DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 49TH WING (ACC)
HOLLOMAN AIR FORCE BASE, NEW MEXICO

ENTERED

2012 JUL 16 2012

A. David Budak
Deputy Base Civil Engineer
550 Tabosa Avenue
Holloman AFB NM 88330-8458

New Mexico Environment Department
Attn: Mr. John Kieling, Chief
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe NM 87105-6303

Dear New Mexico Environment Department

Holloman Air Force Base has prepared this well abandonment plan for monitoring wells located at the following seven sites that have been approved by the New Mexico Environment Department (NMED) as Corrective Action Complete and have accepted the request for Class 3 Permit Modification:

- SWMU 105 – Golf Course Landfill
- SWMU 108 – Mobility Support Squadron (MOBSS) Landfill
- SWMU 115 – West Area Landfill No. 1
- SWMU 116 – West Area Landfill No. 2
- SWMU 130 – Leaking Underground Storage Tank and Taxiway 4 Tank 28 JP-4 Underground Waste Tank
- AOC N – Military Gas Station
- AOC P – Building 301 Fuel Tank Leaks

Well Abandonment

The abandonment of all wells will be conducted in a manner consistent with current NMED technical guidance (NMED, Monitoring Well Guidelines, Revision 1.1, March 2011). Table 1 lists the wells to be abandoned and pertinent well details that will be used for conducting the abandonment. Figure 1 shows the locations of the seven sites at HAFB where wells are to be abandoned and Figures 2 through 8 show the locations of the wells at the seven sites. All of the wells to be abandoned are relatively shallow (less than 25 ft depth), intersect only the water table aquifer zone and are non-artesian.

The following steps summarize the actions that will be conducted to abandon the wells in accordance with current NMED guidance:

1) Abandonment will not proceed until approval has been obtained from NMED.

2) The well shroud (i.e., protective casing), surface pad and protective posts (i.e., bollards) will be removed.

3) If not known, the total well depth will be measured and recorded prior to abandonment.

4) Because the wells are constructed of small diameter PVC casing and screen (e.g., 2-inch diameter) and have been grouted across the casing interval (ground surface to approximately top of screen), experience indicates that attempts to pull the casing will result in broken well pipe and partial removal. This consequence often results in caving and partial filling of the pipe, thus hampering filling with grout from the bottom up. Therefore, it is proposed that all shallow wells that intersect only the water table and which have grouted casing be abandoned by internal filling from the bottom up to ground surface using an appropriate sealing material (e.g., neat cement grout; bentonite-based plugging material).

5) The abandonment procedure will be documented for each well and written notification of all abandoned wells will be submitted to NMED.

The well abandonment will be scheduled as soon as practical following approval of this abandonment plan by NMED.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. Brent Hunt of our Asset Management Flight at (575) 572-5395.

Sincerely

20120716

A. DAVID BUDAK, GS-14, DAFC

cc:

Mr. David Strasser
Hazardous Waste Bureau
5500 San Antonio Dr. NE
Albuquerque NM 87109

