

N83447.AR.000251
NAS FORT WORTH
5090.3a

FINAL BASEWIDE QUARTERLY GROUNDWATER MONITORING FIRST SEMIANNUAL
REPORT VOLUME 2 OF 3 FIGURES NAS FORT WORTH TX
3/1/1996
LAW ENGINEERING AND ENVIRONMENTAL

281 0



**NAVAL AIR STATION
FORT WORTH JRB
CARSWELL FIELD
TEXAS**

**ADMINISTRATIVE RECORD
COVER SHEET**

AR File Number 281

11-3517-3201

INSTALLATION RESTORATION PROGRAM (IRP)
BASEWIDE QUARTERLY GROUND-WATER MONITORING
FIRST SEMIANNUAL REPORT

VOLUME 2: FIGURES

Naval Air Station Fort Worth
Joint Reserve Base, Carswell Field
Fort Worth, Texas

March 1996

Final



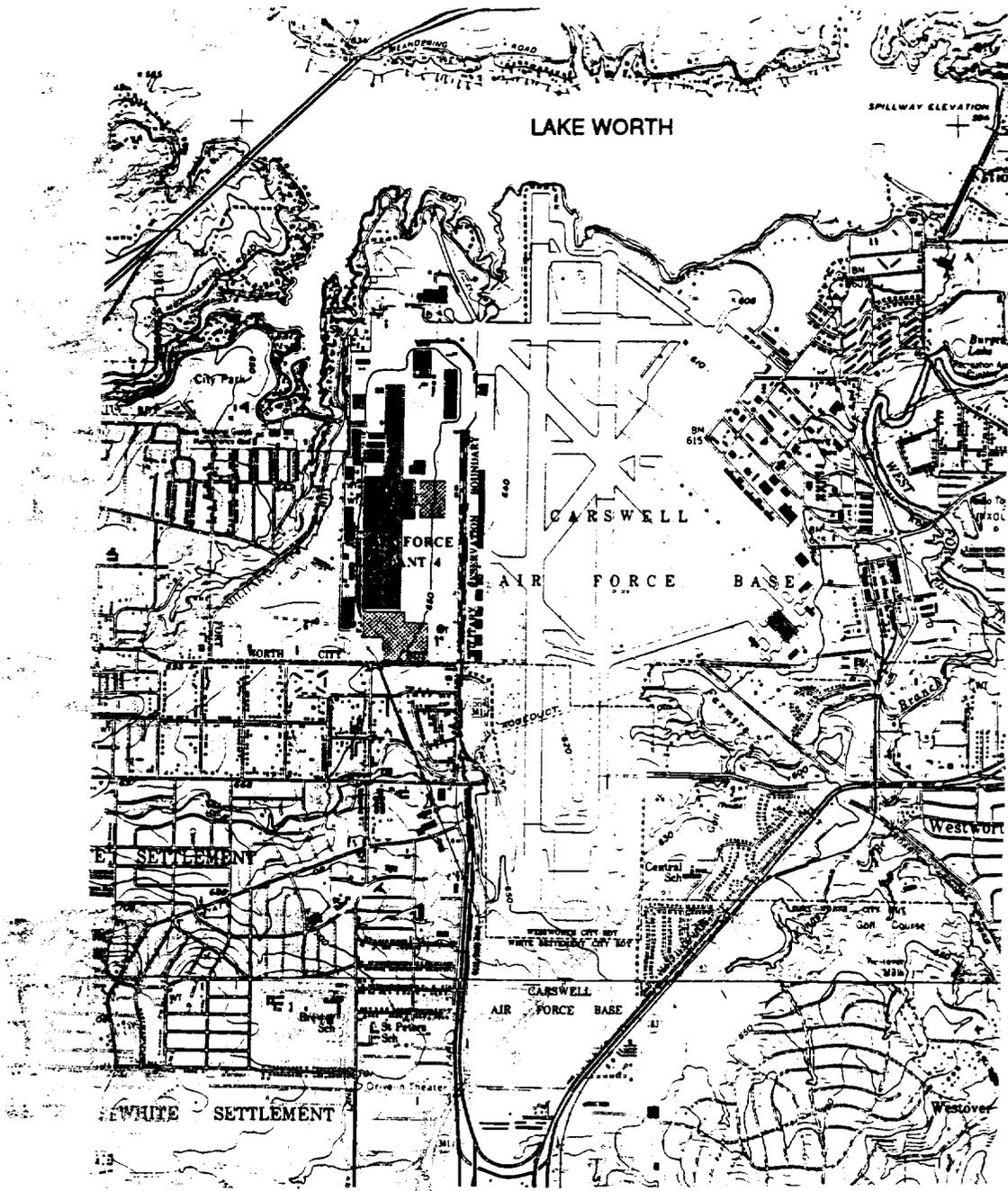
PREPARED FOR

AIR FORCE BASE CONVERSION AGENCY (AFBCA/OL-H)
NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE, CARSWELL FIELD
FORT WORTH, TEXAS 76127-5000

UNITED STATES AIR FORCE
AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE (AFCEE/ERB)
BROOKS AIR FORCE BASE, TEXAS 78235-5328

CONTRACT NO.: F41624-94-D-8050

DELIVERY ORDER 0001



UNITED STATES AIR FORCE NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE, CARSWELL FIELD			
<h2>SITE VICINITY MAP</h2>			
PREPARED/DATE:	TM 8 NOV 94	FIGURE NUMBER:	FILE DATE: N/A
CHECKED/DATE:	JFD	SCALE:	PLOT DATE: N/A
APPROVED BY:	EFS	1-1	FILENAME: SP

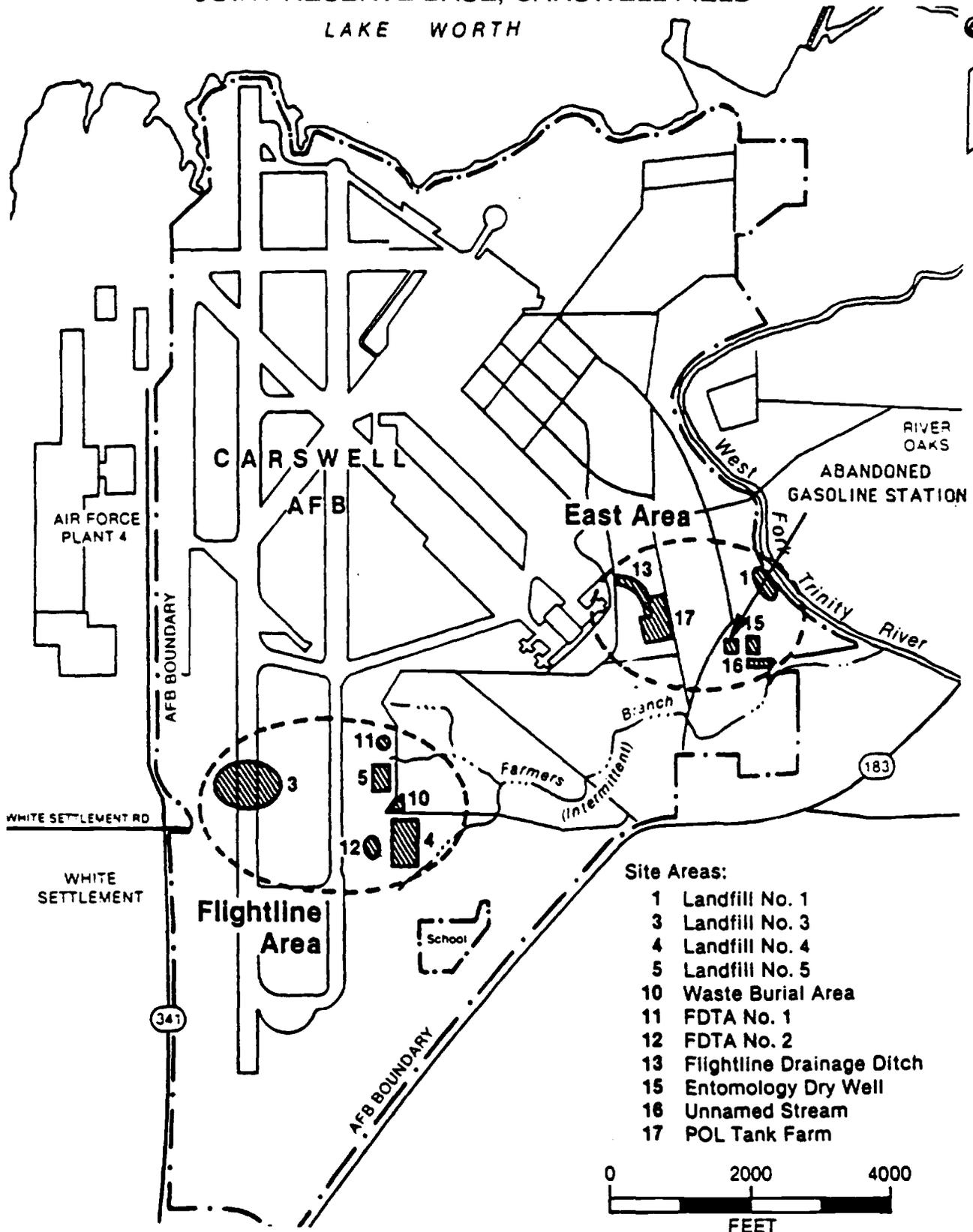
Source: USGS Lake Worth, Texas Topographic Quadrangle, 1982
 USGS Benbrook, Texas Topographic Quadrangle, 1981

