UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OSC REPORT

EMERGENCY REMOVAL ACTION

Payano Salvage Yard
Valencia County
Los Lunas, New Mexico

Prepared By:

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EPA Region Six

August 10, 1990

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I. SUMMARY OF EVENTS

A. Location of Hazardous Release:

A release of Polychlorinated Biphenyls (PCBs) was documented in the soils and nearby surface water. The PCBs existed over the entire property, boundary to boundary, at levels in excess of the cleanup level of ten (10) parts per million (ppm). While a release has been documented to the nearby surface water sediments (Peralta Drain), the levels were below those considered an immediate threat to the local human health and environment.

The hazardous release is located at 102 Edeal Road, Los Lunas, Valencia County, New Mexico. This address is approximately 1.0 mile south of the Edeal Road and Highway 49 intersection (Attachment A1). The Village of Los Lunas (population = 3625), is approximately 25 miles south of Albuquerque, New Mexico.

The release is located in a residential area, immediately adjacent to the primary roadway (Edeal) that serves this community. The area defined as the "site" is bounded as such: Edeal Road (Valencia County) immediately along the entire East border; State-owned property immediately adjacent to the South and West borders, with a man-made creek along the West and controlled irrigation ditch to the South; and a livestock pasture (private property) immediately adjacent to the North (Attachment B1 and B2).

B. Cause of Release:

As part of normal salvage operations, the operator purchased salvageable materials which included transformers, capacitors and 55-gallon drums filled with waste oils. Upon placement of the drums on-site, several of the transformers and capacitors leaked fluids that contained high levels of PCBs, onto the soil. Additionally, the operator reportedly utilized some of the fluids as a fuel for enhancing the burning of insulated copper wire.

It was determined that the areas of highest concentration coincided with those areas defined as "burn" areas and an area directly related to the household septic system (drain field). While the operator claims no knowledge of how the extensive contamination (to depths of 5.5 ft) in the drain field occurred, post-excavation sampling indicated a very definite pattern of migration. The exact cause of this specific release is unconfirmed at this time.

It appears that the migration of PCBs may have been caused by the existence of PCBs in the septic system, thus encouraging the depth contamination. Evidence gathered (sample data) confirmed PCBs in the concrete septic tank and drain lines. This theory is

supported with significant amounts of data and a pattern of contamination that indicated "clean" at upper levels, then "hot" at much lower levels. This pattern was not found anywhere else except the drain field, and the highest levels mirrored the drain line pattern. This theory is deemed the most probable cause for a release at this depth.

C. Initial Situation:

The area described as the "site" (Section I-A) is actually comprised of two property owners. The northern third of the site is owned by Mr. Ben Smith. The southern two-thirds of the site is currently owned by Mrs. Margaret Pagano (OWNER). The Smith portion was leased to the Pagano's for many years and utilized for salvage operations.

The Pagano Salvage Yard was established in the early 1960s by Mr. Carmen Pagano. The company purchased scrap from several federal facilities including White Sands Missile Range, Kirkland Air Force Base, Rocky Mountain Arsenal and Sandia National Laboratories (SNL). After November 2, 1982, and the death of Mr. Pagano, the salvage operations were continued by the stepson, Mr. David Peluchette (OPERATOR).

During mid-1983, the operator purchased a "lot" of salvage from SNL that contained several transformers and capacitors. Several of these containers leaked fluids containing PCBs onto the soils of the site.

On September 10, 1984, a Resource Conservation and Recovery Act site inspection was conducted by the New Mexico Environmental Improvement Division (NMEID). Levels of PCBs in excess of the EPA's Action Level of 50 ppm, were identified at that time.

After the operator notified SNL of his concern about receiving the containers and the related contamination, SNL responded by removing the capacitors on June 18, 1985, and also sampling drums that allegedly were purchased in a lot from SNL. The analysis confirmed PCBs in the drums as well. The drums were removed from the site at a later date by SNL.

Following this action, the Superfund office revisited the site to conduct a variety of assessment-type inspections. Starting in September of 1985, the Field Investigative Team and Technical Assistance Team (TAT) have shared duties sampling, analyzing, ranking for inclusion on the National Priorities List (NPL) and eventually assessing the immediate threat to the public health, welfare and/or environment.

The site scored sufficiently to be proposed for inclusion on the NPL in June, 1988. The site was promulgated to the NPL in October, 1989. Prior to promulgation, United States Environmental Protection Agency (EPA) Emergency Response Branch (ERB) conducted a series of site assessments to determine the immediate threat posed by the site.

On March 23, 1989, the Regional Administrator approved ERB's recommendation for a Time-Critical Emergency Removal Action at this NPL site. Following enforcement activities (See Section I-D), ERB initiated an on-site response on June 20, 1989.

D. Efforts to Obtain Response by Responsible Parties:

A Potentially Responsible Party (PRP) search was conducted which identified seven PRPs. On March 29, 1989, notice letters were sent to the PRPs allowing them the opportunity to participate in the removal action. The PRPs declined to undertake the removal action.

On June 8 1989, EPA issued a CERCLA §106 Unilateral Administrative Order to the PRPs, requiring them to perform the removal. Although none of the PRPs agreed to perform the removal, some expressed an interest in funding the action. Consequently, a preliminary agreement was negotiated whereby the EPA would conduct the cleanup and the PRPs would eventually reimburse the EPA for total project costs.

Negotiations continue between the PRPs and Regional Counsel at the present time. U.S. Department of Justice has already assigned an attorney to the case, and will pursue the potential for total cost recovery.

E. Organization of Response:

While the NMEID did not actively participate in any on-site activity, they remained updated on the status of the removal. The primary participants for this response, and assigned duties are listed below:

1. USEPA/ERB - Emergency Response Branch
   - Gary W. Guerra; On-Scene Coordinator (OSC)

2. USEPA/ERT - Environmental Response Team
   - Rodney Turpin; Site Safety Officer & Inspector
   - William A. Coakley; Quality Assurance Officer
   - Raj Singhvi; Laboratory Coordinator
   - George Prince; Geologist, well installation

3. FEMA - Federal Emergency Management Agency
- Barry Hansen; Project Manager, relocation

4. ERCS - Emergency Response Contracting Services
- LeRoy Cassidey; Response Manager

5. TAT - Technical Assistance Team
- Matthew Kaarlela; Project Manager

F. Resources Committed:

On March 23, 1989, the Regional Administrator authorized $1,275,750 for the ERCS and $1,690,000 for the entire project. As the project progressed, it was determined that additional funding would be necessary to complete the project, and a second Action Memorandum requesting "Exemption From the $2 Million Statutory Ceiling and Ceiling Increase" was developed for Headquarters approval (OSWER).

The exemption and increase were approved December 12, 1989, thus authorizing a new ERCS ceiling of $2.2 million and a total project ceiling of $2.968 million. The OSC increased the ERCS ceiling to $1.95 million in order to conserve funds. This conservation of funds committed to a total project ceiling of $2.472 million instead of the authorized limit of $2.968 million. The following figures are the best estimates, as of the final printing date of this report:

	Committed	Actual	(%)
ERCS	$1,950,000	$1,841,000	(94)
TAT	$ 290,000	$ 280,000	(97)
ERT & FEMA	$ 132,000	$ 108,000	(82)
EPA	$ 100,000	$ 99,000	(99)
Total	$2,472,000	$2,328,000	(94)

G. Effect on Natural Resources:

To date, no Federal or State, trustee reports or assessments exist relating to injury or potential injury to the local natural resources. It is the OSC's assessment, that the local natural resources were not effected (i.e. - mineral deposits & waterpower) due to this release.

H. Threat Abatement Action Taken:

Primary Objective:

As originally proposed, the primary objective of this removal action was to remove the source of contamination. Assuming that this proposed abatement action could be achieved at the cleanup level selected, ten (10) parts per million (ppm), the threats posed by this site would be eliminated and thus requiring minimal EPA remedial activity.

Phase Activity:

Due to many inherent physical, contractual and logistical limitations, the work was conducted in "phases", such that multiple tasks could be conducted simultaneously. "Phase" activity was conducted in the following basic order:

1) Excavation:

- Site organized into "Sections" and "grids";

- "Sections" refer to arbitrary labelling of entire site; while "grids" refer the 20'x20' square-shaped areas that comprised the respective sections; both were utilized to organize and track the excavation and sampling processes;

- In some instances, the grids were "quadded" into four smaller grids of 10'x10', in an effort to provide a more defined quantification of contaminants and to ensure an effective cleanup;

- Direction for excavation was defined by Section, grid and quad where relevant.

NOTE: See Attachments C1 & D1 for detail on excavation grids.

Also attached is a 3-dimensional (simulated) drawing of the Base Map (Attachment E1); this provides a perspective of the site sampling structure and of the progression of phase activity.

2) Sampling and Analysis:

- Utilized a computer-designed sampling plan that incorporated the use of 20'x20' squares to provide an organized method for tracking the progress of the project and provide a statistically valid method for analyzing the samples representing the site soils (Attachment D1);

- EPA Environmental Response Team (ERT) provided an on-site, 24-hour, laboratory complete with crew at the OSC's request; the request was preceded by QA/QC problems at a contracted laboratory;

- Samples could be immediately collected and analyzed in the event that difficulties arose in the process.

3) Quality Assurance/Quality Control (QA/QC):

- ERT provided both on-site and off-site "checking" of data packages in order to ensure that valid data would be available prior to OSC's evaluation.

4) Evaluation:

- OSC evaluates all of QA/QC'd data prior to defining a section, grid or quad "clean."

- Consideration was given to False/Negative Limitations and the probability that values near 10 ppm would statistically "average out."

NOTE: All sample chain-of-custody records, raw data packages, QA/QC packages, Validation Packages, OSC's Data Summary/Evaluation sheets and OSC/Site log books, are available in the Removal File.

Initial Phases:

The entire site was excavated to a depth of 10 inches below original grade. Analytical results from Phase One of sampling indicated that approximately 33% of the surface area remained in excess of 10 ppm.

Work continued through Phase Six at which time it was obvious that the existing funds approved would not suffice for the anticipated transportation and disposal requirements. At this time all project personnel were temporarily demobilized until funding could be procured by the OSC. The rationale to demobilize was based on findings that the depth contamination, that had already extended to over 2.5 feet in selected quads, may extend even further.

The OSC's Data Summary/Evaluation indicated a digressive quantitative progression (high to low PCB concentrations). As it appeared that only a few stubborn grids and quads remained to be "cleaned", significant changes in the progression were defined in selected grids. The grids in question all were located within and beneath the single residential septic system. The area would henceforth be referred to as the "drain field", due to its function.

Just prior to demobilization of the entire crew, depth samples (cores) were collected in "clean" and "hot" areas. As expected, depth contamination was confirmed well below the Phase Six level (2.5 feet below original grade). The extent of this migration could not be defined specifically at this time, but the OSC suspected that the drain field would ultimately be confirmed as the location of the remainder of the PCB contaminated soils.

Second Phases:

When additional funding was approved through EPA Headquarters, project activity resumed without incident. Phase Seven activity included confirmational sampling and extensive core sampling in areas strongly suspected of contamination. The resultant data confirmed that extensive contamination, above the cleanup level, existed at depths nearing six feet below the original grade. All of the contamination followed the direct path of drain lines and remained within the porous drain field material. Phase activity continued as scheduled.

Phases Eight through Thirteen did not produce a massive number of samples (as in 1-6), but did create some inherent time delays due to new analytical arrangements. Since the ERT Lab could not be set up on-site in a time and cost effective manner, samples were mailed directly to the ERT Lab in Edison, New Jersey. Upon evaluation, the grids were defined as "clean" and restoration activities followed.

NOTE: A copy of the ERT's final report (QA/QC'd) on all samples analyzed is provided with this OSC report.

A summary of the QA/QC'd data for all thirteen phases is attached; see Attachment F1 (Soil Data Summary).

As noted earlier in this section, a 3-dimensional version of each of the "phases" is attached; phase 13 is not shown as no further excavation was required.

Restoration Activity:

Approximately 5100 tons of soil and debris were disposed of off-site. Approximately 4900 cubic yards of native soil was restored to as near original condition as possible. Truckloads of material were off-loaded at the site in dump trucks of variable sizes. The TAT and ERCS verified each load to confirm quantities and associated costs. Various ERCS subcontractors completed all restoration activities per the OSC's instruction.

During the process of excavation, several utilities were disrupted or completely removed. All utilities (i.e. - electrical, telephone, water, gas and septic system) were

restored to original working conditions. In addition, personal property that was damaged during the course of this removal (i.e. - fence around yard) was replaced to original conditions as best possible.

Additional Objectives:

The following items were additional project objectives:

1) Compliance, with the multitude of Federal, State, County, and City regulations that affected this site (i.e., LDR, OSHA, DOT);

2) Consistency, with any future remedial action (source removal);

3) Confirmation, of "effectiveness" both during and after the removal (i.e., QA\QC & sampling).

Compliance and consistency were ensured through pre-removal planning and close communication between the EPA and respective parties. A total source removal was consistent with remedial plans for the future.

Confirmation of "effectiveness" was best demonstrated via sampling. All effected media were addressed utilizing a variety of methods. The resultant data has been summarized and attached to this report. The following is a summary of the confirmation or "characterization" sampling that was conducted during the project:

1) Air:

- On-site.....Low-volume personal pumps (OSHA 1910.120)
- Off-site.....High-volume area monitors (PCBs only)

* QA/QC'd data available in Removal file
** see Attachment G1 for Hi-Vol data summary
*** see Attachment G2 for Hi-Vol location map

2) Soil:

- On-site.....Total HSL Metals (Hazardous Substance List) (I1)
  .....Lead (X-Ray Fluorescence - XRF) (HI)
- Off-site.....Full HSL scan (I1)
  .....(PCBs only) (J1)

* QA/QC'd data available in removal file
** see Attachments H1 & I1 & J1 for data summaries
*** see Attachments H2 & I2 & J2 for location maps

Note: The on-site HSL samples were taken at depth (cores) and in the areas that had indicated the greatest potential for contamination. The off-site HSL samples were taken at the surface.

The XRF readings were taken at surface levels, prior to excavation. All of these areas were excavated during the removal.

3) Groundwater:

- On-site.....Residential & monitoring wells (full scan)
- Off-site.....Residential & monitoring wells (full scan)

* ERT installed (5) monitoring wells
** ERT collected and analyzed all well samples
*** QA/QC'd data and maps are available in the ERT report that is attached.

4) Surface Water:

- Off-site.....sediments in adjacent drain (full scan)

* QA/QC'd data available in removal file
** see Attachment J1 (PCBs only) for data summary
*** see Attachment J2 (PCBs only) for location map

All the data gathered confirm that all project objectives were achieved. Evaluation of the data on-site, and the simultaneous phase activity provided for a true challenge of performance for all project personnel. All parties involved played an integral and vital part towards the success of these threat abatement actions.

I. Treatment Methods Pursued and Followed:

In evaluating which treatment method to utilize for this project, several factors were considered. The primary factors evaluated were: a) promotion of an efficient cleanup, b) consistency with the proposed remedial action, and c) appropriateness with respect to any potential threats.

Considering all of the preceding factors, it was determined that landfilling of the contaminated soil and debris would best meet all of these factors, and provide the most cost and time effective method for disposal. A National Variance would be cited as the means by which the soil and debris would be allowed into a landfill under the current Federal Land Disposal Regulations.

The extremely high costs for incineration of all site soils made this option, undesirable. Technical difficulties between the hydrogeological conditions and currently available technologies, (i.e., K-Peg method), proved to be undesirable.

J. Community Relations Activities:

In an effort to establish a solid working relationship with all parties that would potentially be affected during the course of the removal action, the OSC and ERB Community Relations personnel, made personal contact with a variety of groups prior to the removal and continued this contact for the duration of the project. The following is a list of groups contacted, and a brief description of the agreement or understanding between the OSC and respective group:

1. State of New Mexico:

   a. Environmental Improvement Division - this site was originally referred to the EPA via the State; the OSC continues to provide updates.

   b. Middle Rio Grande Conservacy Division - authorized utilization of state-owned land that immediately bounded the site.

   c. Valencia County - authorized utilization of all primary roadways for transportation of project material (hazardous & non-hazardous) to and from the site; authorized temporary restriction of traffic on Edeal Road; provided all construction signs and barriers for restricting traffic; provided several useful maps and blueprints of the state, county and city.

   d. Highway Patrol - provided OSC with recommended safe routes of travel for disposal vehicles; acknowledged potential dangers associated to this site.

2. Village of Los Lunas - acknowledged EPA's efforts and offered any help if necessary.

   a. Police Department - assisted by informing local citizens; assisted in distribution of EPA information flyers.

   b. Fire Department - understood their role in the event of an emergency; OSC reviewed safety aspects of this project.

   c. Library - assisted in distributing EPA information flyers to the general public.

Per request of the OSC, ERB Community Relations personnel prepared a bi-lingual information flyer relative to the site and anticipated actions at the site. EPA personnel went door-to-door to distribute flyers along the roadway that would be most affected (Edeal Road). As the project progressed, the OSC distributed maps of "detour routes" to any vehicles affected by the periodic restriction of access. Overall public interaction was very good.

II. EFFECTIVENESS OF REMOVAL ACTIONS TAKEN BY OTHER PARTIES

Since the entire removal action was conducted by Region Six - ERB, there are no second or third party actions to be evaluated. While the responsible parties, as a whole, declined to participate in the on-site activity, pre-removal negotiations provided for an up-front "agreement" for payment of the entire project costs. As noted in Section I-D of this report, cost recovery negotiations are currently being handled by the Department of Justice and Regional Counsel.

III. DIFFICULTIES ENCOUNTERED

With respect to intergovernmental coordination, no major difficulties were encountered with either the NMEID or the Village of Los Lunas, for the entire project

The only local difficulty arose when the transportation company, contracted for disposal of the contaminated soils, parked empty tractor-trailer rigs in the Village of Los Lunas. Local authorities and citizens were concerned that hazardous wastes were being "stored" in their city without authorization and without concern for their personal safety. This issue was quickly resolved to everyone's satisfaction.

