

278 184 441

US Postal Service

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MS AMY COOPER  
409 N JACKSON STREET  
CRYSTAL SPRINGS MS 39059

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PS Form 3800, April 1995

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1. Article Addressed to:

MS AMY COOPER  
 409 N JACKSON STREET  
 CRYSTAL SPRINGS MS 39059

2. Article Number (Copy from service label)

2-278 184 441

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Wendy Smith

B. Date of Delivery

10-18-00

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X Wendy Smith  Agent  
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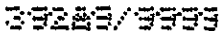
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MS DEPT OF ENVIRONMENTAL QUALITY  
PO BOX 10385  
JACKSON MS 39289-0385  
ATTENTION: GRETCHEN ZMITROVICH





STATE OF MISSISSIPPI  
DAVID RONALD MUSGROVE, GOVERNOR  
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY  
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

October 11, 2000

**CERTIFIED LETTER NO. Z 278 184 441 RETURN RECEIPT REQUESTED**

Ms. Amy Cooper  
409 N. Jackson Street  
Crystal Springs, Mississippi 39059

RE: 409 N. Jackson Street  
Crystal Springs, Copiah County, Mississippi

Dear Ms. Cooper:

The Uncontrolled Sites Section of the Mississippi Department of Environmental Quality (MDEQ) has completed a review of the sampling report prepared by Ogden Environmental and Engineering for the above referenced property. The MDEQ requires no further action at this site at this time.

If cleanup standards change or additional data becomes available for the site, then MDEQ will notify the appropriate parties of the need for any additional investigation(s) or remedial action(s). These actions will be consistent with our need to protect human health, welfare, and/or the environment.

If you have any questions, concerning this matter, please contact Gretchen Zmitrovich at (601) 961-5240.

Sincerely,

A handwritten signature in black ink that reads "Tony Russell".

Tony Russell, Chief  
Uncontrolled Sites Section

Kuhlman Electric-409 N. Jackson (Cooper) SNFA\_10-11-00 (gz)



**FILE COPY**

**STATE OF MISSISSIPPI**  
DAVID RONALD MUSGROVE, GOVERNOR  
**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**  
CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

October 11, 2000

Ms. Amy Cooper  
409 N. Jackson Street  
Crystal Springs, Mississippi 39059

RE: soil and wipe sampling

Dear Ms. Cooper:

Please find attached the report for the soil and wipe sampling recently conducted at 409 N. Jackson, Crystal Springs, MS. The report includes the following:

1. a map showing the sampling locations, and
2. a table containing the sample results for the analysis conducted by the mobile laboratory, Environmental Chemistry Consulting Services.

In addition, please find enclosed a letter from the MDEQ stating that, based on the information collected to date, no further investigative or remedial action is required on your property in regard to contamination from the Kuhlman facility.

Please contact Gretchen Zmitrovich at 601-961-5240 if you have any questions regarding this report.

Sincerely,

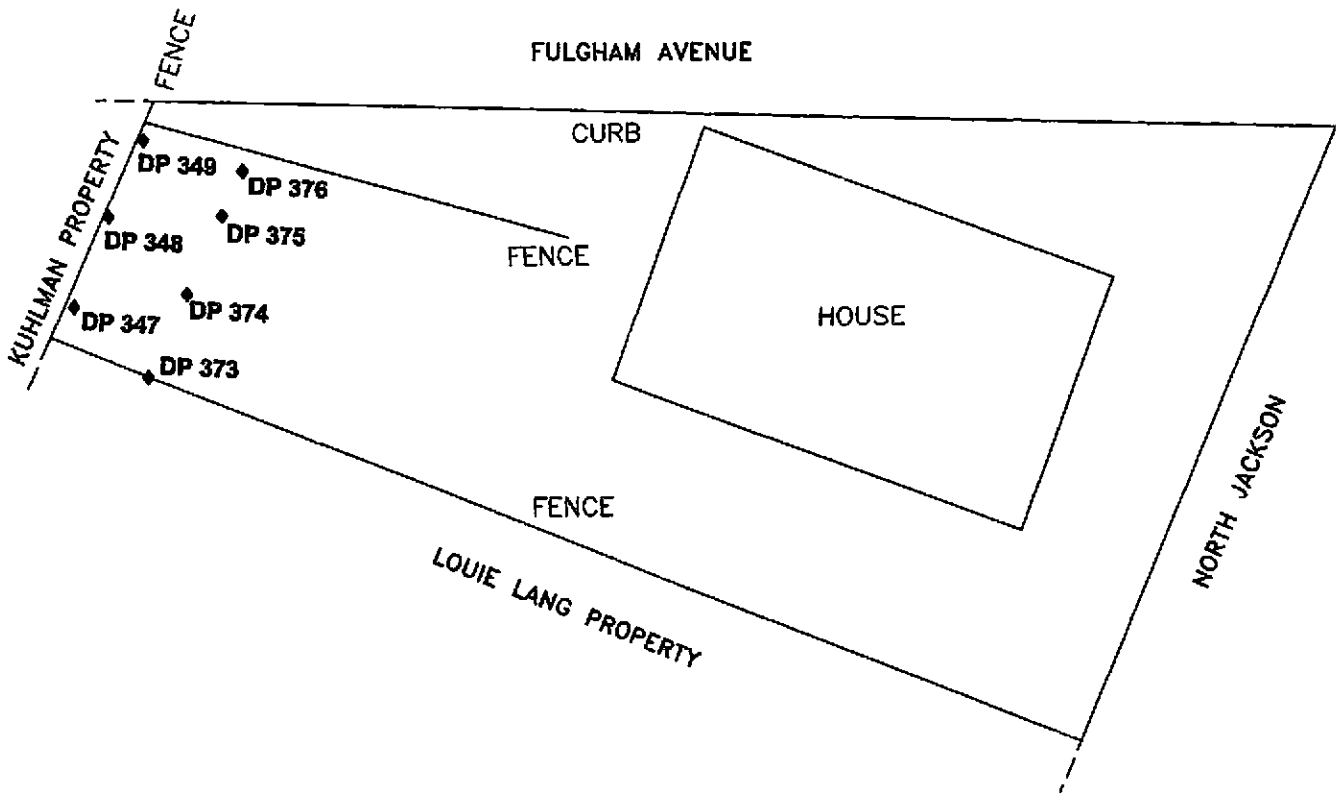
A handwritten signature in black ink that reads "Tony Russell".

Tony Russell, Chief  
Uncontrolled Sites Section

Enclosures

Kuhlman Electric-403 N. Jackson (Cooper) report\_10-11-00 (gz)

# COPY



**LEGEND**

- ◆ SAMPLE POINT
- DP 332 SAMPLE POINT NUMBER



- 1) ALL DISTANCES ARE ESTIMATED
- 2) THIS MAP WAS PREPARED FROM RECORD MAPS
- 3) THIS MAP HAS BEEN PREPARED FOR PRESENTATION PURPOSES ONLY

**SAMPLE LOCATIONS FOR  
AMY COOPER PROPERTY  
409 NORTH JACKSON**

SCALE: AS SHOWN	DR MDI	CHK TF	REV BPS
PREPARED BY: <b>OGDEN</b> ENVIRONMENTAL AND ENGINEERING SERVICES			
200 SOUTH OLD STATEVILLE ROAD • HUNTERSVILLE, NC 28078 • 704-875-3570			
PROJ: 073860000	DATE: 09/24/00	SHEET 1 OF 1	

Soil and Wipe Sample Results  
 Amy Cooper Property  
 409 North Jackson  
 Crystal Springs, Mississippi

SOIL SAMPLES (MG/KG)		DP-347	DP-347	DP-348	DP-348	DP-349	DP-349	DP-373	DP-373	DP-374
Target Analyte	Sample #	4	4	4	4	4	4	4	4	0.5
	Depth (ft)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Lab #	99	101	102	103	104	167	168	169	169
PCB as 1260		0.13	0.22	<0.10	0.61	<0.10	<0.10	NA	<0.10	<0.10
Collection Date		8/17/00	8/17/00	8/17/00	8/17/00	8/17/00	8/17/00	8/18/00	8/18/00	8/18/00
Collection Time		14:02	14:09	14:11	14:14	14:16	15:27	15:29	15:52	15:52
Injection Date		8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	8/19/00	NA	NA	8/19/00

Notes:

NA indicates sample not analyzed

WIPE SAMPLES (TOTAL UG)		ACW-1	ACW-2	ACW-3	ACW-4	ACW-5	ACW-6
Target Analyte	Sample #	610	611	612	613	614	615
	Depth	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Lab #						
PCB as 1260		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Collection Date		8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00
Collection Time		9:38	9:40	9:45	9:49	9:51	9:52
Injection Date		8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00

LOCATION:

- ACW1: Right handrailing of back porch stairs, second step from the bottom.
- ACW2: Seat of plastic Kawasaki 4 wheeler.
- ACW3: Edge padding on trampoline.
- ACW4: Lawnmower discharge chute.
- ACW6: Top of steel mesh patio table.
- ACW6: Roof of Little Tykes car.



Soil and Wipe Sample Results  
 Amy Cooper Property  
 409 North Jackson  
 Crystal Springs, Mississippi

SOIL SAMPLES (MG/KG)										
Target Analyte	Sample #	DP-374	DP-375	DP-375	DP-376	DP-376	DP-376	DP-348	DP-349	
	Depth (ft)	4	0.5	4	0.5	4	0.1	0.1	0.1	
	Lab #	170	171	172	173	174	1138	1139		
PCB as 1280		NA	<0.10	NA	<0.10	NA	1.0	0.47		
	Collection Date	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	9/19/00	9/19/00	9/19/00	
	Collection Time	15:53	15:58	15:59	16:02	16:04	16:50	16:54	16:54	
	Injection Date	NA	8/19/00	NA	8/19/00	NA	9/20/00	9/20/00	9/20/00	

Notes:

NA indicates sample not analyzed

BorgWarner  
Inc.

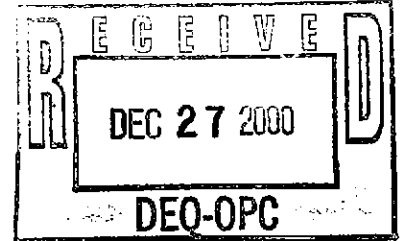
200  
South  
Michigan  
Avenue

Chicago,  
Illinois  
60604

Telephone  
312 322 8500

AH-00-1638

VIA UPS NEXT DAY AIR



**BorgWarner**

December 20, 2000

Ms. Gretchen Zmitrovich  
Mississippi Department of Environmental Quality  
Office of Pollution Control  
101 West Capitol Street  
Jackson, Mississippi 39201

Anastasia Hamel  
Director, Environmental Programs  
BorgWarner Inc.  
11955 East Nine Mile Road  
Warren, Michigan 48089

Re: **Progress Report of Assessment and Remediation Activities  
Kuhlman Electric Corporation and Residential Properties  
Crystal Springs, Mississippi**

**FILE COPY**

Dear Ms. Zmitrovich:

This is a progress report to summarize the assessment and remediation activities related to PCB contamination at Crystal Springs, Mississippi. BorgWarner's last update was October 31, 2000. As you are aware, pursuant to the indemnity agreement between Kuhlman Electric Corporation (KEC) and BorgWarner Inc., BorgWarner has continued the assessment at the KEC plant and began the assessment of residential properties along a drainage channel downgradient of the plant. BorgWarner has also been actively remediating those properties adjacent to the KEC plant for which access was previously granted and sampling was complete.

BorgWarner, as it stated in its October 31, 2000 letter to the Mississippi Department of Environmental Quality (MDEQ), remains committed to working closely with MDEQ, USEPA, local government and KEC in a cooperative manner to accomplish the tasks necessary for the protection of human health and the environment, to the extent that the circumstances are covered by its contractual indemnity to KEC. BorgWarner will continue to seek MDEQ's guidance and direction in its current and future intended activities and to promptly share information.

### ACTIONS TAKEN AND PLANNED

#### **1. Delineation of Residential Properties along Jackson and Lee Avenues**

BorgWarner promptly and voluntarily began sampling and delineation activities at the residential and commercial properties, adjoining the KEC plant that appeared to or reportedly have been affected by runoff or by the removal of soil from the KEC plant prior to October 6, 1999.

Under MDEQ's supervision, BorgWarner conducted delineation activities of these properties during the month of August, 2000. A total of eighteen (18) properties were investigated, which were:

1. Perry Smith, 219 North Jackson Street
2. Stringer Funeral Home, 301 North Jackson Street
3. Stringer Rental Property, 303 North Jackson Street
4. Harold and Suzanne Warren, 403 North Jackson Street
5. Elnor Wright, 401 North Jackson Street
6. Sonny Reeves, 405 North Jackson Street
7. Brent Property, 403 Lee Avenue
8. Louie Lang/David Vinson, 407 North Jackson Street
9. Jerry Youngblood, 100 Lamar St.
10. Medical Clinic, Lee Avenue
11. Edwards Property, 406 Lee Avenue
12. Garment Shop, 414 Lee Avenue
13. Frazier Property, 405 Lee Avenue
14. Duplex Property, 408/410 Lee Avenue
15. Kellum Property, 412 Lee Avenue
16. Dabney/Smith Property, 215 North Jackson
17. Cooper Property, 409 North Jackson
18. Larry and Carol Wright, 305 North Jackson

BorgWarner acted under the continuous guidance and direction of the MDEQ with respect to delineation activities at the residential and commercial properties adjoining the KEC plant. Split samples were analyzed and QA/QC procedures were implemented by two laboratories experienced with polychlorinated biphenyl analysis. Samples were frequently split with on-site MDEQ representatives for MDEQ's independent analysis, which to our knowledge consistently correlated with BorgWarner's on-site and off-site laboratory analytical results.

The delineation activities were conducted utilizing the "US EPA, Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual," May 1996 (EISOPQAM), sampling and analytical protocols. A copy of the work plan with procedures used in the field and applicable sections of the EISOPQAM are attached to this report for reference purposes.

Upon completing the delineation activities, BorgWarner compiled and submitted the analytical results on October 2, 2000 to MDEQ and US EPA, Region IV. Subsequently, BorgWarner began to schedule the remediation of residential and commercial properties adjacent to the KEC plant and along Jackson and Lee Avenues for which access was granted with the assistance of MDEQ and City of Crystal Springs Mayor Webb and where an attorney and/or an independent consultant were not involved in performing conflicting sampling activities.

## **2. Remediation of Residential Properties**

On October 16, 2000 BorgWarner initiated remediation activities at the Medical Center and the Dabney/Smith properties, which are adjacent to the KEC plant. Remediation of the Newman Duplex, on Lee Avenue, began on November 30, 2000. Remediation of these properties involved excavation and disposal of all soil containing 1.0 part per million (ppm) or greater of PCBs in accordance with MDEQ's established clean-up criteria for residential properties. All soils containing greater than 1 ppm PCBs but less than 50 ppm PCBs were profiled and disposed of at the BFI's "Little Dixie" Subtitle D Landfill in Madison County, Mississippi after MDEQ and US EPA, Region IV approvals were obtained.

Following excavation, all excavated areas were sampled to confirm that impacted soil had been removed. In correspondence regarding disposal requirements, Craig Brown of US EPA, Region IV, stated that the excavated soils did not meet the definition of "PCB remediation waste." Under this definition, the remediation activities fell under the management criteria and guidelines set by MDEQ. As a result, the remediation and confirmation of clean-up standards established by MDEQ guidance were adopted and implemented in all of BorgWarner's residential remediation activities. A grid with ten-foot (10) sampling point centers was used to confirm that impacted soils had been removed at each site.

The remediation of the Dabney/Smith, the Medical Center and the Newman duplex property resulted in the removal of 1400 tons of soil, which was disposed of at the BFI "Little Dixie" Subtitle D Landfill and replaced with 1500 tons of certified clean soil. During the remediation activities, the on-site laboratory analyzed 324 soil samples in the month of November and the fixed-base laboratory analyzed 32 quality control samples.

Vegetation, such as live oak trees, was treated with specialty equipment for maximum protection and to minimize damage to the root systems. Soil surrounding the live oak tree roots was removed using an "Air Shovel"<sup>™</sup>, a unique technology adopted specifically for this purpose. The Air Shovel<sup>™</sup> uses a pressure spray to dislodge soil from around the roots while a vacuum system removes the soil and water by vacuuming into a tank. This method of soil removal has performed effectively with minimal damage to the tree's root system as was confirmed by the landscaping contractor and arborist. However, this process, regardless of its effectiveness, is very tedious and as a result only the tree on the Dabney/Smith property was completed during the second half of November. One other live oak tree, located on the Medical Center property, remains to be treated in a similar fashion and is scheduled for January 2001.

Landscaping and replacement of structures (sheds, car ports, etc.) on both the Medical Center and the Dabney/Smith properties are continuing and will most likely be completed by the end of December 2000. Both properties have been surveyed and the fence between the Dabney/Smith and Medical Center properties is currently being re-installed. Landscaping has been completed on the Newman duplex property.

Third party independent sampling activities commissioned by the Nutt & Associates Law Firm have interfered with planned remediation activities along Lee Avenue, specifically at the Frazier's, Edward's, and Kellum's properties. The Garment Shop is a more complicated matter for two reasons. First, the impacted soil at the Garment Shop is located at the property line between it and the Kellum residence and second, the Kellum elm tree roots extend to the Garment Shop property itself. BorgWarner has filed a Freedom of Information Act request to MDEQ in an effort to obtain a copy of the recently submitted report generated by these independent parties.

BorgWarner, after its evaluation of the sampling results and data contained within the third party report, will begin discussions with the attorney(s) representing each resident (mentioned above) along Lee Avenue in an attempt to resolve the matter, including confirmation that all sampling results have been disclosed, and whether further sampling is necessary, and confirm access to then remediate those properties. BorgWarner also plans to keep MDEQ appraised of any developments and any progress or if no progress is being made with the attorney(s) involved.

BorgWarner will schedule delineation activities for the Gas Station, which is at the corner of Lee Avenue next to the Garment Shop, Mayor Webb's residence and the drainage pathway to the south. BorgWarner will inform MDEQ of the timing for those activities.

### 3. Drainage Channel Properties

Beginning on October 30<sup>th</sup> through the end of November, BorgWarner collected and analyzed soil samples from nine properties situated along the drainage channel leading from the north side of KEC's plant site to Lake Chautauqua. The properties were:

1. Sojourner Property, 111 M<sup>e</sup>Pherson Street
2. Weathersby Property, 101 Forest Street
3. Robert Williams Property (Lonnie Williams' residence), 103 Forest Street
4. Flossie M<sup>e</sup>Murray Property (Ralph Williams residence), 104 Forest Street
5. Ralph Williams Rental Property, 107 Forest Street
6. Richard Williams Property, 102 Forest Street
7. Roberta Fitzgerald Estate Property, (R.P Edwards point of contact) 108 Tucker Street  
Property currently is being rented to the Kendrick family.
8. Welch Property, 501 Camp Street
9. Orister Harris Property, 311 West Railroad Avenue

A total of 650 soil samples was collected from these properties and analyzed by the on-site laboratory. The fixed-base laboratory analyzed an additional 65 samples for confirmation and quality control purposes. These preliminary assessment activities were conducted in the same manner as the Kuhlman plant preliminary site assessment and the KEC plant adjacent residential properties; and utilizing the "EPA, Region IV Environmental Investigations Standard Operating

Procedures and Quality Assurance Manual", May 1996 (EISOPQAM), sampling and analytical protocols.

Preliminary results available at this time indicate that six of the nine properties that were sampled will require certain remediation. Four properties, including the Sojourner, Williams' rental, Harris and Welch properties, will require remediation under the MDEQ guidelines since the highest concentrations detected are less than 50 ppm. Two properties, including the M<sup>c</sup>Murray and R. P. Edwards properties, have soil with PCB concentrations greater than 50 ppm and therefore will require remediation under the TSCA rules. The following is a list of properties where concentrations greater than 1.0 ppm PCB were detected as well as the highest detected concentration on each property:

<u>Property</u>	<u>Highest Detected Concentration</u>
Sojourner	2.6 ppm
Williams rental	30.0 ppm
Harris	1.2 ppm
Welch	8.4 ppm
M <sup>c</sup> Murray	70.0 ppm
R. P. Edwards	51.0 ppm

Data from this sampling event are being evaluated and once quality control measures are completed the data will be tabulated. Site-specific reports containing collected data, maps of sampling locations, and work plans for remediation, if required, for each individual site are also being prepared and will be submitted to MDEQ and US EPA, Region IV by January 12, 2001.

It is anticipated that additional sampling will be required along the drainage channel. Several undeveloped properties, either abutting the drainage channel or through which the drainage channel runs, will be sampled to delineate the extent of possibly impacted soil and determine the potential for future runoff to Lake Chautauqua. The Department will be kept apprised as to the timing for this additional investigation and sampling activity.

#### 4. KEC Plant

After an initial phase of sampling in the areas identified by KEC's construction activities and the related equipment decontamination zone, BorgWarner conducted further, substantial sampling activities in the south and north parking lot areas as well as the former above ground storage tank area. These delineation activities, other than any possible data gaps, have been completed. The results are currently being tabulated and compared for correlation purposes between the on-site and off-site laboratories, prior to being issued to MDEQ. Should any data gaps exist, BorgWarner will conduct further sampling activities.

This additional data will be incorporated as an addendum to the *Preliminary Site Assessment Report*, submitted to MDEQ in July 2000. Comments to the *Preliminary Site Assessment Report* made by MDEQ will also be addressed and included in the addendum submittal. It is anticipated that the addendum report will be submitted to MDEQ by February 12, 2001.

#### 5. Lake Chautauqua

BorgWarner intends to consider delineation of the sediments at Lake Chautauqua, ecological assessment, and surface water sampling, to the extent appropriate after receipt of the pending "Task Force" report. These activities will not begin on any great scale until the Task Force report is evaluated.

#### 6. Groundwater Delineation

BorgWarner intends to delineate the nature and extent of any groundwater contamination relative to the KEC plant. Groundwater delineation will take place at the time that remediation at the KEC plant commences. It is critical that the protective cover at the KEC plant site is not disturbed for the time being and that the groundwater investigation is addressed when BorgWarner is actively remediating on the KEC plant property. This approach will ensure that sediments from the KEC Plant do not travel to the drainage channel and Lake Chautauqua.

BorgWarner remains dedicated to continuing its open communication with MDEQ and US EPA, Region IV and looks forward to the meeting with MDEQ and City of Crystal Springs Mayor Webb and other Crystal Springs representatives on January 17, 2001 (at 8:30 a.m.) to further discuss any of the above and share its plans for future activities.

Should you have any questions or comments, please contact me directly at (810) 497-4503 at your earliest convenience.

Very truly yours,



Anastasia Hamel  
Director, Environmental Programs  
BorgWarner Inc.

Ms. Gretchen Zmitrovich MDEQ  
December 20, 2000  
Page 7 of 7

**Attachments:**

1. Work Plan – Preliminary Assessment and Remediation
2. Craig Brown, US EPA, Region IV letter to BFI

cc: J. Banks, MDEQ  
T. Russell, MDEQ  
K. Dowell, Esq., MDEQ  
C. Brown, US EPA Region IV  
H. Webb, Mayor Crystal Springs  
Laurene H. Horiszny, Esq.  
Robert Martin, MSGA  
Thomas D. Lupo, Esq.  
Scott E. Schang, Esq.  
Mickey Crockett, KEC  
Al Thomas, KEC



**WORKPLAN FOR THE PRELIMINARY  
ASSESSMENT AND REMEDIATION OF PCB CONTAMINATION IN SOIL  
KUHLMAN ELECTRIC CORPORATION FACILITY  
AND RESIDENTIAL COMMERCIAL PROPERTIES  
IN CRYSTAL SPRINGS, MISSISSIPPI**

As established by the Mississippi Department of Environmental Quality (MDEQ) guidelines in connection with this project, all work related to the preliminary assessment of the extent of contamination at the Kuhlman Electric Corporation (KEC) facility and work related to the preliminary assessment and confirmation of remedial actions at KEC adjacent residential/commercial properties and residential properties along the drainage channel (leading from the north side of KEC's facility to Lake Chautauqua) has been performed in accordance with the *Environmental Protection Agency (EPA), Region IV "Environmental Investigations, Standard Operating Procedures and Quality Assurance Manual", May 1996 (EISOPQAM)*.

Copies of relevant and applicable portions of the EISOPQAM are maintained on site during all field activities and all field personnel are trained in its implementation. Remedial action confirmation sampling grids were established using *MDEQ Guidance Document, Verification of Soil Remediation, Environmental Response Division, Waste Management Division, April 1994, Revision 1*. Specifically, sampling grids were based on Part 2-Medium and Large Site Soil Cleanup Verification, "Establishing Grid Interval."

Field operations were performed under the site-specific Health and Safety Plan guidelines. Modified Level "D" Personal Protective Equipment (PPE) was utilized by all personnel working within the investigative area.

## **Sampling Objectives**

The soil-sampling objective is to establish the vertical and horizontal extent of contamination resulting from historical facility operations. In the KEC facility case, the soil-sampling objective included historical use of polychlorinated biphenyl (PCB). All sampling procedures were conducted in accordance with the US EPA, Region IV EISOPQAM. Sampling procedures included the collection of soil samples on a twenty foot triangular grid, where possible, at discreet depth intervals. Surface and subsurface soil samples were collected using GeoProbe<sup>®</sup> MacroProbe<sup>™</sup> direct push sampling equipment. The GeoProbe<sup>®</sup> system uses a hydraulically driven hammer to advance a hollow, split-barrel sampler to the desired depth. The sampler contains an acetate liner in which a sample of the cored soil is retained. The MacroProbe<sup>™</sup> corer retains a 1.25-inch diameter continuous 4 feet in length core sample. Once sampling is completed, the direct-push boring holes are backfilled with bentonite chips in unpaved areas, and with grout in parking lots and other paved areas.

Throughout the delineation activities each direct-push boring was sampled at 0.5-3.0 feet below ground surface (bgs) and at 3.0-6.0 feet bgs. Selected borings were completed to depths varying from 8-12 feet bgs and sampled in these deeper intervals to evaluate the vertical distribution of contaminants.

Additional sampling of dust, stream and drainage ditch sediments, surface water and ground water were collected, as warranted, in accordance with applicable EISOPQAM guidelines.

### Analytical Methods

Samples that were collected were analyzed for PCBs by the on-site **mobile laboratory**, Environmental Chemistry Consulting Services (ECCS) of Madison, Wisconsin. **Initially** soil samples were also analyzed for chlorinated benzenes until data confirmed that chlorinated benzene contamination is not at issue in samples with low concentrations of PCBs (generally <20 ppm). At least 10% of all samples were split and sent to a fixed-base laboratory, Paradigm Analytical Laboratories, Inc. (PAL) of Wilmington, North Carolina for analysis of the same parameters as for the on-site mobile laboratory to corroborate the results of laboratory analyses for quality control and quality assurance measures. Both the on-site and fixed-base laboratories used the same standard EPA approved analytical methods. PCBs were analyzed by Modified Environmental Protection Agency (EPA) Method 8080/81 and chlorinated benzene compounds were analyzed by EPA Method 8270. Volatile organic compounds (VOCs) were analyzed by EPA Method 8260 for samples suspected of being impacted by other industrial processes solvents unrelated to PCBs. Select soil samples were also analyzed for silver, by EPA Method 6010B, and cyanide, by EPA Method 9012A.

Surface water samples were analyzed by PAL for PCBs using EPA Method 8080/81. Semivolatile organic compounds (SVOCs) were analyzed by EPA Method 8270, Volatile Organic Compounds (VOCs) were analyzed by EPA Method 8260, silver by EPA Method 6010B, and cyanide using Standard Method 4500 Cn-E. Perched ground water was analyzed for PCBs, SVOCs, and VOCs by the same methods as indicated above for surface water.

**Quality Control**

The following is the list of key personnel dedicated to this project:

**Project Manager:** Mr. Robert Martin, Martin & Slagle GeoEnvironmental Associates, LLC

**Duties:** Responsible for management of project including all field coordination efforts.

**Field Sample Custodian:** Mr. Robert Martin, Christine Slagle, Martin & Slagle GeoEnvironmental Associates, LLC

**Duties:** Maintaining custody of samples, completing sample labels, Chain-of-Custody record.

**Field Team Leader:** Mr. Robert Martin, Martin & Slagle GeoEnvironmental Associates, LLC

**Duties:** Responsible for all activities related to the collection of samples.

**Samplers:** Tim Fitzpatrick, Christine Slagle, Robert Martin

**Duties:** Individuals responsible for the actual collection of samples.

**Laboratory Sample Custodian:**

Mr. Michael Linskens, ECCS  
Mr. Nicolas Schertz, ECCS  
Ms. Erin Staagard, PAL

**Duties:** Individuals responsible for accepting custody of samples from the field sample custodian.

## Quality Assurance Objectives for Data

Data for this project is being generated by two separate entities. The on-site data is generated by ECCS in their mobile laboratory. The fixed-base laboratory, PAL in Wilmington, North Carolina, generates the analytical results for the split samples.