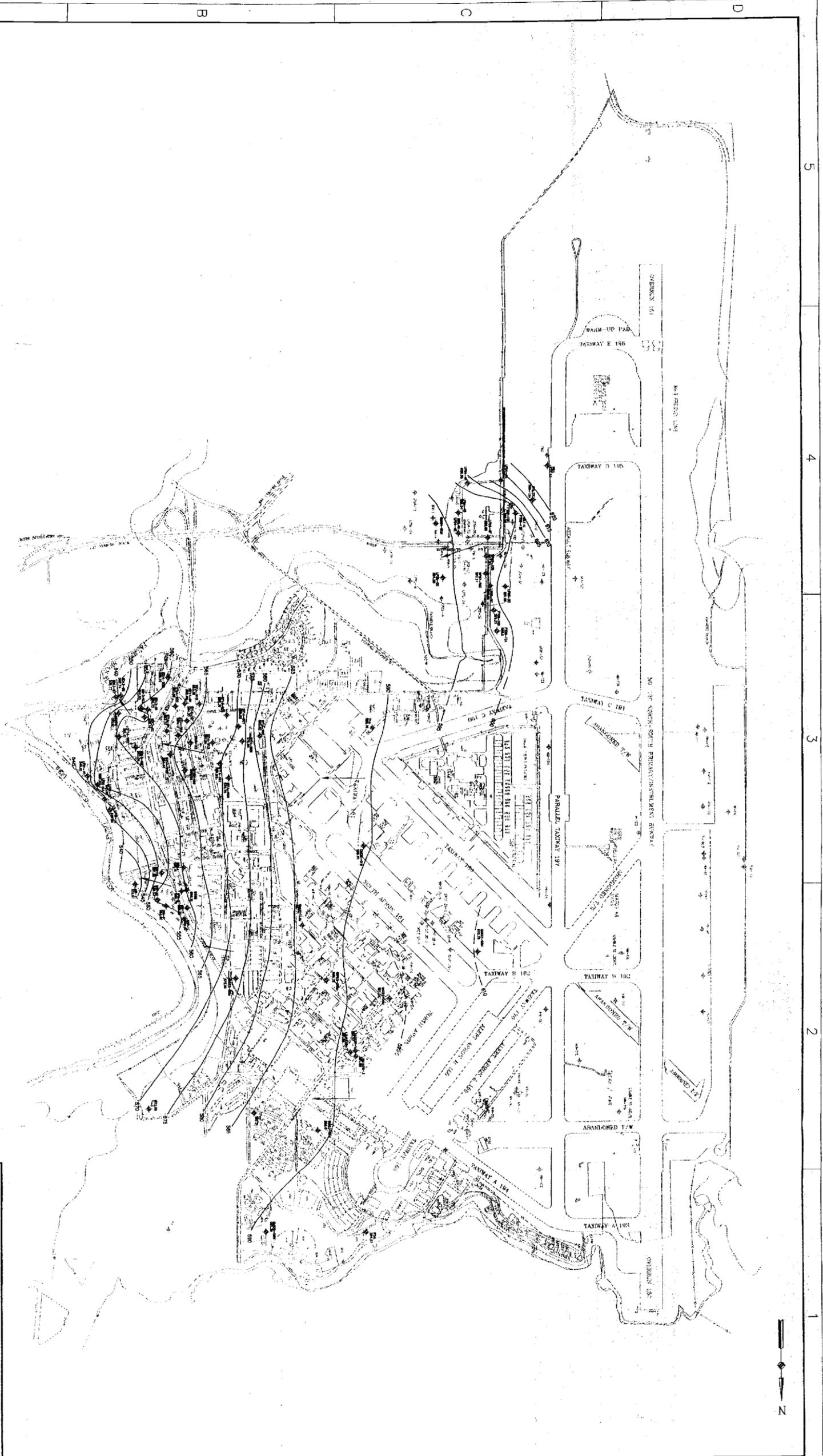
LOCATION OF PHASE II, STAGE 1 SITES

(AFTER RADIAN, 1986)

NAVAL AIR STATION FORT WORTH
JOINT RESERVE BASE, CARSWELL FIELD

LAKE WORTH





LEGEND

- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
- ⊕ EXISTING MONITORING WELL
- 100' GROUND-WATER ELEVATION CONTOUR

NOTE

1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
2. CONTOUR INTERVAL = 5 FEET.



Symbol	Description	Date	Approved

DESIGNED BY NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE FORT WORTH, TEXAS		SHEET NO. 3-1	SHEET 1 OF 1
DRAWN BY CAD	GROUND-WATER POTENTIOMETRIC SURFACE MAP - 1st QUARTER (ALLUVIAL AQUIFER)		
CHECKED BY DSS	BASE-WIDE QUARTERLY GROUND-WATER MONITORING		
RELEASED BY ARF	SCALE AS SHOWN	SHEET NUMBER 3-1	FILE NAME 180104.dwg
DATE 09 JAN 96	PROJECT NO. 11-5517-3201	DATE 09 JAN 96	SHEET NO. 3-1



LEGEND

- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
- ⊕ EXISTING MONITORING WELL
- 100' GROUND-WATER ELEVATION CONTOUR

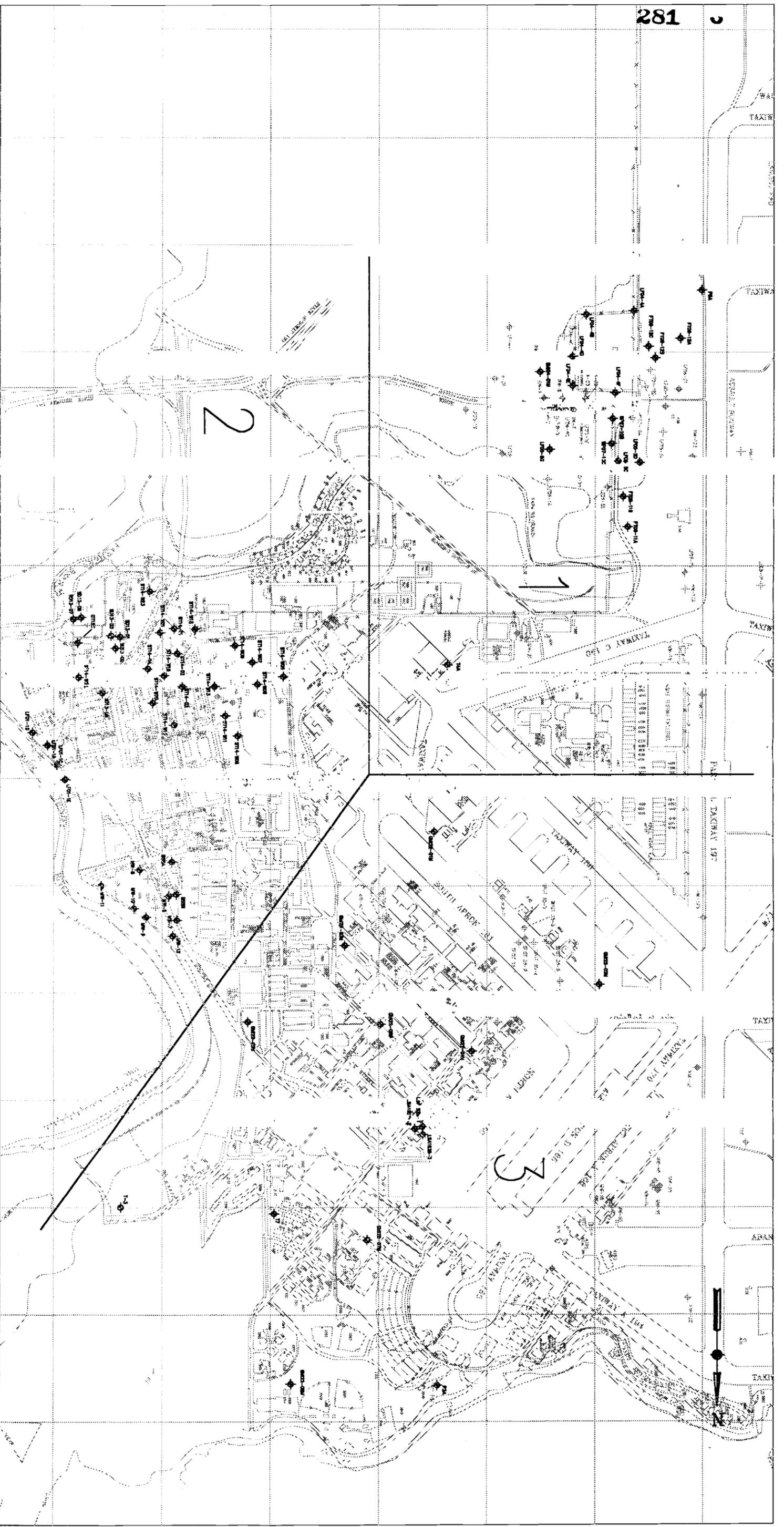
NOTE

1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
2. CONTOUR INTERVAL = 5 FEET.