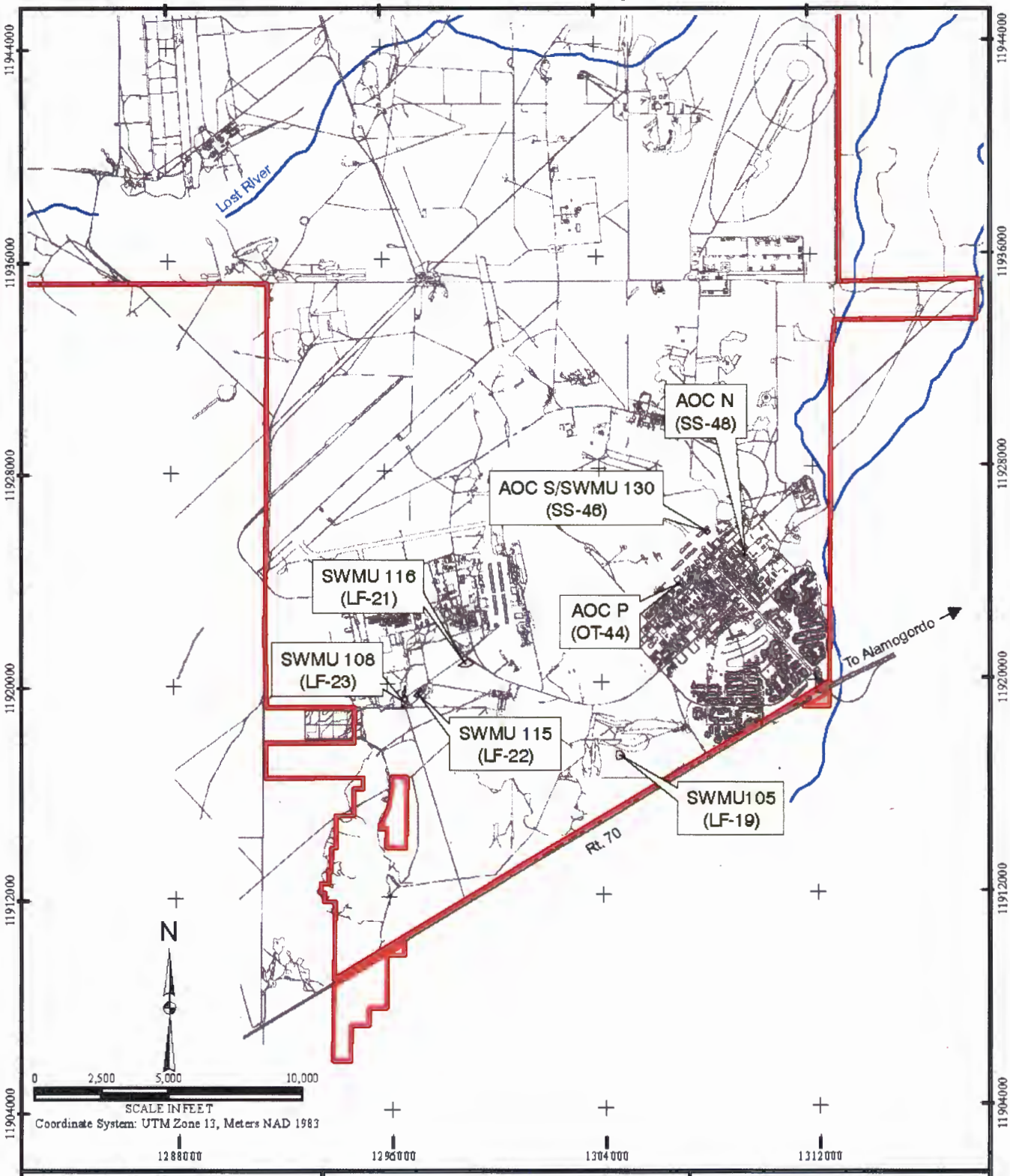
Mr. Will Moats
Hazardous Waste Bureau
5500 San Antonio Dr. NE
Albuquerque NM 87109

Mr. Chuck Hendrickson
USEPA, Region 6 (6PD-F)
1445 Ross Ave., Ste 1200
Dallas TX 75202

Table 1
Details of Wells to be Abandoned
Holloman Air Force Base, New Mexico

Site	Well ID	Date Well Installed	Well Diameter, inches	Total Well Depth, ft BGS
SWMU 105 (LF-19)	MW-19-01	Sep-91	2	15
	MW-19-02	Aug-91	2	13
	MW-19-03	Aug-91	2	17
SWMU 108 (LF-23)	MW-23-01	Sep-91	2	14.6
	MW-23-02	Sep-91	2	14
	MW-23-03	Sep-91	2	14
	MW-23-04	Sep-91	2	14.1
SWMU 115 (LF-22)	MW-22-01	Aug-91	2	15.9
	MW-22-02	Aug-91	2	16.5
	MW-22-03	Aug-91	2	19
	MW-22-04	Aug-91	2	18.5
SWMU 116 (LF-21)	MW-21-01	Aug-91	2	14
	MW-21-02	Aug-91	2	14
	MW-21-03	Aug-91	2	14
	MW-21-04	Aug-91	2	14
SWMU 130 (SS-46)	MW-46-01	TBD	TBD	TBD
	MW-46-02	TBD	TBD	TBD
	MW-46-03	TBD	TBD	TBD
AOC N (SS-48)	S55-MW-1	TBD	TBD	TBD
	S55-MW-2	TBD	TBD	TBD
	S55-MW-3	TBD	TBD	TBD
	S55-MW-4	TBD	TBD	TBD
	S55-MW-5	TBD	TBD	TBD
	S55-MW-6	TBD	TBD	TBD
	S55-MW-7	TBD	TBD	TBD
AOC P (OT-44)	50-W1	Sep-84	2	19
	MW-1	Mar-88	2	18
	MW-2	Mar-88	2	18
	MW-3	Apr-88	2	17.5
	MW-4	Mar-88	2	20.5
	MW-6	Jan-89	2	19

BGS - below ground surface; TBD - to be determined.