Several site-specific items are worthy of notice since they had a direct impact on the time and cost effectiveness of the overall project. The following list is a brief description of these items:

A. Site Accessibility and Confined Working Space:

One primary road (Edeal Rd) served the immediate residents and commercial businesses along this road. As the road is immediately adjacent to the site, whenever earthwork activities (excavation & loading of trucks) created sufficient airborne contamination to be a potential health threat to passing traffic, the roadway traffic was temporarily restricted. While the majority of the people affected were understanding, a few citizens were not so patient and "crashed" the road blocks that

were manned by uniformed guards. In only one instance did the OSC consider enforcement action against a repeat offender. The control of access to the entire site was overall successful. Since the site was surrounded by physical barriers, it required unique handling practices and constant rescheduling of events on-site. Edeal Road to the East, a private residence (farm) to the North, a primary water drain (manmade creek) to the immediate West, and seasonal irrigation ditch to the immediate South, created a very confined working space for a large crew of workers and several pieces of earth-moving equipment. These physical barriers, combined with the confirmed contamination over the entire site, required relocation of on-site salvage materials multiple times for the duration of the project as well as requiring a very "flexible" workplan.

B. Default of Soils Laboratory:

As the primary objective of this project was to remove the source of contamination from the site, confirmation of this effort would be essential to meeting this objective. As a result, minimum QA/QC criteria for were established by the EPA for this specific project. Evaluation of reports from the initial analytical lab indicated QA/QC inadequacies which could not be corrected to the standards required by EPA. Therefore, new services were obtained and the project proceeded as planned.

C. Changing Land Disposal Facilities:

Original arrangements for land disposal were at the Chemical Waste Management (CWM) facility in Emelle, Alabama. However, midway through the project, disposal of wastes from this site was stopped by the State of Alabama due to recent changes in the State's environmental regulations. The Alabama Department of Environmental Management adopted an "incomplete" version of the Federal Land Disposal Restrictions and land disposal of PCBs were no longer allowed. When immediate resolution seemed unlikely, the OSC opted to select an entirely new facility, in another state. Similar arrangements were quickly made with the CWM facility in Kettleman Hills, California.

D. Additional Contamination:

Original investigative sampling indicated that the extent of contamination did not extend more than 10 inches below the original surface of the site. This proved to be true for the majority of the site, but grossly underestimated in others. In an area previously identified as the "septic drain field", contamination was confirmed in excess of the defined cleanup level

to depths of 6 feet below the surface. This additional contamination significantly increased the time necessary to complete the project and the associative costs for transportation and disposal of the increased soil volume (excavation & restoration).

IV. RECOMMENDATIONS

In order to best prevent this same event from recurring, the EPA removed the source of this contamination from this site. The only way that this specific event could recur, is if similar "business practices" were followed by the salvage operator.

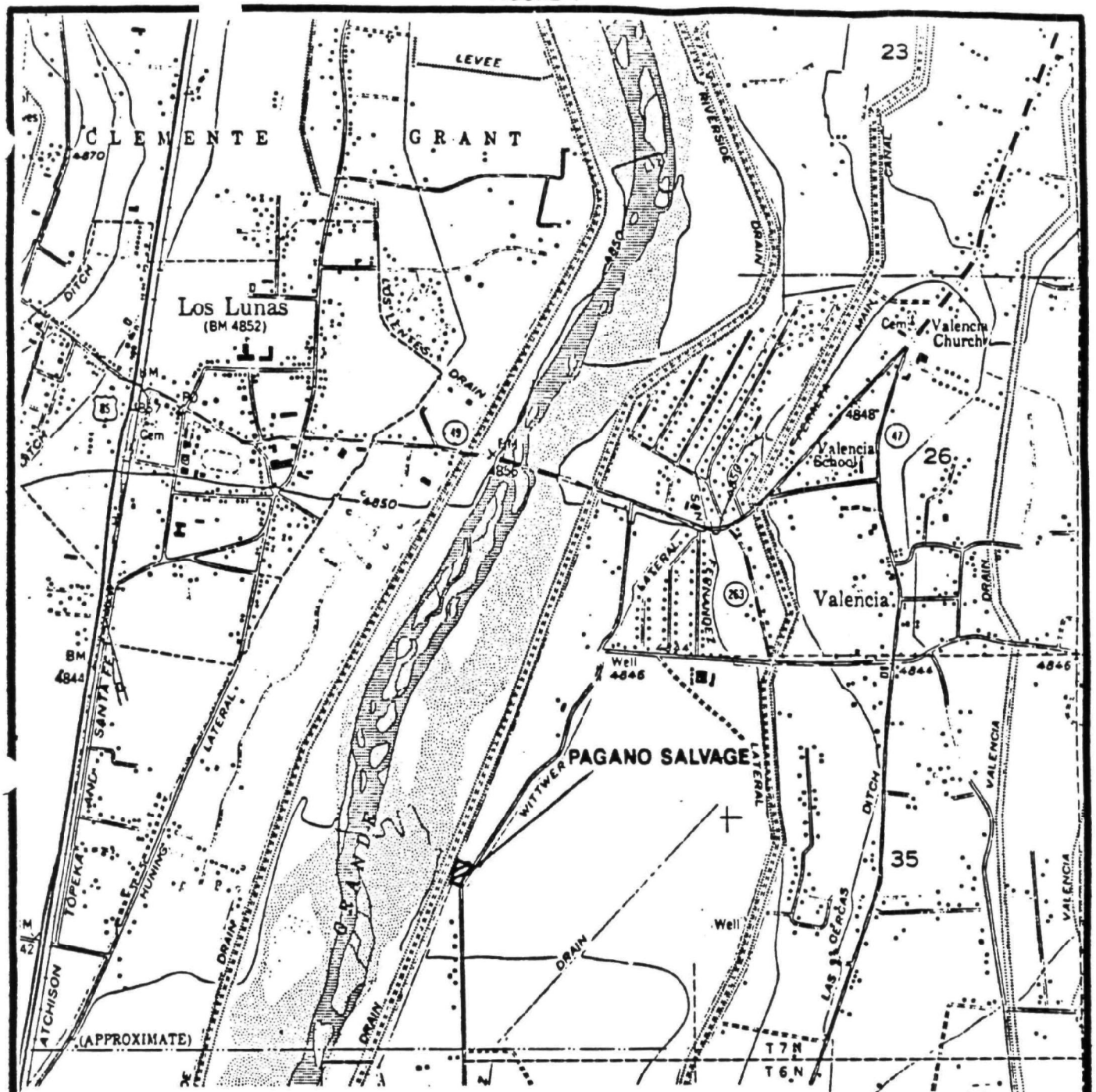
In an effort to prevent the recurrence of this specific event, some form of assurance would be needed that the operator would no longer accept containers that potentially contain PCBs. In addition, if containers holding PCB fluids were accepted, assure that the original "business practices" demonstrated by the operator, are not duplicated.

Referencing Section I-C of this report, relative to the means by which the material came to rest on this site, it is recommended that Federal Agencies and associated Federal Contractors, who in any way are responsible for the use, handling and eventual disposal of any hazardous materials, be required to maintain records defining specifically what these materials are and have a pre-designated "plan" for their disposal. If these materials are to be sold or auctioned, the potential owners must be made aware of the liability associated to the receipt of these materials and they must also be made aware of the potential environmental damage that could be caused if these materials are not handled properly.

There are no recommendations with respect to improvement of response actions or changes to the National contingency plan, Regional contingency plan or the OSC contingency plan.

Attachment A1

FIGURE 1



NOTE: BASE MAP ADAPTED FROM U.S.G.S. 7.5 MINUTE QUADRANGLE, LOS LUNAS, N. MEX., 1952. PHOTOREVISED 1971 AND 1974.

SCALE 1:24 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

GN MN
0°58' 17 MILS
12° 213 MILS

UTM GRID AND 1974 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

US EPA ENVIRONMENTAL RESPONSE TEAM RESPONSE ENGINEERING AND ANALYTICAL CONTRACT 68-03-3482	PAGANO SALVAGE SITE	
	LOS LUNAS, NM	W.O. #2330

Attachment B1

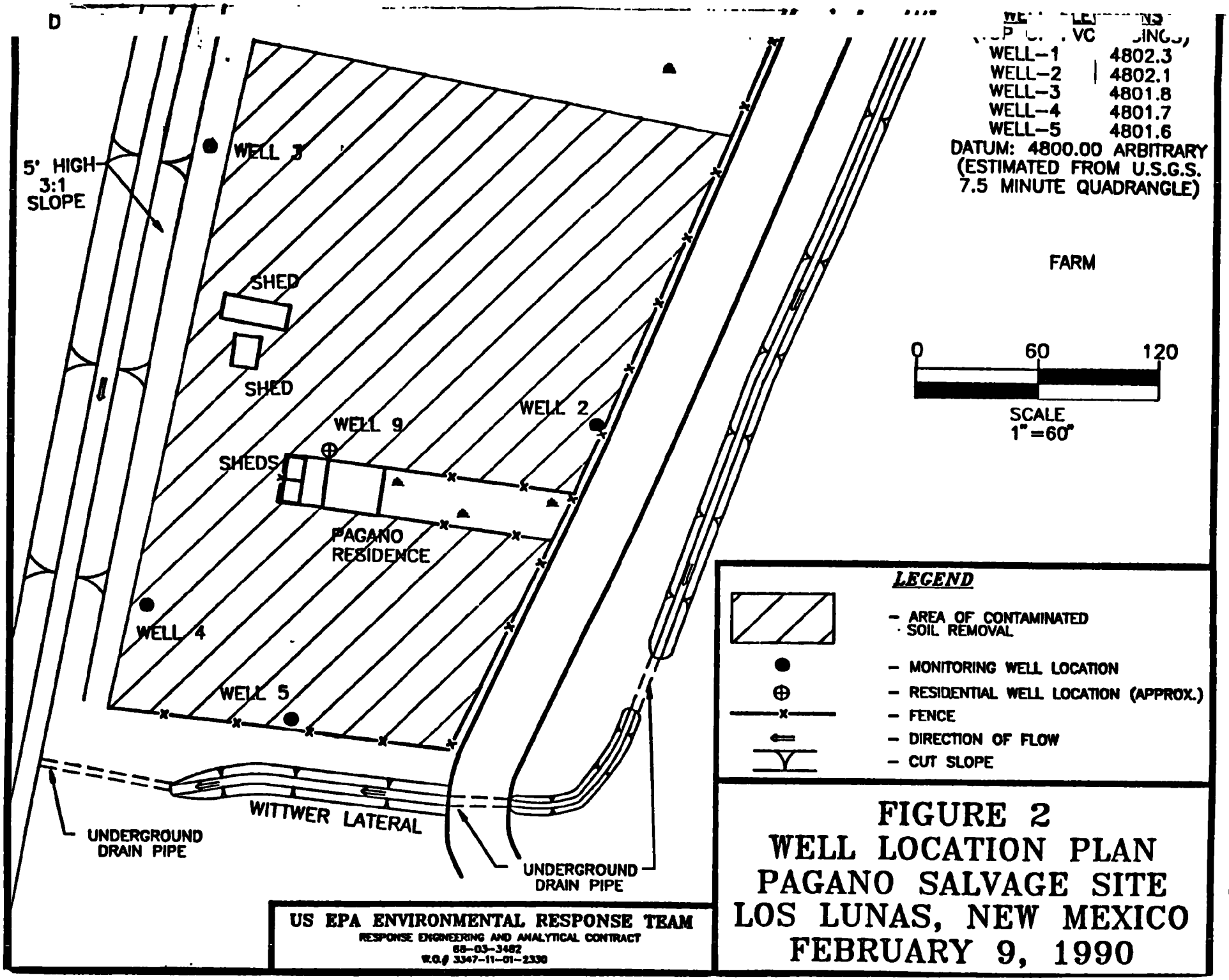
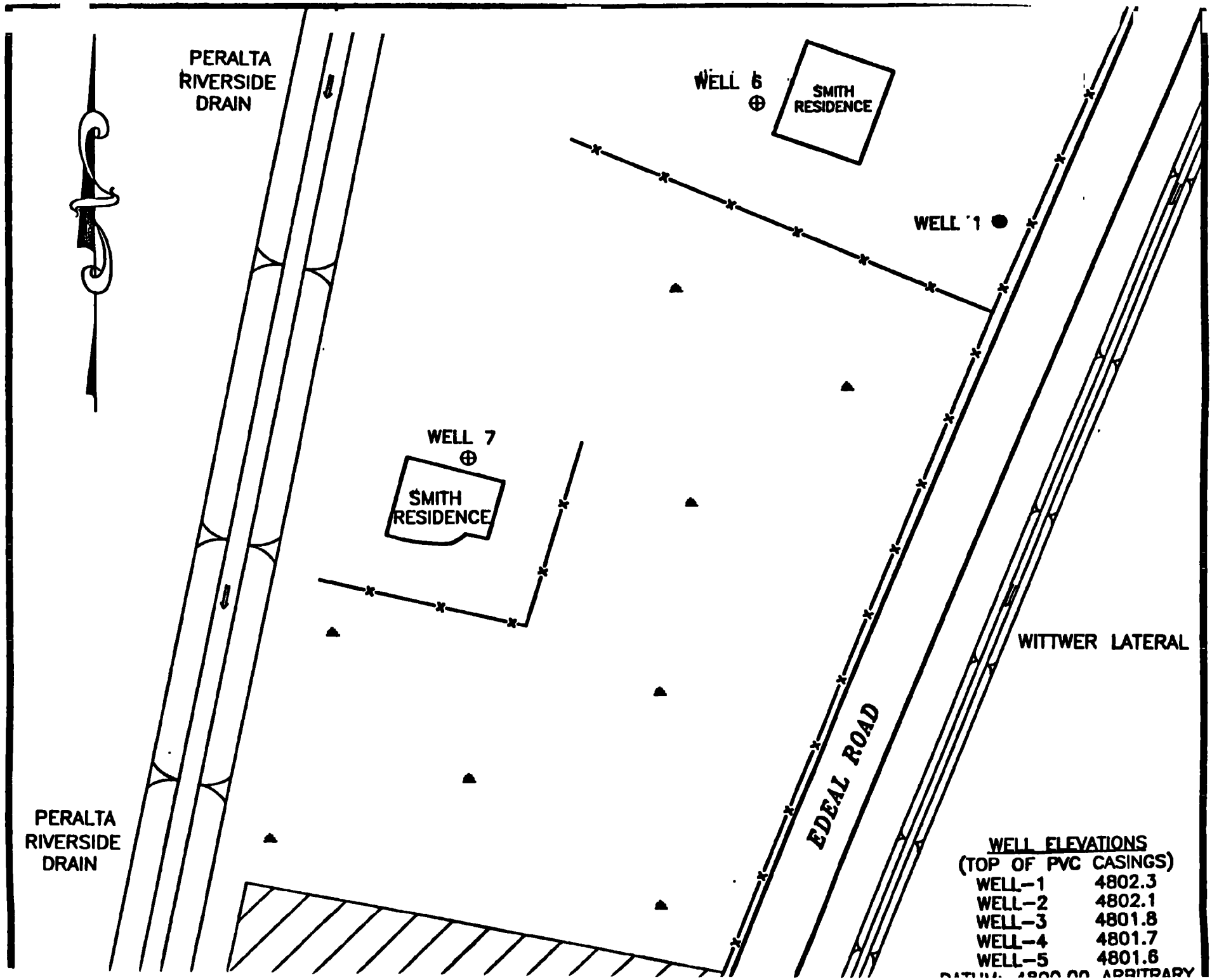


FIGURE 2
WELL LOCATION PLAN
PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO
FEBRUARY 9, 1990

ATTACHMENT B1

Attachment B2

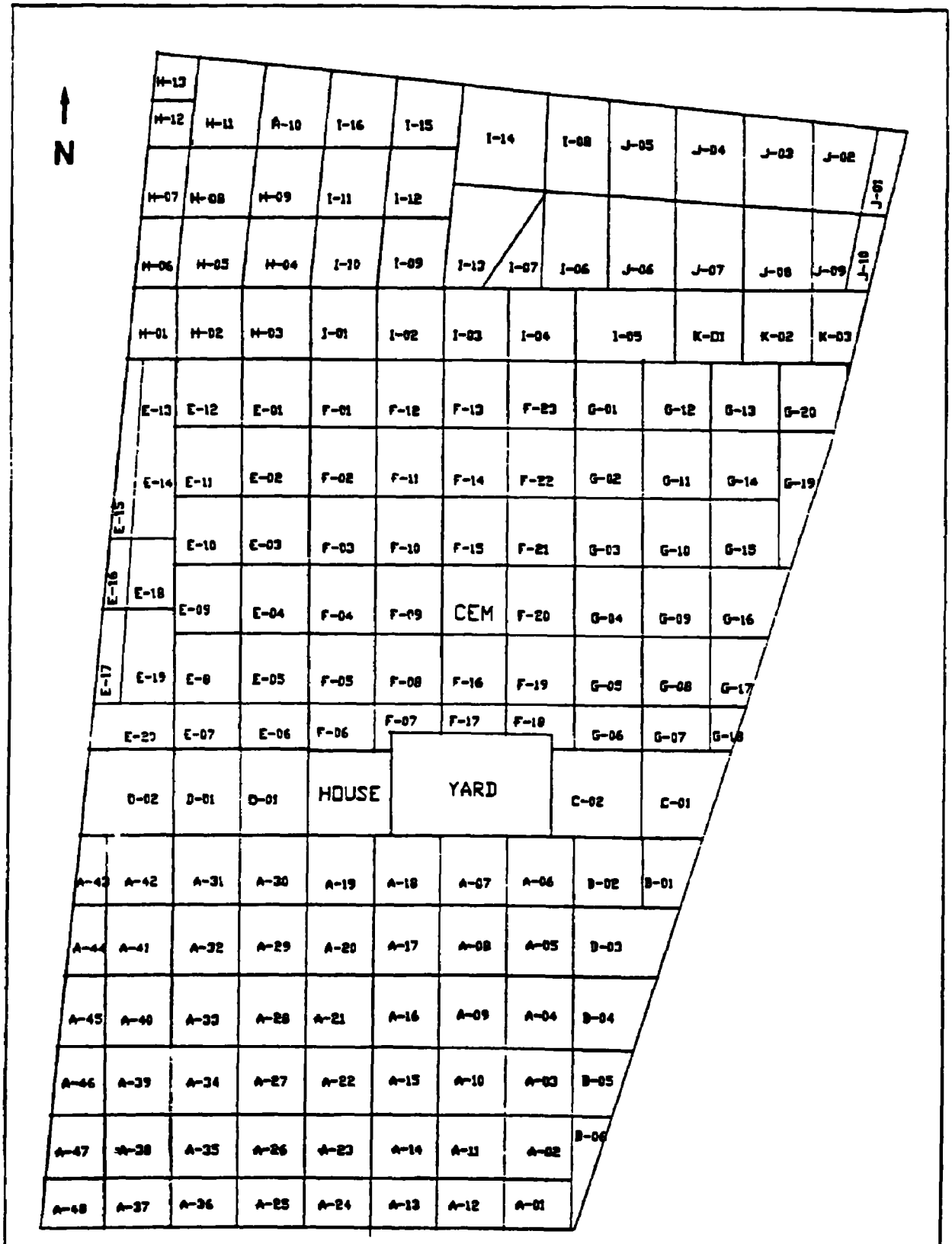


ATTACHMENT B2

Attachment C1

PAGANO SALVAGE YARD

Los Lunas, New Mexico



SAMPLING STRATEGY-GRID MAP

Attachment D1

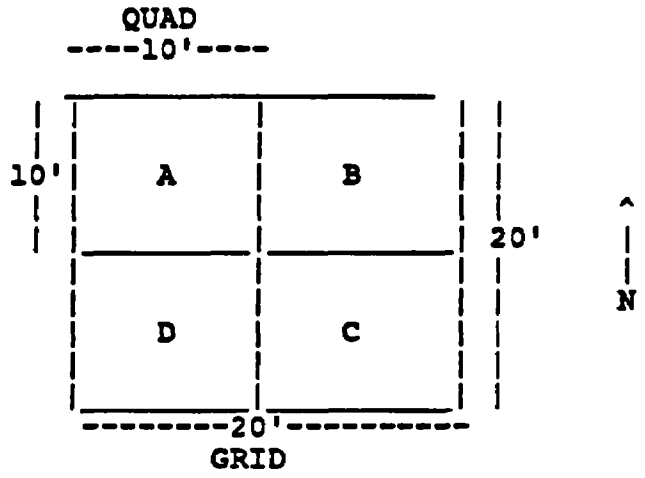
PAGANO SALVAGE YARD

The sampling strategy utilized for PCB soil sampling involved initial division of the site into 20x20 foot square "grids". A composite soil sample was collected from each of the grids using a 9-aliquot even distribution. All aliquots were combined and homogenized to uniform particle size and a 8-ounce sample was submitted for analysis.