Symbol	Description	Date	Approved
◆	MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING		
⊕	EXISTING MONITORING WELL		
—	100' GROUND-WATER ELEVATION CONTOUR		

Designed by Drawn by CAD Checked by DSS Reviewed by JNF Date 09 JAN 98 ARCEE		NAVY AIR STATION FORT WORTH JOINT RESERVE BASE FORT WORTH, TEXAS	
BASE-WIDE QUARTERLY GROUND-WATER MONITORING SURFACE MAP - 2nd QUARTER (ALLUVIAL AQUIFER)		Sheet number 3-2	Project No. 11-3517-3201 File Name 2ndqtr.dwg Sheet 1 of 1

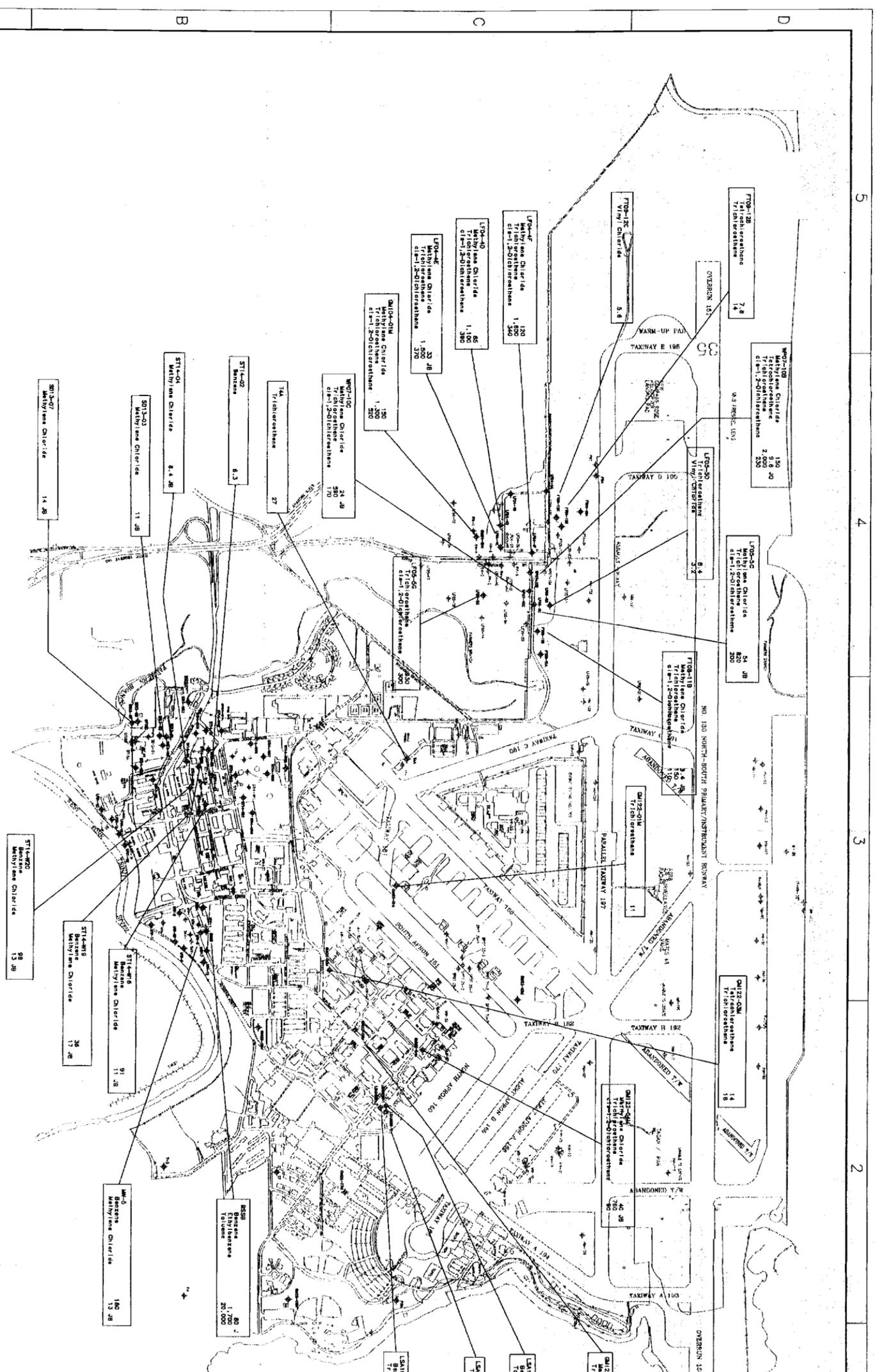


- LEGEND**
- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
 - ⊕ EXISTING MONITORING WELL
 - 1 ZONE AREA DESIGNATION

NOTE
 1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.



NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE FORT WORTH, TEXAS	
QUARTERLY GROUND WATER MONITORING GENERAL AREA MAP	
BASE-WIDE	
PREPARED BY: DSS	FIGURE NUMBER: 3-3
CHECKED BY: JRF	FILE DATE: 29 SEPTEMBER 95
PROJECT NO. 11-3517-3201	FILE NAME: AREAMAP.DWG
	PLOT DATE: 03 OCT 95



LEGEND
 ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
 ⊕ EXISTING MONITORING WELL

NOTE
 1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
 2. ALL CONCENTRATIONS MEASURED IN ug/L.



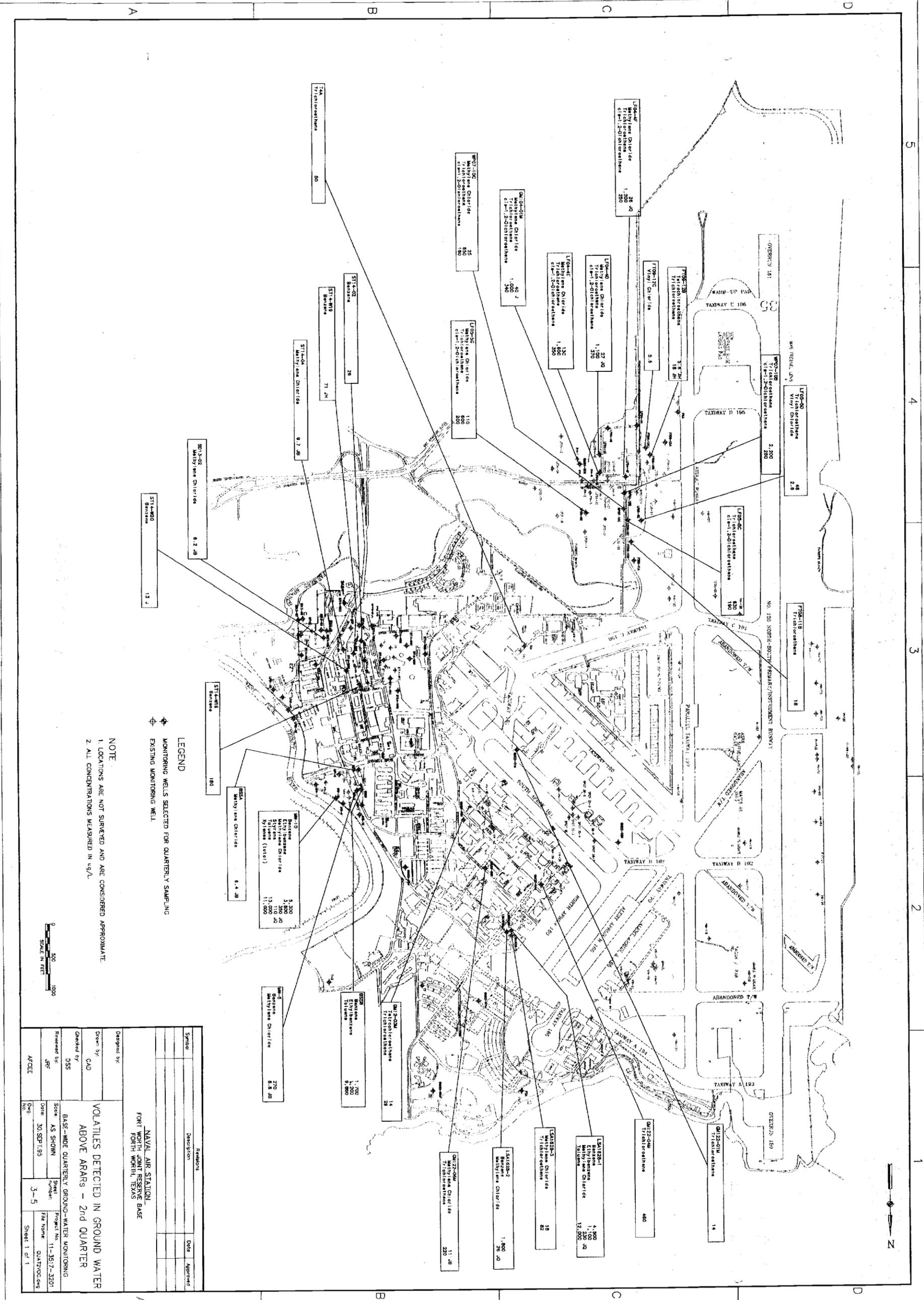
Symbol	Description	Date	Approved

Designed by:
 Drawn by: CAD
 Checked by: DSS
 Reviewed by: JRF
 Date: 30 SEPT 95
 AFCE

NAVAL AIR STATION
FORT WORTH JOINT RESERVE BASE
FORT WORTH, NORTH TEXAS

VOLATILES DETECTED IN GROUND WATER ABOVE ARARS - 1ST QUARTER

Scale AS SHOWN
 Figure Number: 3-4
 Project No: 11-3517-3201
 File Name: gwtmon.dwg
 Sheet 1 of 1



LEGEND

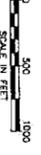
◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING

◊ EXISTING MONITORING WELL

NOTE

1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.