File X:\AFC002\Holloman_AFB\TO37\Maps\SOB_7_Sites\site_location.mxd
Project: TT3001.02.01
Revised: 04/04/08 TB
Map Source: Holloman AFB

Legend

- Holloman AFB Boundary
- Building/Structure
- Operable Unit Boundary (Approx.)

Figure 1
Site Location Map
Holloman AFB

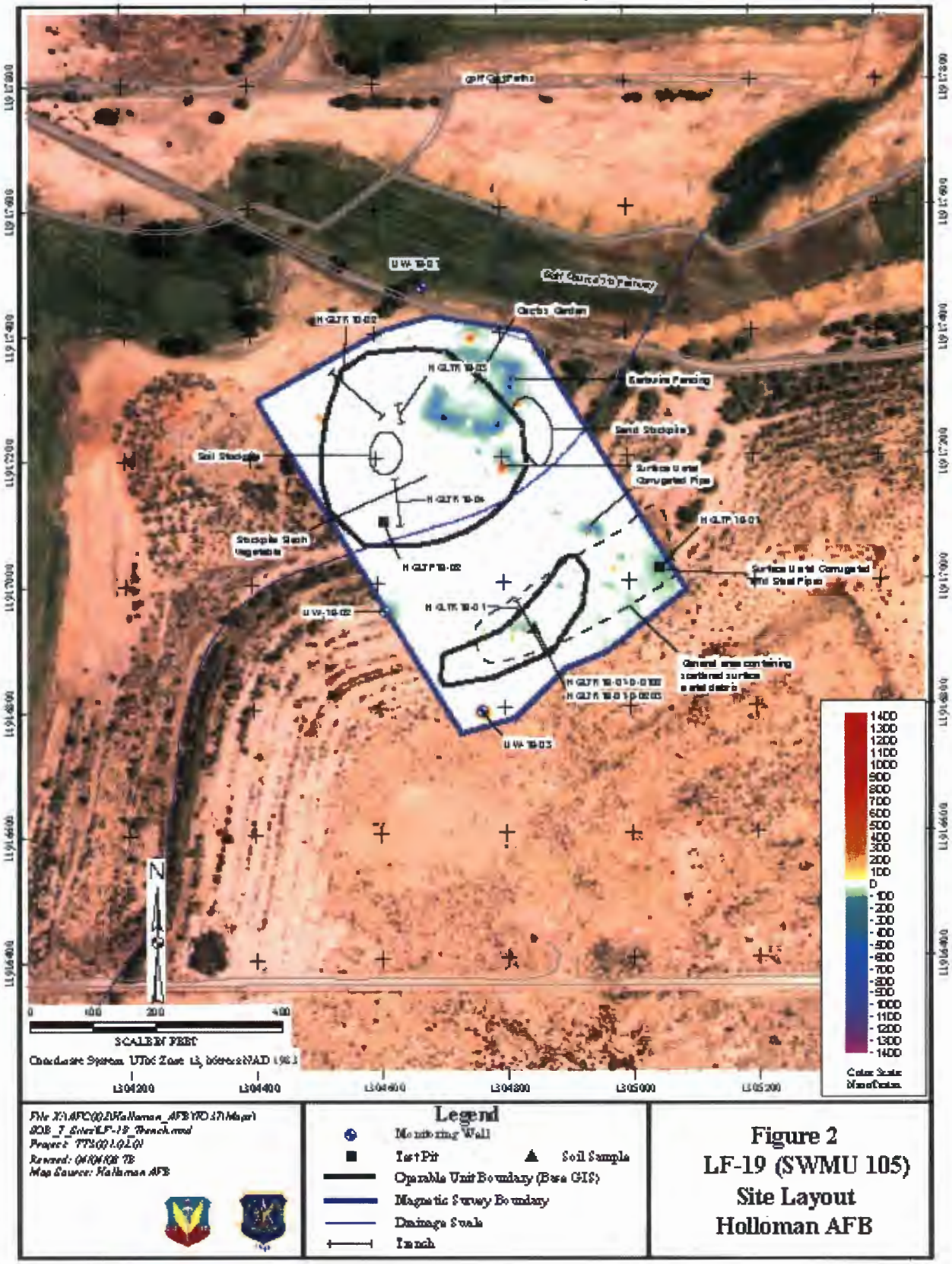
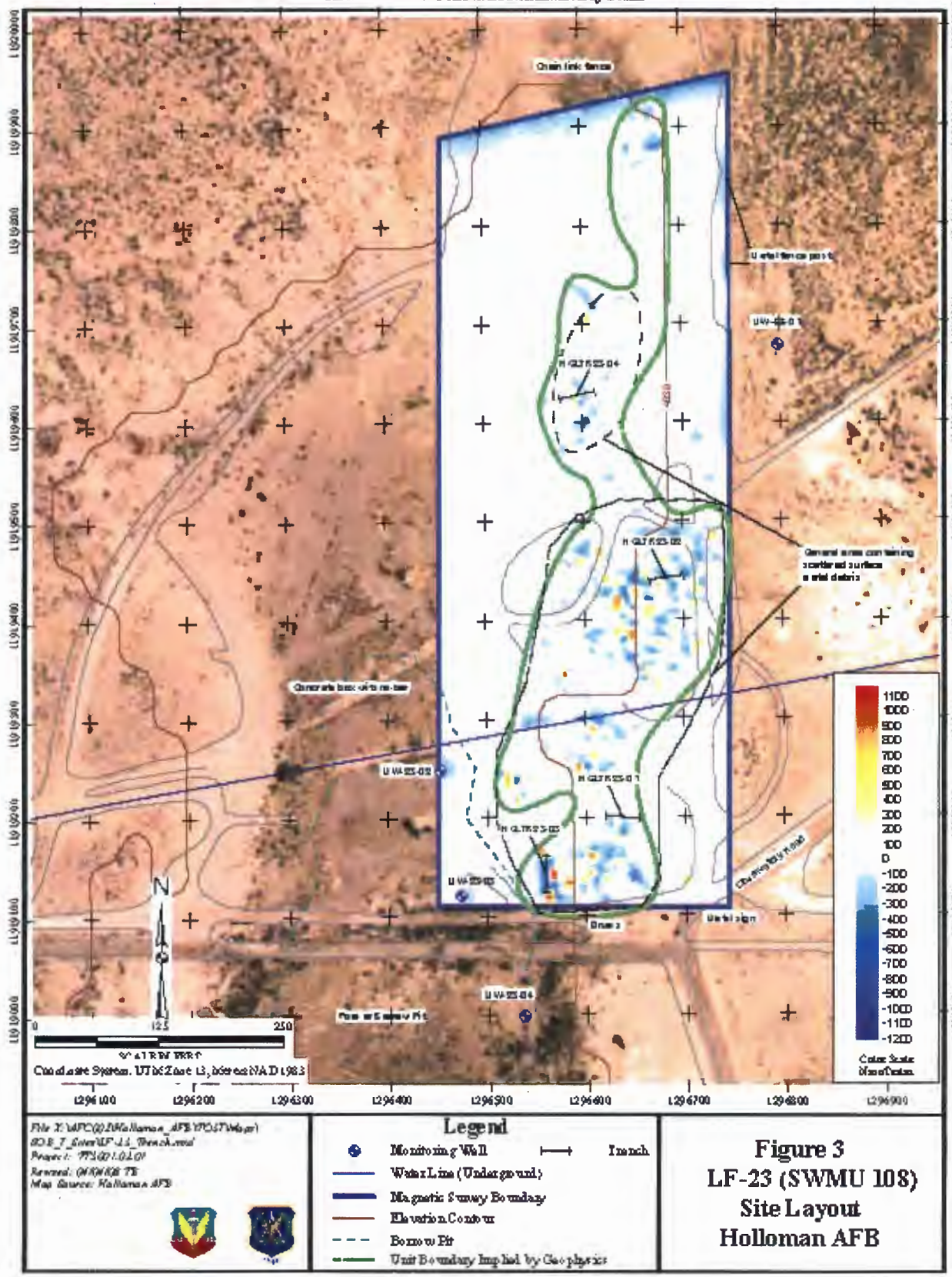