Sample analysis tested for aroclors 1254 and 1260 and separate totals were calculated and recorded. These concentrations were then combined to create a total which was compared to the approved cleanup level of ten (10) parts per million. After the initial phase of excavation, grids with totals significantly higher than the cleanup level were further divided into 10x10 foot "quads". A sample of this design is illustrated below.

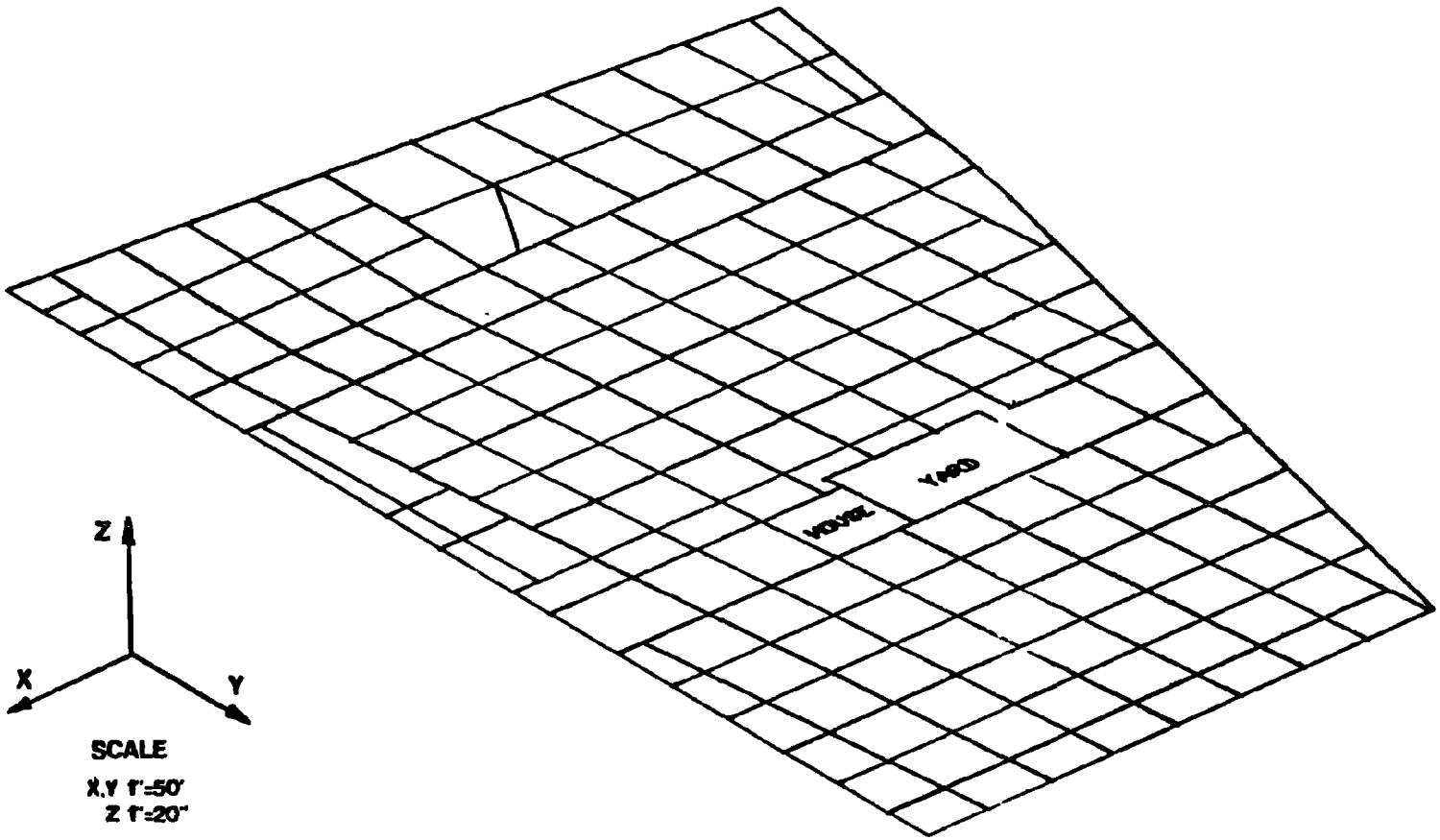
The tracking system was basically comprised of first, the SECTION letter; second, the GRID number; and finally, the QUAD letter. The quad letters were aligned as shown in the illustration below.

Excavation was completed when sample results for a grid were below the cleanup level, quads within a grid were below a cleanup level, or the average of quads within a grid was below the cleanup level. All areas were defined as "clean" and excavation "complete" at the OSC's discretion.



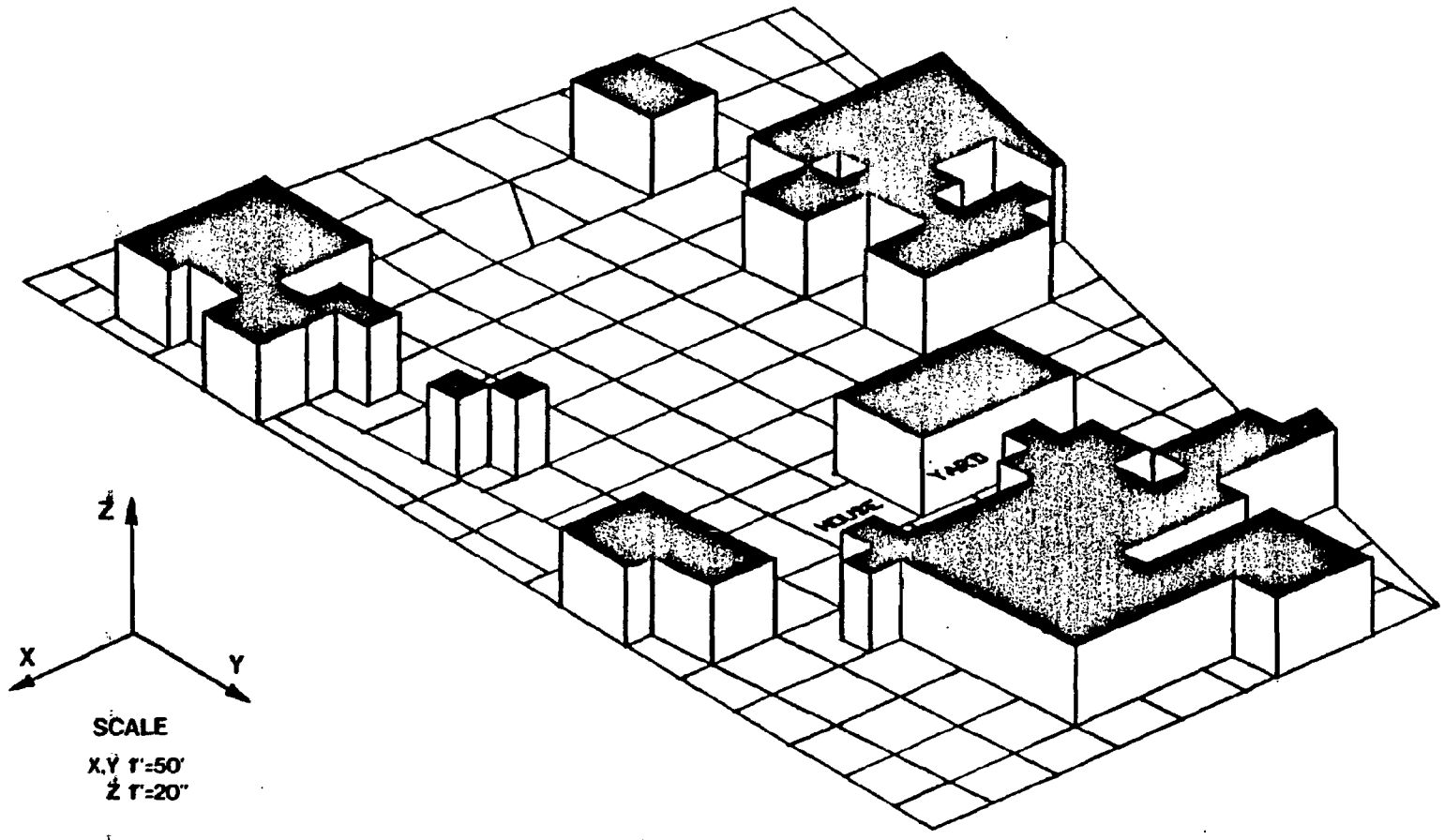
Attachment E1

EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



BASE MAP

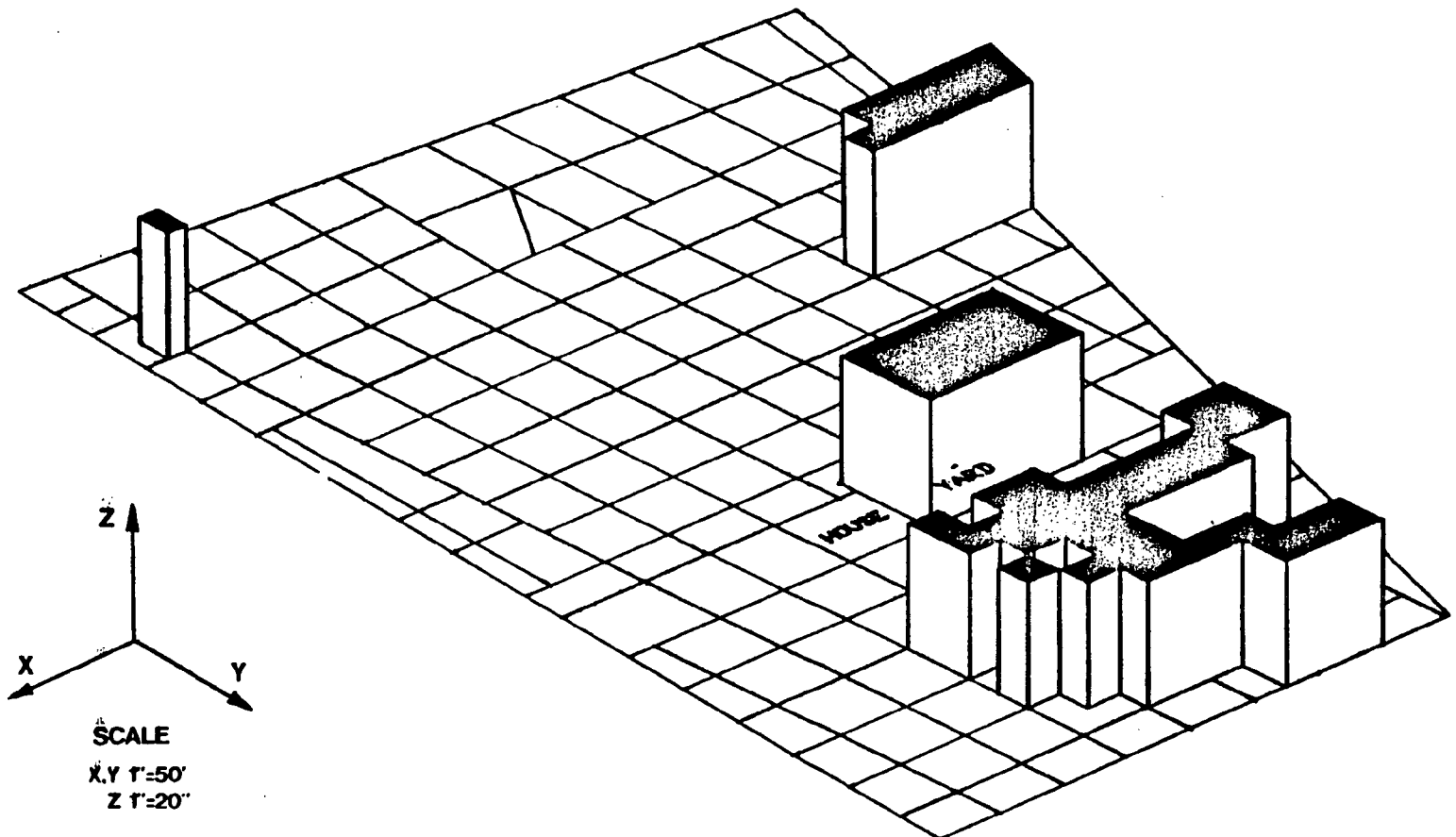
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 1

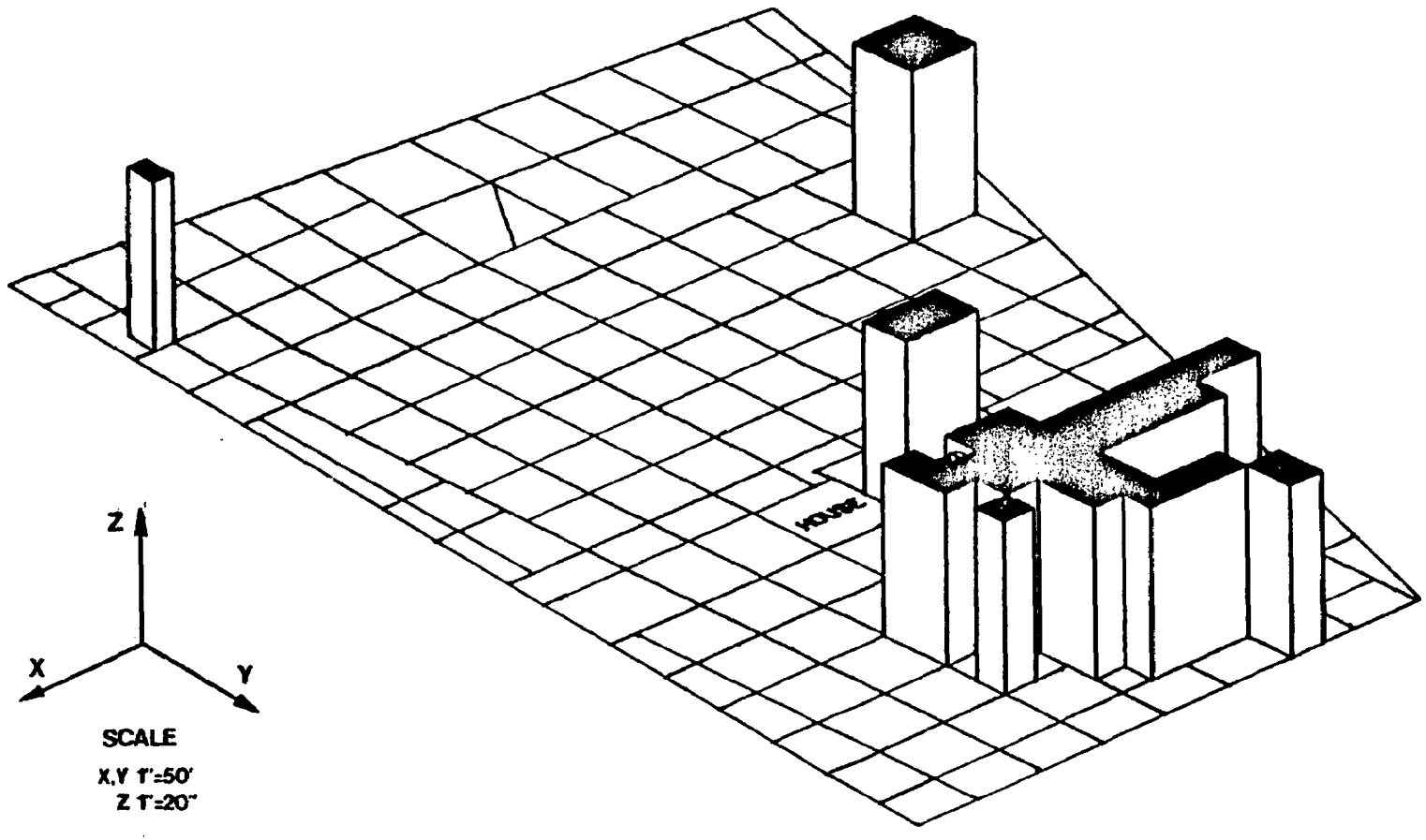
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 2