2. ALL CONCENTRATIONS MEASURED IN ug/L



Symbol	Revision	Date	Approved

NAVAL AIR STATION
FORT WORTH JOINT RESERVE BASE
FORT WORTH, TEXAS

Designed by: _____

Drawn by: CAD

Checked by: DSS

Reviewed by: JRF

AFCEE

Scale: AS SHOWN

Date: 30 SEP 1995

Project No: 11-3517-3201

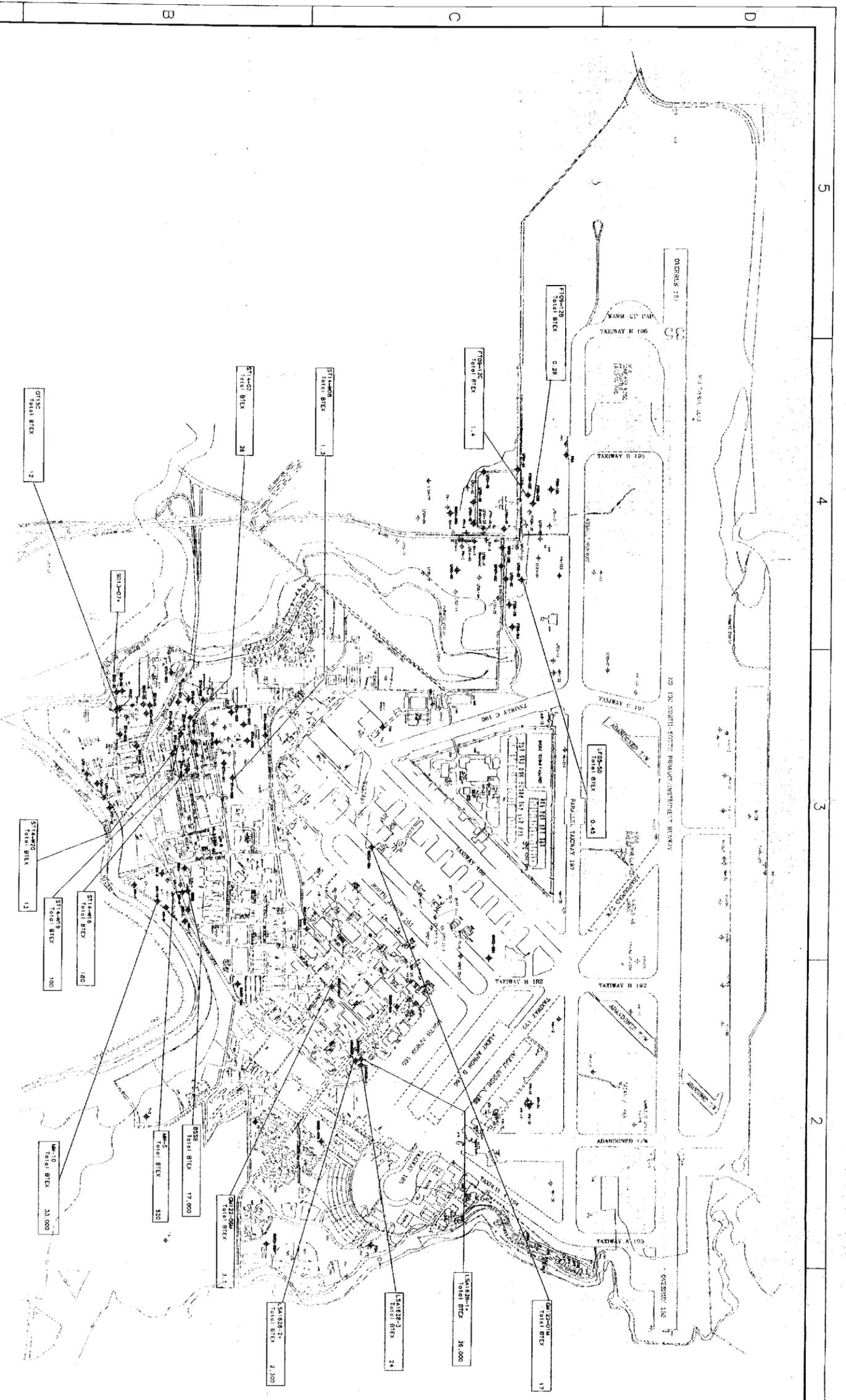
File Name: QUA7300C.dwg

Sheet Number: 3-5

Sheet 1 of 1

VOLATILES DETECTED IN GROUND WATER ABOVE ARARS - 2nd QUARTER

BASE-WIDE QUARTERLY GROUND-WATER MONITORING



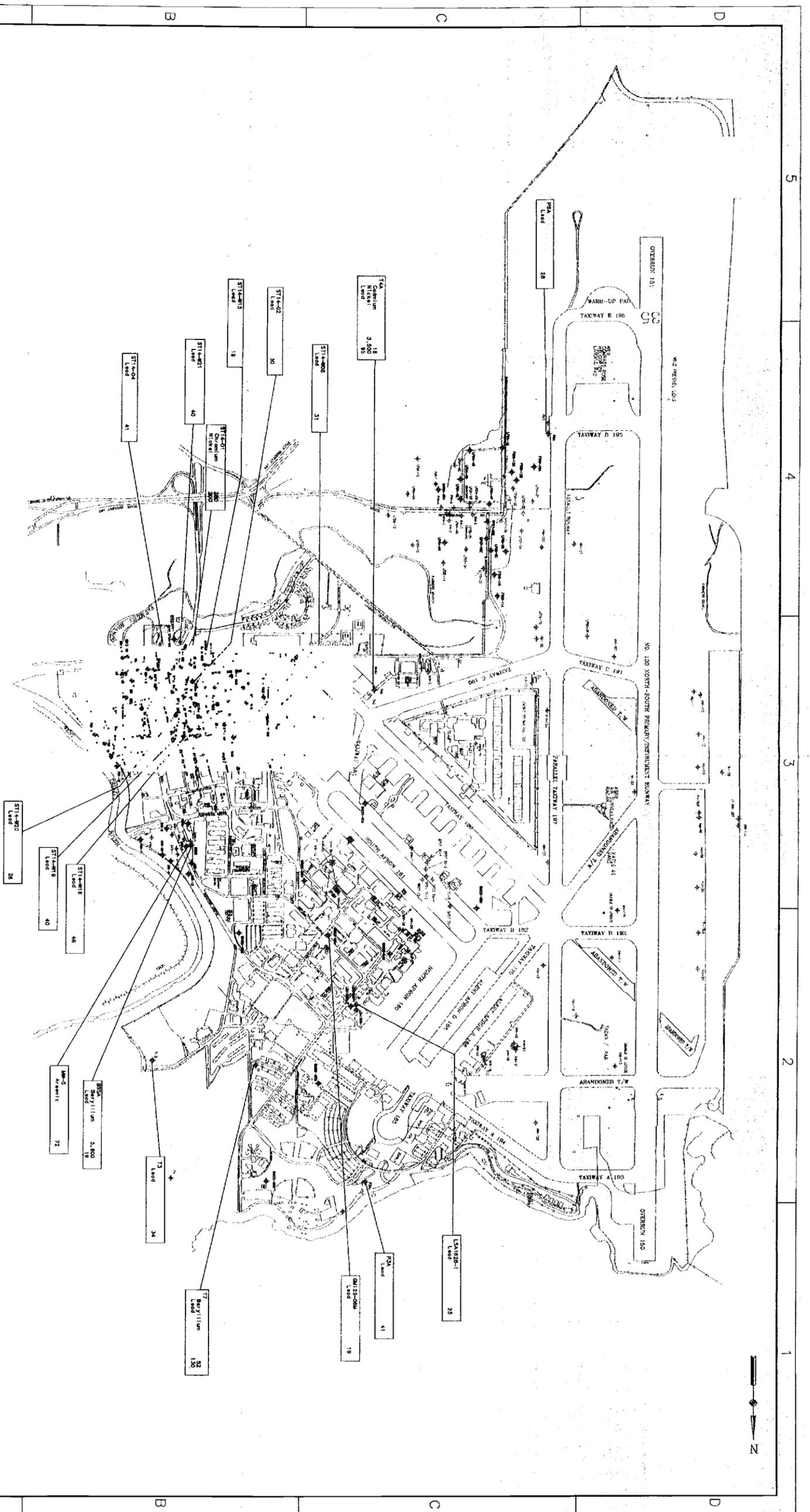
LEGEND
 ☐ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
 ⊕ EXISTING MONITORING WELL

NOTE
 1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
 2. ALL CONCENTRATIONS MEASURED IN ug/L
 3. * DENOTES WELLS WITH MEASURABLE FREE PRODUCT.