Figure 2
LF-19 (SWMU 105)
Site Layout
Holloman AFB


Legend
Monitoring Well
1 inch
Water Line (Underground)
Magnetic Survey Boundary
Elevation Contour
Borrow Pit
Unit Boundary Implied by Geophysics
Figure 3
LF-23 (SWMU 108)
Site Layout
Holloman AFB

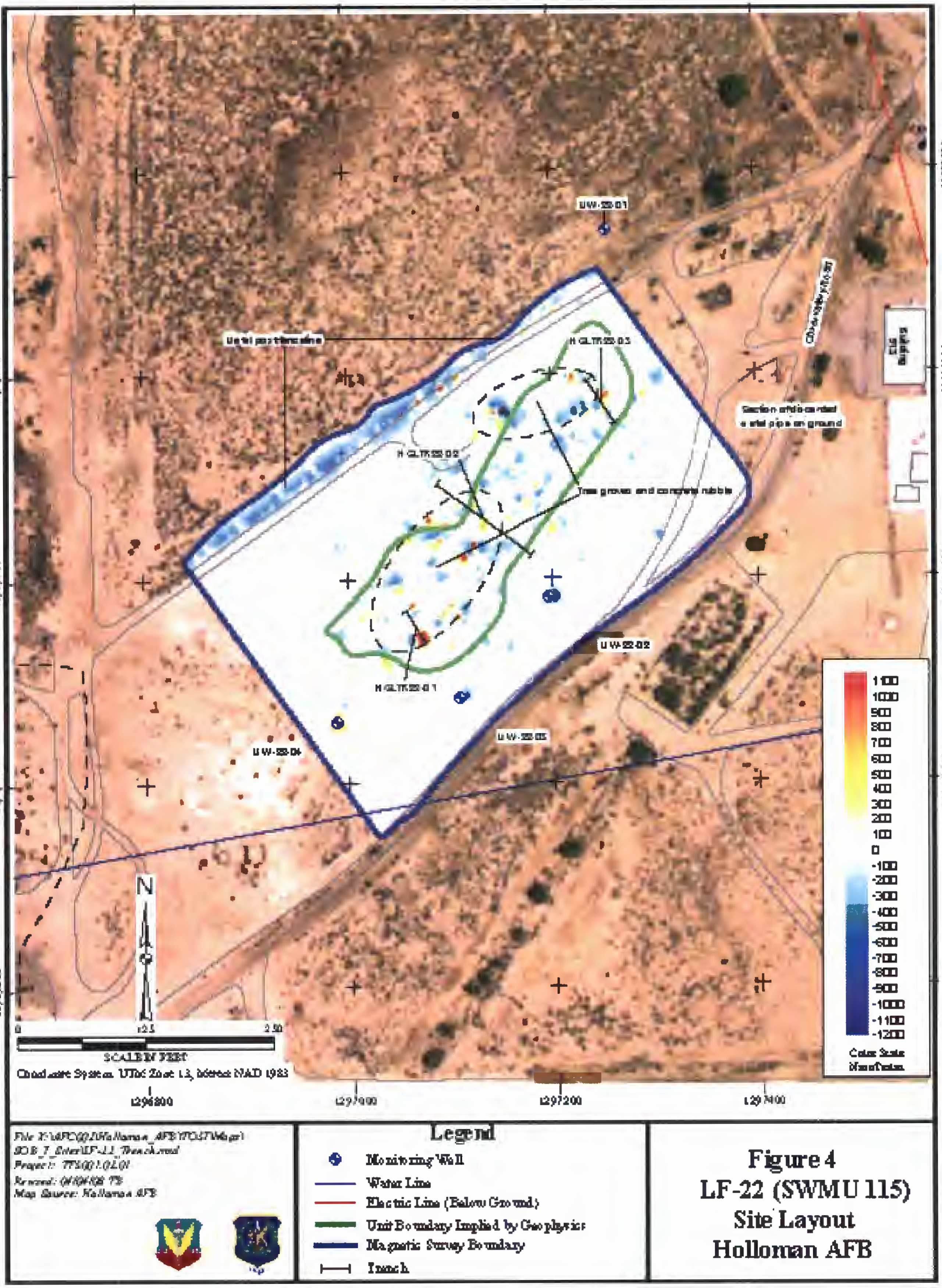