The data quality objectives are pre-defined for the ECCS data in that Mississippi considers all mobile lab data screening level data. ECCS uses the same equipment and methodology as the fixed-base laboratories with the exception of the mini-extraction modification. Mobile laboratory data is validated by comparison of a minimum of 10% split samples with PAL. Following this procedure, the data qualifies as screening data with definitive confirmation under US EPA, Region IV EISOPQAM guidelines.

All samples sent to PAL were collected as follows: The sample was transferred from the GeoProbe® clean, unused, acetate sample liner into the labeled 4 ounce (oz) amber glass soil jar. The sample jar was then transferred to the mobile lab where ECCS personnel homogenized the sample prior to taking an aliquot for analysis. Due to the limited sample volume required by the ECCS mini-extraction and the low volatility of the chemicals of concern, the initial sampling jar was resealed (after ECCS personnel removed the amount of sample needed for their analysis), refrigerated and then sent to PAL; meaning PAL analyzed the sample from the exact same sample jar as ECCS.

Equipment rinsate samples were collected for evaluation of cross-contamination potential from ineffective decontamination procedures. These were prepared by pouring distilled water over the sampling equipment after decontamination and collecting and preserving the rinsate that was generated. Equipment rinseate samples were collected in accordance with the EPA, Region IV EISOPQAM guidelines.

Field blank samples were collected by filling sampling containers that were kept in the transition zone with distilled water. Field blanks determine the presence of ambient contaminants that may not be directly related to concentrations of contaminants in the sample media.

Blind duplicate soil samples were collected for analysis and sent to both laboratories. Blind duplicates were collected by homogenizing an aliquot of sample in a disposable plastic container and splitting the homogenized sample into two containers. After ECCS took their aliquot of these samples, the remainder of the sample was sent to PAL for analysis.

## **SAMPLE CONTROL AND FIELD RECORDS**

### **Sample Identification**

All samples sent to PAL for analysis conform to the labeling requirements under section 3.2.1 of the EISOPQAM.

#### **8.3.1 Chain of Custody Procedures**

Samples were logged as they were collected from the geoprobe liners. Date, time and sample lithology were recorded on each log. Samples were then transferred to 4 oz amber glass jars and the jars transferred to a small sample cooler, which was taken to the mobile lab by field personnel in charge of sample handling. Sample identification (ID), date and time sampling occurred were recorded in the field logbook before transferring the samples to the mobile lab. Upon arrival at the mobile lab, the samples were transferred to the ECCS sample custodian who logged each sample on ECCS chain of custody forms. Each sample was assigned a unique ECCS internal ID number for tracking purposes. After analysis, the samples were transferred to either a sample refrigerator in the mobile lab or stored in coolers with ice until they were either shipped to PAL for confirmation analysis or readied for disposal. For samples sent to PAL, a new chain of custody form was completed by field personnel in charge of sample handling.

#### **8.3.2 Field Records**

Field records were kept in accordance with procedures and guidelines specified in section 3.5 of EISOPQAM.

#### **8.4 Analytical Procedures**

For analysis of samples in the field, ECCS used EPA Method 8082m, **modified for quantitation** of chlorinated benzenes and the mini extraction procedure.

PAL used EPA Method 8082 for quantitation of PCBs. For chlorinated **benzenes**, it used EPA Method 8270. While Method 8270 does not cover all the chlorinated **benzenes**, it provides confirmation of the ones it does detect and has the added benefit of supplying **an analysis** of a broad range of other semivolatile organic compounds.

For the analysis of cyanide EPA Method 9012A was employed and for silver EPA Method 6010B.

Selected samples were analyzed by EPA Method 8260, primarily to confirm that **volatile organic** compounds were not present in the samples or part of the site contaminants.

#### **8.5 Laboratory Quality Assurance/Quality Control (QA/QC)**

QA/QC procedures for both labs were found to be virtually identical. **Summaries** of each laboratory procedures follow.

*ECCS:*

- ◆ Continuous calibration standards analyzed every ten samples or less and at the end of a run.
- ◆ Blank samples and laboratory control samples (LCS) analyzed every twenty samples or less with a minimum of one per day.
- ◆ Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples analyzed every twenty samples or less with a minimum of one per day.

*PAL:*

- ◆ Continuous calibration standards analyzed at least once every 12 hour shift plus a minimum of every 20 samples gas chromatography/mass spectroscopy (GC/MS) criteria follows method specific tuning requirements per EPA Method 8270.
- ◆ Blank and LCS samples analyzed every 20 samples or less with a minimum of one per day.
- ◆ MS/MSD samples analyzed every 20 samples or less with a minimum of one per day.

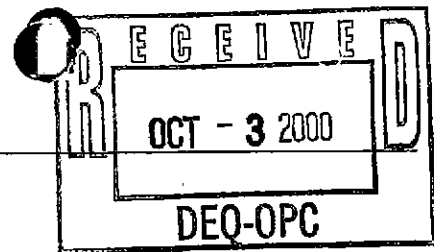
### **8.6 Data Validation and Reporting**

As discussed in section 8.2, the primary validation of the ECCS data was accomplished through comparison with the data from PAL.

Since Hexachlorobenzene and 1,2,4-Trichlorobenzene are the only chlorinated benzenes on the standard Method 8270 list, these two compounds and total PCBs were the parameters tracked for the data validation procedure.

Overall, the correlation to this point of the investigation and remediation activities has been excellent with the majority of sample splits showing Relative Percent Differences (RPDs) of less than 100. Considering the inherent variability of soil as a matrix, achieving 93% acceptable split data spanning several orders of magnitude of concentration serves to justify the use of the on-site data as definitive quality.





October 2, 2000

**FILE COPY**

Ms. Gretchen Zmitrovich  
Office of Pollution Control  
Mississippi Department of  
Environmental Quality  
P.O. Box 10385  
Jackson, Mississippi 39289-0385

**SUBJECT: Transmittal of Analytical Data for Residences  
Kuhlman Electric Corporation  
Crystal Springs, Mississippi**

---

Dear Ms. Zmitrovich:

Attached are site plans and spreadsheets showing sampling locations and analytical results from sampling of soils by Ogden Environmental and Energy Services. The soil samples were collected from residential properties surrounding Kuhlman Electric Corporation. Samples were collected from various depths ranging from ground surface to 4 feet below grade and analyzed by an on-site laboratory. Split samples were sent to Paradigm Analytical Laboratories for confirmation of on-site lab results.

The following properties have concentrations of PCB 1260 in excess of 1 mg/kg.

1. Medical Clinic on Lee Avenue
2. Edwards Property at 406 Lee Avenue
3. Garment Shop at 414 Lee Avenue
4. Frazier Property on Lee Avenue
5. Duplex Property at 408/410 Lee Avenue
6. Kellum Property at 412 Lee Avenue
7. Dabney/Smith Property on N. Jackson and Lee Avenue

8. Cooper Property on N. Jackson and Fulgham Avenue
9. Larry and Carol Wright on N. Jackson Avenue

Please contact me at 828-669-3929 if you have any questions or comments concerning these results.

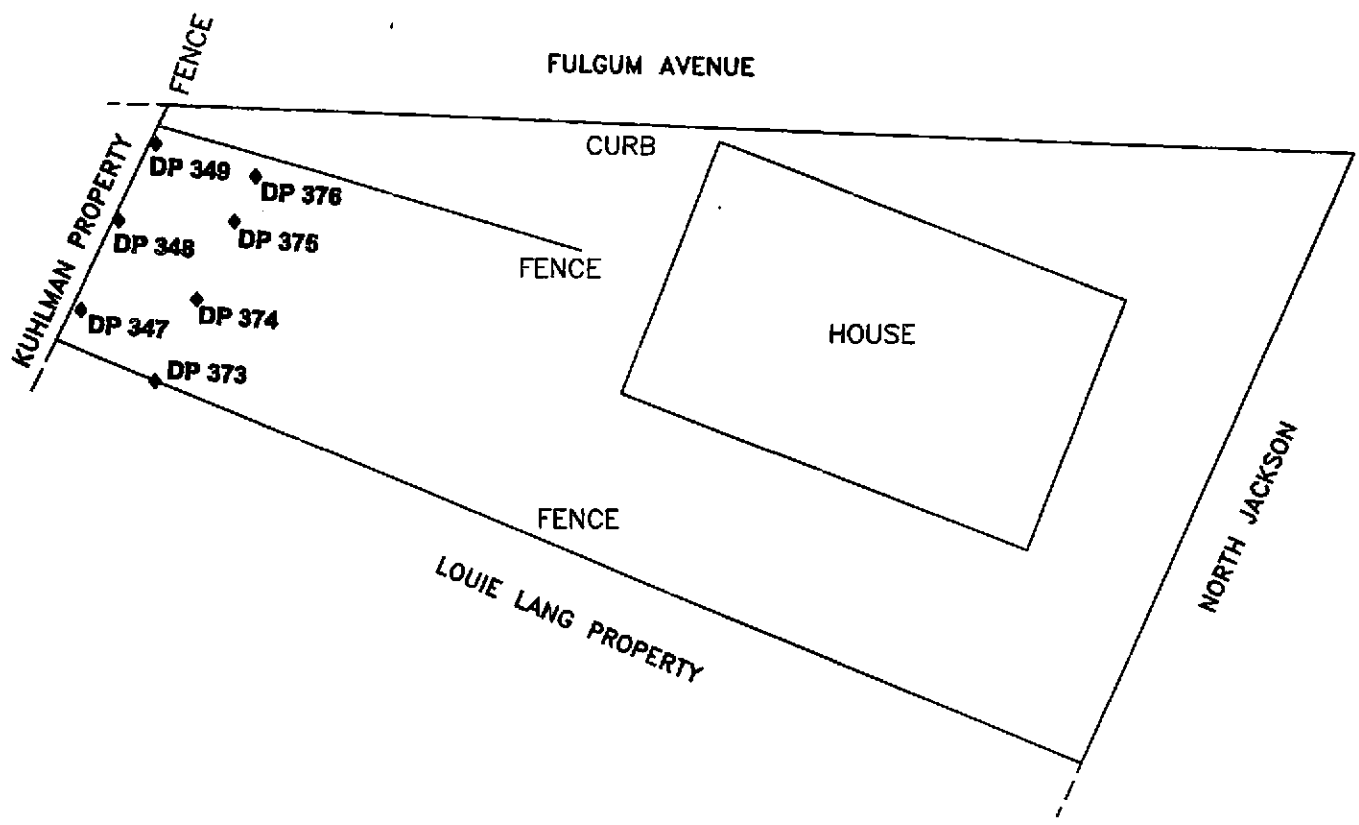
Sincerely,

Martin and Slagle GeoEnvironmental Associates, LLC

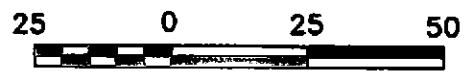


Robert L. Martin, P.G.  
Project Manager

Cc: Anastasia Hamel, BorgWarner Inc.



**LEGEND**  
 ◆ SAMPLE POINT  
 DP 392 SAMPLE POINT NUMBER



- 1) ALL DISTANCES ARE ESTIMATED
- 2) THIS MAP WAS PREPARED FROM RECORD MAPS
- 3) THIS MAP HAS BEEN PREPARED FOR PRESENTATION PURPOSES ONLY

**SAMPLE LOCATIONS FOR  
 AMY COOPER PROPERTY  
 409 NORTH JACKSON**

SCALE: AS SHOWN	DR MDI	CHK TF	REV BPS
PREPARED BY: <b>OGDEN</b> ENVIRONMENTAL AND ENGINEERING SERVICES <small>200 SOUTH OLD STATEVILLE ROAD • HUNTERSVILLE, NC 28078 • 704-875-3570</small>			
PROJ: 073360000	DATE: 09/24/00	SHEET 1 OF 1	

Soil and Wipe Sample Results  
 Army Cooper Property  
 409 North Jackson  
 Crystal Springs, Mississippi

SOIL SAMPLES (MG/KG)												
Target Analyte	DP-347	DP-347	DP-348	DP-348	DP-349	DP-349	DP-373	DP-373	DP-373	DP-373	DP-374	DP-374
	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	0.5
	99	100	101	102	103	104	167	168	169	169	169	169
PCB as 1260	0.13	<0.10	0.22	<0.10	0.61	<0.10	<0.10	NA	<0.10	NA	<0.10	<0.10
Collection Date	8/17/00	8/17/00	8/17/00	8/17/00	8/17/00	8/17/00	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00
Collection Time	14:02	14:03	14:09	14:11	14:14	14:16	15:27	15:29	15:29	15:29	15:52	15:52
Injection Date	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	8/19/00	8/19/00	8/19/00	8/19/00	8/19/00	8/19/00

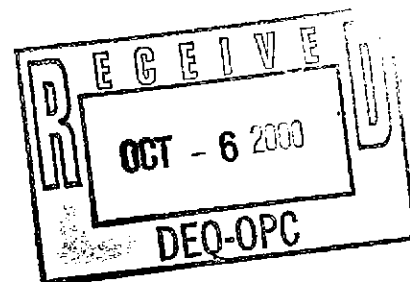
WIPE SAMPLES (TOTAL UG)									
Target Analyte	ACW-1	ACW-2	ACW-3	ACW-4	ACW-5	ACW-6	ACW-5	ACW-5	ACW-6
	610	611	612	613	614	615	614	614	615
PCB as 1260	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Collection Date	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00
Collection Time	9:38	9:40	9:45	9:49	9:51	9:52	9:51	9:51	9:52
Injection Date	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00

LOCATION:  
 ACW1: Right handrailing of back porch stairs, second step from the bottom.  
 ACW2: Seat of plastic Kawasaki 4 wheeler.  
 ACW3: Edge padding on trampoline.  
 ACW4: Lawnmower discharge chute.  
 ACW5: Top of steel mesh patio table.  
 ACW6: Roof of Little Tykes car.

Soil and Wipe Sample Results  
 Amy Cooper Property  
 409 North Jackson  
 Crystal Springs, Mississippi

SOIL SAMPLES (MG/KG)		DP-374	DP-375	DP-375	DP-376	DP-376	DP-376	DP-348	DP-349
Target Analyte	Sample #	4	0.5	4	0.5	4	0.1	0.1	0.1
	Depth								
	Lab #	170	171	172	173	174	1138	1139	
PCB as 1260		NA	<0.10	NA	<0.10	NA	1.0	0.47	
	Collection Date	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	9/19/00	9/19/00	
	Collection Time	15:53	15:58	15:59	16:02	16:04	16:50	16:54	
	Injection Date	NA	8/19/00	NA	8/19/00	NA	9/20/00	9/20/00	

October 5, 2000



Ms. Gretchen Zmitrovich  
Office of Pollution Control  
Mississippi Department of  
Environmental Quality  
Office of Pollution Control  
P.O. Box 10385  
Jackson, Mississippi 39289-0385

**SUBJECT: Transmittal of Revised Analytical Data Tables for Residences  
Kuhlman Electric Corporation  
Crystal Springs, Mississippi**

---

Dear Ms. Zmitrovich:

Attached is one complete set of revised spreadsheets showing analytical results from sampling of soils by Ogden Environmental and Energy Services. The tables were revised based on your review and comments. Results for split samples are being prepared into tables and will be forwarded to you by Monday at the latest.

Please contact me at 828-669-3929 if you have any questions or comments concerning these results.

Sincerely,

**Martin and Slagle GeoEnvironmental Associates, LLC**

A handwritten signature in cursive script that reads "Robert L. Martin".

Robert L. Martin, P.G.  
Project Manager

Cc: Anastasia Hamel, BorgWarner Inc.

Soil and Wipe Sample Results  
 Army Cooper Property  
 409 North Jackson  
 Crystal Springs, Mississippi

SOIL SAMPLES (MG/KG)										
Target Analyte	DP-347	DP-347	DP-348	DP-348	DP-349	DP-349	DP-373	DP-373	DP-373	DP-374
	0.5	4	0.5	4	0.5	4	0.5	4	4	0.5
	99	100	101	102	103	104	167	168	168	169
	0.13	<0.10	0.22	<0.10	0.61	<0.10	<0.10	NA	NA	<0.10
	8/17/00	8/17/00	8/17/00	8/17/00	8/17/00	8/17/00	8/18/00	8/18/00	8/18/00	8/18/00
	14:02	14:03	14:09	14:11	14:14	14:16	15:27	15:29	15:29	15:52
	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	8/19/00	8/19/00	NA	8/19/00

Notes:

NA indicates sample not analyzed

WIPE SAMPLES (TOTAL UG)										
Target Analyte	ACW-1	ACW-2	ACW-3	ACW-4	ACW-5	ACW-5	ACW-6			
	610	611	612	613	614	615				
	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				
	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00			
	9:38	9:40	9:45	9:49	9:51	9:52	9:52			
	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00	8/28/00			

LOCATION:

- ACW1: Right handrailing of back porch stairs, second step from the bottom.
- ACW2: Seat of plastic Kawasaki 4 wheeler.
- ACW3: Edge padding on trampoline.
- ACW4: Lawnmower discharge chute.
- ACW5: Top of steel mesh patio table.
- ACW6: Roof of Little Tykes car.

Soil and Wipe Sample Results  
 Army Cooper Property  
 409 North Jackson  
 Crystal Springs, Mississippi

SOIL SAMPLES (MG/KG)										
Target Analyte	Sample #	DP-374	DP-375	DP-375	DP-376	DP-376	DP-376	DP-348	DP-349	
	Depth (ft)	4	0.5	4	0.5	4	0.1	0.1	0.1	
	Lab #	170	171	172	173	174	1138	1139		
PCB as 1260		NA	<0.10	NA	<0.10	NA	1.0	0.47		
	Collection Date	8/18/00	8/18/00	8/18/00	8/18/00	8/18/00	9/19/00	9/19/00	9/19/00	
	Collection Time	15:53	15:58	15:59	16:02	16:04	16:50	16:54	16:54	
	Injection Date	NA	8/19/00	NA	8/19/00	NA	9/20/00	9/20/00	9/20/00	

Notes:

NA indicates sample not analyzed

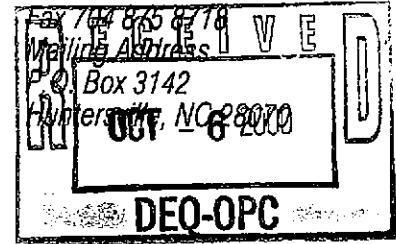




200 S. Old Statesville Road  
Huntersville, NC 28078  
704 875 3570

October 5, 2000

Ms. Gretchen Zmitrovich  
Mississippi Dept. of Environmental Quality  
101 W. Capitol St.  
Jackson, MS 39201



**RE: CADD Drawings**

---

Dear Ms. Zmitrovich:

Enclosed are your copies of corrected Autocad drawings for the Kellum property, the Dabney property and the Cooper property.

Corrections made were as follows. On the Kellum property map, the sampling point labeled as DP519 was corrected to read DP529. On the Dabney property map, the point originally labeled as DP578 was corrected to read DP587. On the Cooper property map, Fulgham was misspelled on the original.

I am forwarding copies of the corrected maps to both Martin & Slagle as well as Ms. Anastasia Hamel of BorgWarner Inc.

Any spreadsheet corrections will come from Martin & Slagle.

If you have any questions or comments, please call.

Sincerely,

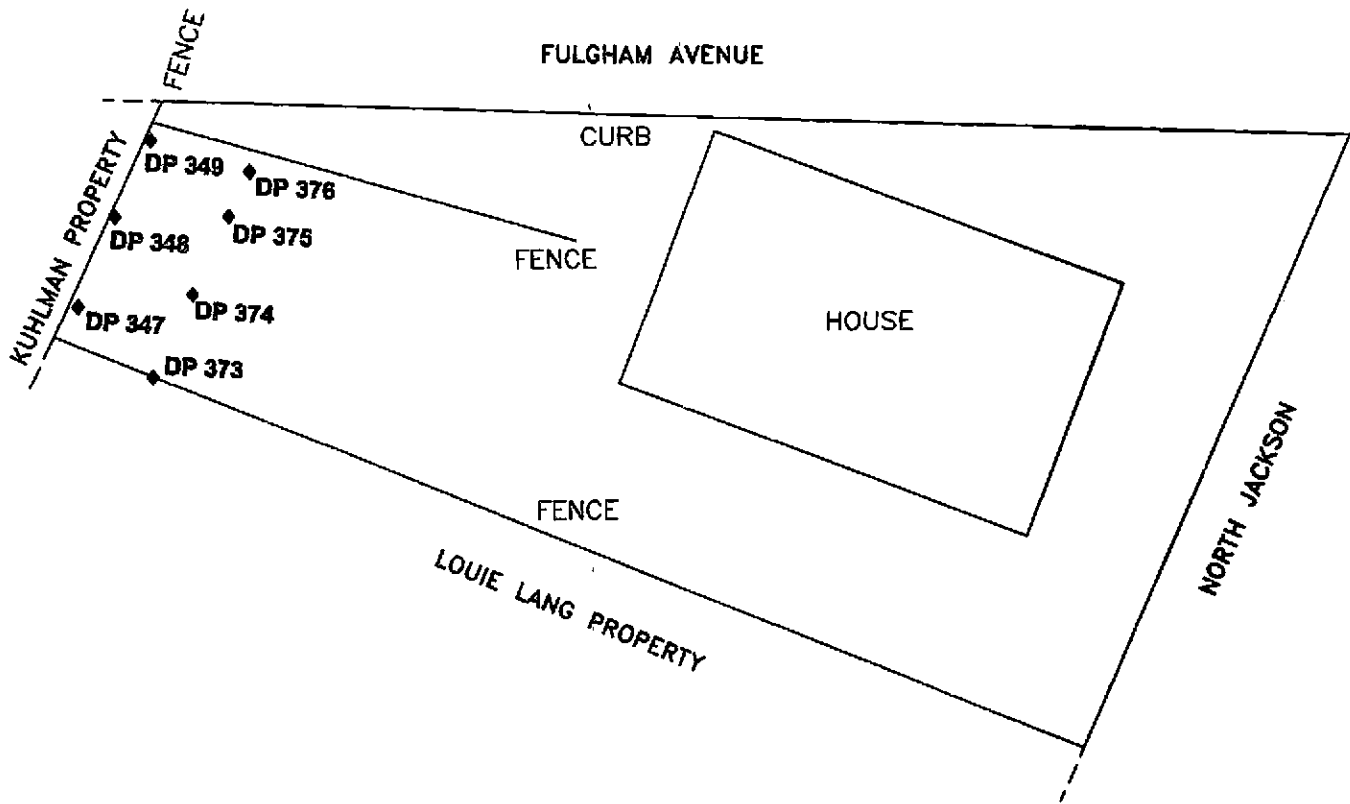
**OGDEN ENVIRONMENTAL AND ENGINEERING SERVICES, INC.**

Timothy J. Fitzpatrick  
Senior Environmental Chemist

Enclosure

Cc: Martin & Slagle  
Ms. Anastasia Hamel





**LEGEND**  
 ◆ SAMPLE POINT  
 DP 392 SAMPLE POINT NUMBER



**SAMPLE LOCATIONS FOR  
 AMY COOPER PROPERTY  
 409 NORTH JACKSON**

SCALE: AS SHOWN      DR MDI    CHK TF    REV BPS

- 1) ALL DISTANCES ARE ESTIMATED
- 2) THIS MAP WAS PREPARED FROM RECORD MAPS
- 3) THIS MAP HAS BEEN PREPARED FOR PRESENTATION PURPOSES ONLY

PREPARED BY:  
**OGDEN** ENVIRONMENTAL AND ENGINEERING SERVICES  
 200 SOUTH OLD STATEVILLE ROAD • HUNTERSVILLE, NC 28078 • 704-875-3570  
 PROJ: 073350000    DATE: 09/24/00    SHEET 1 OF 1

**FILE COPY**

19 pages w/cover

To:  
Gretchen Zmitrovich  
MDEA

From:  
Tim Fitzpatrick  
Ogden Environmental

Gretchen: Following are my field mps - I hope  
you can read them! Data will follow shortly.

Please call after you receive this fax.

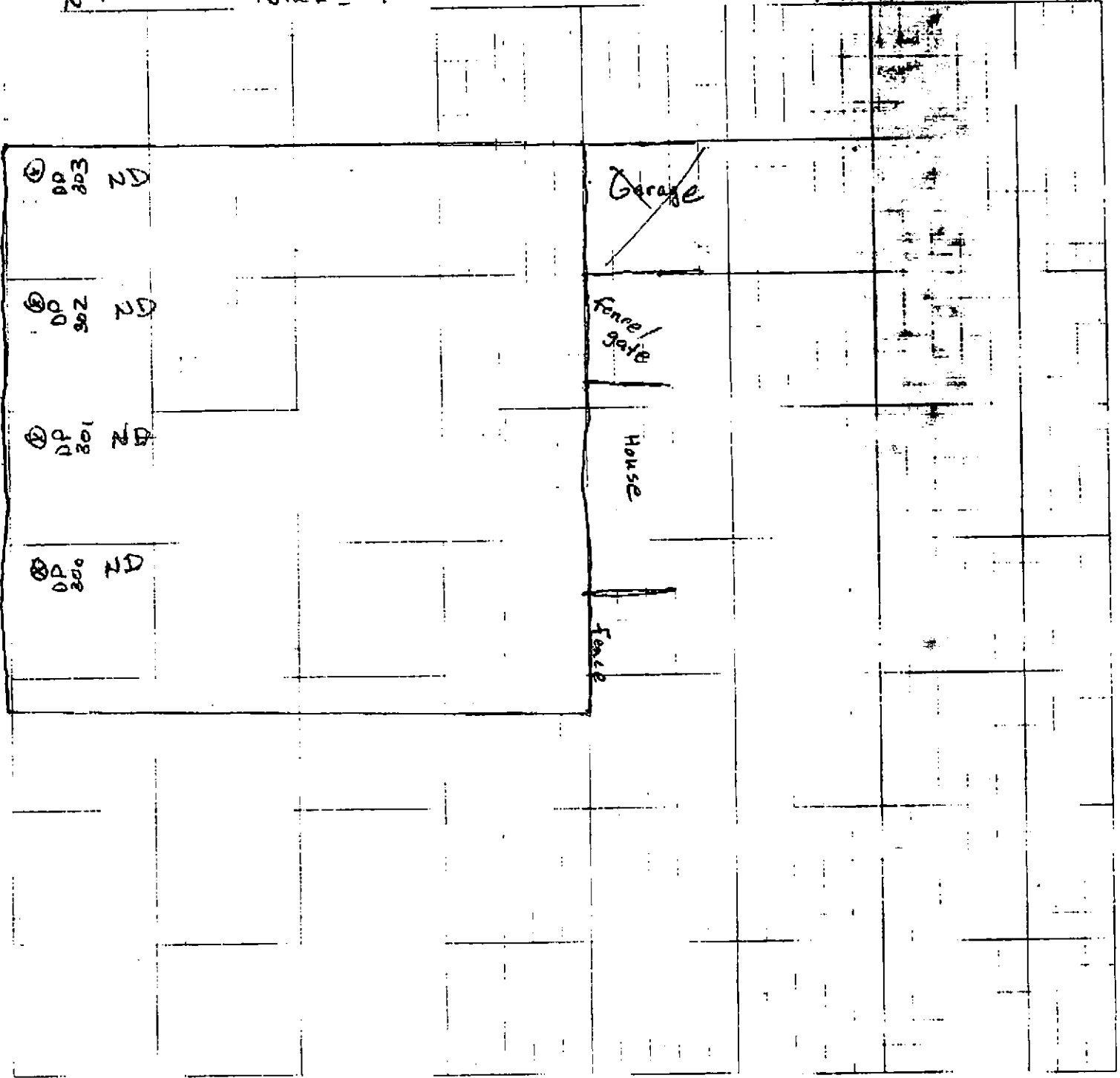
Thanks,

Tim



Job Name: Crystal Springs  
Job Number:  
Title: Sony Reeves backyard 4DS Jackson  
Computed by:  
Date: 2/16/2000  
Checked by:  
Sheet: 11