Symbol	Description	Date	Approved
☐	MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING		
⊕	EXISTING MONITORING WELL		

Designed by:	NAVAL AIR STATION
Drawn by:	FOOT NORTH JOINT RESERVE BASE
Checked by:	FOOT NORTH, TEXAS
Reviewed by:	
Scale:	AS SHOWN
Date:	09 JUN 95
Project No.:	11-3517-3201
File Name:	quad20a.dwg
Sheet:	3-7
Sheet:	1 of 1



LEGEND

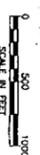
Monitoring Wells Selected for Quarterly Sampling

Existing Monitoring Well

NOTE

1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.

2. ALL CONCENTRATIONS MEASURED IN ug/L.



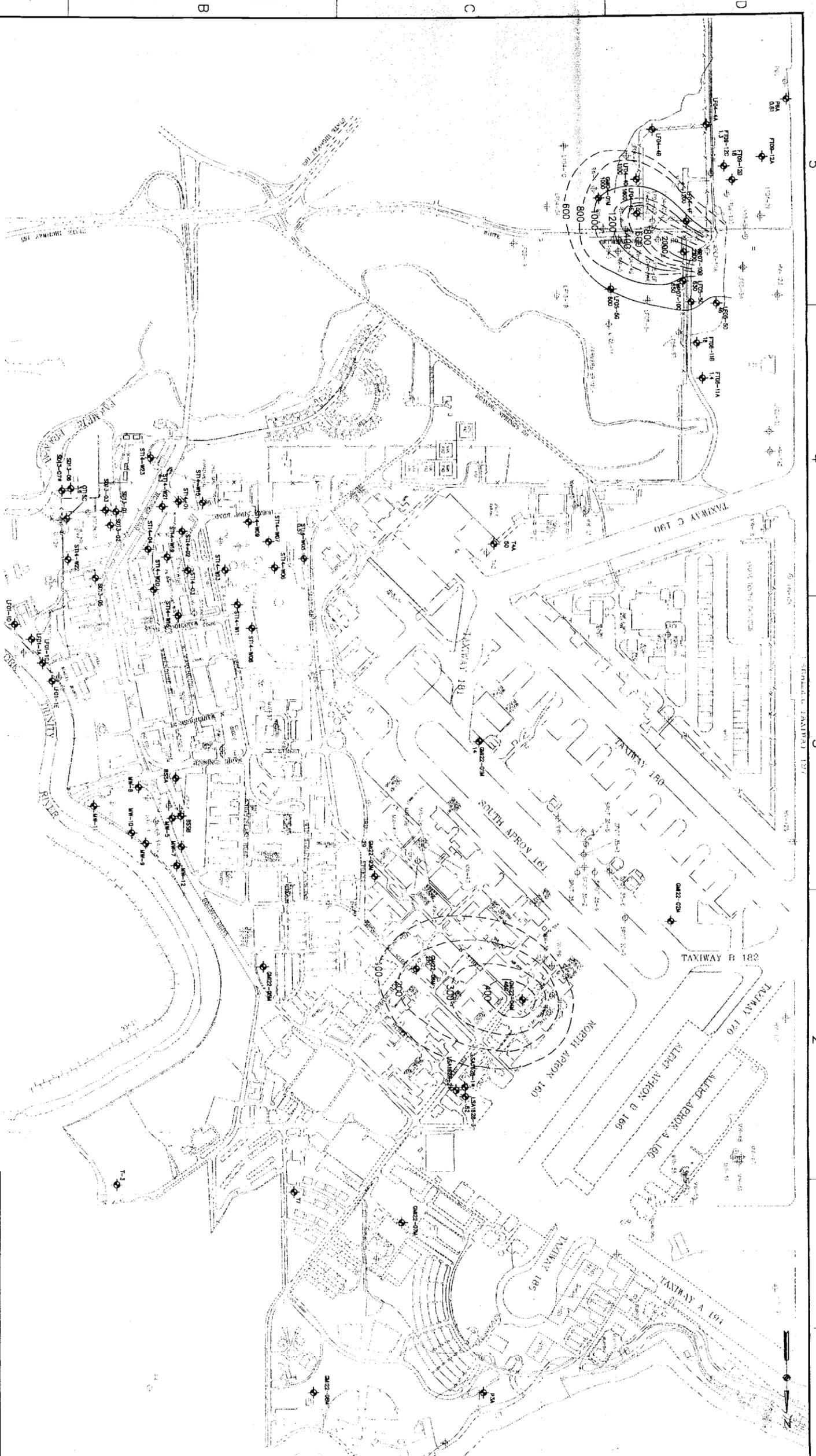
Serial	Revision	Date	Approved

Designed by: _____
 Drawn by: CAD
 Checked by: DSS
 Reviewed by: JRF
 Date: 30 SEP 1993
 Scale: AS SHOWN
 Project No: 11-1517-3001
 File Name: quaterlead.dwg
 Sheet: 1 of 1

NAVAL AIR STATION
FORT WORTH JOINT RESERVE BASE
FORT WORTH, TEXAS

METALS DETECTED IN GROUND WATER
ABOVE ARARS - 2ND QUARTER
 BASE-WIDE QUARTERLY GROUND-WATER MONITORING

ARCEE
 3-9



LEGEND

- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
- EXISTING MONITORING WELL
- 100' CONCENTRATION CONTOUR
- 100' ESTIMATED CONCENTRATION CONTOUR

NOTE

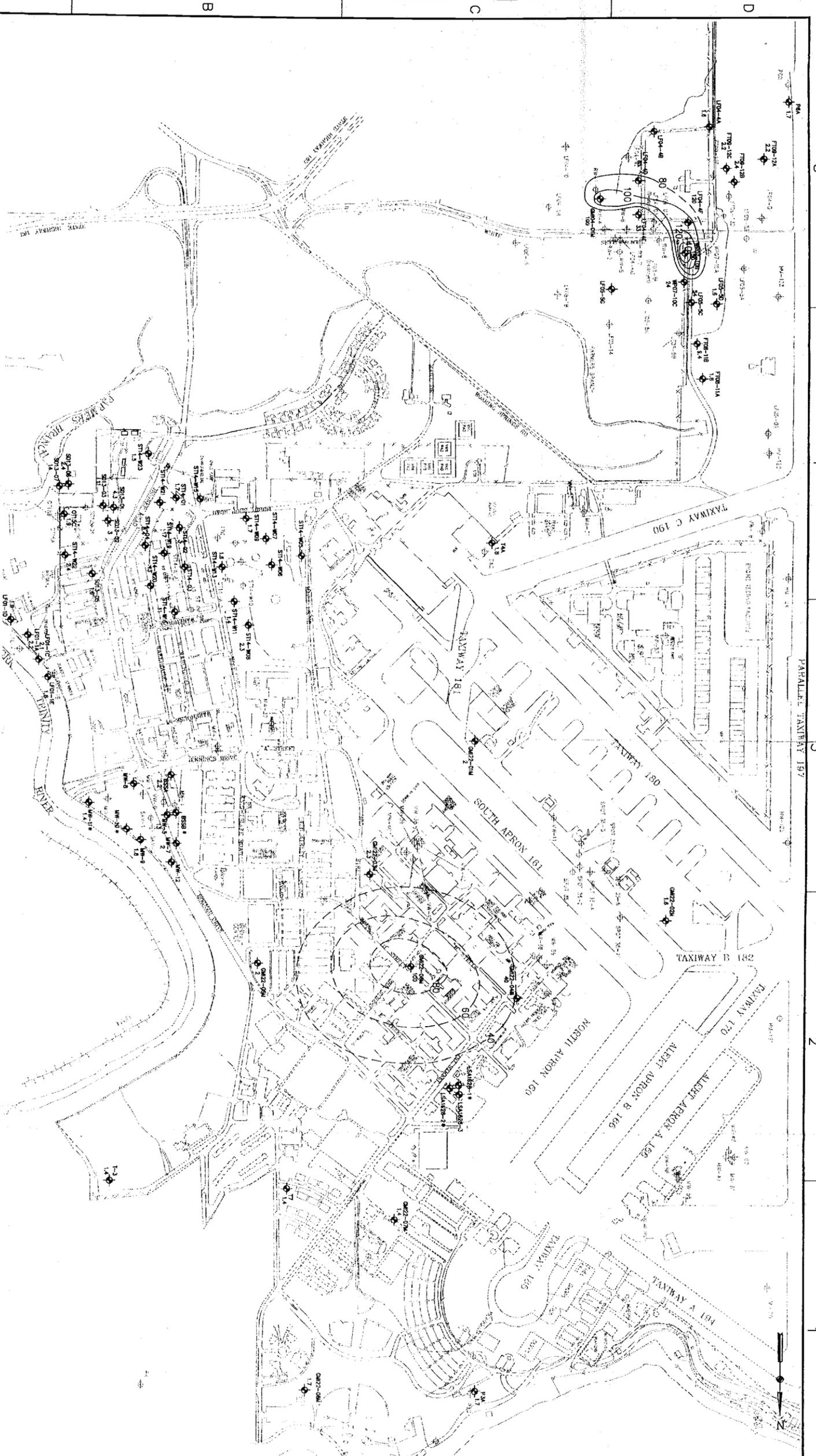
1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
2. ALL CONCENTRATIONS MEASURED IN ug/L
3. * DENOTES WELLS WITH MEASURABLE FREE PRODUCT



