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**ROCKY MOUNTAIN ARSENAL
NORTHWEST BOUNDARY CONTAINMENT/TREATMENT SYSTEM
BASELINE CONDITIONS, SYSTEM STARTUP,
AND OPERATIONAL ASSESSMENT**

REPORT FOR FY 85/86

DTIC
ELECTE
DEC 28 1994
S C D

**VOLUME II
PLATES**

by

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

DEFERRED STATEMENT
Approved for public release
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December 1987

19941221 108

REPORT DOCUMENTATION PAGE

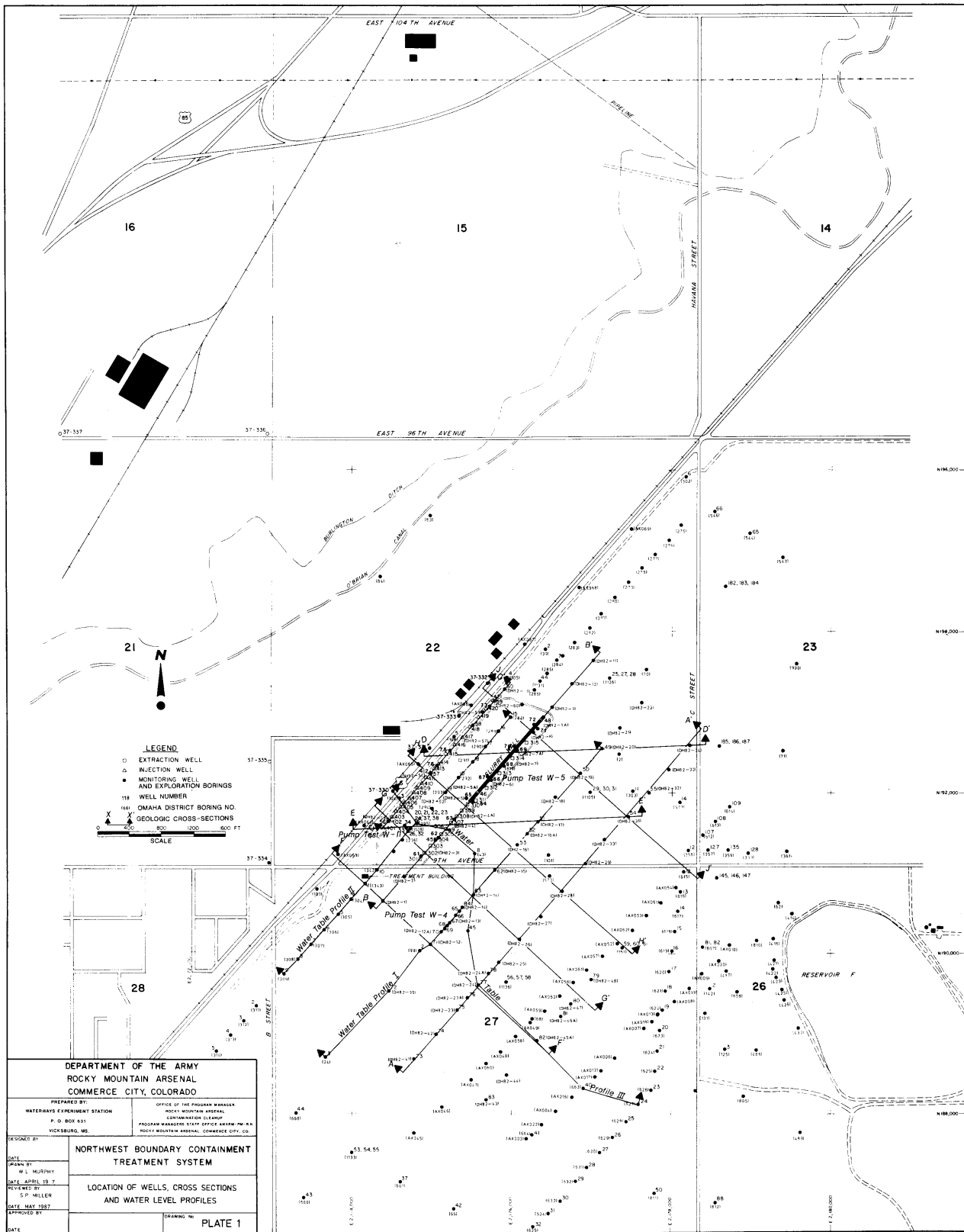
Form Approved
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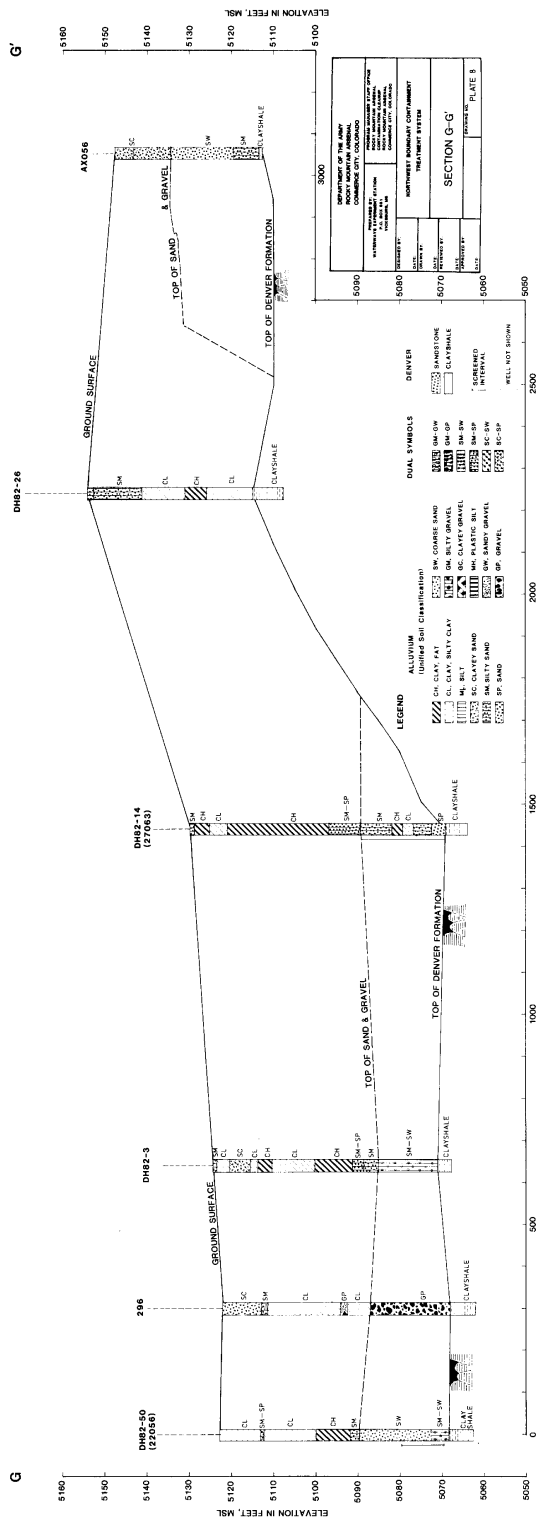
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 12/00/87	3. REPORT TYPE AND DATES COVERED	
4. TITLE AND SUBTITLE ROCKY MOUNTAIN ARSENAL NORTHWEST BOUNDARY CONTAINMENT/TREATMENT SYSTEM, BASELINE CONDITIONS, SYSTEM STARTUP, AND OPERATIONAL ASSESSMENT, REPORT FOR FY 85/86		5. FUNDING NUMBERS	
6. AUTHOR(S)		8. PERFORMING ORGANIZATION REPORT NUMBER 88054R01	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) ROCKY MOUNTAIN ARSENAL (CO.). PMRMA COMMERCE CITY, CO			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) ARMY ENGINEER WATERWAYS EXPERIMENT STATION ABERDEEN PROVING GROUND, MD		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED		12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) THIS REPORT WAS PREPARED TO DOCUMENT AND ASSESS THE STATUS AND OVERALL OPERATIONAL PERFORMANCE OF THE NORTHWEST BOUNDARY CONTAINMENT/TREATMENT (NWBCT) SYSTEM. THE REPORT CONSISTS OF THREE VOLUMES: <ol style="list-style-type: none"> 1. MAIN TEXT 2. HYDROGEOLOGIC AND CONTAMINANT DISTRIBUTION PLATES 3. DATABASES DEVELOPED TO SUPPORT THE EVALUATIONS AND ASSESSMENTS. THE REPORT COVERS THE OPERATING PERIOD OF OCTOBER, 1984, TO SEPTEMBER, 1986. THE OBJECTIVES OF THE REPORT INCLUDE: <ol style="list-style-type: none"> 1. ASSESS THE CONTINUING EFFECTIVENESS OF THE NORTHWEST 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 SYSTEM EFFECTIVENESS. 			
14. SUBJECT TERMS GEOLOGY, HYDROLOGY, CONTAMINANTS DISTRIBUTION, DEWATERING WELL DATA, GC/MS ANALYSES		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

GEOLOGY PLATES 01 thru 13

Accession For	NTIS	CRA&I
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	Justification	<input type="checkbox"/>
By		
Organization/		
Availability Codes		
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	Special	
	AI	



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 ANDR-PM-94 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY: DATE DRAWN BY: DATE CHECKED BY: DATE APPROVED BY: DATE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM LOCATION OF WELLS, CROSS SECTIONS AND WATER LEVEL PROFILES DRAWING NO. PLATE 1

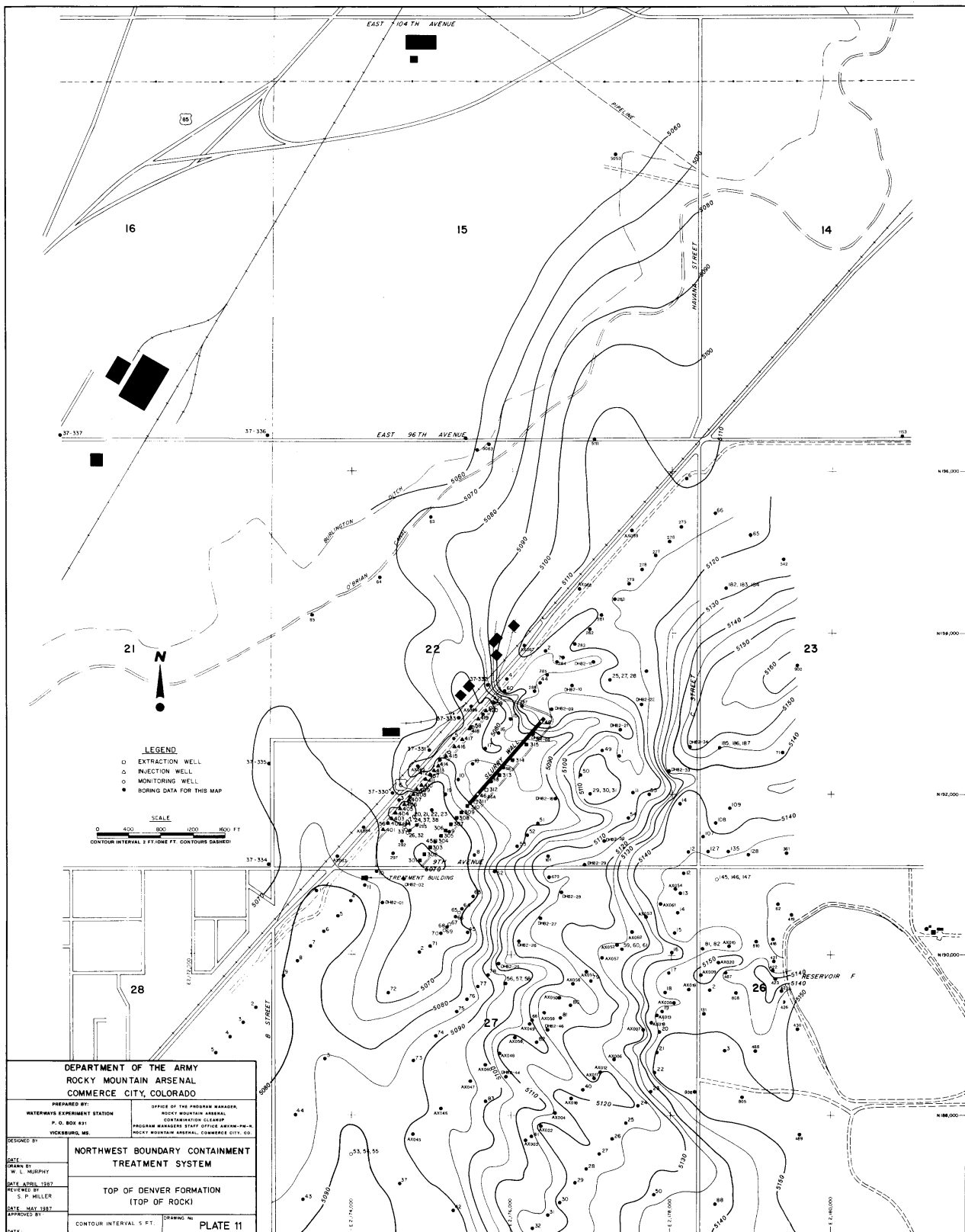


Vertical Exaggeration 10X

Distance in Feet

G

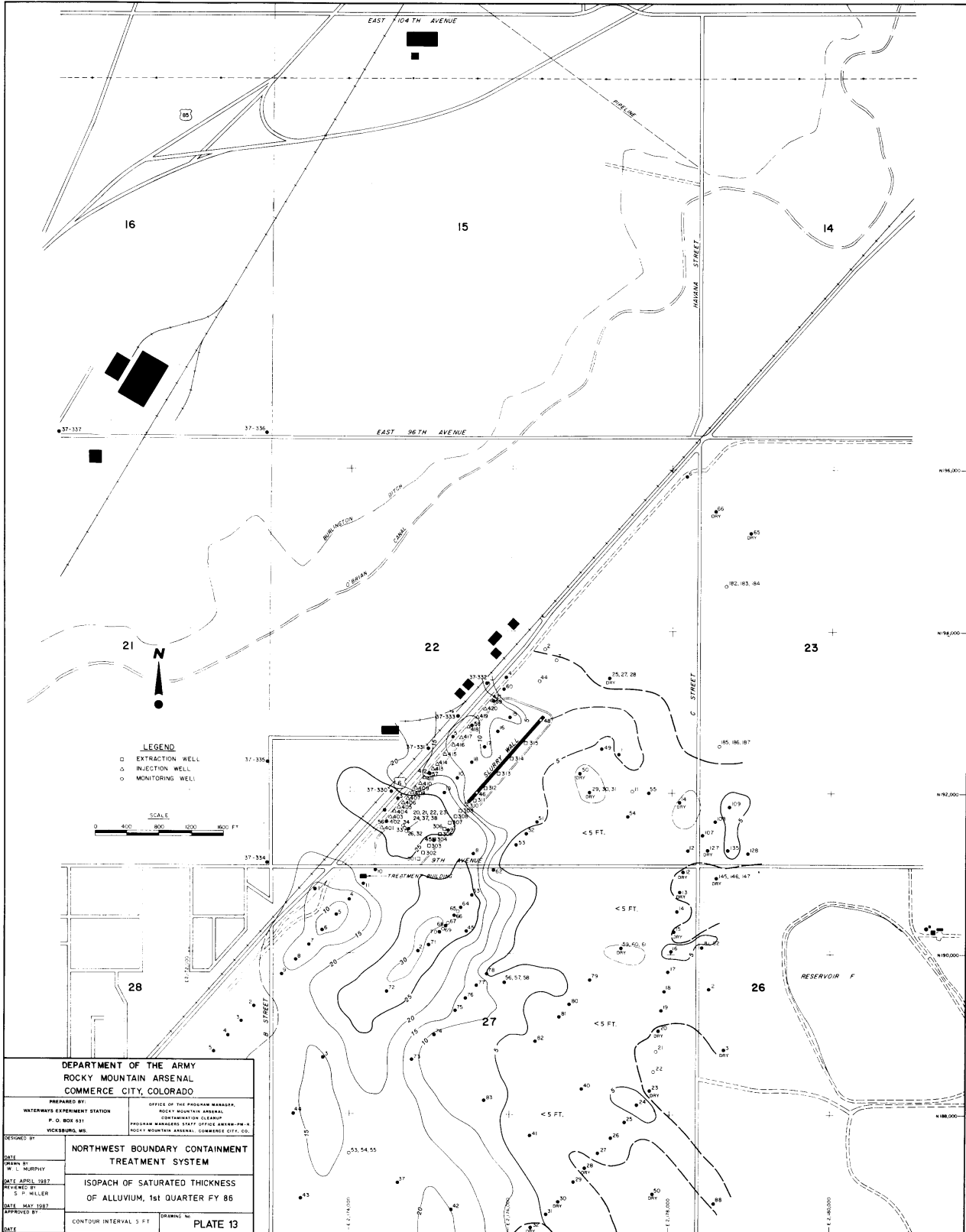
G



LEGEND
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 □ INJECTION WELL
 ○ MONITORING WELL
 ● BORING DATA FOR THIS MAP

SCALE
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 CONTOUR INTERVAL: 2 FEET (1 FT. CONTOURS DASHED)

DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
DESIGNED BY: W. L. MURPHY	PREPARED BY: OFFICE OF THE PROGRAM MANAGER, ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE AREA 10A-1 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DATE: APRIL 1987	WATERWAYS EXPERIMENT STATION P. O. BOX 431 VICKSBURG, MS.
REVIEWED BY: S. P. MILLER	DATE: MAY 1987
APPROVED BY:	DATE:
NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM TOP OF DENVER FORMATION (TOP OF ROCK)	
CONTOUR INTERVAL: 5 FT. DRAWING NO. PLATE 11	



DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

PREPARED BY: OFFICE OF THE PROGRAM MANAGER,
 WATERWAYS EXPERIMENT STATION ROCKY MOUNTAIN ARSENAL,
 P. O. BOX 837 CONTAMINATION CLEANUP
 VICKSBURG, MS. PROGRAM MANAGER STAFF OFFICE, ARSNAL-PH-A,
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM

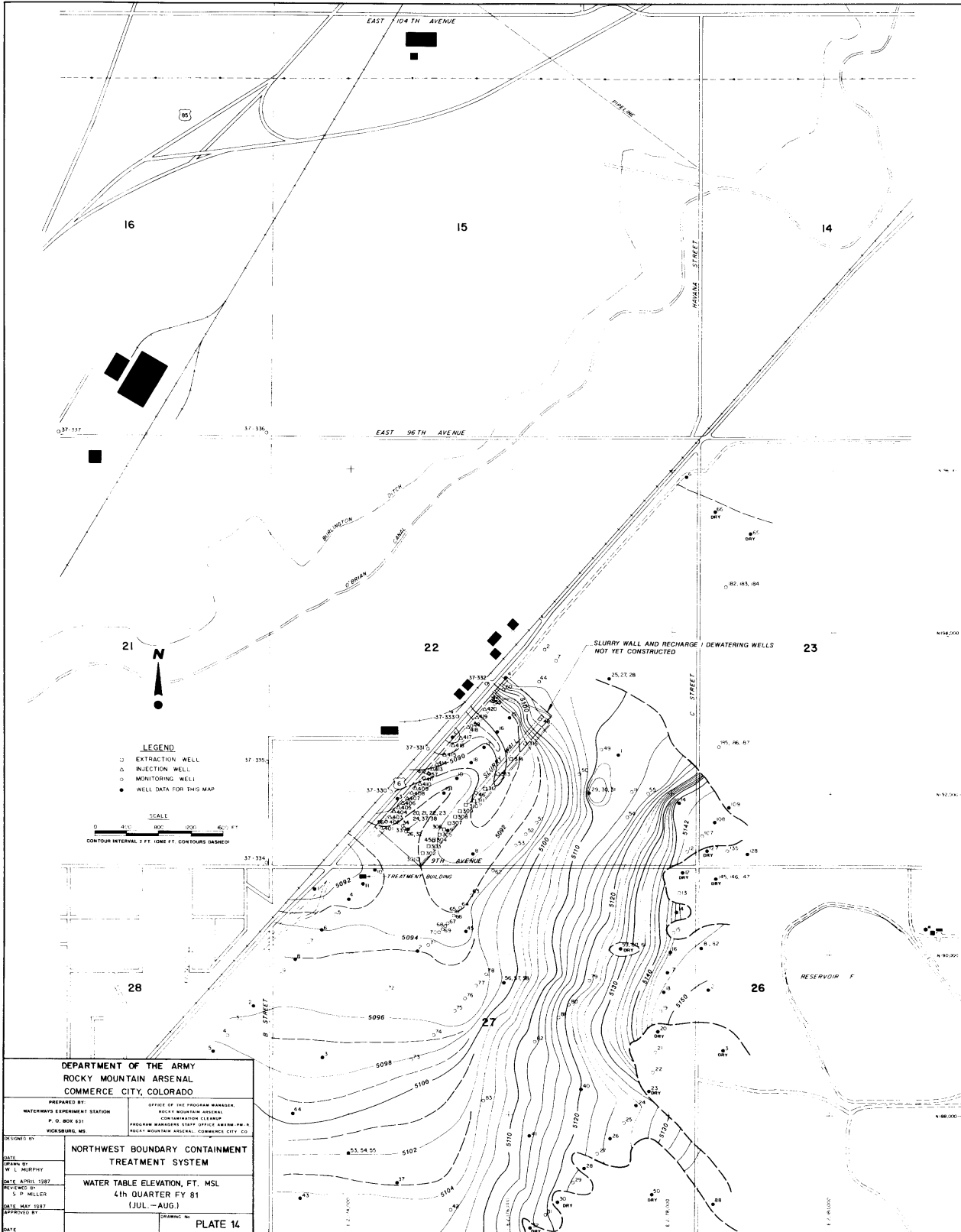
DATE: _____
 DRAWN BY: W. L. MURPHY
 DATE: APRIL 1987
 REVIEWED BY: S. P. MILLER
 DATE: MAY 1987
 APPROVED BY: _____
 DATE: _____

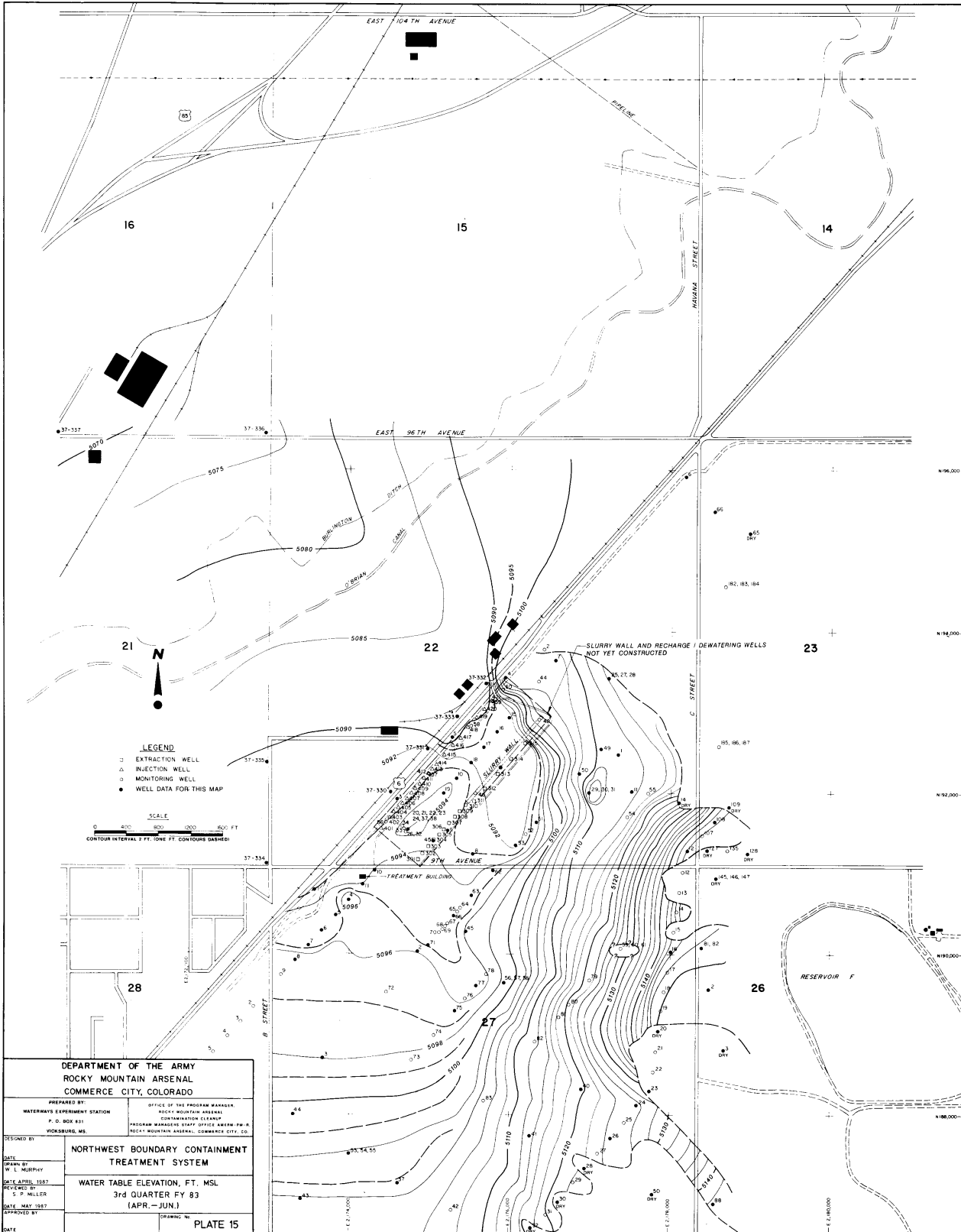
ISOPACH OF SATURATED THICKNESS
 OF ALLUVIUM, 1st QUARTER FY 86

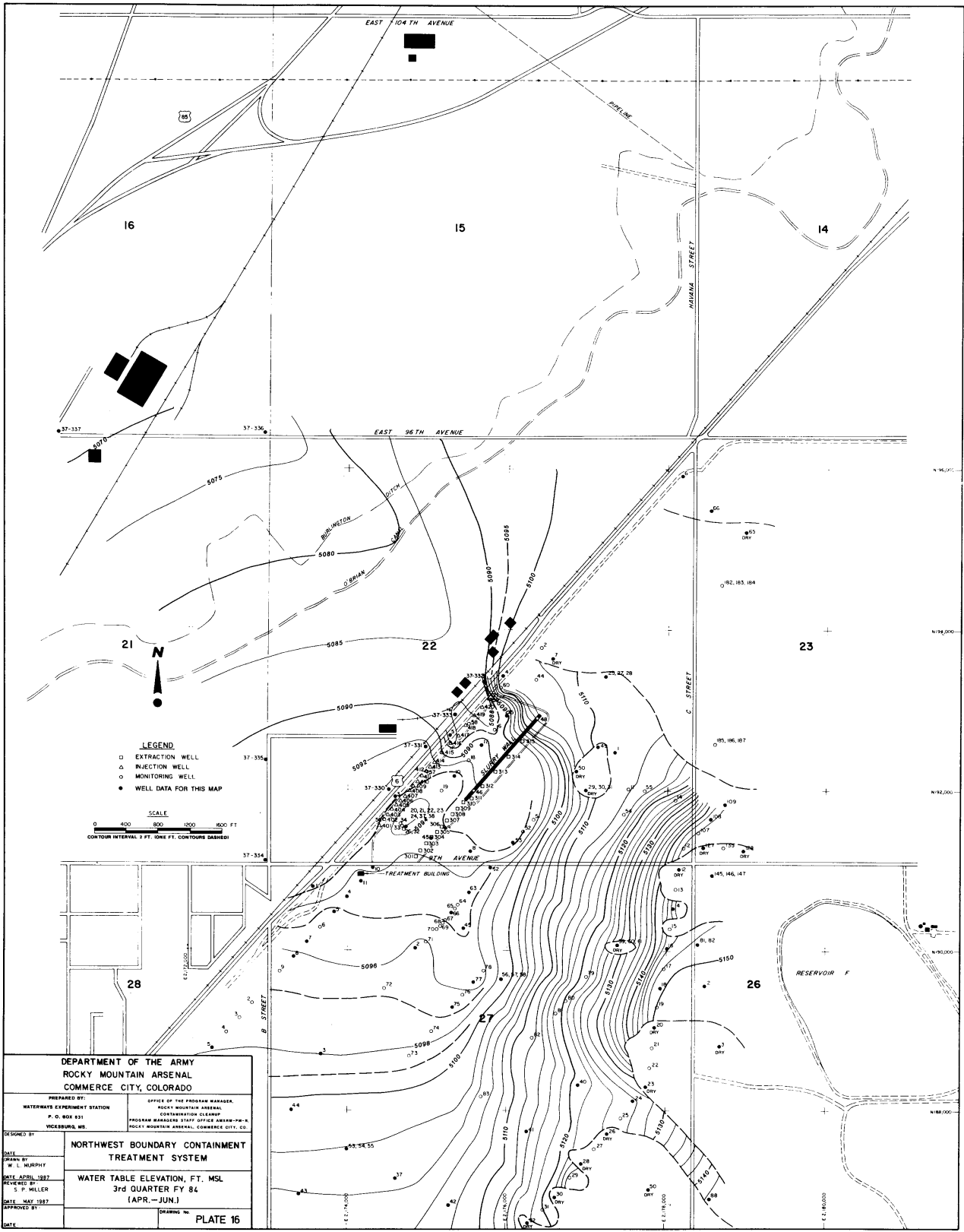
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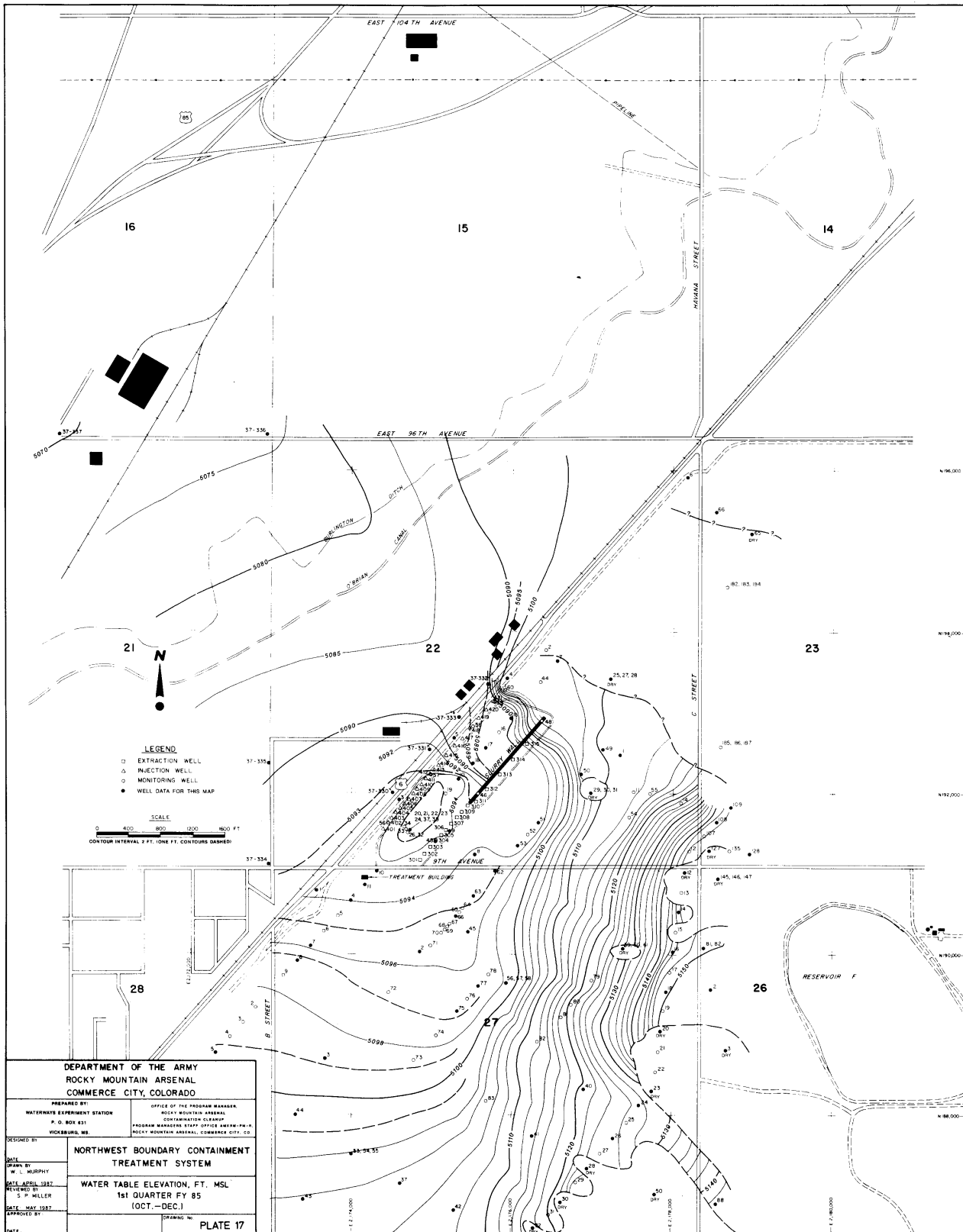
HYDROLOGY PLATES

14 thru 24



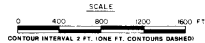




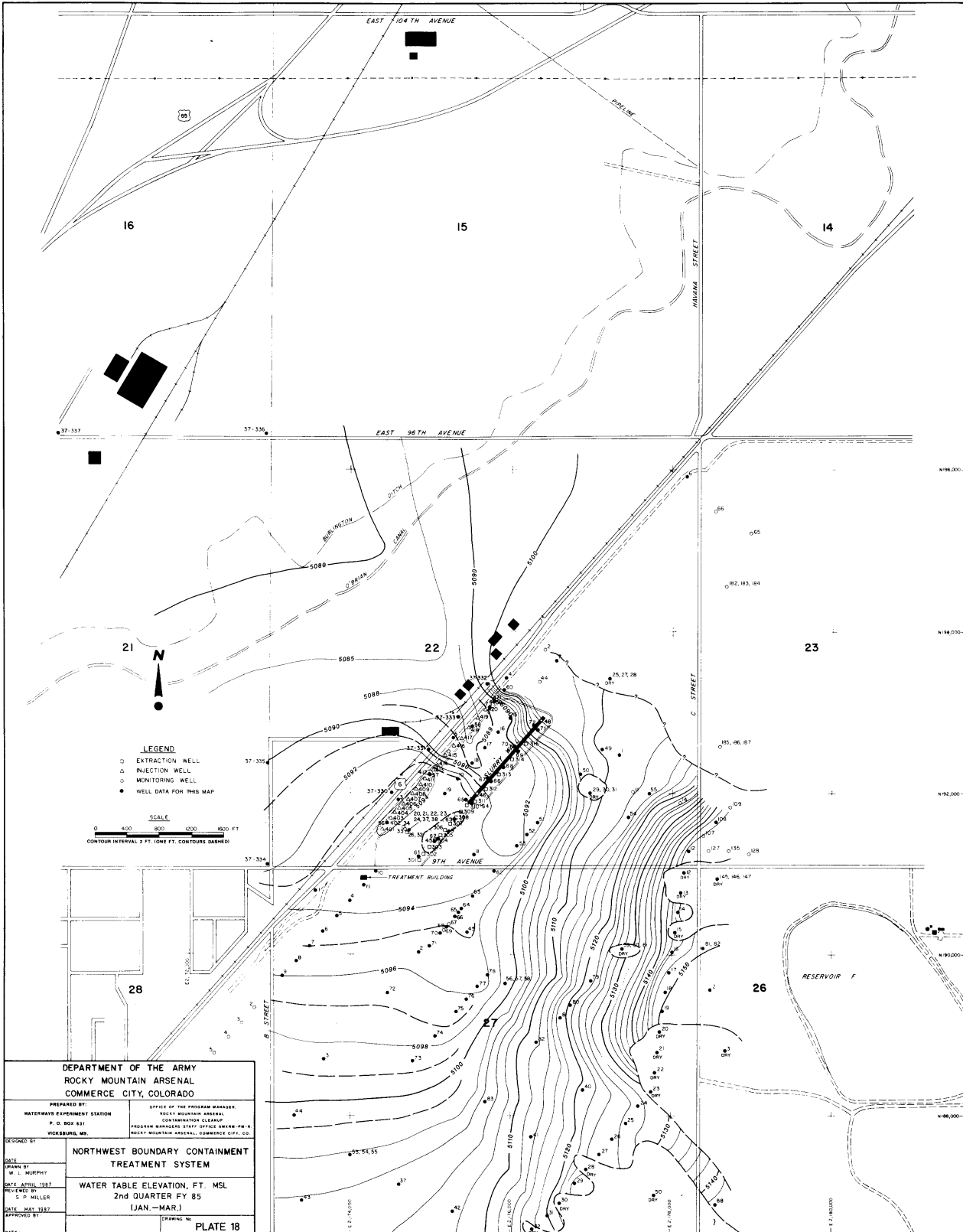


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- MONITORING WELL
- WELL DATA FOR THIS MAP



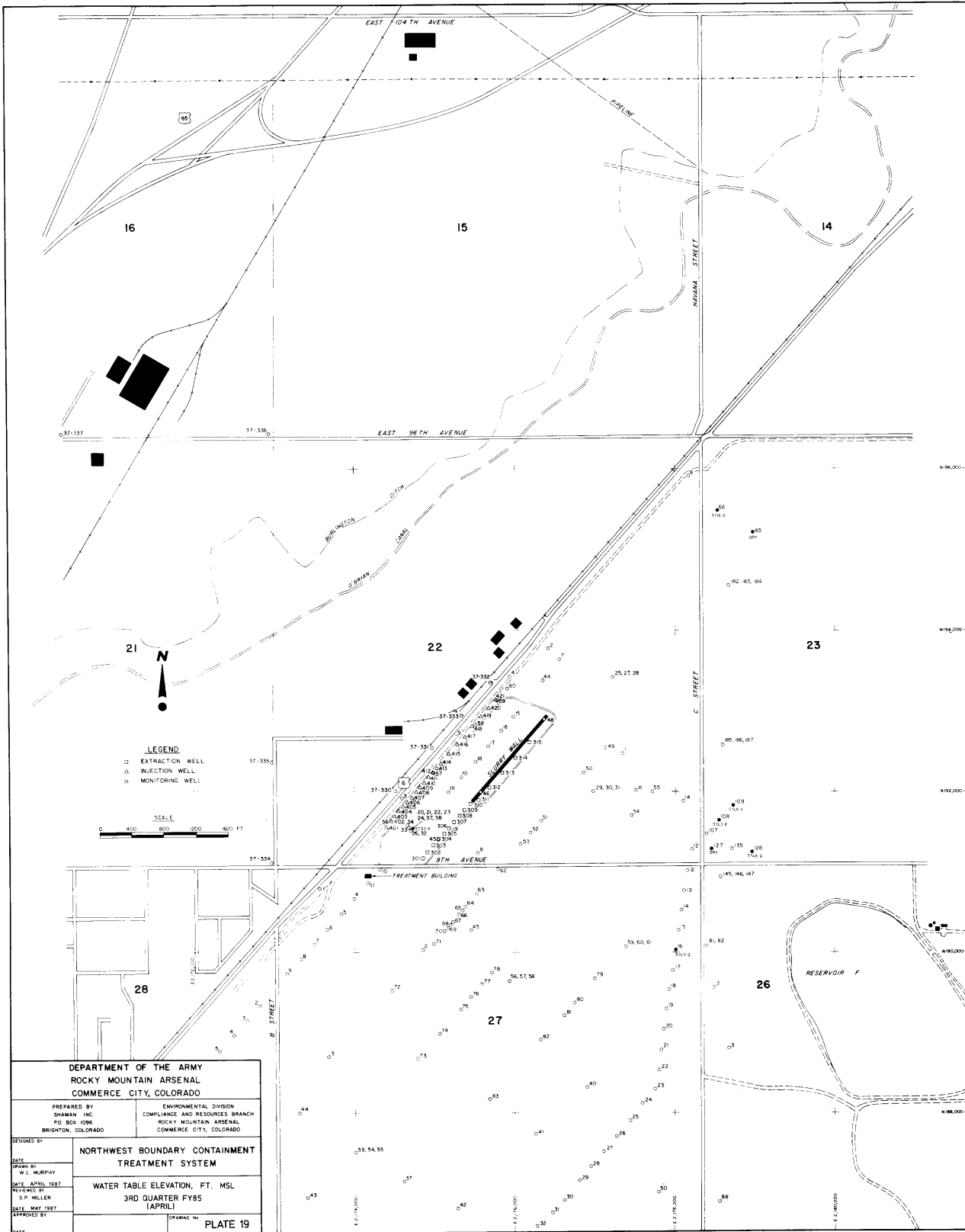
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<p>DESIGNED BY DATE DRAWN BY DATE REVIEWED BY DATE APPROVED BY DATE</p>	<p>PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 431 WICKSBURG, MS</p> <p>OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEARUP PROGRAM MANAGER STAFF OFFICE WARRM/PH-11 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO</p>
<p>NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM</p>	
<p>WATER TABLE ELEVATION, FT. MSL 1st QUARTER FY 85 (OCT.-DEC.)</p>	
DATE	DRAWING NO.
	PLATE 17

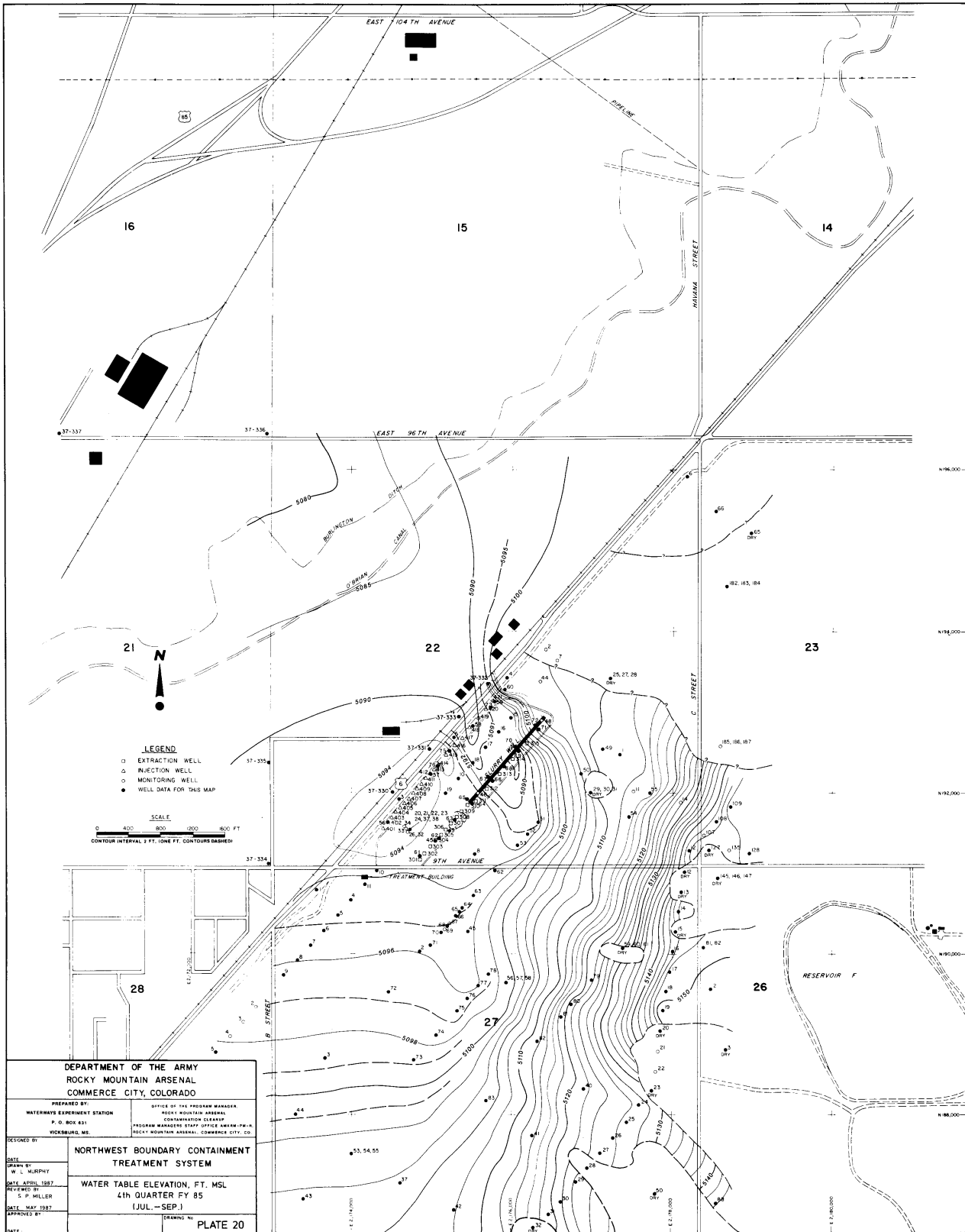


LEGEND
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 △ INJECTION WELL
 ◊ MONITORING WELL
 ● WELL DATA FOR THIS MAP

SCALE
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 CONTOUR INTERVAL 2 FT (ONE FT. CONTOURS DASHED)

DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY: WATERWAYS EQUIPMENT STATION P. O. BOX 831 VICKSBURG, MS.	OFFICE OF THE PROGRAM MANAGER: ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER, STREET OFFICE, BARBER DR. N. ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DESIGNED BY: DATE: DRAWN BY: DATE: APRIL 1987 REVIEWED BY: DATE: MAY 1987 APPROVED BY: DATE:	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM WATER TABLE ELEVATION, FT. MSL 2nd QUARTER FY 85 (JAN-MAR) DRAWING NO.
PLATE 18	

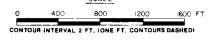




LEGEND

- EXTRACTION WELL
- △ INJECTION WELL
- MONITORING WELL
- WELL DATA FOR THIS MAP

SCALE



DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

PREPARED BY:
 WATERWAYS EXPERIMENT STATION
 P. O. BOX 631
 WICKBURG, MO.

OFFICE OF THE PROGRAM MANAGER
 ROCKY MOUNTAIN ARSENAL
 CONSERVATION CENTER
 PROGRAM MANAGERS STAFF OFFICE AREA 10-A
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

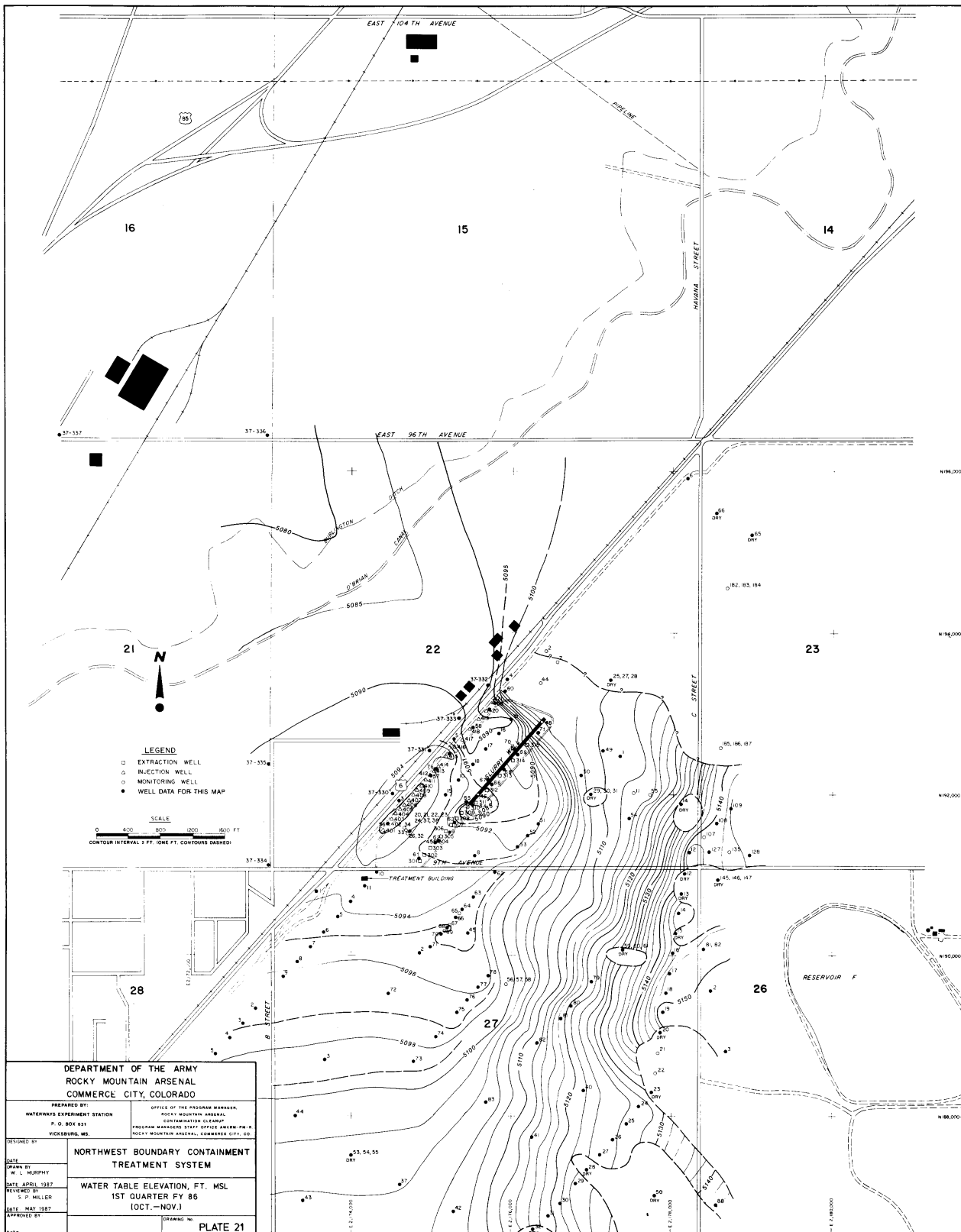
DECORATED BY:
**NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM**

DATE APRIL 1987
 REVISION BY
 S. P. MILLER
 DATE MAY 1987
 APPROVED BY

DATE

WATER TABLE ELEVATION, FT. MSL
 4th QUARTER FY 85
 (JUL.-SEP.)

DRAWING NO.
PLATE 20



- LEGEND**
- EXTRACTION WELL
 - △ INJECTION WELL
 - MONITORING WELL
 - WELL DATA FOR THIS MAP

SCALE
 0 400 800 1200 1600 FT
 CONTOUR INTERVAL 2 FT. 1000 FT. CONTOURS DASHED

DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

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

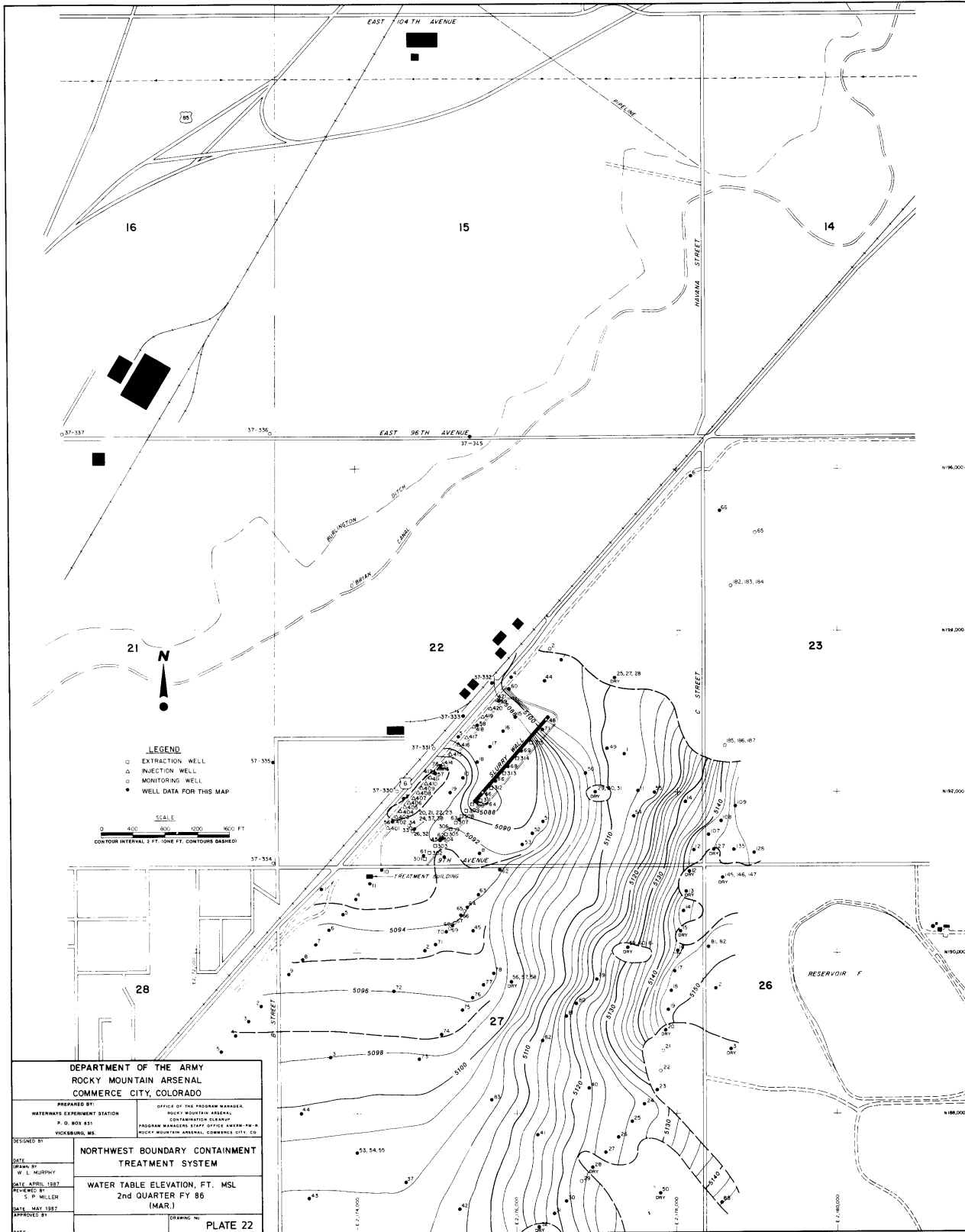
OFFICE OF THE PROGRAM MANAGER,
 ROCKY MOUNTAIN ARSENAL,
 CONTAMINATION CLEANUP
 PROGRAM MANAGER'S STAFF OFFICE/ARSENAL PM-8
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

**NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM**

**WATER TABLE ELEVATION, FT. MSL
 1ST QUARTER FY 86
 (OCT.-NOV.)**

DESIGNED BY: []
 DATE: []
 DRAWN BY: W. L. MURPHY
 DATE: APRIL 1987
 REVIEWED BY: S. P. MILLER
 DATE: MAY 1987
 APPROVED BY: []
 DATE: []

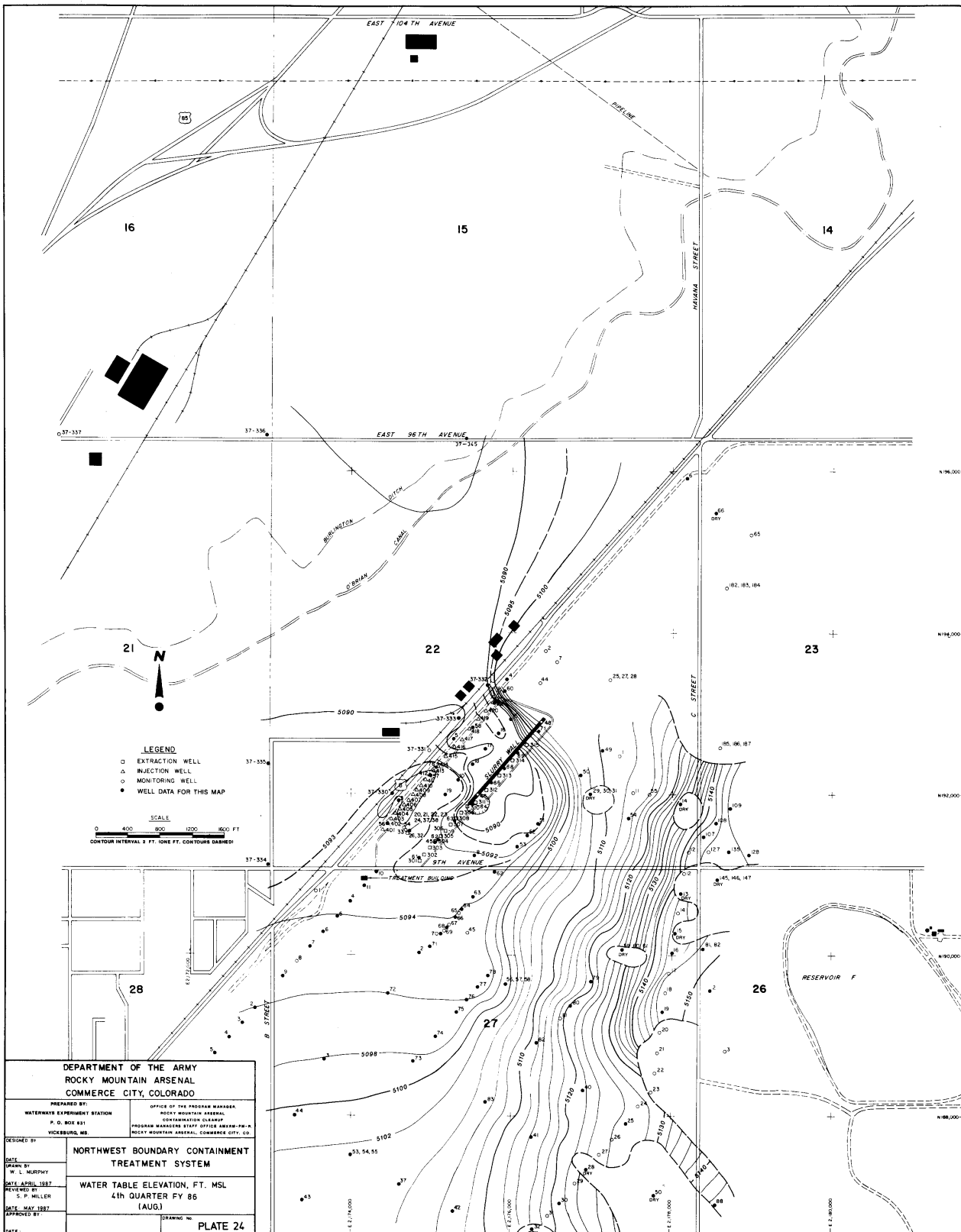
PLATE 21



LEGEND
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 △ INJECTION WELL
 ◊ MONITORING WELL
 ● WELL DATA FOR THIS MAP

SCALE
 0 400 800 1200 1600 FT
 CONTOUR INTERVAL 5 FT. (ONE FT. CONTOURS DASHED)

DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY: WATERWAYS DIVISION STATION P. O. BOX 431 VICKSBURG, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE, ROOM 114 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM	
DATE: APRIL 1987	
DRAWN BY: W. L. MURPHY	
DATE: APRIL 1987	
REVIEWED BY: S. P. MILLER	
DATE: MAY 1987	
APPROVED BY:	
DATE:	
PLATE 22	



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
 OPERATION CLEANUP
 PROGRAM MANAGER STAFF OFFICE ARSN-PM-R
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

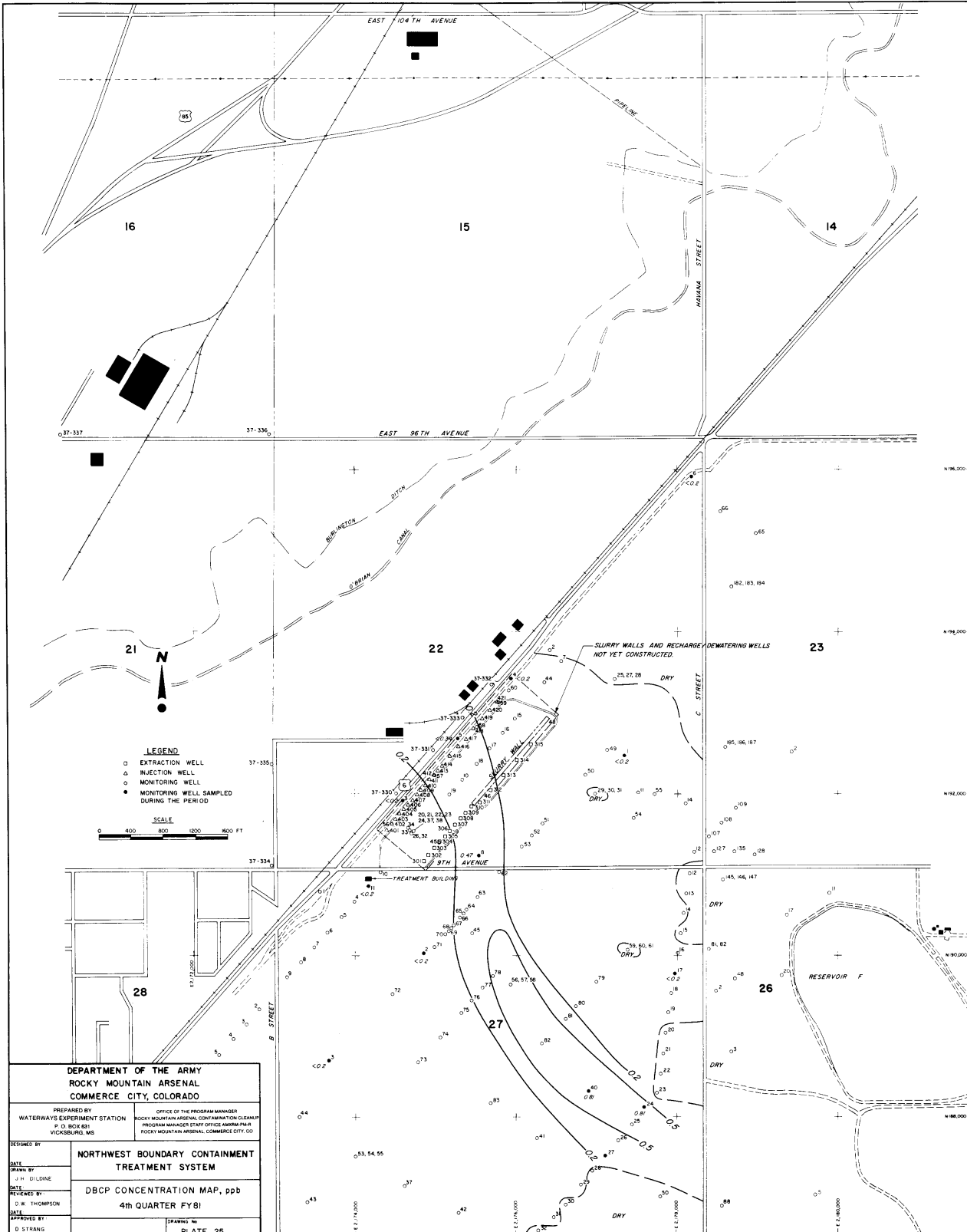
DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM

DATE: APRIL 1987
 DRAWN BY: W. L. MURPHY
 DATE: APRIL 1987
 CHECKED BY: S. P. MILLER
 DATE: MAY 1987
 APPROVED BY:

DRAWING NO. PLATE 24

CONTAMINANT DISTRIBUTION PLATES

25 thru 76



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

SCALE
 0 400 800 1200 600 FT

**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 CONTAMINATION CLEANUP
 PROGRAM MANAGER STAFF OFFICE 4400R/PLR/PLR
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY
**NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM**

DRAWN BY
 J. H. DILLINE

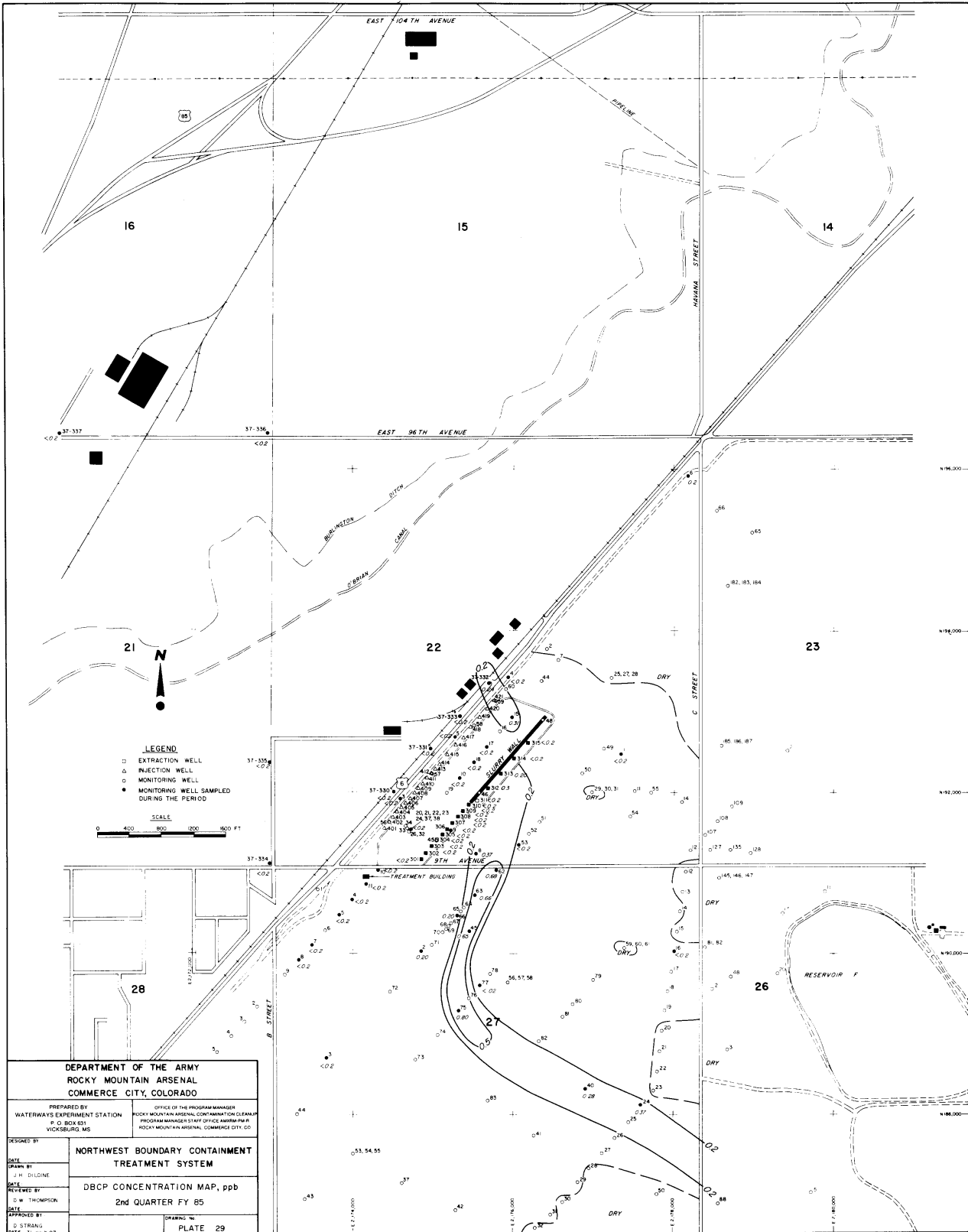
REVIEWED BY
 D. W. THOMPSON

APPROVED BY
 O. STRANG

DATE
 11/17/82

PLATE 25

**DBCP CONCENTRATION MAP, ppb
 4th QUARTER FY81**

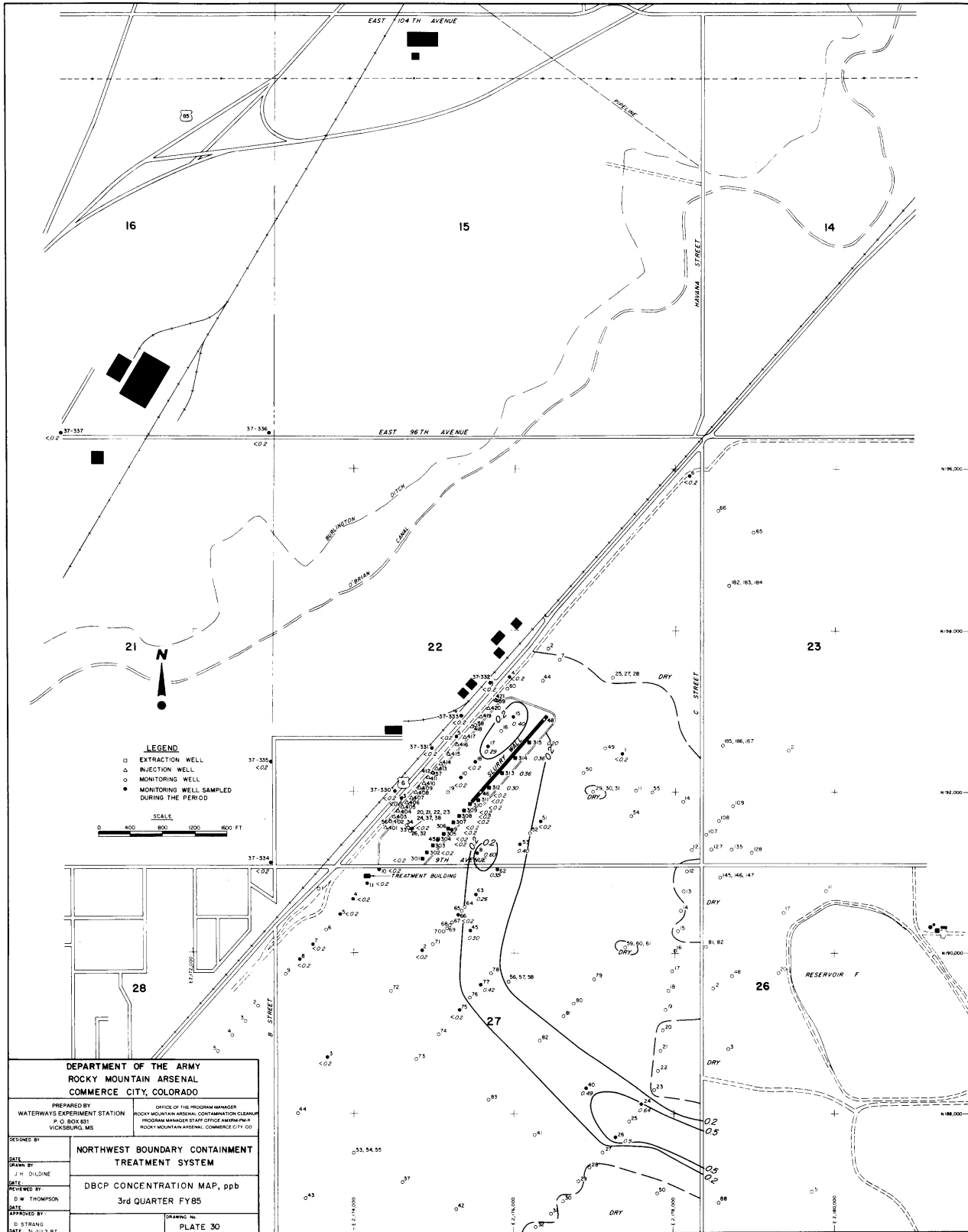


**DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO**

PREPARED BY: WATERWAYS EXPERIMENT STATION
P. O. BOX 631
WOODBRIDGE, MD

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER'S STAFF OFFICE
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY:	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
DRAWN BY: J. H. DILLINE	
REVIEWED BY: D. W. THOMPSON	DBCPC CONCENTRATION MAP, ppb 2nd QUARTER FY 85
APPROVED BY: D. STRANG	
DATE: 3/22/87	DRAWING NO. PLATE 29



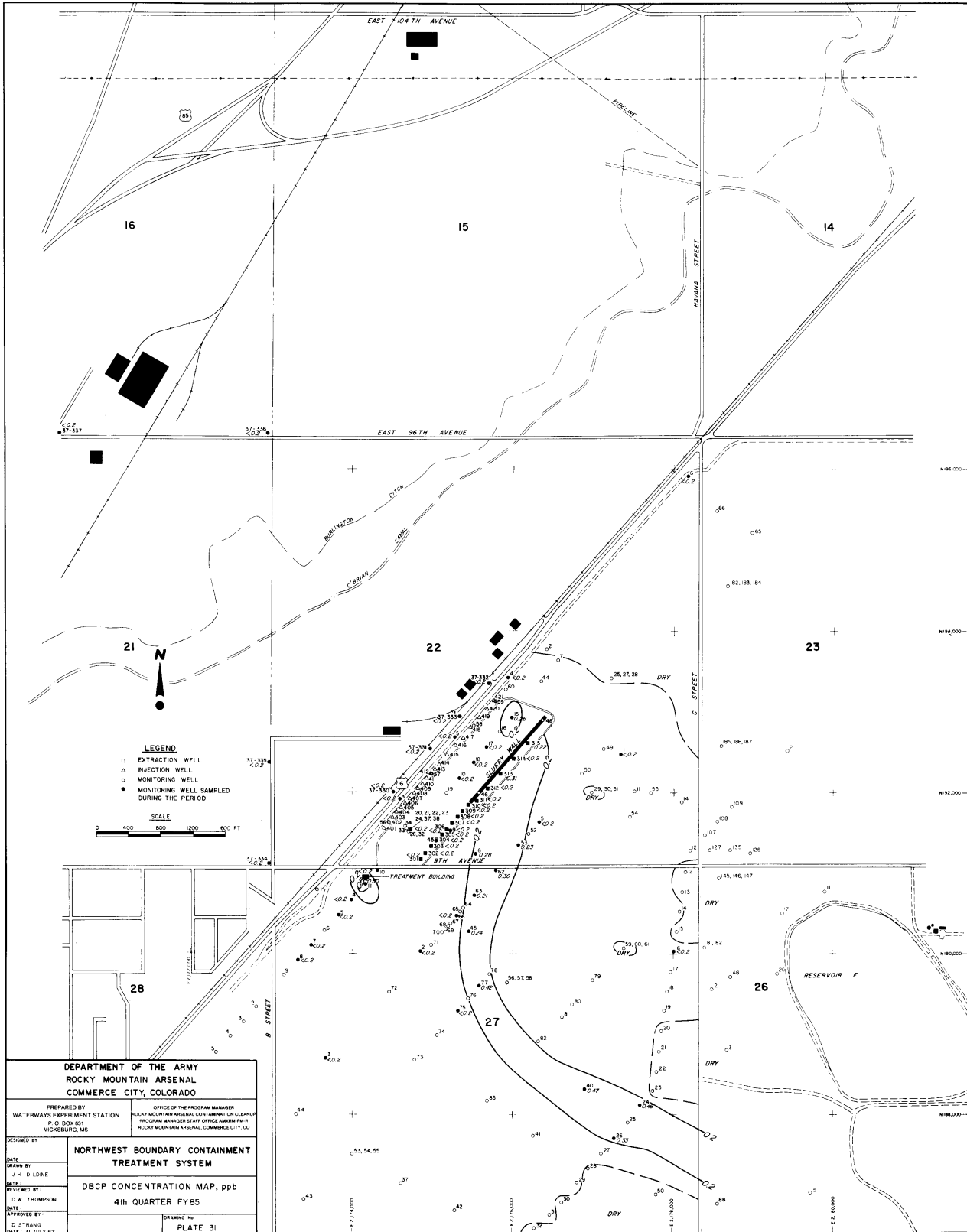
LEGEND

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

SCALE



<p>DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO</p>	
<p>PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 VICKSBURG, MS</p>	<p>OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE AMRMP/PA ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO</p>
<p>DESIGNED BY DATE DRAWN BY J. H. DILDINE DATE REVIEWED BY D. W. THOMPSON DATE APPROVED BY G. STRANG DATE 31 MAR 87</p>	<p>NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM DBCP CONCENTRATION MAP, ppb 3rd QUARTER FY85 DRAWING NO. PLATE 30</p>



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

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

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE 4800M-PM-11
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: **NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM**

DRAWN BY: J. H. DILLONE

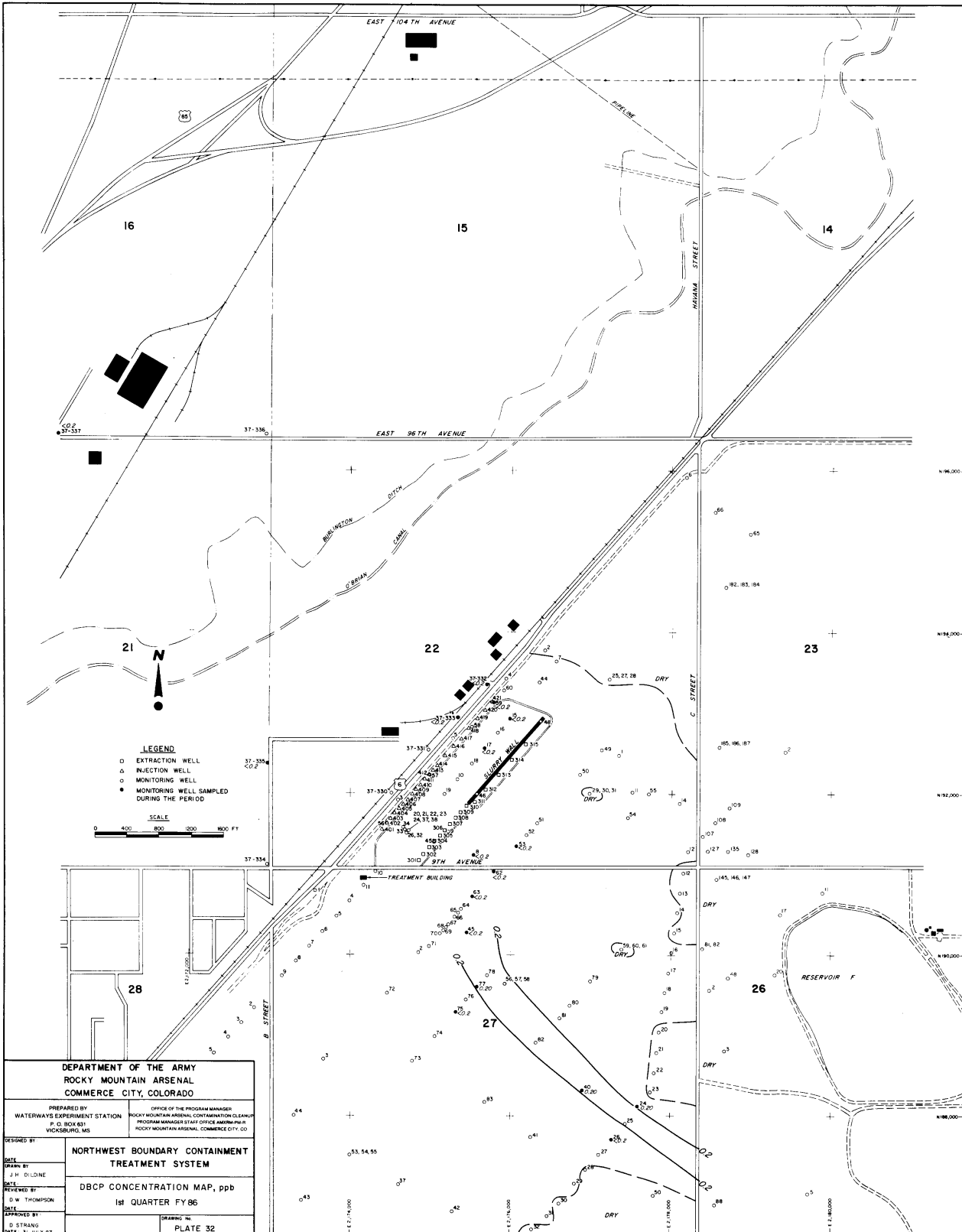
REVIEWED BY: D. W. THOMPSON

APPROVED BY: D. STRANG

DATE: 31 OCT 82

DBCP CONCENTRATION MAP, ppp
4th QUARTER FY85

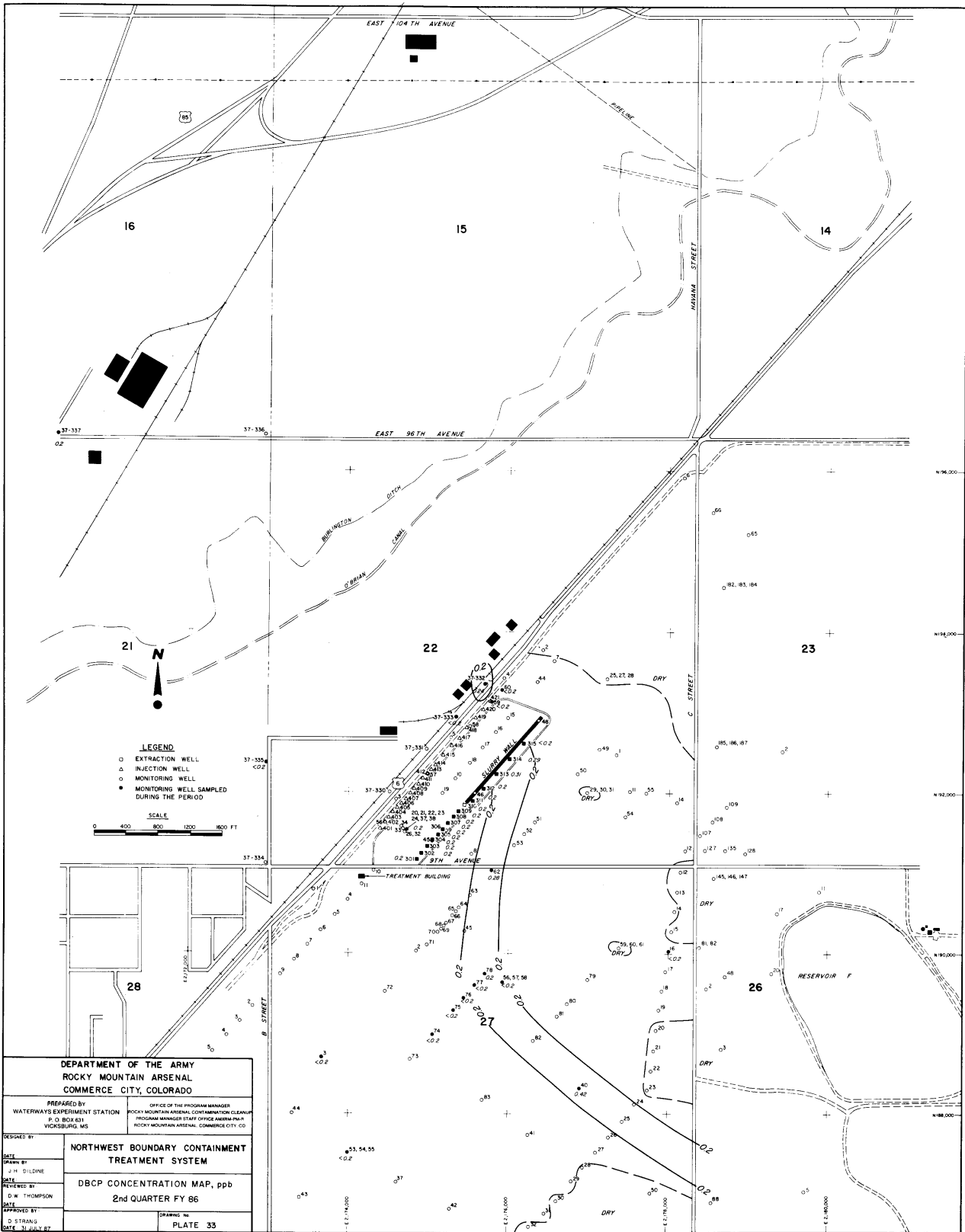
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 ○ MONITORING WELL
 ● MONITORING WELL SAMPLED DURING THE PERIOD

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 WICKSBURG, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER'S OFFICE ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY DATE DRAWN BY J. H. DILLONE DATE REVIEWED BY D. W. THOMPSON DATE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM DBCP CONCENTRATION MAP, ppb 1st QUARTER FY 86
APPROVED BY D. STRANG DATE: 8-20-87	DRAWING NO. PLATE 32



LEGEND

- EXTRACTION WELL
- △ INJECTION WELL
- MONITORING WELL
- MONITORING WELL 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, WICKSBURG, MS
 OFFICE OF THE PROGRAM MANAGER: ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE, ARSENAL PARK, ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM

DRAWN BY: J. H. DILLINE

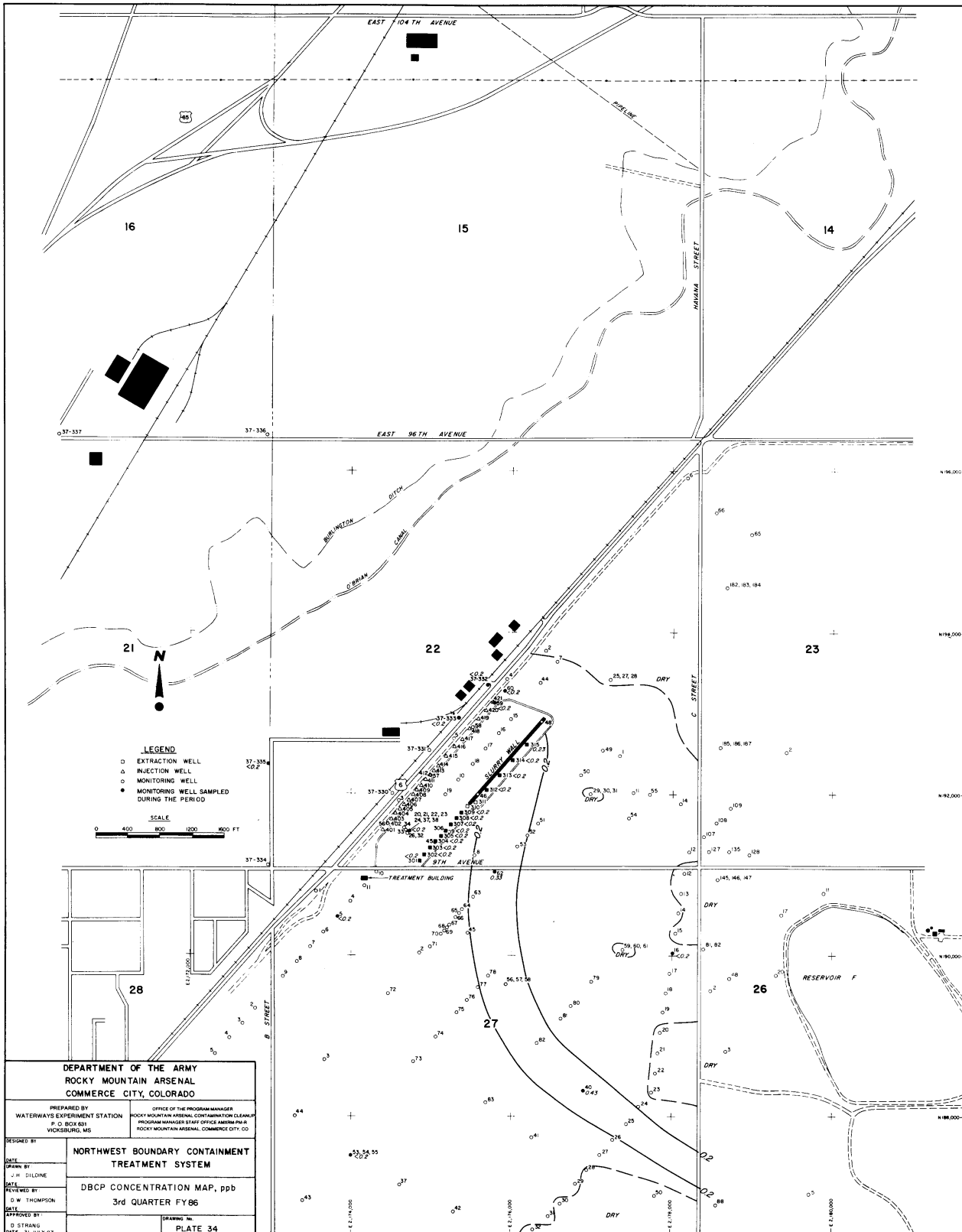
REVIEWED BY: D. W. THOMPSON

DATE: 2nd QUARTER FY 86

APPROVED BY: D. STRANG

DATE: 31 JUL 87

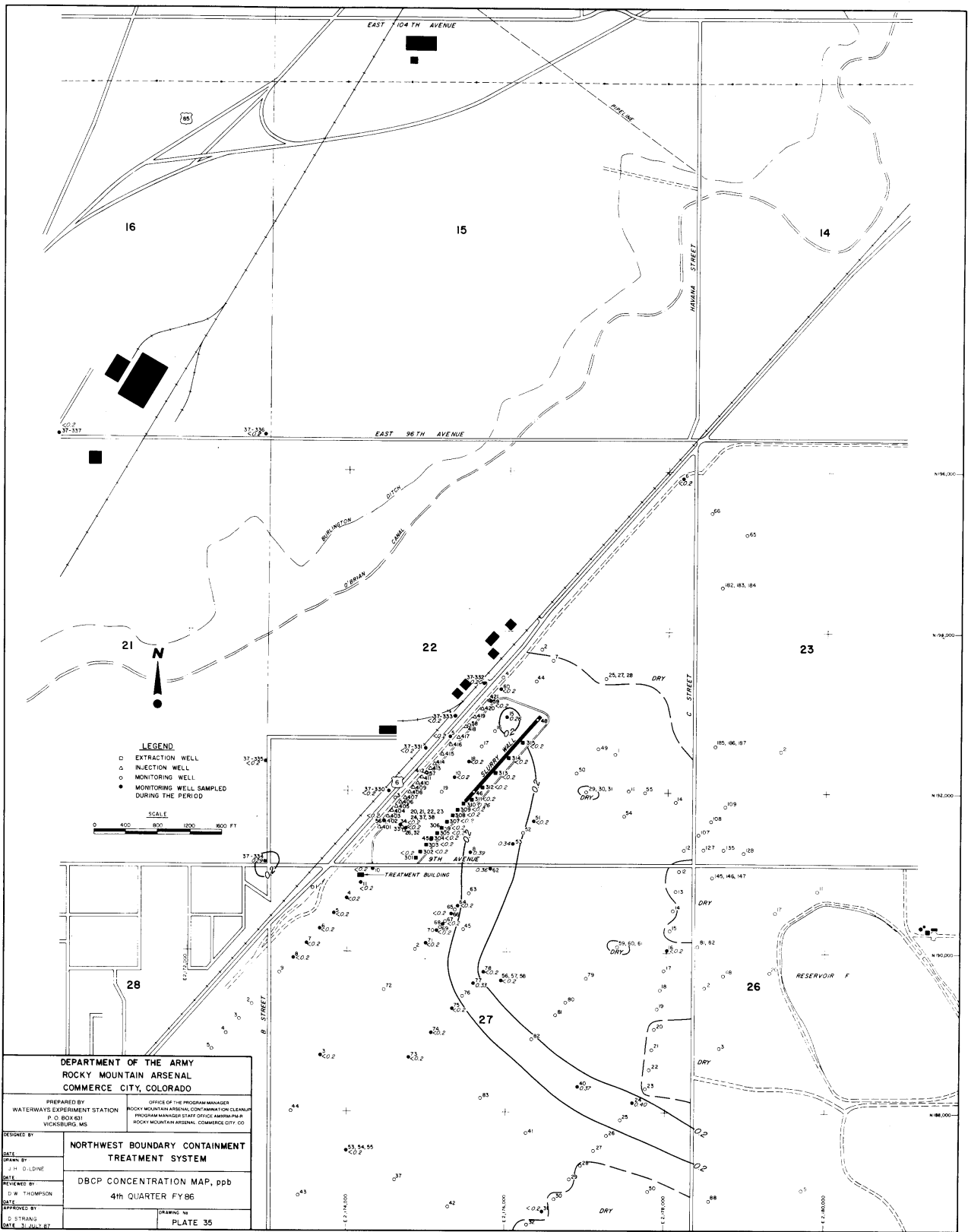
DRAWING NO: PLATE 33



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 □ MONITORING WELL
 ■ MONITORING WELL SAMPLED DURING THE PERIOD

SCALE
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DEPARTMENT OF THE ARMY	
ROCKY MOUNTAIN ARSENAL	
COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 601 WOODBRIDGE, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER'S OFFICE JARRIN P. H. ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DESIGNED BY NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM	
DRAWN BY J. H. DILLONE	
CHECKED BY D. W. THOMPSON	
DATE 31 JUL 87	
APPROVED BY D. STRANG	
	PLATE 34



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

SCALE
 0 400 800 1200 800 FT

DEPARTMENT OF THE ARMY
ROCKY MOUNTAIN ARSENAL
COMMERCE CITY, COLORADO

PREPARED BY: WATERWAYS EXPERIMENT STATION (P. O. BOX 501) WICKSBURG, MS

OFFICE OF THE PROGRAM MANAGER
 ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE AMMP/PA/R
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: **NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM**

DRAWN BY: J. H. O'LDINE

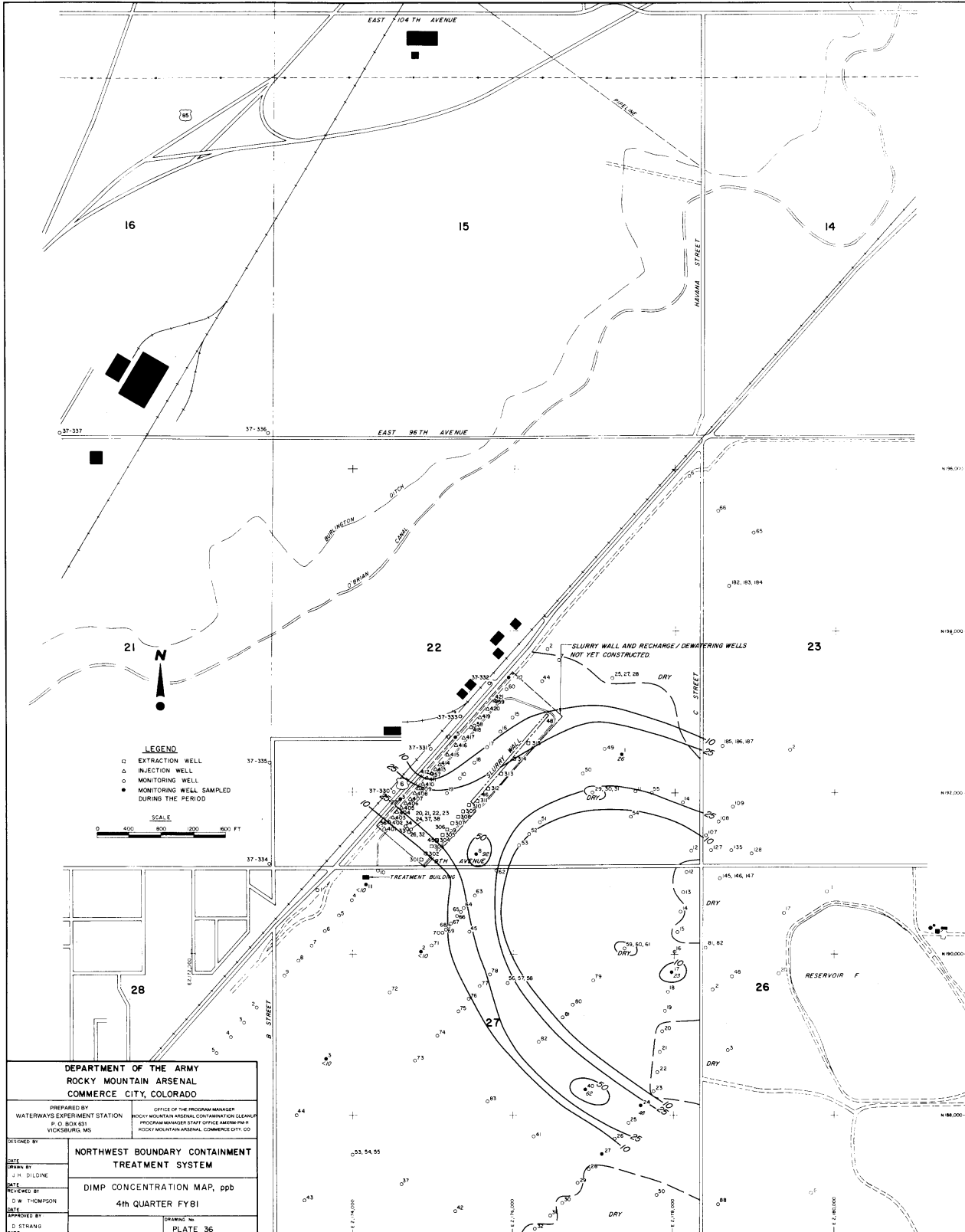
CHECKED BY: D. W. THOMPSON

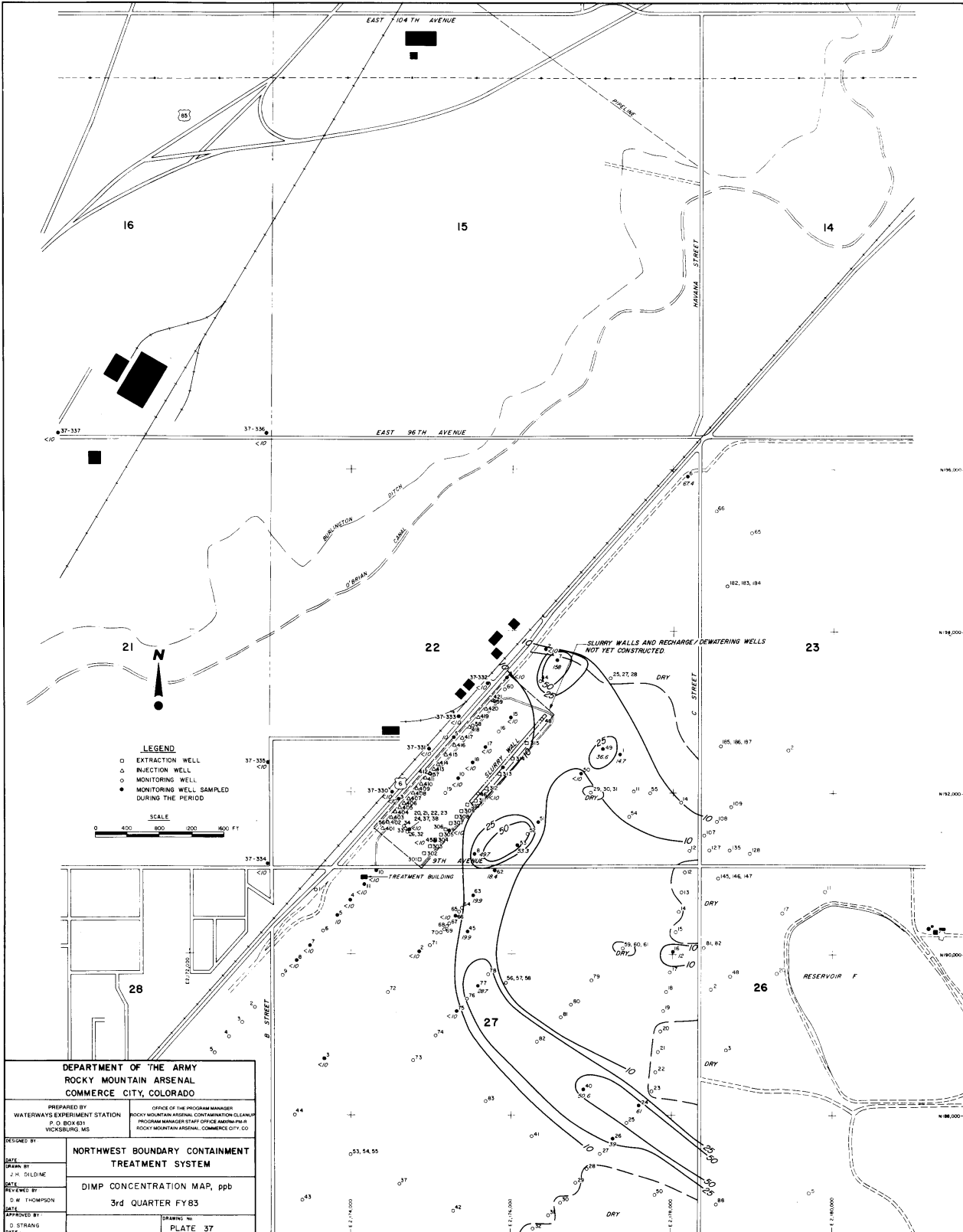
DATE: 4th QUARTER FY86

APPROVED BY: D. STRANG

DATE: 31 JUL 87

DRAWING NO. **PLATE 35**





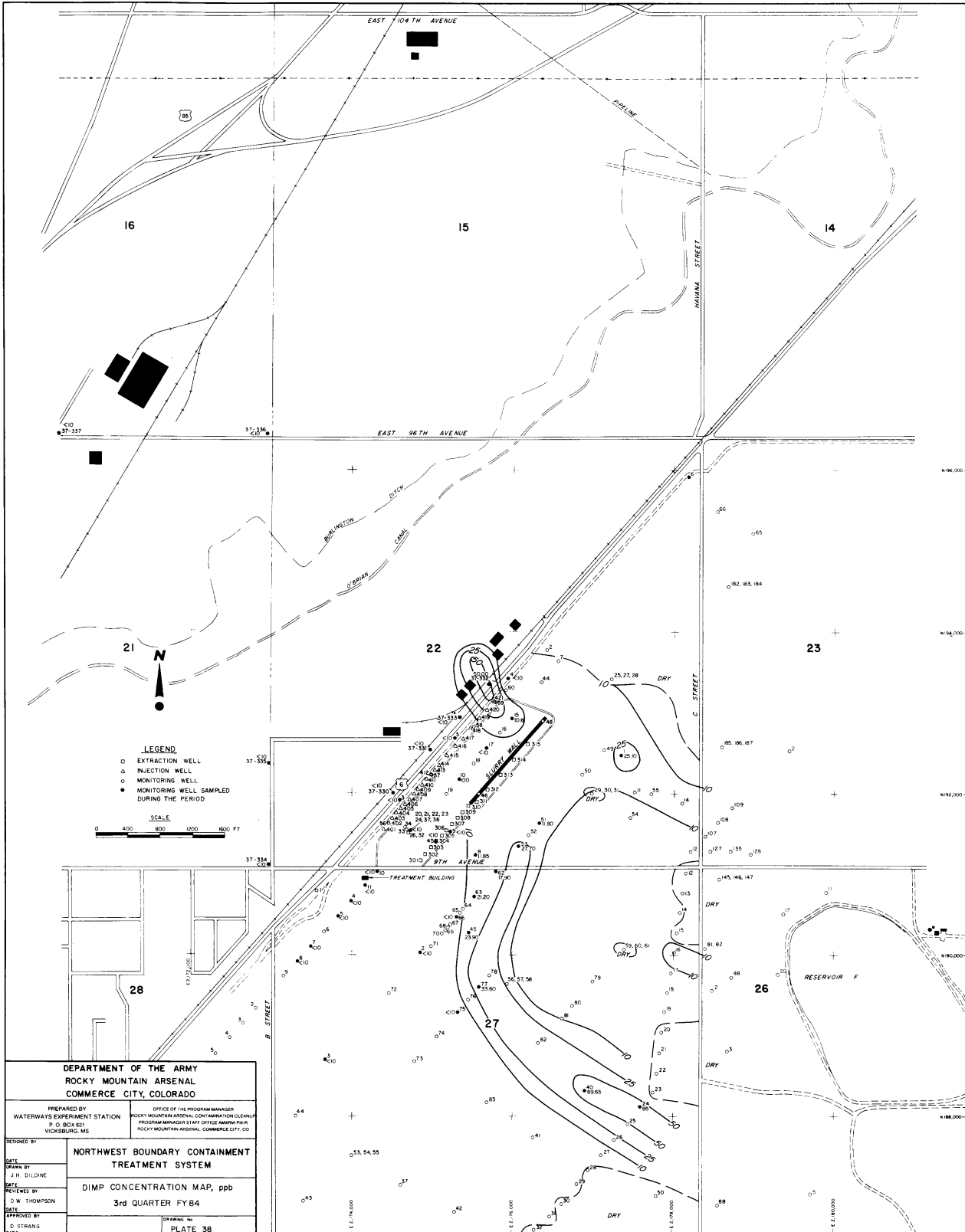
LEGEND

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

SCALE

0 400 800 200 600 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 CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE ROOM 1611B ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY J. M. DILDINE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
CHECKED BY D. W. THOMPSON	DIMP CONCENTRATION MAP, ppb 3rd QUARTER FY83
APPROVED BY O. STRANG	DRAWING NO. PLATE 37



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

SCALE
 0 400 800 1200 1600 2000 FT

**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 CONTAMINATION CLEANUP
 PROGRAM MANAGER'S STATE OFFICE 4800 W. 140th
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: **NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM**

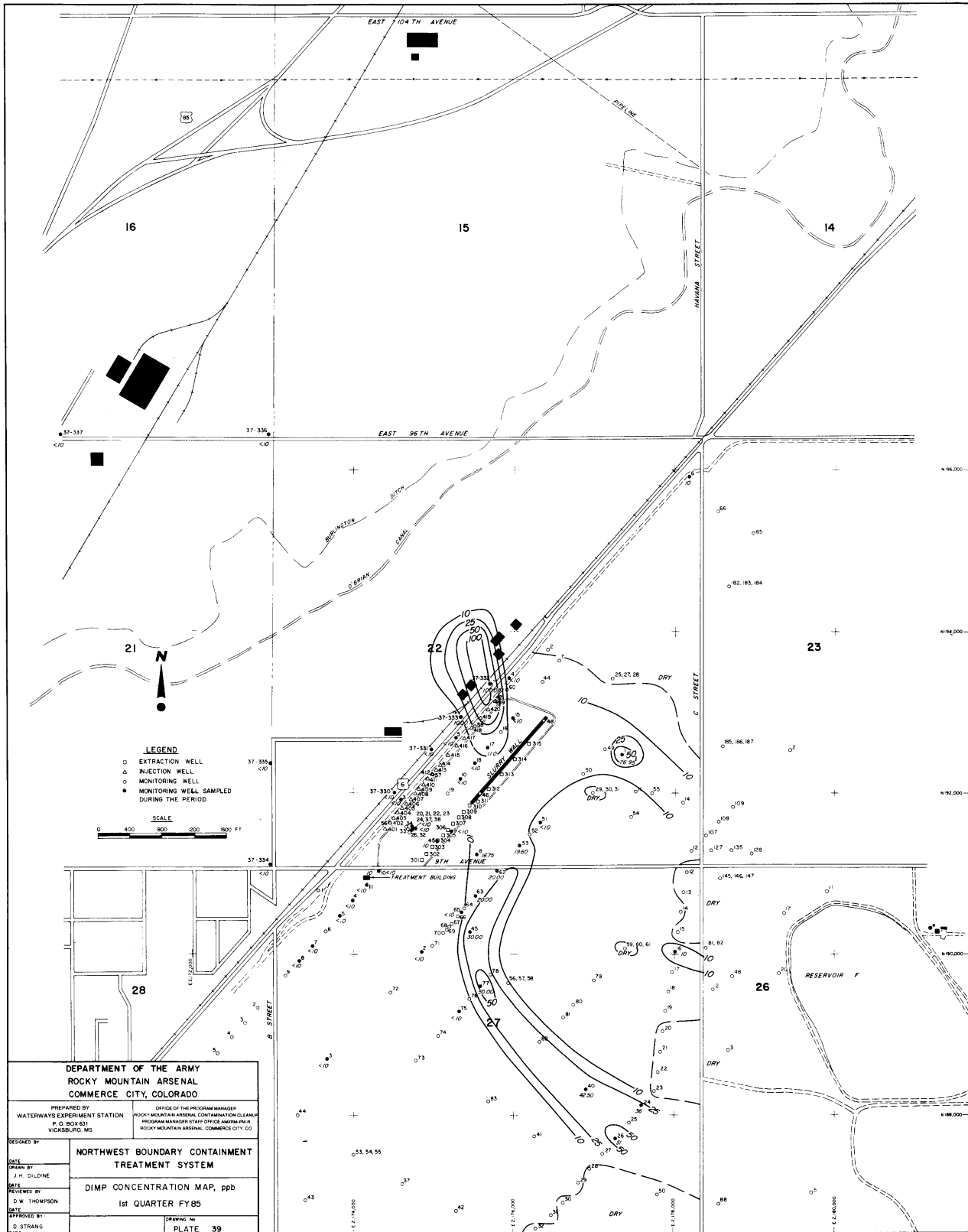
DRAWN BY: J. H. DILLINE

REVIEWED BY: D. W. THOMPSON

DATE: 3rd QUARTER FY84

APPROVED BY: D. STRANG

DRAWING NO: **PLATE 38**



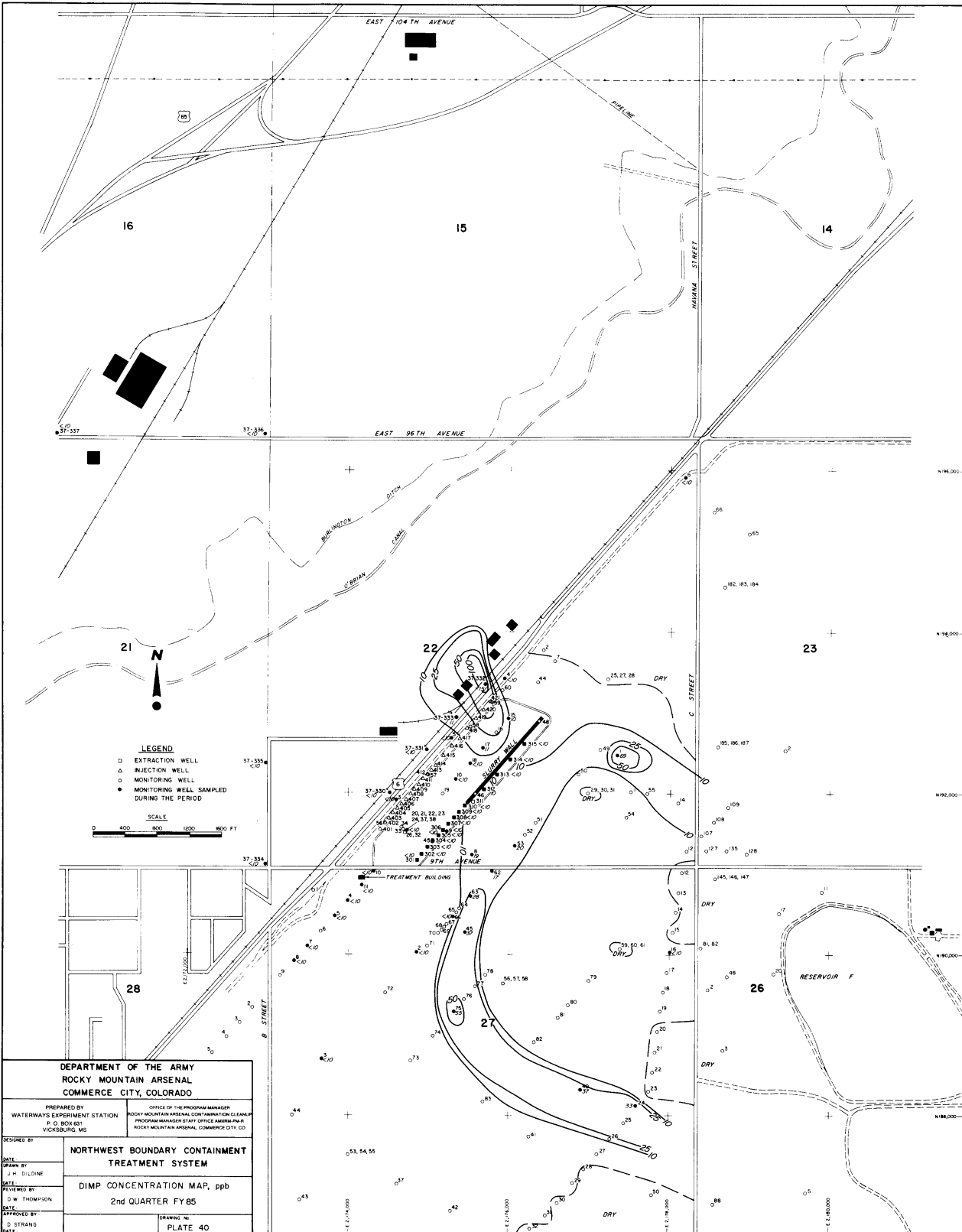
LEGEND
 □ EXTRACTION WELL
 △ INJECTION WELL
 ○ MONITORING WELL
 ● MONITORING WELL SAMPLED DURING THE PERIOD

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 CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE, MAIN FIRM #1, ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: DATE: DRAWN BY: J. H. DILDINE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
REVIEWED BY: D. W. THOMPSON DATE:	
APPROVED BY: D. STRANG DATE:	DIMP CONCENTRATION MAP, ppb 1st QUARTER FY85
	DRAWING NO. PLATE 39



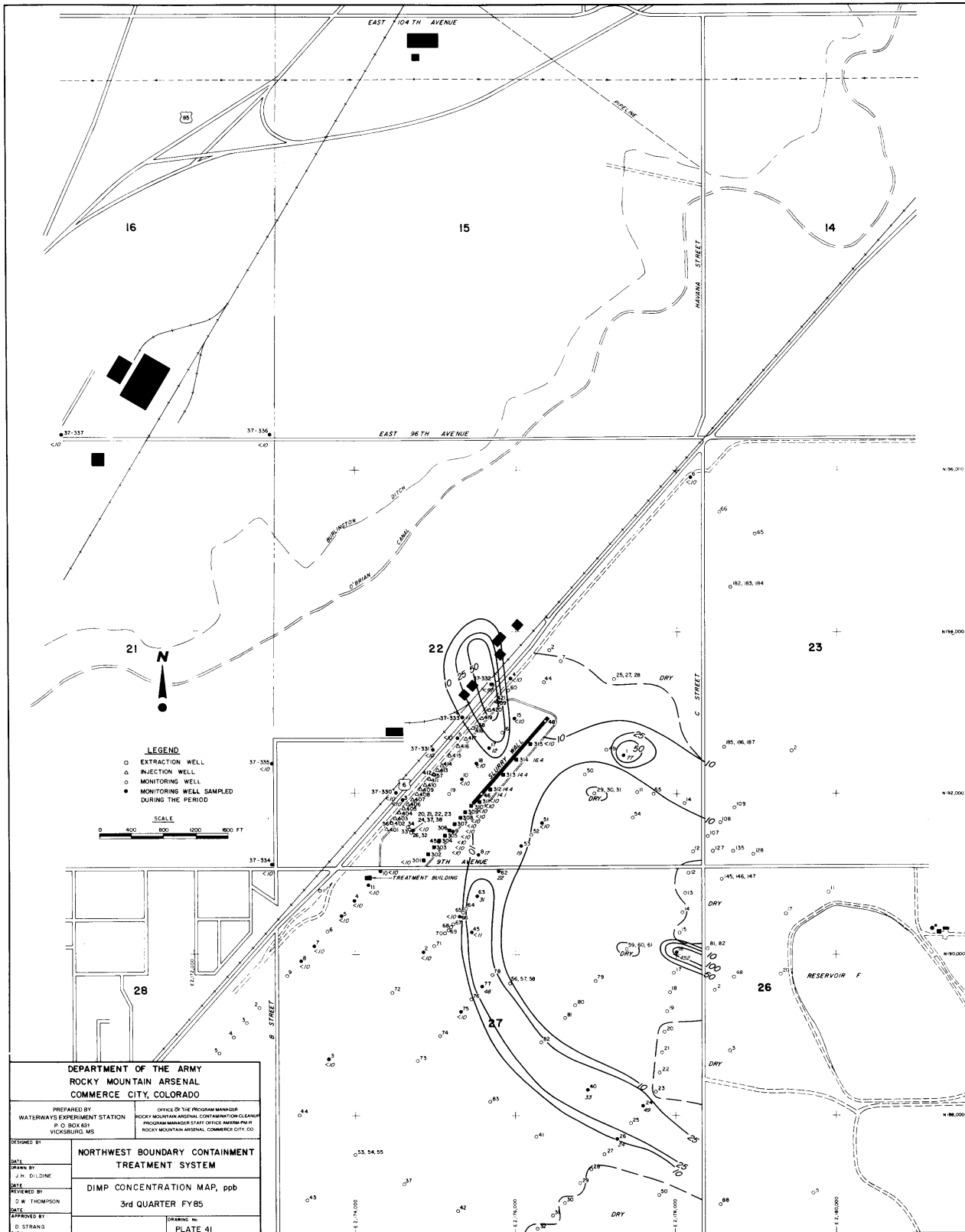
LEGEND

- EXTRACTION WELL
- △ INJECTION WELL
- MONITORING WELL
- 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 CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE AMB/PL/PL/PL ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM	
DRAWN BY J. H. DILDINE	
CHECKED BY D. W. THOMPSON	
APPROVED BY D. STRANG	
DIMP CONCENTRATION MAP, ppb 2nd QUARTER FY85	
DRAWING NO. PLATE 40	

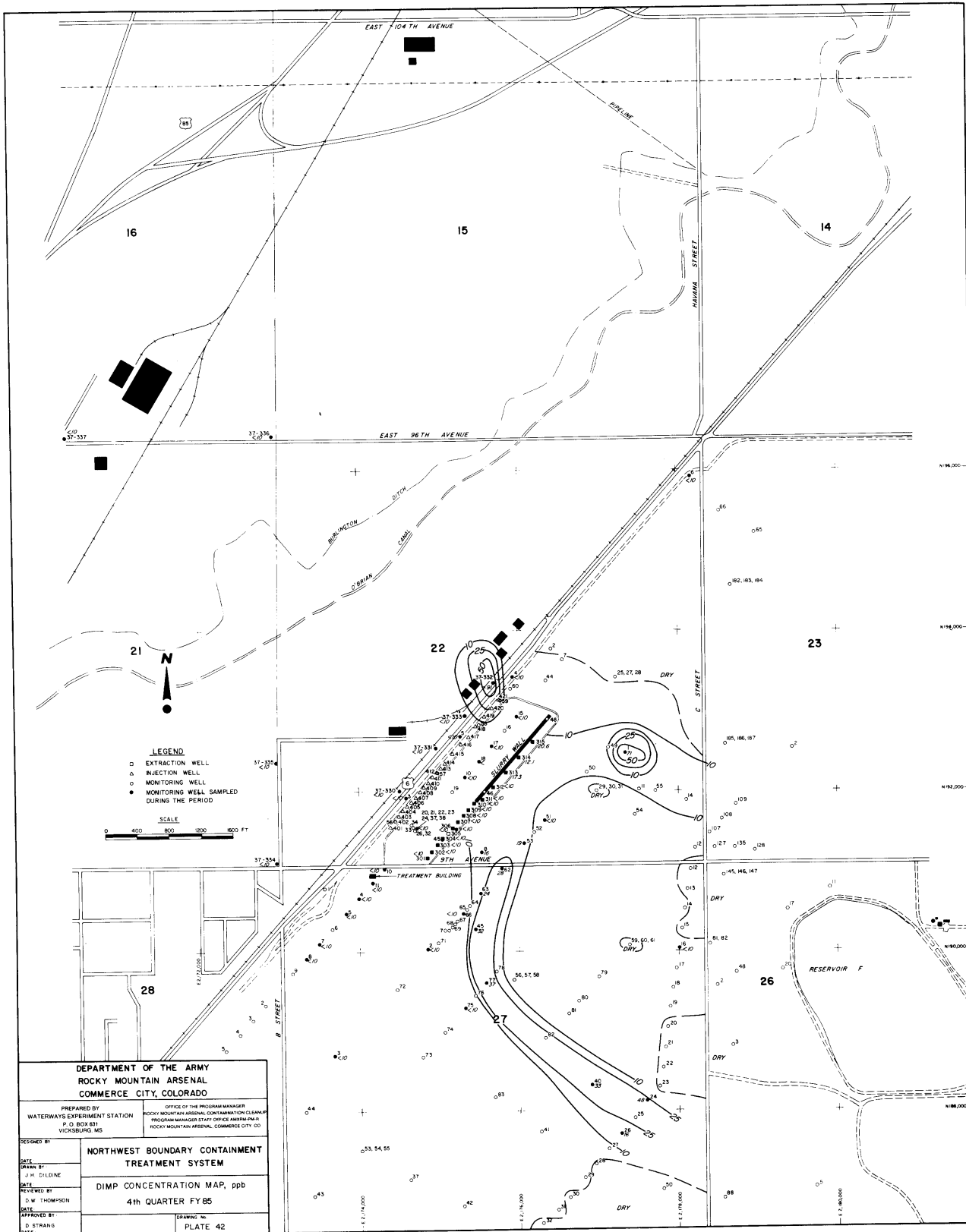


DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

PREPARED BY: OFFICE OF THE PROGRAM MANAGER
 WATERWAYS EXPERIMENT STATION
 P. O. BOX 631
 VICKSBURG, MS

ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
 PROGRAM MANAGER STAFF OFFICE (AWM/PM/PL/IR)
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

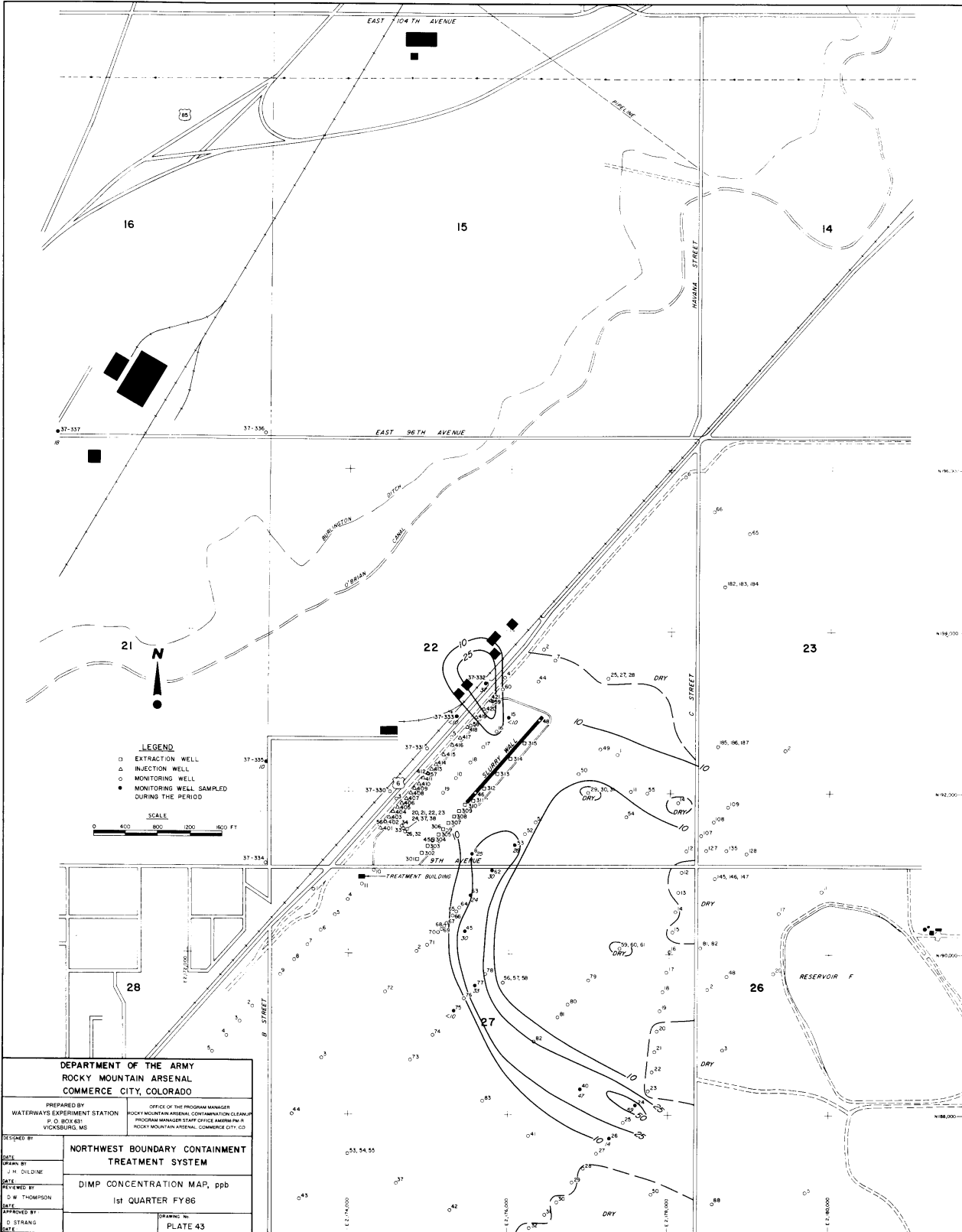
DESIGNED BY:	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
DATE:	
DRAWN BY:	DIMP CONCENTRATION MAP, ppb
DATE:	
REVIEWED BY:	3rd QUARTER FY85
DATE:	
APPROVED BY:	DRAWING NO. PLATE 41
DATE:	



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

SCALE
 0 400 800 1200 1600 2000 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 CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE ARMY/PAC ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY DATE DRAWN BY J. M. CHILDS DATE REVIEWED BY D. W. THOMPSON DATE APPROVED BY D. STRANG DATE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM DIMP CONCENTRATION MAP, ppb 4th QUARTER FY85 DRAWING NO. PLATE 42



DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

PREPARED BY: WATERWAYS EXPERIMENT STATION
 P. O. BOX 851
 VICKSBURG, MS.

OFFICE OF THE PROGRAM MANAGER
 ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
 PROGRAM, ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY:

DRAWN BY: J. M. DILDINE

DATE:

REVIEWED BY: D. W. THOMPSON

DATE:

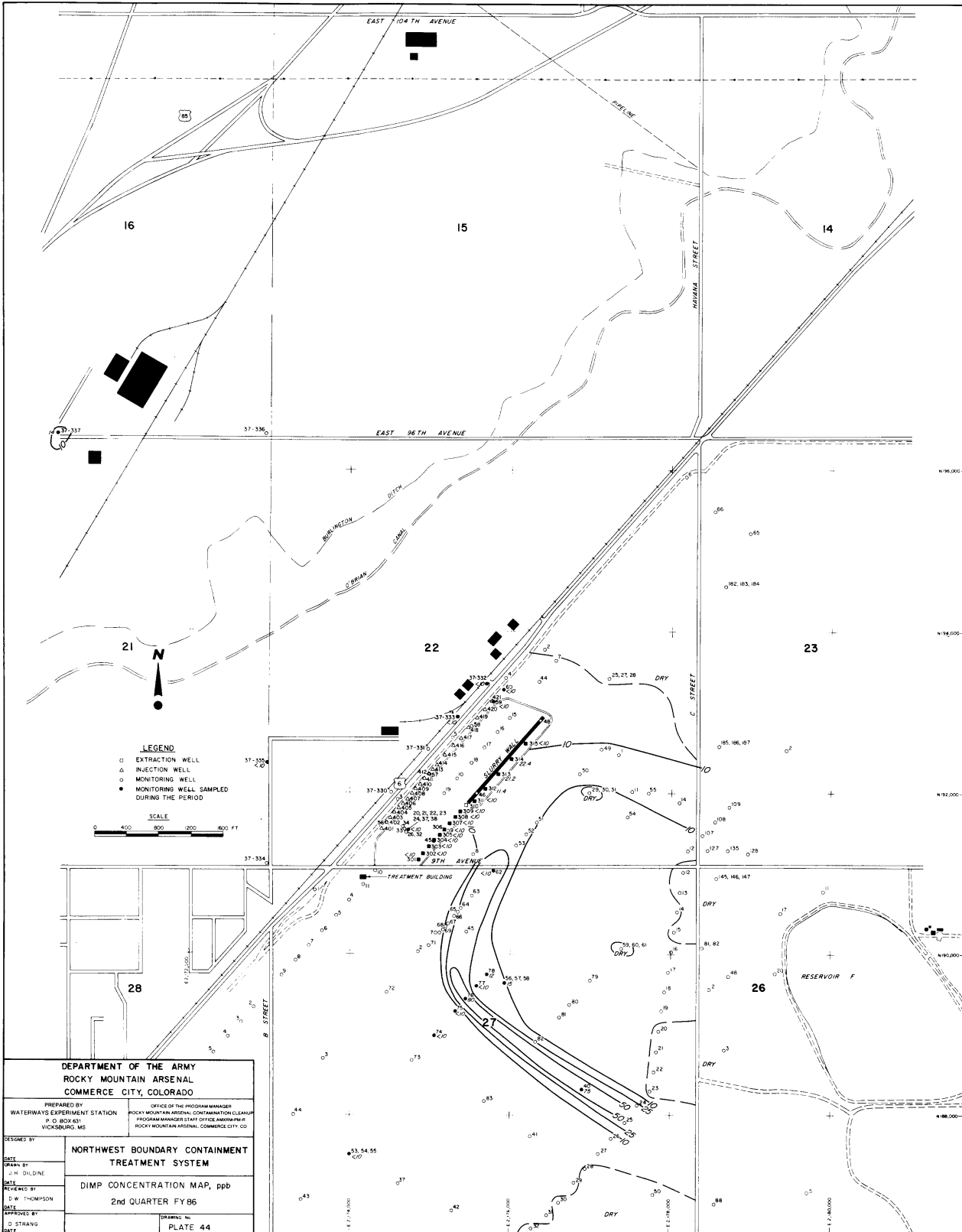
APPROVED BY: D. STRANG

DATE:

**NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM**

DIMP CONCENTRATION MAP, ppb
 1st QUARTER FY86

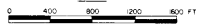
DRAWING NO. PLATE 43



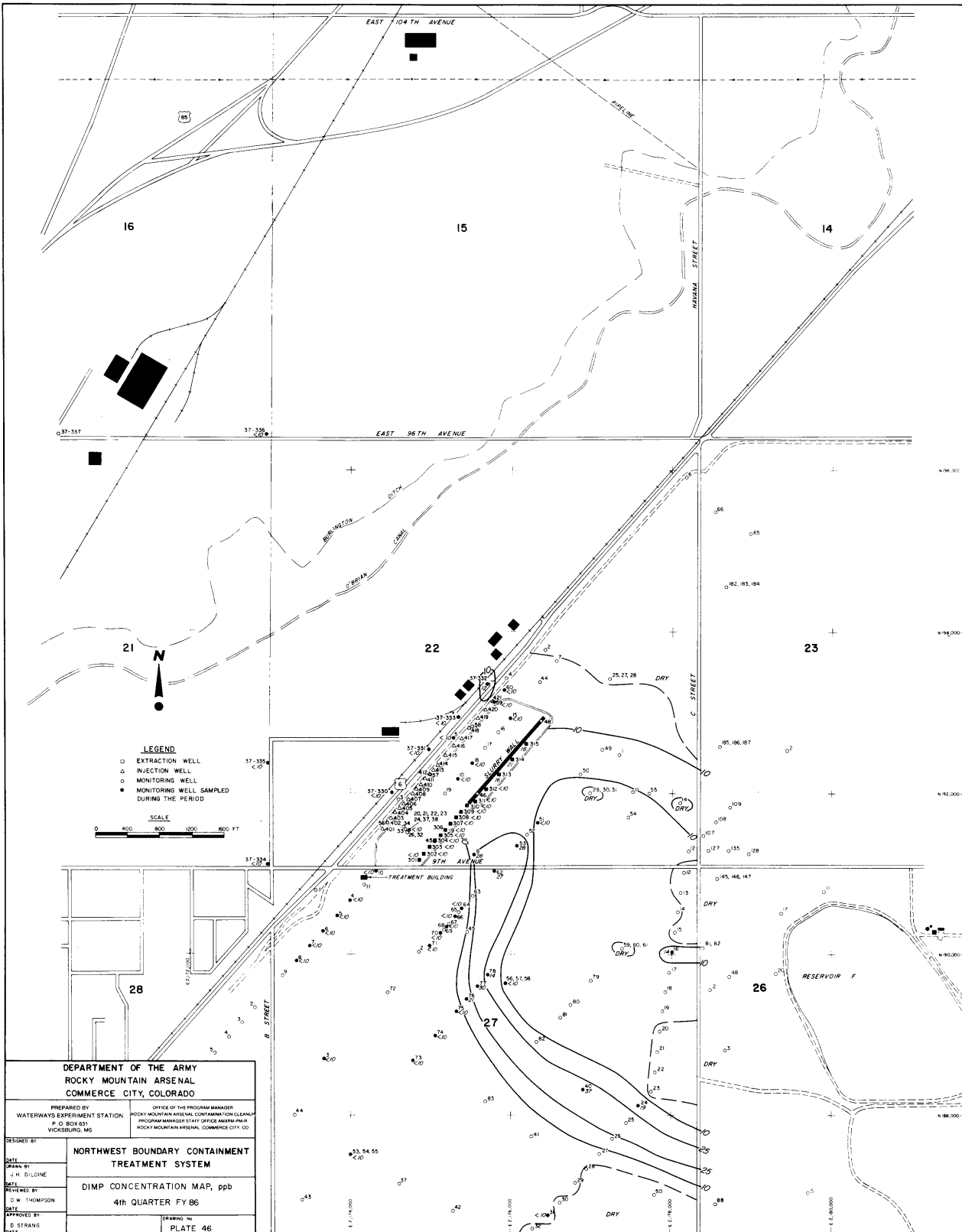
LEGEND

- EXTRACTION WELL
- △ INJECTION WELL
- MONITORING WELL
- 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 421 WOODBRIDGE, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP PROGRAM MANAGER'S OFFICE, AND/OR ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM	
DATE DRAWN BY J. H. DILDINE	
DATE FILED BY D. W. THOMPSON	
DATE APPROVED BY D. STRANG	DRAWING NO. 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 CONTAMINATION CLEANUP
 PROGRAM MANAGER'S STAFF OFFICE, 8400M-PM-10
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM

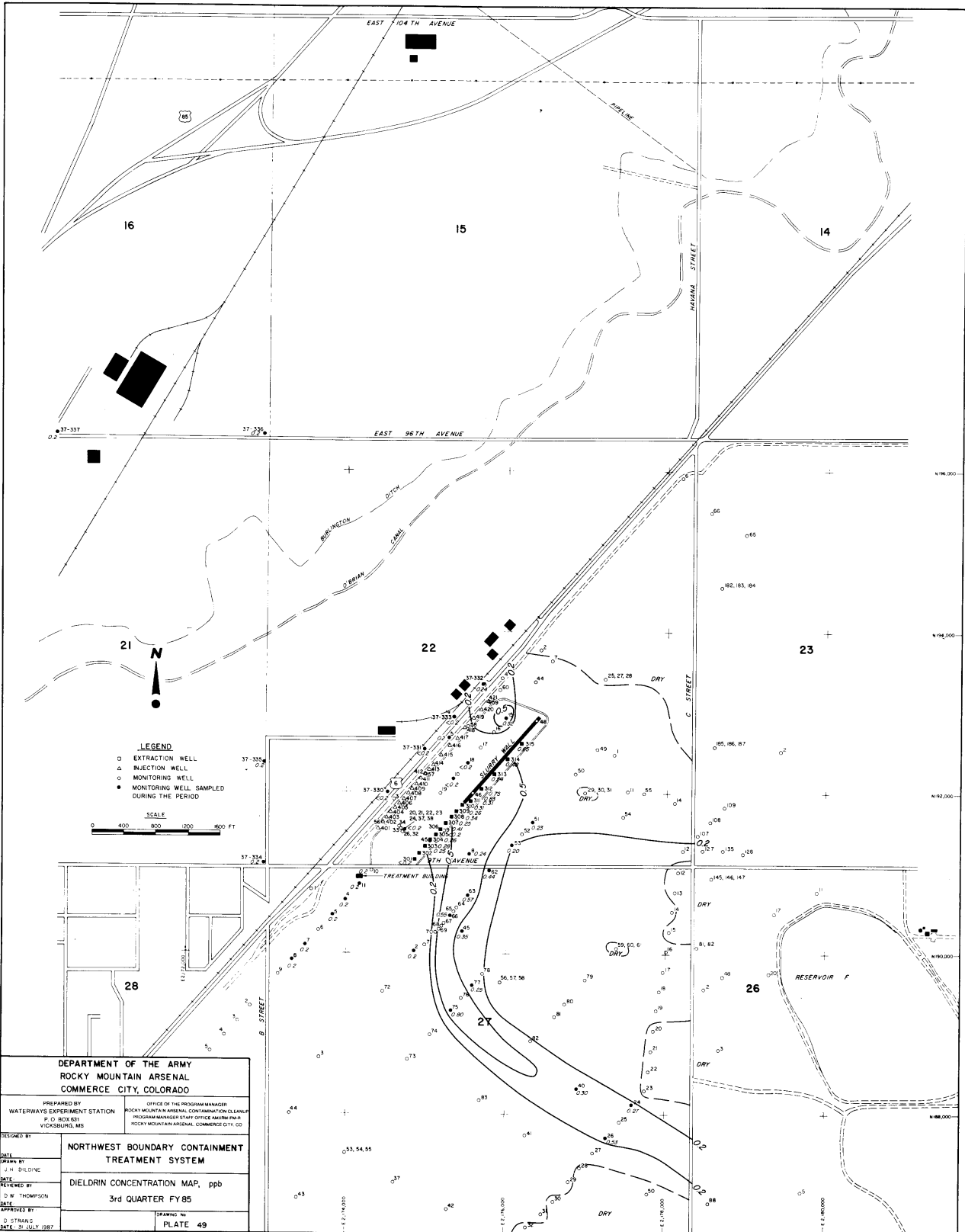
DRAWN BY: J. H. DILLONE

REVIEWED BY: D. W. THOMPSON

DATE: 4th QUARTER FY 86

APPROVED BY: D. STRANG

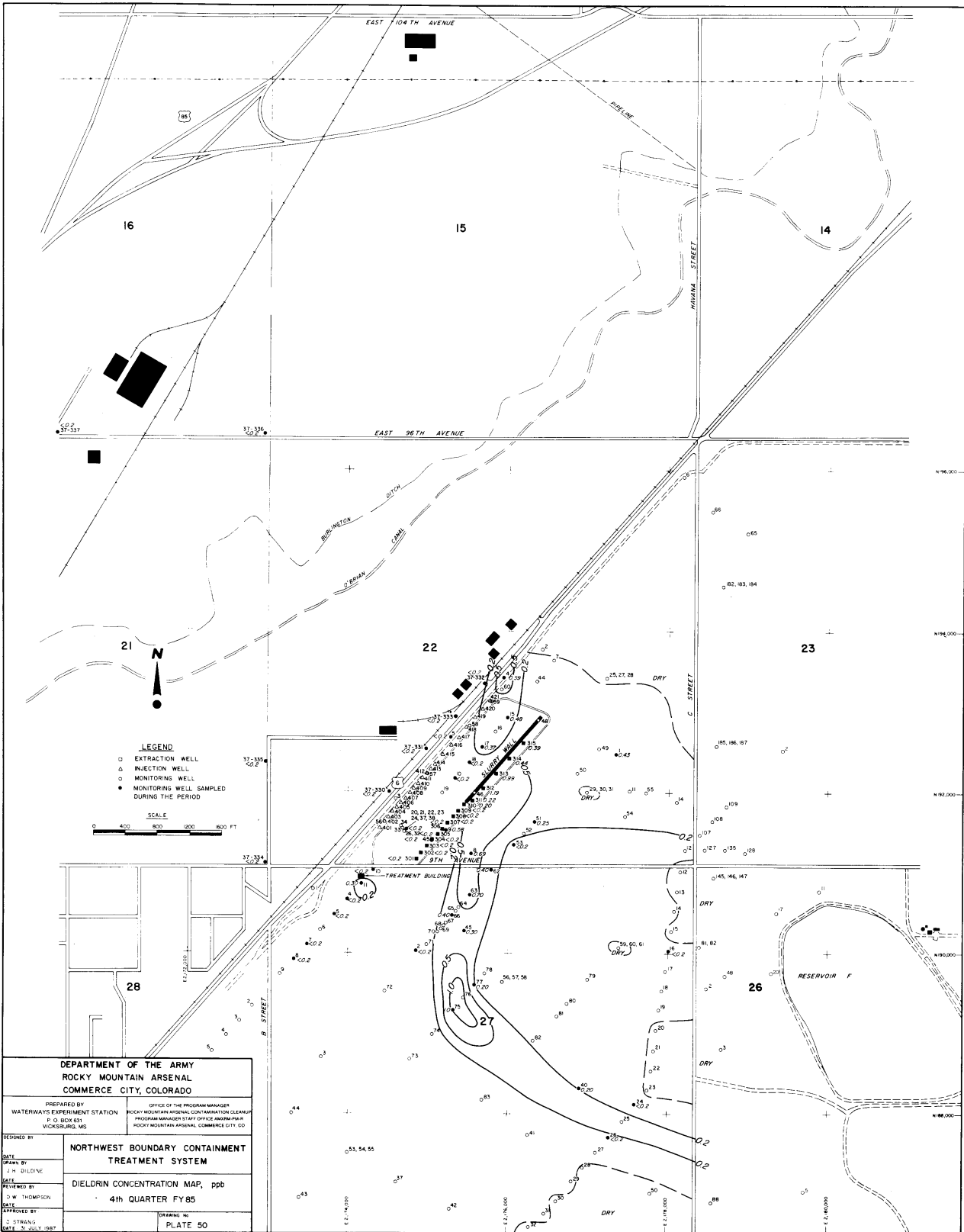
DATE: PLATE 46



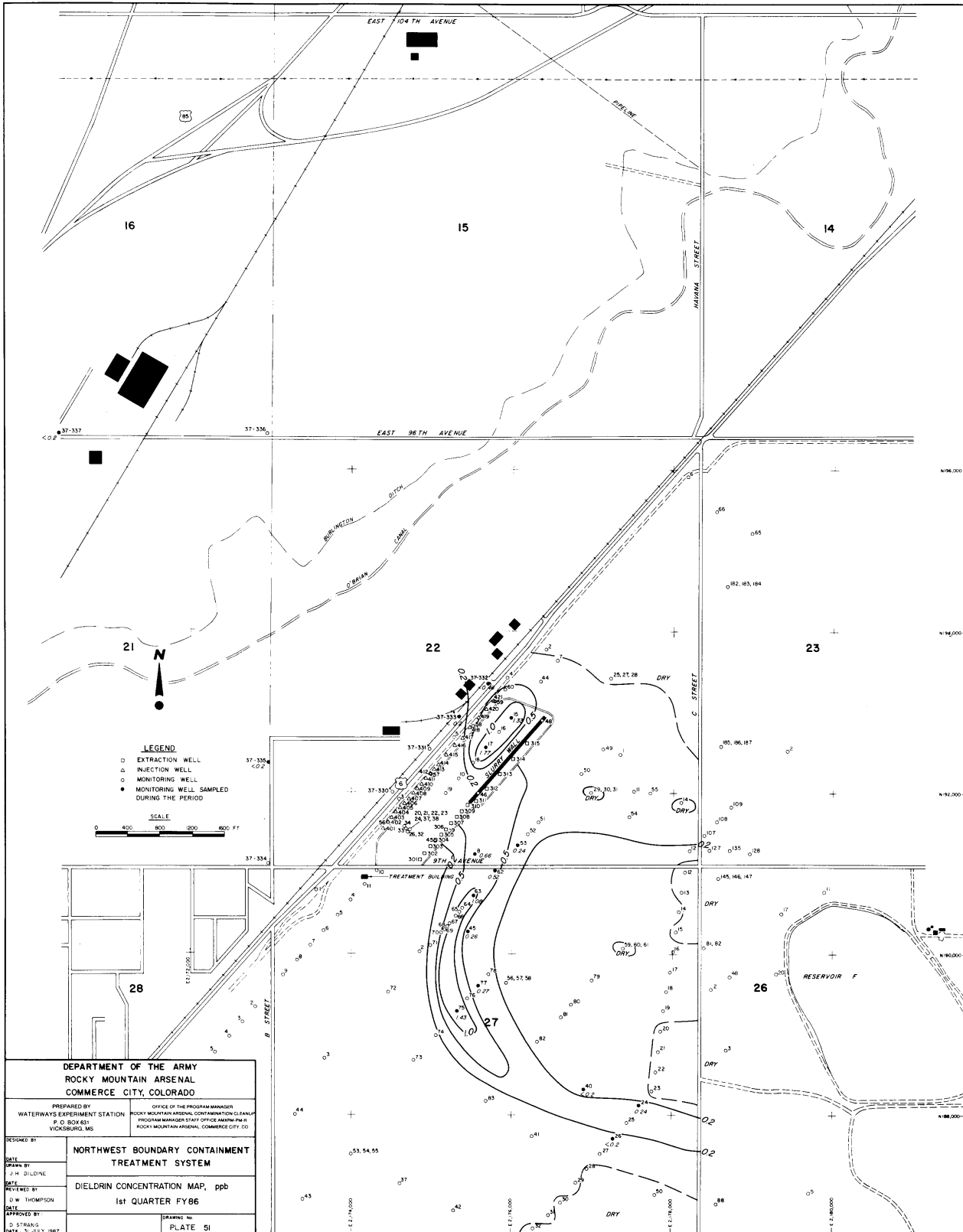
LEGEND
 □ EXTRACTION WELL
 △ INJECTION WELL
 ○ MONITORING WELL
 ● MONITORING WELL SAMPLED DURING THE PERIOD

SCALE
 0 400 800 1200 1600 2000 2400 2800 3200 3600 4000 4400 4800 500 FT

DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 531 WICKSBURG, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE (A97M) PW 3 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY DATE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
DRAWN BY J. H. DILDINE	DIELDRIN CONCENTRATION MAP, ppb
REVIEWED BY D. W. THOMPSON	3rd QUARTER FY85
APPROVED BY DATE: 31 JULY 1987	DRAWING NO. PLATE 49



DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 WICKSBURG, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER'S OFFICE ARMY/PAC ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM	
DRAWN BY J. H. D'LEONE	
CHECKED BY D. W. THOMPSON	
DATE 4th QUARTER FY85	
APPROVED BY C. STRANG	DRAWING NO. PLATE 50



DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

PREPARED BY: OFFICE OF THE PROGRAM MANAGER
 WATERWAYS EXPERIMENT STATION, ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE AEDT/PUR/R
 P. O. BOX 651, ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO. WICKSBURG, MS

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM

DRAWN BY: J. H. BILDING

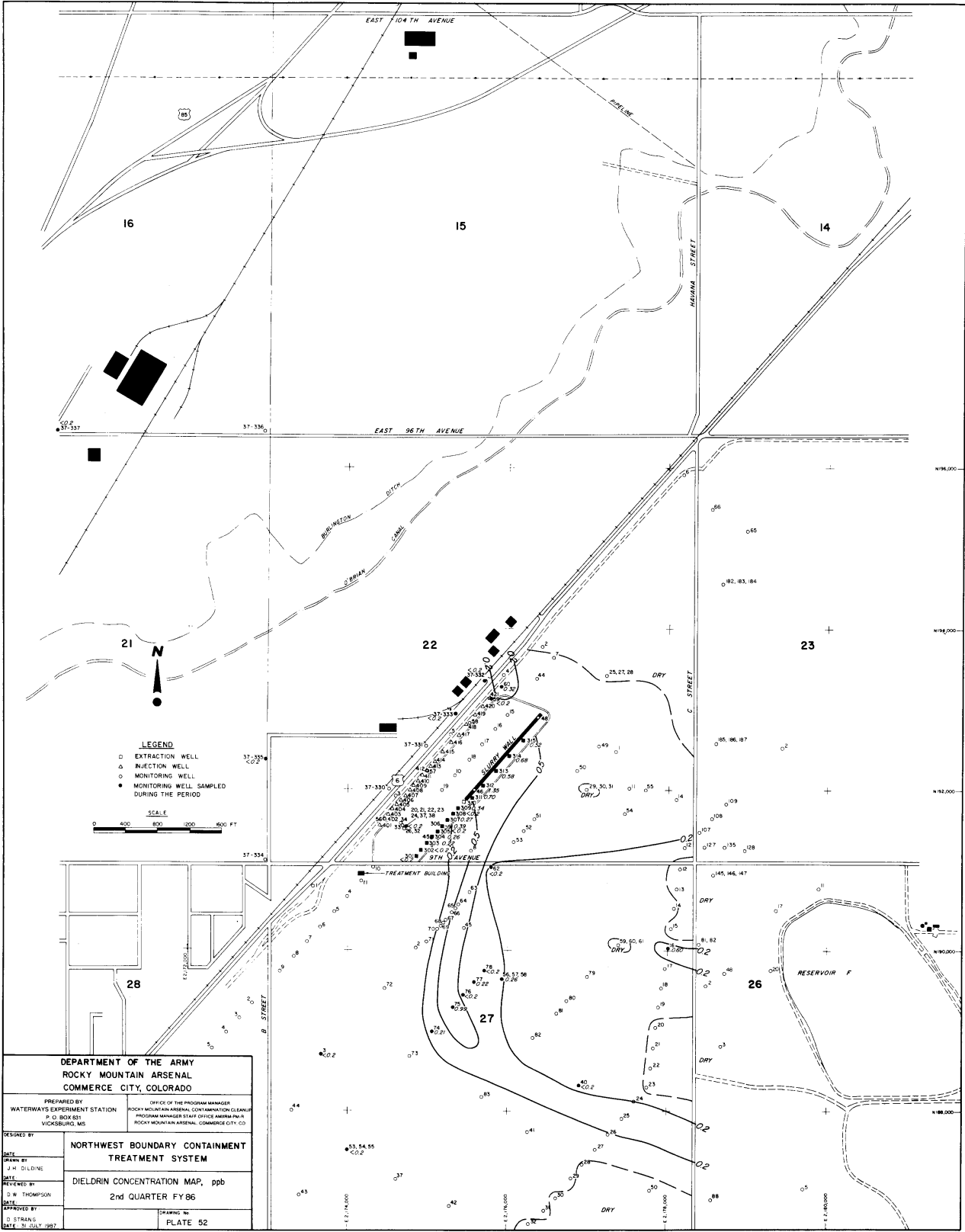
CHECKED BY: D. W. THOMPSON

DATE: 1st QUARTER FY86

APPROVED BY: D. STRANG

DATE: 31 JULY 1987

DRAWING NO. PLATE 51



DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

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

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM

DRAWN BY: J.H. DILDINE

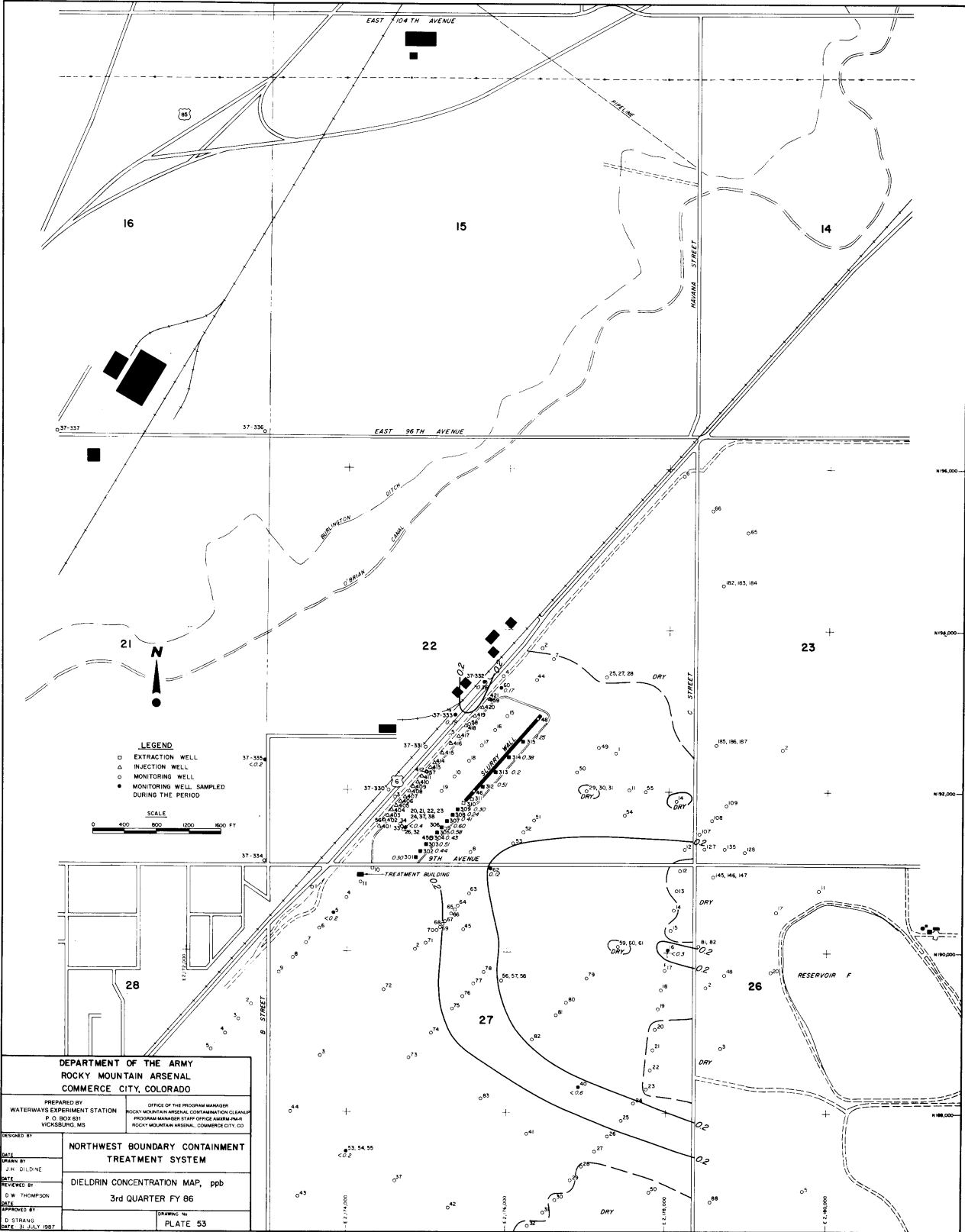
CHECKED BY: D.W. THOMPSON

APPROVED BY: D. STRANG

DATE: 31 JULY 1987

OFFICE OF THE PROGRAM MANAGER
 ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
 PROGRAM MANAGER STAFF OFFICE ARMPA/P-8
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DRAWING NO. PLATE 52



DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

PREPARED BY: OFFICE OF THE PROGRAM MANAGER
 WATERWAYS EXPERIMENT STATION
 P. O. BOX 531
 VICKSBURG, MS

ROCKY MOUNTAIN ARSENAL, CONFIRMATION CLEANUP
 PROGRAM MANAGER STAFF OFFICE MARIETTA, GA
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM

DATE: J.M. DILDINE

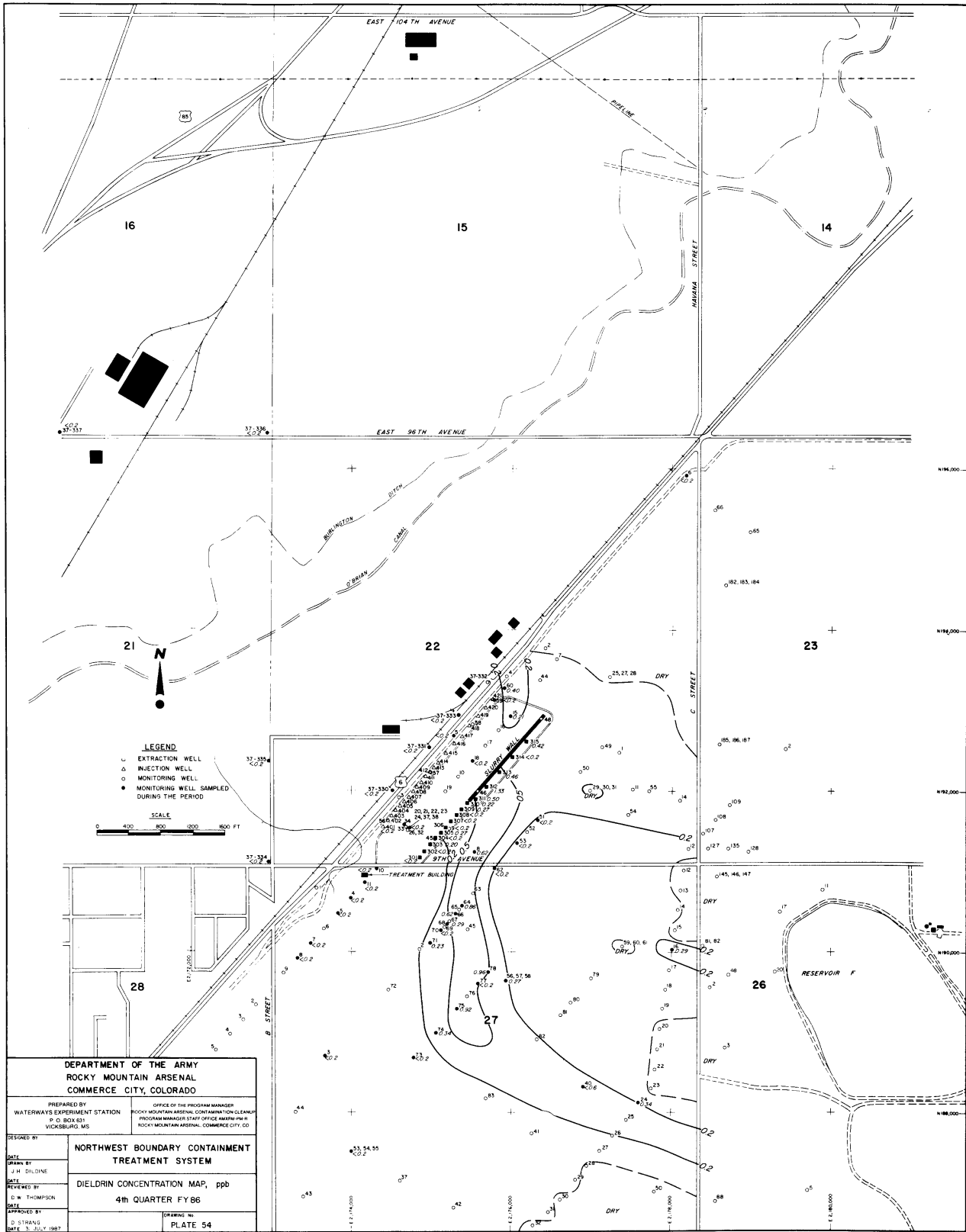
REVIEWED BY: D.W. THOMPSON

DATE: 3rd QUARTER FY 86

APPROVED BY: D. STRANG

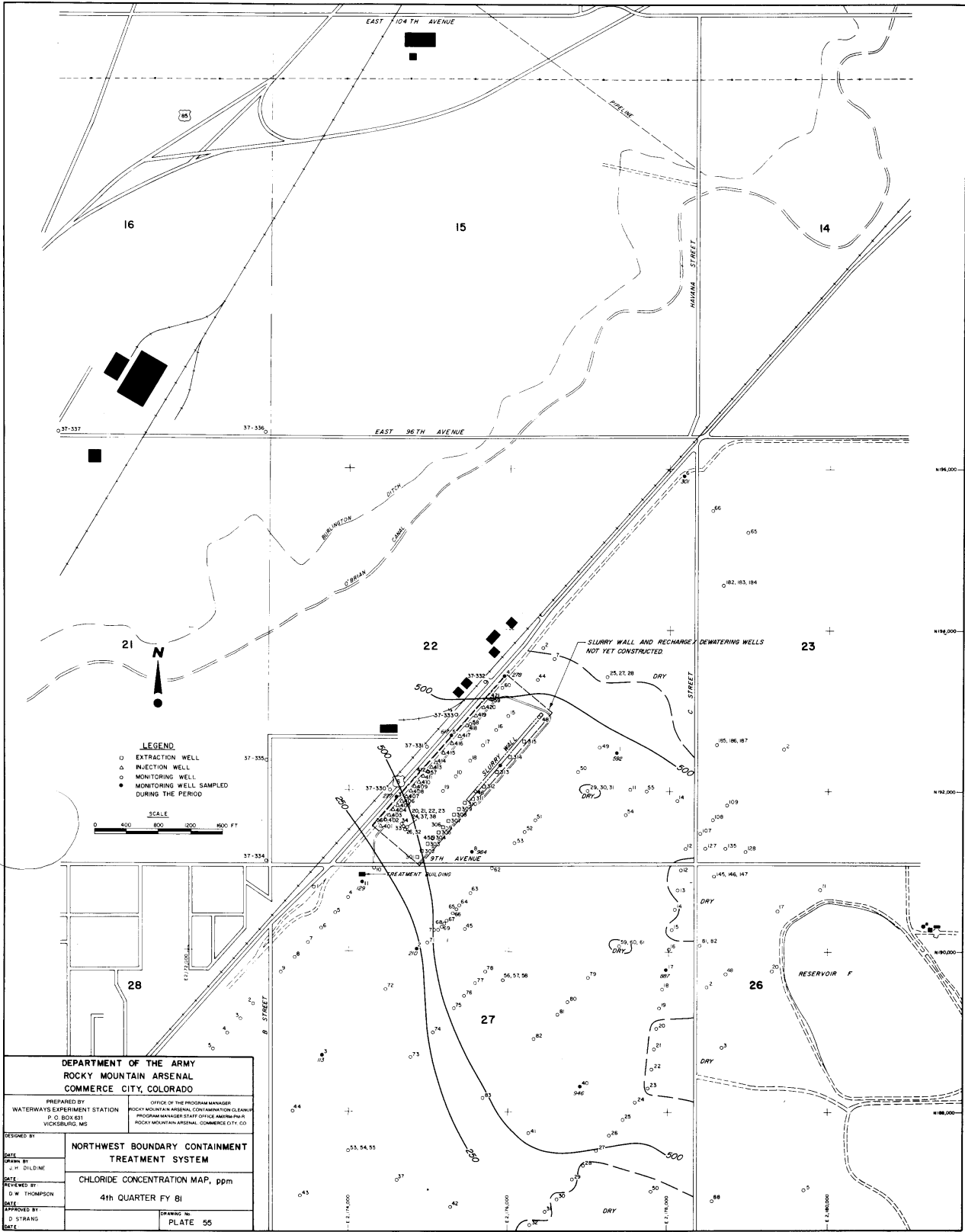
DATE: 21 JULY 1987

DRAWING NO. PLATE 53



**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 CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE HANSEN 4H-1 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY DATE DRAWN BY J. H. DILLONE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
REVIEWED BY D. W. THOMPSON	
DATE APPROVED BY D. STRANG	DATE 3 JULY 1987
DIEDRIN CONCENTRATION MAP, ppb 4th QUARTER FY86 PLATE 54	



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

SCALE
 0 400 800 1200 1600 FT

DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

PREPARED BY: OFFICE OF THE PROGRAM MANAGER
 WATERWAYS EXPERIMENT STATION
 P. O. BOX 651
 WICKSBURG, MS

PROGRAM MANAGER STAFF OFFICE ANDR/PA/R
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM

DRAWN BY: J. H. DILLANE

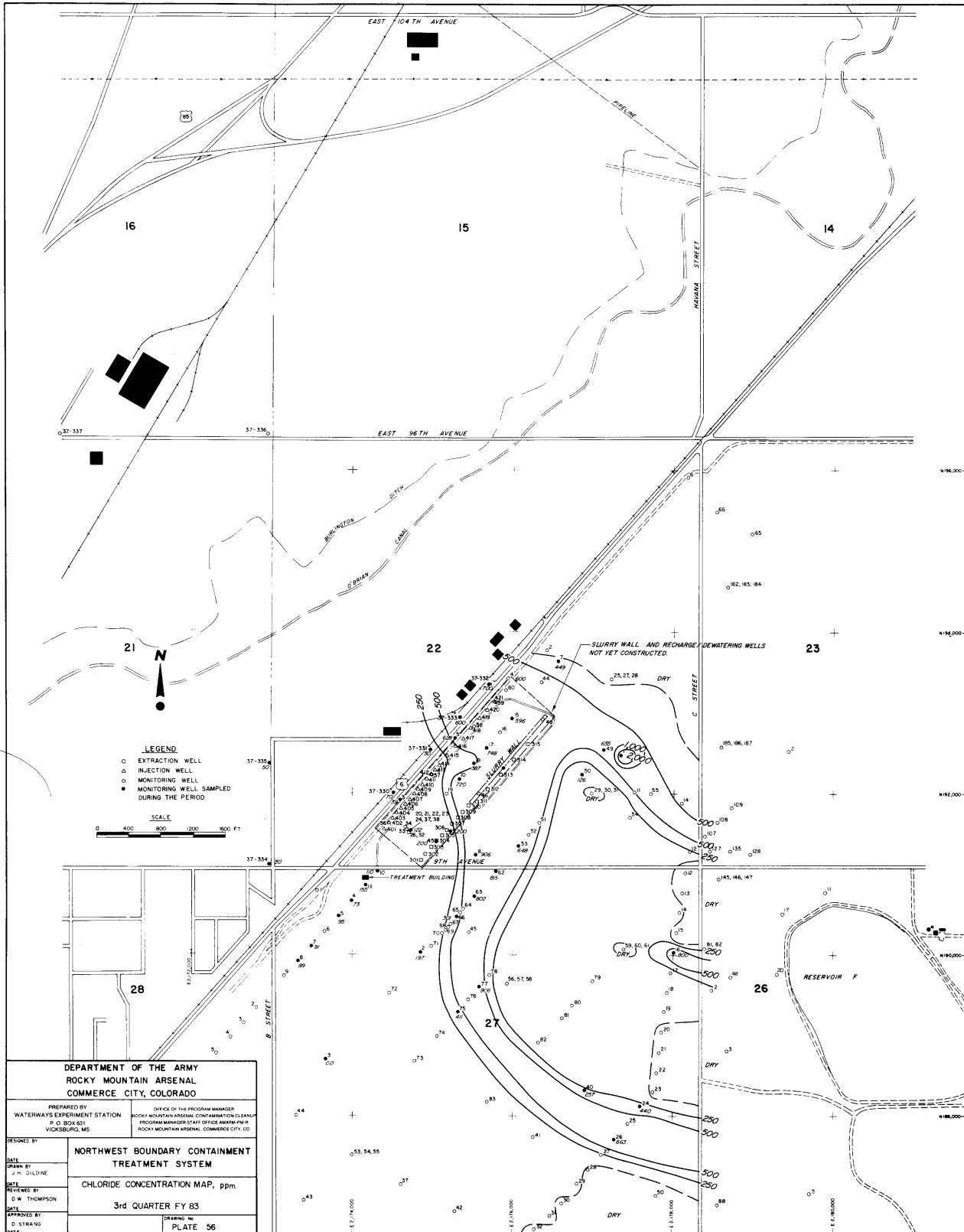
DATE: CHLORIDE CONCENTRATION MAP, ppm

REVIEWED BY: D. W. THOMPSON

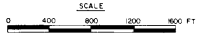
DATE: 4th QUARTER FY 81

APPROVED BY: D. STRANG

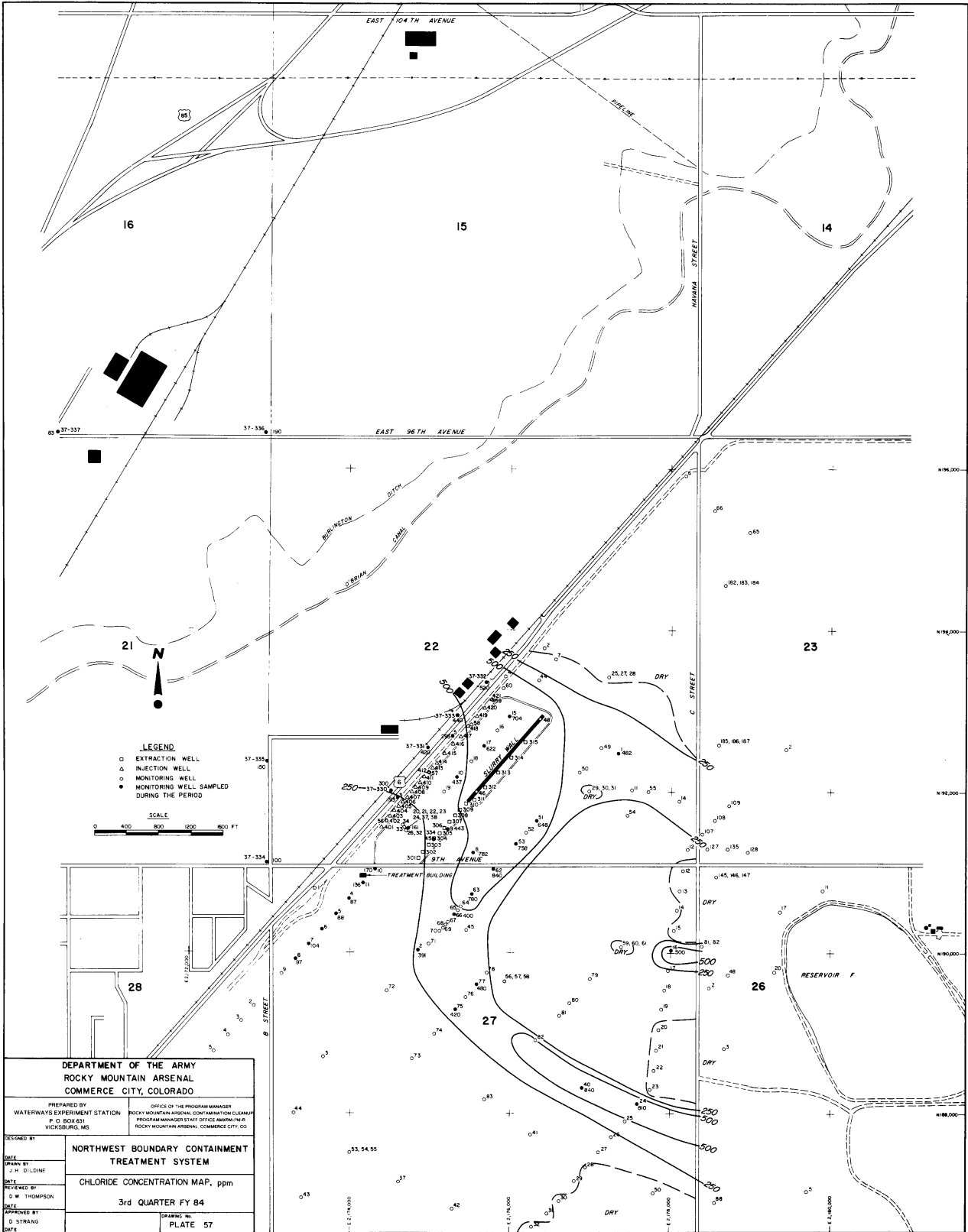
DATE: DRAWING NO. PLATE 55



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



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 CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE ARMRM-PM-R ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY DATE DRAWN BY DATE REVIEWED BY DATE APPROVED BY DATE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM CHLORIDE CONCENTRATION MAP, ppm 3rd QUARTER FY 83 DRAWING NO. PLATE 56

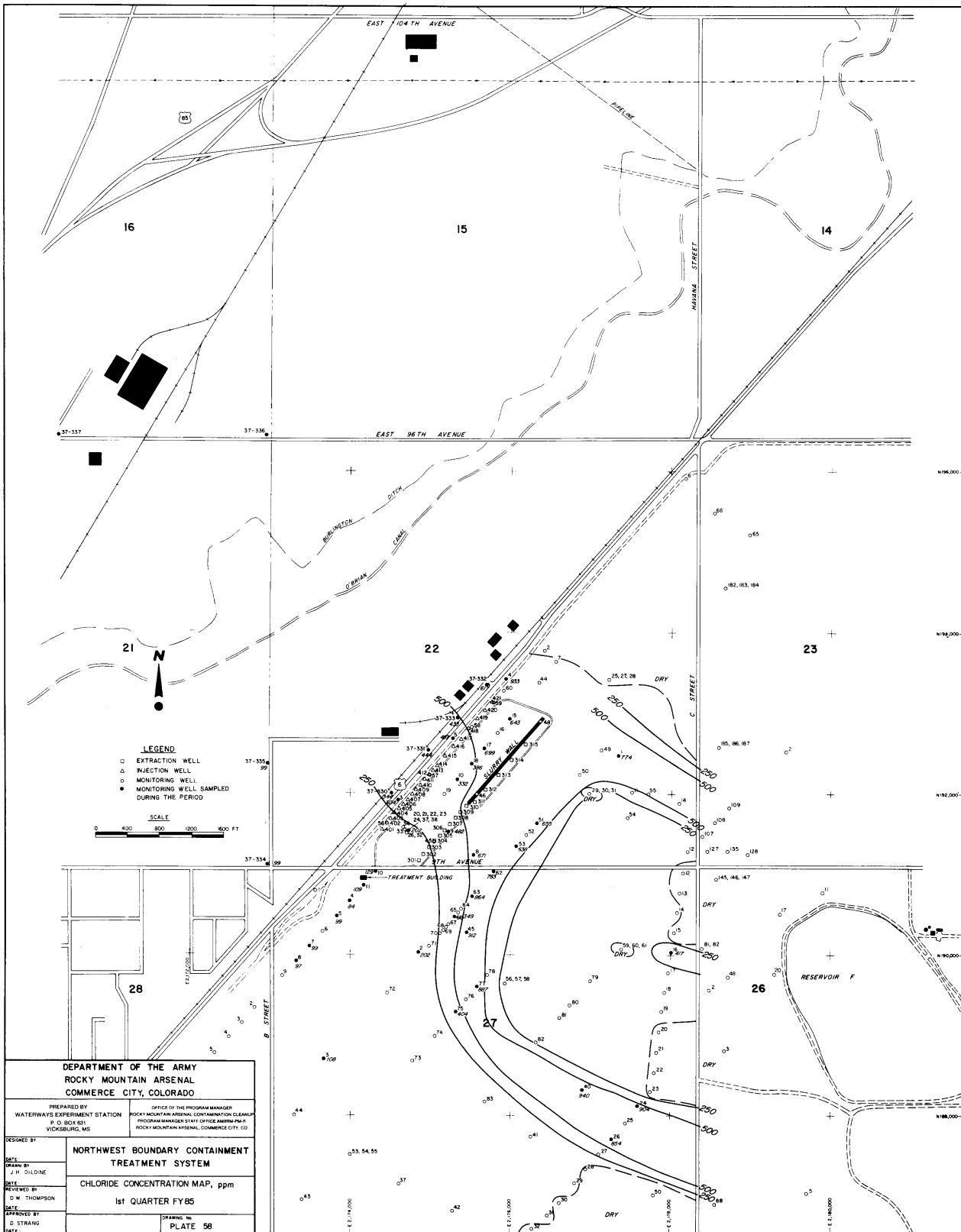


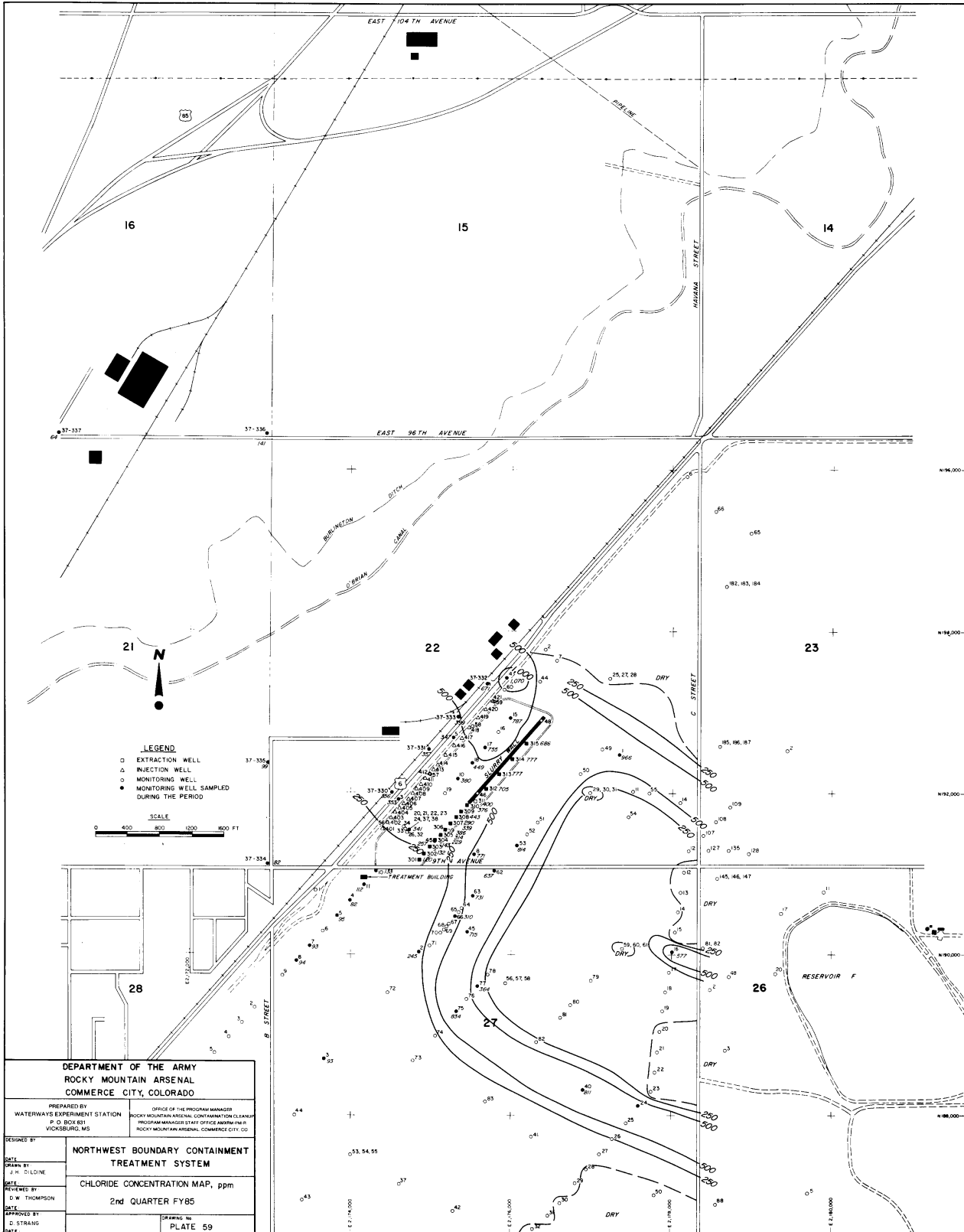
DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

PREPARED BY: WATERWAYS EXPERIMENT STATION, VICKSBURG, MS
 OFFICE OF THE PROGRAM MANAGER: ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER'S OFFICE, ARMY/DA, ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
 DRAWN BY: J. M. D'OLINE
 DATE: 12/22/80
 REVIEWED BY: D. W. THOMPSON
 DATE: 1/17/81
 APPROVED BY: D. STRANG
 DATE:

CHLORIDE CONCENTRATION MAP, ppm
 3rd QUARTER FY 84
 DRAWING NO. PLATE 57

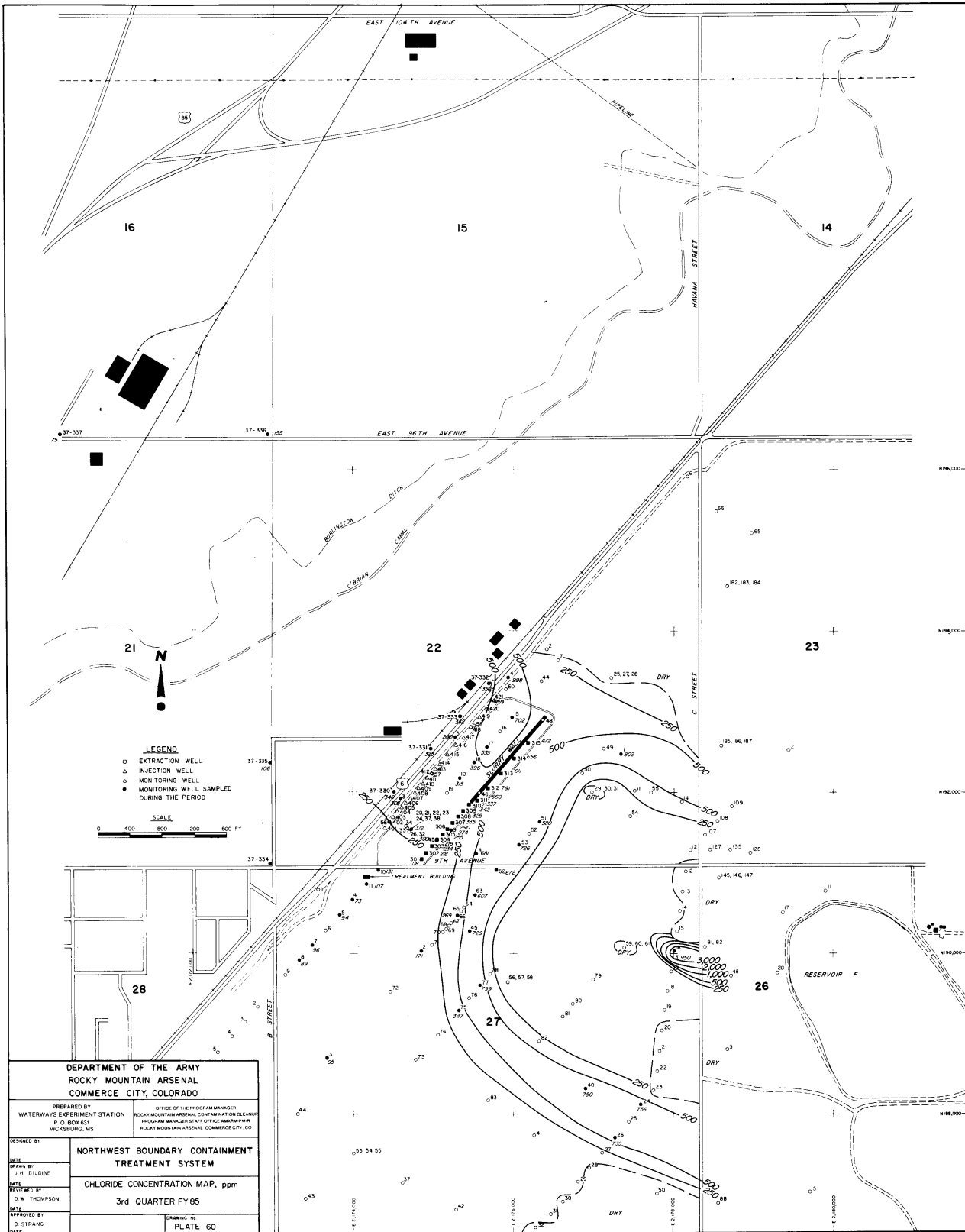




LEGEND
 □ EXTRACTION WELL
 ○ MONITORING WELL
 ○ MONITORING WELL SAMPLED DURING THE PERIOD

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 851 VICKSBURG, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER STATE OFFICE BIRMINGHAM ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM	
CHLORIDE CONCENTRATION MAP, ppm	
2nd QUARTER FY85	
DESIGNED BY DATE DRAWN BY DATE REVIEWED BY DATE APPROVED BY DATE	DRAWING NO. PLATE 59



LEGEND

- EXTRACTION WELL
- △ INJECTION WELL
- MONITORING WELL
- 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 651
 VICKSBURG, MS

OFFICE OF THE PROGRAM MANAGER
 ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP
 PROGRAM MANAGER STAFF OFFICE AMREP/MS
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY:
**NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM**

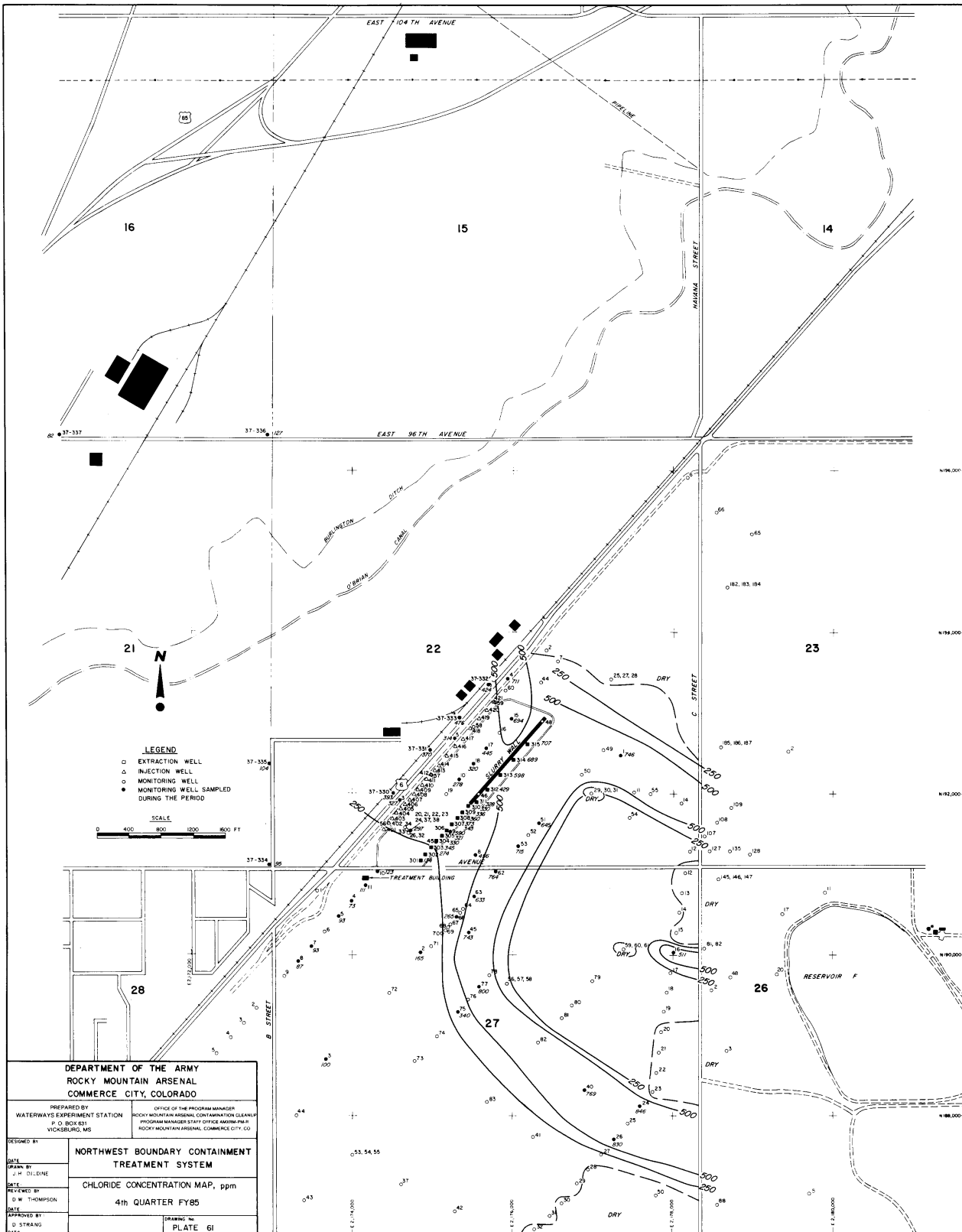
DRAWN BY:
 J. H. ELDINE

CHECKED BY:
 D. W. THOMPSON

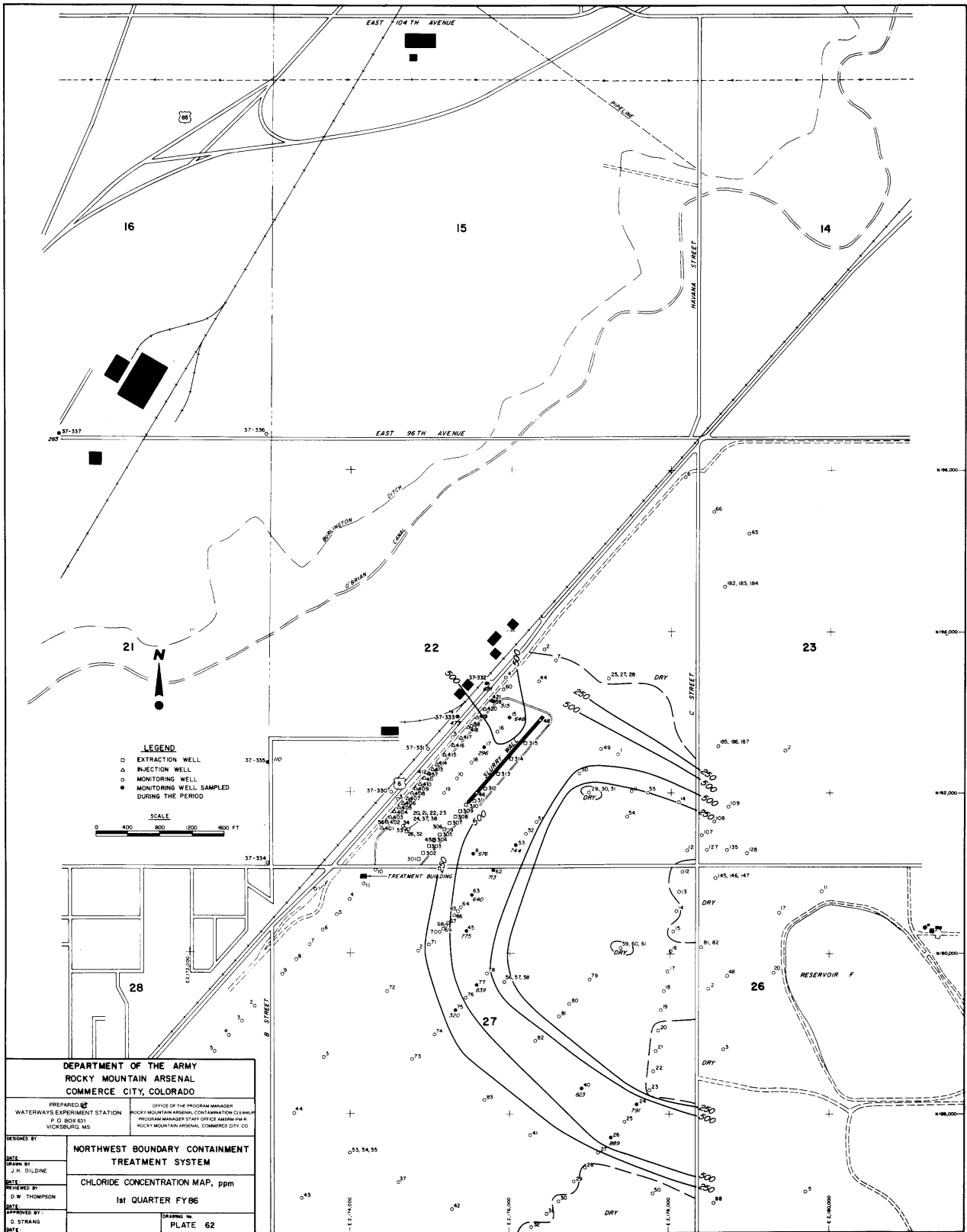
DATE:
 3rd QUARTER FY85

APPROVED BY:
 D. STRANG

DATE:
 PLATE 60



<p>DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO</p>	
<p>PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 631 WOODBRIDGE, MS</p>	<p>OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER'S OFFICE ADMIN. BR. ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO</p>
<p>DESIGNED BY DATE</p>	<p>NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM</p>
<p>DRAWN BY J. H. DILLINE</p>	<p>CHLORIDE CONCENTRATION MAP, ppm</p>
<p>REVIEWED BY D. W. THOMPSON</p>	<p>4th QUARTER FY85</p>
<p>APPROVED BY D. STRANG</p>	<p>DRAWING NO. PLATE 6I</p>
<p>DATE</p>	<p>DATE</p>



LEGEND
 ○ EXTRACTION WELL
 △ INJECTION WELL
 □ MONITORING WELL
 ● MONITORING WELL 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, WICKSBURG, MO.
 OFFICE OF THE PROGRAM MANAGER: ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP PROGRAM, 1100 BOX 651, ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.

DESIGNED BY: **NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM**

DRAWN BY: J.H. DILDINE

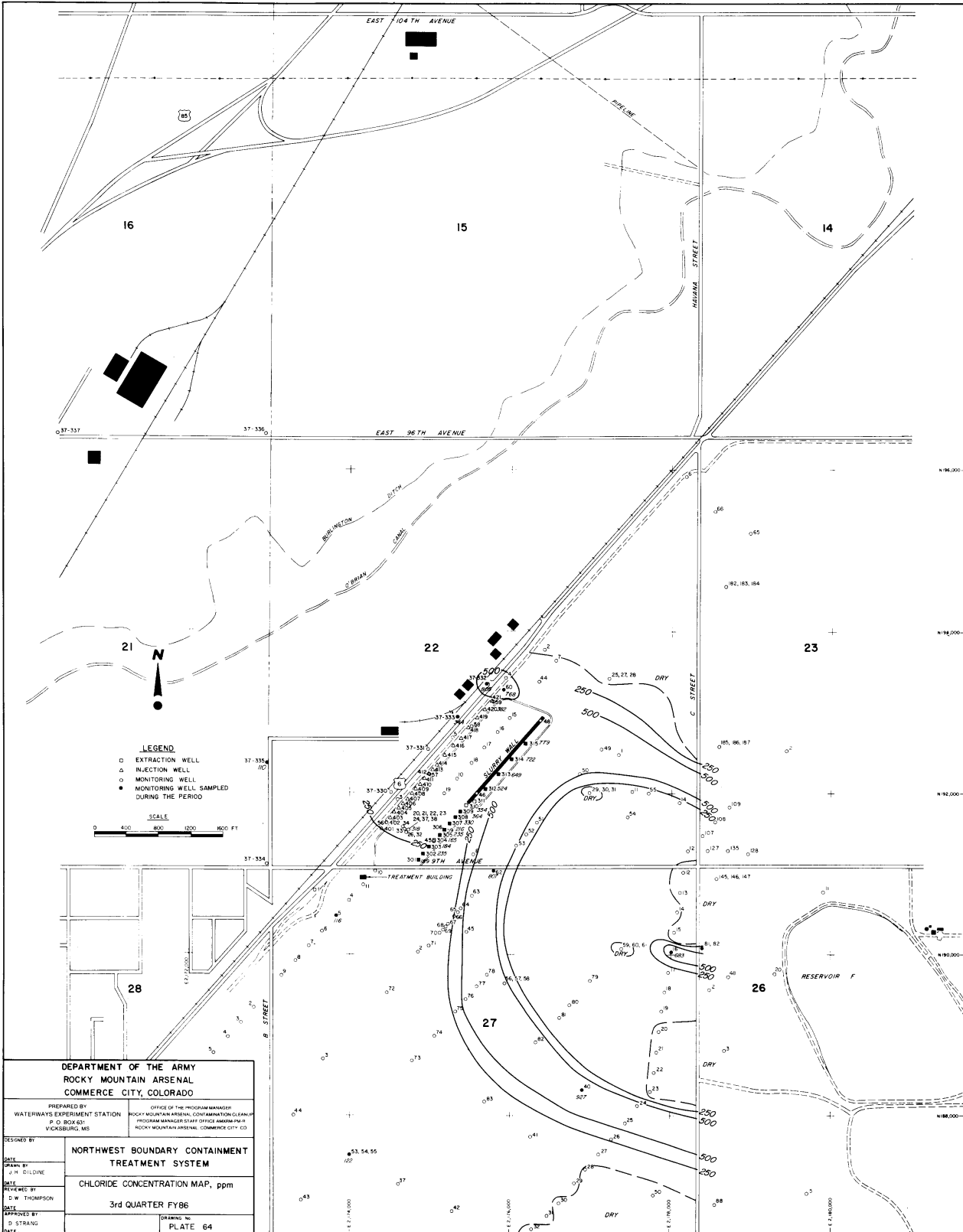
CHECKED BY: O.W. THOMPSON

APPROVED BY: O. STRANG

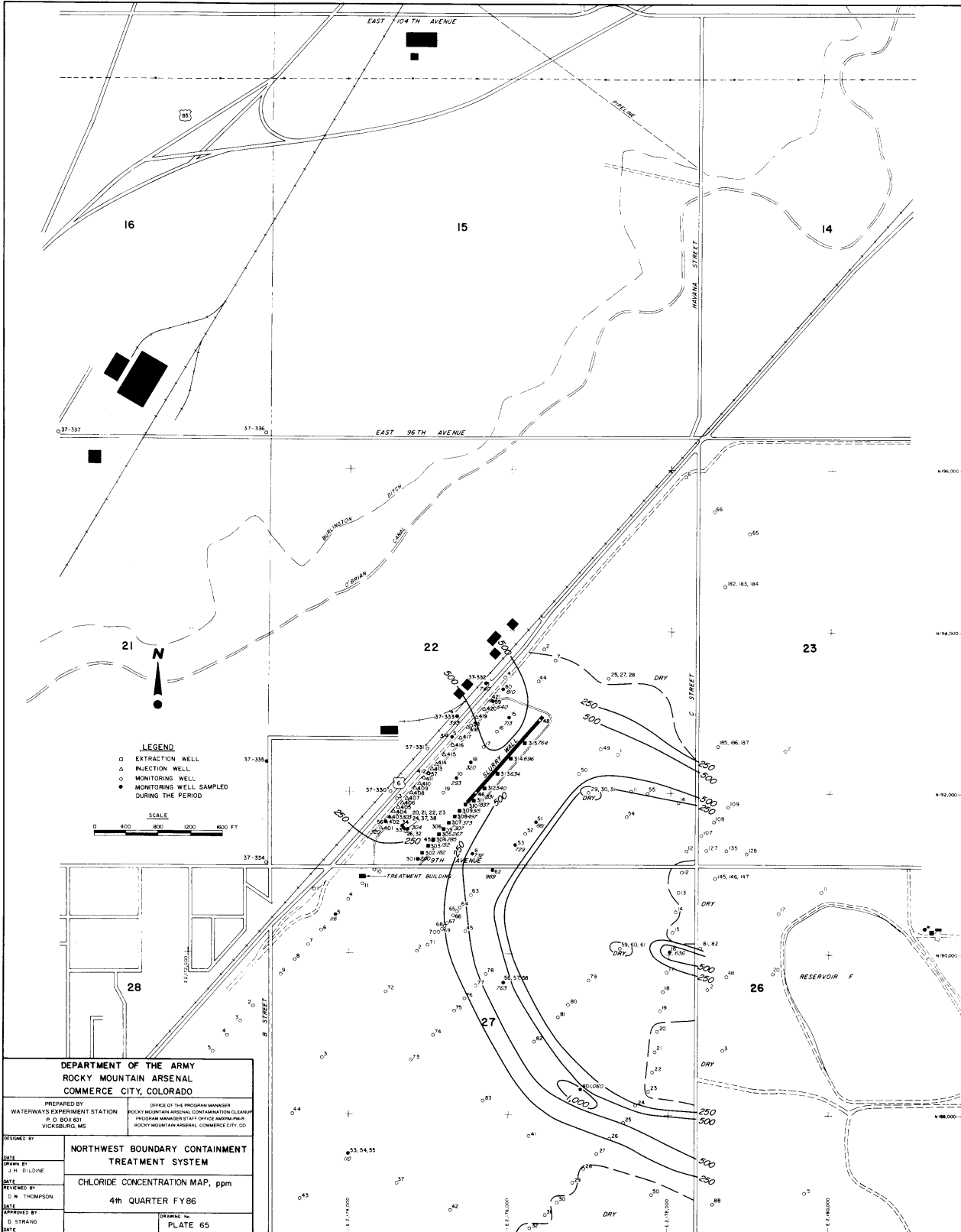
DATE: _____

CHLORIDE CONCENTRATION MAP, ppm
 1st QUARTER FY 86

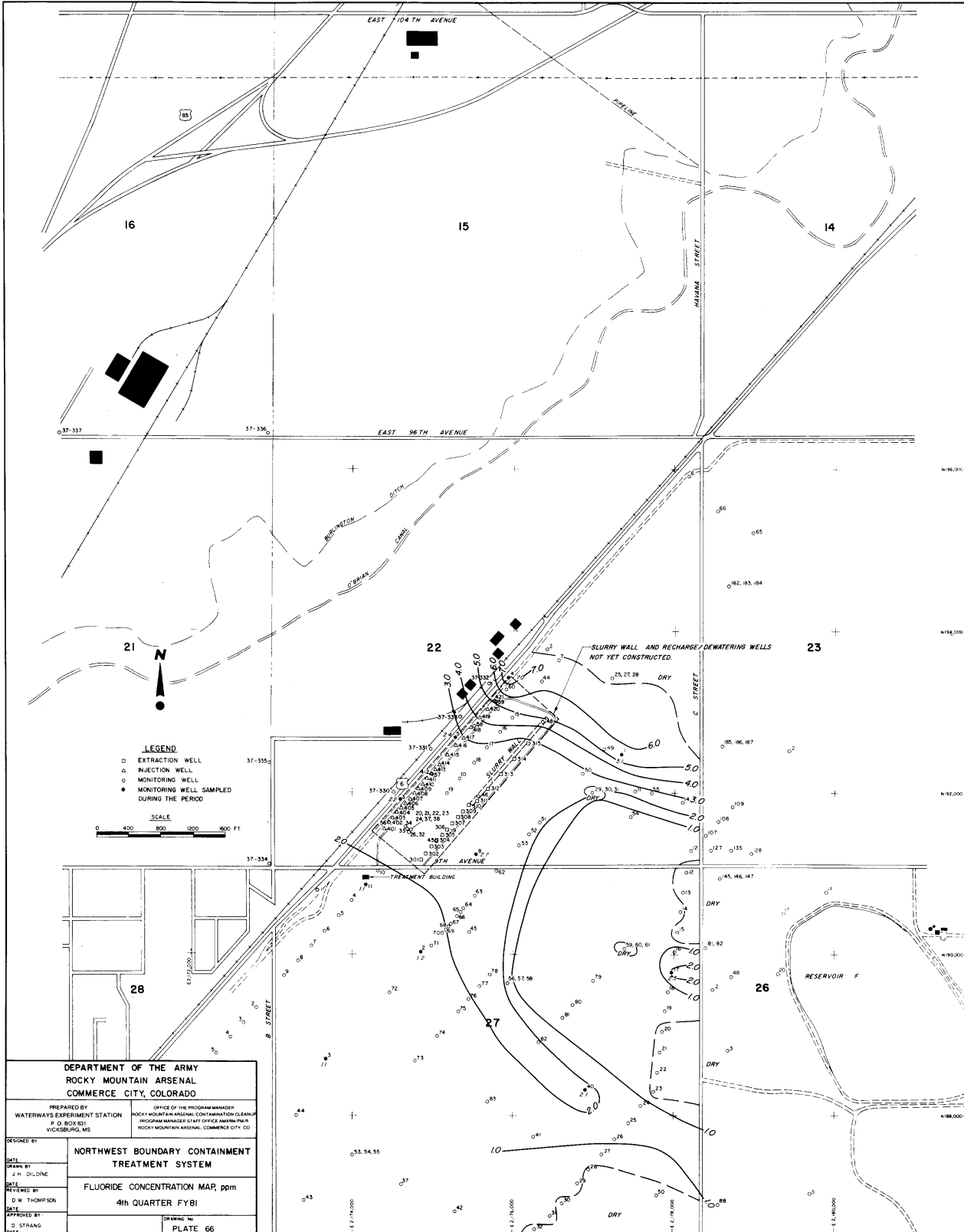
DRAWING NO. PLATE 62



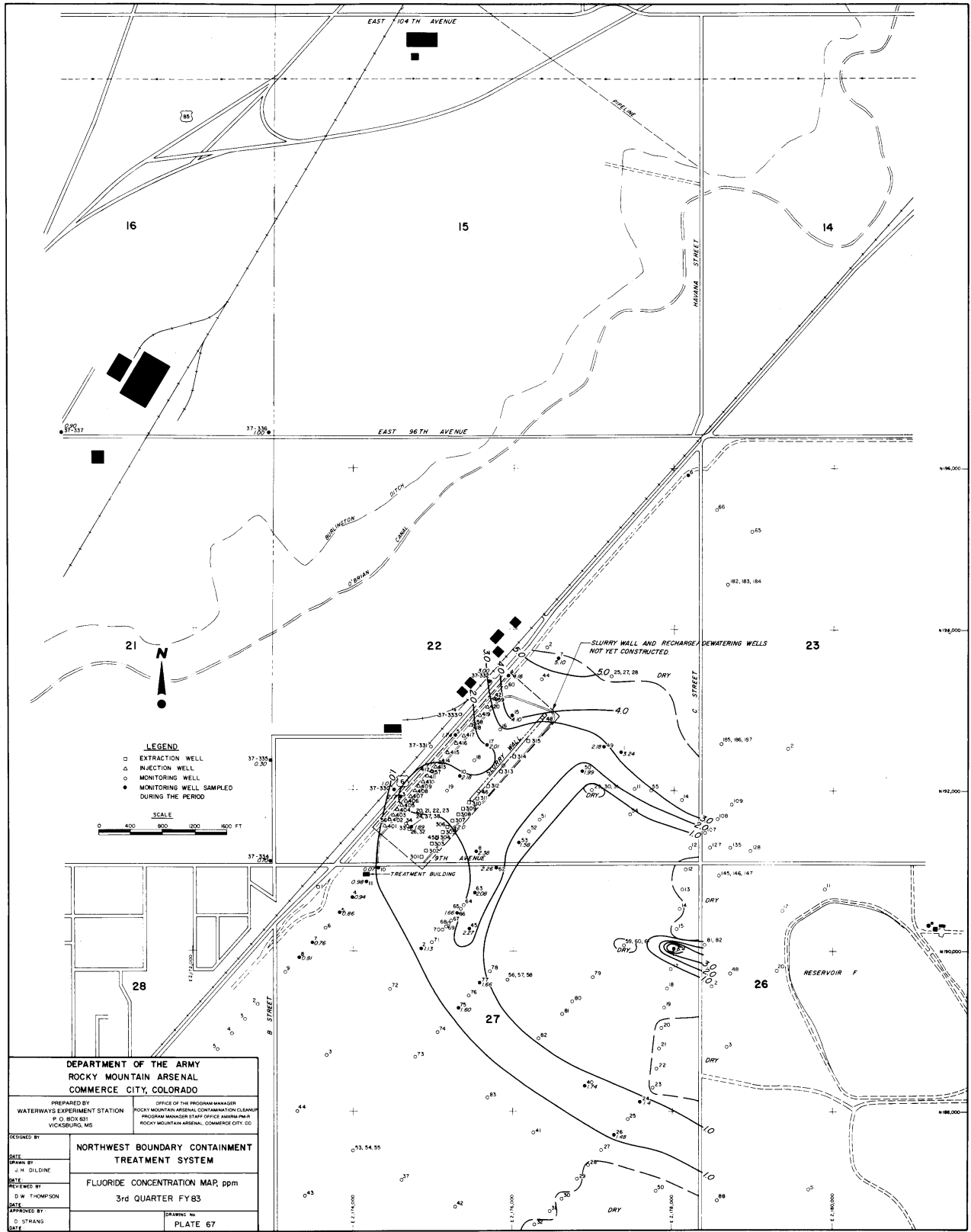
DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 637 WICKSBURG, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE 34000 PM II ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY DATE DRAWN BY J. H. DILLONE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
CHECKED BY D. W. THOMPSON	CHLORIDE CONCENTRATION MAP, ppm
DATE APPROVED BY D. STRANG	3rd QUARTER FY86
DATE	DRAWING NO. PLATE 64



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 CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE ANDRU/PWR/P ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO.
DESIGNED BY DATE DRAWN BY J. M. DILLONE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
CHECKED BY C. W. THOMPSON	CHLORIDE CONCENTRATION MAP, ppm
DATE APPROVED BY D. STRANG	4th QUARTER FY86
DATE	DRAWING NO. PLATE 65



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 CONTAMINATION CLEANUP PROGRAM MANAGER STAFF OFFICE AARH/PWR ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY DATE DRAWN BY J. H. DILLONE DATE REVIEWED BY D. W. THOMPSON DATE APPROVED BY O. STRANG DATE	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM FLUORIDE CONCENTRATION MAP, ppm 4th QUARTER FY81 DRAWING NO. PLATE 66



DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

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

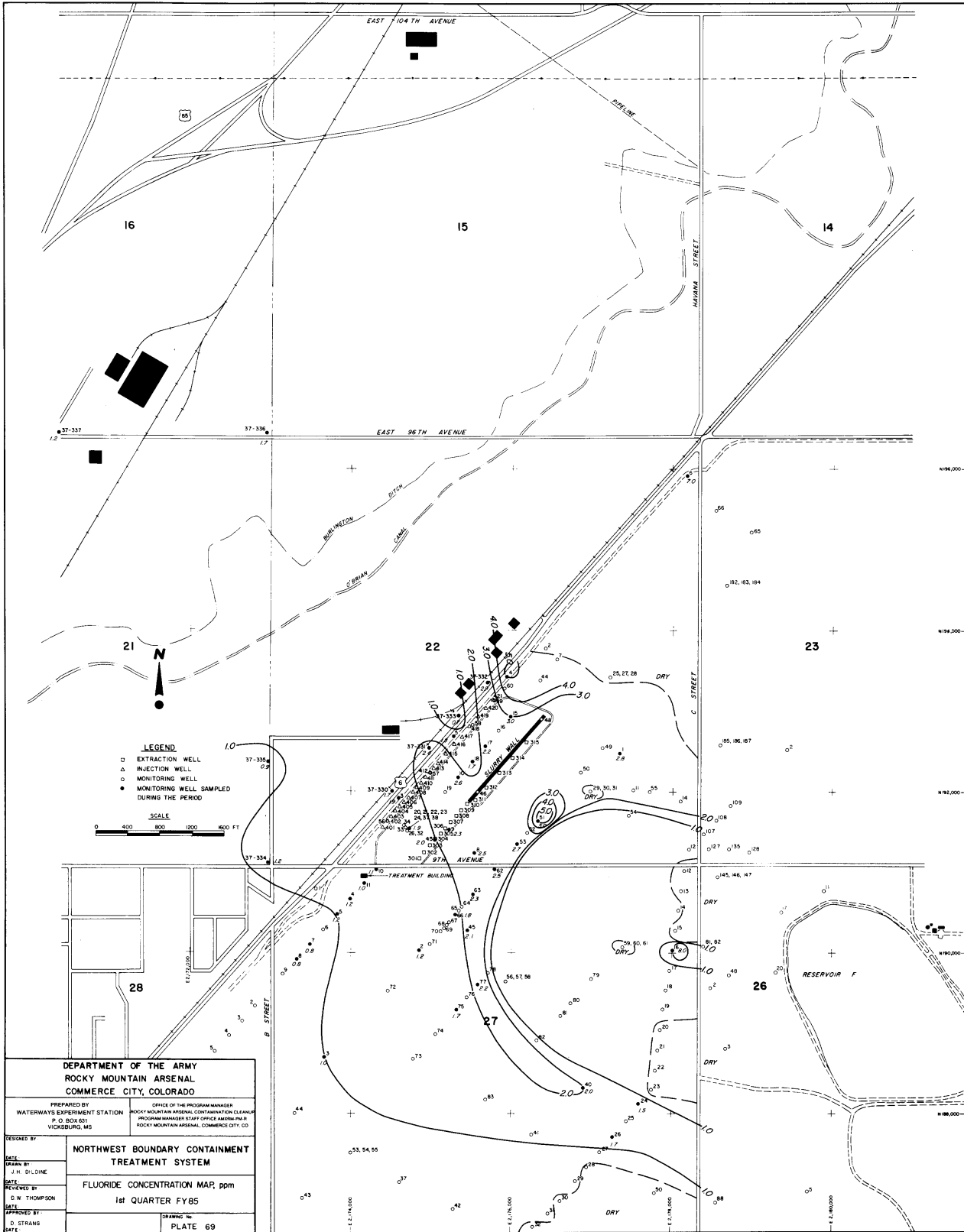
OFFICE OF THE PROGRAM MANAGER
 ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
 PROGRAM MANAGER STAFF OFFICE AMR/PM/RS
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM

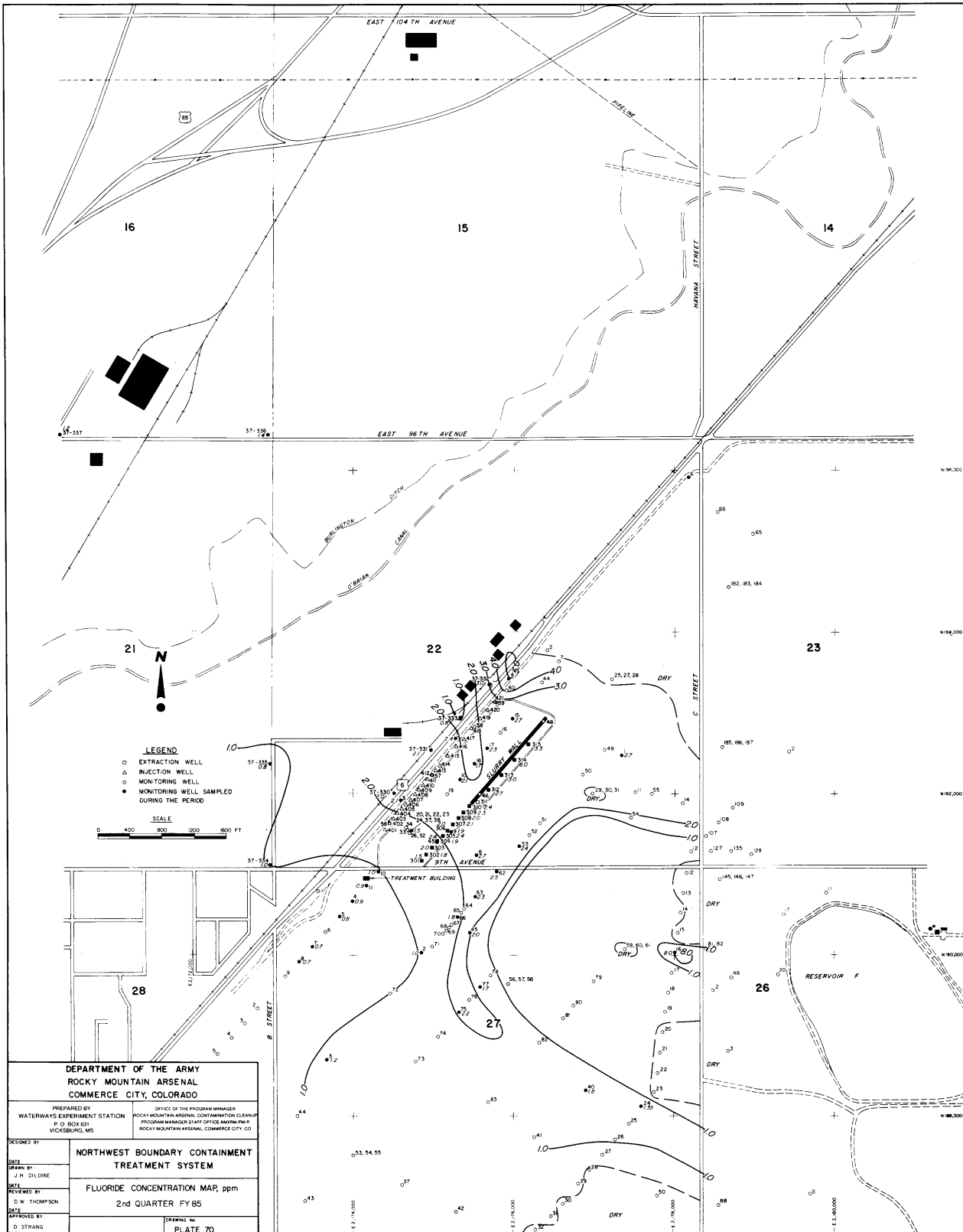
FLUORIDE CONCENTRATION MAR, ppm
 3rd QUARTER FY83

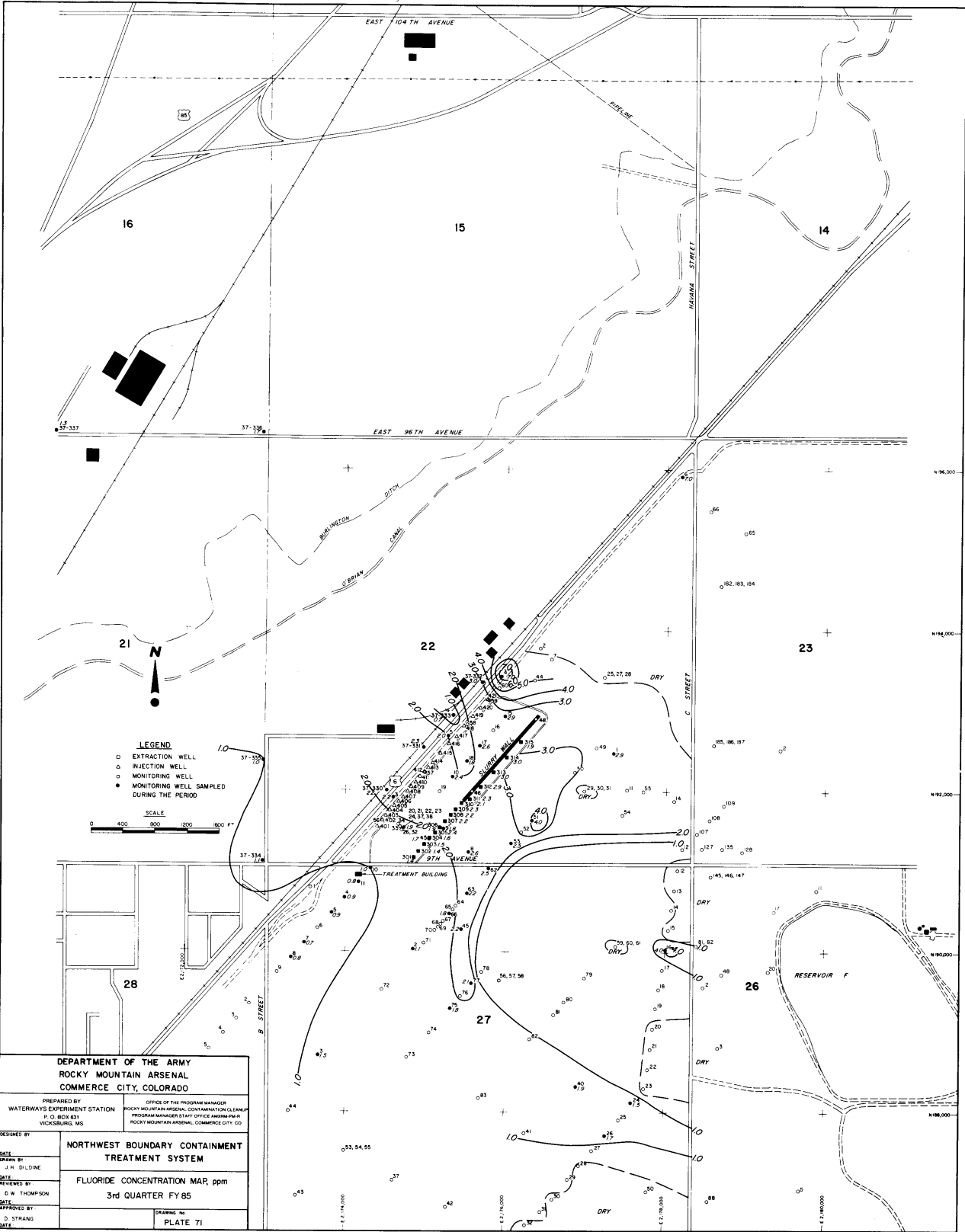
PLATE 67

DATE: _____
 DRAWN BY: J. H. OILDINE
 DATE: _____
 CHECKED BY: D. W. THOMPSON
 DATE: _____
 APPROVED BY: D. STRANG
 DATE: _____



DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
DESIGNED BY DATE DRAWN BY J. H. D'LOINE CHECKED BY G. W. THOMPSON DATE APPROVED BY D. D. STRANG DATE	PREPARED BY OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP PROGRAM MANAGER'S STAFF OFFICE ARMY/P/PLR ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM	
FLUORIDE CONCENTRATION MAP, ppm 1st QUARTER FY85	
DRAWING NO. PLATE 69	

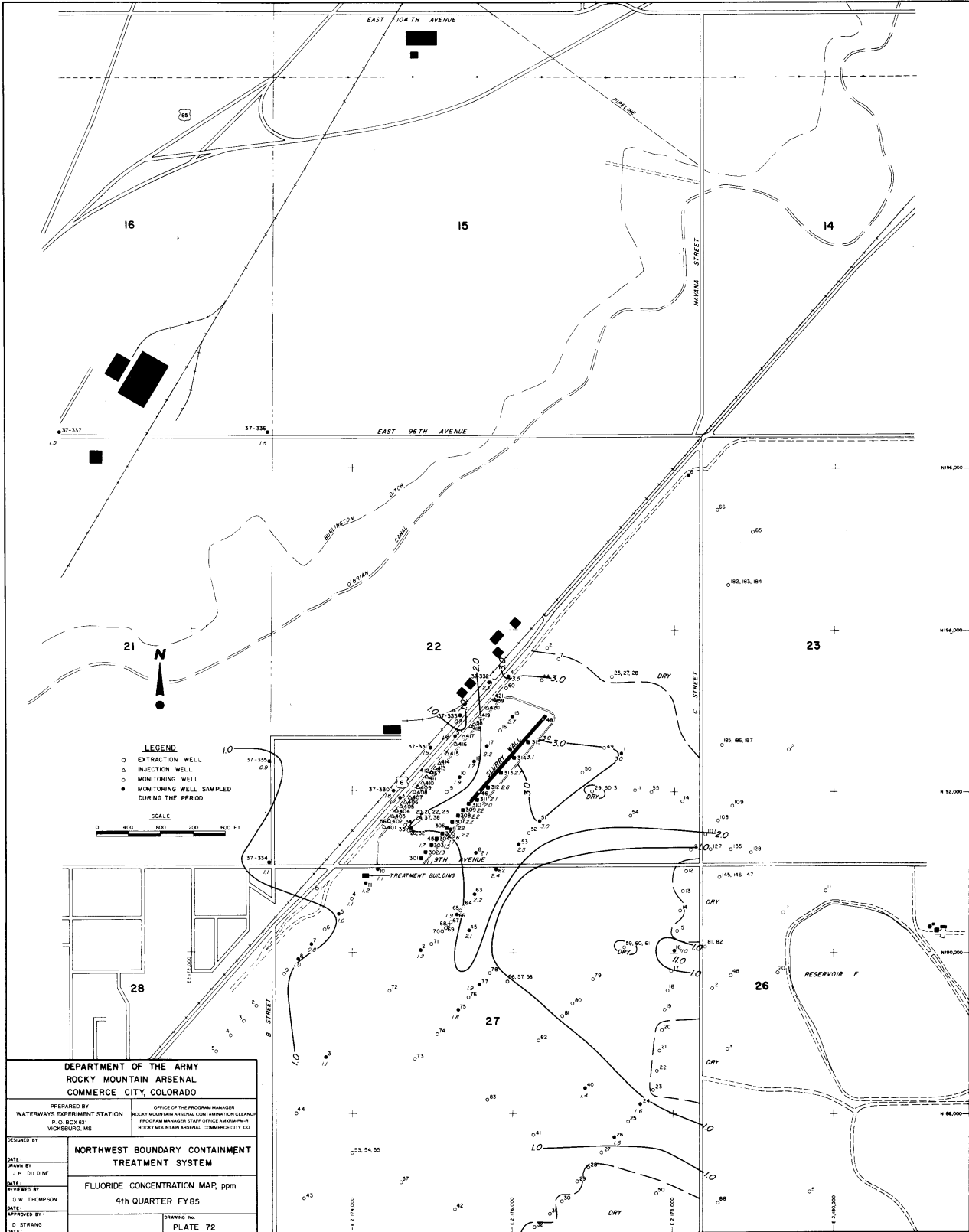


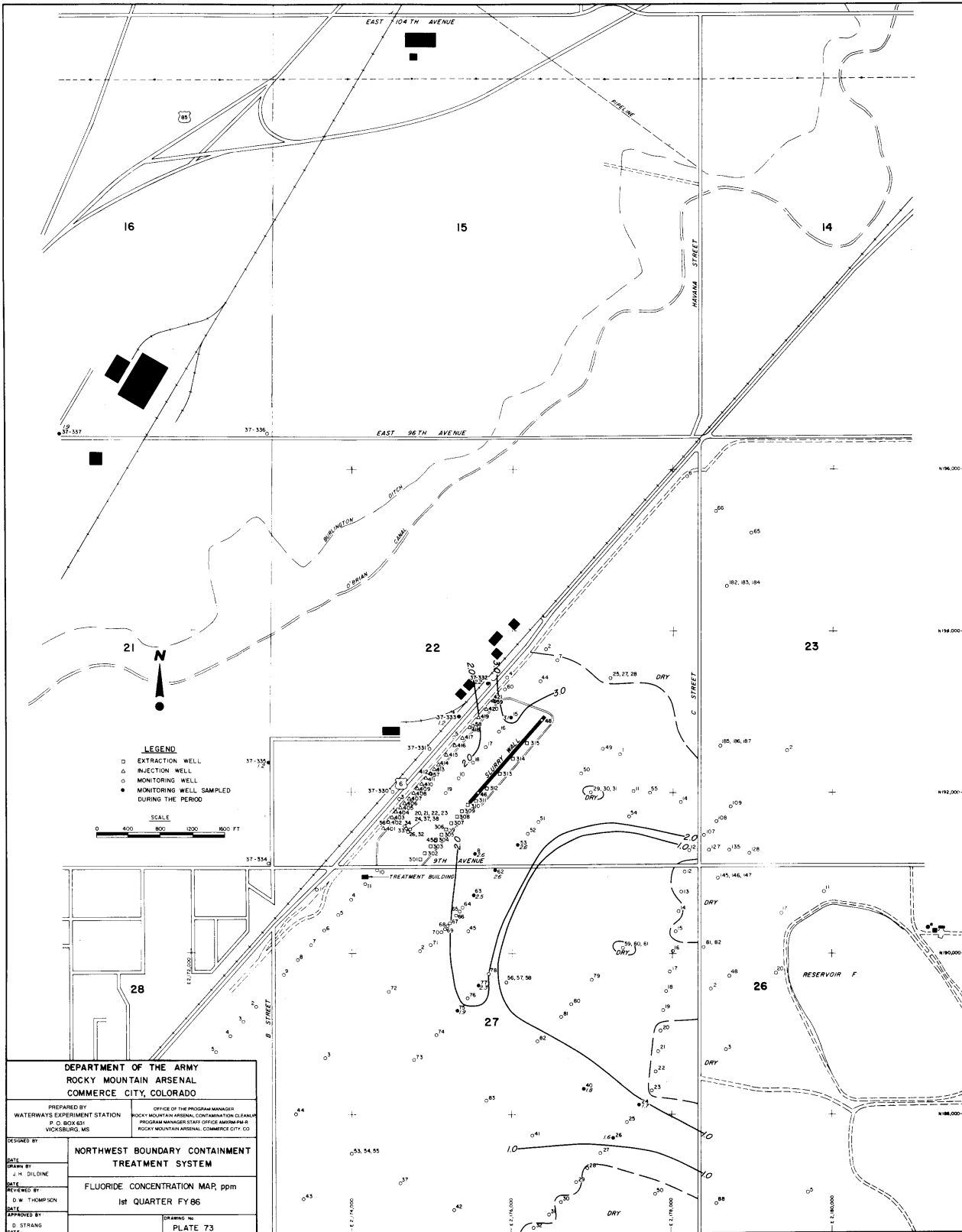


LEGEND
 ○ EXTRACTION WELL
 ○ INJECTION WELL
 ○ MONITORING WELL
 ● MONITORING WELL SAMPLED DURING THE PERIOD

SCALE
 0 400 800 200 600 FT

DEPARTMENT OF THE ARMY ROCKY MOUNTAIN ARSENAL COMMERCE CITY, COLORADO	
PREPARED BY WATERWAYS EXPERIMENT STATION P. O. BOX 533 VICKSBURG, MS	OFFICE OF THE PROGRAM MANAGER ROCKY MOUNTAIN ARSENAL, CONTAMINATION CLEANUP PROGRAM MANAGER'S STATE OFFICE AND/OR PWS ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO
DESIGNED BY	NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM
DATE	
DRAWN BY J. N. D'LOINE	
DATE	
REVIEWS BY C. W. THOMPSON	FLUORIDE CONCENTRATION MAP, ppm 3rd QUARTER FY 85
DATE	
APPROVED BY D. STRANG	DRAWING NO. PLATE 71
DATE	





LEGEND
 □ EXTRACTION WELL
 △ INJECTION WELL
 ○ MONITORING WELL
 ● MONITORING WELL 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, WICKSBURG, MS

OFFICE OF THE PROGRAM MANAGER
 ROCKY MOUNTAIN ARSENAL, CONFIRMATION CLEANUP PROGRAM MANAGER STAFF OFFICE AMM/PWR, ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY: NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM

DATE: 4 M 1986

DRAWN BY: J M DILLINE

DATE:

REVIEWED BY: D W THOMPSON

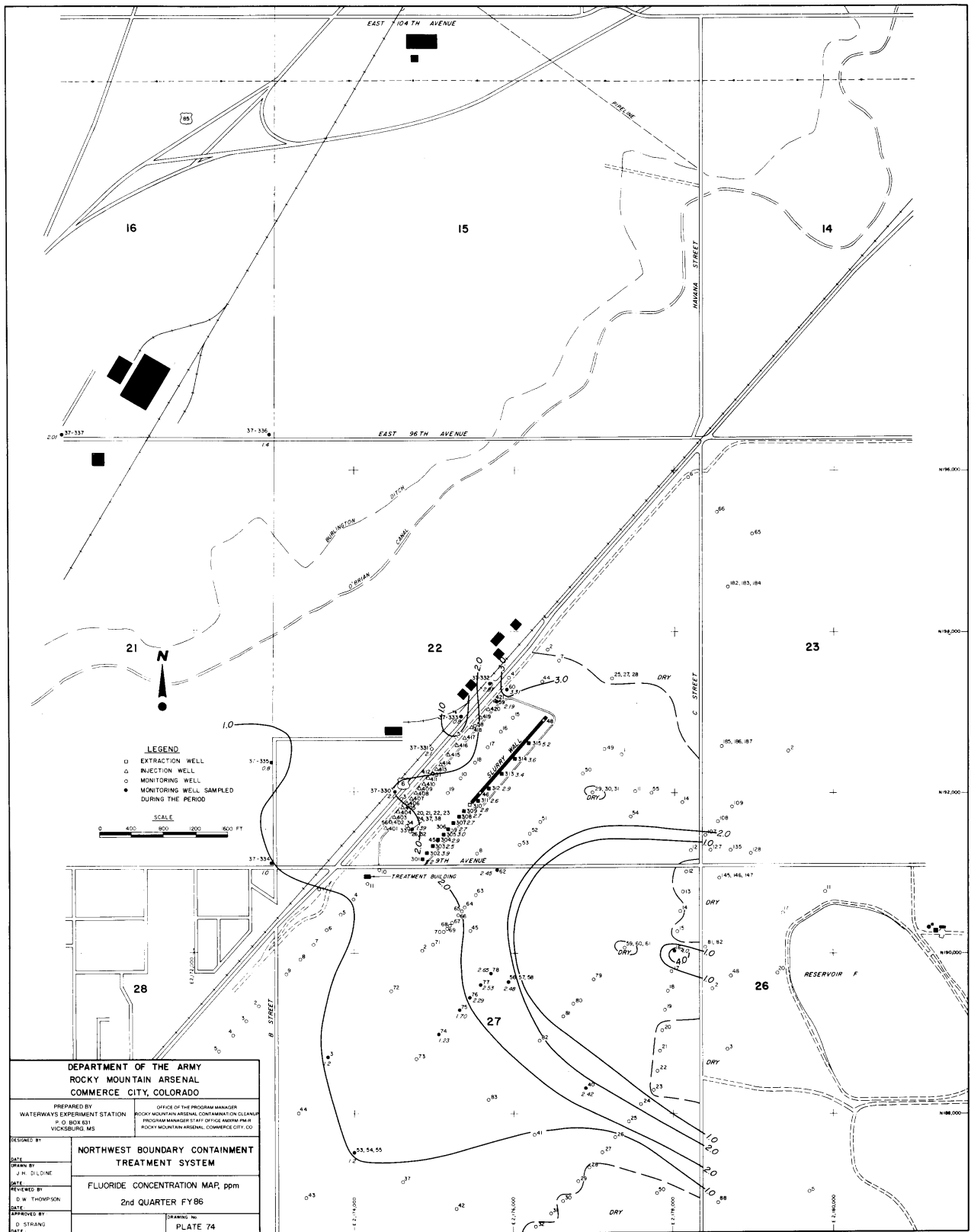
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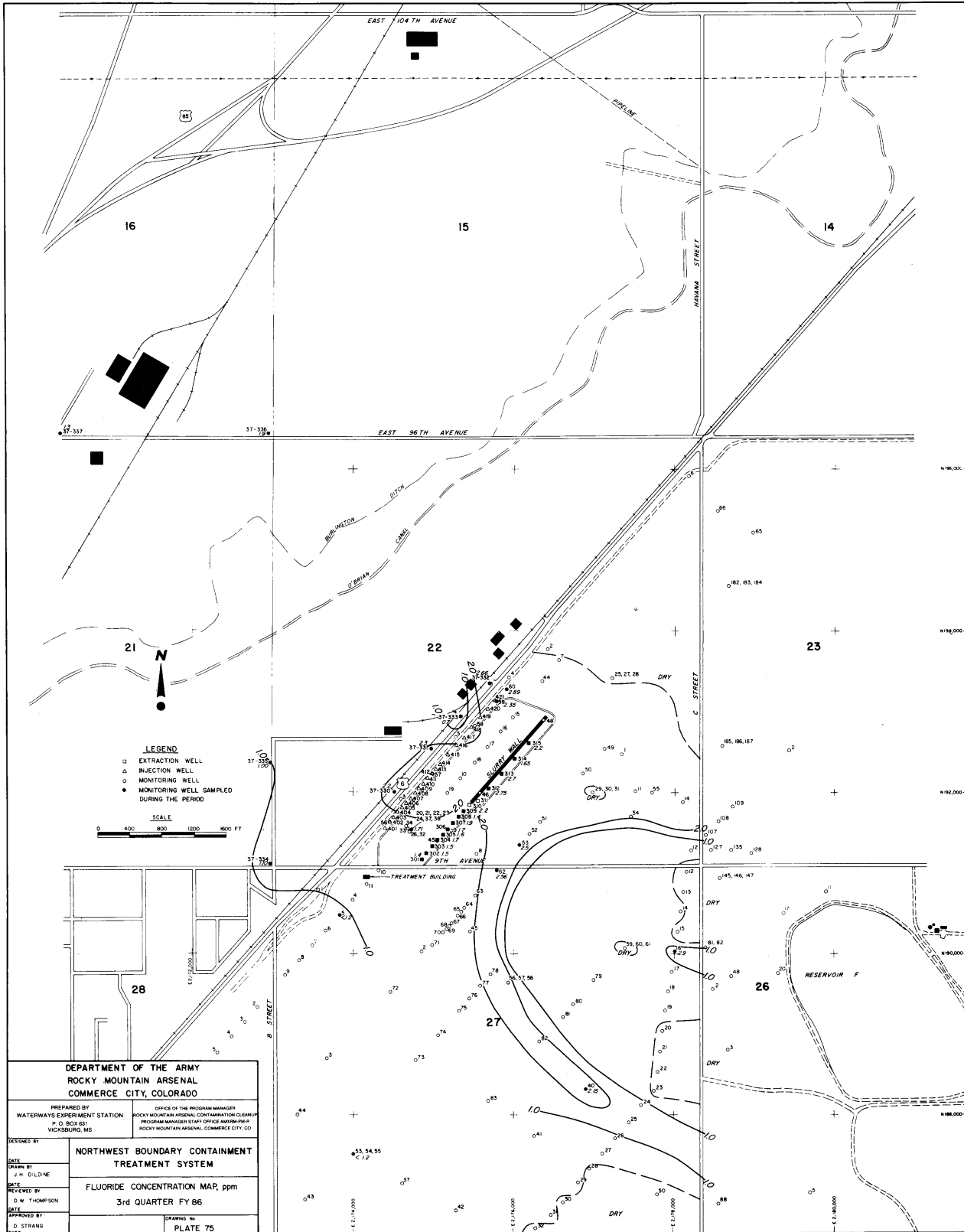
APPROVED BY: G STRANG

DATE:

FLUORIDE CONCENTRATION MAP, ppm
1st QUARTER FY 86

DRAWING NO.: PLATE 73





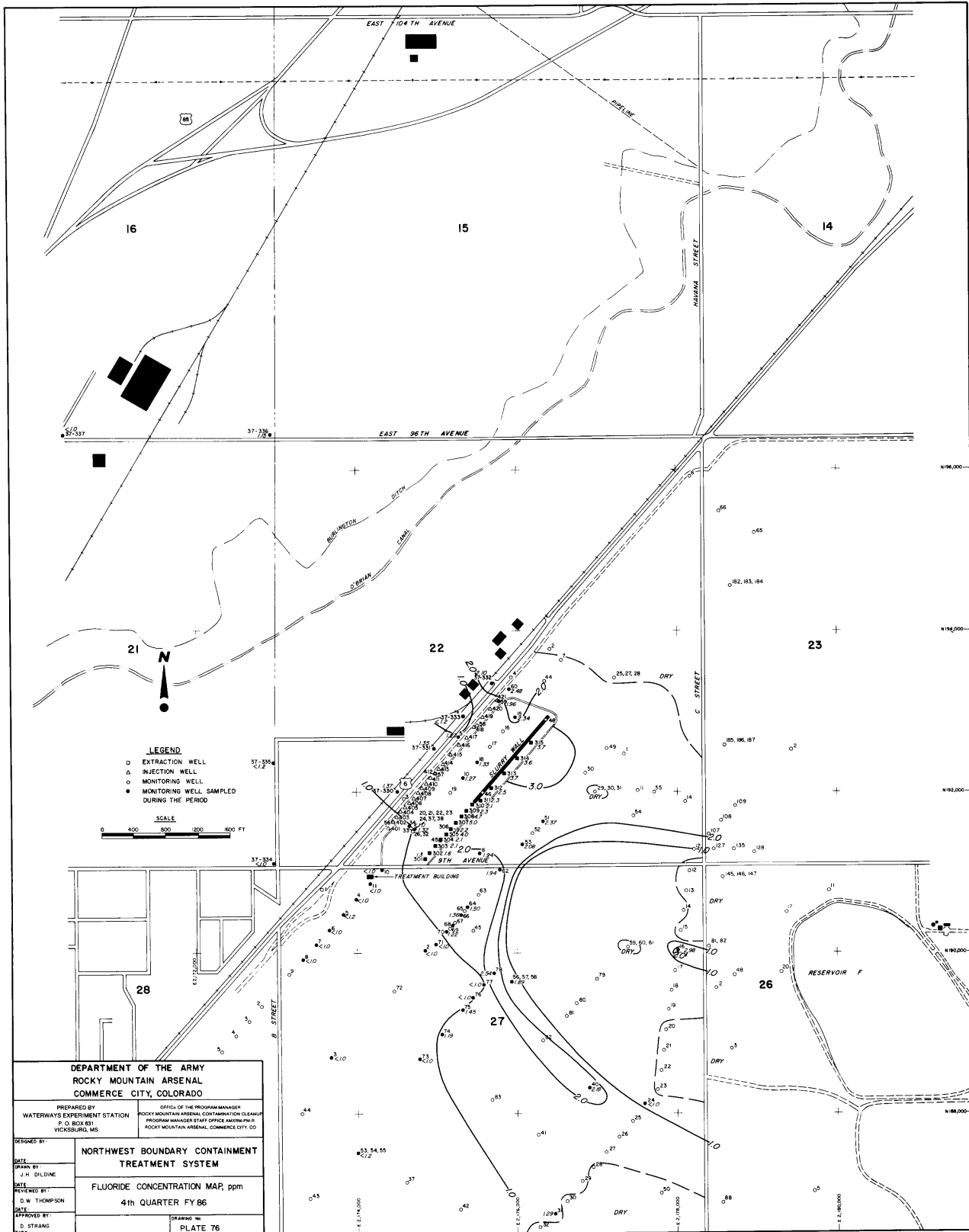
DEPARTMENT OF THE ARMY
 ROCKY MOUNTAIN ARSENAL
 COMMERCE CITY, COLORADO

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

OFFICE OF THE PROGRAM MANAGER
 ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
 PROGRAM MANAGER/STAFF OFFICE AR80M/PWR
 ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

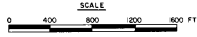
DESIGNED BY
 DATE
 DRAWN BY J. M. DILDINE
 DATE
 REVIEWED BY
 DATE
 APPROVED BY
 DATE

NORTHWEST BOUNDARY CONTAINMENT
 TREATMENT SYSTEM
 FLUORIDE CONCENTRATION MAP, ppm
 3rd QUARTER FY 86
 DRAWING NO. 161-10000
 PLATE 75



LEGEND

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



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

PREPARED BY: WATERWAYS EXPERIMENT STATION
P. O. BOX 851
VICKSBURG, MS

OFFICE OF THE PROGRAM MANAGER
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP
PROGRAM MANAGER STAFF OFFICE HWY/PL/3
ROCKY MOUNTAIN ARSENAL, COMMERCE CITY, CO

DESIGNED BY:	<p>NORTHWEST BOUNDARY CONTAINMENT TREATMENT SYSTEM</p> <p>FLUORIDE CONCENTRATION MAP, ppm</p> <p>4th QUARTER FY 86</p>
DATE:	
DRAWN BY:	
REVIEWED BY:	
APPROVED BY:	
DATE:	DRAWING NO.
DATE:	PLATE 76