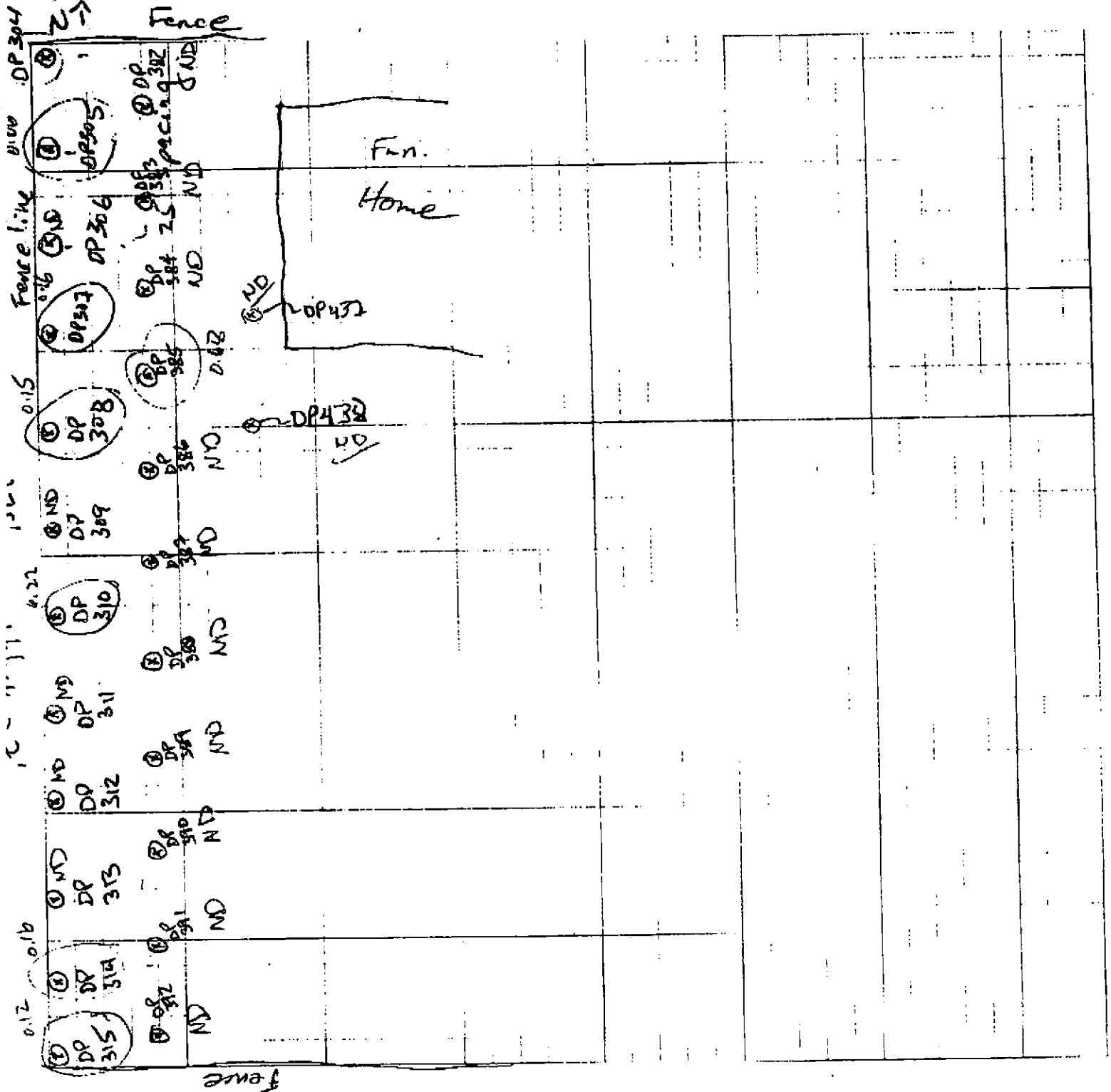
N ↑ 1 block = 4'





DP 280  
200  
7

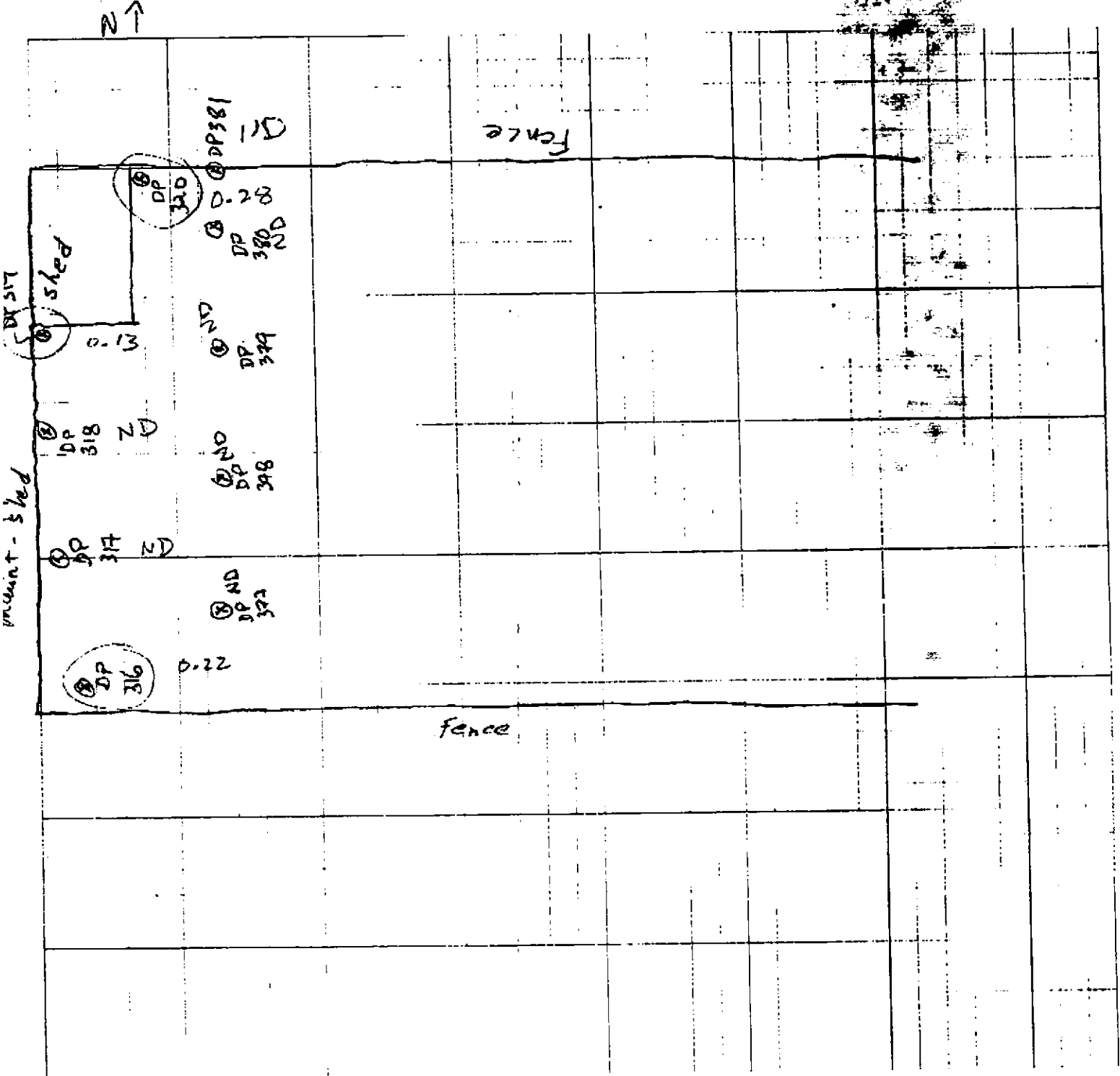
Job Name: Crystal Springs  
Job Number:  
Title: Stringer Funeral Home  
Computed by: Checked by:  
Date: 8-16-2000 Sheet: 2 Of: 11





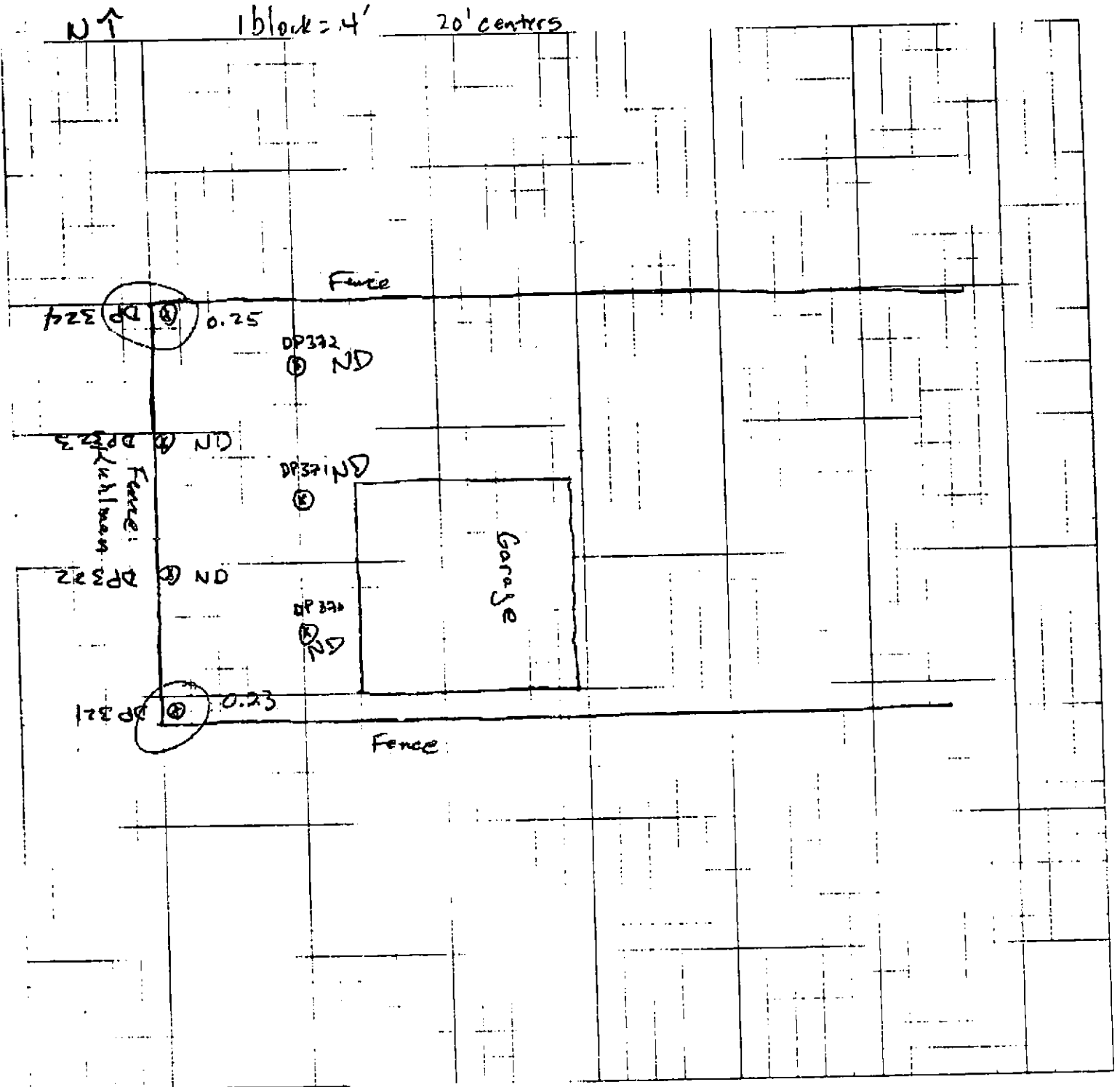
Job Name: Crystal Springs  
Job Number:  
Title: 401 N. Jackson in Elgin, Bright  
Computed by: Checked  
Date: 8-16-2000 Sheet: 3 of 11

1 block = 4'



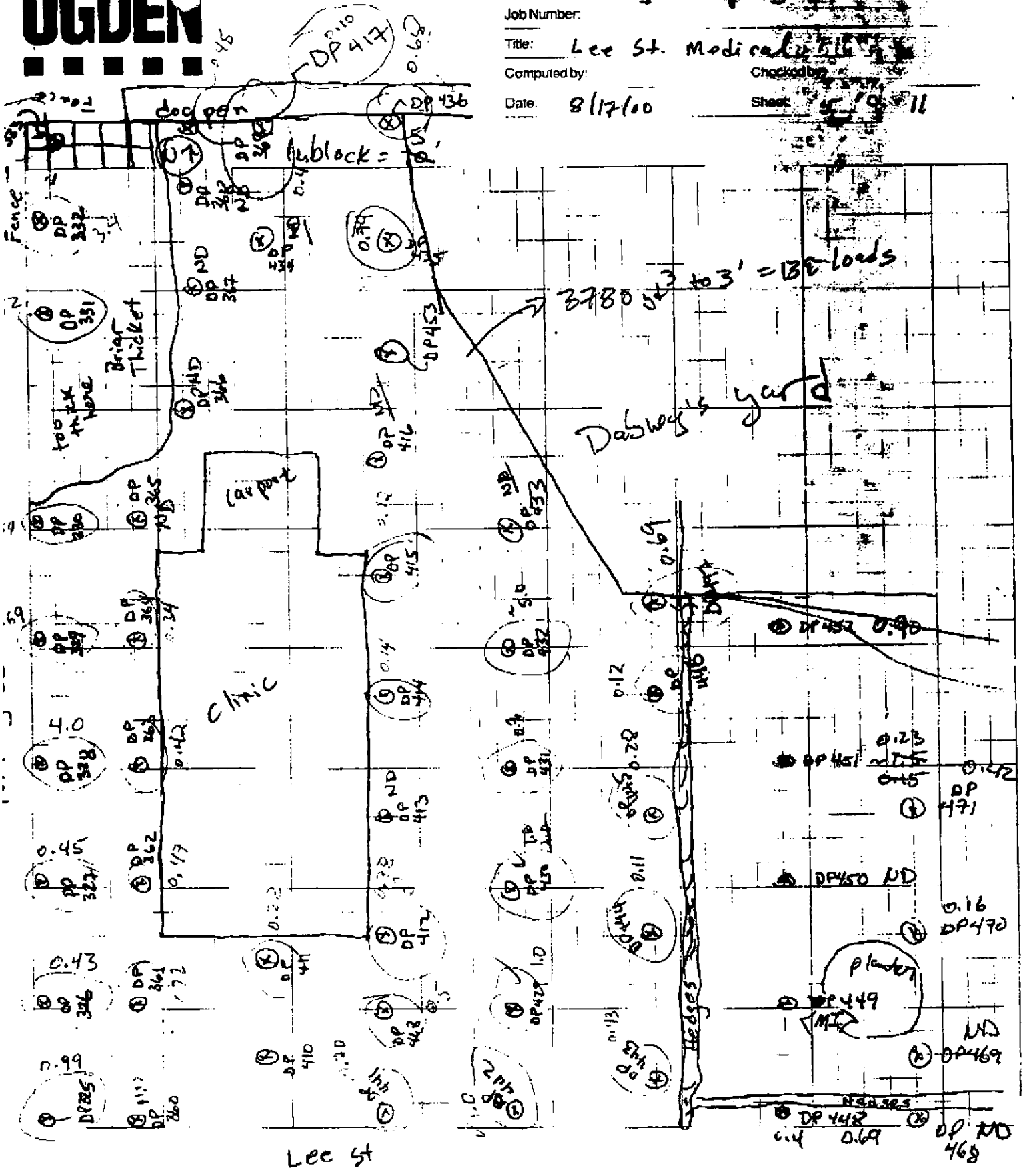


Job Name: Crystal Springs  
Job Number: \_\_\_\_\_  
Title: 407 N. Jackson Louie Lang  
Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_  
Date: 8-16-00 Sheet: 4 Of: 11





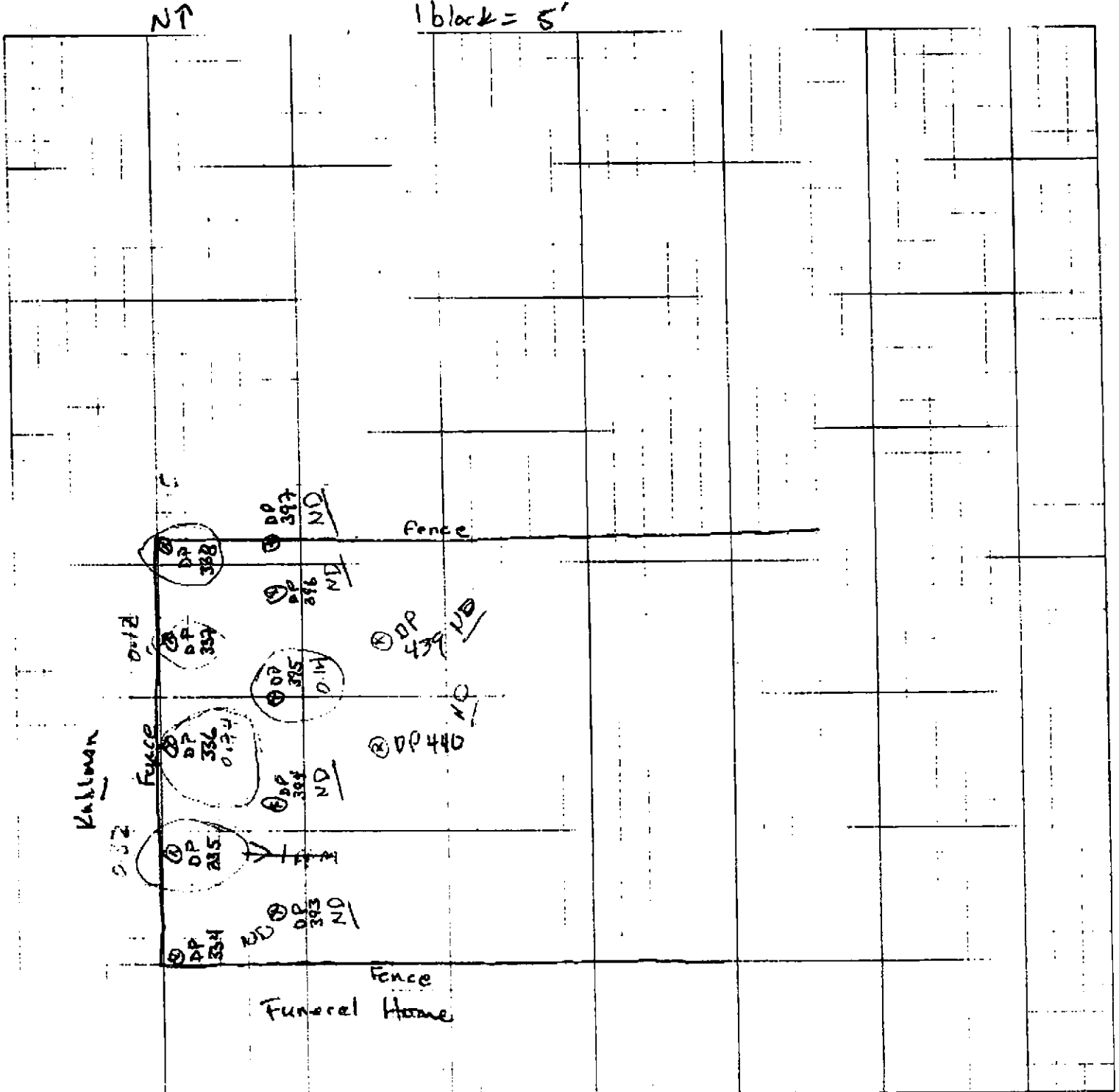
Job Name: Crystal Springs  
 Job Number:  
 Title: Lee St. Medical  
 Computed by: Checked by:  
 Date: 8/17/00 Sheet: 5/0/11







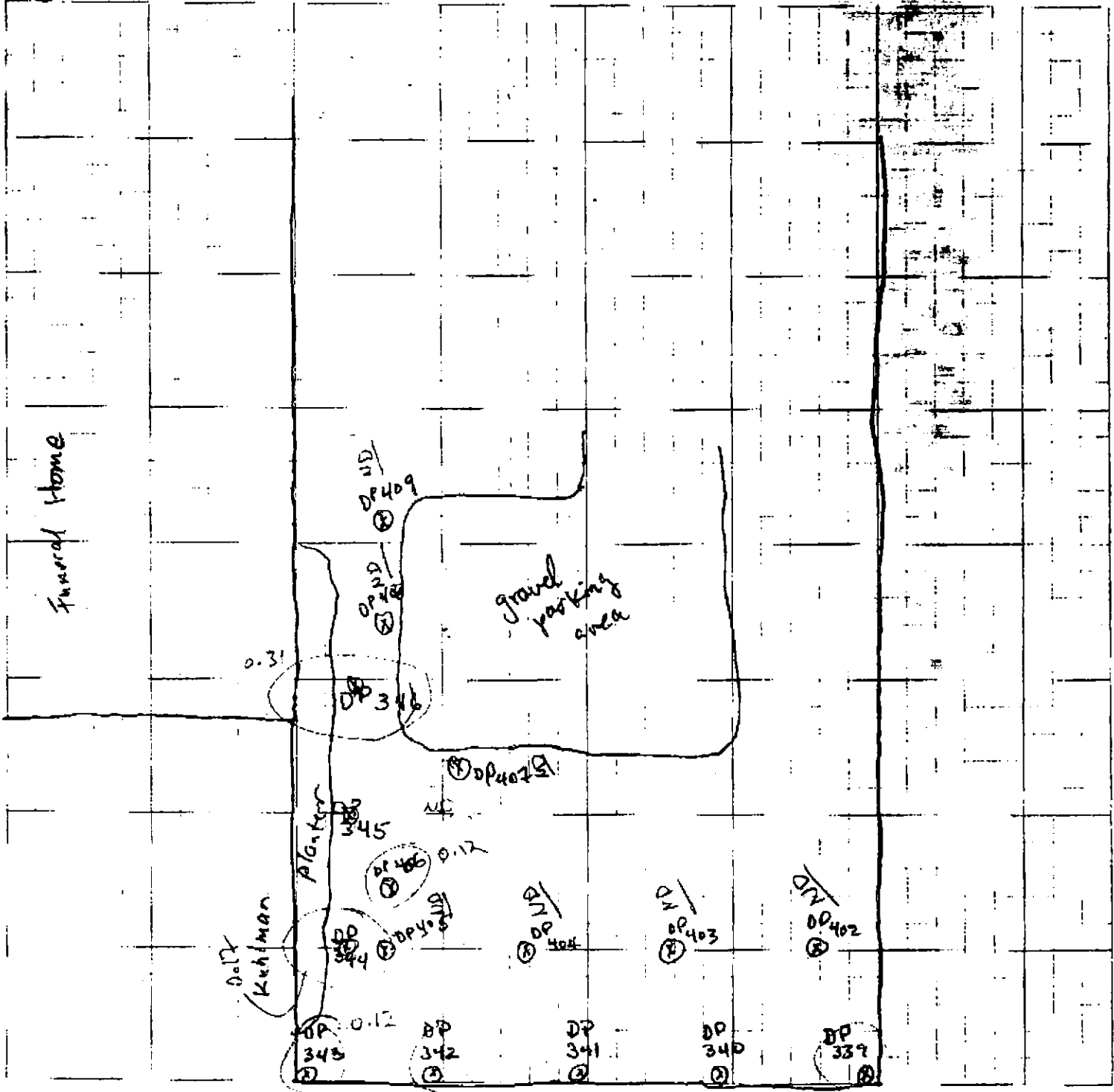
Job Name: Crystal Springs  
Job Number:  
Title: 303 N. Jackson (stringer)  
Computed by:  
Date: 8-17-00  
Checked by:  
Sheet: 6 of 11





Job Name: Crystal Springs  
Job Number:  
Title: 219 N-Jackson - Perry Smith  
Computed by: TJF  
Date: 8-17-00  
Checked:  
Sheet: 11

1 block = 5'



②

Funeral Home

gravel parking area

Plantage  
Kuhlman

ND  
DP 409

OPND  
DP 408

DP 348

DP 407

DP 345

DP 406

DP 404

ND  
DP 404

ND  
DP 403

ND  
DP 402

DP 348

DP 342

DP 341

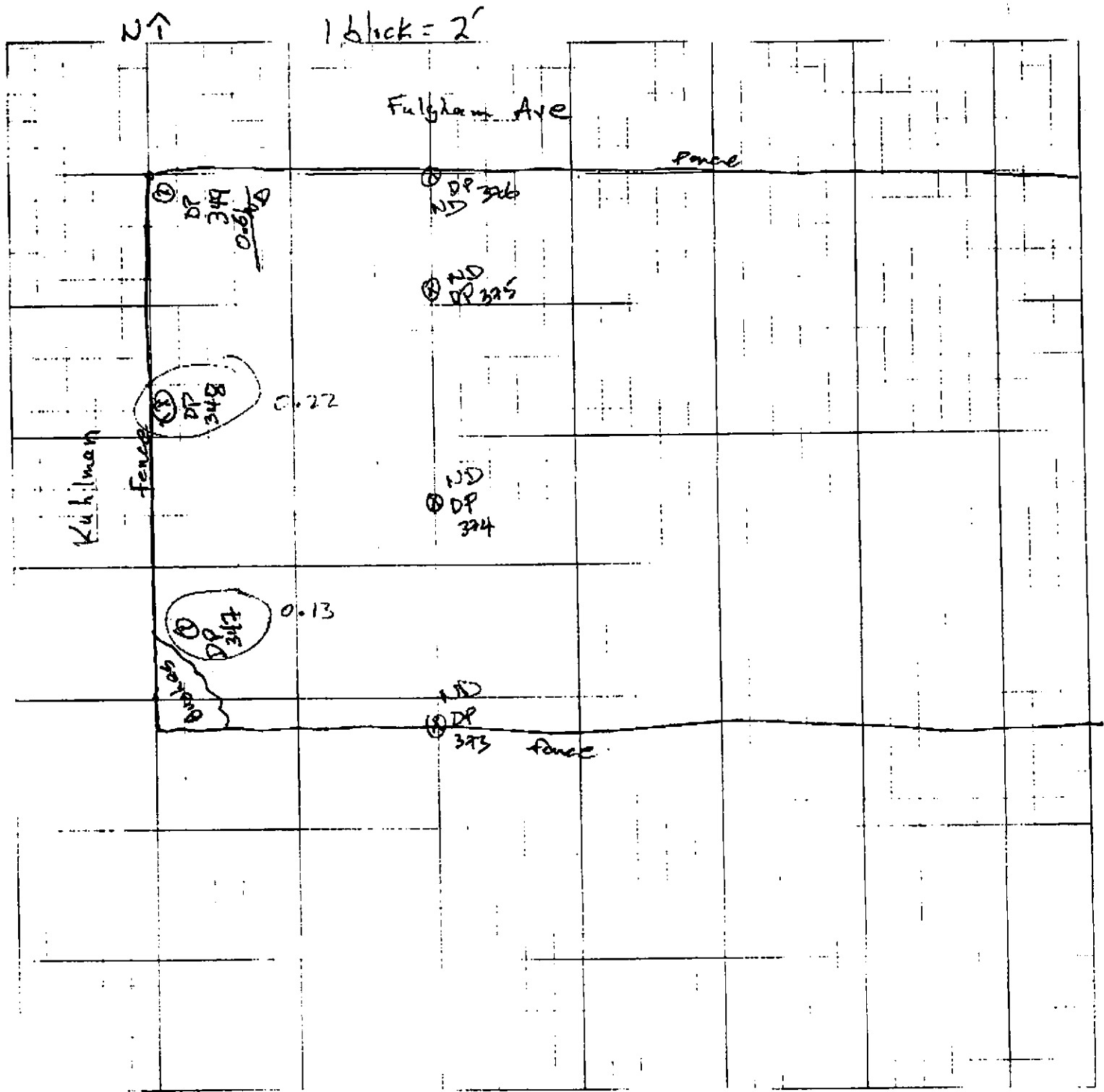
DP 340

DP 339

Kuhlman



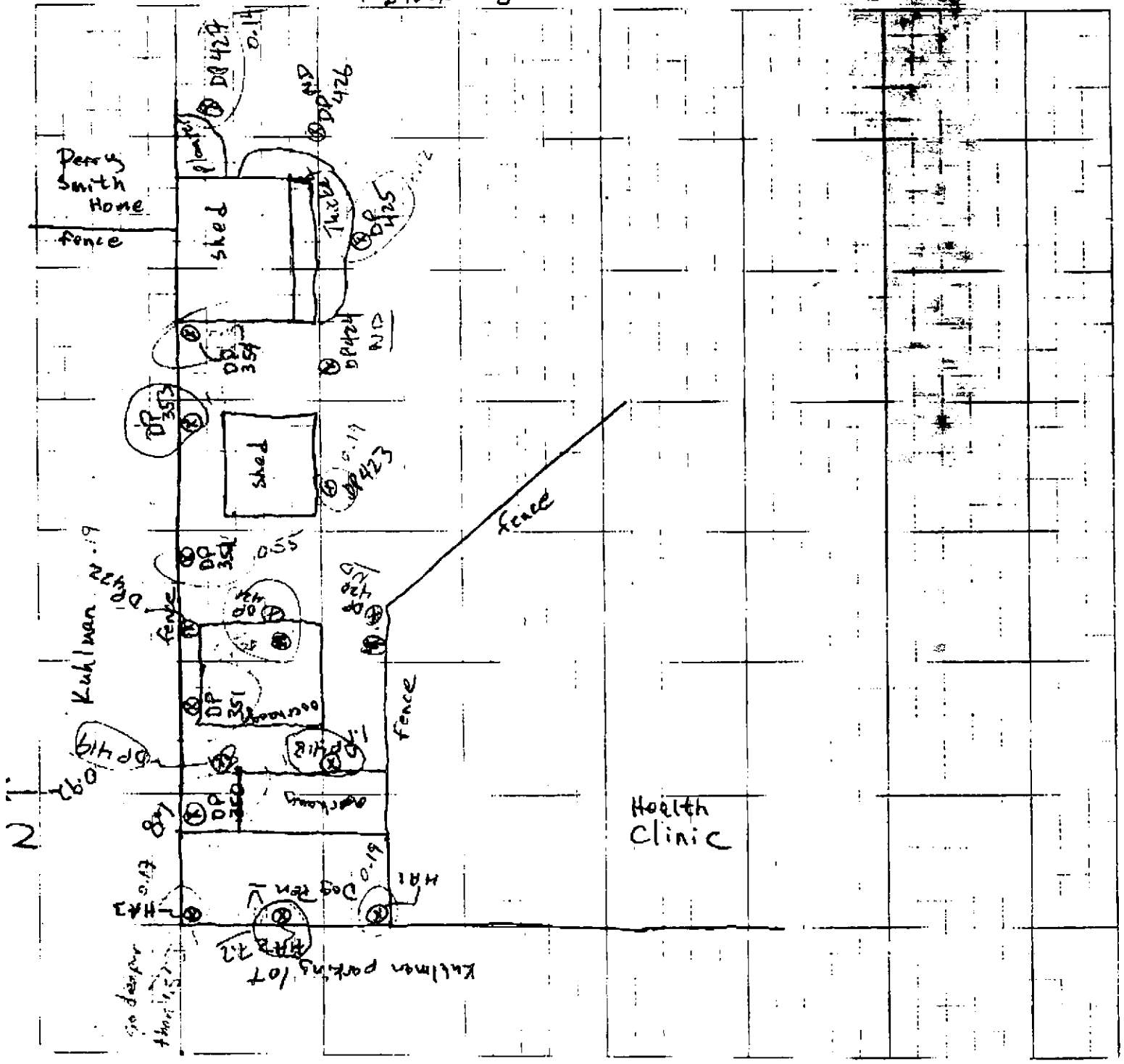
Job Name: Crystal Springs  
Job Number:  
Title: 409 N. Jackson (Amy Cooper)  
Computed by: BF  
Checked by:  
Date: 8-17-00  
Sheet: 8 of 11





Job Name: Crystal Spring  
Job Number:  
Title: Dabney Home  
Computed by: TJE  
Date: 8-17-00  
Checked by:  
Sheet 9 of 11

1 block = 5'





Job Name: Crystal Springs

Job Number: \_\_\_\_\_

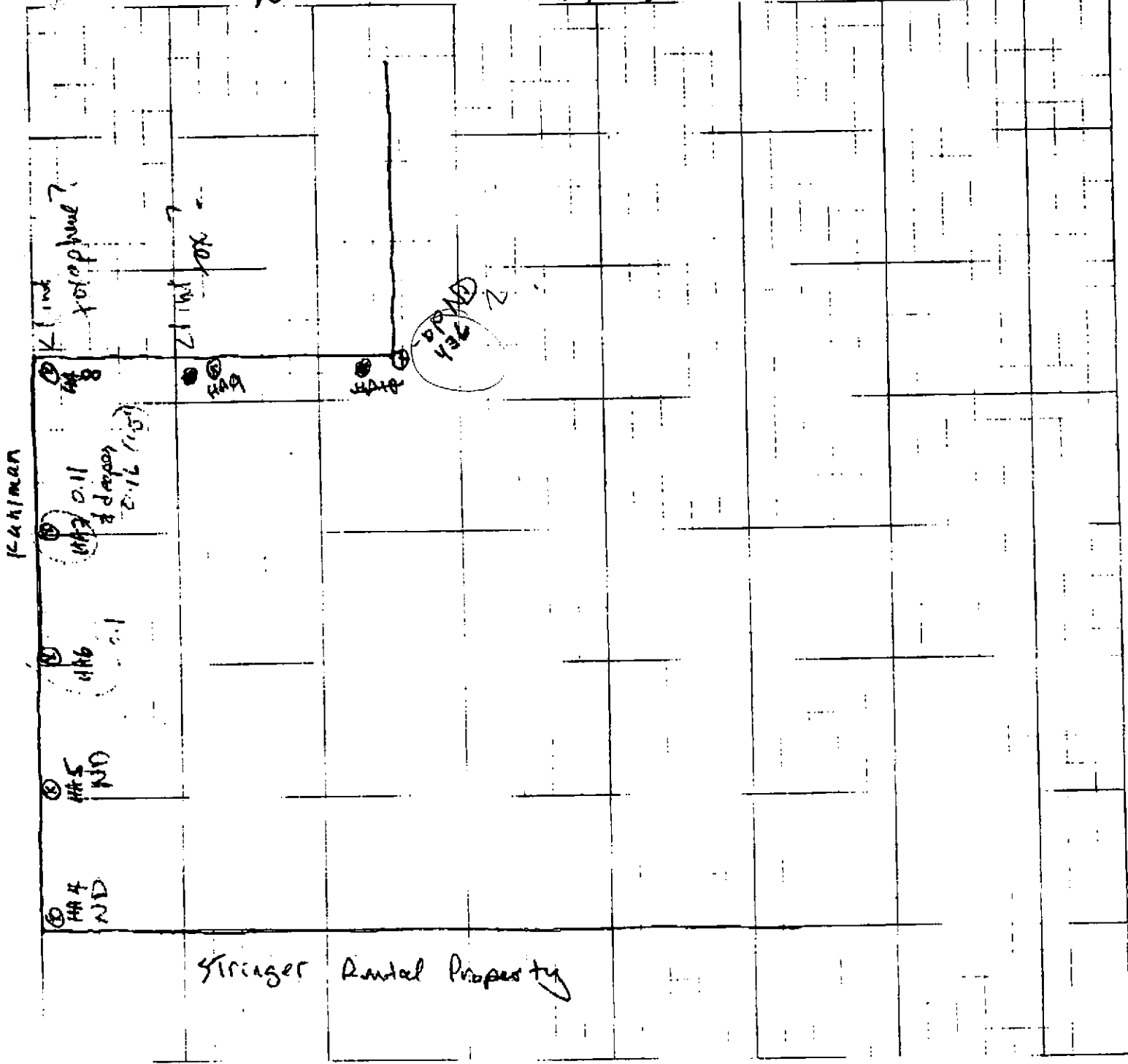
Title: Wright House

Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_

Date: 8-18-00 Sheet: 10 Of: 11

NT

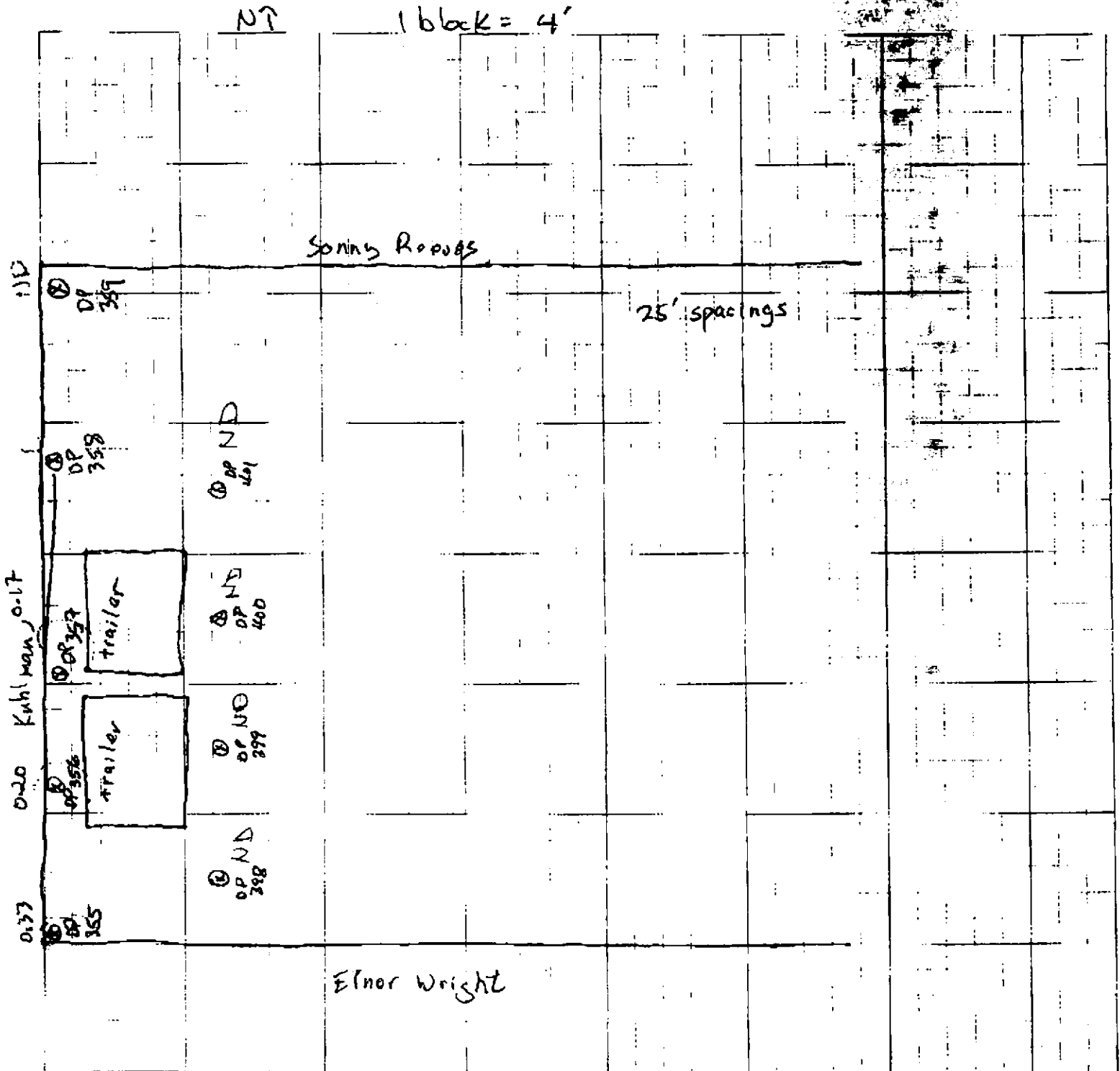
1 block = 4'





Job Name: Crystal Spring Sp  
Job Number:  
Title: Harold & Suzanne Wassen  
Computed by: TBF  
Date: 8-18-00

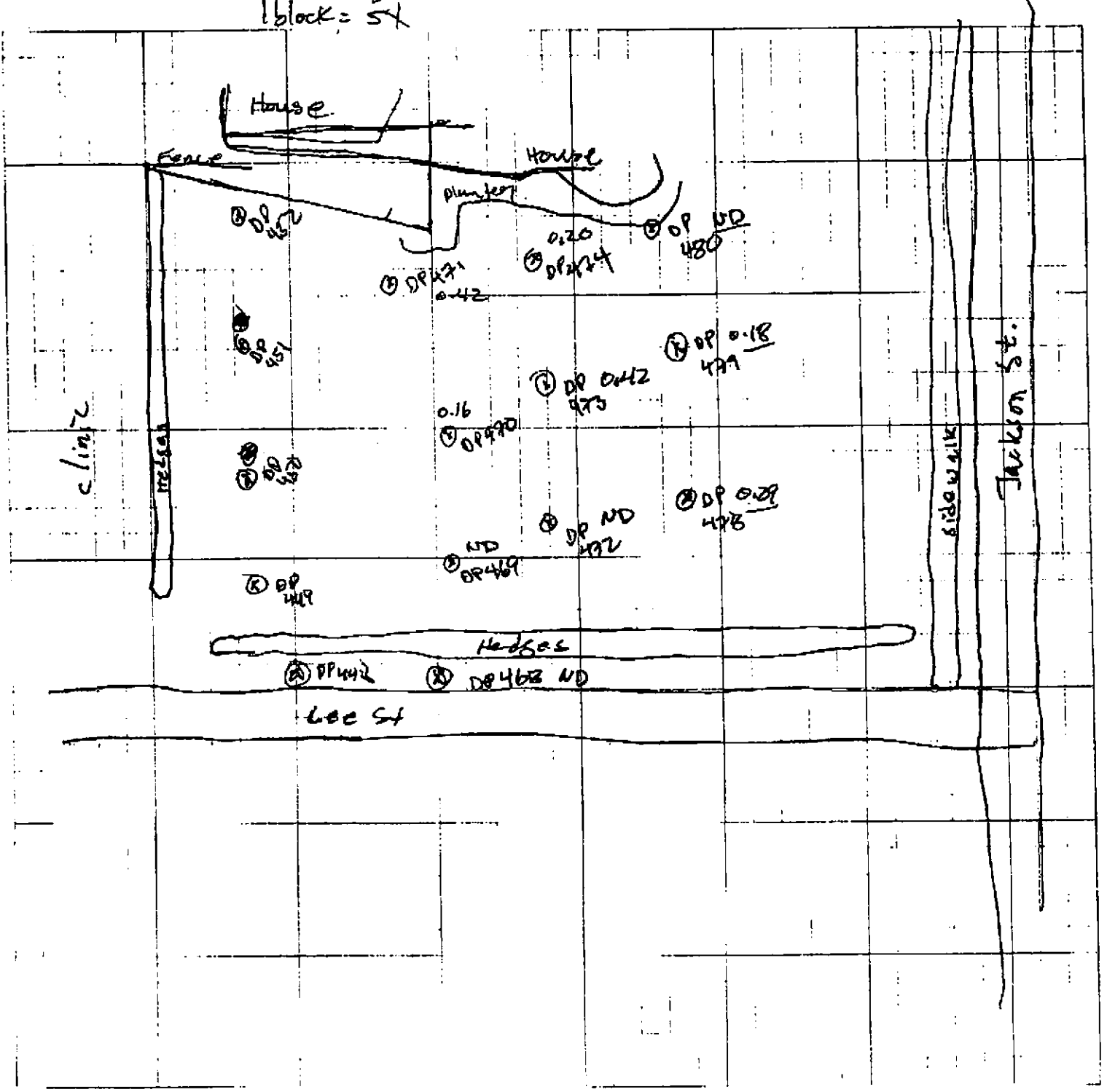
Checked by:  
Sheet 11 of 11





Job Name: \_\_\_\_\_  
 Job Number: \_\_\_\_\_  
 Title: Dabney yard - south side  
 Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_  
 Date: 8/23/00 Sheet: 12 Of \_\_\_\_\_

1 block = 5'





Job Name:

Job Number:

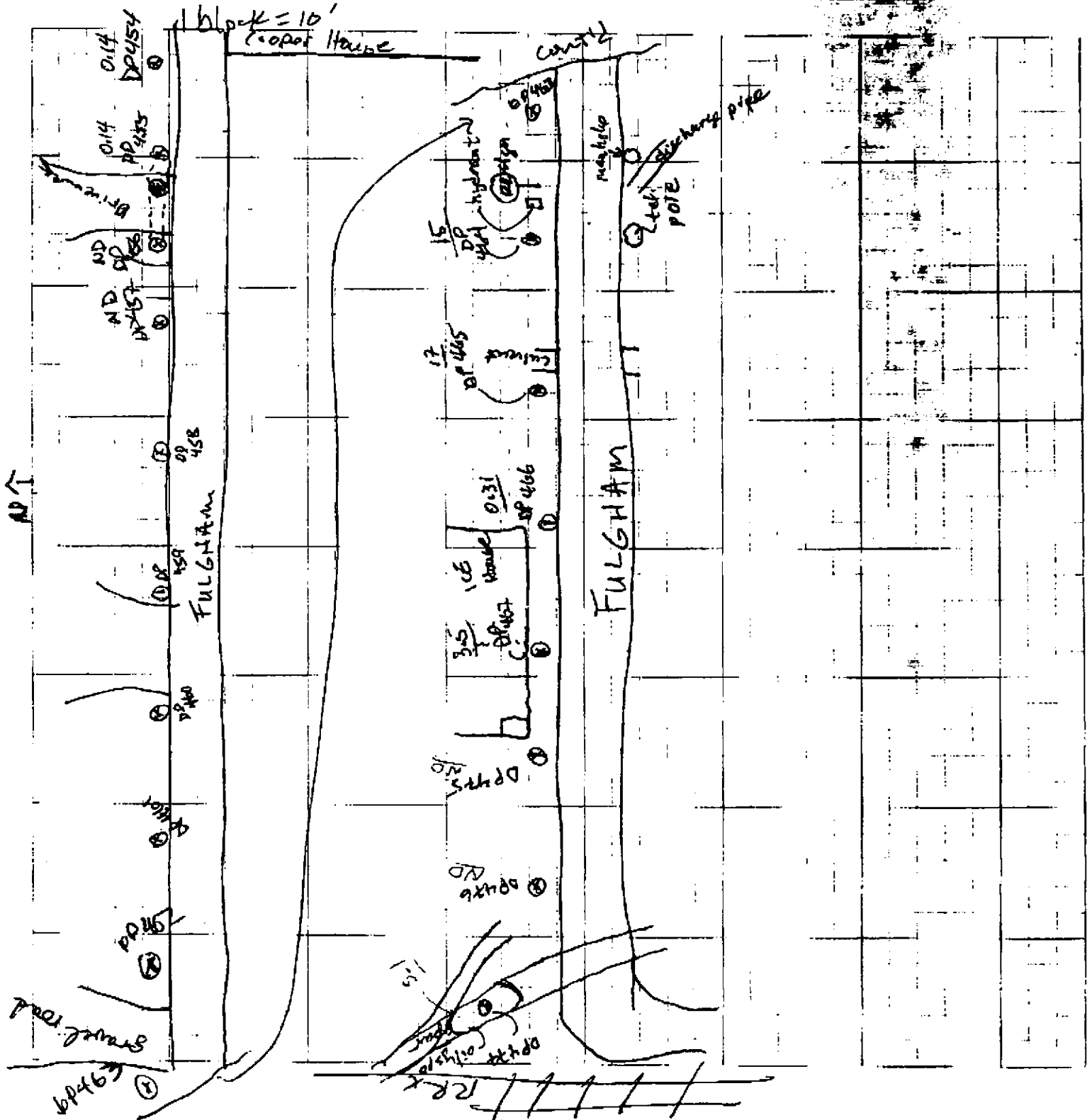
Title Fulgham Ave

Computed by:

Date:

Checked by:

Sheet 13







Job Name:

Job Number:

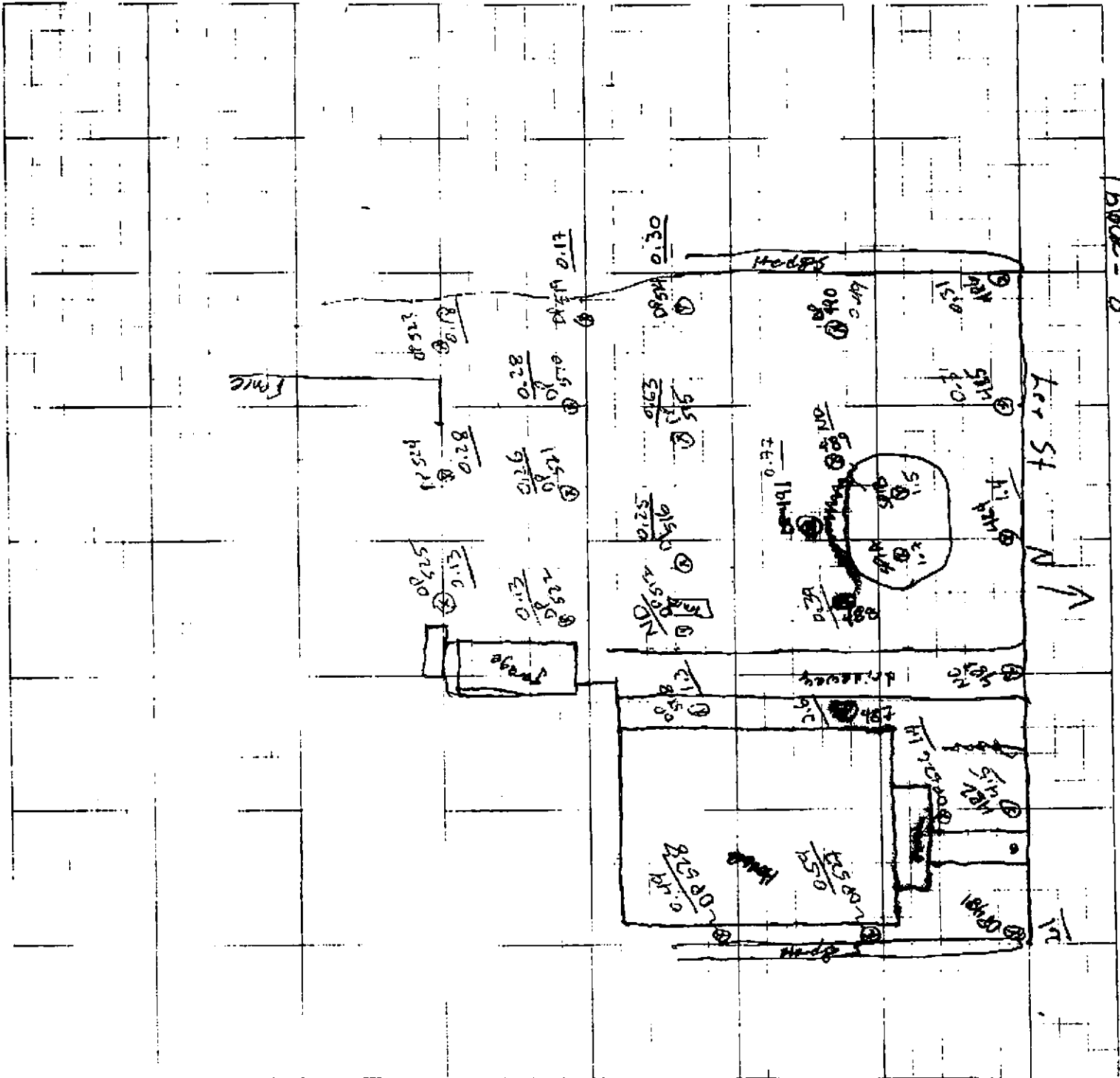
Title: *Edwards property*

Computed by: *TJF*

Checked by:

Date: *8/24/00*

Sheet: *14* Of:



*1 block = 5'*

*Cor St N*



Job Name:

Job Number:

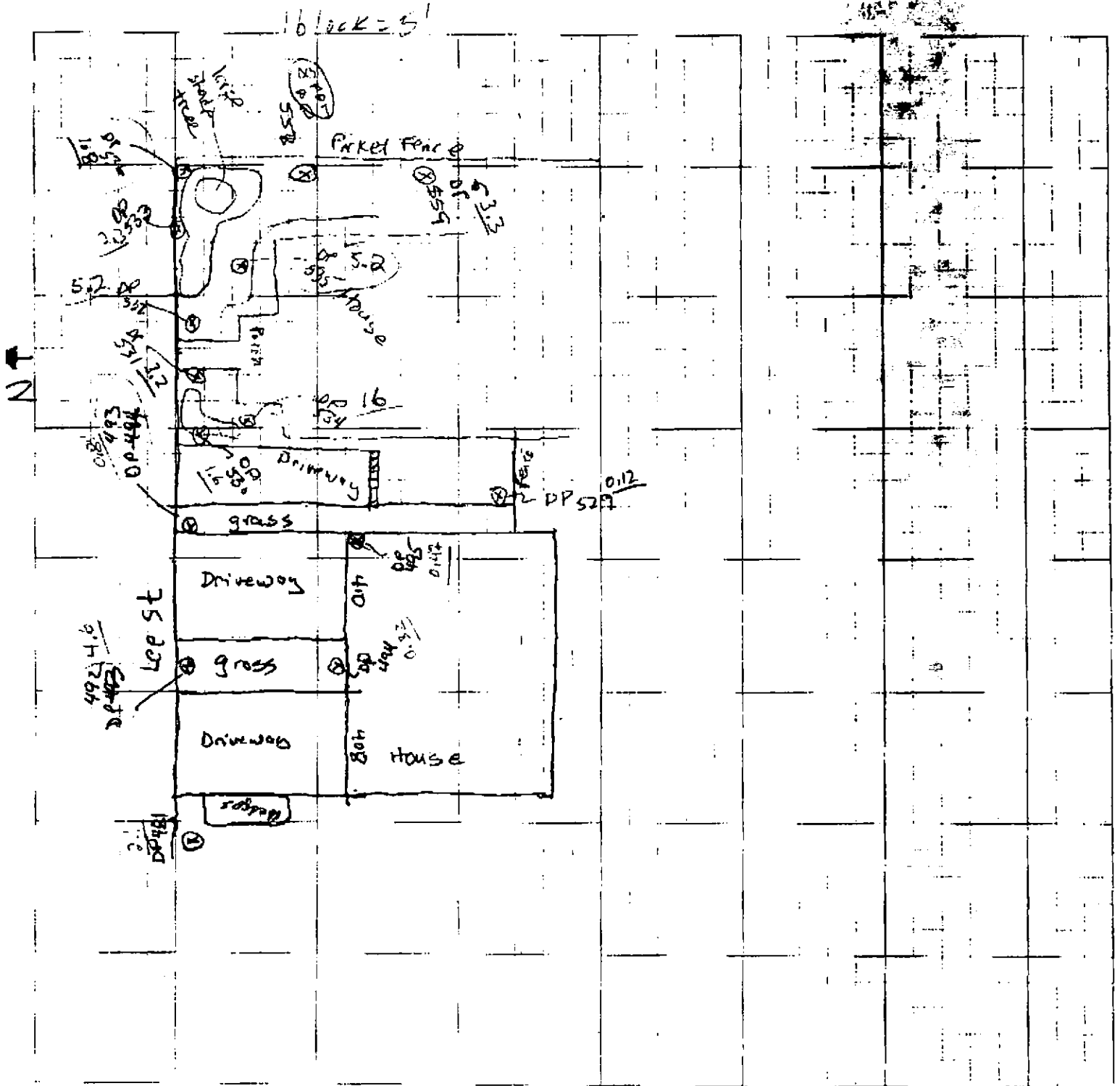
Title: 408/410 Lee SC

Computed by: TDF

Date: 8/24/00

Checked by:

Sheet:





Job Name:

Job Number:

Title: Brent Property Lee St.

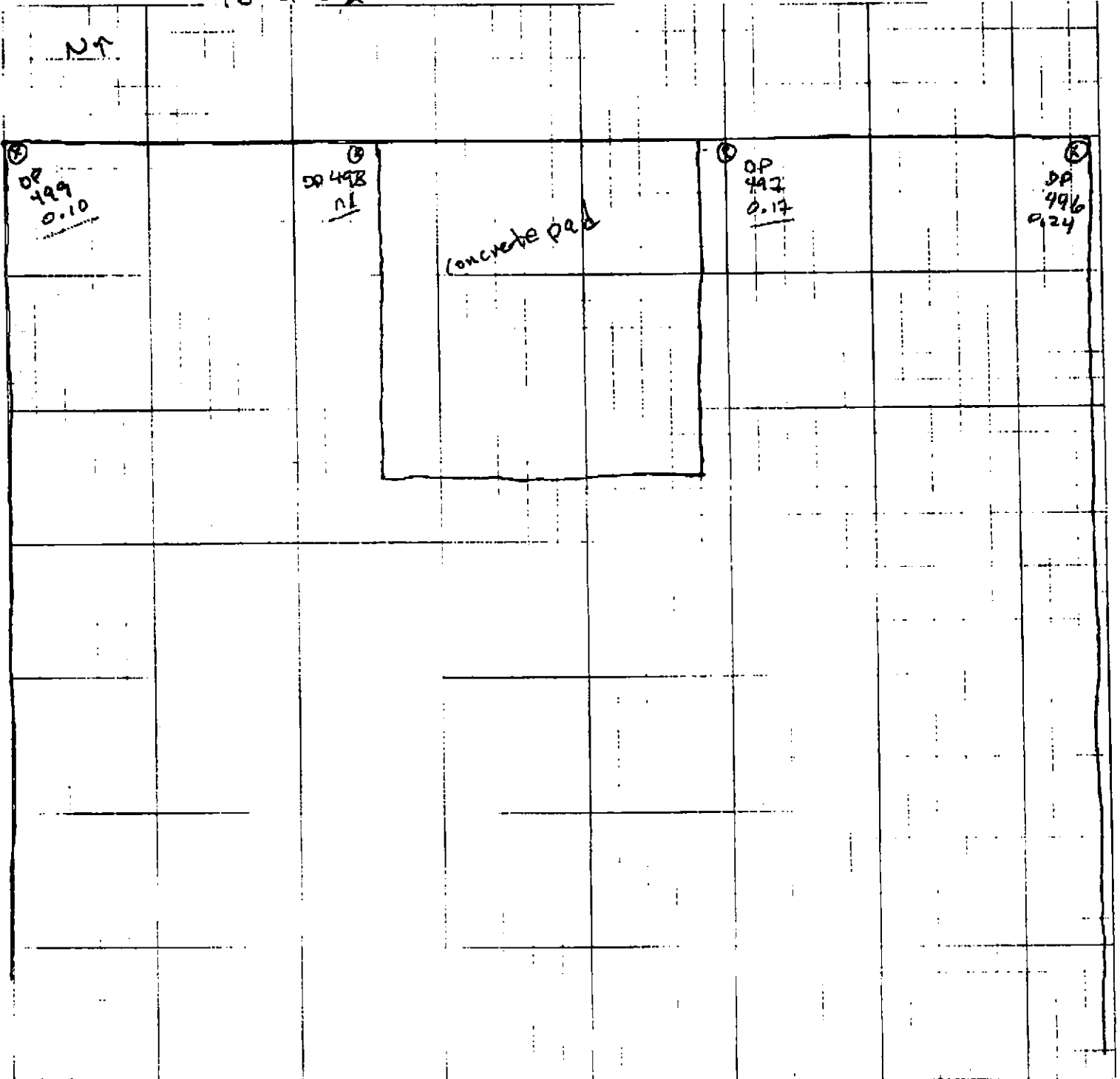
Computed by: T J F

Checked by:

Date: 8/24/00

Sheet: 16 Of:

1 block = 2'





Job Name

Job Number:

Title: *Frazier Property*

Computed by *TJF*

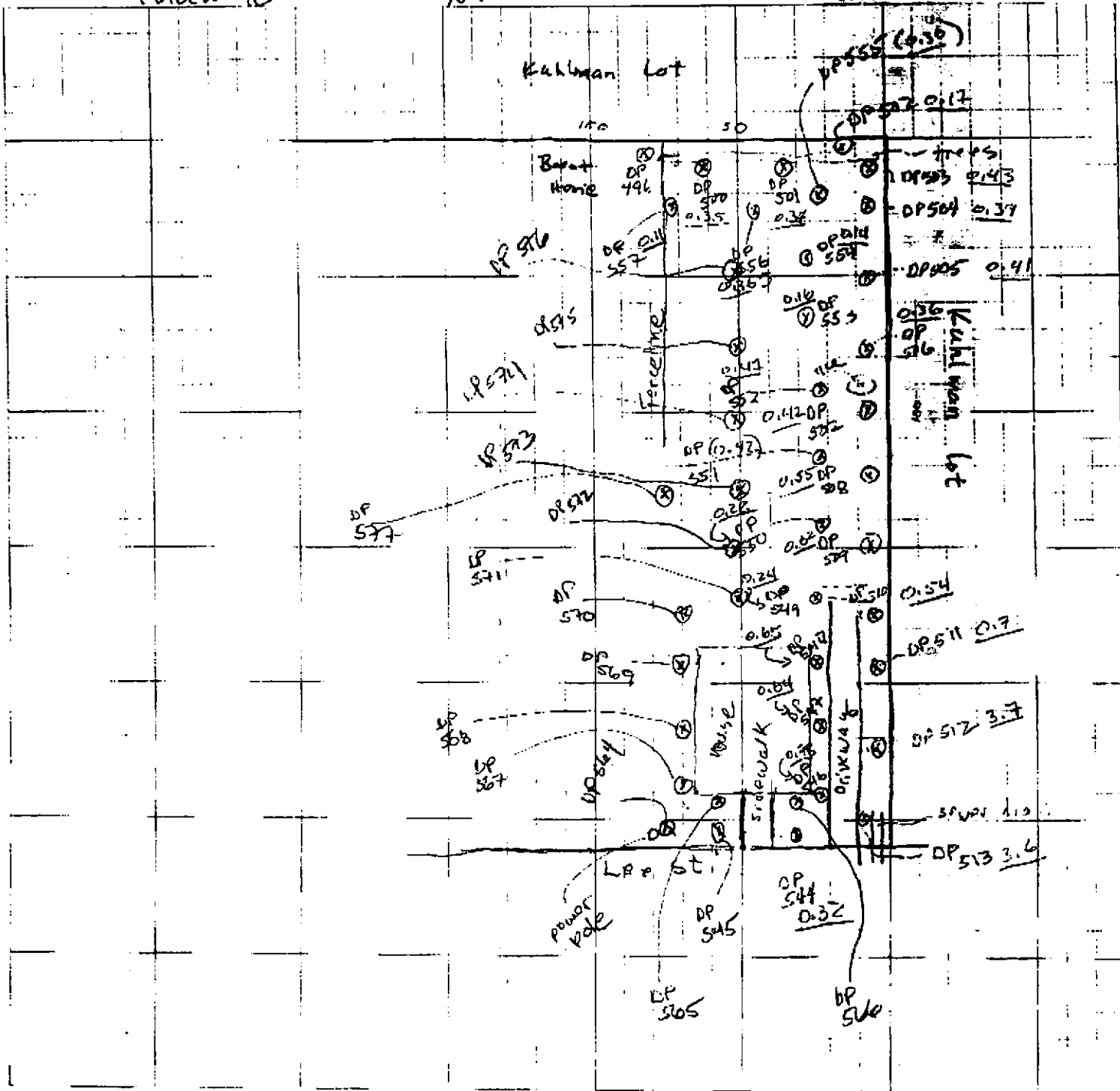
Date: *8/25/00*

Checked by

Sheet: *17* of *18*

*1 block = 10'*

*NT*





Job Name:

Job Number:

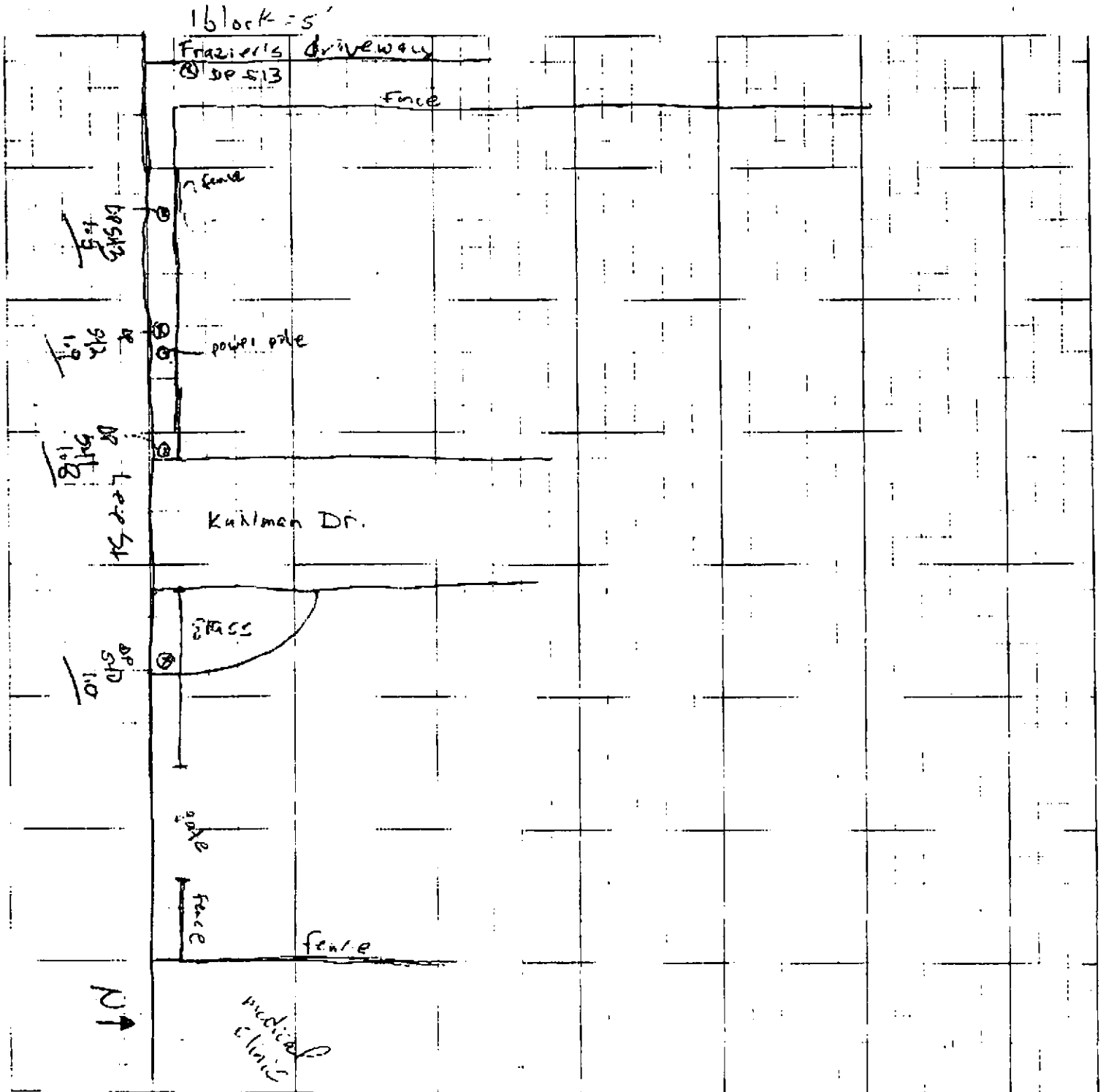
Title: Kuhlman South Parking Lot

Computed by:

Checked by:

Date: 8/26/2000

Sheet: 18 of

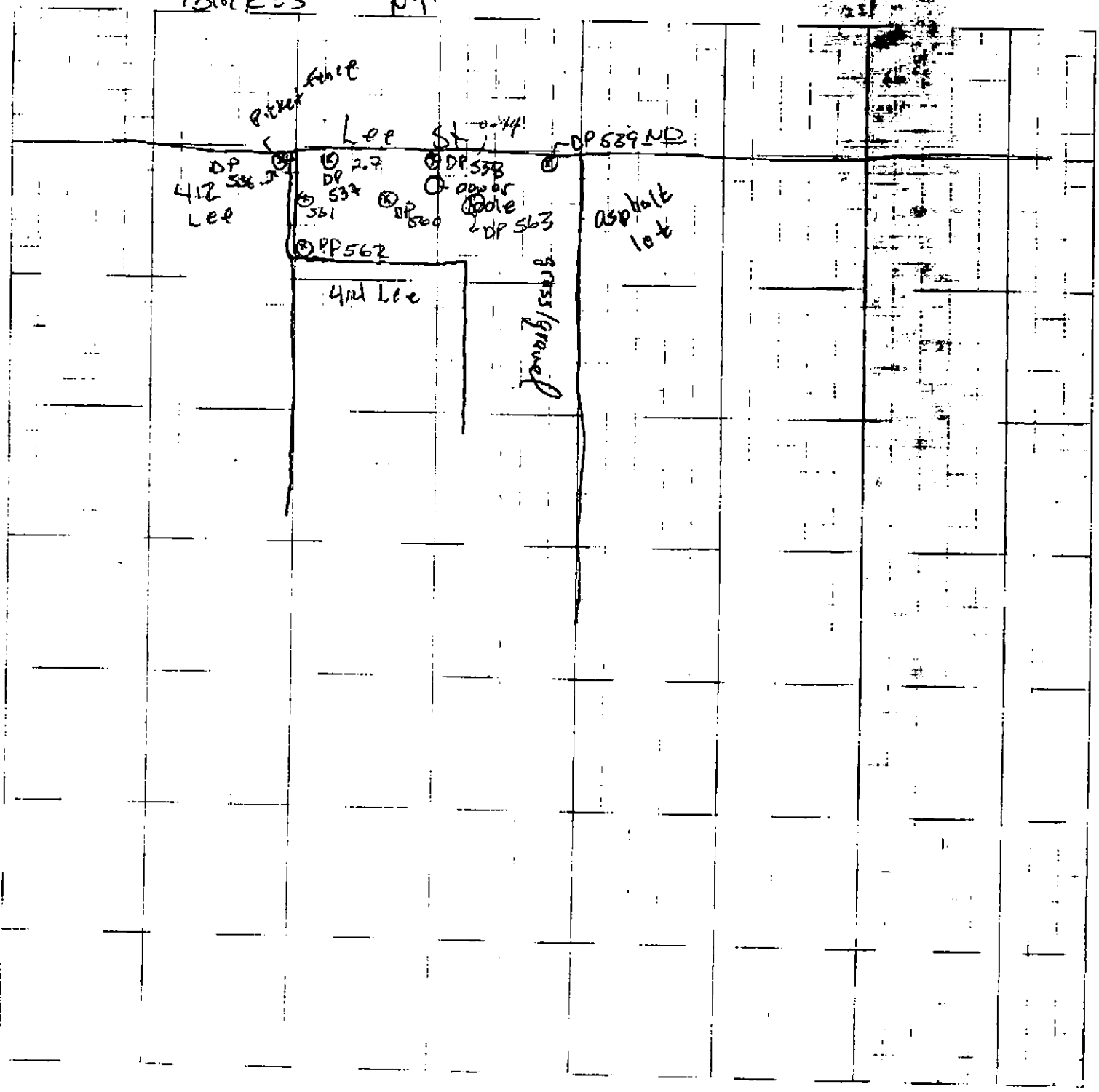




Job Name:  
Job Number:  
Title: 414 Lee St  
Computed by: JPF  
Date: 8/26/2000

(60' x 110' ship)  
City: Chicago  
Sheet: 19 of 20

1 block = 5' NT





FILE COPY

Job Name:  
Job Number  
Title:  
Computed by:  
Date

Checked by:  
Sheet: Of

To: Gretchin Zmitrovich

From Tim Fitzpatrick

RE: Crystal Springs

31 pages total

Ms. Zmitrovich:

Following ~~are~~<sup>are</sup> data & maps from our investigation. We are complete at this time. Please forward the data to Mr. Robert Martin & Ms. Anastasia Hanel as well. Thank you

Tim Fitzpatrick

709 236 3496 (cell)

Sample Tracking Form

Date: 15 Aug 82

Target Analyte	1 2 3			Sample Description	Blank #	LCS #	MS #	MSD #
	10/10	20/10	40/10					
1,3,5-TrCB	✓	✓	✓		2010	101	2010	2010
1,2,4-TrCB	✓	✓	✓			105		
1,2,3-TrCB	✓	✓	✓			102		
1,2,3,5,8,1,2,4,5	✓	✓	✓			104		
1,2,3,4-TeCB	✓	✓	✓			104		
Penta-CB	✓	✓	✓			106		
Hexa-CB	✓	✓	✓			111		
PCB as 1260	10/0	10/5	6/2		2010	106	51	47
Surrogate-TCH	116	114	110		103	109	152	104
DEP	125	111	120		118	109		142
CONTROLS								
1254	1254							
15000	15000							
013	013							
INT Data	15	15	15		15	15	15	15

J = Estimated  
E = Exceeds calibration range







### Sample Tracking Form

Date: 16 AUG 2000

		ACID			ACID			ACID			ACID			MSD #	MS #	LCS #	Blank #
		ACID	ACID	ACID	ACID	ACID	ACID	ACID	ACID	ACID	ACID	ACID	ACID				
Target Analyte	320	0.5	4	45	46	47	48	49	50	51	52	53	54				
	1,3,5-TrCB	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓				
	1,2,4-TrCB																
	1,2,3-TrCB																
	1,2,3,5&1,2,4,5																
	1,2,3,4-TeCB																
Penta-CB	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓				
Hexa-CB	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓				
PCB as 1260	0.28	0.10	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	0.20	0.21	0.22				
Surrogate TXN	141	112	134	107	937	103	106	104	99.6	107							
DiBP	155	117	137	111	105	110	113	104	107								
										TOTAL							
										1260							

J = Estimated  
E = Exceeds calibration range

AUGUST 00



Sample Tracking Form

Page 7 of 1

Date: August 11, 2000

Target Analyte	N-D			Ac-D			Ac-D			Ac-D			Ac-D		
	Sample	Description	MSD	Sample	Description	MSD	Sample	Description	MSD	Sample	Description	MSD	Sample	Description	MSD
1,3,5-TrCB	335	0.5	76	335	0.5	76	337	0.5	79	337	0.5	79	337	0.5	79
1,2,4-TrCB	336	0.5	78	336	0.5	78	338	0.5	81	338	0.5	81	338	0.5	81
1,2,3-TrCB	337	0.5	78	337	0.5	78	339	0.5	83	339	0.5	83	339	0.5	83
1,2,3,5&1,2,4,5	338	0.5	78	338	0.5	78	340	0.5	85	340	0.5	85	340	0.5	85
1,2,3,4-TeCB	339	0.5	78	339	0.5	78	341	0.5	87	341	0.5	87	341	0.5	87
Penta-CB	340	0.5	78	340	0.5	78	342	0.5	89	342	0.5	89	342	0.5	89
Hexa-CB	341	0.5	78	341	0.5	78	343	0.5	91	343	0.5	91	343	0.5	91
PCB as 1260	342	0.5	78	342	0.5	78	344	0.5	93	344	0.5	93	344	0.5	93
Surrogate TCHA	128	0.32	107	128	0.32	107	130	0.32	109	130	0.32	109	130	0.32	109
DCBP	142	0.12	117	142	0.12	117	144	0.12	119	144	0.12	119	144	0.12	119

J = Estimated  
E = Exceeds calibration range

Sample Tracking Form

Date: 17 AUG 00

Target Analyte	ACID										Blank	LCS	MS #	MSD #						
	345	346	347	348	349	349	349	349	350	351					352	353	353			
1,3,5-TrCB	4 95	4 97	4 99	4 100	4 101	4 102	4 103	4 104	4 105	4 106	4 107	4 108	4 109	4 110	4 111	4 112	4 113	4 114	4 115	
1,2,4-TrCB																				
1,2,3-TrCB																				
1,2,3,5&1,2,4,5																				
1,2,3,4-TeCB																				
Penta-CB																				
Hexa-CB																				
PCB as 1260	4010	4011	4012	4013	4014	4015	4016	4017	4018	4019	4020	4021	4022	4023	4024	4025	4026	4027	4028	
Surrogate TEHQ	106	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	
DBP	108	108	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	
THY																				
V60																				
175 Date	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	

J = Estimated AUGUST 00

E = Exceeds calibration range

17

Sample Tracking Form

Date: 18 Aug 00

ACID

ACID

ACID

ACID

Target Analyte	350	351	352	352	353	353	354	354	354	MA-1	1	2	2	3	3	4	4	4	5	5	Blank	LCS	MS #	MSC #
1,3,5-TrCB	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130
1,2,4-TrCB																								
1,2,3-TrCB																								
1,2,3,5,8,1,2,4,5																								
1,2,3,4,TeCB																								
Penta-CB																								
Hexa-CB																								
PCB as 1260	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141
Surrogate Tox	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
PCBP	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139

J = Estimated  
E = Exceeds calibration range

# Sample Tracking Form

Date: 18 Aug 00

Target Analyte	Acid		Acid		Acid		Acid		Acid		Acid		Acid		Acid		MSD #
	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	HA-L6	
	0.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28
	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	28

J = Estimated  
E = Exceeds calibration range



# Sample Tracking Form

Date: 18 Aug 00

SENT BY: KUHLMAN ELECTRIC CORPORA

601 8926496

601 8926496;

AUG-20 10:13AM;

PAGE 11

Target Analyte	ACID			ACID			ACID			ACID			ACID			ACID				
	363	364	365	366	367	368	368	369	369	370	370	371	371	372	372	372	Blank #	LCS #	MS #	MSD #
1,3,5-TrCB	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166
1,2,4-TrCB	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2,3-TrCB																				
1,2,3,5,8,1,2,4,5																				
1,2,3,4-TeCB																				
Penta-CB																				
Hexa-CB																				
PCB as 1260	0.42	<0.01	<0.01	0.31	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Surrogate TCMY	112	92.6	119	89.1	120	87	103	90	102	88	102	88	115	90.3	116	85	85	74	72	120
D8P	129	999	79	910	120	103	103	102	102	102	102	102	124	92.4	130	84	102	91	137	132

J = Estimated  
E = Exceeds calibration range

Sample Tracking Form

Date: 18 Aug 00

Target Analyte	MSD #	MS #	LCS #	Blank #	Sample Description	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393
1,3,5-TrCB	107	107	11	4001	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202
1,2,4-TrCB																										
1,2,3-TrCB																										
1,2,3,5,8,1,2,4,5																										
1,2,3,4-TeCB																										
Penta-CB																										
Hexa-CB																										
PCB as 1260	008	008			002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019	020	021	022	023
Surrogate TCE	82	82			79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
DCE	99	99			99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120

J = Estimated  
E = Exceeds calibration range





Sample Tracking Form

Date: 19 Aug 20

Target Analyte	Sample Description	402	402	403	403	403	405	405	405	406	406	406	407	407	407	408	408	408	409	409	410	410	410	411	411	411	Blank	LCS	MS #	MSC #		
1,3,5-TrCB		225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253		
1,2,4-TrCB		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
1,2,3-TrCB		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
1,2,3,5&1,2,4,5		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
1,2,3,4-TeCB		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Penta-CB		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Hexa-CB		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
PCB as 1260		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Surrogate ICB		95.7	95.7	93.7	93.7	94.0	95.8	95.8	95.8	95.4	92.3	94.9	94.9	92.2	92.2	95.6	95.6	92.3	92.3	93.8	93.8	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	
DxCB		95.3	95.3	94.7	94.7	93.5	95.0	95.0	95.0	94.8	98.1	98.1	98.1	98.2	98.2	91.4	91.4	91.2	91.2	95.5	95.5	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9
		19	19	19	19	19	19	19	19	19	20	19	19	19	19	20	19	19	19	20	20	20	20	20	20	20	20	20	20	20	20	19

J = Estimated  
E = Exceeds calibration range

Sample Tracking Form

Date: 19 Aug 00

Sullivan ✓  
LDD  
NEMH

Target Analyte	Pin	Sample Description																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		412 0.5	412 4	413 0.5	413 4	414 0.5	414 4	415 0.5	415 4	416 0.5	416 4	417 0.5	417 4	418 0.5	418 4	419 0.5	419 4	420 0.5	420 4	421 0.5	421 4	Blank #	LCS #	IMS #	MSD #																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
1,3,5-TrICB	245	246	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000

J = Estimated  
E = Exceeds calibration range

Sample Tracking Form

Date: 19 Aug 00

ACID

Target Analyte	Sample Description				Blank #	LCS #	MS #	M #
	422	423	424	427				
1,3,5-TrCB	2.65	2.67	2.70	2.76	2.01	2.75	2.86	
1,2,4-TrCB								
1,2,3-TrCB								
1,2,3,5&1,2,4,5								
1,2,3,4-TeCB								
Penta-CB								
Hexa-CB								
PCB as 1260	0.19	0.19	0.10	0.10	0.12	0.10	0.10	
Surrogate TCMK	119	75.0	88.6	83.7	84.2	75.6	75.7	
DIBP	15	81.9	85.2	88.6	83.3	79.7	85.1	
1.5 Dots	20	20	20	20	20	20	20	

see Appendix  
Rows  
A

J = Estimated  
E = Exceeds calibration range

Sample Tracking Form

PL

MS

Date: 20 Aug 00

Target Analyte	Sample Description										MS #	LCS #	Blank #	HA7 #	HA8 #	MS #									
	Acid		Acid		Acid		Acid		Acid																
	#	Q.S	#	Q.S	#	Q.S	#	Q.S	#	Q.S															
1,3,5-TricB	435	4	292	435	4	293	294	436	4	436	225	148	296	297	298	277	16	89.8							
1,2,4-TricB	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							
1,2,3-TricB	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							
1,2,3,5&1,2,4,5	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							
1,2,3,4-TeCB	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							
Penta-CB	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							
Hexa-CB	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							
PCB as 1260	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							
Surrogate	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							
DGP	435	4	291	435	4	291	292	436	4	436	225	148	296	297	298	277	16	89.8							

J = Estimated  
E = Exceeds calibration range



Sample Tracking Form

Date: 20 Aug 00

Target Analyte	Acid				Acid				Acid				
	MSD #	MS #	LCS #	Blank #	445 #	446 #	447 #	448 #	449 #	450 #	451 #	452 #	453 #
1,3,5-TrCB	304	304	17	17	310	315	314	315	312	309	310	311	312
1,2,4-TrCB													
1,2,3-TrCB													
1,2,3,5,8,1,2,4,5													
1,2,3,4-TeCB													
Penta-CB													
Hexa-CB													
PCB as 1260													
Surrogate ToxX													
ToxX													

2 large US Paper one by one by ToxX

Estimated  
E = Exceeds calibration range

Sample Tracking Form

Date: 20 Aug 00

Target Analyte	MS #	LCS #	Blank #	Sample Description	MS #	MSC #	
1,3,5-TrICB	446	446	447	NO LCS / MS / MSD blank	447		
1,2,4-TrICB	C.S	4	0.5		4		
1,2,3-TrICB	317	318	319		320	321	
1,2,3,5&1,2,4,5	445	446	447				
1,2,3,4-TeCB	LH						
Penta-CB							
Hexa-CB							
PCB as 1260							
Surrogate 7-11X							
D-8D							
1,2,3,4,5							

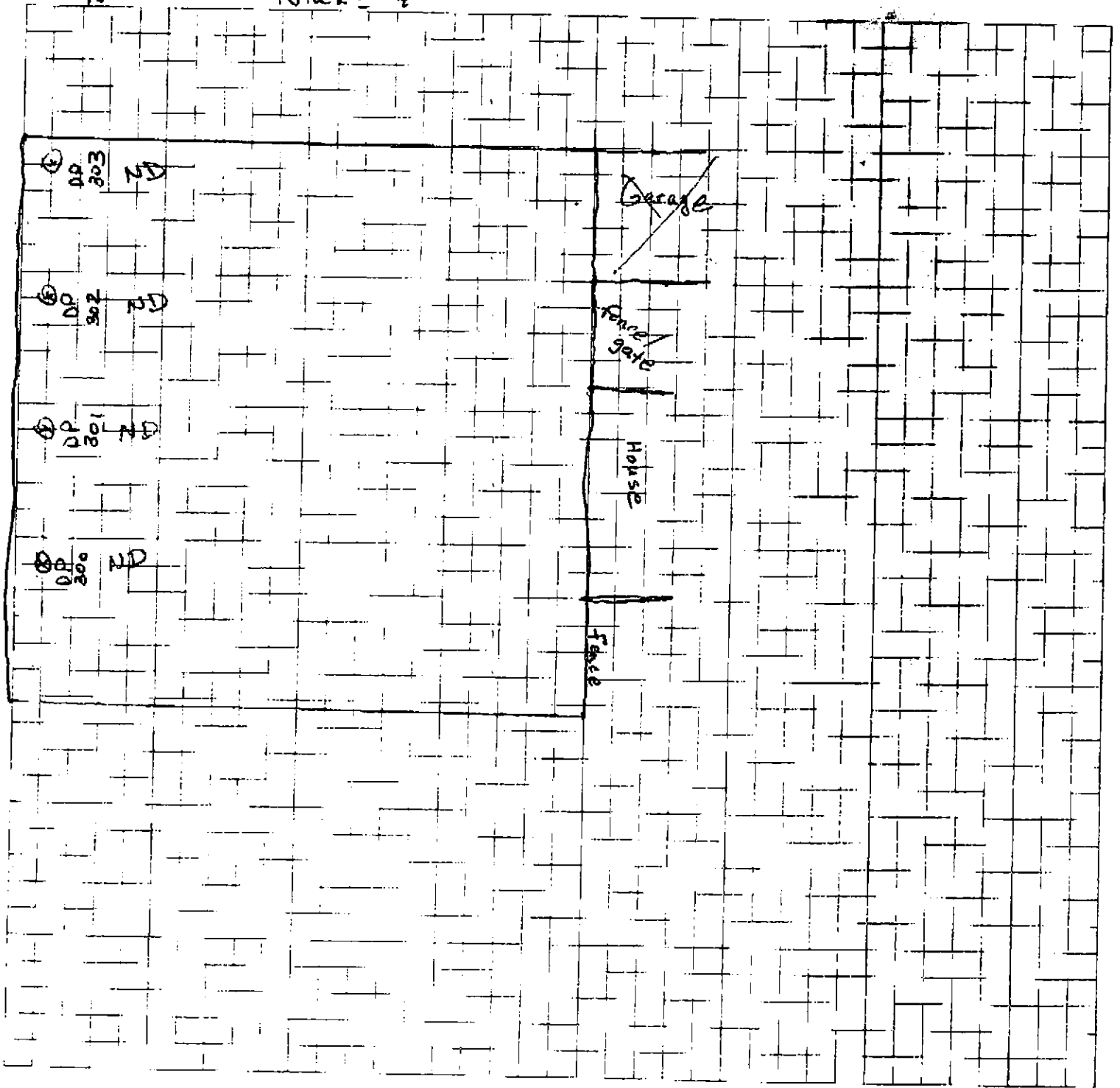
J = Estimated  
E = Exceeds calibration range



Job Name: Crystal Springs  
 Job Number: \_\_\_\_\_  
 Title: Sony Reeves backyard 405 Jackson  
 Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_  
 Date: 2/16/2000 Sheet 1 of 11

N ↑

1 block = 4'

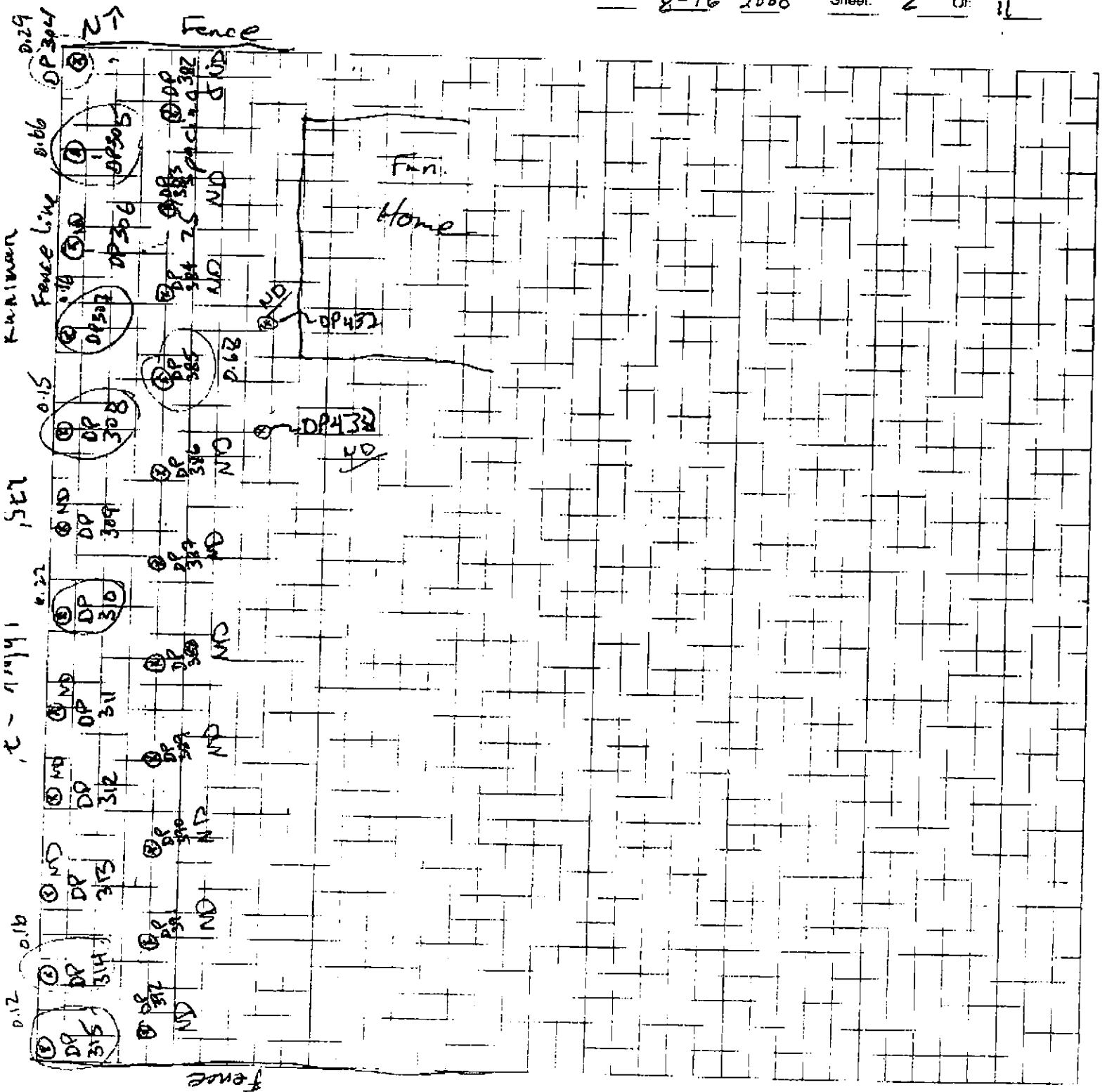


1/2" = 10' (vertical)



Handwritten scribble with numbers 200 and 7

Job Name: Crystal Springs  
Job Number: \_\_\_\_\_  
Title: Stringer Funeral Home  
Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_  
Date: 8-16-2000 Sheet: 2 Of: 11

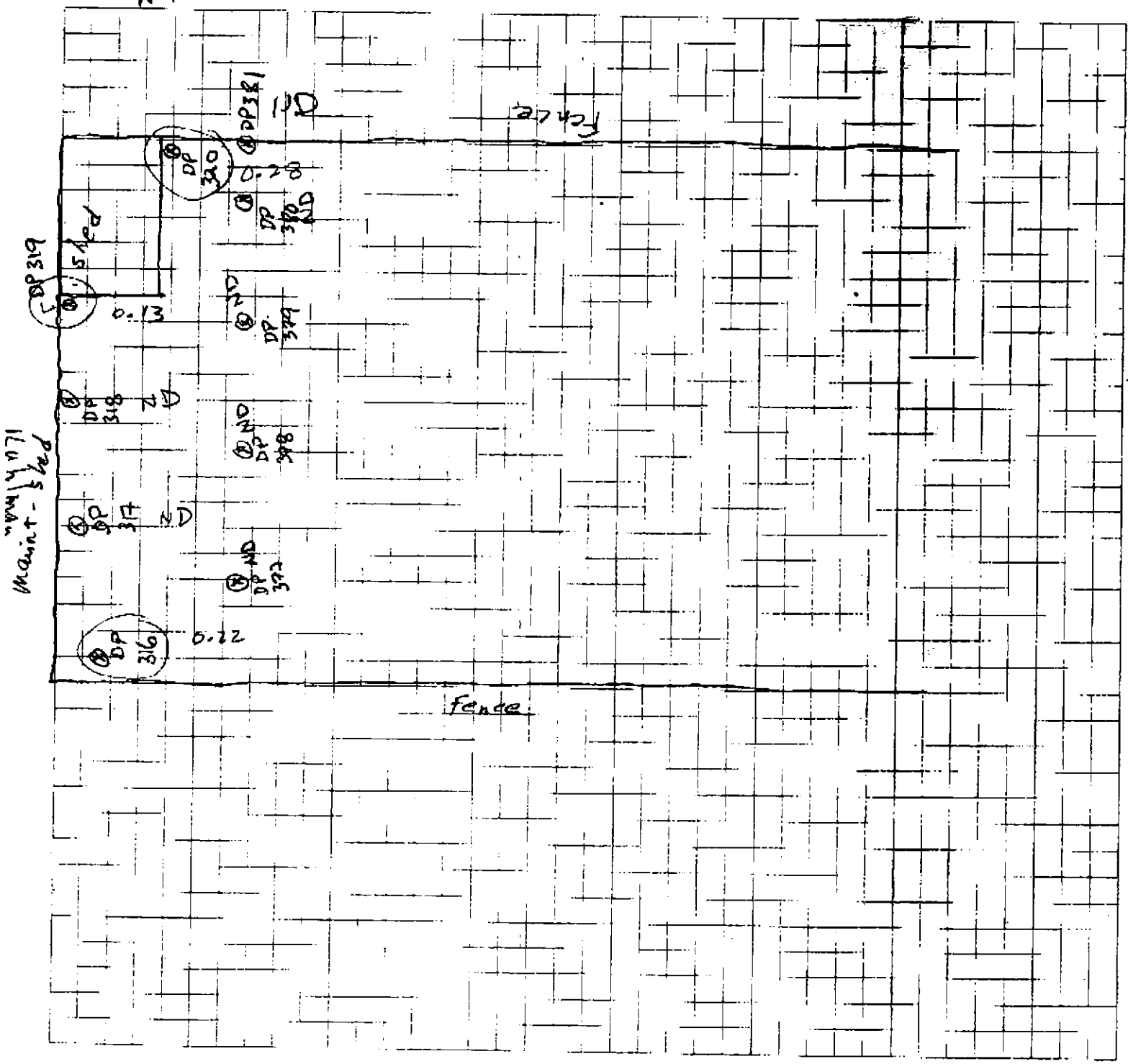


# OGDEN

Job Name: Crystal Springs  
 Job Number: \_\_\_\_\_  
 Title: 401 N. Jackson, Elnor Wright  
 Computed by: \_\_\_\_\_  
 Date: 8-16-2000 Sheet 3 of 11

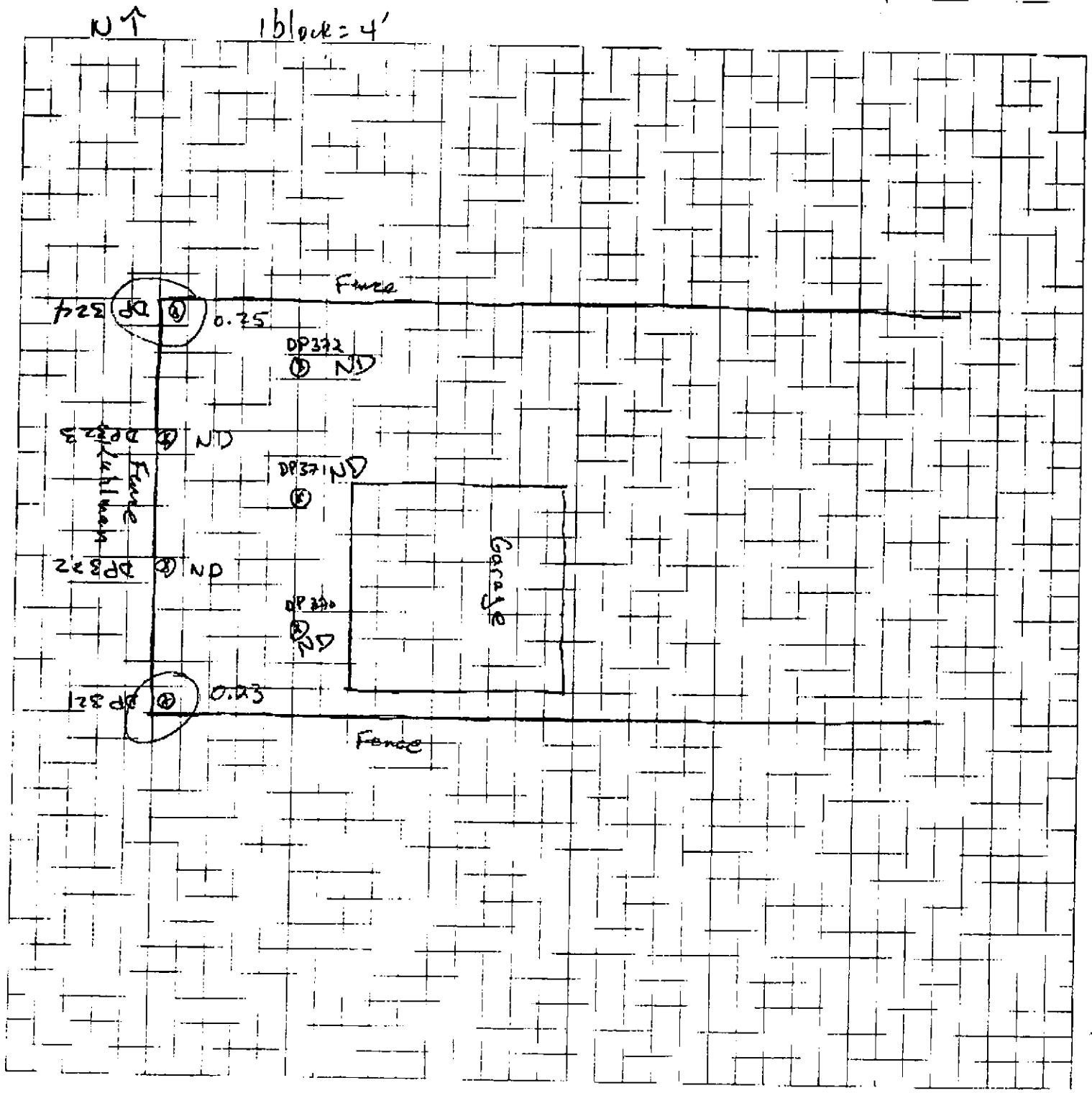
1 block = 4'

N ↑



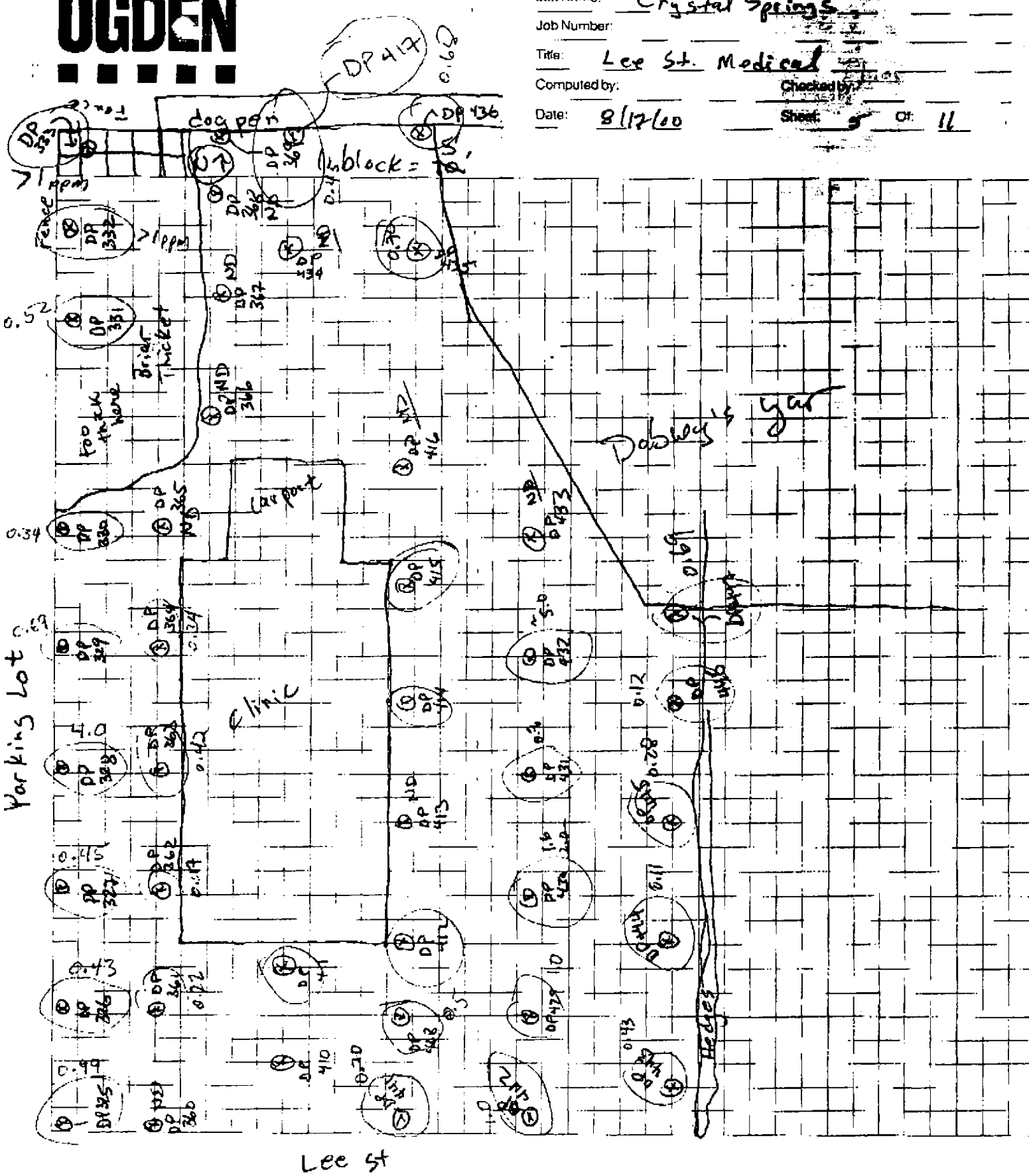


Job Name: Crystal Springs  
Job Number: \_\_\_\_\_  
Title: 407 N. Jackson Louie Lang  
Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_  
Date: 8-16-00 Sheet: 4 Of: 11





Job Name: Crystal Springs  
Job Number: \_\_\_\_\_  
Title: Lee St. Medical  
Computed by: \_\_\_\_\_  
Date: 8/17/00 Sheet: 9 of 11



Lee St



Job Name: Crystal Springs

Job Number: \_\_\_\_\_

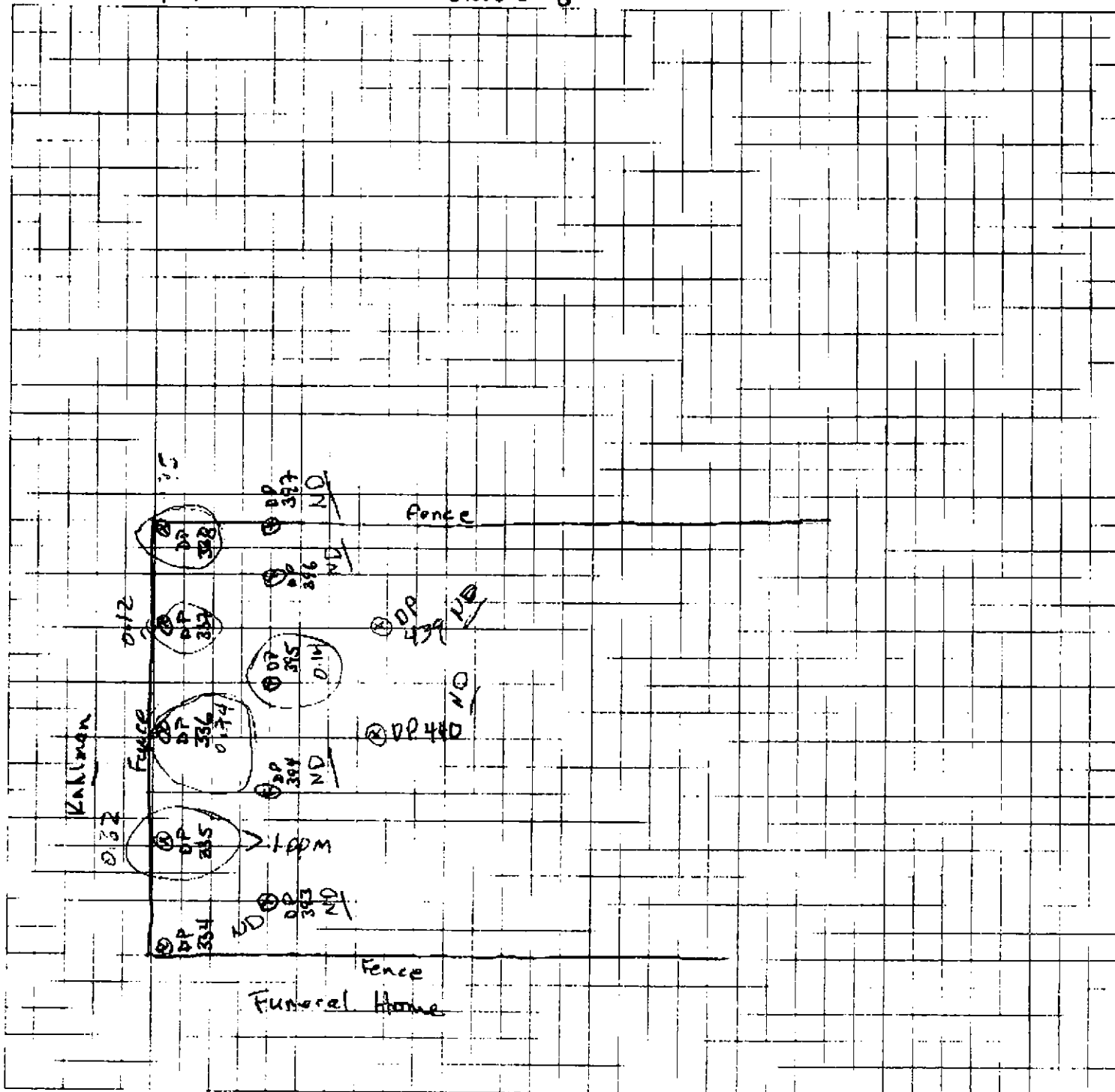
Title: 303 N. Jackson (stringer)

Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_

Date: 8-17-00 Sheet: 6 Of 11

NT

1 block = 5'



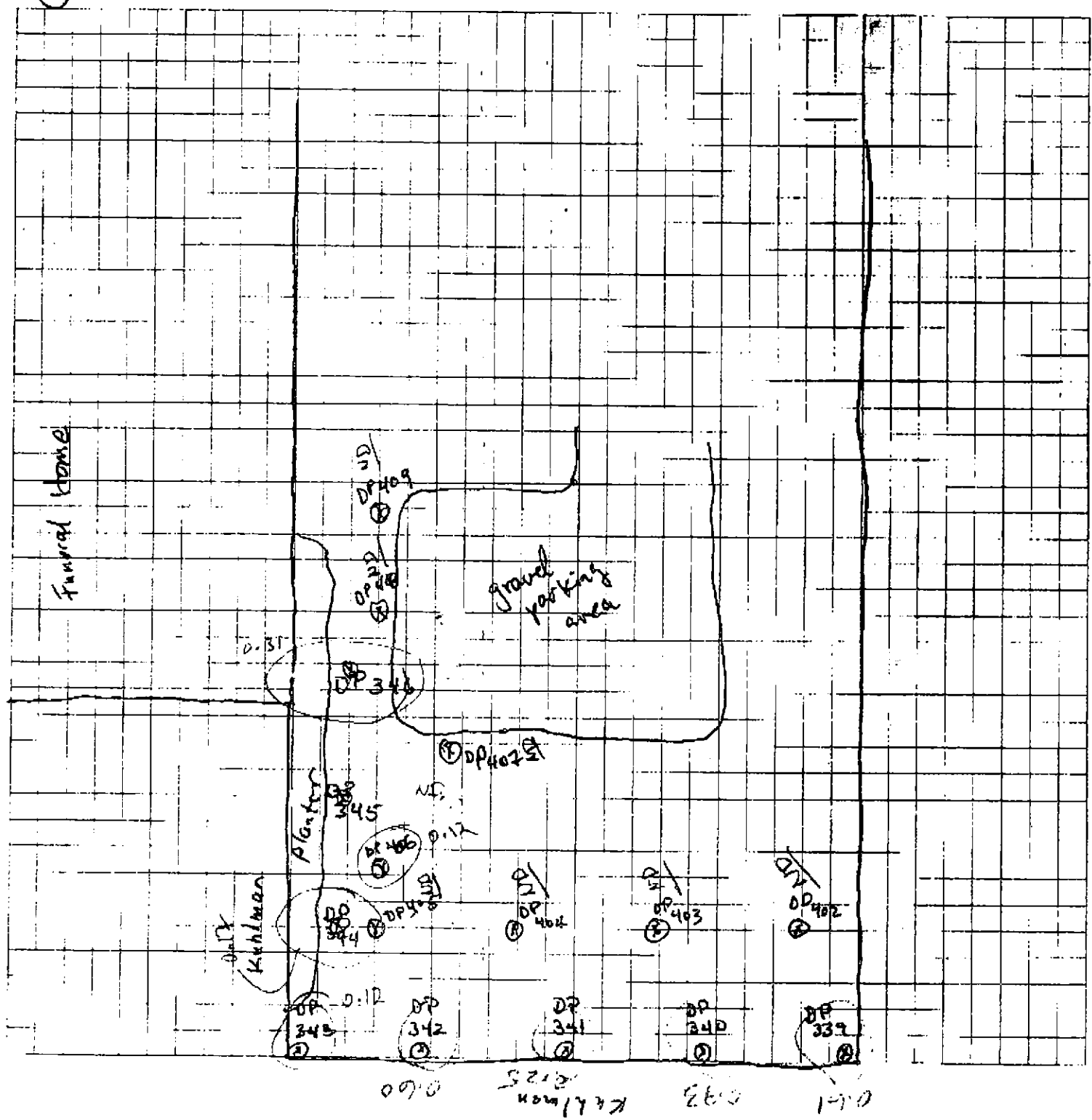




Job Name: Crystal Springs  
 Job Number: 3-4  
 Title: 219 N. Jackson - Perry Smith  
 Computed by: TJF Checked by:   
 Date: 8-17-00 Sheet: 7 Of: 11

1 block = 5'

② ↑





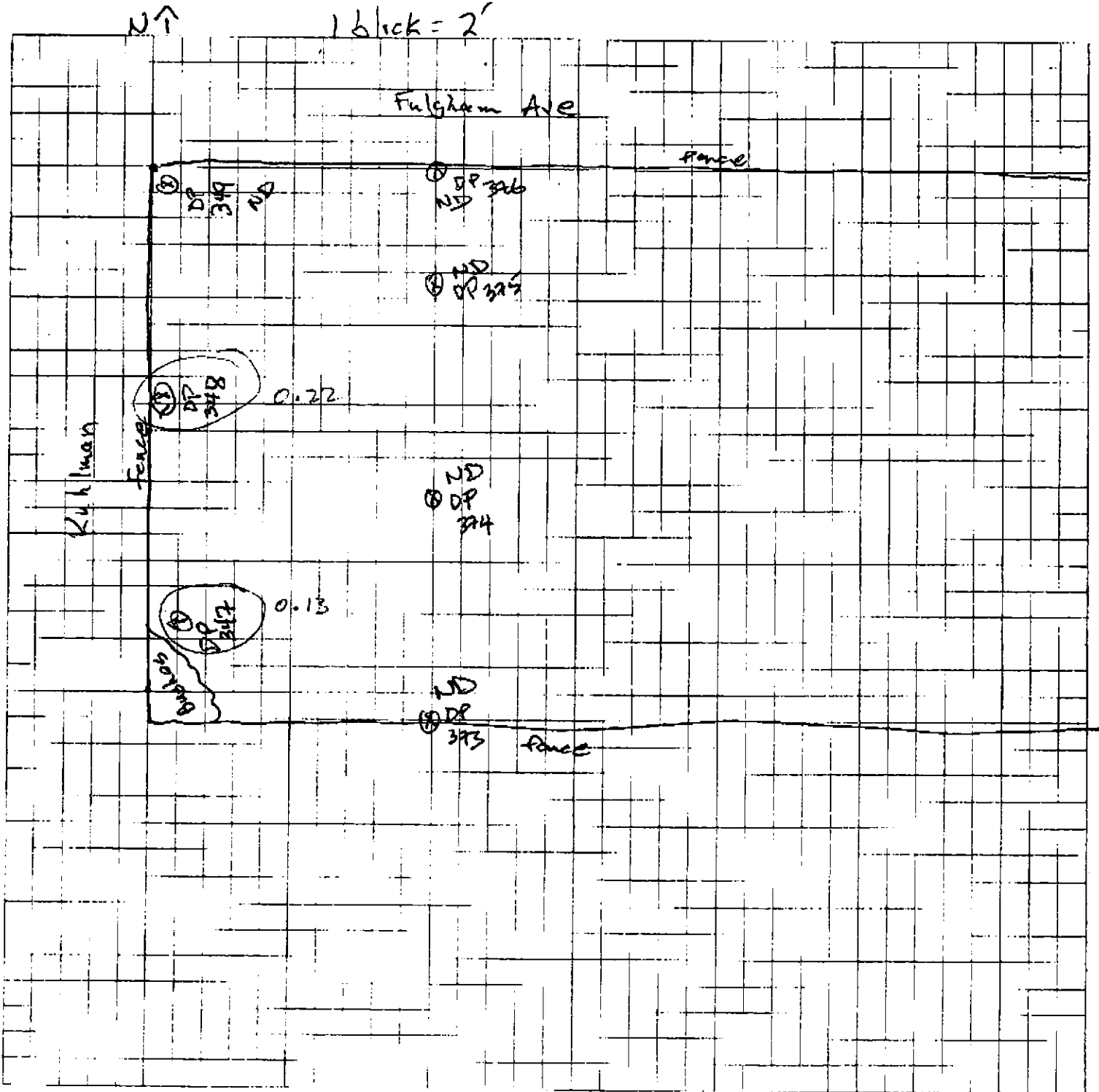
Job Name: Crystal Springs

Job Number: \_\_\_\_\_

Title: 409 N. Jackson (Army Cooper)

Computed by: RF Checked by: \_\_\_\_\_

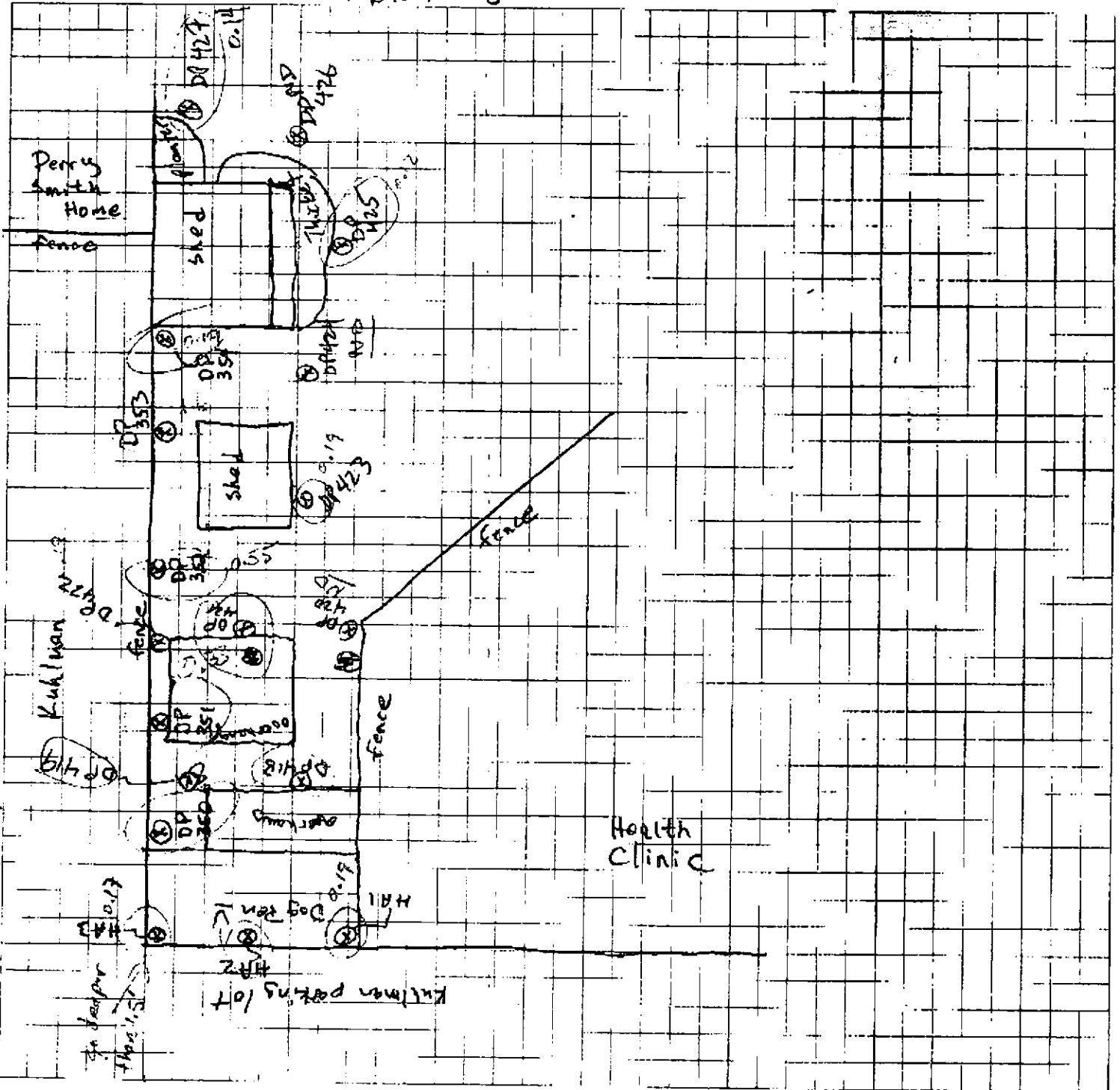
Date: 8-17-00 Sheet: 8 Of: 11





Job Name Crystal Springs  
 Job Number: \_\_\_\_\_  
 Title: Dabney Home  
 Computed by: TJE Checked by: \_\_\_\_\_  
 Date: 8-17-00 Sheet 9 of 11

1 block = 5'





Job Name: Crystal Springs

Job Number: \_\_\_\_\_

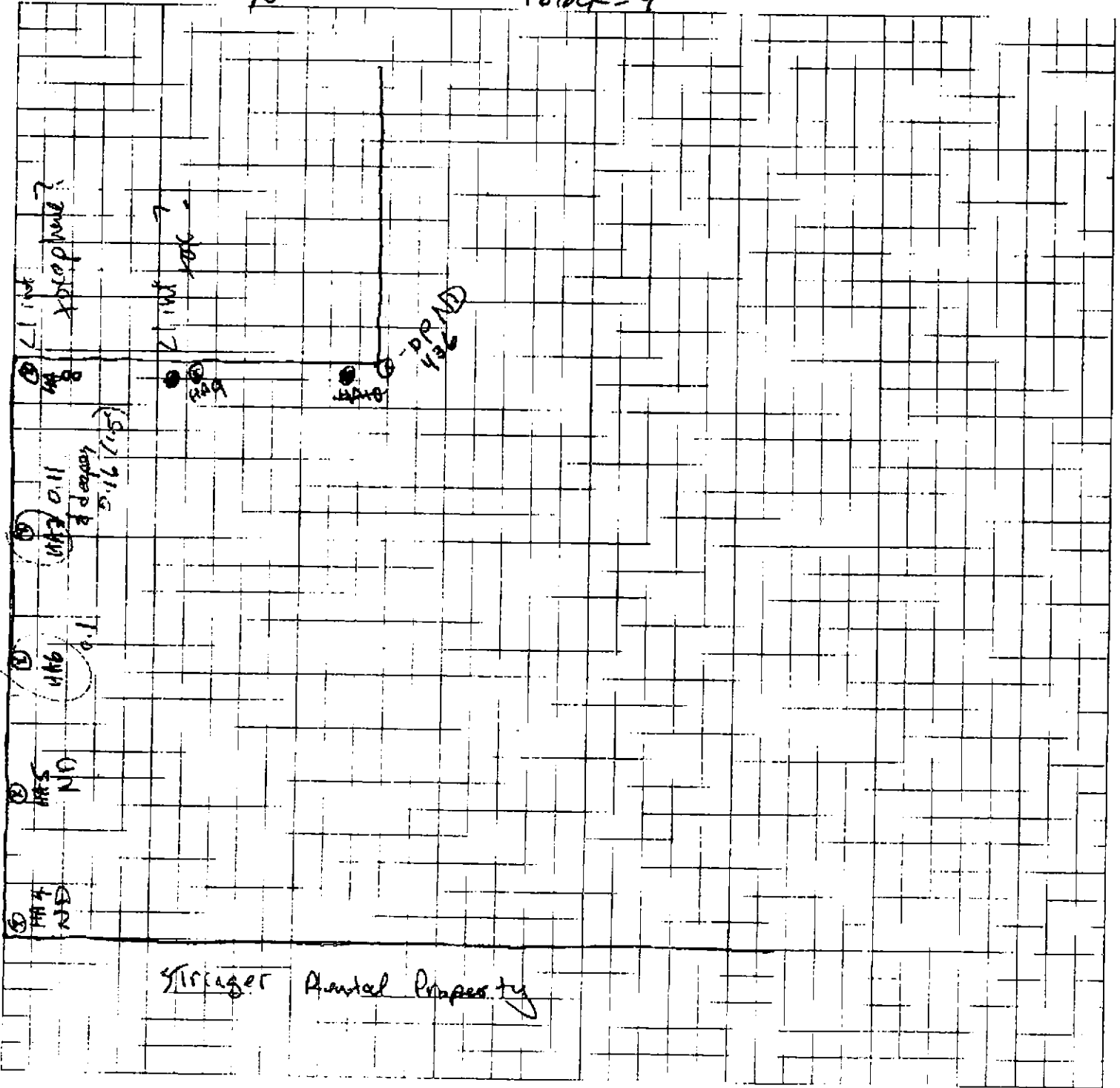
Title: Wright House

Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_

Date: 8-18-00 Sheet: 10 of: 11

NT

1 block = 4'



Kuhlman

int  
drop line?

int  
box

DPAD  
1/26

911  
drop  
5.16 (1.5)

466  
d.i.

MRS  
ND

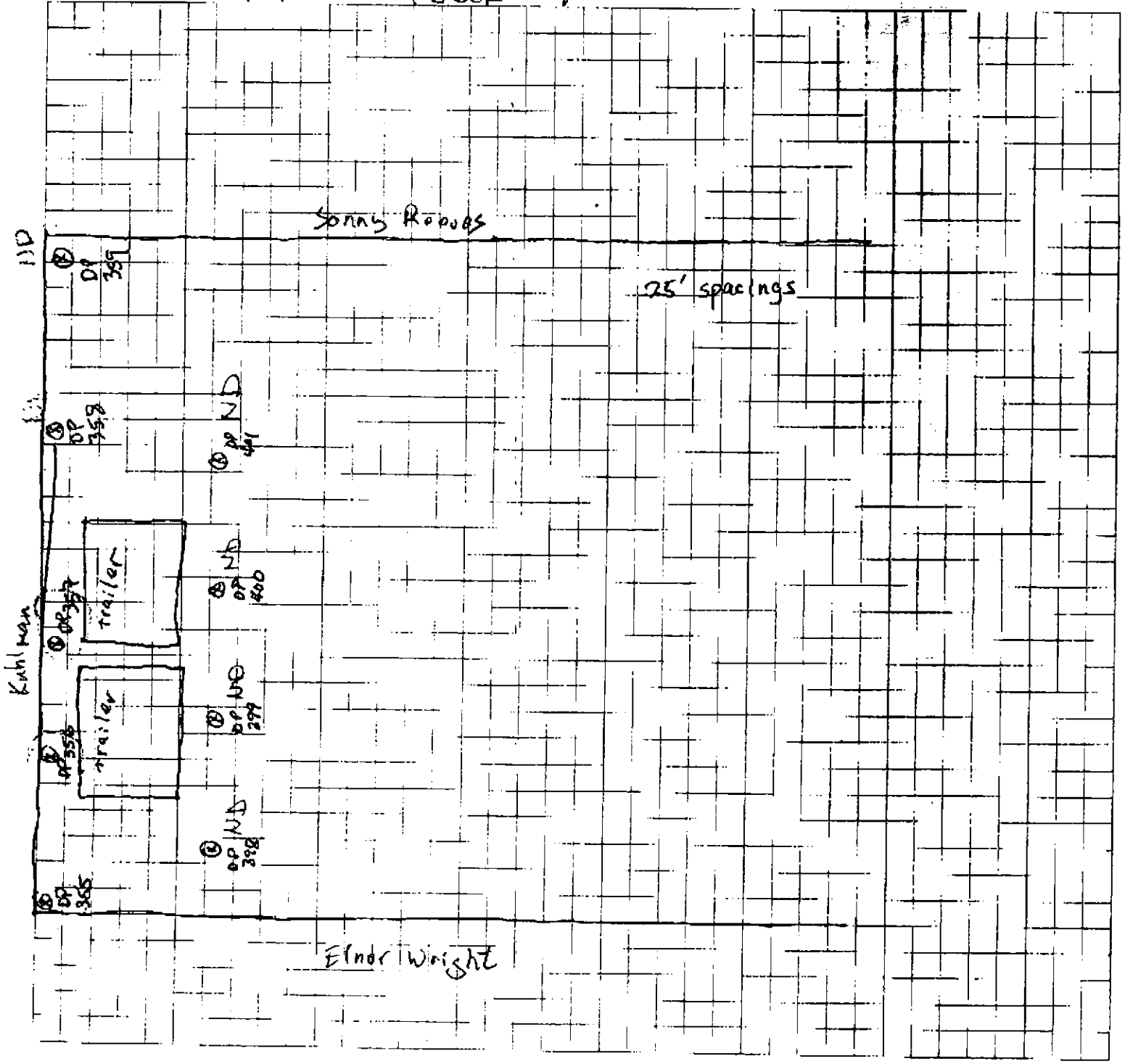
MAY  
ADD

Storage Rental Property



Job Name: Crystal Springs  
 Job Number: \_\_\_\_\_  
 Title: Harold & Suzanne Warren  
 Computed by: TJF Checked by: \_\_\_\_\_  
 Date: 8-18-00 Sheet 12 of 16

N? 1 block = 4'





Job Name  
Job Number:  
Title:  
Computed by:  
Date:

FILE COPY  
COPY

Checked by:  
Sheet: 1 of 19

# Fax Coversheet

To: Gretchin Zmitrovich  
MDECR

From: Tim Fitzpatrick  
Ogden Environmental

Re: Crystal Springs Data Summary

19 pages total

Ms. Zmitrovich:

Following is all the data available as of 5:30 PM on Friday Aug 18. The mobile lab had autosampler malfunctions the previous two nights and are thus still somewhat behind.

We will be working through the weekend and you can reach me on my cell at 704-236-3496 if you like.

Best Regards,  
Tim Fitzpatrick



# Sample Tracking Form

Target Analyte	Sample Description												MS #30	MSD #30											
	05	4	0.5	4	0.5	4	0.5	4	0.5	4	0.5	4													
1,3,5-TrCB	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	Blank #1	LCS #8	MS #30	MSD #30	
1,2,4-TrCB																									
1,2,3-TrCB																									
1,2,3,5,8,12,4,5																									
1,2,3,4,TeCB																									
Penta-CB																									
Hexa-CB																									
PCB as 1260	0.22	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.16	0.10	0.13	0.10	0.22	0.18	0.10	0.10	0.10	0.10	0.13	0.10	0.10	0.10	0.10	0.10	0.10
Surrogate PchX	101	83.8	96	74	111	93	110	107	112	99	134	107	127	98.0	107	103	109	102	106	112	120	113	107	109	107
DeBP	115	102	91	79	103	106	109	114	112	105	128	112	129	101	106	102	106	111	108	120	113	107	109	107	
			TRAC		TRAC										TRAC		TRAC								
			1260		1260										1260		1260								

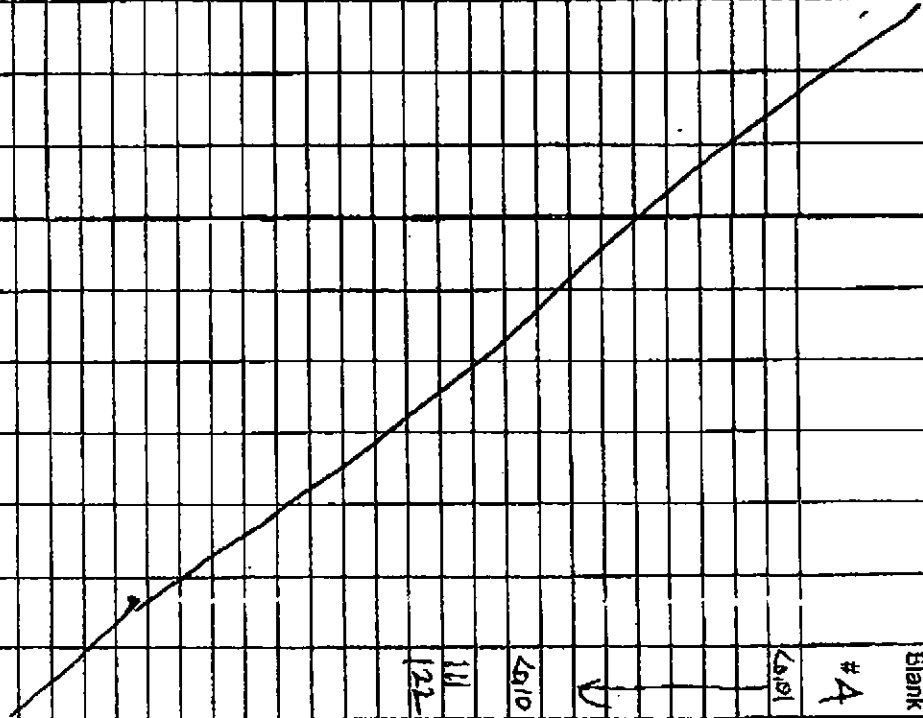
J = Estimated  
E = Exceeds calibration range



### Sample Tracking Form

Target Analyte	ACID										Blank #	LCS #	MS #	MSD #	
	320	320	321	321	321	321	322	322	323	323					324
1,3,5-TNCB	44	45	46	47	48	49	50	51	52	53	54	4201	104	150	147
1,2,4-TNCB													104	147	145
1,2,3-TNCB													104	145	143
1,2,3,5,8,12,4,5													103	147	145
1,2,3,4-TeCB													104	143	141
Penta-CB													105	143	141
Hexa-CB													102	140	138
PCB as 1260	928	928	928	928	928	928	928	928	928	928	928	4201	102	161	157
Surrogate-TCMX	141	112	134	107	937	103	105	106	104	99.6	107	111	101	139	133
DIBP	155	117	137	111	105	110	116	109	113	104	107	122	104	147	149

J = Estimated  
E = Exceeds calibration range



DC  
PEAK  
BY  
07/16/00

157/166

Target Analyte  
1,3,5-TrICB  
1,2,4-TrICB  
1,2,3-TrICB  
1,2,3,5&1,2,4,5  
1,2,3,4-TaCB  
Penta-CB  
Hexa-CB  
PCB as 1260  
Surrogate TCMK  
DCBP

Target Analyte	Sample Description										Blank #5	LCS #5	MS #61	MSD #61										
	ACID	ACID	ACID	ACID	ACID	ACID	ACID	ACID	ACID	ACID														
1,3,5-TrICB	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	99.8	149	152	
1,2,4-TrICB																					714	149	150	
1,2,3-TrICB																					984	149	148	
1,2,3,5&1,2,4,5																					970	148	148	
1,2,3,4-TaCB																					984	147	147	
Penta-CB																					968	141	141	
Hexa-CB																								
PCB as 1260	0199	4810	0443	4810	0445	4810	410	4810	0169	4810	0194	4810	0152	4810		4810		4810	4810	4810	108	120	122	
Surrogate TCMK	143	103	109	104	109	109	145	104	103	108	107	107	132	104	133	100	137	103	104	105	103	974	147	143
DCBP	132	103	107	117	113	115	156	107	103	110	105	110	134	110	140	108	127	113	110	114	116	128	152	137
					01						02					THAC 1260			THAC 1260					
					PA A1 2789						PRALS A1 2792													
																					18	18	18	

Sample Tracking Form

PHAT 1-2  
PIL 1-5

Page 1 of 5  
Date: August 17, 2000

J = ESI

Sample Tracking Form

Date: August 11 2000

Page 6 of 2

Target Analyte	Sample Description										Blank #	LCS #	1-20 MS #	MSD #											
	335	335	336	336	337	337	338	338	339	339															
1,3,5-TrCB	75	70	18	18	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	10	10	15	15	
1,2,4-TrCB																									
1,2,3,6,8,1,2,4,5																									
1,2,3,4-TeCB																									
Penta-CB																									
Hexa-CB																									
PCB as 1260	0.32	0.10	0.10	0.74	0.12	0.10	0.75	0.10									0.12	0.10	0.17	0.10	0.10	970			34
Sumgale TePA	128	107	105	111	110	103	139	110									102	983	104	103	100	982	14	140	
DCBP	142	117	115	112	123	109	162	117									102	114	108	110	135	110	142	158	
	18	18	18	18	18	18	18	18									18	18	18	18	18	18	18	18	18

J = Estima  
C = Evaluation

J = Estim

ADDG057 60

Target Analyte	ACID										Sample Description				Blank #	LCS #	MS #	MSD #								
	305	345	346	347	348	349	349	349	349	349	349	349	349	349					349	349	349					
1,3,5-TrCB	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
1,2,4-TrCB																										
1,2,3-TrCB																										
1,2,3,5,8,1,2,4,5																										
1,2,3,4,1,6,6,8																										
Penta-CB																										
Hexa-CB																										
PCBs as 1260	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010	2010
Surrogate TEAH	106	97.9	97.3	98.7	98.7	97.6	94.5	95.4	122	90.0																
DBP	109	108	100	112	107	111	104	107	137	106																
TIME																										
W60																										
OK																										
PEAK																										
AF=BI																										
WINDUP																										
	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18

Sample Tracking Form

Sample Tracking Form

ACID

ACID

ACID

Sample Description ACID

Date: 18 Aug 00

Page 1 of

Target Analyte	350 0.5	350 4	351 0.5	351 4	352 0.5	352 4	353 0.5	353 4	354 0.5	354 4	HA-1 0.5	1 4	2 0.5	2 4	3 0.5	3 1.5	4 0.5	4 2.5	5 0.5	5 2.5	Blank # 8	LCS # 8	MIS # 107	MISD # 107
1,3,5-TrCB	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126			140	132
1,2,4-TrCB	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120			135	135
1,2,3-TrCB																							133	131
1,2,3,5,8,1,2,4,5																							126	124
1,2,3,4-TeCB																							124	121
Penta-CB																							124	122
Hexa-CB																							121	122
PCB as 1260	108	1010	0133	1010	0.55	1010																	121	117
Surrogate Pery	104	100	104	104	104	104																	124	117
PCBP	116	114	108	116	114	105																	138	129
MSD	18	18	18	18	18	18																	18	18

J = Estin



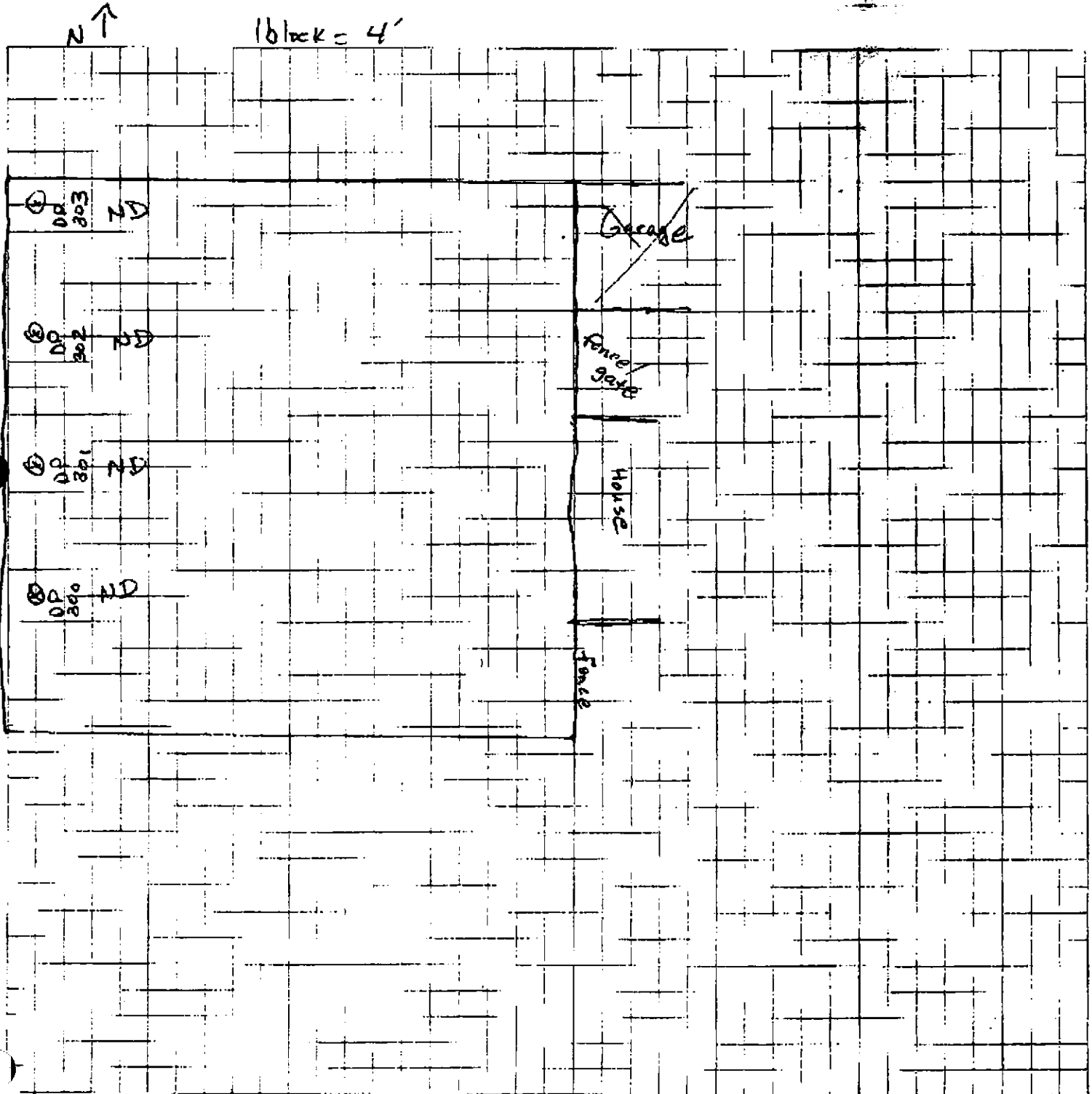
Job Name: Crystal Springs

Job Number: \_\_\_\_\_

Title: Sony Reeves backyard 405 Jackson

Computed by: Chadler

Date: 2/16/2000 Sheet 1 of 11





280  
200  
7

Job Name: Crystal Springs

Job Number:

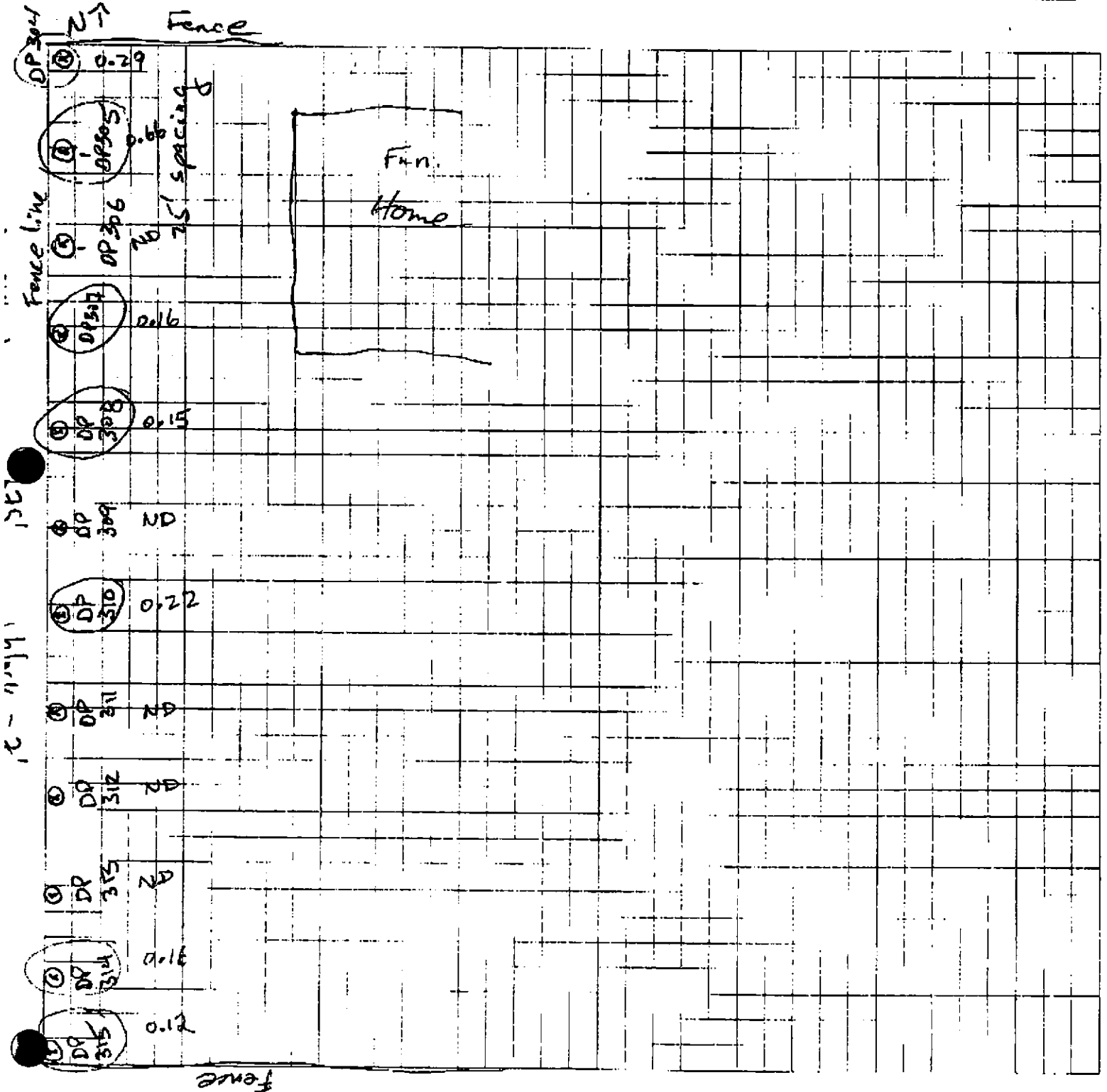
Title: Stringer Funeral Home

Computed by:

Checked by:

Date:

Sheet: 2 Of: 11





Job Name: Crystal Springs

Job Number: \_\_\_\_\_

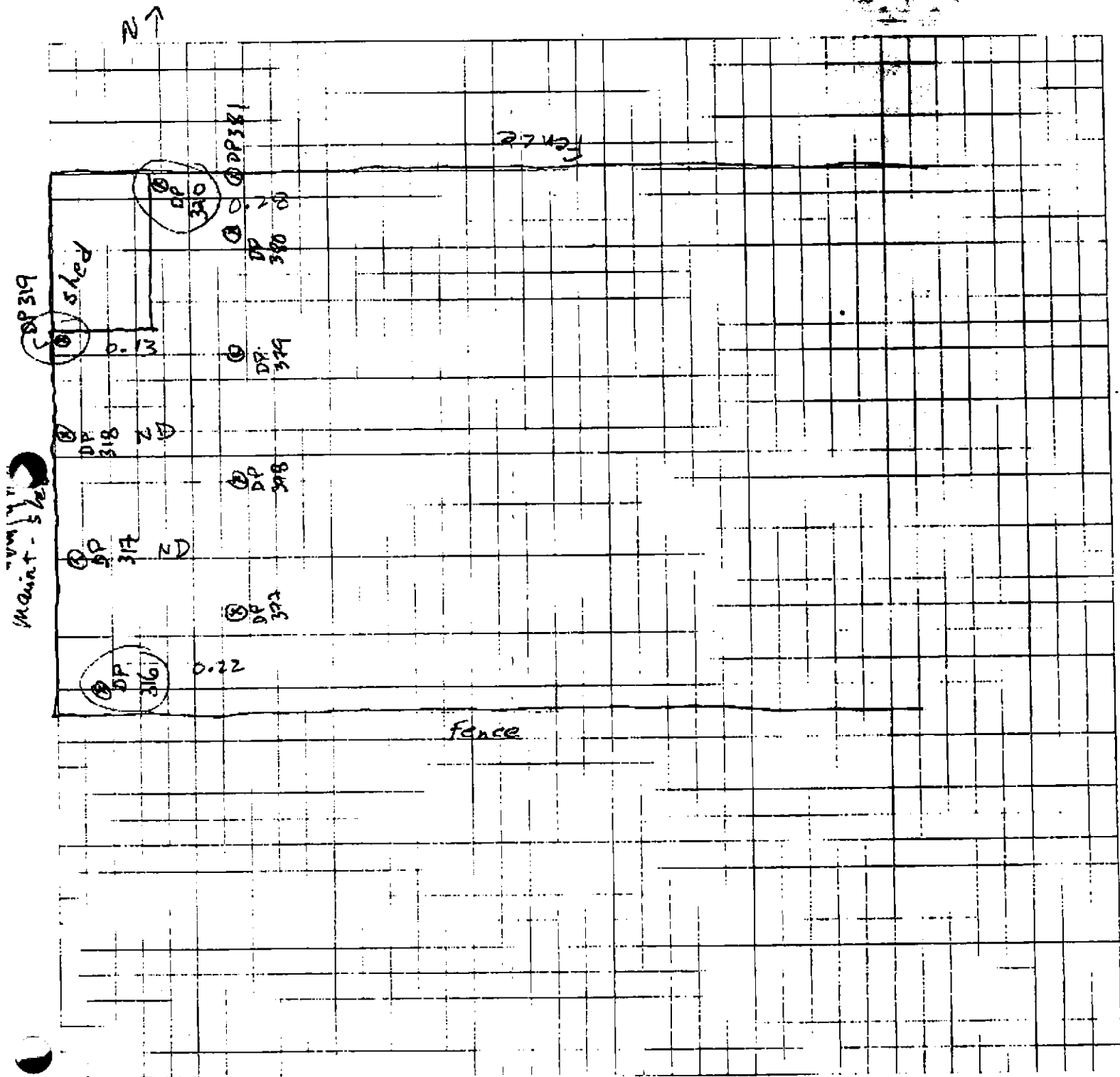
Title: 401 N. Jackson Floor Wright

Computed by: \_\_\_\_\_

Date: 8-16-2000

Checked by: \_\_\_\_\_  
Sheet 3 of 11

1 block = 4'







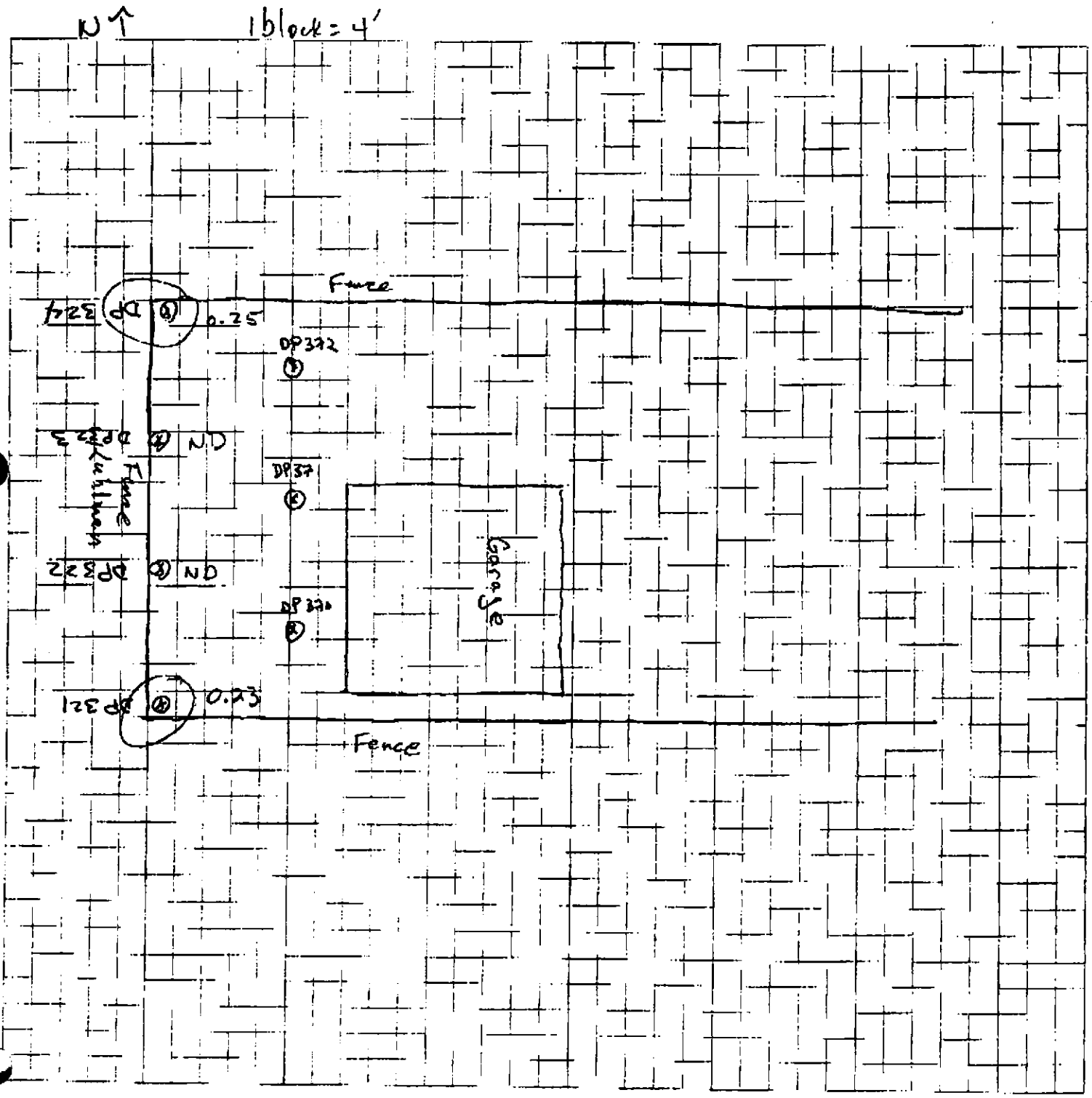
Job Name: Crystal Springs

Job Number: \_\_\_\_\_

Title: 407 N. Jackson Louie Lang

Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_

Date: 8-16-00 Sheet: 4 of 11





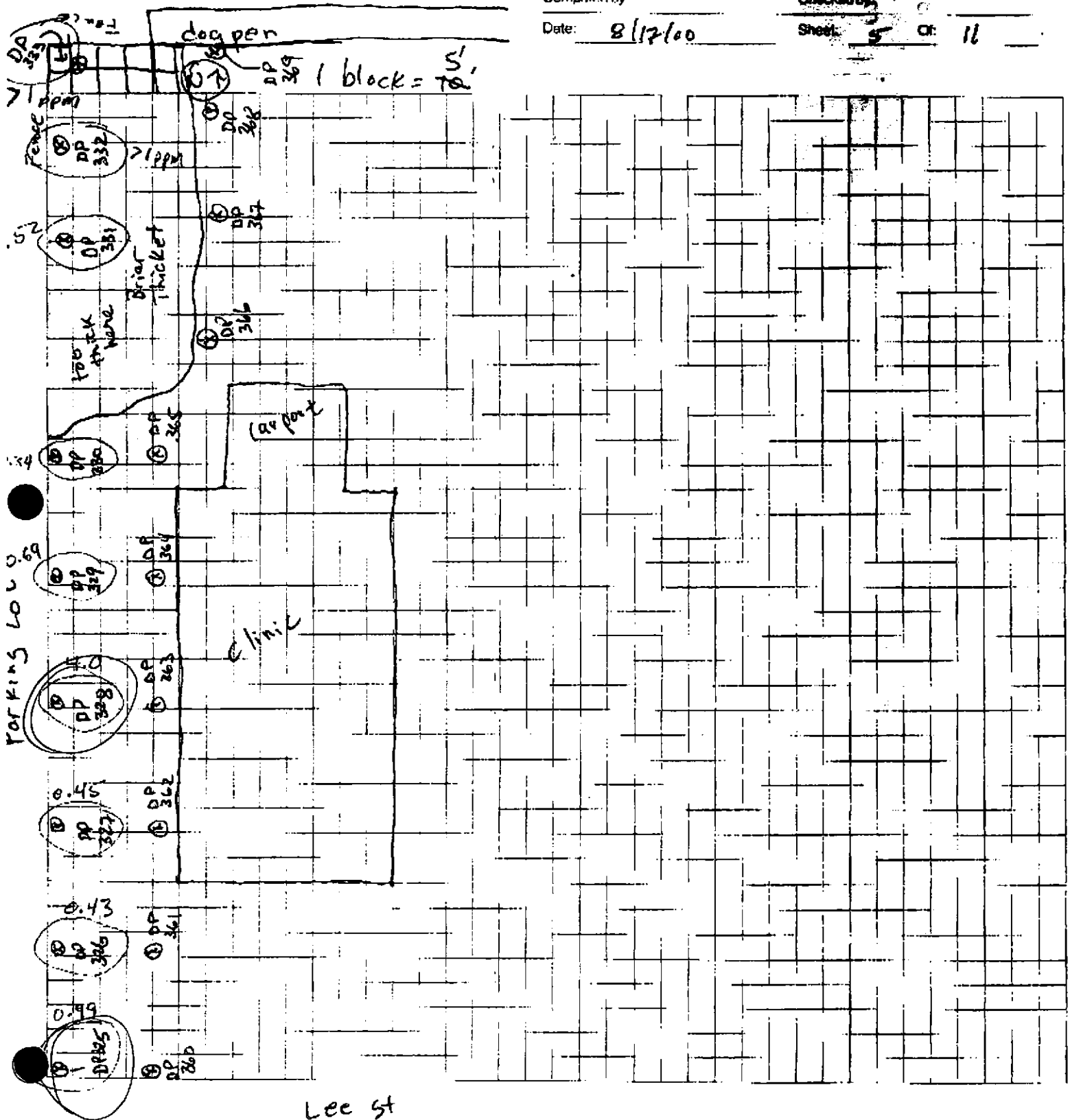
Job Name: Crystal Springs

Job Number: \_\_\_\_\_

Title: Lee St. Medical

Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_

Date: 8/17/00 Sheet: 5 of 11



Lee St



Job Name: Crystal Springs

Job Number: \_\_\_\_\_

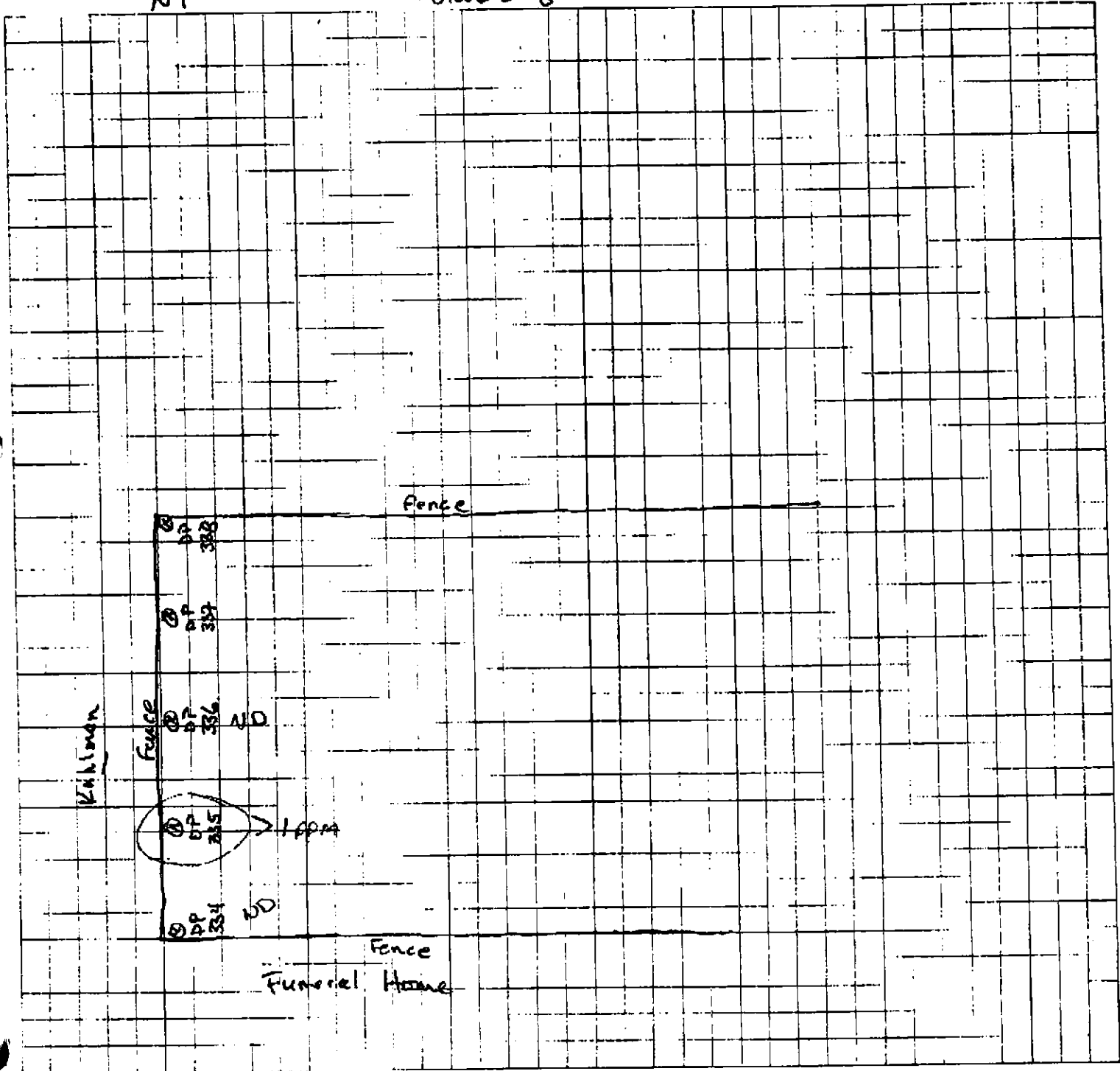
Title: 303 N. Jackson (stringer)

Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_

Date: 8-17-00 Sheet: 6 Of: 11

NT

1 block = 5'





Job Name: Crystal Springs  
 Job Number: \_\_\_\_\_  
 Title: 219 N-Jackson - Perry Smith  
 Computed by: TJF Checked by: \_\_\_\_\_  
 Date: 8-17-00 Sheet: 7 Of: 11

1 block = 5'

②

Focused Home

Kuhlman

⊙ DP 346 0.31

⊙ DP 345 ND

⊙ DP 344 0.17

⊙ DP 343 0.12

⊙ DP 342

⊙ DP 341

⊙ DP 340

⊙ DP 339

Kuhlman



Job Name: Crystal Springs

Job Number:

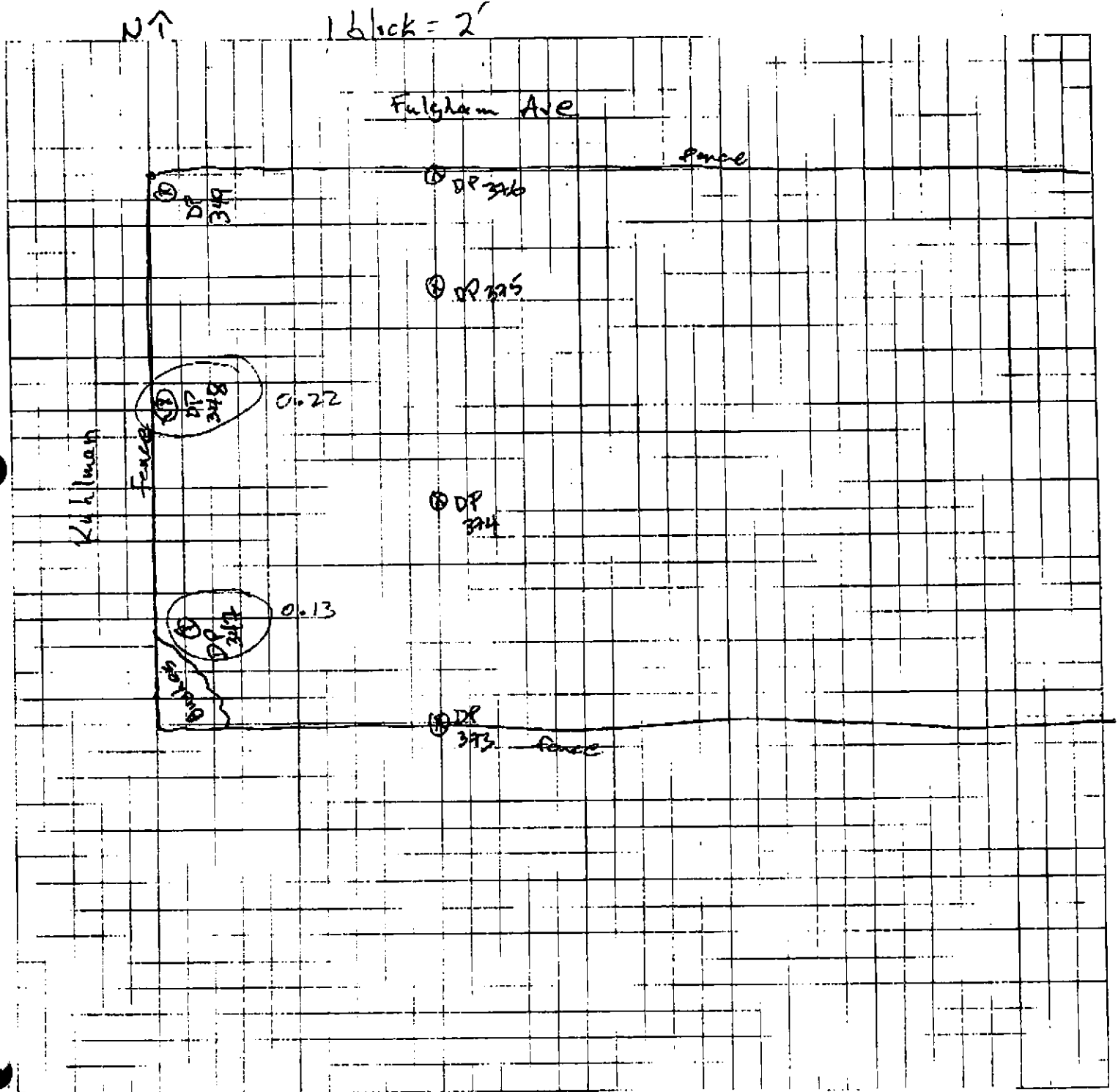
Title: 409 N. Jackson (Army Cooper)

Computed by: DF

Checked by:

Date: 8-17-00

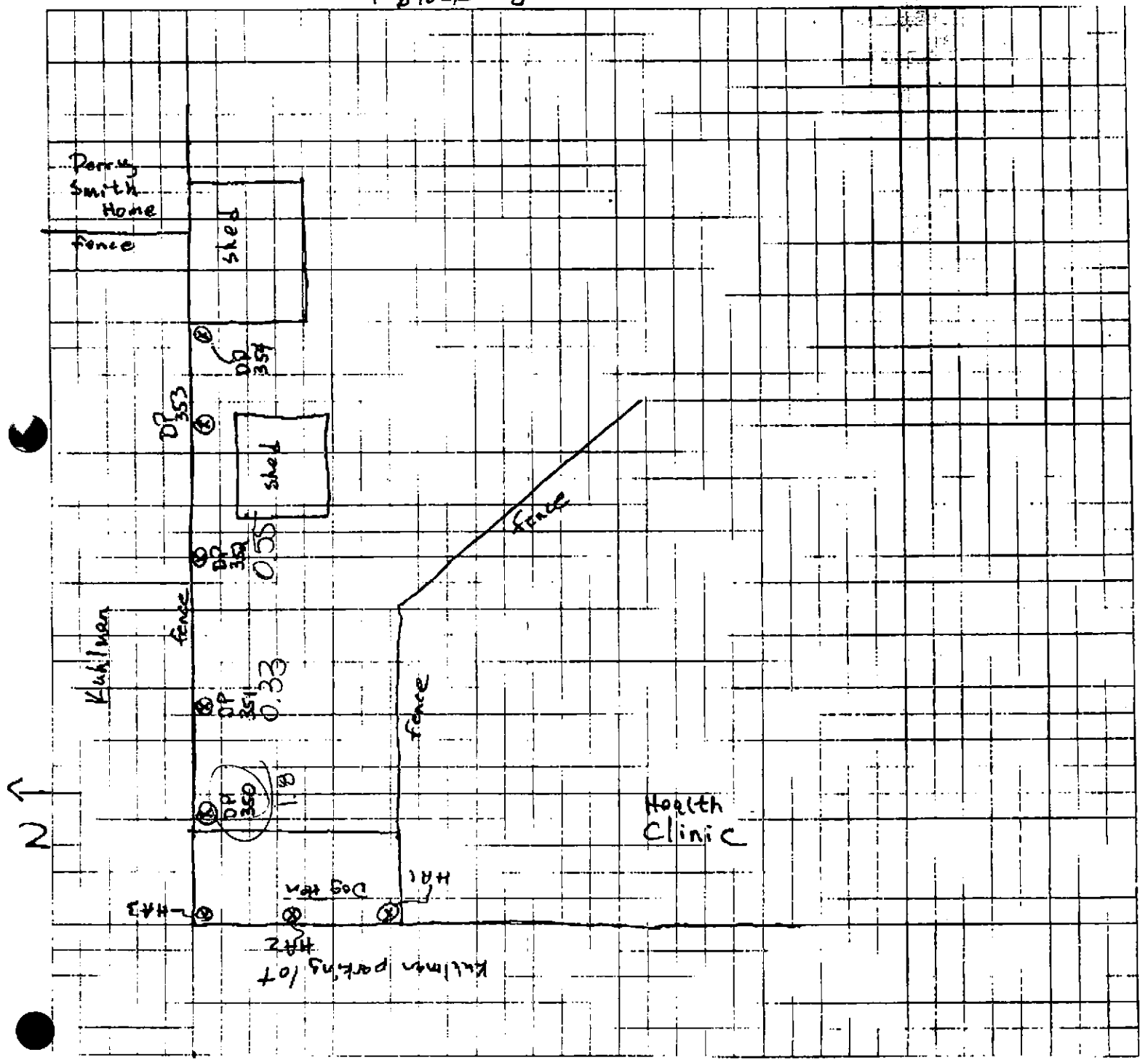
Sheet: 8 Of: 11





Job Name: Crystal Springs  
 Job Number: \_\_\_\_\_  
 Title: Dabney Home  
 Computed by: TJE Checked by: \_\_\_\_\_  
 Date: 8-17-00 Sheet: 9 Of: 11

1 block = 5'





Job Name: Crystal Springs

Job Number: \_\_\_\_\_

Title: Wright House

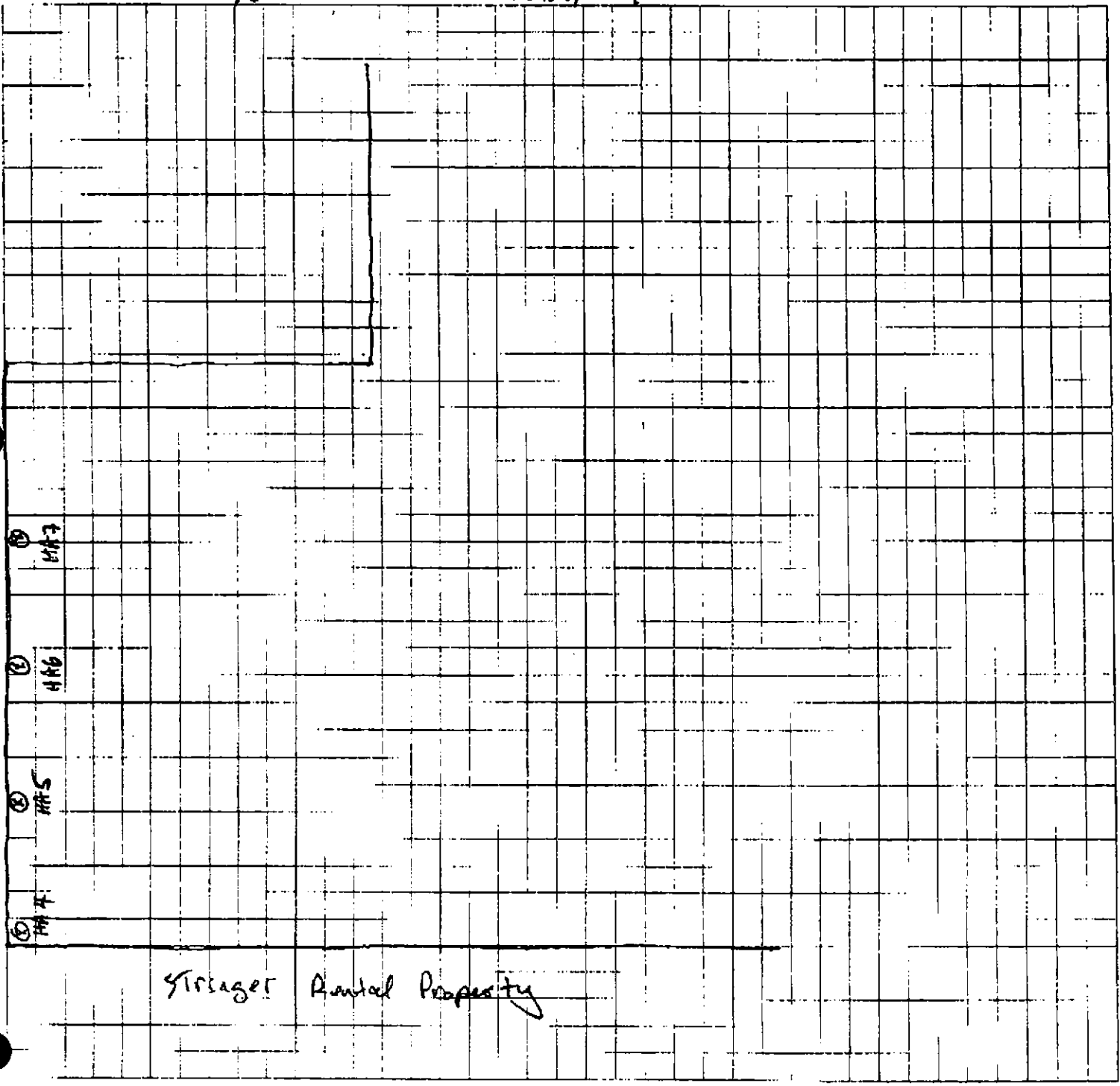
Computed by: \_\_\_\_\_ Checked by: \_\_\_\_\_

Date: 8-18-00 Sheet: 10 Of: 11

N ↑

1 block = 4'

Kuhlman



Singer Rental Property



Job Name: Crystal Springs

Job Number: \_\_\_\_\_

Title: Harold & Suzanne Womack

Computed by: TJF Checked by: \_\_\_\_\_

Date: 8-18-00 Sheet: 16 Of: 16

NT 1 block = 4'

Sunny Ponds

25' spacing

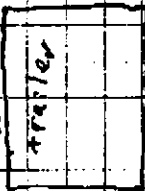
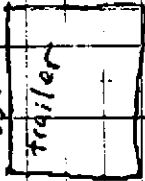
DP 359

DP 358

DP 357

DP 356

DP 355



Kuhlman

Elmer Wright