Symbol	Description	Date	Approved

Designed by: _____
 Drawn by: CAD
 Checked by: DSS
 Reviewed by: JRF
 Date: 07 MAR 96
 Project No: 11-3517-2201
 Sheet No: 3-11
 Sheet 1 of 1

TRICHLOROETHENE DETECTED IN GROUND WATER - 2ND QUARTER
 NAVAL AIR STATION,
 FORT WORTH JOINT RESERVE BASE
 FORT WORTH, TEXAS



LEGEND

- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
- ◊ EXISTING MONITORING WELL
- 100 ug/L CONCENTRATION CONTOUR
- - - 100 ug/L ESTIMATED CONCENTRATION CONTOUR

NOTE

1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
2. ALL CONCENTRATIONS MEASURED IN ug/L.
3. * DENOTES WELLS WITH MEASURABLE FREE PRODUCT



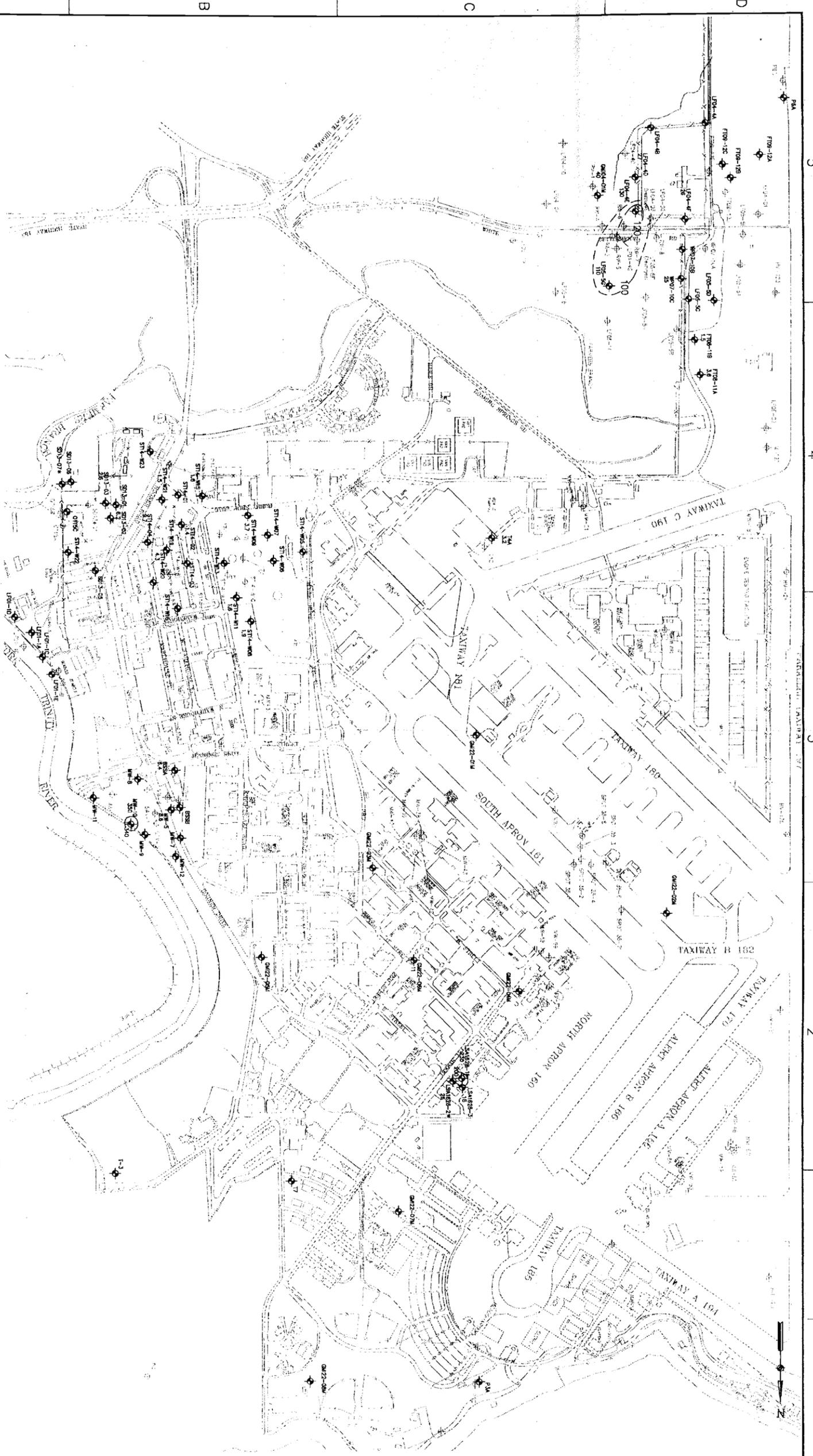
Symbol	Description	Date	Approved

Designed by: _____
 Drawn by: CAD
 Checked by: DSS
 Reviewed by: JRF
 Date: 07 MAR 98
 ARCEE

**NAVAL AIR STATION
 FORT WORTH JOINT RESERVE BASE
 FORT WORTH, TEXAS**

**METHYLENE CHLORIDE DETECTED IN
 GROUND WATER - 1st QUARTER**

BASE-WIDE QUARTERLY GROUND-WATER MONITORING
 Scale AS SHOWN
 Sheet 3-14
 Project No. 1-3517-3201
 File Name: WCTCPT.dwg
 Date: 07 MAR 98
 Sheet 1 of 1



- LEGEND**
- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
 - ◇ EXISTING MONITORING WELL
 - 100 CONCENTRATION CONTOUR
 - 100 ESTIMATED CONCENTRATION CONTOUR

- NOTE**
1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
 2. ALL CONCENTRATIONS MEASURED IN UG/L.
 3. * DENOTES WELLS WITH MEASURABLE FREE PRODUCT



