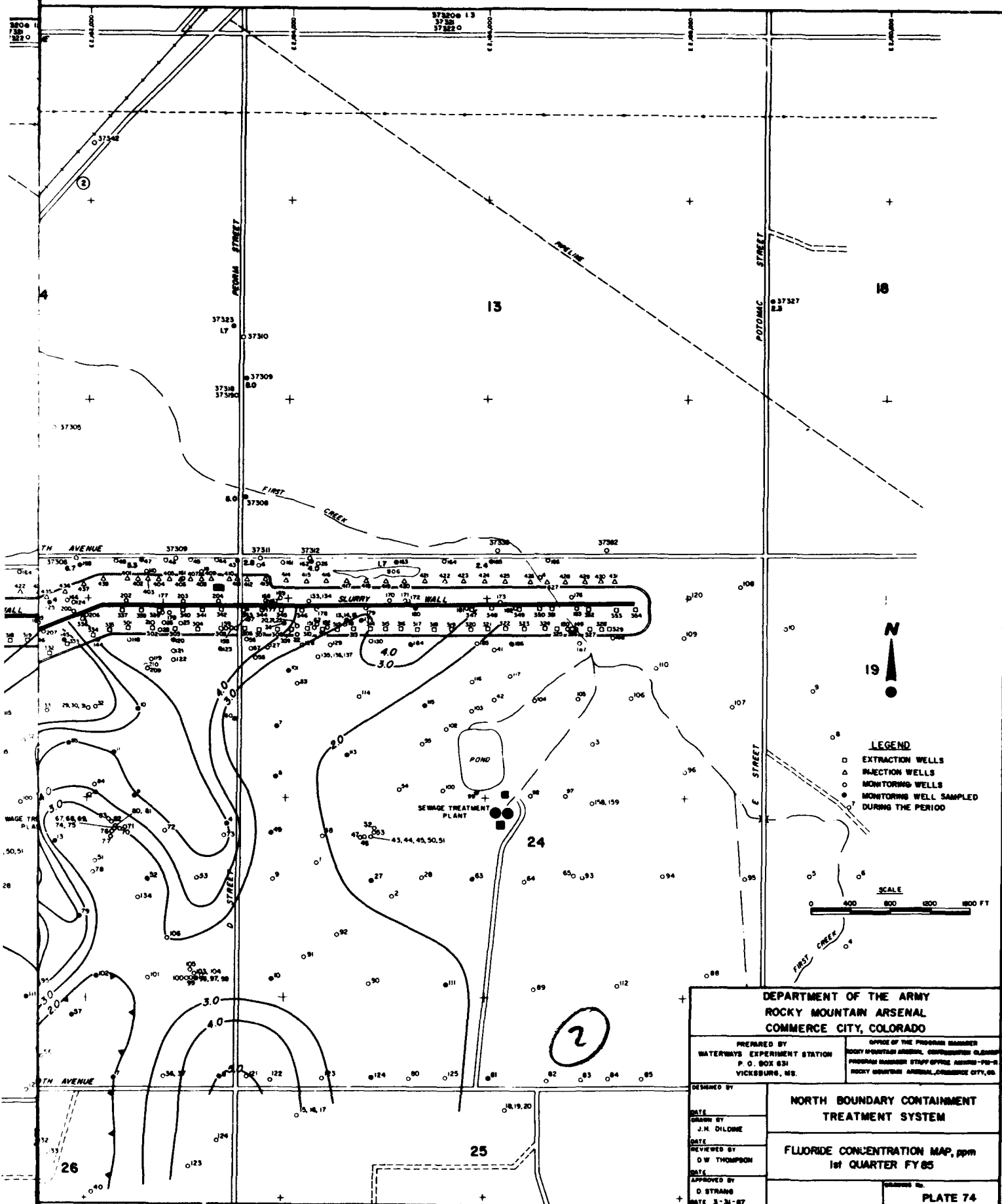
**NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM**

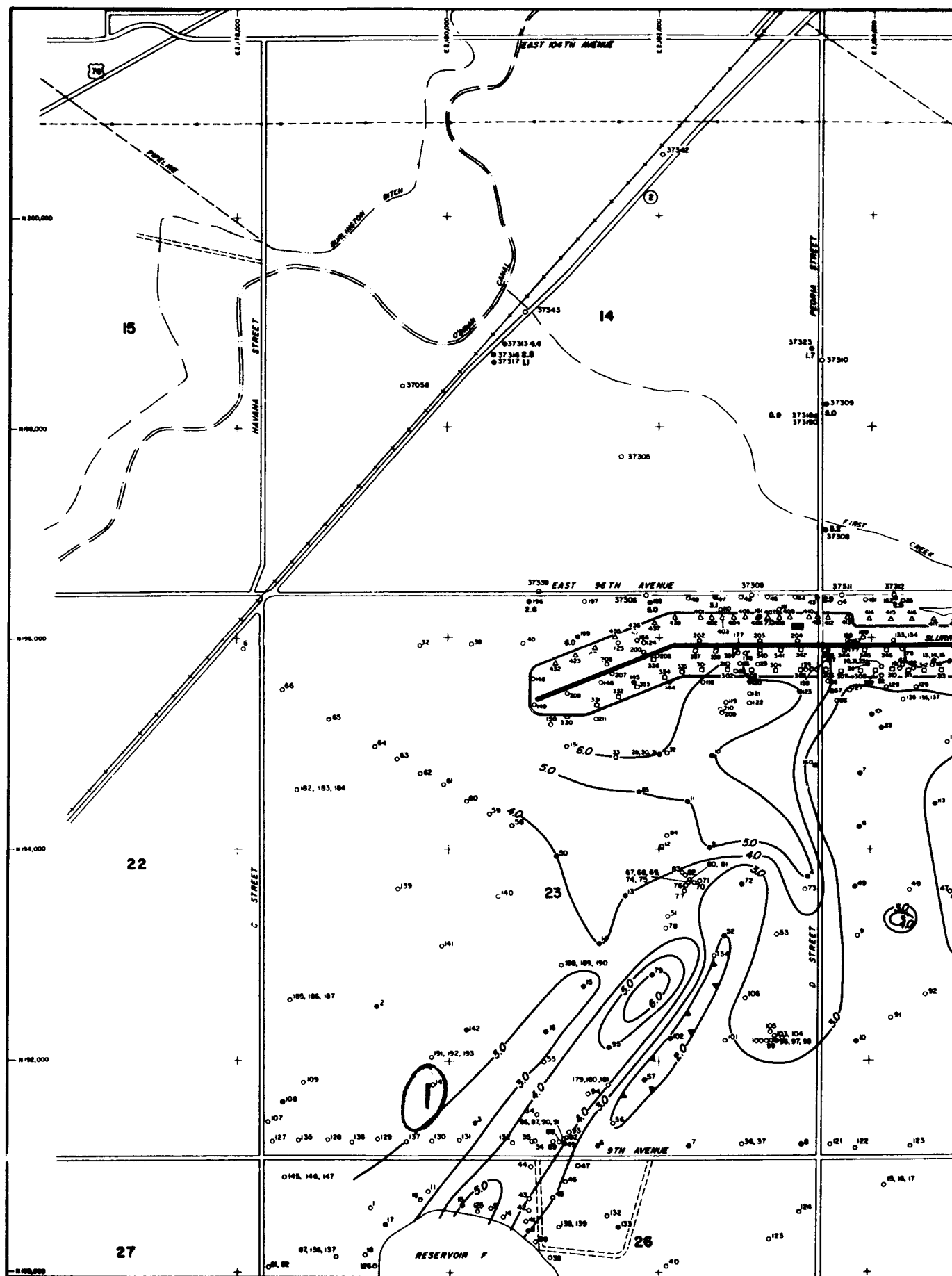
**CHLORIDE CONCENTRATION MAP, ppm
4th QUARTER FY86**

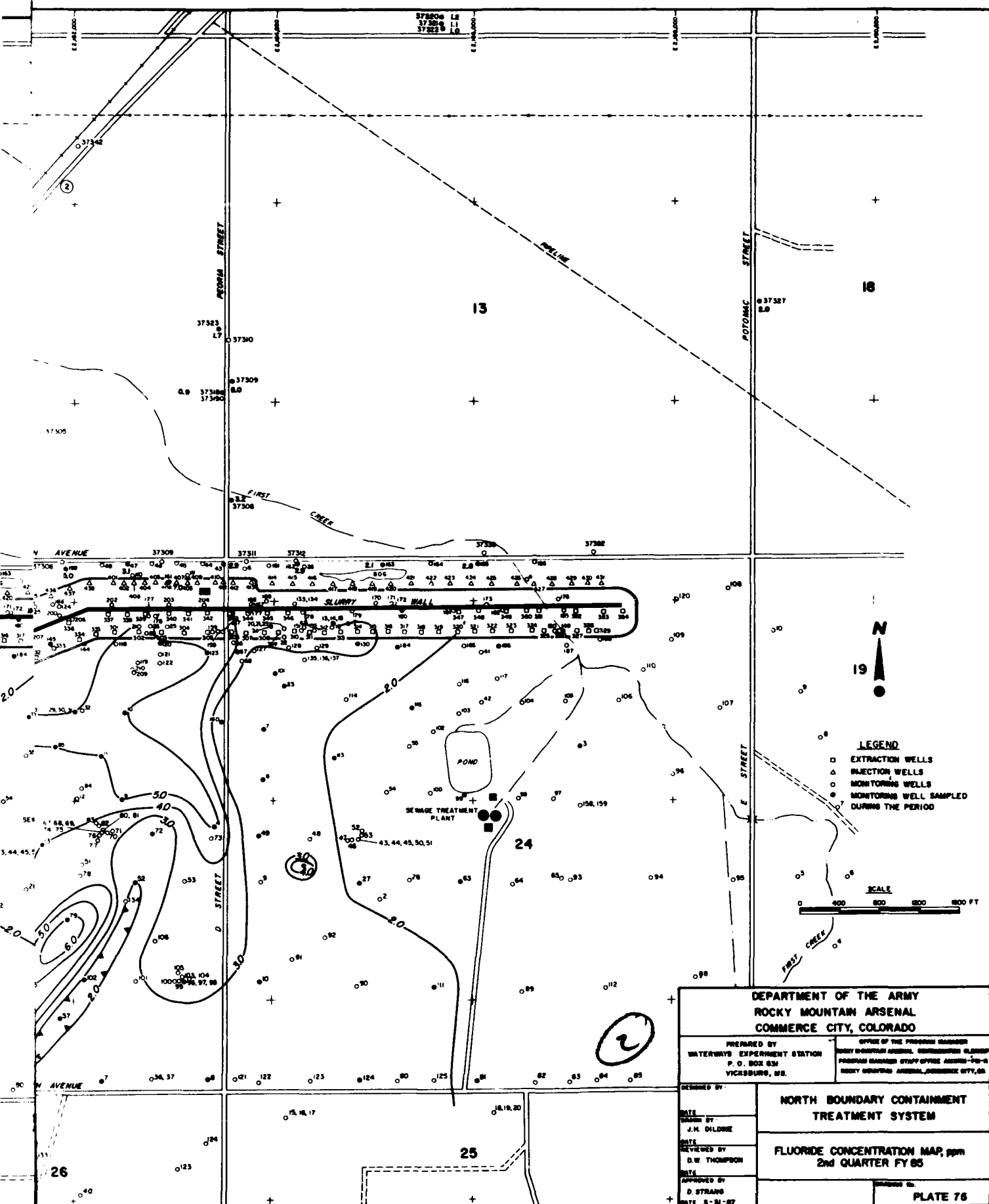
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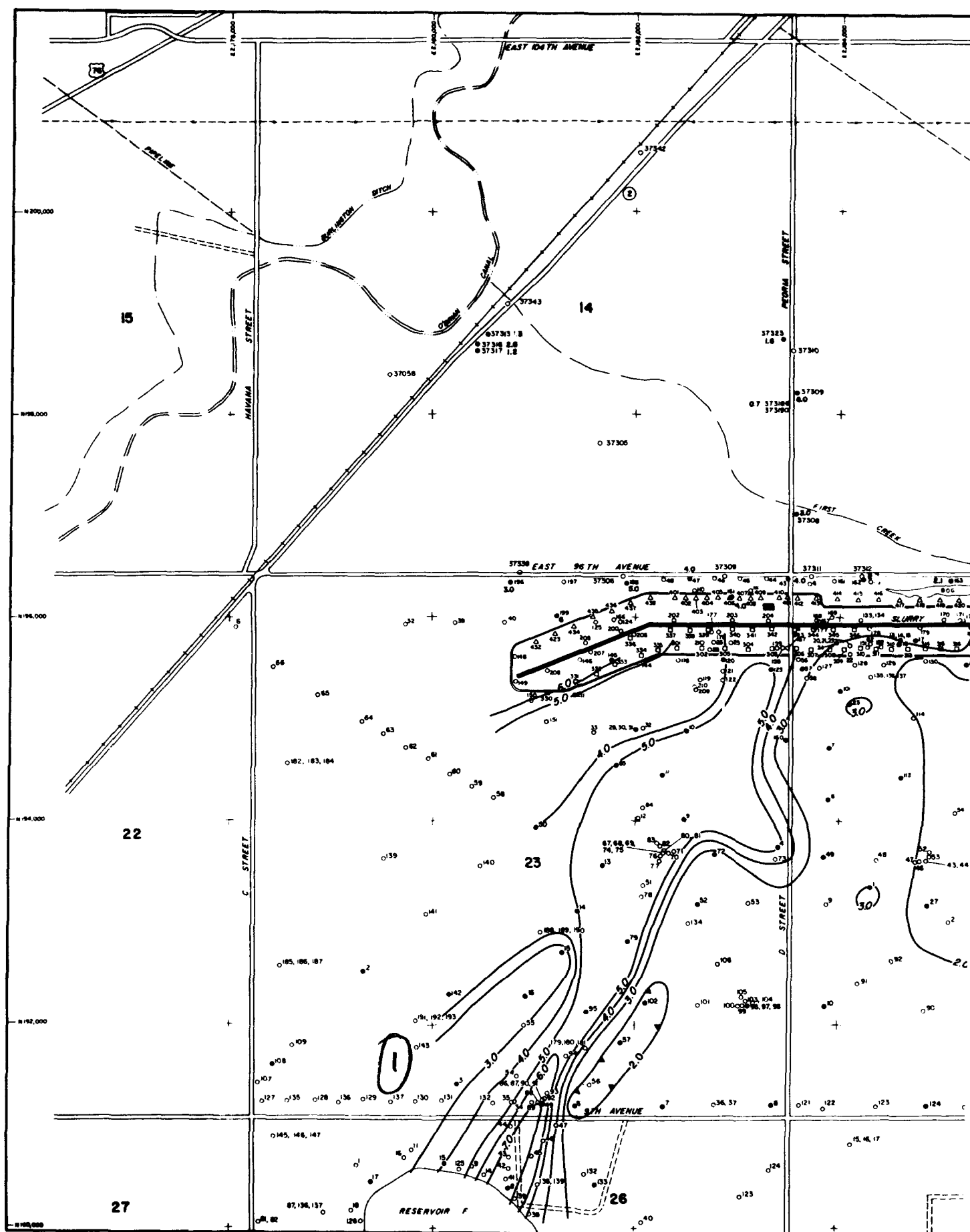
PLATE 73

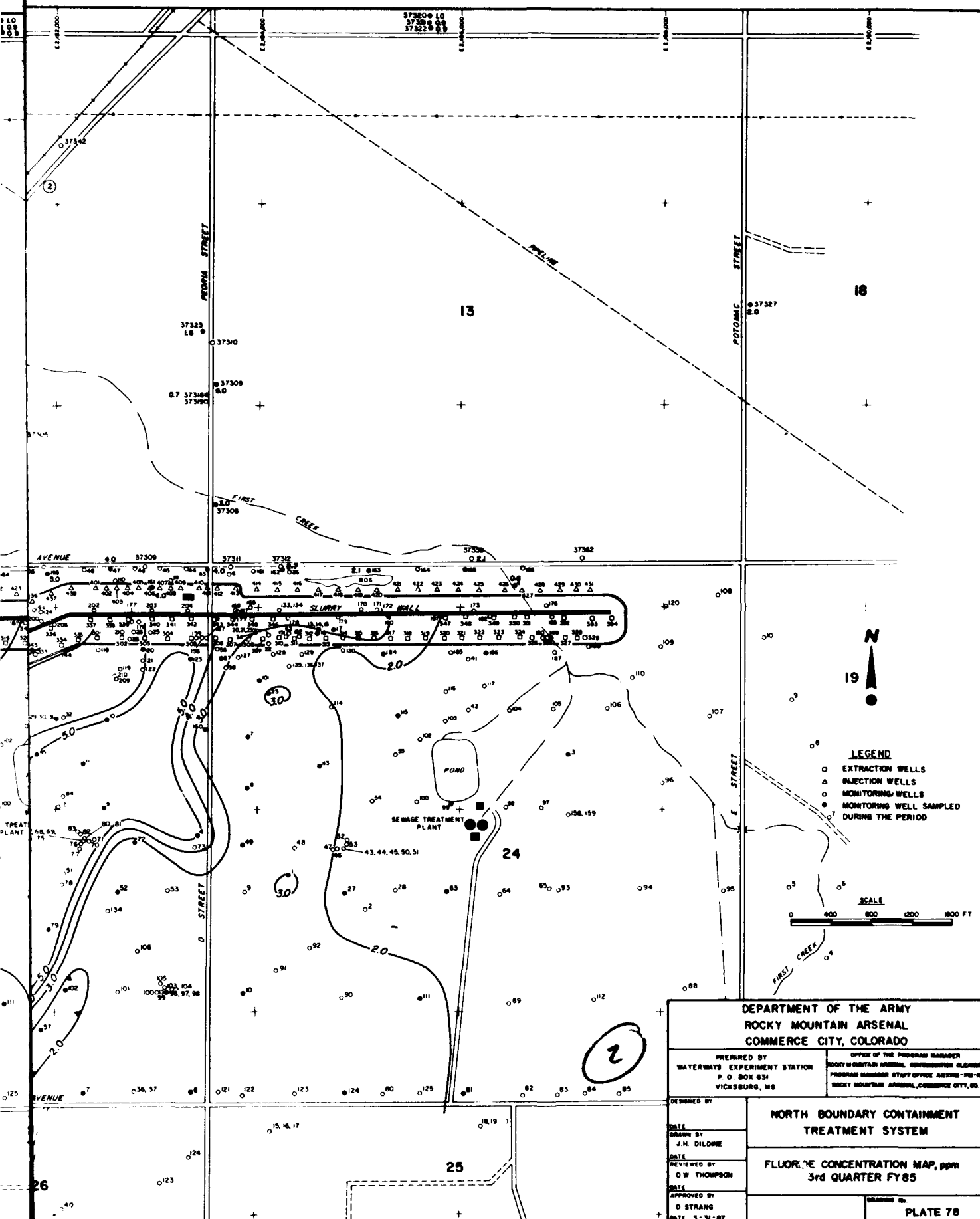












DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY
WATERWAYS EXPERIMENT STATION
P. O. BOX 631
VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO
PROGRAM MANAGER STAFF OFFICE ARSENAL - PM-2
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY

DATE

DRAWN BY

J.M. DILONE

DATE

REVIEWED BY

D.W. THOMPSON

DATE

APPROVED BY

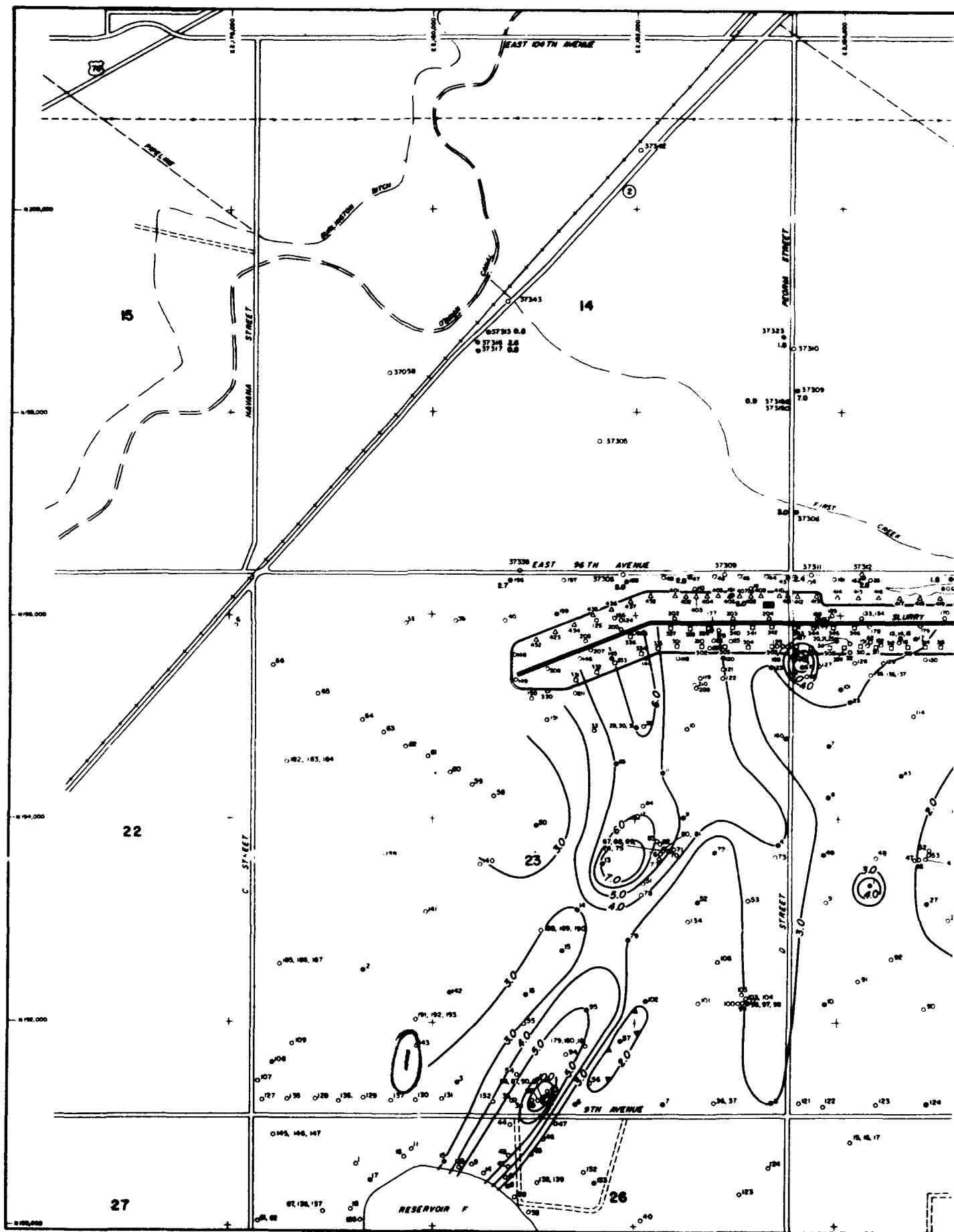
D. STRANG

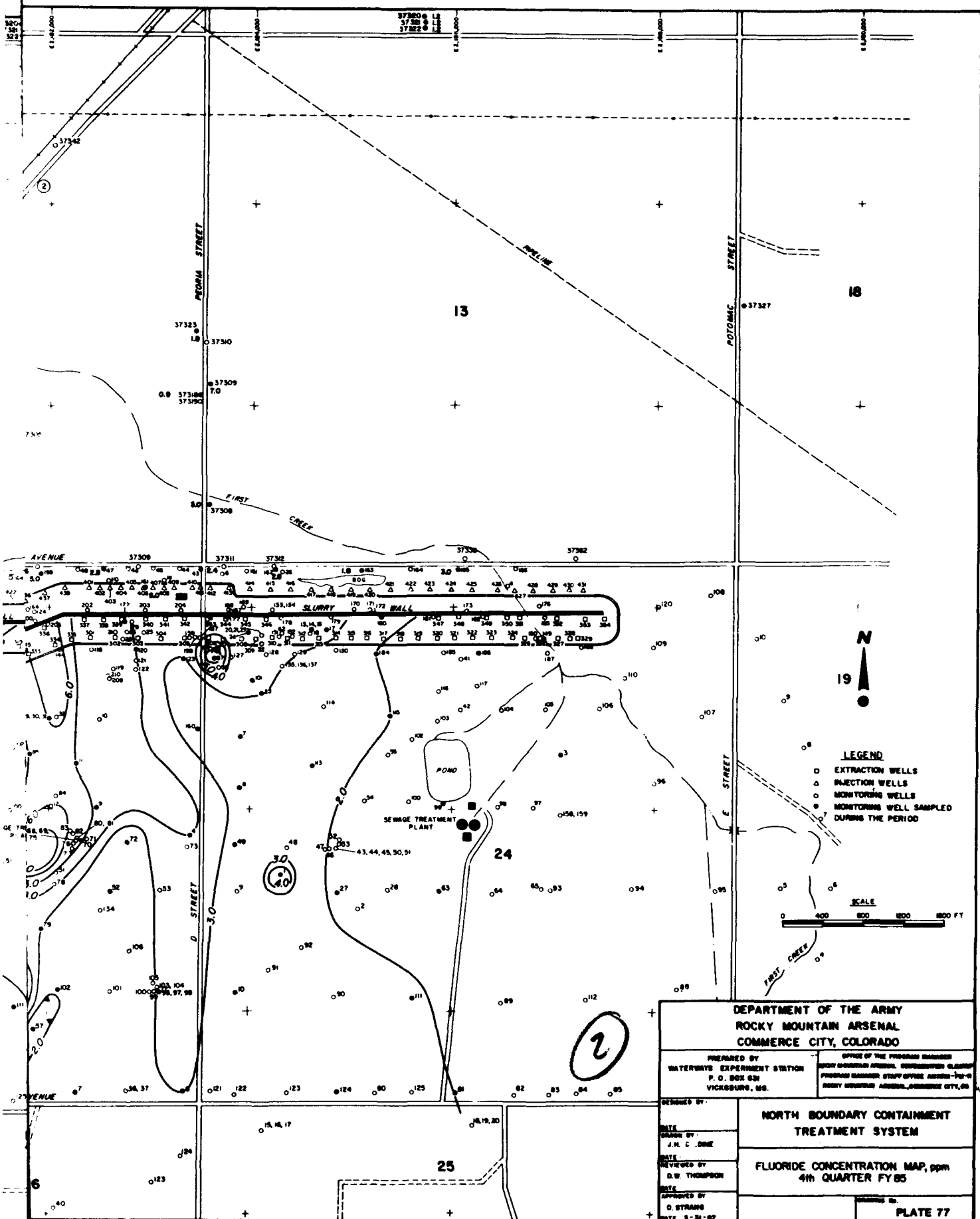
DATE 3-31-87

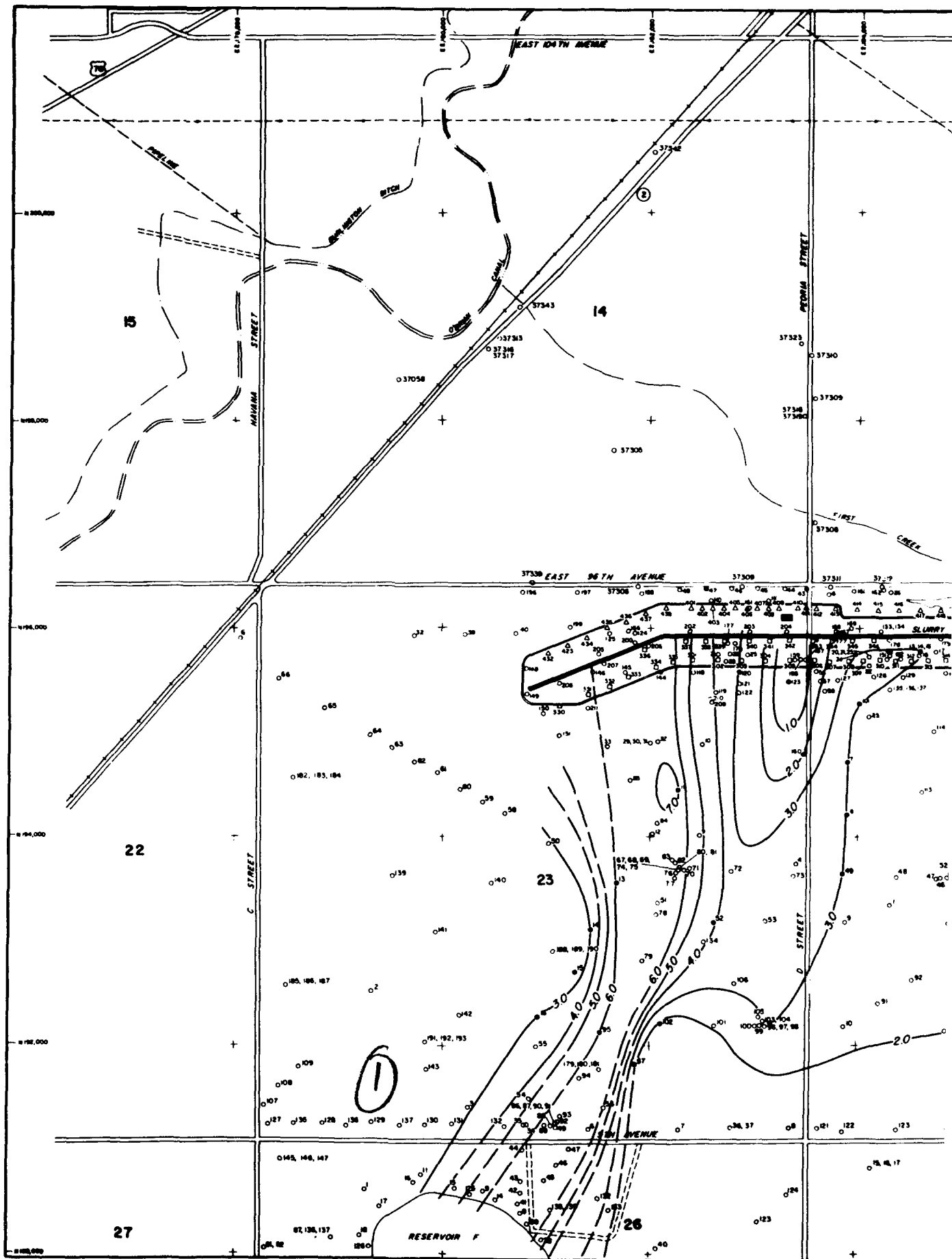
NORTH BOUNDARY CONTAINMENT
TREATMENT SYSTEM

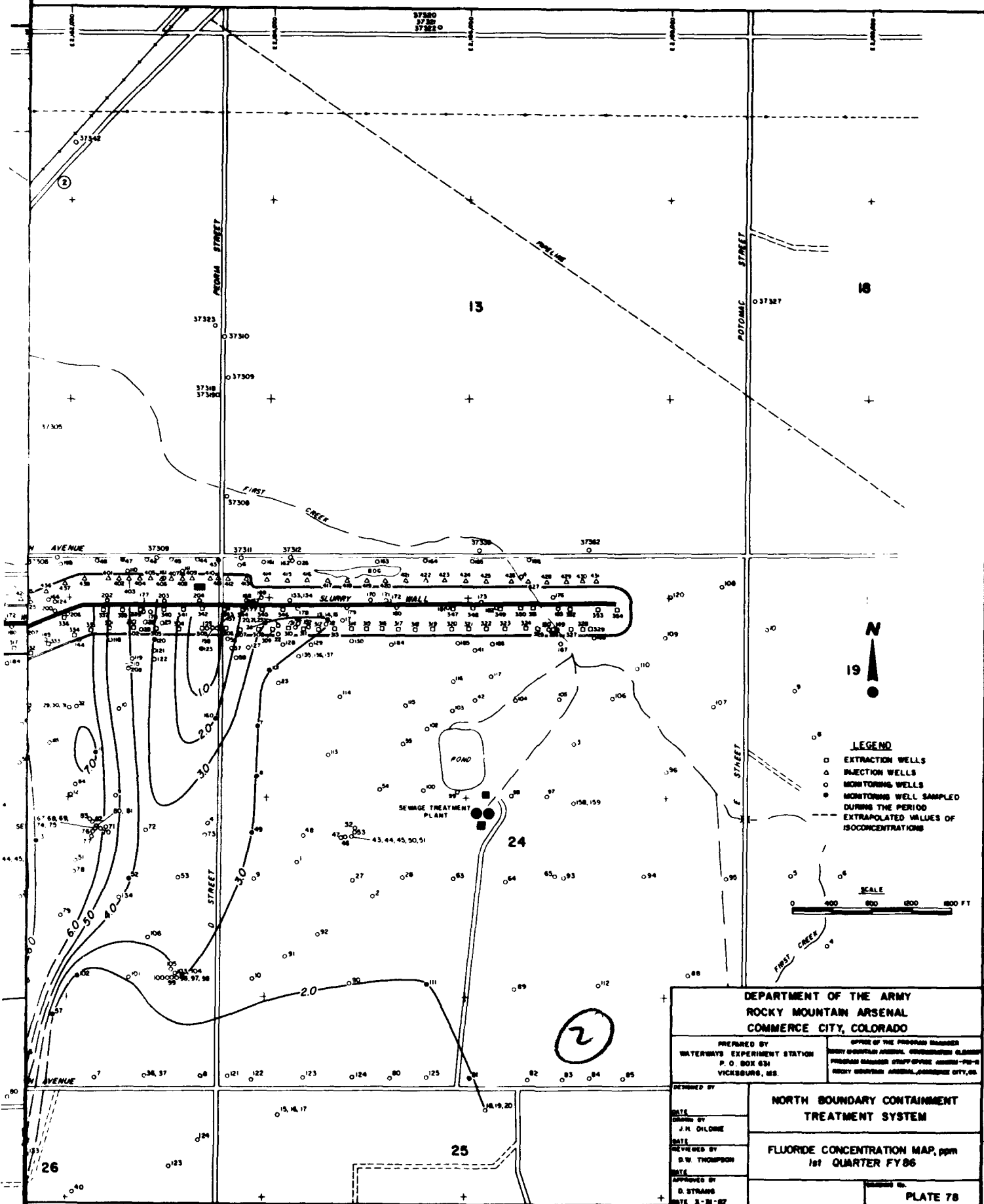
FLUORINE CONCENTRATION MAP, ppm
3rd QUARTER FY 85

PLATE 78

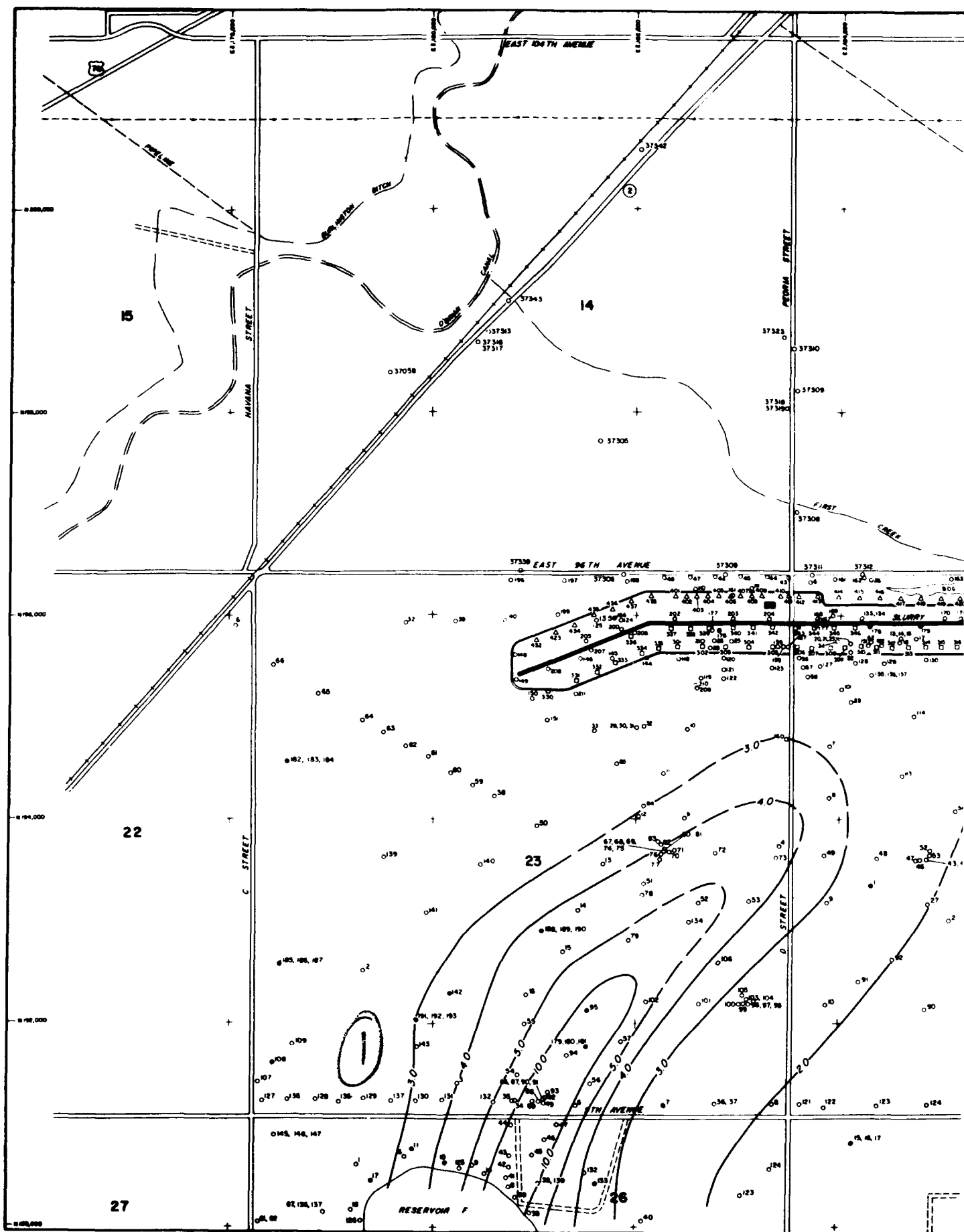


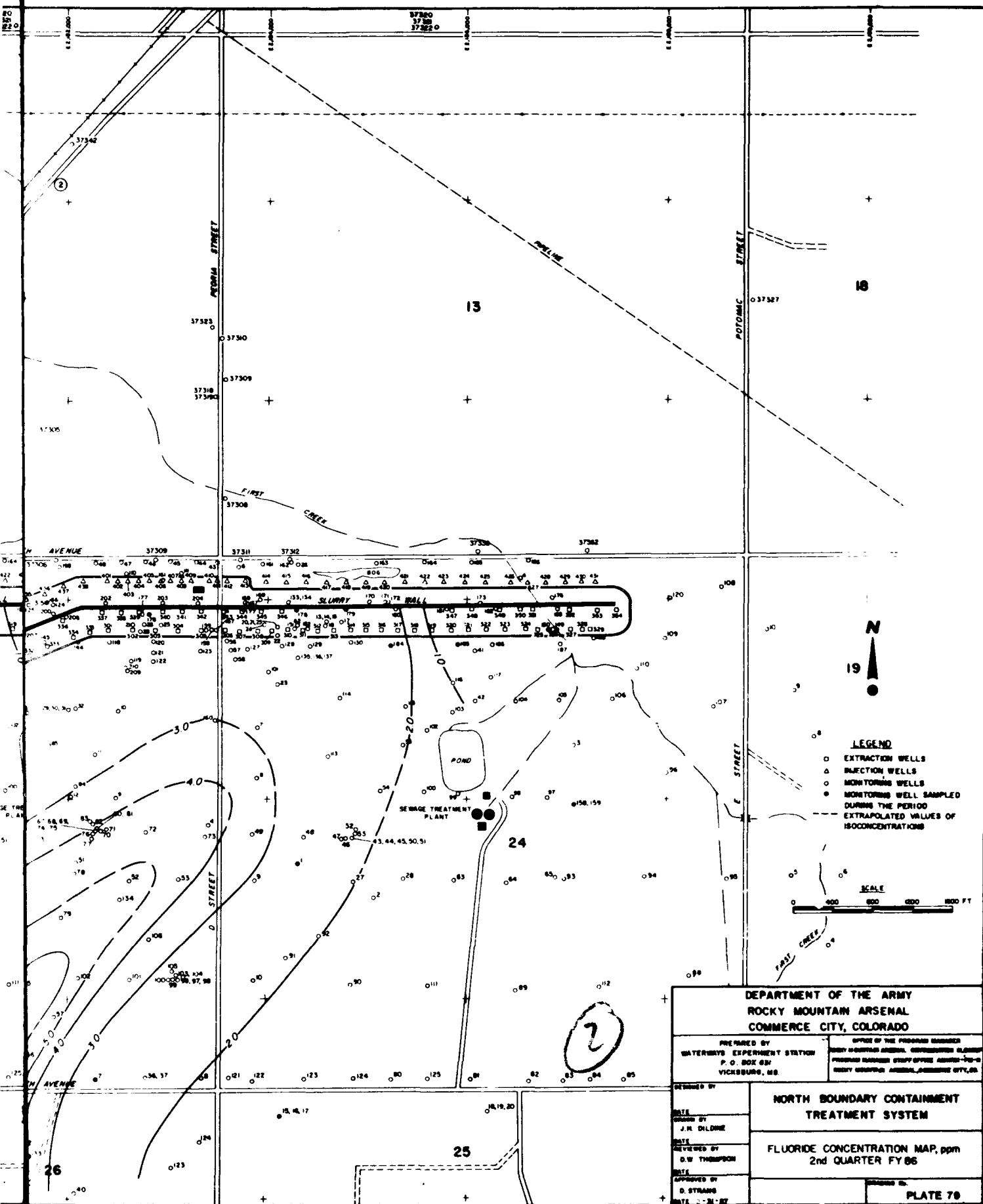


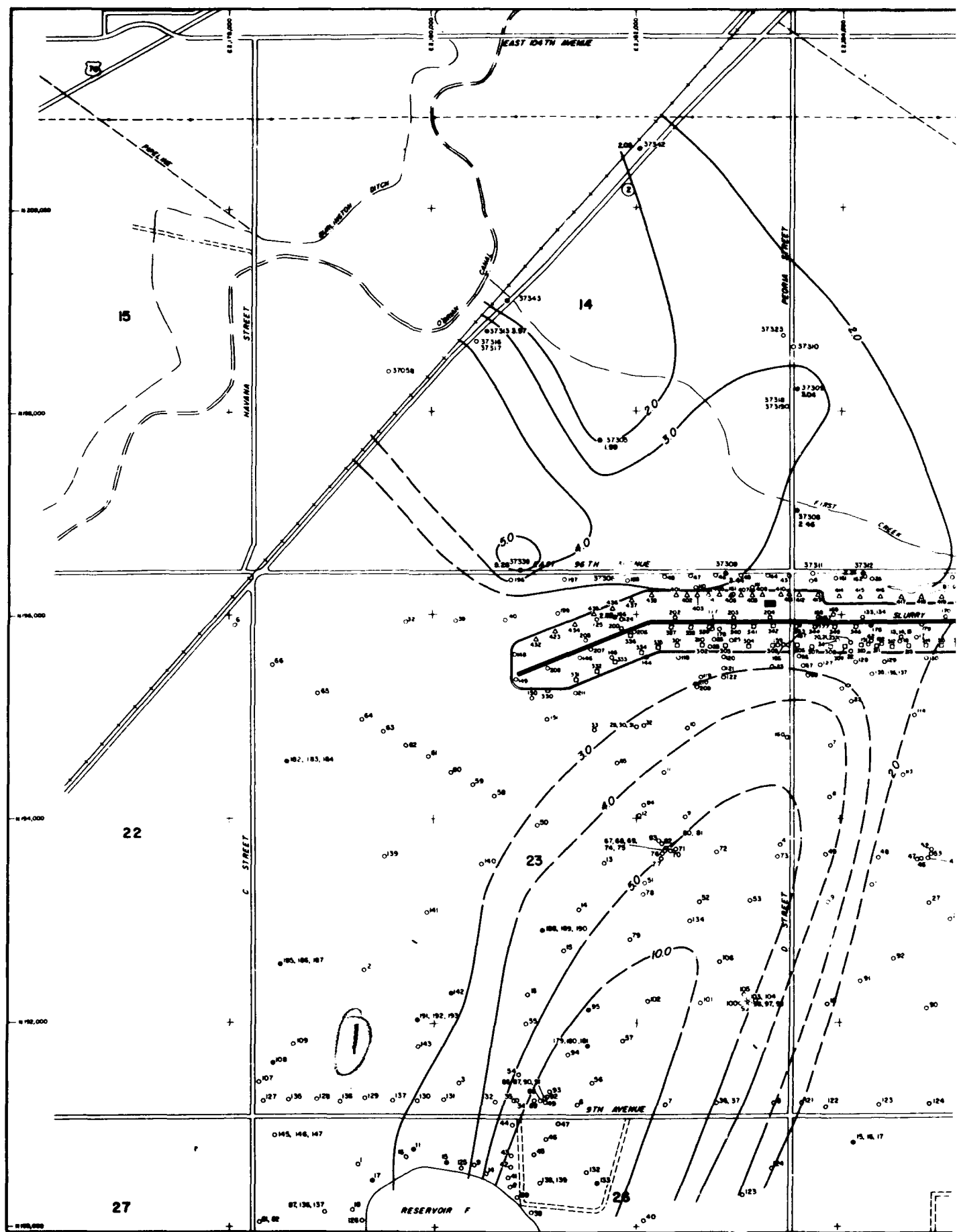


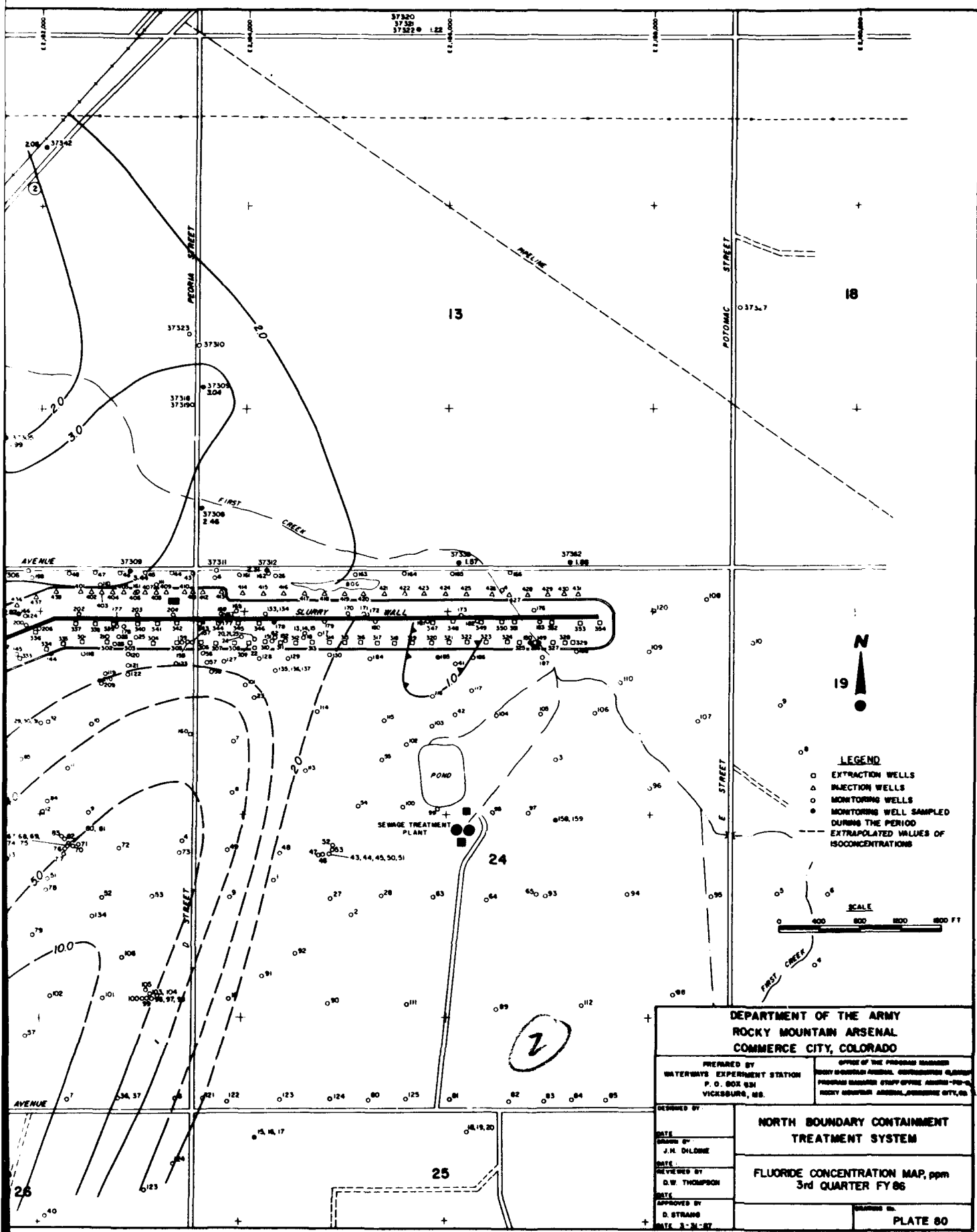


DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 831 VICKSBURG, MS.	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, COMMERCIAL BLVD. PROGRAM MANAGER STAFF OFFICE ARSENAL-PFM-1 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DETERMINED BY DATE DRAWN BY J. H. DILONE DATE REVIEWED BY S. W. THOMPSON DATE APPROVED BY D. STRANG DATE 8-18-87	NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM FLUORIDE CONCENTRATION MAP, ppm 1st QUARTER FY 86 DRAWING NO. PLATE 78









LEGEND

- EXTRACTION WELLS
- △ INJECTION WELLS
- MONITORING WELLS
- MONITORING WELL SAMPLED DURING THE PERIOD
- - - - - EXTRAPOLATED VALUES OF ISOCONCENTRATIONS

SCALE

0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 VICKSBURG, MS.	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, COLORADO PROGRAM MANAGER STAFF OFFICE ARSENAL-PD-1 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY DATE DRAWN BY J.M. DILONE DATE REVIEWED BY D.W. THOMPSON DATE APPROVED BY D. STRAIN DATE 3-31-87	NORTH BOUNDARY CONTAINMENT TREATMENT SYSTEM FLUORIDE CONCENTRATION MAP, ppm 3rd QUARTER FY 86 SHEET NO. PLATE 80