Figure 4
LF-22 (SWMU 115)
Site Layout
Holloman AFB

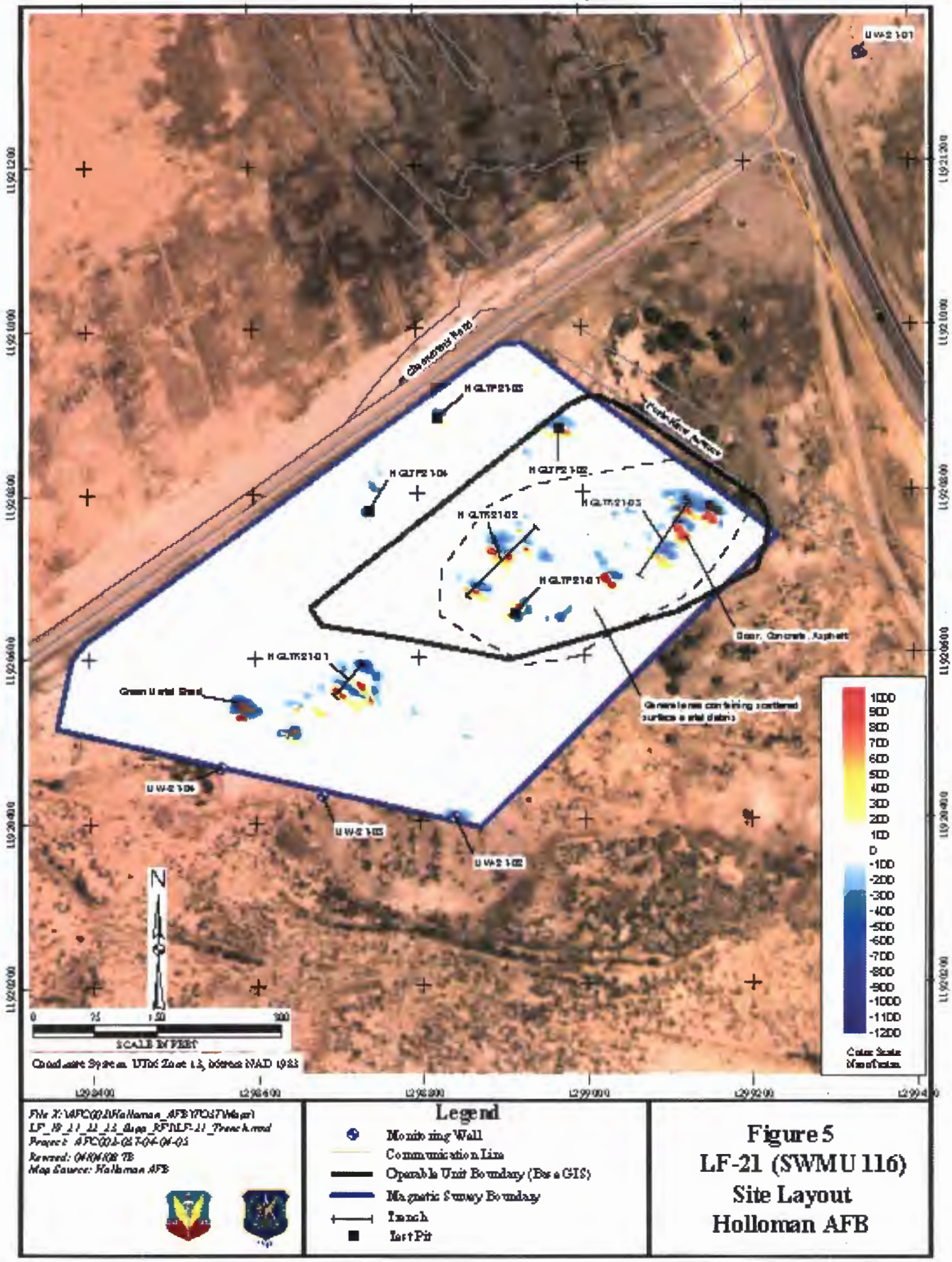

Legend
Monitoring Well
Communication Line
Operable Unit Boundary (Base GIS)
Magnetic Survey Boundary
Trench
Test Pit
Figure 5
LF-21 (SWMU 116)
Site Layout
Holloman AFB

Figure 6
SS-46
(SWMU 130)
Site Layout
Holloman AFB

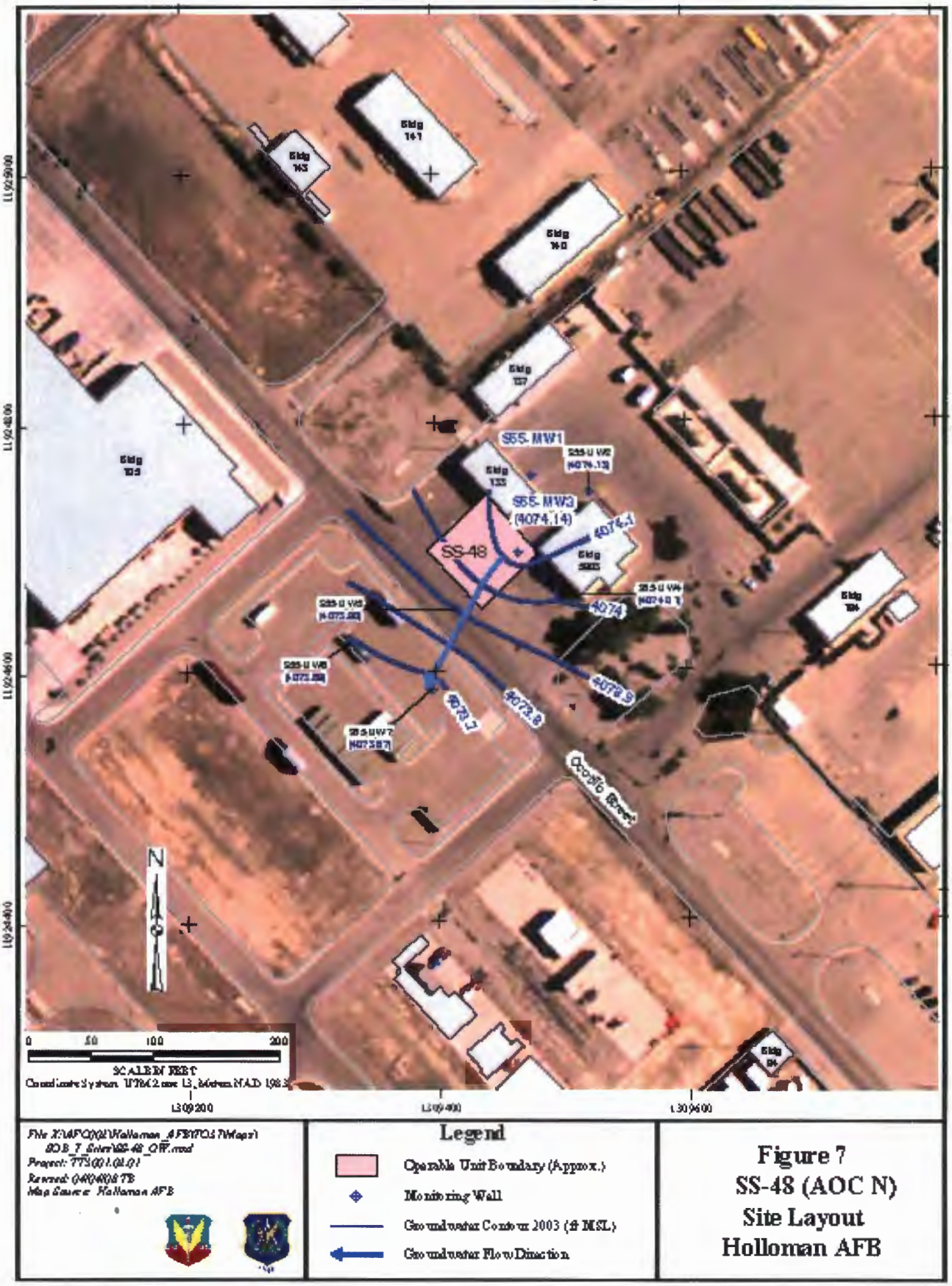
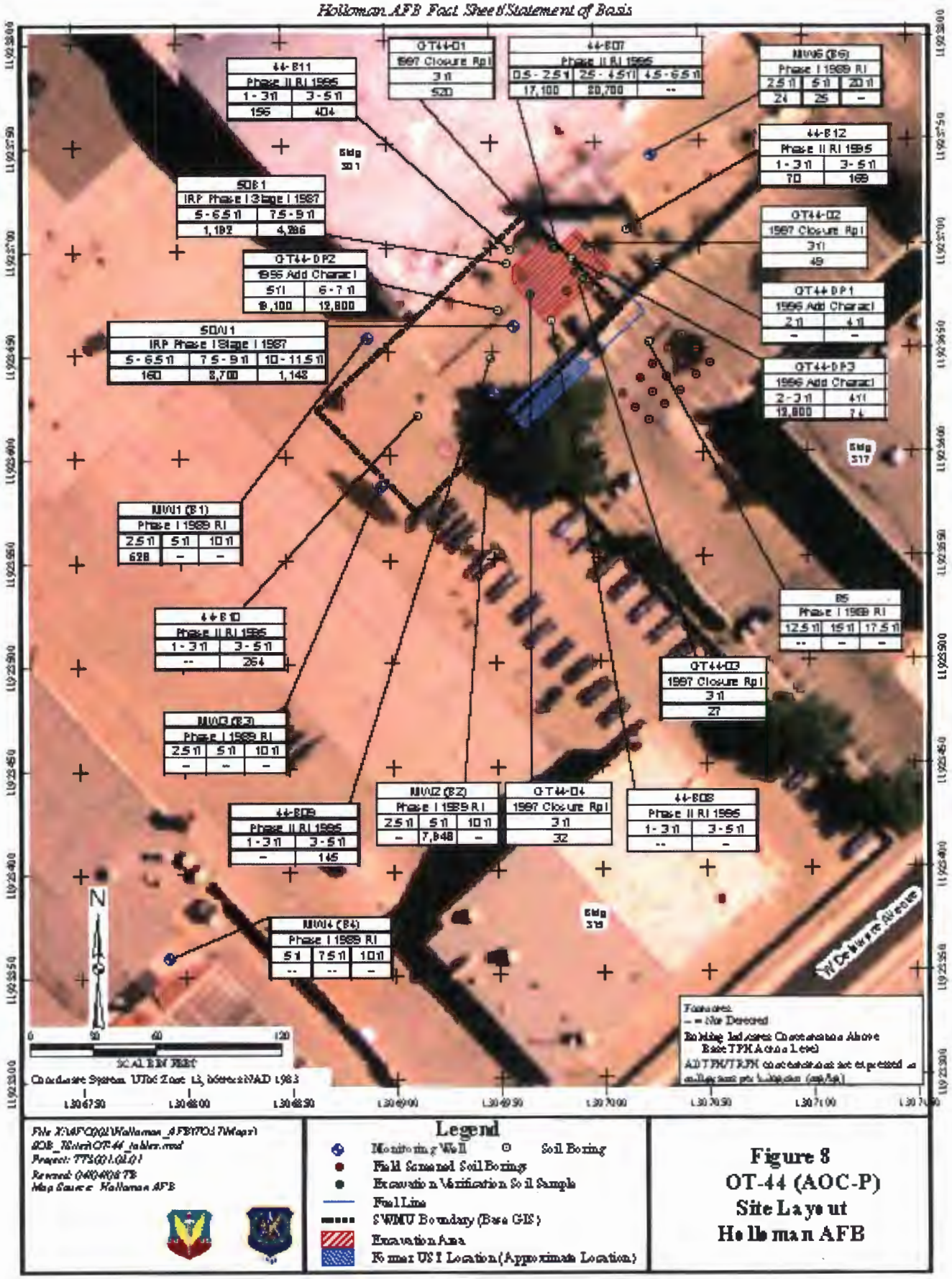


Figure 7
SS-48 (AOC N)
Site Layout
Holloman AFB


44-B11
Phase II RI 1995
1 - 3 ft | 3 - 5 ft
195 | 404
OT44-01
1997 Closure Rpt
3 ft
520
44-B07
Phase II RI 1995
0.5 - 2.5 ft | 2.5 - 4.5 ft | 4.5 - 6.5 ft
17,100 | 20,700 | --
MW6 (B5)
Phase I 1989 RI
2.5 ft | 5 ft | 20 ft
24 | 25 | --
44-B12
Phase II RI 1995
1 - 3 ft | 3 - 5 ft
70 | 169
SDB1
IRP Phase I Stage I 1987
5 - 6.5 ft | 7.5 - 9 ft
1,192 | 4,286
OT44-DP2
1996 Add Charact
5 ft | 6 - 7 ft
9,100 | 12,800
OT44-02
1997 Closure Rpt
3 ft
49
OT44-DP1
1996 Add Charact
2 ft | 4 ft
- | -
OT44-DP3
1996 Add Charact
2 - 3 ft | 4 ft
12,800 | 74
SDA1
IRP Phase I Stage I 1987
5 - 6.5 ft | 7.5 - 9 ft | 10 - 11.5 ft
160 | 8,700 | 1,148
Bldg 317
MW1 (B1)
Phase I 1989 RI
2.5 ft | 5 ft | 10 ft
628 | - | -
B5
Phase I 1989 RI
12.5 ft	15 ft	17.5 ft
44-B10
Phase II RI 1995
1 - 3 ft | 3 - 5 ft
-- | 264
OT44-03
1997 Closure Rpt
3 ft
27
MW3 (B3)
Phase I 1989 RI
2.5 ft | 5 ft | 10 ft
- | - | -
MW2 (B2)
Phase I 1989 RI
2.5 ft | 5 ft | 10 ft
- | 7,848 | -
OT44-04
1997 Closure Rpt
3 ft
32
44-B08
Phase II RI 1995
1 - 3 ft	3 - 5 ft
44-B09
Phase II RI 1995
1 - 3 ft | 3 - 5 ft
- | 145
Bldg 318
MW4 (B4)
Phase I 1989 RI
5 ft	7.5 ft	10 ft
W Delaware Avenue
N
0 30 60 120
SCALE IN FEET
Coordinate System: UTM Zone 13, Meters, NAD 1983
L3046750 L3046800 L3046850 L3046900 L3046950 L3047000 L3047050 L3047100 L3047150
Features
-- = Not Detected
Bolding Indicates Concentration Above Base TPH Action Level
ADDITIONAL concentrations not expected to influence remediation (mg/kg)
File: X:\AFCEE\Holloman_AFB\TOs 7\Maps\
EDR_Tables\OT44_tables.mxd
Project: TTSQ01.QL0
Revised: 04/04/06 TS
Map Source: Holloman AFB
Legend
Monitoring Well
Soil Boring
Field Screened Soil Boring
Excavation Verification Soil Sample
Fuel Line
SWMU Boundary (Base GIS)
Excavation Area
Former UST Location (Approximate Location)
Figure 8
OT-44 (AOC-P)
Site Layout
Holloman AFB