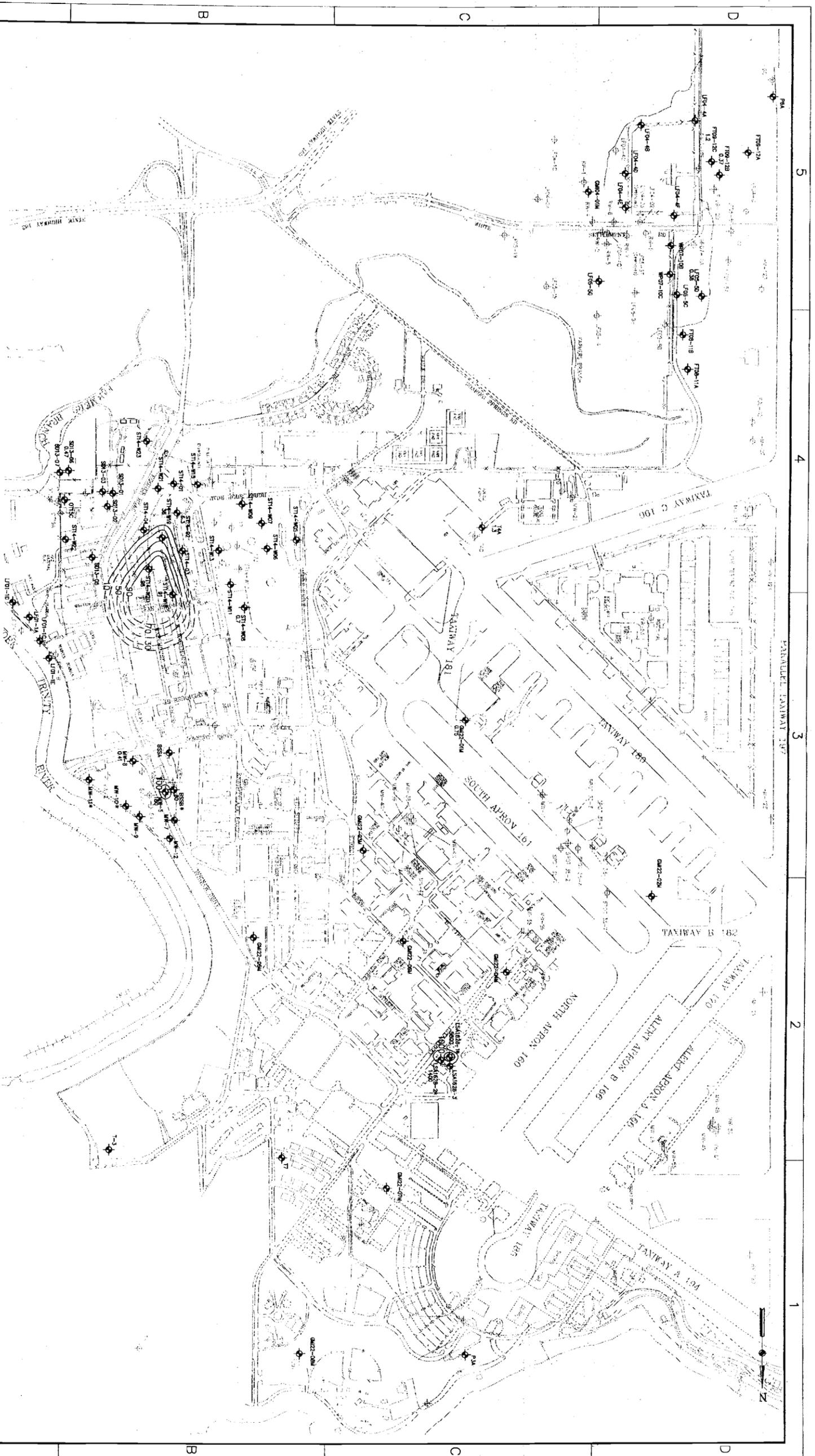
Revision	Description	Date	Approved

Designed by: _____
 Drawn by: CAD
 Checked by: DSS
 Reviewed by: JRF
 Scale: AS SHOWN
 Date: 07 MAR 96
 Project No: 11-3817-3201
 File Name: MDC2907.dwg
 Sheet No: 3-15
 Sheet 1 of 1

**NAVAL AIR STATION
 FORT WORTH JOINT RESERVE BASE
 FORT WORTH, TEXAS**

**METHYLENE CHLORIDE DETECTED IN
 GROUND WATER - 2ND QUARTER**

BASE-WIDE QUARTERLY GROUND-WATER MONITORING

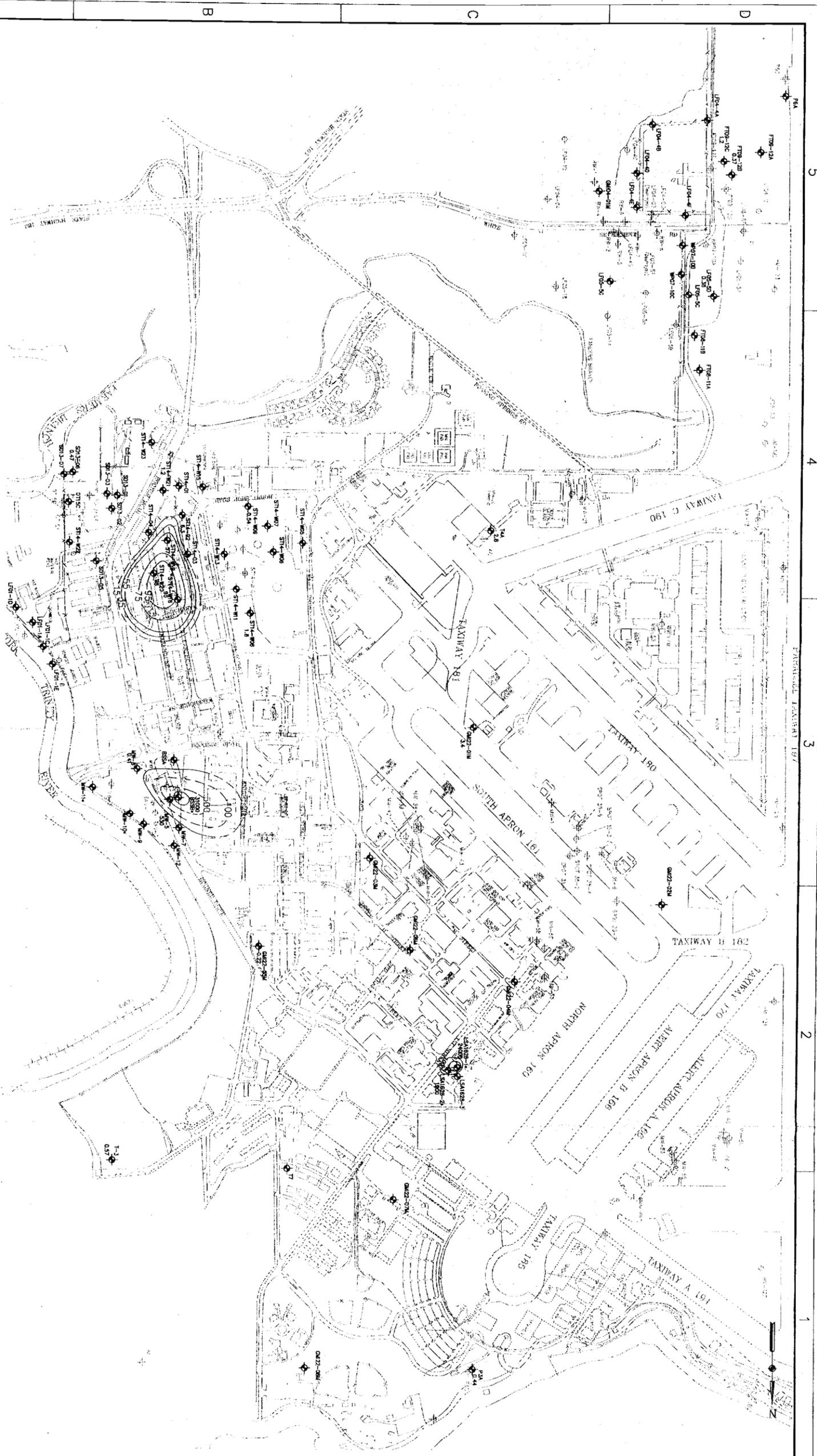


- LEGEND**
- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
 - ◇ EXISTING MONITORING WELL
 - 100- CONCENTRATION CONTOUR
 - - - 1000- ESTIMATED CONCENTRATION CONTOUR
- NOTE**
1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
 2. ALL CONCENTRATIONS MEASURED IN ug/L.
 3. WELL MW-10 WAS NOT SAMPLED FOR QUARTER 1.
 4. * DENOTES WELLS WITH MEASURABLE FREE PRODUCT.



Symbol	Description	Date	Approved

Designed by:		NAVAL AIR STATION, FORT WORTH JOINT RESERVE BASE FORT WORTH, TEXAS	
Drawn by:	CAO	BENZENE DETECTED IN GROUND WATER - 1st QUARTER	
Checked by:	DSS	Scale:	AS SHOWN
Reviewed by:	JR	Date:	07/MAR/95
APCEE	D-5	Sheet:	3-16
		Project No:	11-3517-3201
		File Name:	BENPO1.dwg
		Sheet:	1 of 1