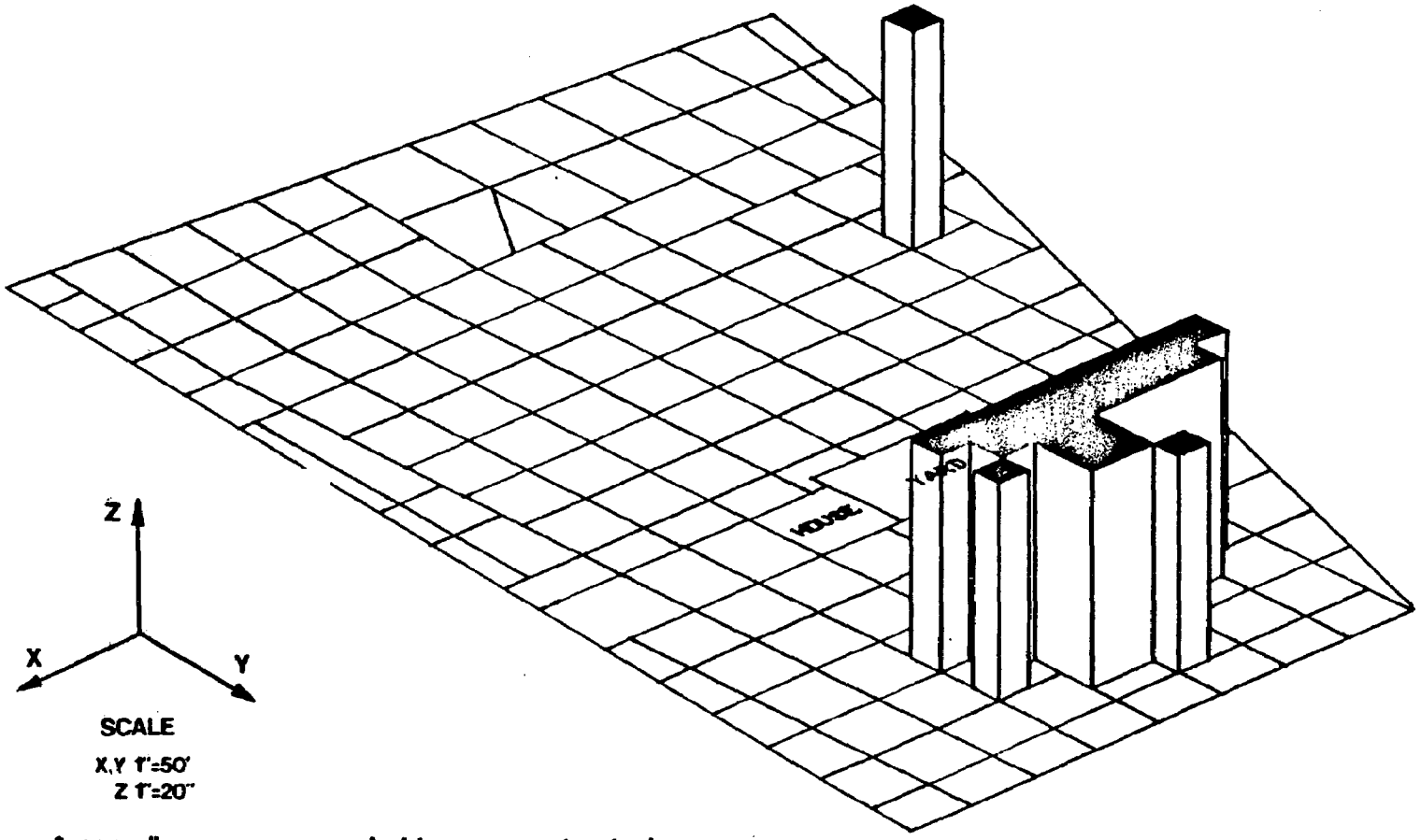
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 3

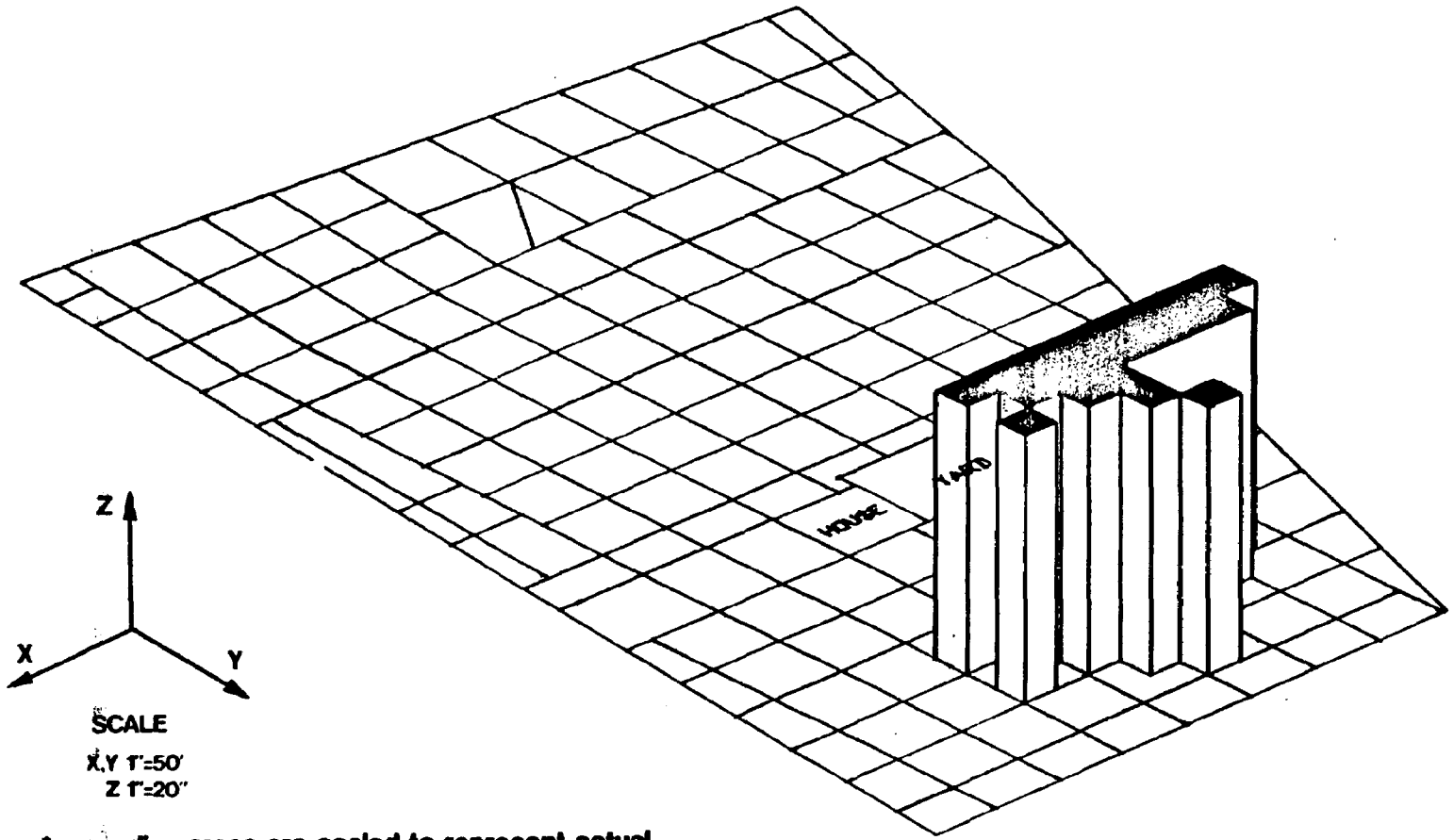
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 4

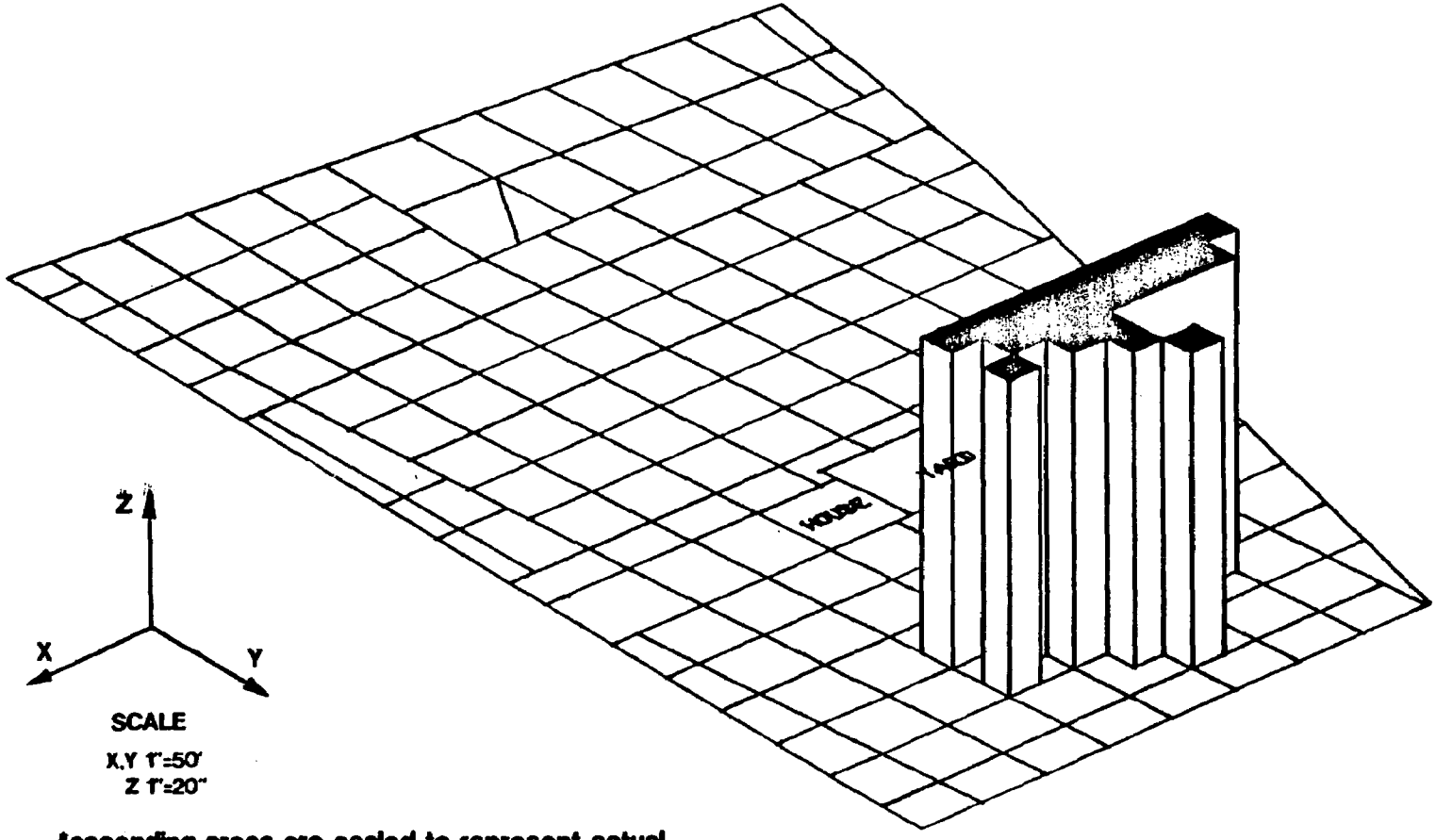
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 5

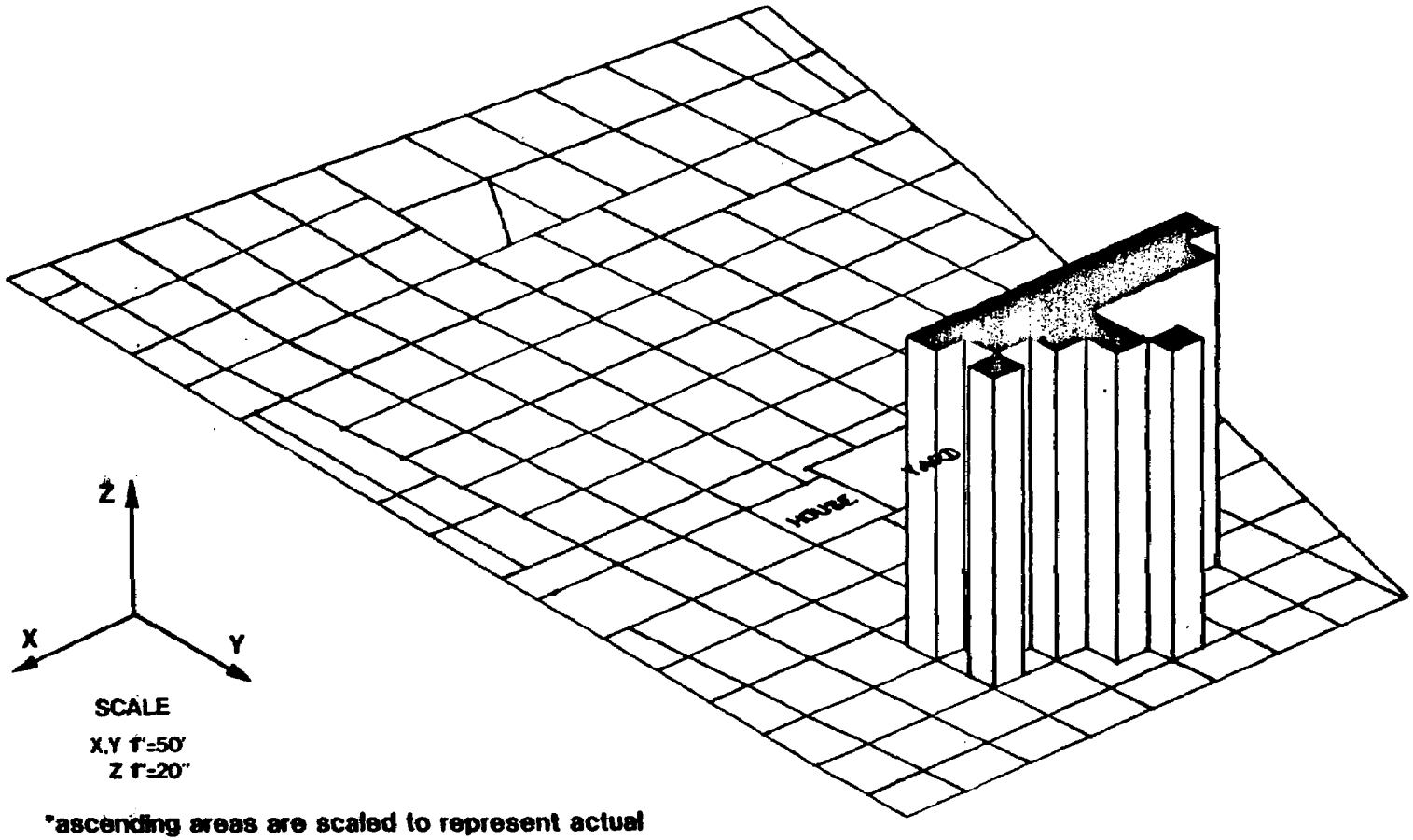
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 6

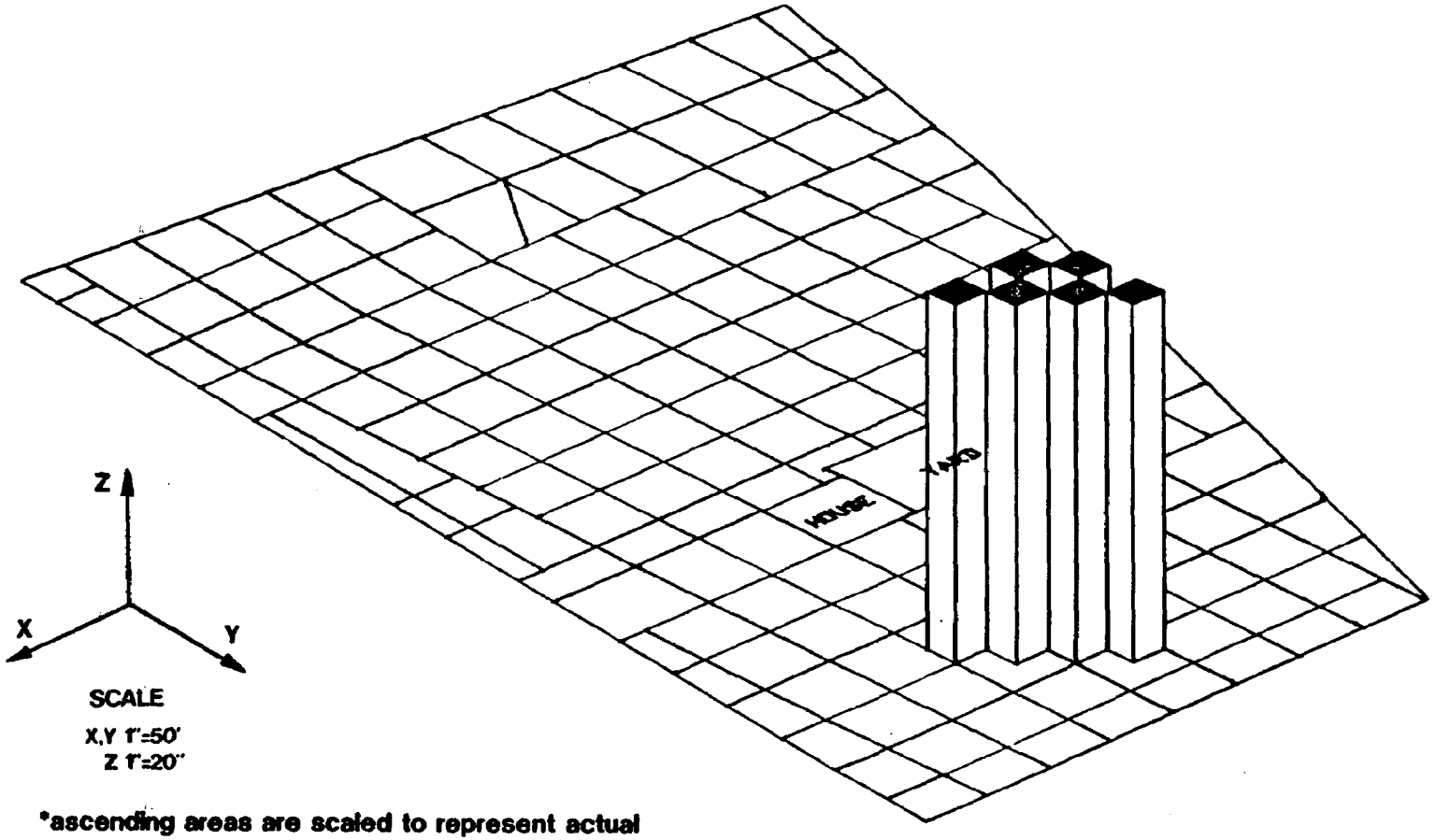
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 7

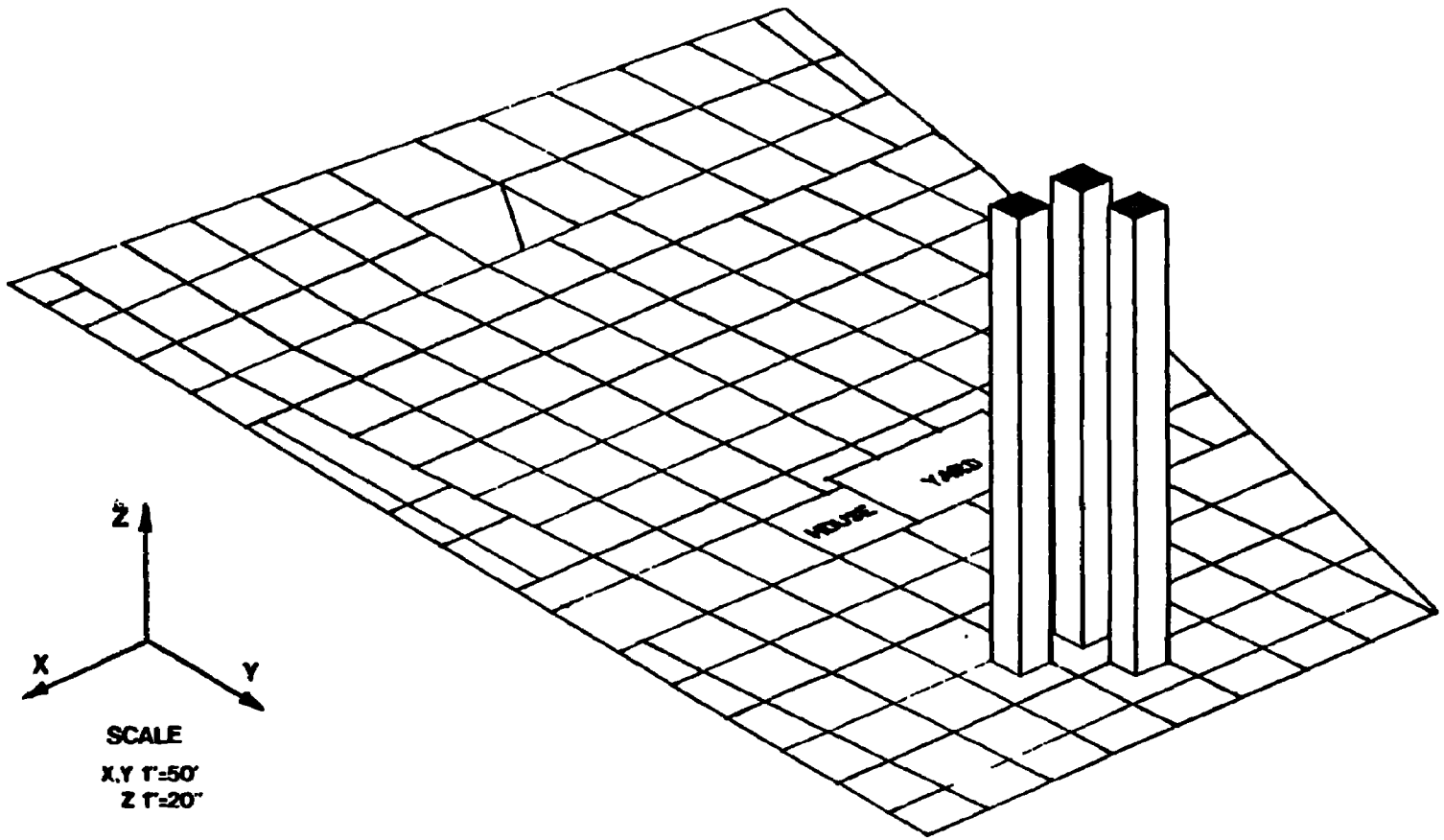
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 8

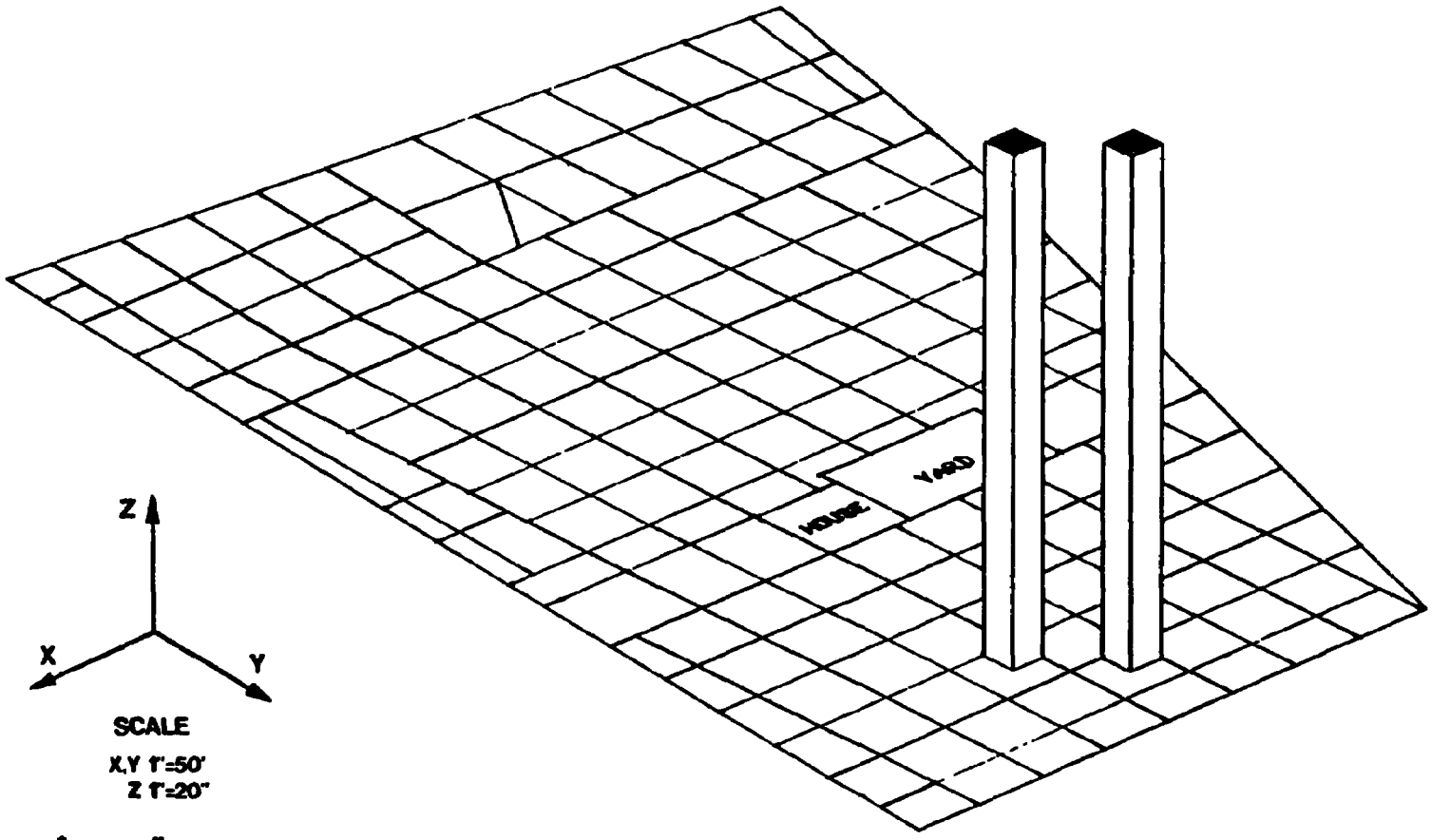
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 9

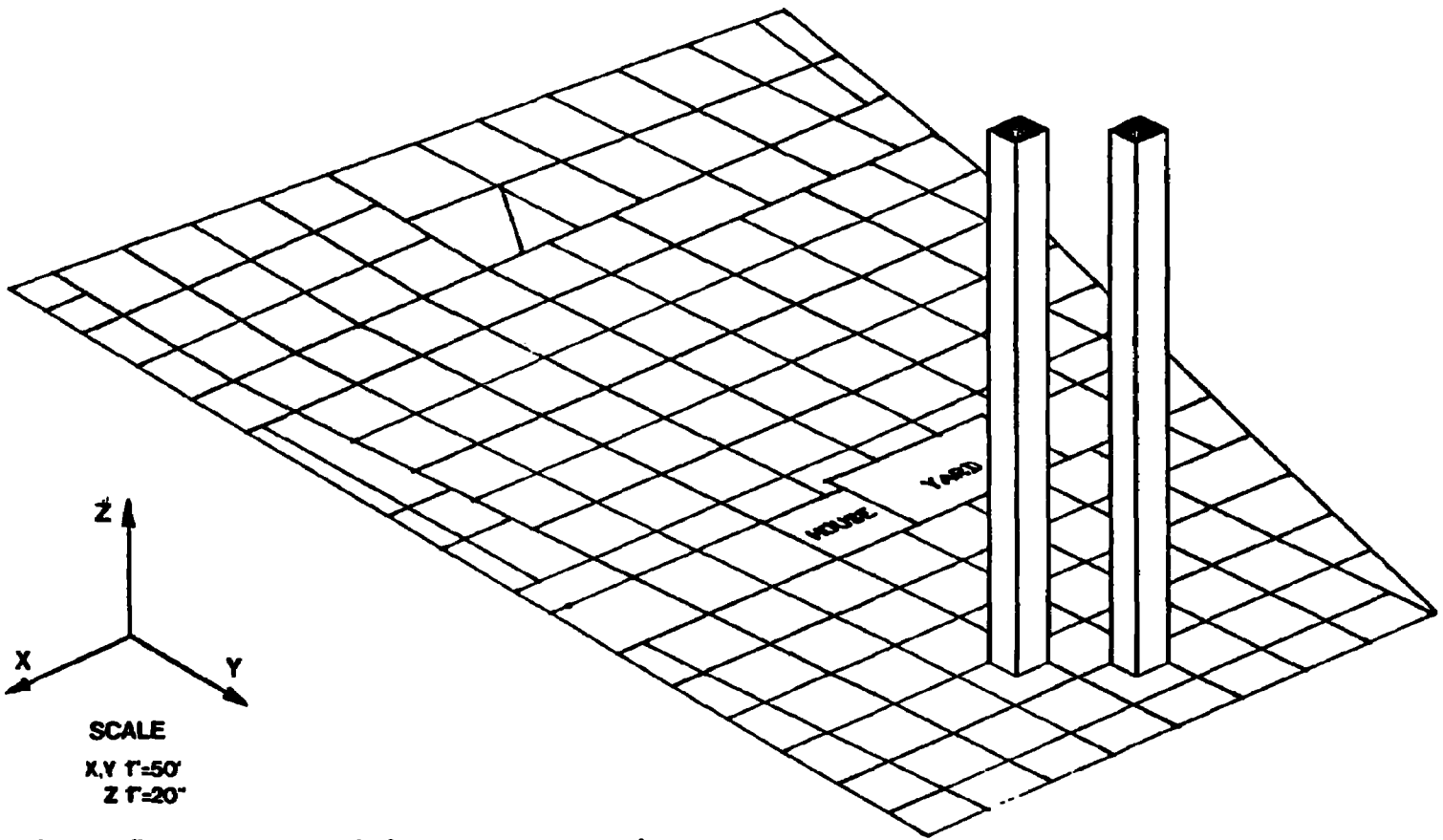
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 10

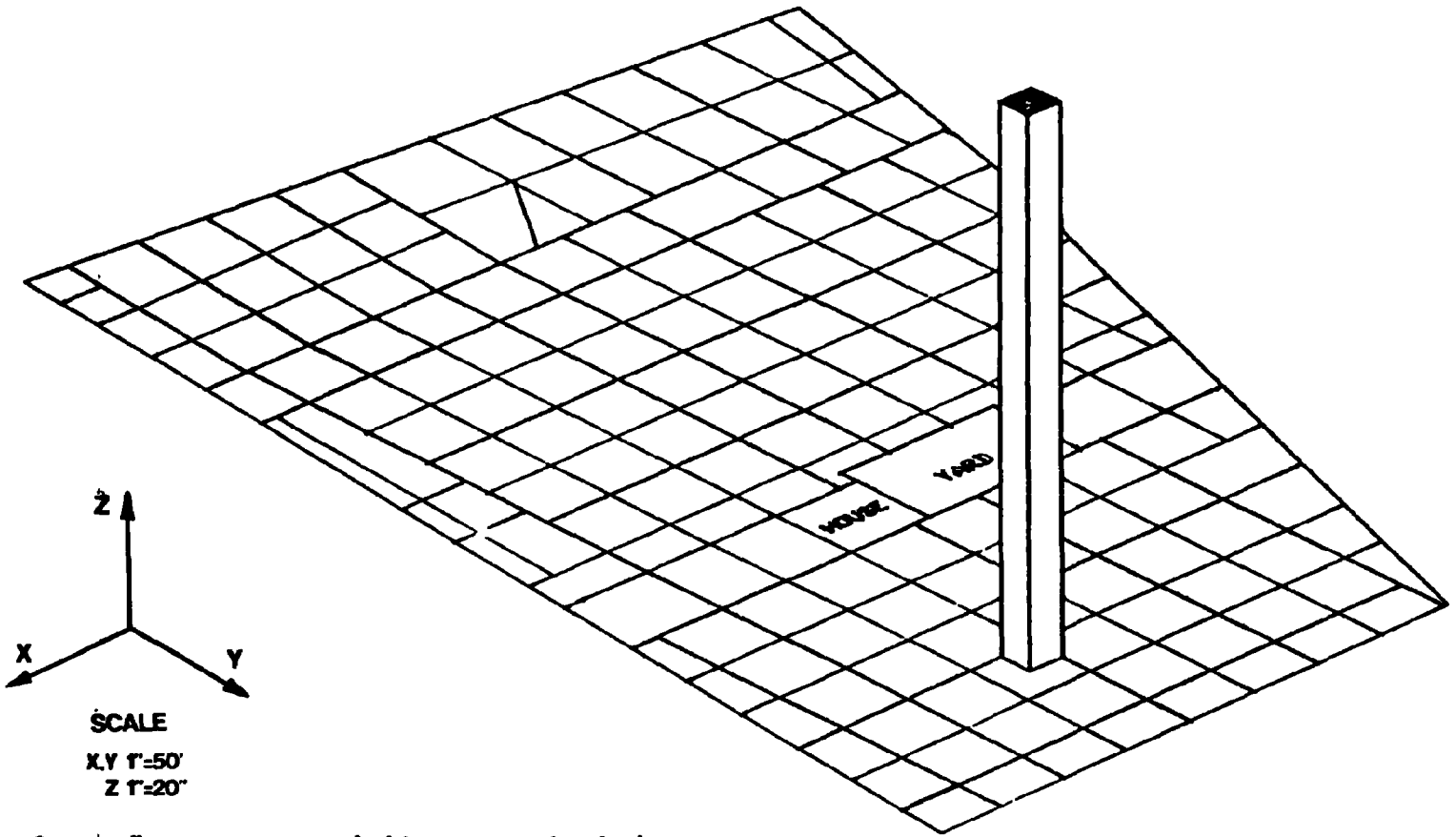
EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 11

EXCAVATION AREAS RELATIVE TO PHASED ACTIVITY



*ascending areas are scaled to represent actual excavation depth relative to the base map

PHASE 12

Attachment F1

SOIL DATA SUMMARY

GRID	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
SA-01	1.97					
SA-02	14.61					
A	1.32					
B	0.51					
C	3.45					
D	7.51					
SA-03	1.35					
SA-04	131.01	-	35.91			
A	-	12.11	3.97			
B	-	21.81	4.21			
C	-	15.41	17.31	8.24		
D	-	9.71	31.31	13.81		
SA-05	2.45 *					
SA-06	1.78 *					
SA-07	18.33					
A	2.95					
B	6.06					
C	4.73					
D	9.16	ND				
SA-08	9.53	1.01				
A	14.41					
B	17.11					
C	11.41					
D	21.01					
SA-09	25.91	-	22.21			
A	32.41	4.15				
B	6.55					
C	18.61	24.71	35.01	11.51		
D	58.41	15.01	26.42	7.91		
SA-10	21.65					
A	3.54					
B	3.26					
C	4.05					
D	1.22					
SA-11	125.01					
A	-	3.29				
B	-	5.61				
C	-	0.37				
D	-	ND				
SA-12	210.01					
A	-	14.61	208.01			
B	-	1.52	ND			

SOIL DATA SUMMARY

GRID	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
SA-13	42.07					
A	3.79					
B	41.11	14.81	ND			
SA-14	35.21					
A	-	0.81				
B	-	ND				
C	-	84.91	16.71	0.38		
D	-	19.31	16.71	26.61	93.51	
SA-15	5.82					
SA-16	11.93					
A	13.31	1.91				
B	117.01	4.53				
C	24.81	26.41	35.61	20.61		
D	128.01	48.31	52.01	35.41		
SA-17	9.33					
A	7.63					
B	24.71	ND				
C	32.61	ND				
D	12.21	ND				
SA-18	4.47					
SA-19	4.31					
SA-20	11.63					
A	7.18					
B	4.61					
C	5.19	ND				
D	9.58	1.41				
SA-21	31.35					
A	29.71	35.11	10.91	ND		
B	7.48	9.02	83.71	ND		
C	16.81	15.01	85.01	ND		
D	26.91	30.21	23.01	ND		
SA-22	162.01					
A	67.61	67.41	31.91	0.23		
B	138.01	136.01	6.68			
C	55.71	58.11	27.81	0.23		
D	62.71	65.41	62.21	0.23		
SA-23	131.01					
A	73.01	83.41	77.91	17.51	ND	
B	55.61	59.91	80.11	17.51	9.52#	
C	63.41	69.71	6.09	1.08		
D	45.81	53.41	3.21			
SA-24	4.15					
SA-25	13.11					
A	2.11					
B	0.47					

SOIL DATA SUMMARY

GRID	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
SA-26	31.41					
A	-	7.44				
B	-	20.66	0.71			
C	-	0.66				
D	-	1.35				
SA-27	59.29					
A	-	0.61				
B	-	107.01	49.21	ND		
C	-	0.43				
D	-	9.35	49.21			
SA-28	20.93					
A	-	11.11	39.41	2.08		
B	-	0.21				
C	-	104.01	63.21			
D	-	16.11	39.41	16.41		
SA-29	10.85					
A	11.71	0.88				
B	3.77					
C	13.91	14.91 #				
D	16.21	2.74				
SA-30	2.51					
SA-31	7.56					
SA-32	10.97					
A	2.36					
B	7.34					
C	26.31	1.08				
D	4.55					
SA-33	3.22					
SA-34	0.26					
SA-35	29.81					
A	10.01 #					
B	1.01					
C	0.17					
D	3.51					
SA-36	0.27					
SA-37	0.62					
SA-38	3.21					
SA-39	0.82					
SA-40	1.09					
SA-41	5.71					
SA-42	39.62	1.91				
SA-43	5.09					
SA-44	0.45					
SA-45	1.97					

SOIL DATA SUMMARY

GRID	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
SA-46	8.94					
A	22.11 #					
B	0.66 *					
C	0.37					
D	ND					
SA-47	1.39					
SA-48	1.32					
SB-01	0.64					
SB-02	0.99					
SB-03	2.42					
SB-04	21.74					
A	51.01	6.43				
B	1.35					
C	44.01	5.78				
D	27.21	9.01				
SB-05	7.39					
SB-06	ND					
SC-01	5.06					
SC-02	3.65					
SD-01	6.19					
SD-02	33.39	1.77 *				
A	8.55					
B	28.45					
C	34.28					
D	12.86					
SE-01	6.56					
SE-02	1.01					
SE-03	0.61					
SE-04	0.94					
SE-05	6.22					
SE-06	0.67					
SE-07	1.43					
SE-08	3.44					
SE-09	1.83					
SE-10	11.66					
A	1.96	1.68				
B	4.22					
C	8.81	1.28				
SE-11	1.74					

SOIL DATA SUMMARY

GRID	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
SE-12	9.41					
A	5.61					
B	11.41	ND				
C	2.21					
D	1.27					
SE-13	0.94					
SE-14	0.68					
SE-15	0.38					
SE-16	0.25					
SE-17	4.73					
SE-18	0.75 *					
SE-19	1.63					
SE-20	4.79					
SF-01	3.48 *					
SF-02	0.46 *					
SF-03	0.91 *					
SF-04	1.21 *					
SF-05	0.41					
SF-06	3.79					
SF-07	7.91					
SF-08	0.78					
SF-09	0.39					
SF-10	5.18					
SF-11	1.71	1.35				
SF-12	10.61 *					
A	6.49					
B	5.55					
C	5.89					
SF-13	2.66					
SF-14	3.76					
SF-15	2.11 *					
SF-16	0.31	0.23				
SF-17	0.54					
SF-18	0.31					
SF-19	1.39	0.91				
SF-20	1.51					
SF-21	4.77					
SF-22	21.21					
A	6.92					
B	8.41					
C	6.41					
D	1.96					
SF-23	ND					

SOIL DATA SUMMARY

GRID	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
SG-01	0.83					
SG-02	8.91					
A	-	5.65				
B	-	5.04				
C	-	5.67				
D	-	5.07				
SG-03	6.33					
SG-04	12.66					
A	0.64	0.91				
B	11.8	0.91				
C	18.1	0.91				
D	7.44	0.91				
SG-05	2.01					
SG-06	0.57					
SG-07	1.92					
SG-08	6.35					
SG-09	10.55					
A	25.01	14.31 #				
B	21.21	2.08				
C	12.41	ND				
D	31.91	ND				
SG-10	8.61					
A	11.21	5.37				
B	9.95	5.37				
C	0.72					
D	11.71	5.37				
SG-11	11.45					
A	7.45					
B	15.01	26.11	5.24			
C	16.41	26.11	5.24			
D	10.21	26.11	5.24			
SG-12	32.16	2.31				
SG-13	24.41	9.78 #				
SG-14	34.71 *	34.81	17.88			
A	-	-	-	8.51 #		
B	-	-	-	ND		
C	-	-	-	ND		
D	-	-	-	-	4.76	
SG-15	3.52 *					
SG-16	2.15 *					
A	35.81	0.33				
B	2.48					
C	1.27					
D	1.31					
SG-17	6.61					
SG-18	4.61					

SOIL DATA SUMMARY

GRID	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
SG-19	36.01	31.51				
A	-	38.61	4.06			
B	-	ND				
SG-20	28.41	1.33				
SH-01	13.91	0.89				
SH-02	20.11					
A	70.61	7.67				
B	2.76					
C	9.13	7.67				
D	59.11	7.67				
SH-03	0.64					
SH-04	17.81					
A	20.51	1.57				
B	8.51	1.57				
C	1.86	1.57				
D	2.52	1.57				
SH-05	12.61	0.66				
A	36.51					
B	19.71					
C	3.66					
D	23.41					
SH-06	3.41					
SH-07	21.81	12.21				
A	1.28					
B	32.14	3.74				
C	9.83	38.01	35.31	5.88		
D	0.89					
SH-08	10.01	8.56 #				
A	66.01					
B	17.21					
C	6.21					
D	43.91					
SH-09	14.41	1.83				
A	38.71					
B	13.31					
C	4.28					
D	19.71					
SH-10	2.96 *					
A	1.17					
B	0.83					
C	4.47					
D	3.91					
SH-11	2.64					
SH-12	1.89					
SH-13	0.53					

SOIL DATA SUMMARY

GRID	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
SI-01	7.28					
SI-02	4.69*					
SI-03	1.31*					
SI-04	0.55					
SI-05	1.11					
SI-06	3.98					
SI-07	2.28					
SI-08	0.58					
SI-09	1.15					
SI-10	3.76					
SI-11	4.08					
SI-12	0.38					
SI-13	ND					
SI-14	ND					
SI-15	7.26					
SI-16	3.54					
SJ-01	ND					
SJ-02	ND					
SJ-03	ND					
SJ-04	ND					
SJ-05	ND					
SJ-06	10.91	0.29				
A	21.61					
B	13.21					
C	38.91					
D	11.31					
SJ-07	4.01					
SJ-08	0.83					
SJ-09	ND					
SJ-10	ND					
SK-01	9.01#					
SK-02	3.51					
SK-03	0.41					
YARD-EAST	34.37	16.59	59.41			
B			1.93			
C			0.86			
YARD-WEST	75.03	20.85	282.01			
A			2.01			
D			11.21#			

SOIL DATA SUMMARY

GRID #	PHASE 7	PHASE 8	PHASE 9	PHASE 10	PHASE 11	PHASE 12	PHASE 13
SA-04D	12.63	1.88					
SA-09C	3.65	3.79					
SA-09D	0.71	1.11					
SA-10A		0.36					
SA-10B		0.12					
SA-12A	3.22						
SA-14D	15.21	0.71					
SA-15A		8.52					
SA-15B		0.71					
SA-16C	26.45	5.11					
SA-16D	15.23	7.35					
SA-21C	45.99	3.76					
SA-21D	34.14	36.1	6.01				
SA-22A		5.87					
SA-22B		23.3	48.7	ND			
SA-22C	0.25	0.24					
SA-22D	0.7	68.6	2.72				
SA-23B	3.83	22	16.3	36.3	13.7	10.2#	
SA-27B	88.5	20.2	46.4	67.1	13	21.7	11#
SA-27D		0.48					
SA-28C	37.83	8.27					
SA-28D		15.5	ND				

* - When Duplicate sample analysis was performed, the higher of the two numbers was recorded.

- Composited with surrounding 10x10' grids, the mean value of a 10x10' grid will be 10 ppm over a surrounding 20x20' area.

Attachment G1

PAGANO SALVAGE YARD

- Confirmation Sample Summaries -

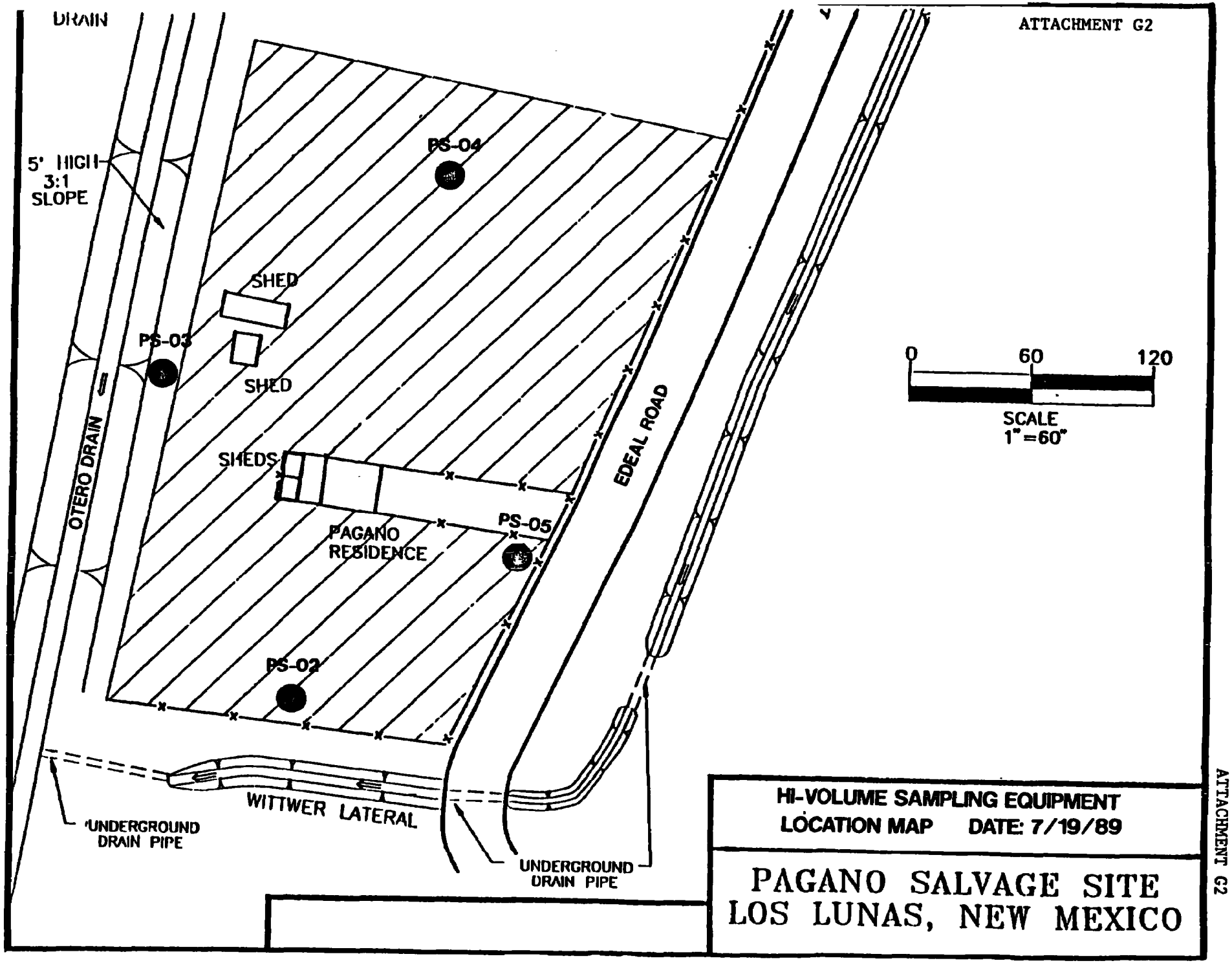
AIR: Off-site
ANALYSIS: PCBs
DATE COLLECTED: As Shown

STATION	7/19/89	7/21/89	7/28/89	8/30/89	8/05/89	8/08/89	8/15/89	1/26/90
PS-01	N/A	N/A	85	63	120	193	56	2
PS-02	162	116	33	226	87	8	47	3
PS-03	135	338	117	53	128	201	53	2
PS-04	55	526	143	69	42	107	N/A	2
PS-05	41	326	182	N/A	46	17	24	4

* results are rounded and shown in ng/M3

* locations are shown on Attachment G2

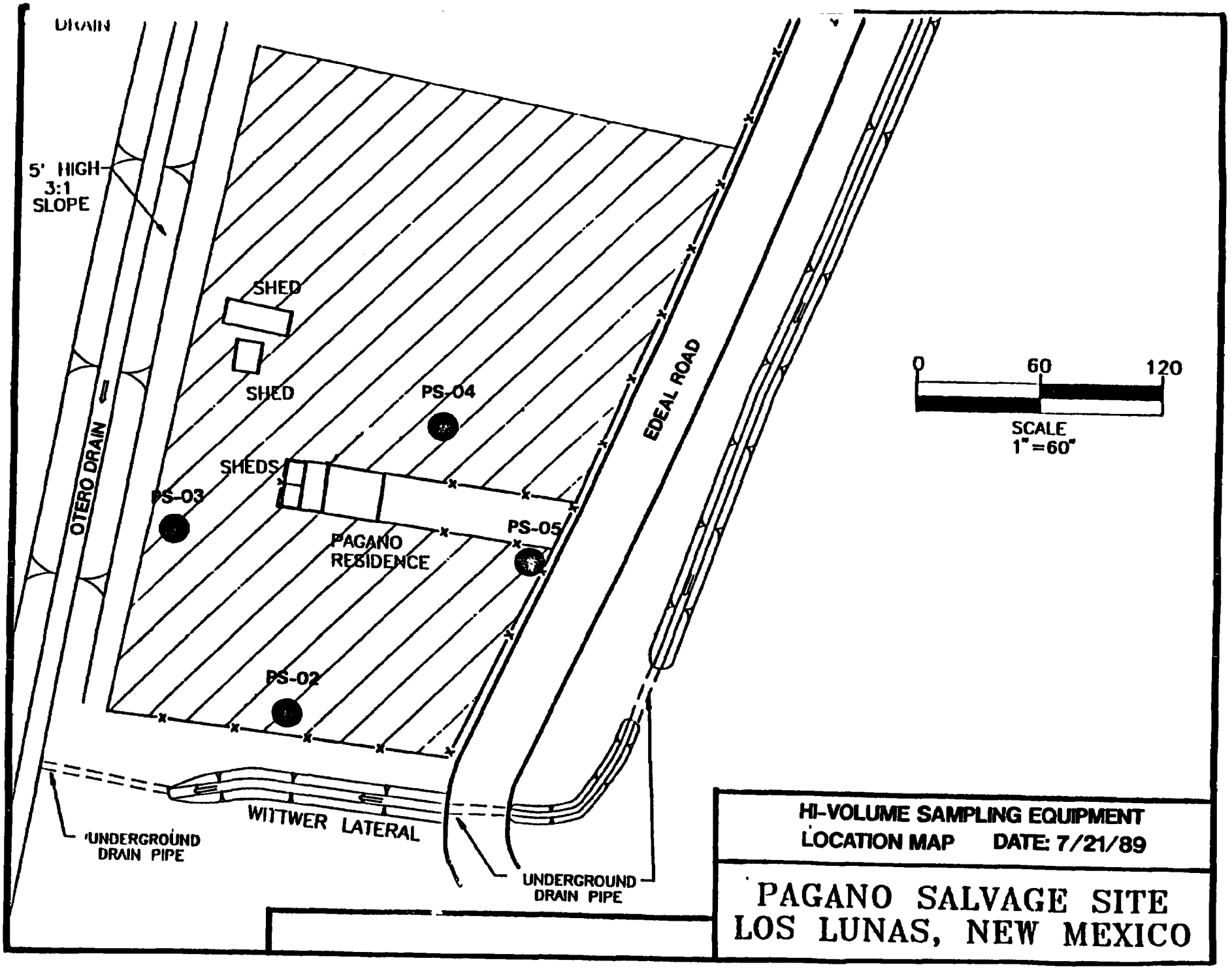
Attachment G2

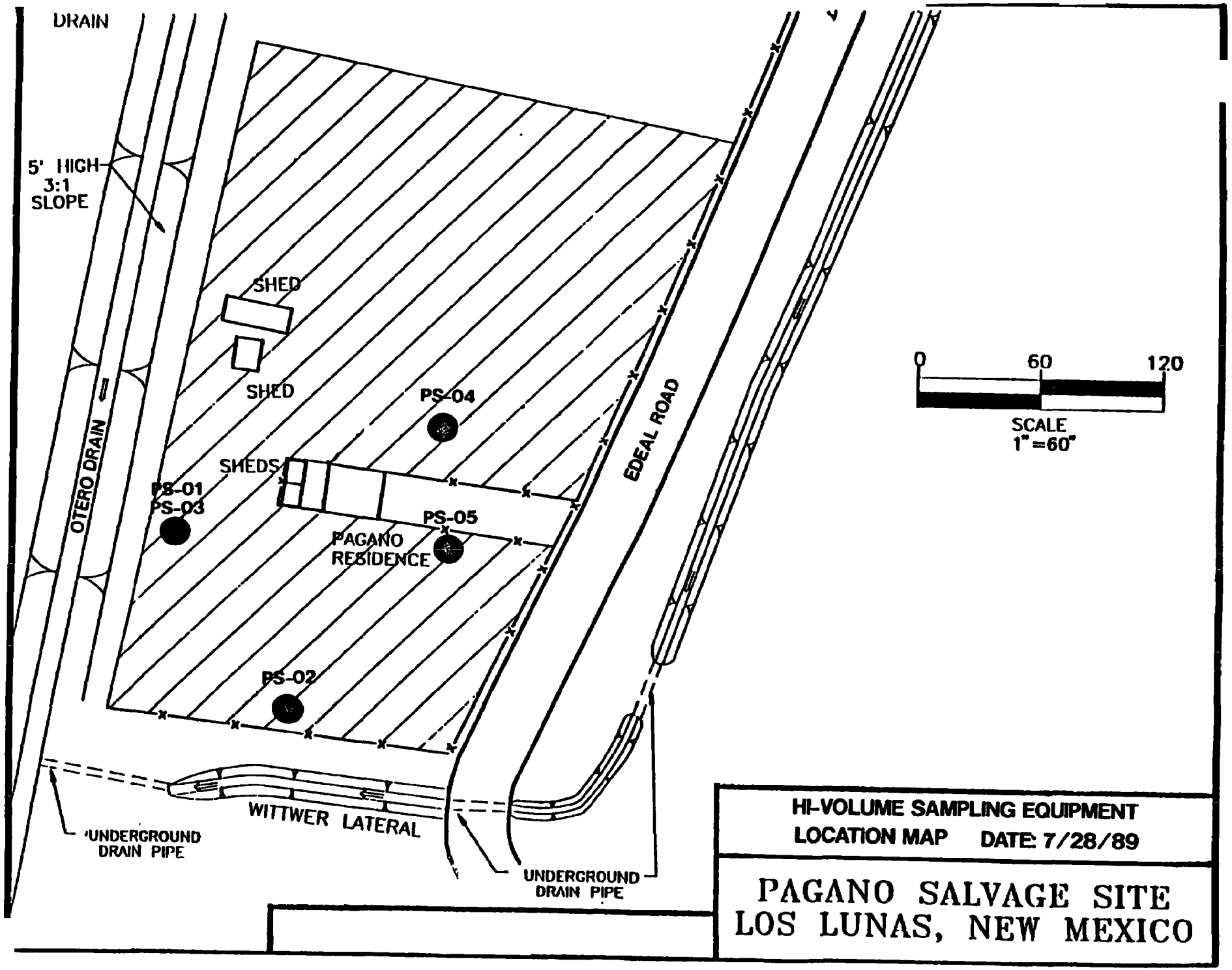


HI-VOLUME SAMPLING EQUIPMENT
LOCATION MAP DATE: 7/19/89

PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO

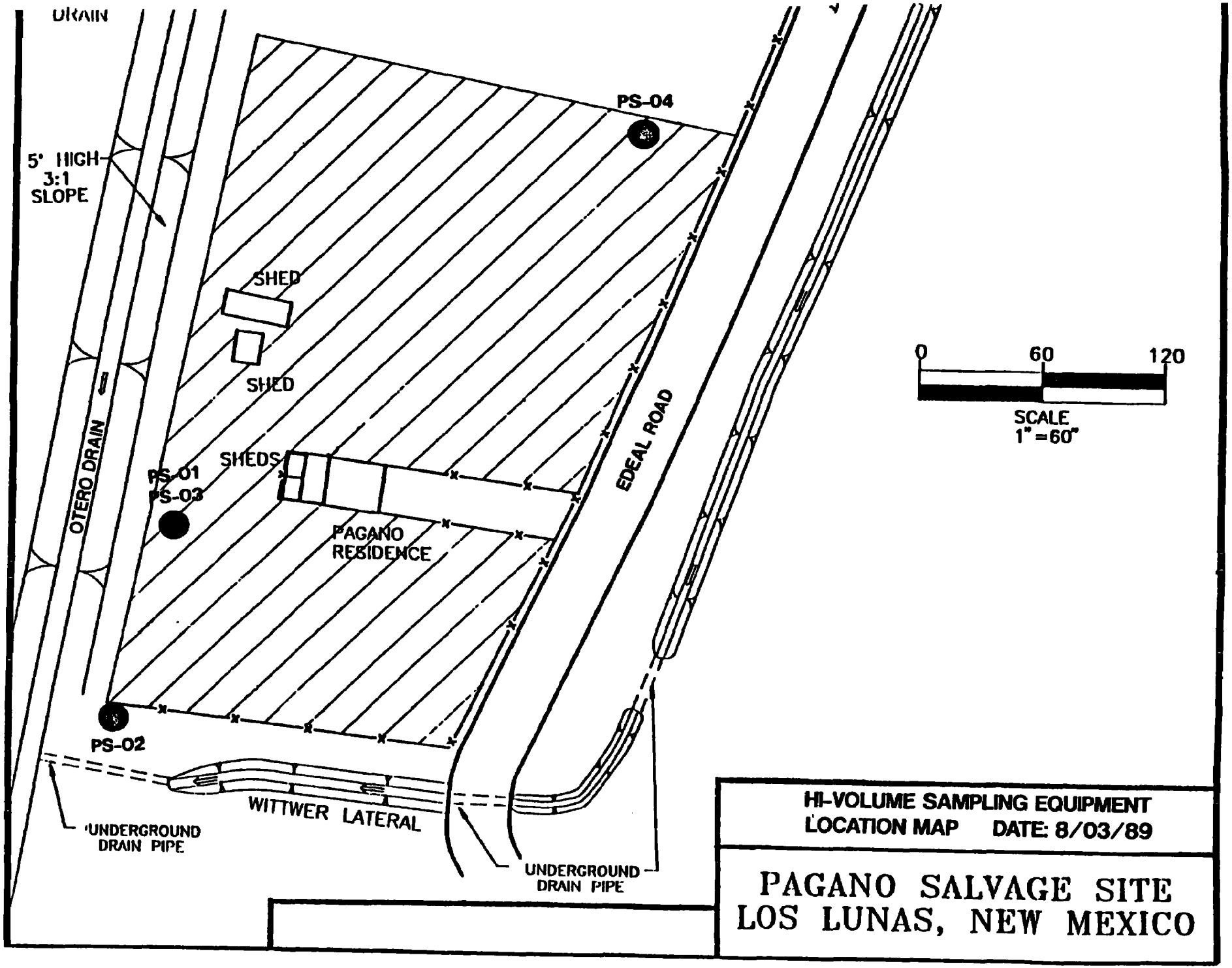
ATTACHMENT G2

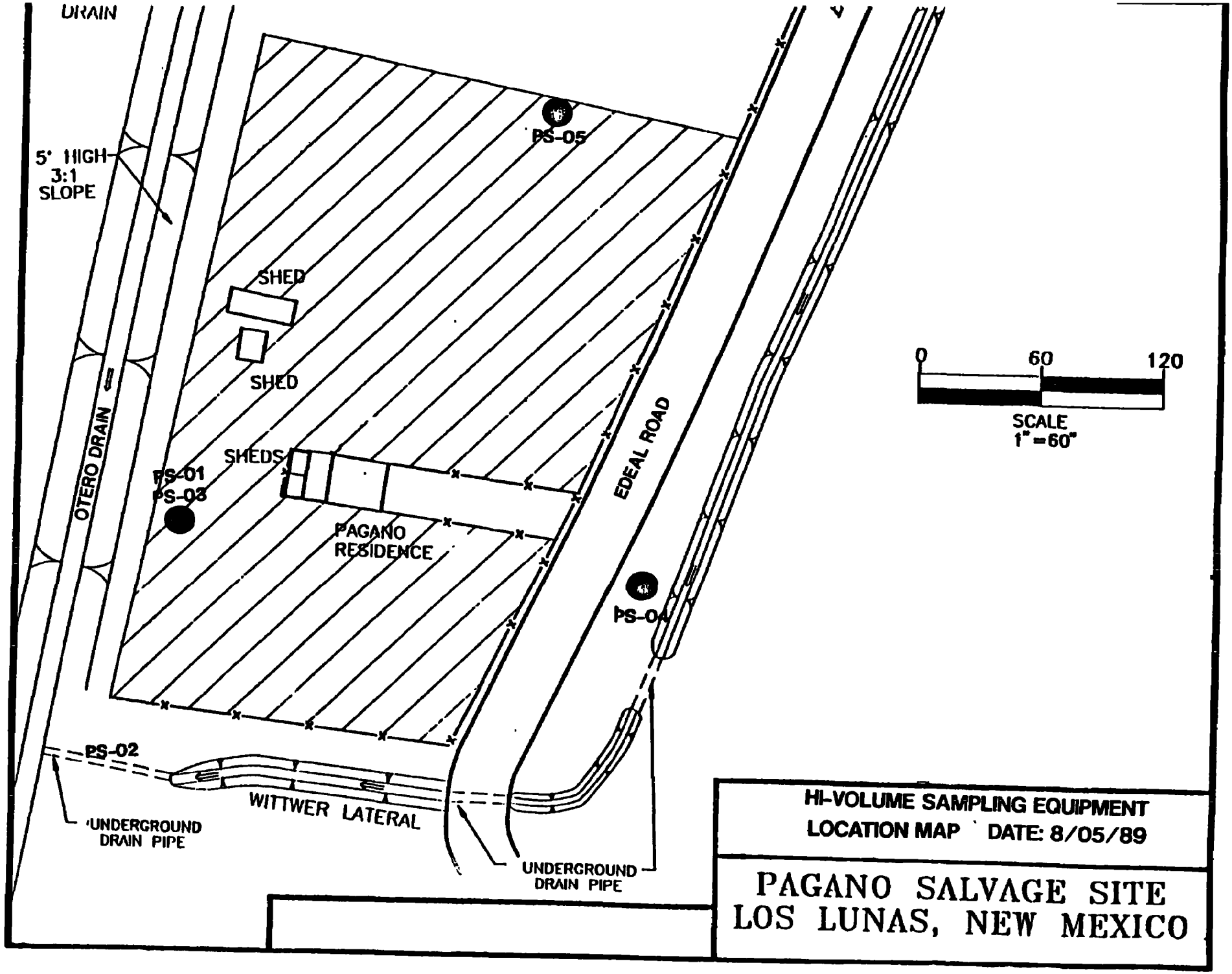

DRAIN
5' HIGH
3:1
SLOPE
SHED
SHED
SHEDS
PS-04
PS-03
PS-05
PS-02
PAGANO
RESIDENCE
OTERO DRAIN
EDEAL ROAD
0
60
120
SCALE
1"=60'
WITTWER LATERAL
UNDERGROUND
DRAIN PIPE
UNDERGROUND
DRAIN PIPE
HI-VOLUME SAMPLING EQUIPMENT
LOCATION MAP DATE: 7/21/89
PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO

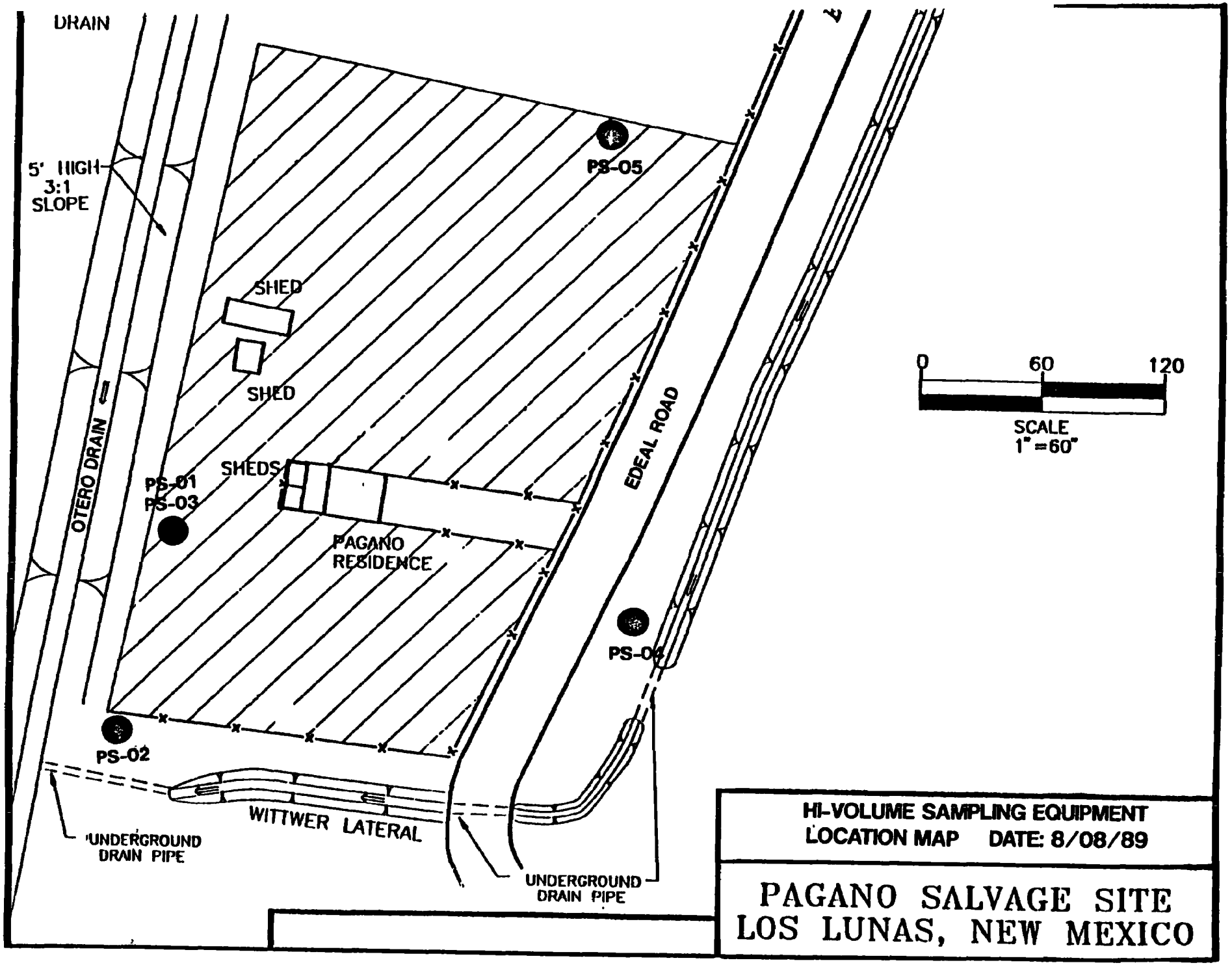


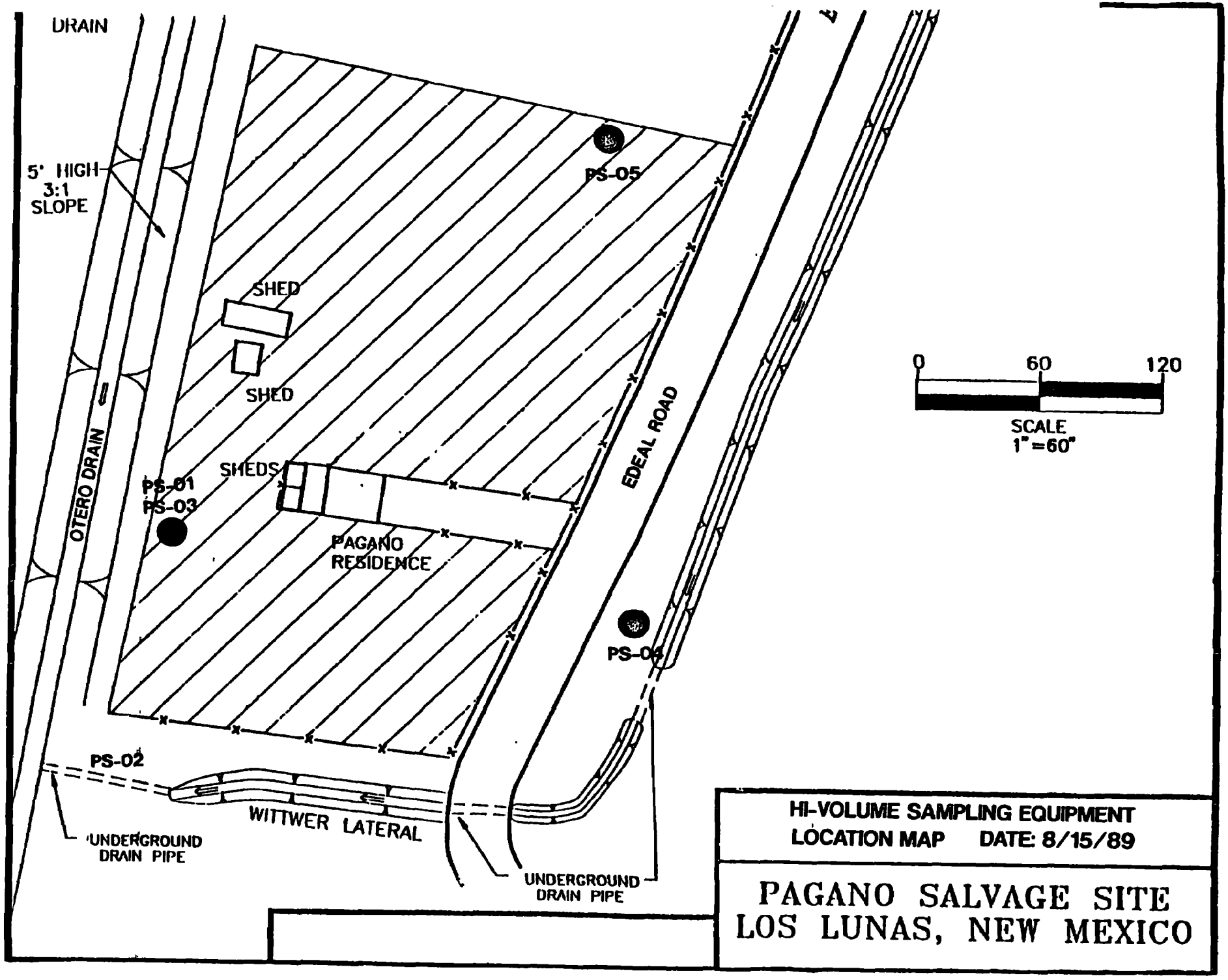
HI-VOLUME SAMPLING EQUIPMENT
LOCATION MAP DATE: 7/28/89

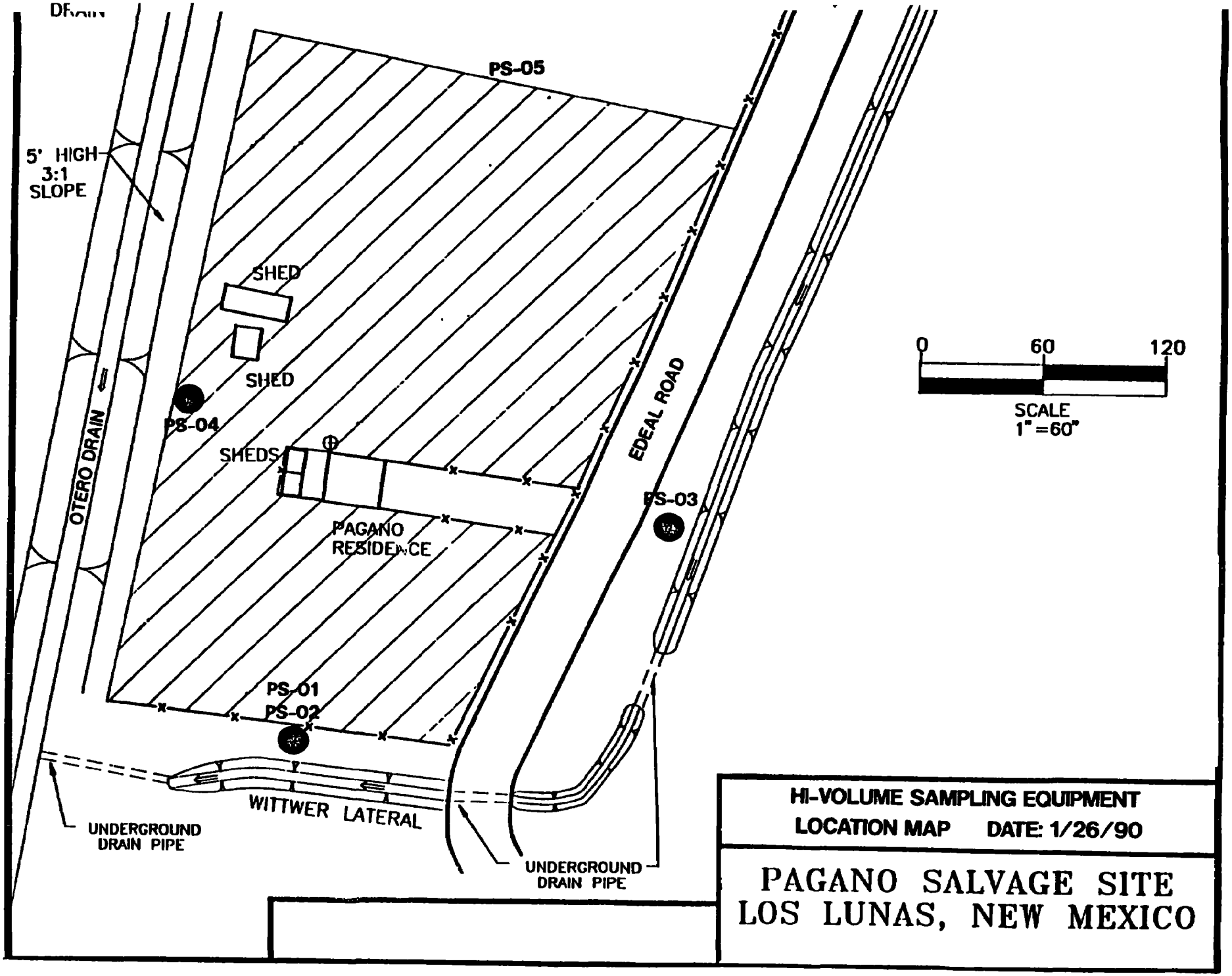
PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO


DRAIN
PS-04
5' HIGH
3:1
SLOPE
SHED
SHED
SHEDS
PS-01
PS-03
OTERO DRAIN
EDEAL ROAD
PAGANO
RESIDENCE
PS-02
WITTWER LATERAL
UNDERGROUND
DRAIN PIPE
UNDERGROUND
DRAIN PIPE
0
60
120
SCALE
1" = 60'
HI-VOLUME SAMPLING EQUIPMENT
LOCATION MAP DATE: 8/03/89
PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO


DRAIN
5' HIGH
3:1
SLOPE
PS-05
SHED
SHED
SHEDS
PS-01
PS-03
OTERO DRAIN
PAGANO
RESIDENCE
EDEAL ROAD
PS-04
PS-02
WITTWER LATERAL
UNDERGROUND
DRAIN PIPE
UNDERGROUND
DRAIN PIPE
0
60
120
SCALE
1" = 60'
HI-VOLUME SAMPLING EQUIPMENT
LOCATION MAP DATE: 8/05/89
PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO


DRAIN
5' HIGH
3:1
SLOPE
PS-05
SHED
SHED
SHEDS
PS-01
PS-03
OTERO DRAIN
PAGANO
RESIDENCE
EDEAL ROAD
PS-04
PS-02
WITTWER LATERAL
UNDERGROUND
DRAIN PIPE
UNDERGROUND
DRAIN PIPE
0
60
120
SCALE
1" = 60'
HI-VOLUME SAMPLING EQUIPMENT
LOCATION MAP DATE: 8/08/89
PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO


DRAIN
5' HIGH
3:1
SLOPE
PS-05
SHED
SHED
SHEDS
PS-01
PS-03
OTERO DRAIN
PAGANO
RESIDENCE
EDEAL ROAD
PS-04
PS-02
WITTWER LATERAL
UNDERGROUND
DRAIN PIPE
UNDERGROUND
DRAIN PIPE
0
60
120
SCALE
1"=60'
HI-VOLUME SAMPLING EQUIPMENT
LOCATION MAP DATE: 8/15/89
PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO


PS-05
5' HIGH
3:1
SLOPE
SHED
SHED
PS-04
SHEDS
OTERO DRAIN
EDEAL ROAD
PS-03
PAGANO
RESIDENCE
PS-01
PS-02
WITTWER LATERAL
UNDERGROUND
DRAIN PIPE
UNDERGROUND
DRAIN PIPE
0
60
120
SCALE
1" =60"
HI-VOLUME SAMPLING EQUIPMENT
LOCATION MAP DATE: 1/26/90
PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO

Attachment H1

PAGANO SALVAGE YARD

- Confirmation Sample Summaries -

SOILS: On-site
ANALYSIS: Total Lead (Pb)/utilizing XRF
DATE COLLECTED: 8/10/90

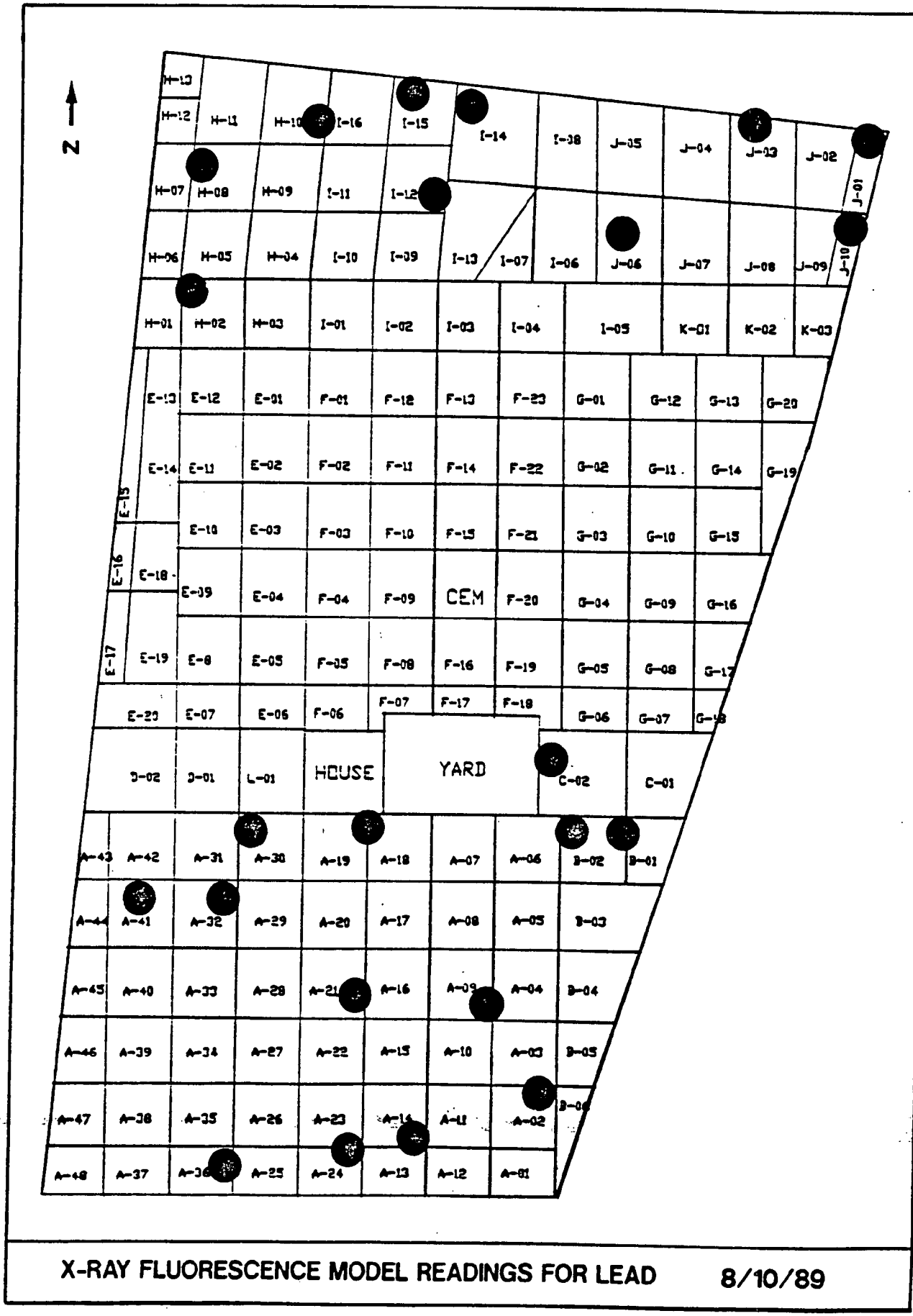
SAMPLE NUMBER	RELATIVE GRID	READING	SAMPLE NUMBER	RELATIVE GRID	READING
A-3	A-41	93	C-02	C-02	33
A-30	A-36	13	H-13	H-10	37
A-34	A-32	163	H-23	H-02	0
A-41	A-30	70	H-26	H-08	13
A-79	A-24	3	I-03	I-14	13
A-85	A-21	77	I-06	I-12	13
A-99	A-14	1090	I-15	I-15	27
A-125	A-09	106	J-03	J-03	0
A-148	A-02	13	J-05	J-01	33
A-163	A-18	70	J-10	J-06	77
B-16	B-02	93	J-13	J-10	40
B-17	B-02	93			

* results shown in mg/kg or PPM

* locations are relative to Grid Map (Attachment C1) and also shown on Attachment H2

Attachment H2

PAGANO SALVAGE YARD



X-RAY FLUORESCENCE MODEL READINGS FOR LEAD 8/10/89

Attachment I1

PAGANO SALVAGE YARD

- Confirmation Sample Summaries -

SOILS: On-site
ANALYSIS: HSL Total Metals - Hazardous Substances List
DATE COLLECTED: 1/10/90

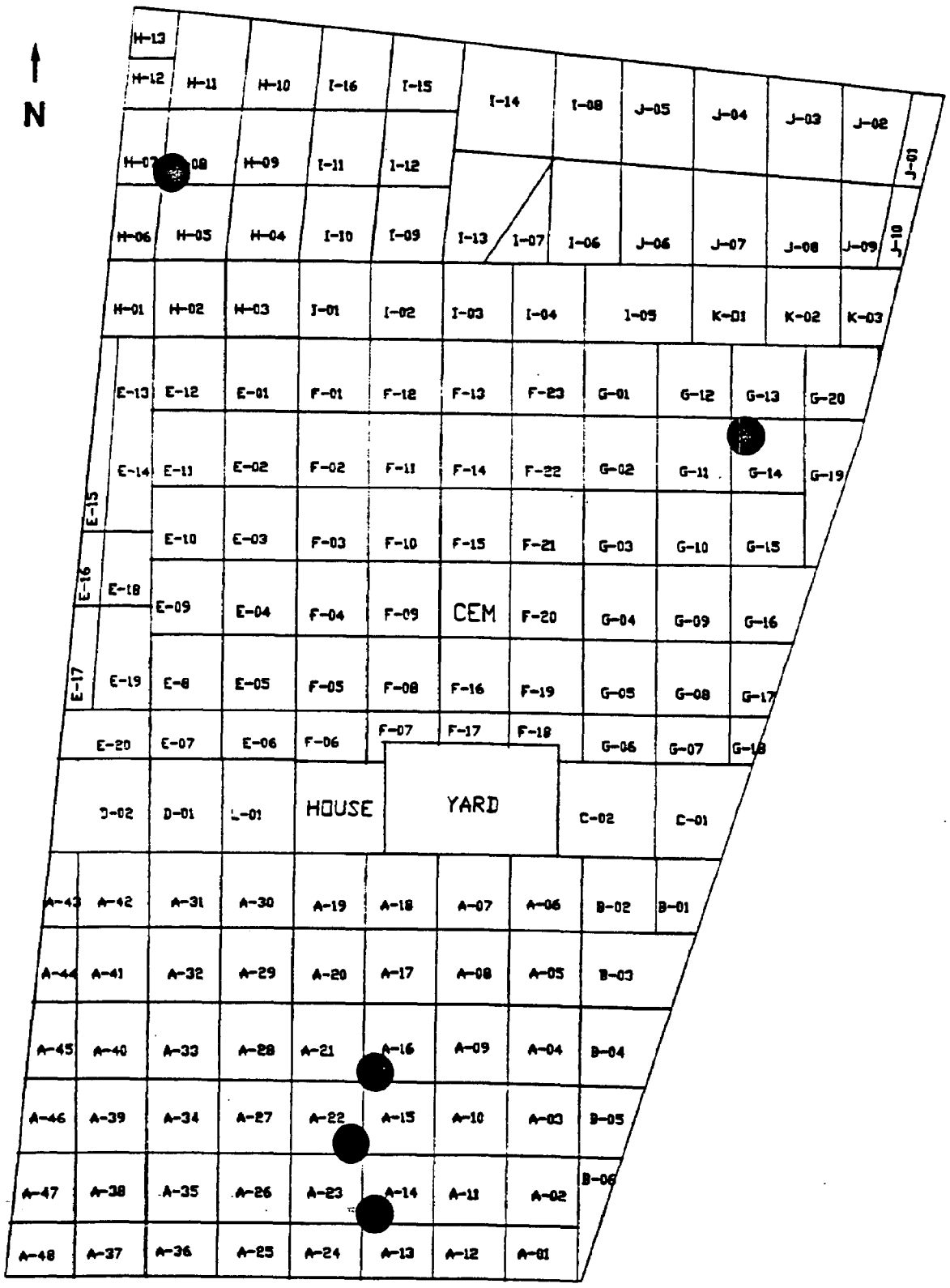
ELEMENT	SAMPLE LOCATION A-14D	A-16D	A-22C	H-08D	G-14A
Arsenic	2.20	3.30	3.30	9.20	2.30
Barium	102.00	84.30	143.00	180.00	125.00
Cadmium	0.20	0.20	0.20	0.20	0.20
Chromium	9.40	7.90	10.90	12.60	9.80
Lead	4.40	4.50	4.90	7.40	5.20
Mercury	0.10	0.10	0.10	0.25	0.10
Selenium	1.00	1.00	1.00	1.00	1.00
Silver	0.40	0.40	0.40	0.40	0.40

* results shown in ug/l or PPB

* locations are relative to Grid Map (Attachment C1) and also on Attachment I2

Attachment I2

PAGANO SALVAGE YARD



HAZARDOUS SUBSTANCE LIST:TOTAL METALS ANALYSIS 1-10-90

Attachment J1

PAGANO SALVAGE YARD

- Confirmation Sample Summaries -

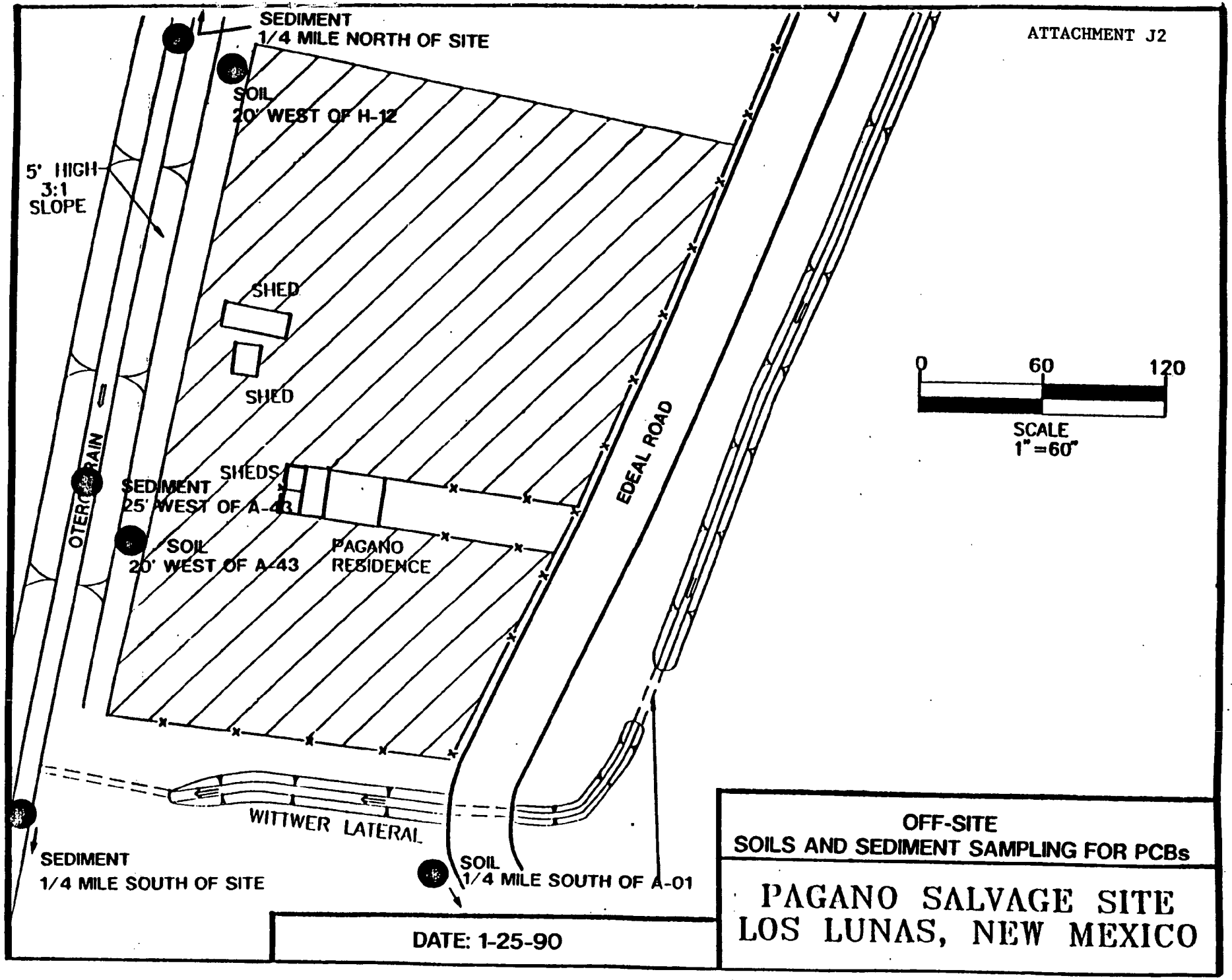
SOIL & SEDIMENTS: Off-site
ANALYSIS: PCBs
DATE COLLECTED: 1/25/90

Station Location	PCB Aroclors 1254	1260	Total Aroclors
west of sect. H	1.90	0.69	2.59
west of sect. A	0.38	10.00	10.38
1/4 mile north of sect. A	0.32	0.32	0.64
Sediment west of sect. A-43	0.37	0.37	0.74
Sediment west of sect. A-43 (duplicate)	0.40	0.40	0.80
Sediment 1/4 mile south of site	0.39	0.39	0.78

* results shown in PPM

* locations are shown on Attachment J2

Attachment J2



OFF-SITE
SOILS AND SEDIMENT SAMPLING FOR PCBs

PAGANO SALVAGE SITE
LOS LUNAS, NEW MEXICO

DATE: 1-25-90

ATTACHMENT J2