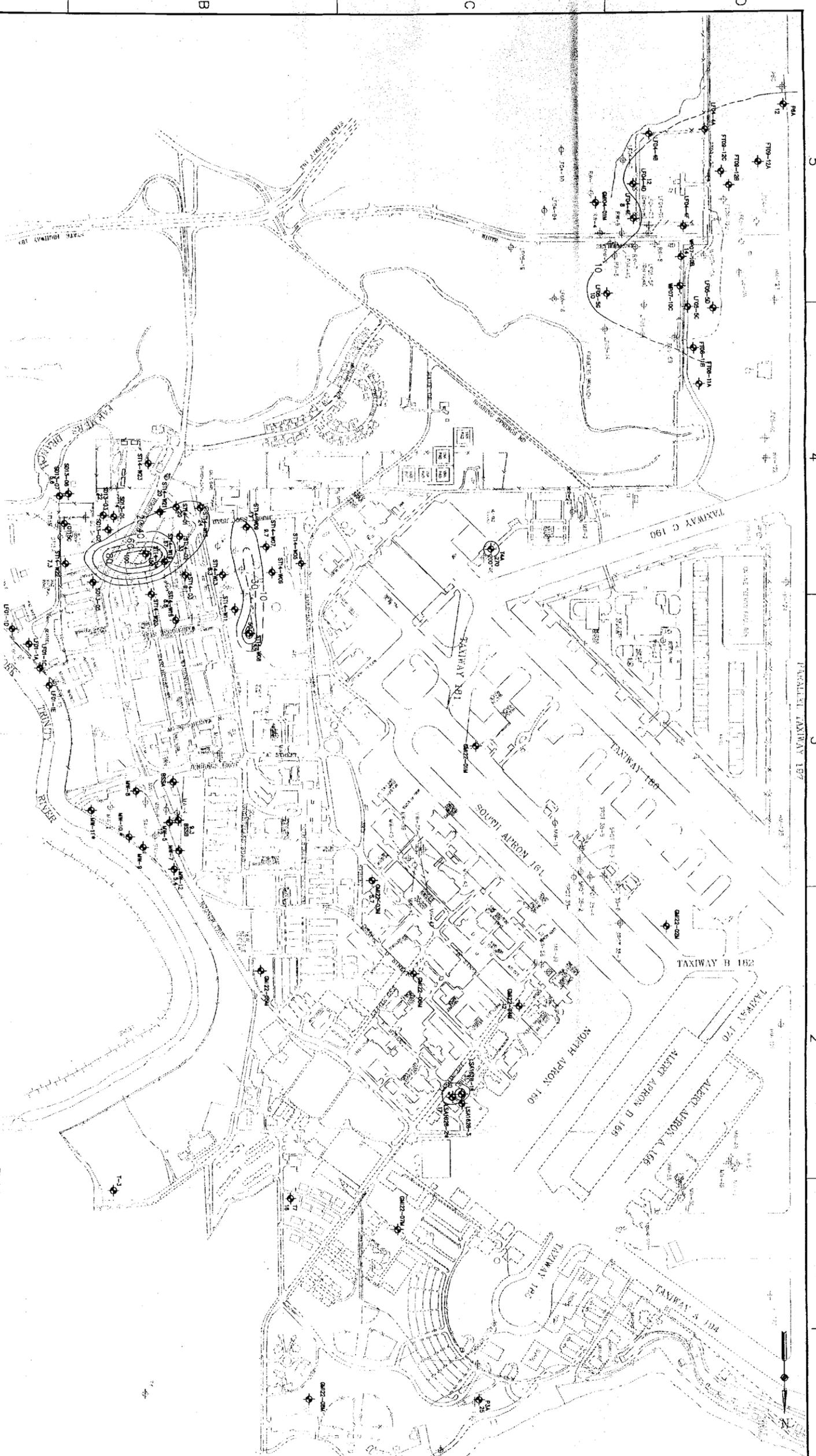
- LEGEND**
- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
 - ⊕ EXISTING MONITORING WELL
 - 100' CONCENTRATION CONTOUR
 - 100' ESTIMATED CONCENTRATION CONTOUR

- NOTE**
1. LOCATIONS ARE NOT SURVEYED AND ARE CONSIDERED APPROXIMATE.
 2. ALL CONCENTRATIONS MEASURED IN ug/L.
 3. WELL MW-10 WAS NOT SAMPLED FOR QUARTER 1.
 4. * DENOTES WELLS WITH MEASURABLE FREE PRODUCT.



Symbol	Description	Date	Approved

DESIGNED BY NAVY AIR STATION FORT WORTH RFB FORT WORTH TEXAS	
TOTAL BTEX DETECTED IN GROUND WATER - 1st QUARTER	
Drawn by CAD	Scale AS SHOWN
Checked by OSS	Sheet number 3-18
Reviewed by JAF	Project No. 11-3517-2301
Date 07 MAR 98	File Name BTEXWQ1.dwg
AFCEE	Sheet 1 of 1



LEGEND

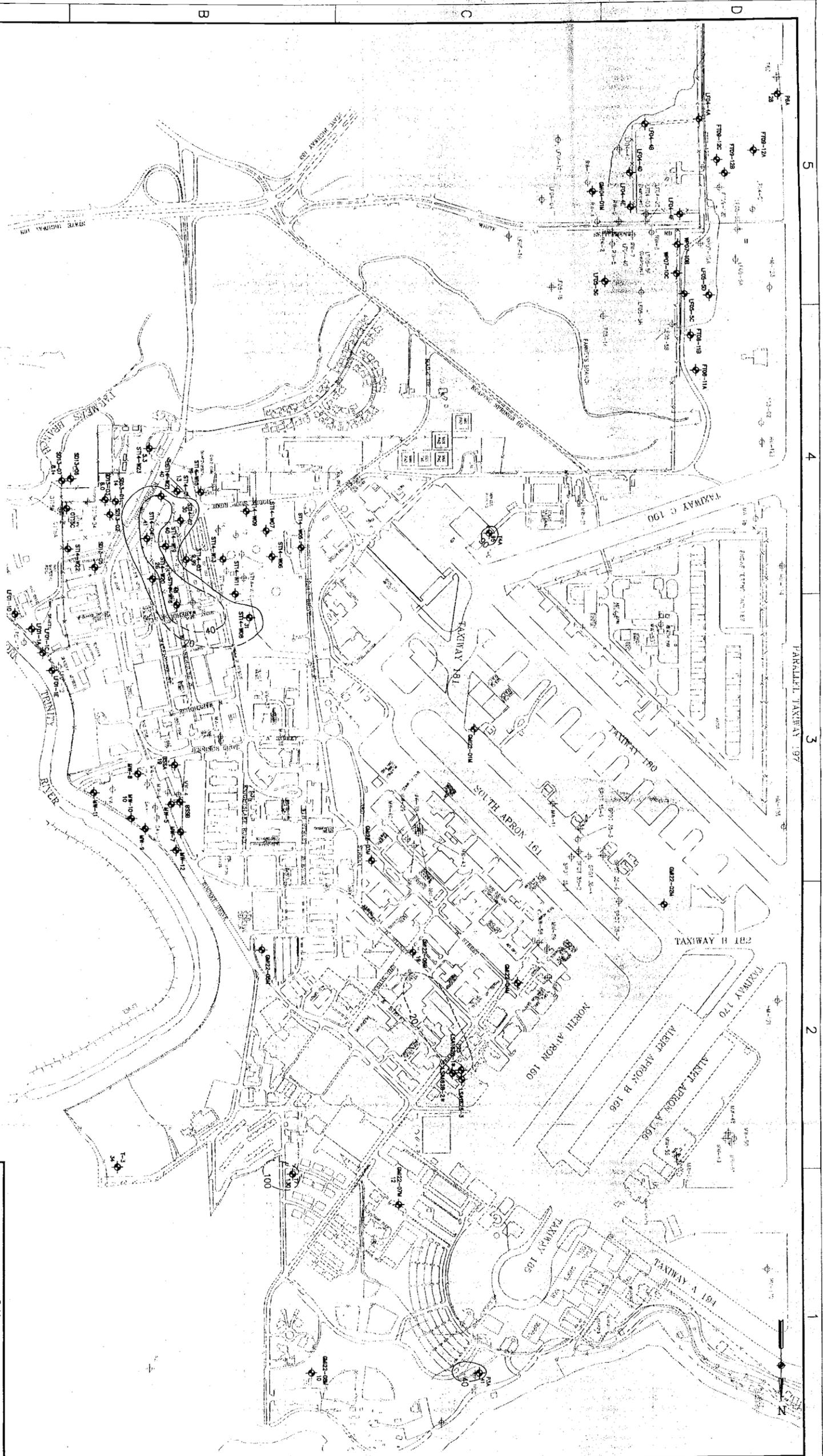
- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
- EXISTING MONITORING WELL
- 100 CONCENTRATION CONTOUR
- - - 100 ESTIMATED CONCENTRATION CONTOUR

NOTE

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2. ALL CONCENTRATIONS MEASURED IN UG/L.
3. * DENOTES WELLS WITH MEASURABLE FREE PRODUCT



<p>DESIGNED BY: [Signature]</p> <p>DRAWN BY: CAD</p> <p>CHECKED BY: OSS</p> <p>REVIEWED BY: JRF</p> <p>DATE: 30 SEPT 95</p> <p>PROJECT NO: 11-3517-3201</p> <p>SHEET NUMBER: 3-20</p> <p>FILE NAME: 14204.dwg</p> <p>DATE: 14204.dwg</p> <p>SHEET 1 OF 1</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>APPROVED</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DESCRIPTION	DATE	APPROVED				
NO.	DESCRIPTION	DATE	APPROVED						
<p> LAW ENGINEERING AND ENVIRONMENTAL SERVICES BRANCH KENNESAW, GEORGIA </p>	<p> NAVAL AIR STATION FORT WORTH JOINT RESERVE BASE FORT WORTH, TEXAS </p>								
<p>LEAD DETECTED IN</p> <p>GROUND WATER - 1st QUARTER</p> <p>BASE-WIDE QUARTERLY GROUND-WATER MONITORING</p>									



LEGEND

- ◆ MONITORING WELLS SELECTED FOR QUARTERLY SAMPLING
- ⊕ EXISTING MONITORING WELL
- 100 CONCENTRATION CONTOUR
- 1000 ESTIMATED CONCENTRATION CONTOUR

NOTE

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2. ALL CONCENTRATIONS MEASURED IN ug/L
3. * DENOTES WELLS WITH MEASURABLE FREE PRODUCT



Symbol	Description	Date	Approved

Designed by: _____
 Drawn by: CAD
 Credited by: DSS
 Reviewed by: JFC
 Date: 30 SEPT 195

LEAD DETECTED IN
GROUND WATER - 2ND QUARTER
 NAVAL AIR STATION
 FORT WORTH JOINT RESERVE BASE
 FORT WORTH, TEXAS

Project No. 11-3917-3201
 Sheet 1 of 1

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE