

JEO-TEST

**GEOTECHNICAL ENGINEERING
SERVICES, JOB NO. 1-51112
100 ACRE SUBDIVISION, SOUTH CAMELOT
LOS LUNAS, NEW MEXICO**

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**PREPARED FOR:
INTREPID DEVELOPMENT**

January 16, 2006
File No. 1-51112

Intrepid Development
4407 Lomas NE
Albuquerque, New Mexico 87111

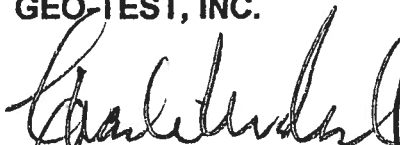
ATTENTION: Mr. Jeff Jesionowski

RE: Geotechnical Engineering Services
100 Acre Subdivision, South Camelot
Los Lunas, New Mexico

Dear Mr. Jesionowski:

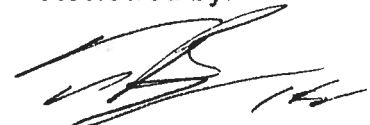
Submitted herein is the Geotechnical Engineering Services report for the above referenced project. The report contains the results of our field investigation, laboratory testing and recommendations for foundation design, slab support, as well as criteria for site grading. It has been a pleasure to serve you on this project. If you should have any questions, please contact this office.

Respectfully submitted:
GEO-TEST, INC.


Charles M. Miller, P.E.



Reviewed by:


Robert D. Booth, P.E.

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INTRODUCTION

This report presents the results of the geotechnical investigation performed at the 100 Acre Subdivision, South Camelot, Los Lunas, New Mexico.

The objective of this investigation is to:

- 1) Evaluate the nature and engineering properties of the subsurface soils.
- 2) To provide recommendations for the general design and construction of foundations, floor slabs, and for site grading.

The investigation includes subsurface exploration, representative soil sampling, laboratory testing of the samples, performing an engineering analysis and preparation of this report.

SITE CONDITIONS AND PROPOSED CONSTRUCTION

It is understood the subdivision is to be developed with single family dwellings. The site will be mass graded. Significant cuts and fills are anticipated. The site is covered with natural vegetation consisting of grasses, brush and cacti.

Conventional construction is anticipated with light to moderate structural loads. No basements are anticipated.

Should structural details vary significantly from those outlined above, especially if heavy loads are anticipated, this firm should be notified for review and revision of recommendations contained herein.

FIELD EXPLORATION

Thirty exploratory borings were drilled to depths ranging from about 16.5 to 21.5 feet below existing grade. The approximate locations of all borings are shown on the accompanying Boring Location Map, Figure 1. The soils encountered in the borings were continuously examined and logged during the drilling operation. The boring logs are presented in a following section of this report. Drilling was accomplished by a truck mounted drill rig using 5- inch diameter continuous flight hollowstem auger. Subsurface materials were sampled in five foot intervals or less utilizing an open tube split barrel sampler.

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LABORATORY TESTING

Selected samples were tested in the laboratory to determine certain engineering properties of the soils. Moisture contents were determined to evaluate the various soil deposits both with depth and laterally. Sieve Analysis and Atterberg Limits Tests were performed to aid in soil classification.

Results of the laboratory tests are presented in the Summary of Laboratory Results, on the boring logs, and on the individual test reports. All soil samples will be discarded 30 days after the date of this report unless we receive a specific request to retain the samples for a longer period of time.

SUBSURFACE SOIL CONDITIONS

As encountered in the exploratory borings, soils underlying the site generally consist of medium dense to dense, clean to silty sand. Clay or clayey sand was encountered in borings #4, #5, #13, #19, #20, #25, and #28, at depths that will influence foundation construction, based on the current grading plan. Borings #9 and #12 encountered sand with interbedded clay. Clay was encountered in other borings where the clay will not influence foundation construction, based on the boring logs and the current grading plan. The clays may be encountered erratically across the site. As indicated by the classification tests, the clay is slightly to highly expansive with increases in moisture content. The sand soils are non plastic.

Soil moisture contents were generally low to moderate and no groundwater was encountered. Some of the loose shallow sands may compress under relatively light loads.

CONCLUSIONS

Site characterization by conventional geotechnical borings indicate the site is suitable for development as planned. Standard penetration tests indicate the sands vary from loose to dense.

Where surface soils are loose they should be densified to provide foundation support and minimize settlement. Foundations and floor slabs should not be placed within 4 feet of the expansive clay. The actual extent of the clay should be determined during development by pot holing or additional borings. Where the clays are encountered within 4 feet of foundations, over excavation and blending, or removal and replacement should be performed to provide a

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minimum of 4 feet of non expansive fill below slabs and foundations. The earthwork criteria presented below outlines a moisture conditioning and vibratory compaction treatment for all foundation areas where over excavation is not required.

Structures should be supported on shallow spread type foundations with concrete slab-on-grade first level floors contingent on site preparation in accordance with the criteria outlined below.

Natural clay or silt layers impeding downward flow of moisture and causing horizontal flow or migration were encountered in some of the borings. Also, some of the silty sands will have relatively lower permeabilities when compacted. Eliminating sub-slab HVAC ductwork will preclude problems with irrigation water entering the ductwork.

The following sections of this report provide detailed recommendations for the design of foundations and slab-on-grade floors. In addition, guide specifications for Site Grading are presented.

FOUNDATIONS

With the use of the recommended site grading as detailed in the Specifications for Earthwork Section of this report, the following design criteria are recommended for shallow spread-type foundations for light to moderately loaded structures bearing on densified natural soils or structural fill:

<u>LOADING</u>	<u>Safe Soil Bearing Pressure</u>
Dead load	1500 psf
Dead plus live loads	2000 psf
Dead plus live loads plus wind or seismic loads	2700 psf
<u>Foundation Type</u>	<u>Depths Below Lowest Adjacent Finished Grade</u>
Exterior foundations	2.0 ft.
Interior foundations	1.0 ft.

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<u>Foundation Type</u>	<u>Minimum Widths</u>
Square foundations	2.00 ft.
Continuous foundations	1.33 ft.

All bearing surfaces should be compacted to a minimum of 95% of maximum ASTM D-1557 density at optimum moisture content $\pm 2\%$, prior to concrete placement. All foundation systems (footings and grade beams or stem walls) should be adequately reinforced to aid in redistribution of loads and to minimize the effects of differential settlement.

As a foundation alternative, the lightly loaded walls in the project may be supported by a monolithically placed slab with turned down edges. The bearing pressure on the turned down portion should not exceed the allowable bearing pressure outlined above. It has been our experience that slab cracking is sometimes more apparent with this type of construction under some conditions than with conventional footing and independent slab type construction. This type of cracking does not indicate failure of the system from a foundation point of view, and therefore we consider it to be a viable foundation alternative. If used, it is recommended that reinforcing steel extend from the turned-down portion of the slabs (footings) well into the slabs.

SETTLEMENT OF FOOTINGS

Settlement of properly designed and constructed footings carrying the maximum anticipated loads are estimated not to exceed one (1) inch for total settlement and one-half (1/2) inch differential settlement for soil moisture contents encountered at the time of test drilling, or compaction moisture introduced during construction. Post-construction moisture increases in the supporting soils below foundations and slabs could cause additional movement.

LATERAL LOADS

Resistance to lateral forces can be assumed to be provided by soil friction on the bases of footings and floor slabs and by passive earth resistance. A coefficient of friction of 0.40 should be used for computing the lateral resistance between bases of footings and slabs with soil. With backfill as recommended in site grading section of this report, a passive soil resistance equivalent to a fluid weighing 325 pounds per cubic foot should be used for analysis.

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SLABS ON GRADE

If the grading requirements are complied with, concrete slabs may be supported on grade. However, if required as working surface, a four (4) inch course of gravel should be placed on properly prepared subgrade. The gravel base should consist of one (1) inch maximum size aggregate with at least 5% but less than 15% passing the No. 200 sieve.

The gravel base will act as a capillary barrier, but will not eliminate moisture intrusion totally. If this is critical, an impervious membrane barrier should be placed beneath the slabs with 2 inches of clean non-plastic sand overlying the barrier to minimize differential cracking and curling of floor slabs.

RETAINING WALLS

Retaining walls which are free to rotate or translate such that the top of the wall can deflect laterally a distance equal to 0.001 times the height of the wall can be designed to resist an active lateral earth pressure equal to 35 pounds per square foot per foot of depth. Walls which are restrained from movement should be designed for at-rest pressures of 60 pounds per square foot per foot of depth.

Retaining walls may be founded on conventional spread footings bearing on structural fill or compacted native soils compacted in accordance with the criteria outlined in the SITE-GRADING section of this report. Footings should be designed for a maximum soil bearing pressure of 1500 pounds per square foot. These pressures assume no factor of safety and no build up of hydrostatic pressures behind the wall. To prevent the buildup of hydrostatic pressures, adequate weep holes or composite drainage systems such as Miradrain or equivalent can be readily installed by attaching to the backside of a retaining wall prior to backfilling. The drainage layer would be connected to a perforated collector pipe at the base of the wall and routed to a sump or to a positive gravity drain.

As an alternative, the conventional french drain type system comprised of free draining granular fill can be placed behind the walls. A perforated PVC drainage pipe would be placed at the bottom of the wall to collect water from the granular fill. A filter fabric should encapsulate the granular fill to control migration of fines into the drain. To minimize the potential for collection of surface waters, the free draining granular backfill should not extend to the surface. The ground surface behind the wall should be sloped to drain away

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from the top of the walls at a minimum 2 percent slope.

During backfilling, the contractor should be limited to the use of hand operated compaction equipment within a zone of about 5 feet horizontally from the back of the wall. The use of heavier equipment could apply lateral pressures well in excess of the earth pressure, particularly over the upper portions of the wall.

EXCAVATION

Excavations should be made in accordance with CFR 29 Part 1926 Subpart P, and other applicable state or local regulations. Excavations should be sloped at 2 horizontal to 1 vertical.

MOISTURE PROTECTION

Precautions should be taken during and after construction to minimize saturation of foundation soils. Positive drainage should be established away from the exterior walls of the structures. Backfill should be well compacted and should meet the specifications outlined in the Specifications for Earthwork section at the back of this report. Irrigation within 5 feet of foundations should be carefully controlled. All utility trenches leading into the structures should be backfilled with compacted fill. Special care should be taken during installation of the subfloor sewer and water lines to reduce the possibility of future subsurface saturation.

Proper landscaping and drainage maintenance is required to preclude accumulation of excessive moisture in the soils below structures. Accumulations of excessive moisture could be harmful to some types of interior flooring, to HVAC ductwork beneath the slabs, and can weaken or cause other changes in the soils supporting the foundations. This can cause differential movement of foundations and can result in cosmetic or structural damage to structures.

1. Do not allow landscaping to change the overall drainage patterns established for development.
2. The ground surface should slope adequately away from all portions of structures. A typical adequate slope is 6 inches in the first 5 feet.
3. Shrubbery planted within 5 feet of foundation walls should be

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- hand irrigated or irrigated with a carefully controlled drip irrigation system.
4. Grass installed within 5 feet of foundation walls should be hand watered or, if irrigated by sprinkler, should be very carefully controlled. Sprinkler heads should always point away from foundation walls.
 5. Decorative bark or gravel should be underlain by a geo-textile fabric (weed fabric) to allow evaporation of soil moisture. Polyethylene or other plastic underlayments are discouraged.
 6. If structures have gutters and downspouts, the downspouts should discharge a minimum of 5 feet away from foundation walls. If structures drain by roof canales, the canales should discharge to splash blocks that carry water rapidly away from the foundation.
 7. It is also advisable to place splash blocks underneath sillcocks and to locate sprinkler valve boxes well away from foundations.
 8. Sidewalks placed close to foundations should not impede flow of water away from the foundation. The ground surface between the sidewalk and the foundation should be graded so that water flows over the sidewalk, or a shallow "french" drain system should be installed along the uphill side of the sidewalk and then piped beneath it to preclude water ponding between the sidewalk and the foundation.
 9. If mowing strips are installed to separate decorative gravel or bark from grass, the mowing strips should be perforated to allow drainage and preclude ponding of water, or ground surface grade should be carefully controlled to allow drainage or water over the mowing strips.

If any water line leaks or if irrigation system leaks are detected, they should be promptly repaired. And, if any low spots develop from the settlement of soils in utility trenches or other areas, they should be backfilled to maintain the grade so that surface water drains rapidly.

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FOUNDATION REVIEW AND INSPECTION

This report has been prepared to aid in the evaluation of this site and to assist in the design of this project. It is recommended that the geotechnical engineer be provided the opportunity to review the final design drawings and specifications in order to determine whether the recommendations in this report are applicable to the final design. Review of the final design drawings and specifications will be noted in writing by the geotechnical engineer.

Variations from soil conditions presented herein may be encountered during construction of this project. In order to permit correlation between the conditions encountered during construction and to confirm recommendations presented herein, it is recommended that the geotechnical engineer be retained to perform sufficient review during construction of this project. Observation and testing should be performed during construction to confirm that suitable fill soils are placed upon competent materials and properly compacted and foundation elements penetrate the recommended soils.

CLOSURE

Our conclusions, recommendations and opinions presented herein are:

- 1) Based upon our evaluation and interpretation of the findings of the field and laboratory program.
- 2) Based upon an interpolation of soil conditions between and beyond the explorations.
- 3) Subject to confirmation of the conditions encountered during final investigation and construction.
- 4) Based upon the assumption that sufficient observation will be provided during construction.
- 5) Prepared in accordance with generally accepted professional geotechnical engineering principles and practice at this time and location.

We make no other warranty, either express or implied. Any person using this report for bidding or construction purposes should perform such independent investigation as he deems necessary to satisfy himself as to the surface and

subsurface conditions to be encountered and the procedures to be used in the performance of work on this project. If conditions are encountered during construction that appear to be different than indicated by this report, this office should be notified.

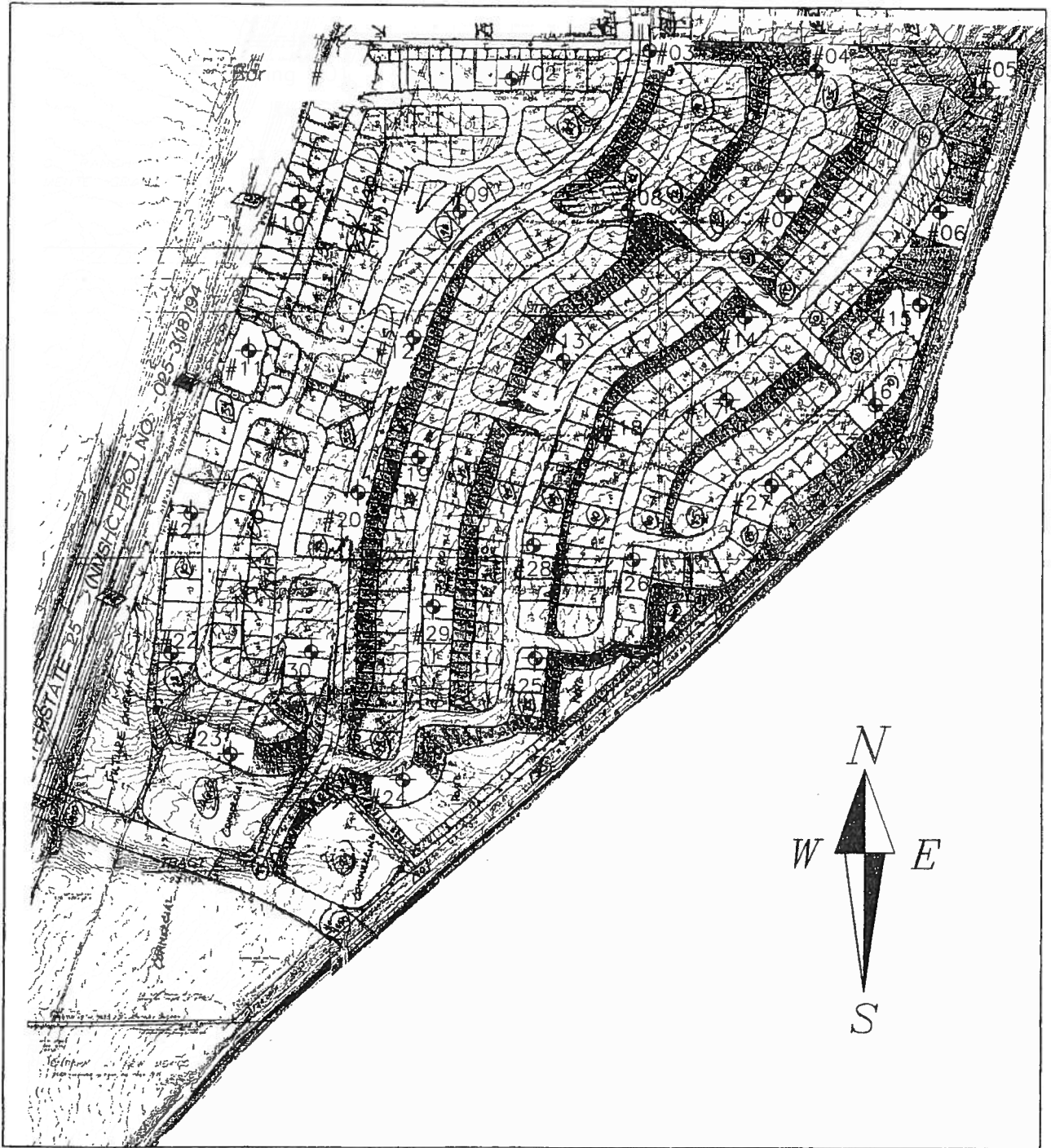
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BORING LOCATION MAP

(Not to Scale)



100 Acre Subdivision
South Camelot
Los Lunas, NM
Job No. 1-51112

FIGURE 1

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GEOTECHNICAL ENGINEERING, ENVIRONMENTAL
MATERIAL TESTING
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Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Classification	Water Content (%)	Dry Density (pcf)	Falling Perm (cm/sec)	Specific Gravity
01	2.5	NP	NP	NP	9.5	19	SM	2.5			
01	15.0							3.3			
02	5.0	NP	NP	NP	9.5	8	SP-SM	1.1			
02	15.0							8.6			
03	2.5							1.0			
03	10.0							3.7			
04	2.5	NP	NP	NP	4.75	11	SP-SM	1.7			
04	10.0							3.9			
04	20.0							14.3			
05	2.5	NP	NP	NP	2	17	SM	2.2			
05	10.0							2.0			
05	20.0	26	17	9	2	93	CL	26.2			
06	5.0							2.1			
06	15.0							8.8			
07	2.5	NP	NP	NP	19	26	SM	3.3			
07	10.0							3.8			
08	2.5							1.4			
08	10.0							14.0			
09	2.5							1.8			
09	10.0							1.7			
10	2.5	NP	NP	NP	4.75	25	SM	2.7			
10	15.0	39	13	26 k	2	92	CL	14.8			
11	2.5							1.6			
11	10.0							1.2			
12	2.0							5.4			
12	15.0							1.1			
13	2.5	NP	NP	NP	4.75	35	SM	2.9			
13	10.0							7.7			
13	15.0	41	18	23 x	2	91	CL	14.8			
14	2.5	NP	NP	NP	2	7	SP-SM	1.6			
14	10.0							4.9			
15	5.0	NP	NP	NP	0.425	7	SP-SM	1.5			
15	15.0							12.7			
16	2.5							1.5			
16	10.0	NP	NP	NP	2	3	SP	1.4			
17	5.0	58	19	39 y	0.425	95	CH	14.5			
17	15.0							1.4			
18	2.5							4.6			
18	10.0							0.8			
19	2.5	NP	NP	NP	0.425	8	SP-SM	1.5			
19	10.0							0.2			
20	5.0							14.6			

US LAB SUMMARY 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

Summary of Laboratory Results



Project: 100 Acre Subdivision, South Camelot

Location: Los Lunas, NM

Number: 1-51112

Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Classification	Water Content (%)	Dry Density (pcf)	Falling Perm (cm/sec)	Specific Gravity
20	15.0							1.5			
21	2.5							3.1			
21	10.0	23	15	8	19	31	SC	8.2			
22	2.5							3.8			
22	15.0							1.4			
23	2.5	22	12	10	4.75	33	SC	4.5			
23	10.0							3.3			
24	5.0							2.5			
24	15.0							1.9			
25	2.5							2.8			
25	10.0	44	19	25 ✓	2	79	CL	14.9			
26	2.5	NP	NP	NP	2	21	SM	3.2			
26	10.0							2.1			
27	2.5							2.0			
27	10.0							1.1			
28	5.0	NP	NP	NP	2	39	SM	7.2			
28	15.0							2.9			
29	2.5							6.3			
29	10.0	NP	NP	NP	0.425	29	SM	3.4			
30	2.5	NP	NP	NP	4.75	14	SM	3.0			
30	10.0							1.6			

US LAB SUMMARY 1-51112 100 ACRE SUBDIVISION.CPJ GEO TEST.GDT 1/13/06



Summary of Laboratory Results

Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112



Project: 100 Acre Subdivision, South Camelot
 Date: 12/07/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 01

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	12-15-17 32	3		SM	SILTY SAND, fine to coarse grained, non-plastic, loose to medium dense, moist, brown	20 40 60 80
			SS	3-5-7 12					12
10			SS	10-15-19 34			SC	CLAYEY SAND, fine to coarse grained, medium to high plasticity, moist, brown	34
15			SS	24-26-50/4" 50/4"	3		SM	SILTY SAND, fine to coarse grained, non-plastic, very dense, moist, brown	
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/07/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 02

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE					SUBSURFACE PROFILE									
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft							
5			SS	6-11-12 23	1		SP-SM	SLIGHTLY SILTY SAND, fine to coarse grained, non-plastic, loose to medium dense, moist, brown	20	40	60	80				
			SS	6-6-6 12												
10			SS	4-4-7 11												
15			SS	7-9-9 18					9							
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'								
25																

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot

Date: 12/07/2005

Project No: 1-51112

Elevation:

Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 03

During Drilling: None

After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
									20 40 60 80
5			SS	3-4-6 10	1		SM	SILTY SAND, fine to coarse grained, non-plastic, loose, moist, brown	10
			SS	3-5-9 14					14
10			SS	8-10-12 22	4		SM	SILTY SAND INTERBEDDED WITH SANDY CLAY, fine to coarse grained, medium plasticity, medium dense, moist, brown	22
15			SS	10-11-15 26			SM	SILTY SAND, fine to coarse grained, non-plastic, medium dense, moist, brown	26
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LEGEND

SS - Split Spoon

AC - Auger Cuttings

CAL - Modified California Sampler

AMSL - Above Mean Sea Level

CS - Continuous Sampler

UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot

Date: 12/07/2005

Project No: 1-51112

Elevation:

Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 04

During Drilling: None

After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE					SUBSURFACE PROFILE		N blows/ft				
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	20	40	60	80	
5			SS	4-6-6 12	2		SP-SM	SLIGHTLY SILTY SAND, fine to coarse grained, non-plastic, medium dense, moist, brown					
			SS	6-7-8 15									
10			SS	7-12-15 27	4		SM	SILTY SAND INTERBEDDED WITH SANDY CLAY, medium plasticity, medium dense, moist, brown					
15			SS	6-6-8 14			CL	SANDY CLAY, fine grained, medium to high plasticity, stiff, very moist, brown					
20			SS	6-7-12 19	14		SM	SILTY SAND INTERBEDDED WITH SANDY CLAY, low to medium plasticity, medium dense, moist, brown					
25								STOPPED AUGER AT 20' STOPPED SAMPLER AT 21.5'					

LEGEND

SS - Split Spoon

AC - Auger Cuttings

CAL - Modified California Sampler

AMSL - Above Mean Sea Level

CS - Continuous Sampler

UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot

Date: 12/20/2005

Project No: 1-51112

Elevation:

Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 05

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE INTERVAL	TYPE	SAMPLE				USC	SUBSURFACE PROFILE	N blows/ft			
				N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)				20	40	60	80
5			SS	5-6-7 13	2			SM SILTY SAND, fine grained, non-plastic, medium dense to dense, slightly moist, brown					
			SS	5-9-11 20									
10			SS	7-9-15 24	2								
15			SS	10-15-20 35				CL SANDY CLAY, fine grained, low plasticity, very stiff to hard, moist, brown NOTE: Very moist at 20'					
20			SS	8-10-13 23	26								
25								STOPPED AUGER AT 20' STOPPED SAMPLER AT 21.5'					

LEGEND

SS - Split Spoon

AC - Auger Cuttings

CAL - Modified California Sampler

AMSL - Above Mean Sea Level

CS - Continuous Sampler

UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 06

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE				
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft			
5			SS	10-15-16 31	2		SM	SILTY SAND, fine grained, non-plastic, dense to medium dense, slightly moist, brown	20	40	60	80
			SS	6-9-11 20								
10			SS	10-15-20 35			SM	SILTY SAND INTERBEDDED WITH SANDY CLAY, fine grained, medium plasticity, dense, slightly moist, brown				
15			SS	9-16-20 36	9							
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'				
25												

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST GDT 1/13/06

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 07

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
									20 40 60 80
5		X	SS	8-14-17 31	3			SILTY SAND, fine grained, non-plastic, dense, slightly moist, brown	31
		X	SS	8-12-13 25			SM		25
10		X	SS	8-18-18 36	4				36
15		X	SS	10-18-22 40			SM	SILTY SAND INTERBEDDED WITH SANDY CLAY, fine grained, medium plasticity, dense, slightly moist, brown	40
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 08

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE INTERVAL	TYPE	SAMPLE			USC	SUBSURFACE PROFILE				
				N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)		DESCRIPTION	N blows/ft			
								20	40	60	80	
5			SS	4-6-8 14	1							
			SS	4-7-8 15			SM		SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown			14
10			SS	11-15-22 37	14		CL		SANDY CLAY, fine grained, high plasticity, hard, slightly moist, brown			15
15			SS	10-11-12 23			SM		SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown			37
20									STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'			23
25												

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

LEGEND

SS - Split Spoon
 AC - Auger Cuttings
 CAL - Modified California Sampler
 AMSL - Above Mean Sea Level
 CS - Continuous Sampler
 UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot

Date: 12/20/2005

Project No: 1-51112

Elevation:

Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 09

During Drilling: None

After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
									20 40 60 80
5		10-11-14	SS	25	2		SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	25
		7-8-10	SS	18			SM	SILTY SAND INTERBEDDED WITH SANDY CLAY, fine to coarse grained, medium plasticity, slightly moist, brown	18
10		6-7-10	SS	17	2		SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	17
15		7-11-15	SS	26				STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	26
20									
25									

LEGEND

SS - Split Spoon

AC - Auger Cuttings

CAL - Modified California Sampler

AMSL - Above Mean Sea Level

CS - Continuous Sampler

UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 10

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE		
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft 20 40 60 80	
5	[Patterned]	[X]	SS	13-14-18 32	3		SM	SILTY SAND, fine grained, non-plastic, medium dense to dense, slightly moist, brown		
		[X]	SS	6-8-13 21						
		[X]	SS	18-30-28 58	15		CL	SANDY CLAY, fine grained, medium to high plasticity, very hard, slightly moist, brown		
		[X]	SS	18-26-29 55						
15	[Hatched]						STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'			
20										
25										

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/05

LEGEND

- SS - Split Spoon
- AMSL - Above Mean Sea Level
- AC - Auger Cuttings
- CS - Continuous Sampler
- CAL - Modified California Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 11

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE					
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft				
									20	40	60	80	
5			SS	6-9-14 23	2			SM SILTY SAND, fine grained, non-plastic, medium dense to dense, slightly moist, brown					
			SS	6-8-10 18									
10			SS	6-10-14 24	1								
15			SS	10-13-18 31									
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'					
25													

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 12

During Drilling: None After 24 Hours:

LOG OF TEST BORING: 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft 20 40 60 80
5			SS	8-9-14 23	5		SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	23
			SS	8-10-12 22			SM	SILTY SAND INTERBEDDED WITH SANDY CLAY, fine to coarse grained, medium plasticity, medium dense, slightly moist, brown	22
10			SS	8-10-11 21			SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	21
15			SS	8-12-15 27	1			STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	27
20									
25									

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 13

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112_100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE INTERVAL	SAMPLE					SUBSURFACE PROFILE	
			TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
0-5			SS	6-10-15 25	3		SM	SILTY SAND, fine to coarse grained, non-plastic, medium dense, slightly moist, brown	25
5-10			SS	15-20-36 56					56
10-15			SS	10-15-26 41	8		CL	SANDY CLAY, fine grained, medium plasticity, very hard, slightly moist, brown	41
15-16.5			SS	9-13-22 35	15			STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	35

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 14

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION GPJ GEO TEST.GDT 1/17/06

DEPTH (Feet)	LOG	SAMPLE					SUBSURFACE PROFILE		
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft 20 40 60 80
5			SS	8-12-12 24	2		SP-SM	SLIGHTLY SILTY SAND, fine to coarse grained, non-plastic, medium dense to dense, slightly moist, brown	24
			SS	14-22-20 42					42
10			SS	11-19-20 39	5		CL	SANDY CLAY, fine grained, medium to high plasticity, very hard, slightly moist, brown	39
15			SS	12-19-21 40					40
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No. 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 15

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE INTERVAL	SAMPLE					SUBSURFACE PROFILE					
			TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft				
5			SS	6-7-12 19	2			SP-SM	SLIGHTLY SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	20	40	60	80
			SS	6-8-12 20									
10			SS	10-11-13 24	13			SM	SILTY SAND INTERBEDDED WITH SANDY CLAY, fine grained, low to medium plasticity, dense, slightly moist, brown	20	40	60	80
15			SS	12-15-18 33									
20									STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'				
25													

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/06

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot

Date: 12/20/2005

Project No: 1-51112

Elevation:

Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 16

During Drilling: None

After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/06

DEPTH (Feet)	LOG	SAMPLE INTERVAL	SAMPLE					SUBSURFACE PROFILE					
			TYPE	N. BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft				
5			SS	6-9-9 18	2			SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown NOTE: occasional clean sand layers (SP)	20	40	60	80
			SS	7-10-11 21						18	21		
10			SS	10-12-13 25	1					25			
15			SS	10-17-21 38			CL	SANDY CLAY, fine grained, high plasticity, very hard, moist, brown	38				
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'					
25													

LEGEND

SS - Split Spoon

AC - Auger Cuttings

CAL - Modified California Sampler

AMSL - Above Mean Sea Level

CS - Continuous Sampler

UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 17

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE INTERVAL	TYPE	SAMPLE			USC	SUBSURFACE PROFILE	DESCRIPTION	N blows/ft			
				N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)				20	40	60	80
5			SS	8-9-13 22	15		SM	SILTY SAND, fine to coarse grained, non-plastic, medium dense to dense, moist, brown	22				
			SS	7-17-20 37			CH		SANDY CLAY, fine grained, high plasticity, hard, moist, brown	37			
10			SS	8-13-21 34	1		SM	SILTY SAND, fine grained, non-plastic, dense, slightly moist, brown	34				
15			SS	15-18-23 41						STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	41		
20													
25													

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.CPJ GEO TEST GDT 1/17/06

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/20/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 18

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	9-10-11 21	5			SM SILTY SAND, fine to coarse grained, non-plastic, medium dense to dense, slightly moist, brown	21
			SS	10-13-15 28			28		
10			SS	10-15-20 35	1		35		
15			SS	12-18-24 42			42		
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 19

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE INTERVAL	SAMPLE					SUBSURFACE PROFILE	
			TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	10-10-12 22	2		SP-SM	SLIGHTLY SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	22
5			SS	15-15-15 30			SC	CLAYEY SAND, fine to coarse grained, medium plasticity, slightly moist, brown	30
10			SS	10-10-13 23	0		SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	23
15			SS	12-13-15 28					28
15								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/06

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 20

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100-ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/06

DEPTH (Feet)	LOG	SAMPLE INTERVAL	SAMPLE					SUBSURFACE PROFILE	
			TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	10-18-33 51	15		SM	SILTY SAND, fine grained, non-plastic, very dense, moist, brown	51
			SS	15-15-12 27			CL	SANDY CLAY, fine grained, medium plasticity, hard, slightly moist, brown	27
10			SS	7-10-12 22			SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	22
15			SS	10-12-13 25	2			STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	25

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 21

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/06

DEPTH (Feet)	LOG	SAMPLE INTERVAL	TYPE	SAMPLE				SUBSURFACE PROFILE	
				N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	2-5-6 11	3			SM SILTY SAND, fine to coarse grained, non-plastic, medium dense, slightly moist, brown NOTE: occasional clayey sand layers (SC)	20 40 60 80
			SS	5-7-10 17					11
10			SS	8-12-13 25	8				17
15			SS	8-8-12 20			SM		25
								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	20
20									
25									

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot

Date: 12/21/2005

Project No: 1-51112

Elevation:

Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 22

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION GPJ GEO TEST.GDT 1/17/06

DEPTH (Feet)	LOG	SAMPLE INTERVAL	SAMPLE					SUBSURFACE PROFILE	
			TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	8-8-10 18	4			SM SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	18
			SS	8-8-9 17					17
10			SS	9-13-18 31			CL SANDY CLAY, fine grained, medium plasticity, hard, moist, brown		31
15			SS	8-11-17 28	1		SM SILTY SAND, fine grained, non-plastic, dense, slightly moist, brown		28
20							STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'		
25									

LEGEND

SS - Split Spoon

AC - Auger Cuttings

CAL - Modified California Sampler

AMSL - Above Mean Sea Level

CS - Continuous Sampler

UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 23

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
									20 40 60 80
5			SS	7-7-10 17	5			SILTY SAND, some clayey, fine grained, non-plastic, medium dense, moist, brown NOTE: occasional clayey sand layers (SC)	17
			SS	9-9-9 18					18
10			SS	5-8-10 18	3				18
15			SS	19-19-22 41					41
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/06

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot

Date: 12/21/2005

Project No: 1-51112

Elevation:

Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 24

During Drilling: None

After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE				
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft 20 40 60 80			
5			SS	6-7-7 14	3		SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	14			
			SS	6-8-11 19							19	
10			SS	8-9-11 20			20					
15			SS	11-12-13 25	2		25					
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'				
25												

LEGEND

SS - Split Spoon

AC - Auger Cuttings

CAL - Modified California Sampler

AMSL - Above Mean Sea Level

CS - Continuous Sampler

UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 25

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	8-8-11 19	3		SM	SILTY SAND, fine to coarse grained, non-plastic, medium dense, moist, brown	19
			SS	8-8-11 19					19
10			SS	12-14-19 33	15		CL	CLAY, medium to high plasticity, hard, moist, brown	33
15			SS	11-11-15 26			SM		26
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/06

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 26

During Drilling: None After 24 Hours:

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION GP.J GEO TEST.GDT 1/13/06

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
									20 40 60 80
5			SS	8-10-12 22	3			SILTY SAND, fine to coarse grained, non-plastic, medium dense to dense, moist, brown	22
			SS	12-12-14 26					26
10			SS	12-18-17 35	2				35
15			SS	9-10-15 25					25
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 27

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N. BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	9-11-13 24	2		SM	SILTY SAND, fine to coarse grained, non-plastic, medium dense to dense, moist, brown	24
			SS	10-13-15 28					28
10			SS	12-15-19 34	1				34
15			SS	10-14-19 33					33
20									
25									
								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/08

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 28

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	5-6-8 14	7		SM	SILTY SAND, fine grained, non-plastic, medium dense, moist, brown	14
			SS	8-9-11 20					20
10			SS	14-21-32 53			CL	SANDY CLAY, fine grained, medium to high plasticity, very hard, moist, brown	53
15			SS	9-9-13 22	3		SM	SILTY SAND, fine grained, non-plastic, medium dense, slightly moist, brown	22
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/17/06

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot
 Date: 12/21/2005 Project No: 1-51112
 Elevation: Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 29

During Drilling: None After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE						SUBSURFACE PROFILE	
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	N blows/ft
5			SS	10-5-6 11	6				11
			SS	5-5-6 11					11
10			SS	8-10-14 24	3		SM	SILTY SAND, fine to coarse grained, non-plastic, medium dense to dense, slightly moist, brown	24
15			SS	8-11-13 24					24
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.



Project: 100 Acre Subdivision, South Camelot

Date: 12/21/2005

Project No: 1-51112

Elevation:

Type: 5" OD HSA

LOG OF TEST BORINGS

GROUNDWATER DEPTH

NO: 30

During Drilling: None

After 24 Hours:

DEPTH (Feet)	LOG	SAMPLE					SUBSURFACE PROFILE		N blows/ft
		SAMPLE INTERVAL	TYPE	N, BLOWS/FT	MOISTURE (%)	DRY DENSITY (pcf)	USC	DESCRIPTION	
5			SS	5-7-8 15	3		SM	SILTY SAND, fine to coarse grained, non-plastic, medium dense, slightly moist, brown	15
			SS	6-7-10 17					17
10			SS	12-12-14 26	2		SM	SILTY SAND WITH CLAY, medium plasticity, medium dense, moist, brown	26
15			SS	10-11-12 23					23
20								STOPPED AUGER AT 15' STOPPED SAMPLER AT 16.5'	
25									

LOG OF TEST BORING 1-51112 100 ACRE SUBDIVISION.GPJ GEO TEST.GDT 1/13/06

LEGEND

- SS - Split Spoon
- AC - Auger Cuttings
- CAL - Modified California Sampler
- AMSL - Above Mean Sea Level
- CS - Continuous Sampler
- UD - Undisturbed

Stratification lines represent approximate boundaries between soil types. Transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.

SPECIFICATIONS FOR EARTHWORK

A. Scope: These specifications apply to all clearing and grubbing, removal of obstructions, general excavating, grading and filling, and any related items necessary to complete the grading for the entire project in accordance with these specifications.

B. Subsurface Soil Data: Subsurface soil investigations have been made, and the results are available for examination by the contractor. The contractor is expected to examine the site and determine for himself the character of materials to be encountered.

CLEARING AND GRUBBING

A. General: Clearing and grubbing will be required for all areas shown on the plans to be excavated, or on which fill is to be constructed.

B. Clearing: Clearing should consist of removal and disposal of other vegetation as well as brush and rubbish within the area to be cleared.

C. Grubbing: Stumps, roots larger than 2 inches in diameter, and matted roots should be removed from within 6 inches of the surface of areas on which fills are to be constructed except roadways. Materials which are described above within 18 inches of finished subgrade should be removed. Areas disturbed by grubbing will be fill as specified hereinafter for EMBANKMENT.

D. Grass and Topsoil: Grass, grass roots, and the incidental topsoil should not be left beneath a fill area, nor should this material be used as fill material. Grass, grass roots, and topsoil may be stockpiled and later used in the top 6 inches of fills outside roadways and building pads.

EARTH EXCAVATION

A. General: Earth excavation should consist of the excavation and removal of suitable soils for use as embankment as well as the satisfactory disposal of all vegetation, debris, and deleterious material encountered within the area to be graded and/or in a borrow area.

B. Surface Maintenance: Excavated areas should be continuously maintained so that the surface should be smooth and have sufficient slope to allow water to drain from the surface.

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EMBANKMENT

A. General: The embankment should consist of a controlled fill constructed in the areas indicated on the grading plans.

B. Embankment Materials: Embankment fill material should consist of soils that conform to the following physical characteristics:

<u>Sieve Size (Square Openings)</u>	<u>% Passing by Weight</u>
3 inch	100
No. 4	40-100
No. 200	5-60

The plasticity index of the materials as determined in accordance with ASTM D-423 and D-424, should not be more than 12.

The fill material should be free from roots, grass, other vegetable matter, clay lumps, or other deleterious materials. Nesting of large cobbles should be avoided.

Site soils from the cuts may be used for fill, provided they meet the requirements in Paragraph B of EMBANKMENT.

C. Construction:

(1) Treatment of Natural Ground Surface in the Building Areas

Prior to construction of structural fills, the native soils should be scarified to a minimum depth of 12 inches and moisture conditioned to bring the moisture content of the subgrade to optimum moisture content -1% to plus 3% for as deep as practicable. Foundations and floor slabs should not be placed within 4 feet of the expansive clay. The areal extent of the clay should be determined during development by pot holing or additional borings. Where the clays are encountered within 4 feet of footings or slabs, over excavation and blending, or removal and replacement should be performed to provide a minimum of 4 feet of non expansive fill below slabs and foundations. The ground surface should then be subjected to 20 passes of a heavy steel drum vibratory roller (20-ton combined static and dynamic compactive effort). Adjacent to existing development, vibrations should be controlled or eliminated to avoid damage to nearby structures. The upper 12 inches of the

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native soils should be compacted to the minimum density specified in paragraph c(3) of this section.

Cut areas of building pads should be watered and rolled as specified above after cutting to substantial finished grade.

(2) Treatment of Natural Ground Surfaces in Non-Building Areas

The upper 6 inches of native soils outside building areas upon which fills are to be constructed should be scarified, brought to a moisture content of 2 percent below optimum or higher, and compacted to requirements in c(3) of this section.

(3) Compaction

The fill should be spread in layers not exceeding 8 inches, watered as necessary, and compacted. The moisture content at the time of compaction should be 2 percent below optimum or higher. Compaction should be with a vibratory roller as specified in c(1) of this section to obtain a density of not less than 95 percent of maximum density for building pads. Embankments outside the building pads should be compacted to 90 percent of maximum density. Native soils beneath fills or in cuts should be compacted to the density specified for fills in that area.

Optimum moisture and maximum density for each soil used should be determined in accordance with ASTM D-1557.

INSPECTION AND TESTS

A. Field Inspection and Testing

The developer should employ the services of a registered licensed soils engineer to observe and test all controlled earthwork. The soils engineer should provide continuous on-site inspection by experienced personnel during construction of controlled earthwork. The contractor should notify the engineer at least 2 working days in advance of any field operations of the controlled earthwork, or of any resumption of operations after stoppages. Tests of fill materials and embankments should be made at the following rates:

- (1) One field density test per each 1,000 square yards of original ground surface prior to placing fill or in cut areas.

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- (2) One field density test per each 350 cubic yards of fill placed, or each layer of fill for each work area, whichever is greater.
- (3) One moisture-density curve for each type of material used, as indicated by sieve analysis and plasticity index.

B.

Report of Field Density Tests

The soils engineer should submit daily the results of field density tests required by these specifications.

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GEO-TEST

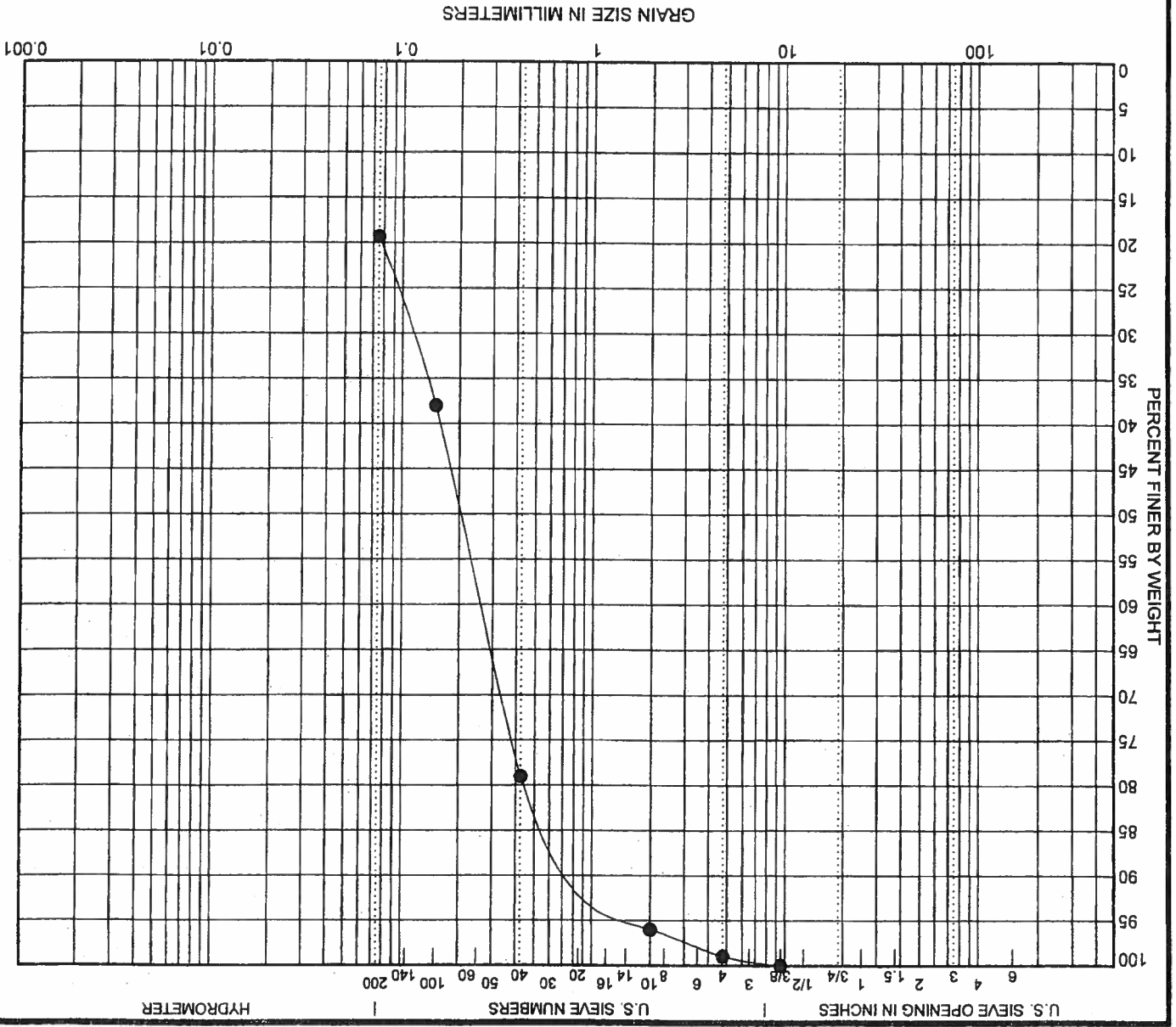
GRAIN SIZE 1-51112 100 ACRE SUBDIVISION, GP J GEO TEST, GDT 1/12/06

GRAIN SIZE DISTRIBUTION

Project: 100 Acre Subdivision, South Camelot
Location: Los Lunas, NM

● 01	Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
01		9.5	0.262	0.112		1.0	79.7		19.3		
● 01	Specimen Identification	Classification				LL	NP	PL	PI	Cc	Cu
01		SILTY SAND(SM)									

COBBLES	coarse	fine	coarse	medium	fine	SILT OR CLAY
	GRAVEL		SAND			



GEO-TEST

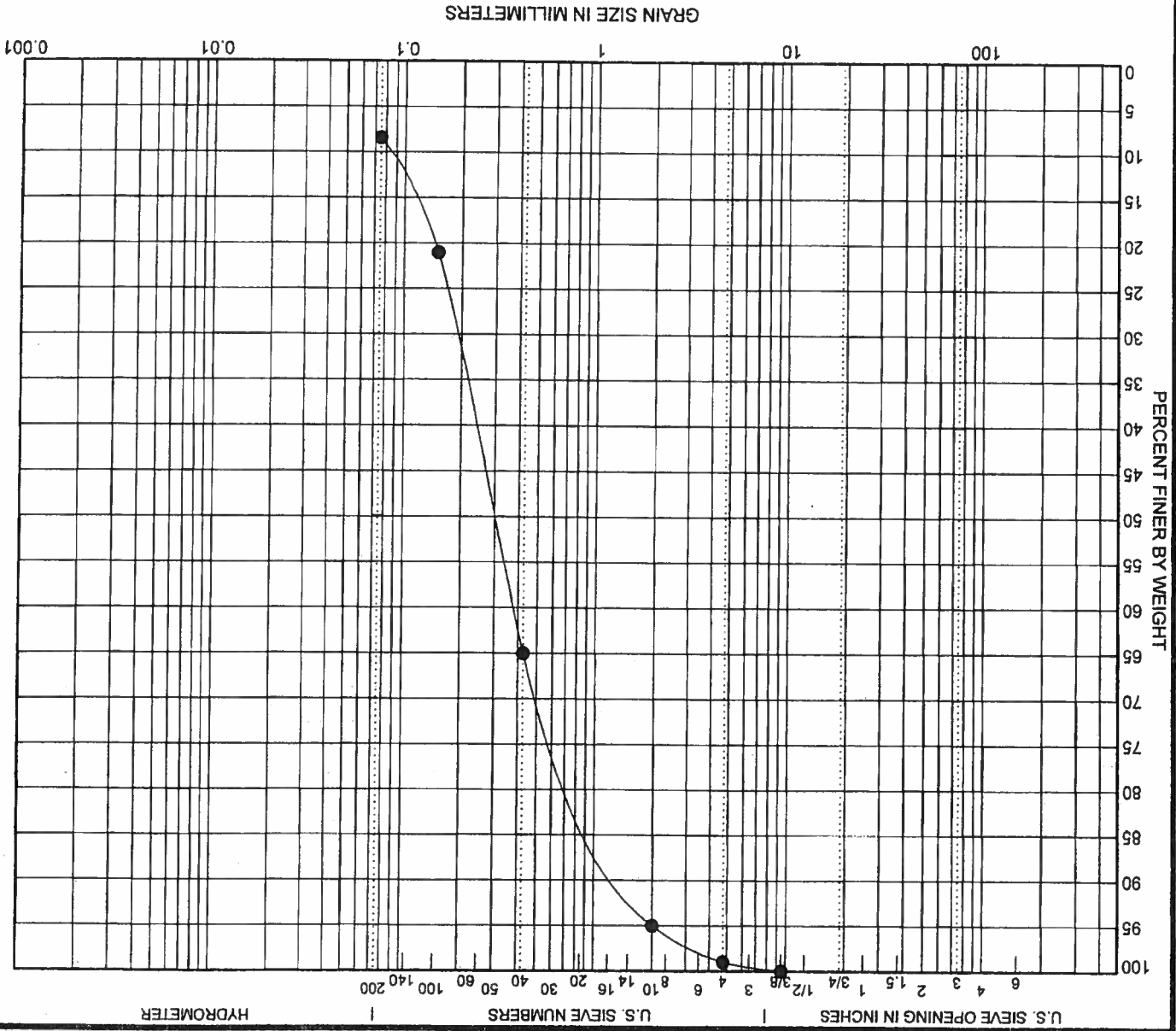
Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
02	5.0	0.378	0.186	0.082	1.0	90.6	8.4	
02	5.0	Classification						
		LL	PL	NP	NP	NP	NP	Cu
								4.61
								1.11

POORLY GRADED SAND with SILT(SP-SM)

COBBLES	GRAVEL	SAND	SILT OR CLAY
	coarse fine	coarse medium fine	



GEO-TEST

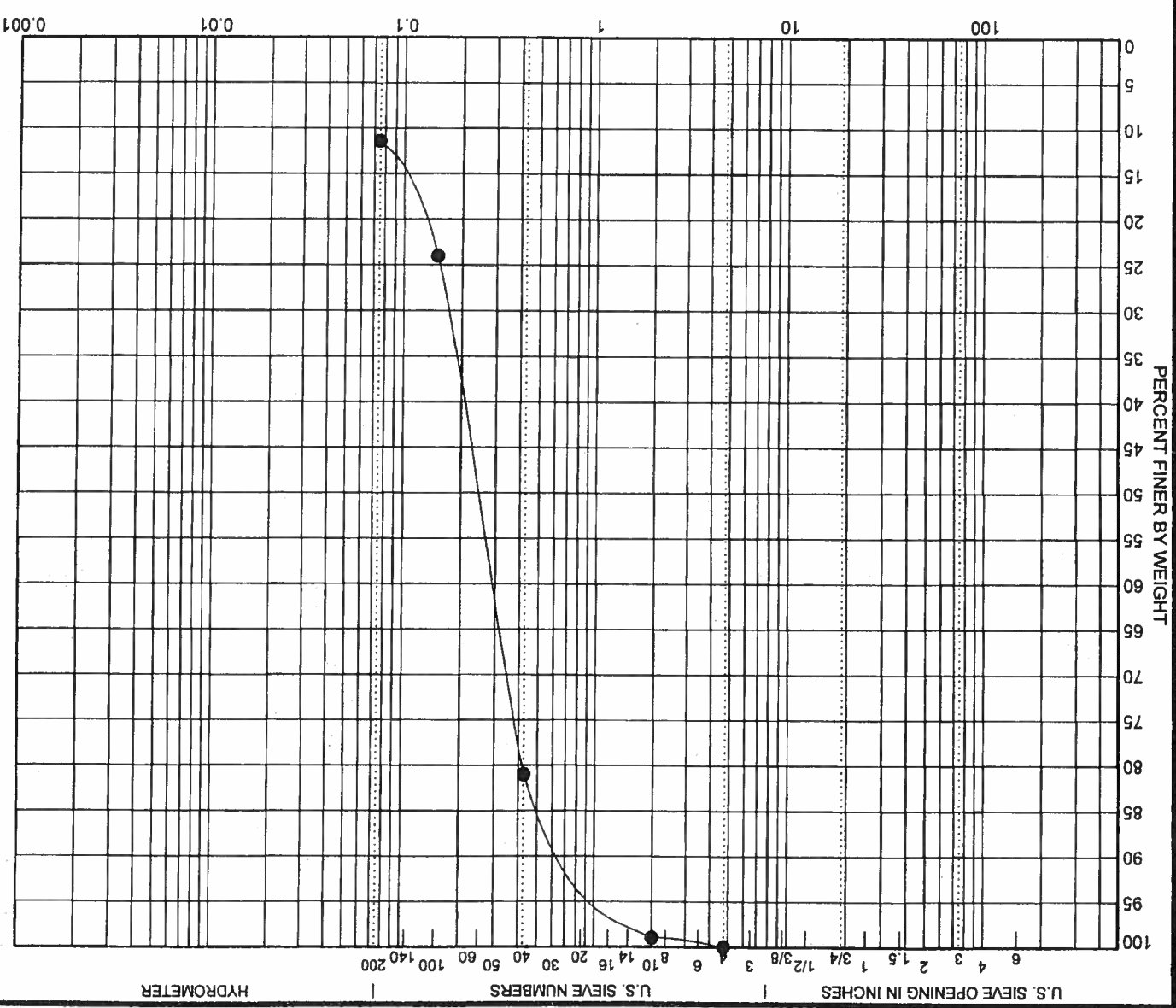
Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

● 04	Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 04	Specimen Identification	2.5	4.75	0.29	0.167	0.0	88.6	11.4	11.4
● 04	Specimen Identification	Classification							
● 04	Specimen Identification	POORLY GRADED SAND with SILT(SP-SM)							
● 04	Specimen Identification	LL	PL	PI	Cc	Cu	NP	NP	NP
● 04	Specimen Identification	4.17	1.39	4.17	1.39	4.17	1.39	4.17	1.39

COBBLES	coarse	fine	coarse	medium	fine	SILT OR CLAY
	GRAVEL		SAND			

GRAIN SIZE IN MILLIMETERS



U.S. SIEVE OPENING IN INCHES
U.S. SIEVE NUMBERS
HYDROMETER

GEO-TEST

Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

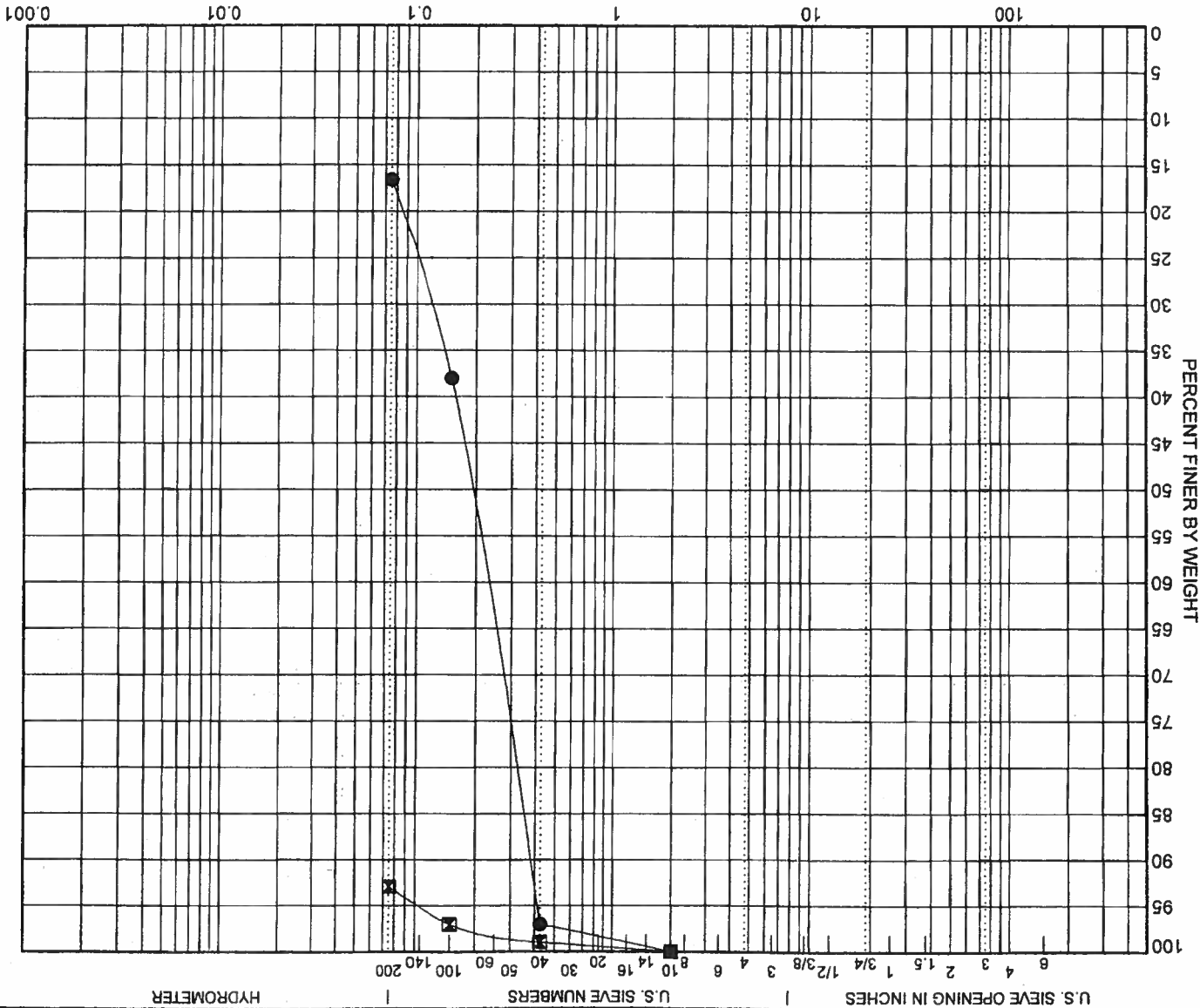
GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
05 ●	20.0	2	0.221	0.116	0.0	83.4	7.1	92.9
05 ●	2.5	2			0.0			16.6

Specimen Identification	Classification	LL	PL	NP	NP	NP	PI	CC	CU
05 ●	SILTY SAND(SM)								
05 ●	LEAN CLAY(CL)	26	17	9					

COBBLES	GRAVEL		SAND		SILT OR CLAY
	coarse	fine	coarse	medium	fine

GRAIN SIZE IN MILLIMETERS



GEO-TEST

Project: 100 Acre Subdivision, South Carmelot
 Location: Los Lunas, NM

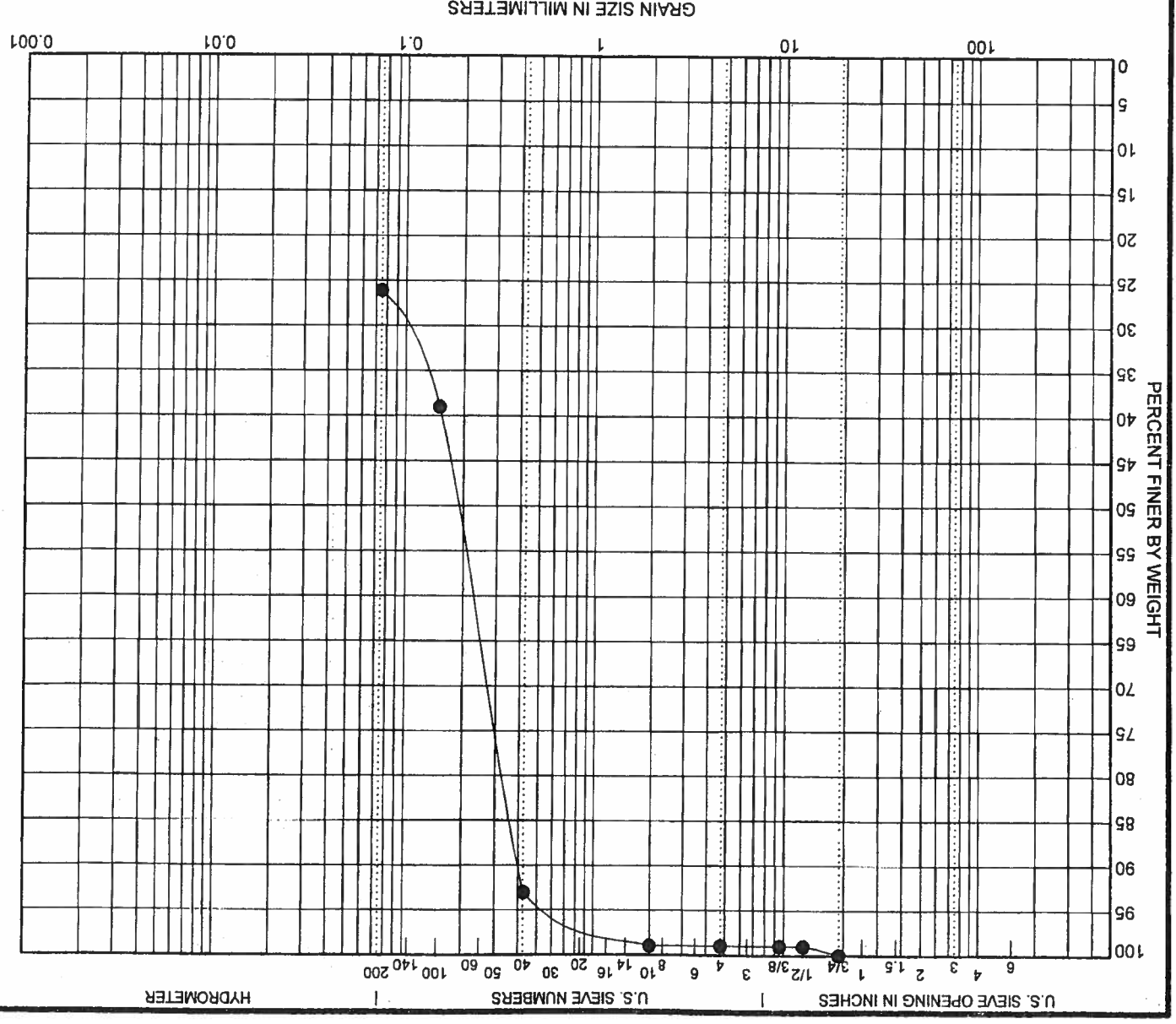
Number: 151112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	% Gravel	% Sand	% Silt	% Clay
● 07	2.5	0.225	0.092	1.0	72.9	26.1		

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● 07	SILTY SAND(SM)					

COBBLES	GRAVEL	SAND	SILT OR CLAY
	coarse fine	coarse medium fine	



GEO-TEST

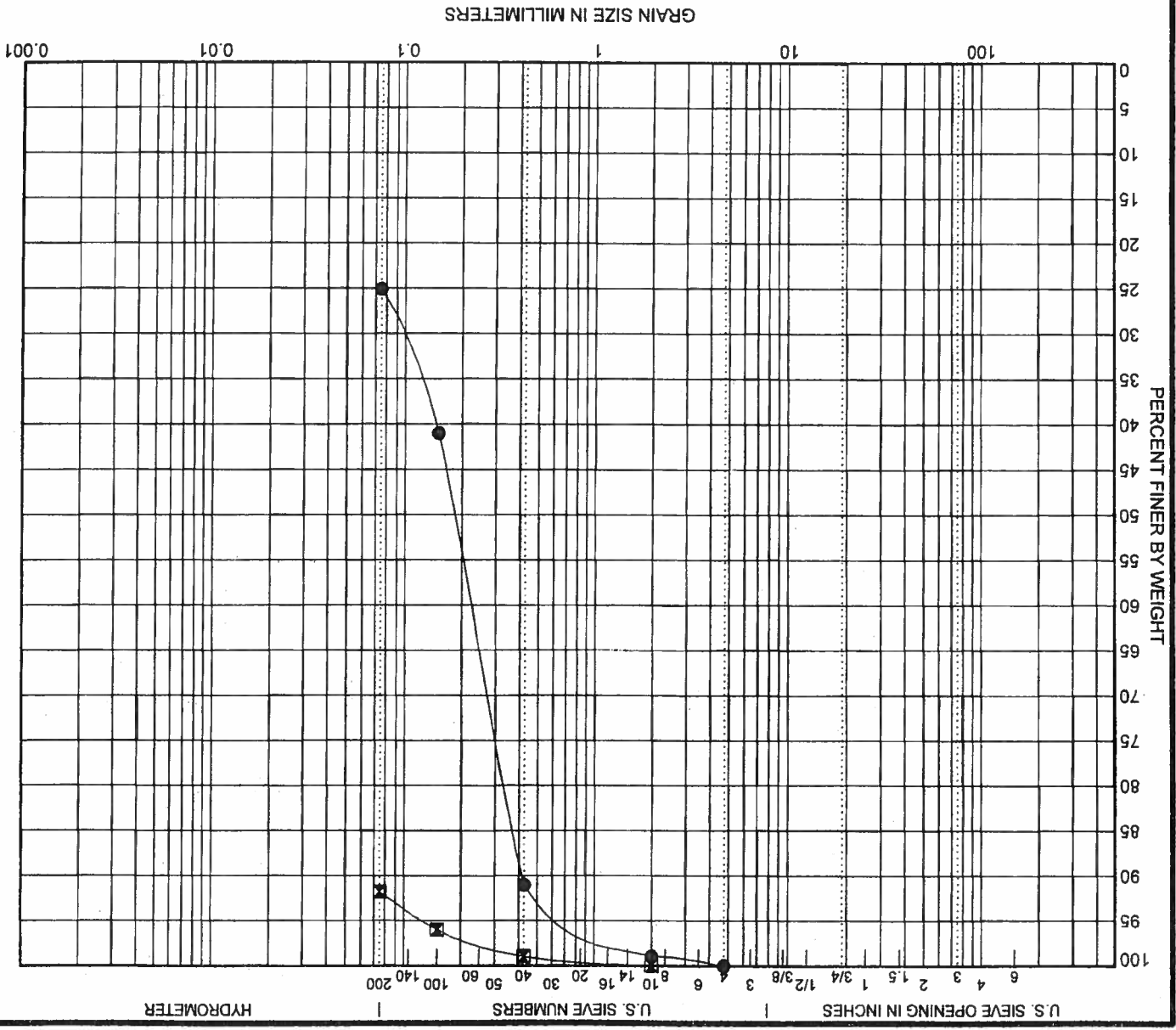
Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 10	4.75	0.223	0.093	0.0	0.0	74.9	25.1	91.8
● 10	15.0	2						

Specimen Identification	Silty Sand(SM)	Lean Clay(CL)	Classification	LL	PL	PI	Cc	Cu
● 10	2.5	15.0	SILT SAND(SM)	39	13	26		
● 10			LEAN CLAY(CL)					

COBBLES	coarse	fine	GRAVEL	coarse	medium	fine	SAND	SILT OR CLAY



GEO-TEST

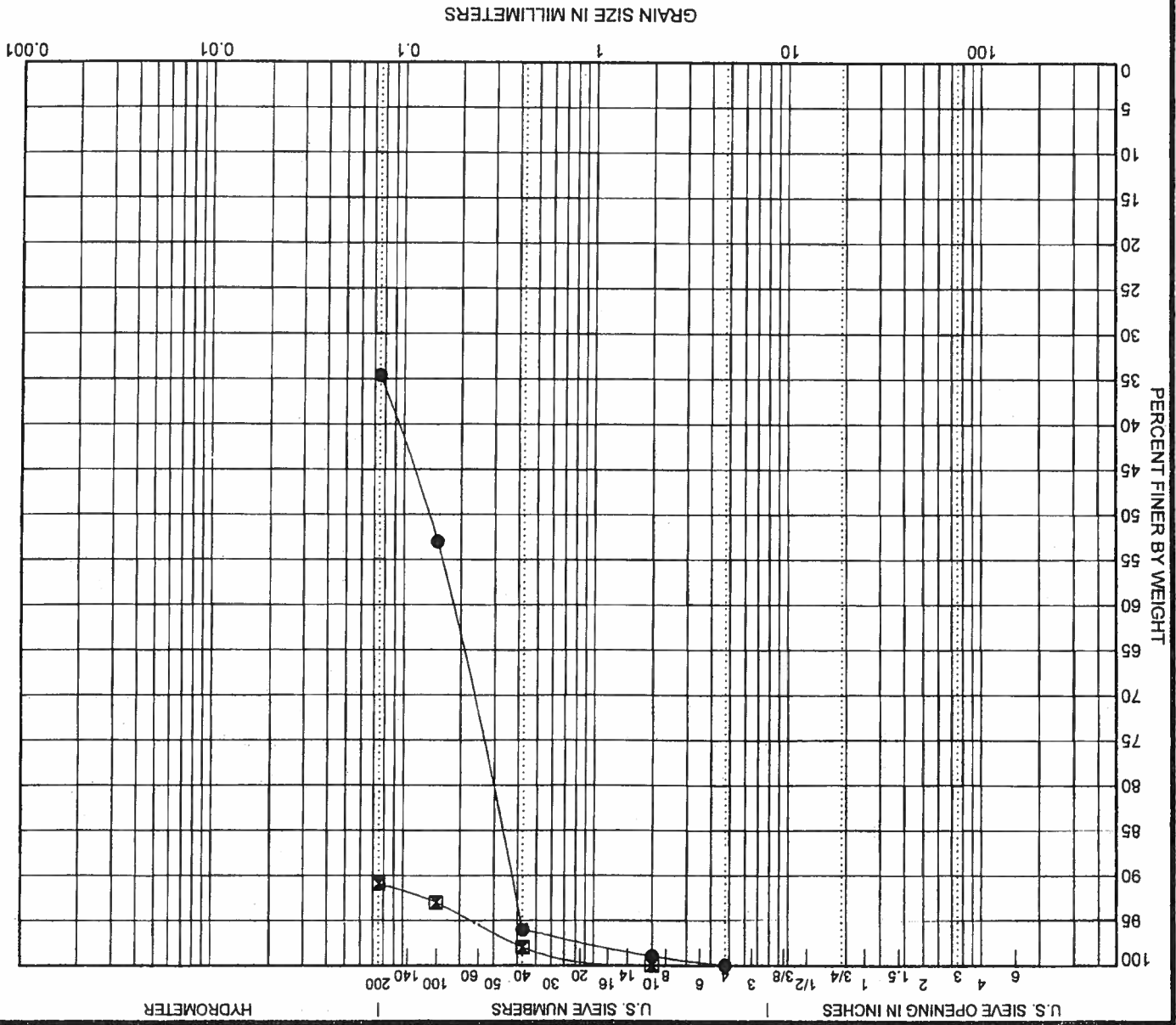
Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 13	2.5	4.75	0.178		0.0	65.4	9.1	34.6
● 13	15.0	2			0.0			90.9

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● 13	SILTY SAND(SM)	NP	NP	NP		
● 13	LEAN CLAY(CL)	41	18	23		

COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	



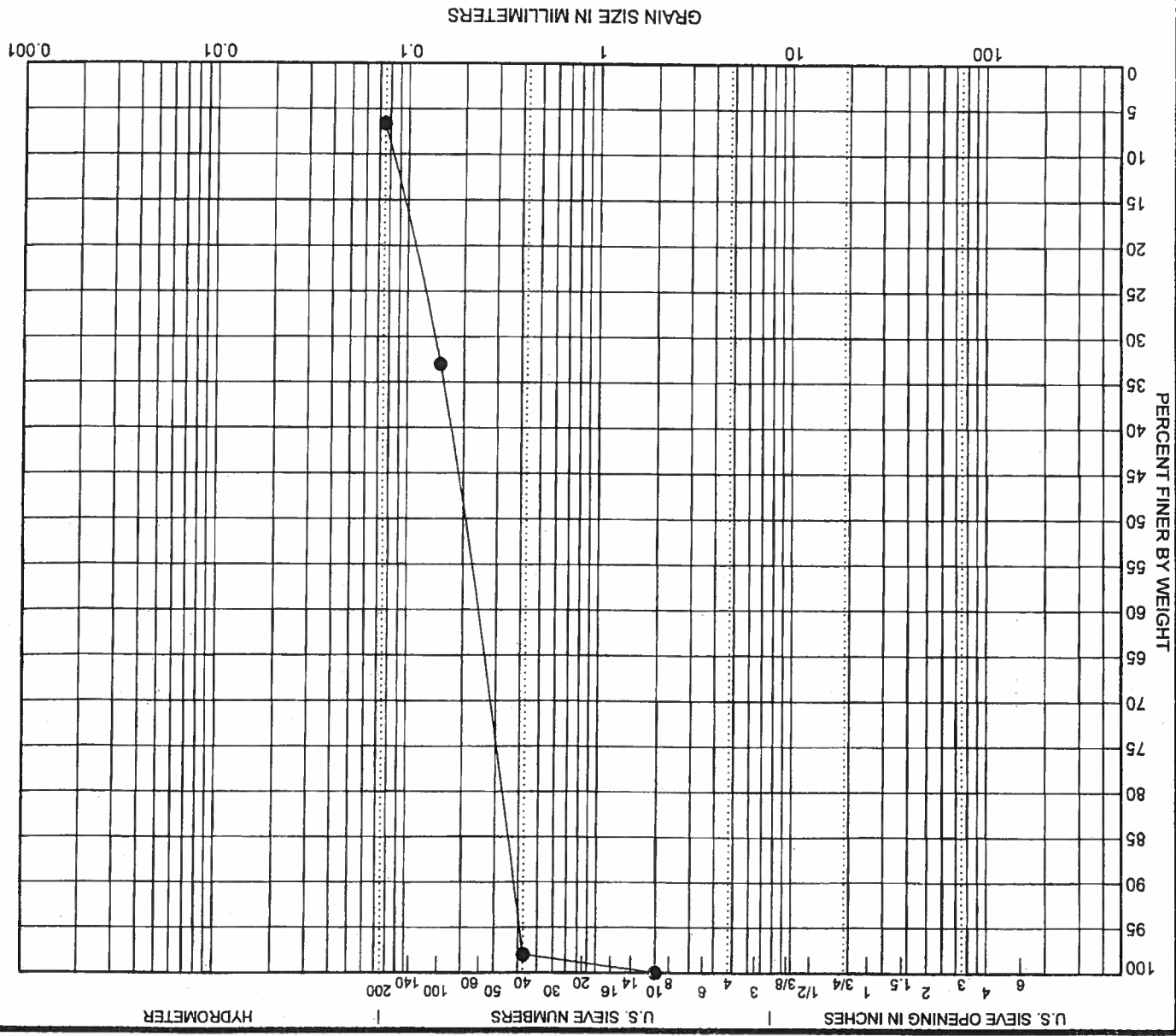
GEO-TEST

Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
● 14	2.5	0.231	0.139	0.082	0.0	93.4	6.6		
Specimen Identification	Classification								
● 14	2.5	POORLY GRADED SAND with SILT(SP-SM)							
		LL	PL	NP	NP	NP	PL	PI	
		Cu	Cc	1.01	2.82				

COBBLES	coarse	fine	SAND	coarse	medium	fine	SILT OR CLAY
	GRAVEL						



U.S. SIEVE OPENING IN INCHES | U.S. SIEVE NUMBERS | HYDROMETER

GEO-TEST

Project: 100 Acre Subdivision, South Camelot

Location: Los Lunas, NM

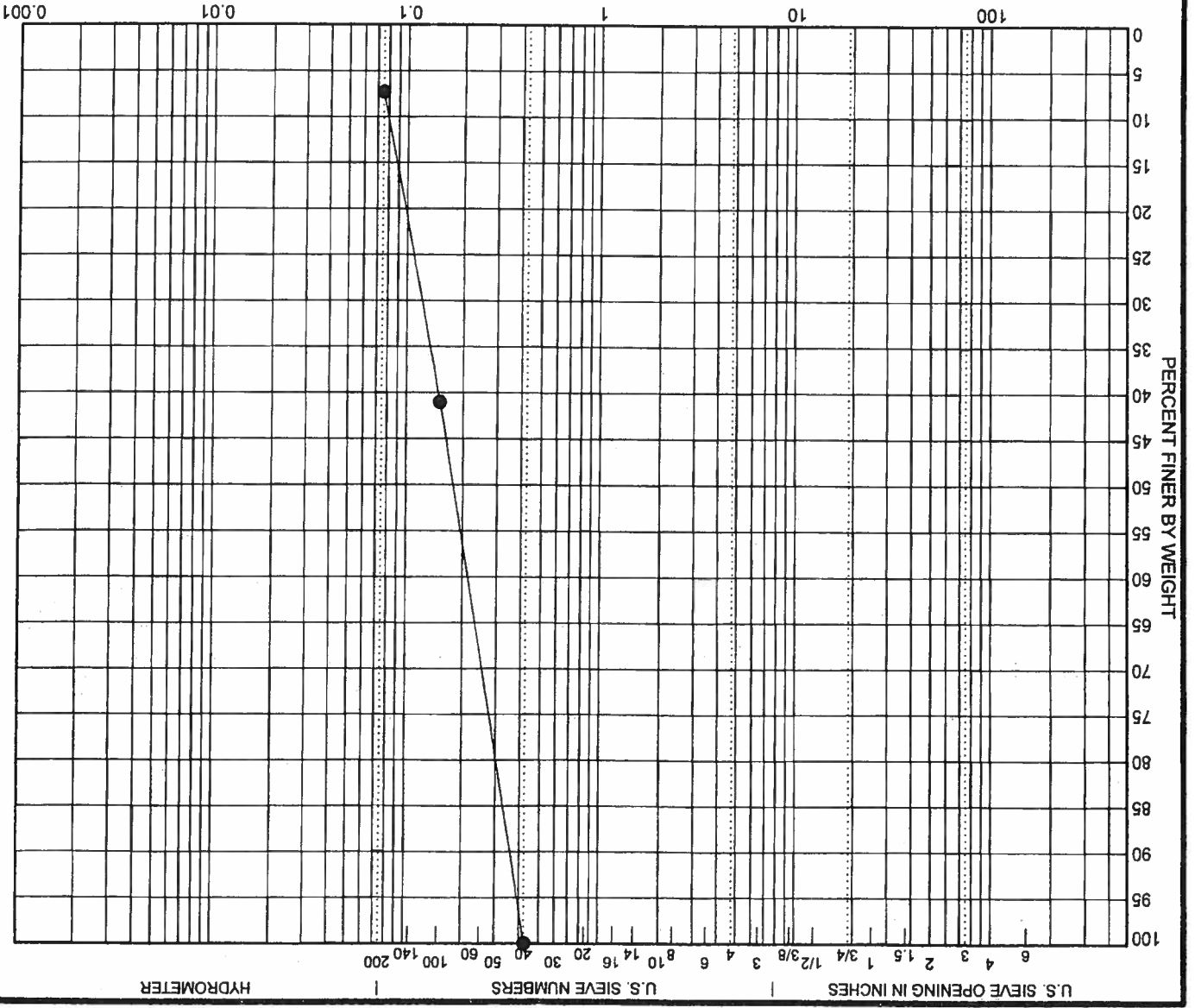
Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 15	5.0	0.425	0.21	0.12	0.079	0.0	92.7	7.3
● 15	5.0	POORLY GRADED SAND with SILT(SP-SM)						
Specimen Identification	Classification							
	LL	PL	PI	NP	NP	NP	Cc	Cu
							0.86	2.65

COBBLES	GRAVEL	SAND	SILT OR CLAY
	coarse fine	coarse medium fine	

GRAIN SIZE IN MILLIMETERS



U.S. SIEVE OPENING IN INCHES | U.S. SIEVE NUMBERS | HYDROMETER

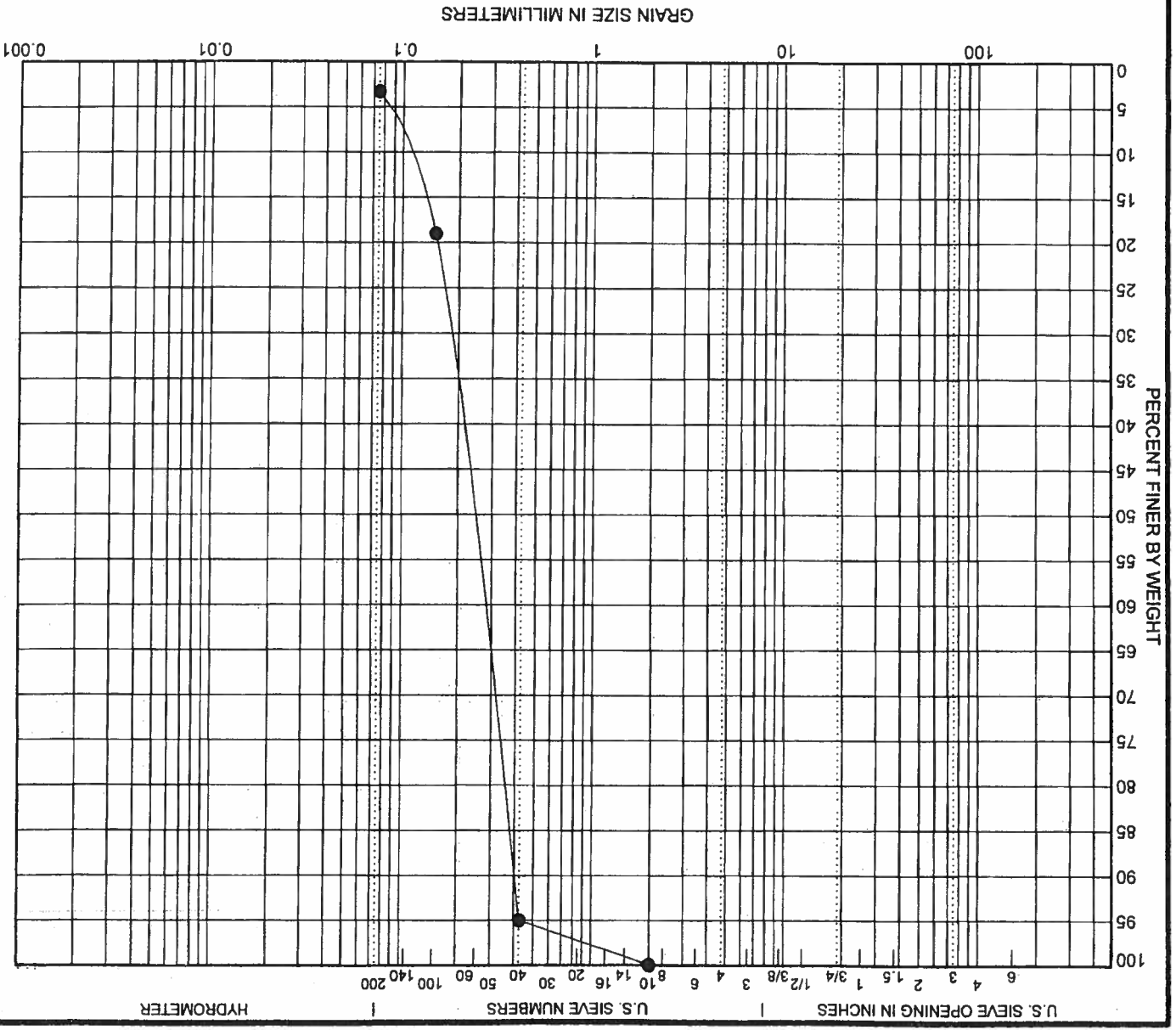
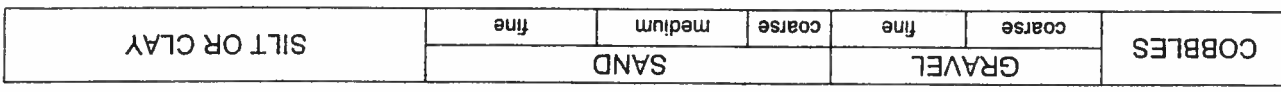
GRAIN SIZE - 1-511112 100 ACRE SUBDIVISION GPJ GEO TEST GOT 1/12/06

GEO-TEST

Project: 100 Acre Subdivision, South Carmelot
 Location: Los Lunas, NM
 Number: 45445

GRAIN SIZE DISTRIBUTION

Specimen Identification	16
Specimen Identification	16
POORLY GRADED SAND(SP)	
Classification	LL PL NP
	LL PL NP
	PL PI NP
	Cc Cu
	2.61
	1.15
	3.3
	10.0
	10.0
	2
	D100
	D60
	D30
	D10
	%Gravel
	%Sand
	%Silt
	%Clay



GEO-TEST

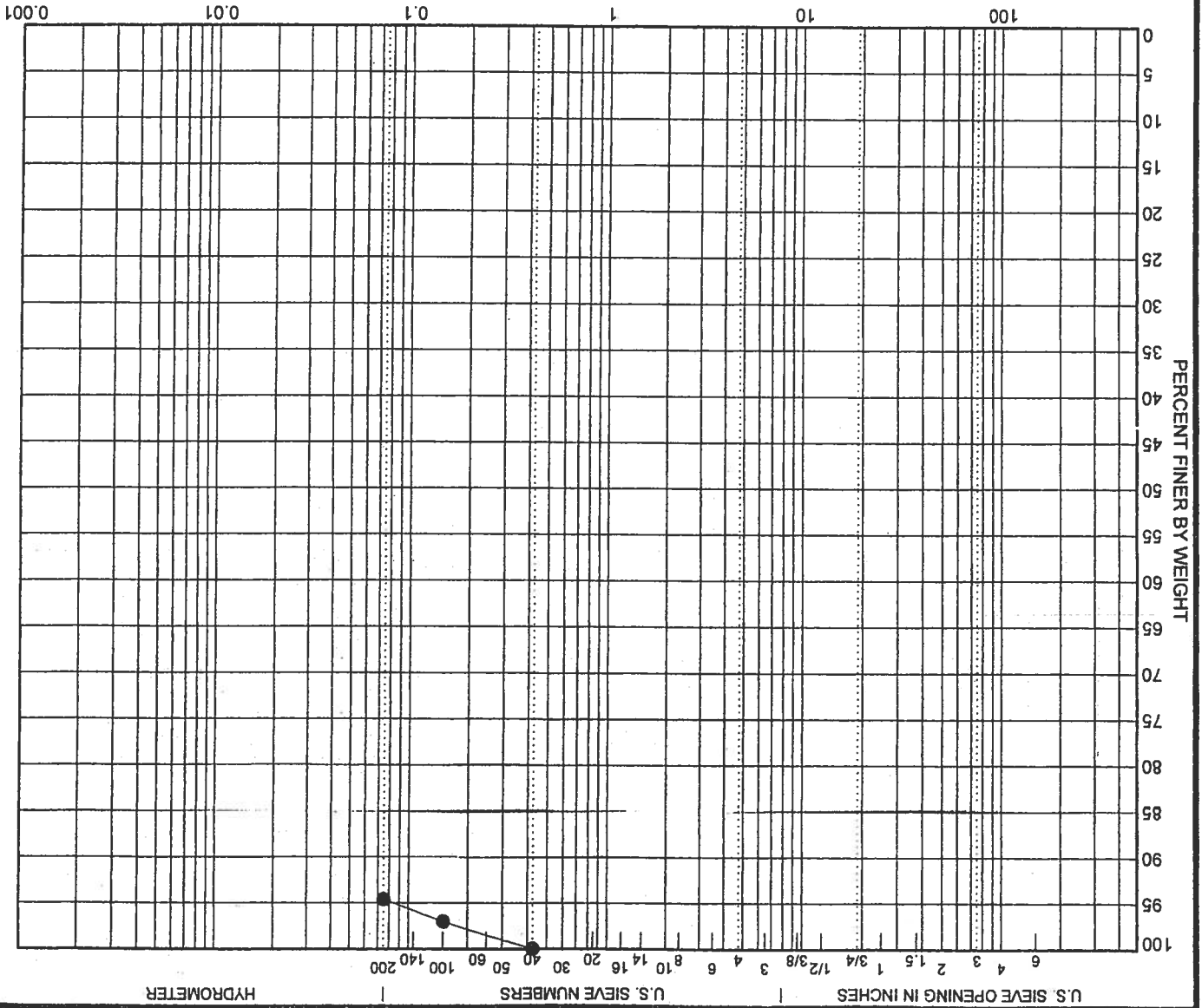
Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

● 17	5.0	0.425	D100	D60	D30	D10	%Gravel	0.0	5.4	94.6	%Clay	
Specimen Identification												
● 17	5.0	FAT CLAY(CH)					LL	58	PL	19	PI	39
Specimen Identification												
Classification												
Cu Cc PL PI												

COBBLES	coarse	fine	coarse	medium	fine	SILT OR CLAY
	GRAVEL			SAND		

GRAIN SIZE IN MILLIMETERS



HYDROMETER

U.S. SIEVE NUMBERS

U.S. SIEVE OPENING IN INCHES

PERCENT FINER BY WEIGHT

US GRAIN SIZE 1-51112 100 ACRE SUBDIVISION GPJ GEO TEST GOT 1/12/06

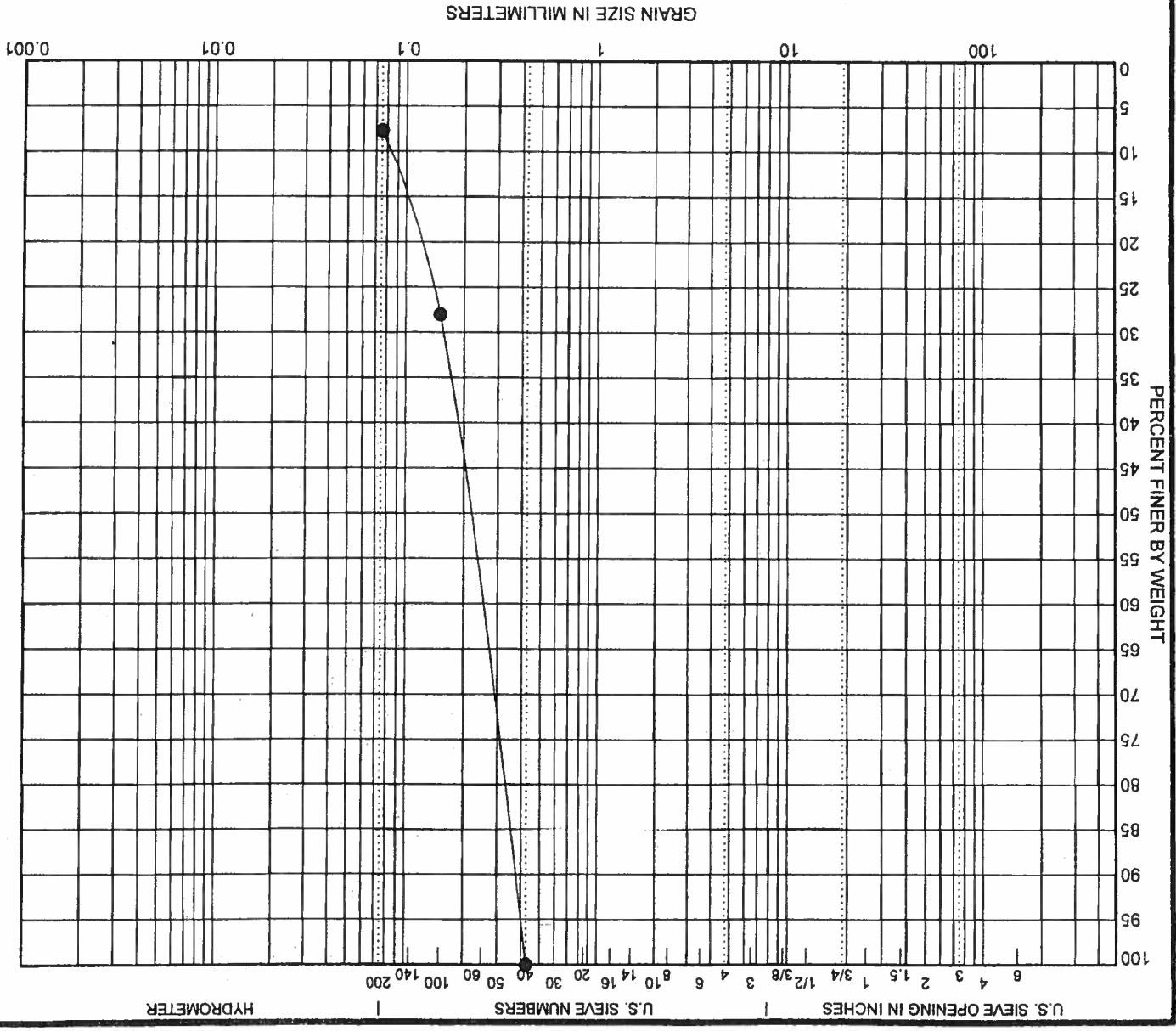
GEO-TEST

Project: 100 Acre Subdivision, South Carmelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
● 19	0.425	0.238	0.154	0.081	0.0	92.3	7.7		
● 19	2.5	POORLY GRADED SAND with SILT(SP-SM)							
Specimen Identification	Classification								
	LL	PL	PI	Cc	Cu				
				1.23	2.94				

COBBLES	coarse	fine	coarse	medium	fine	SILT OR CLAY
	GRAVEL			SAND		



GEO-TEST

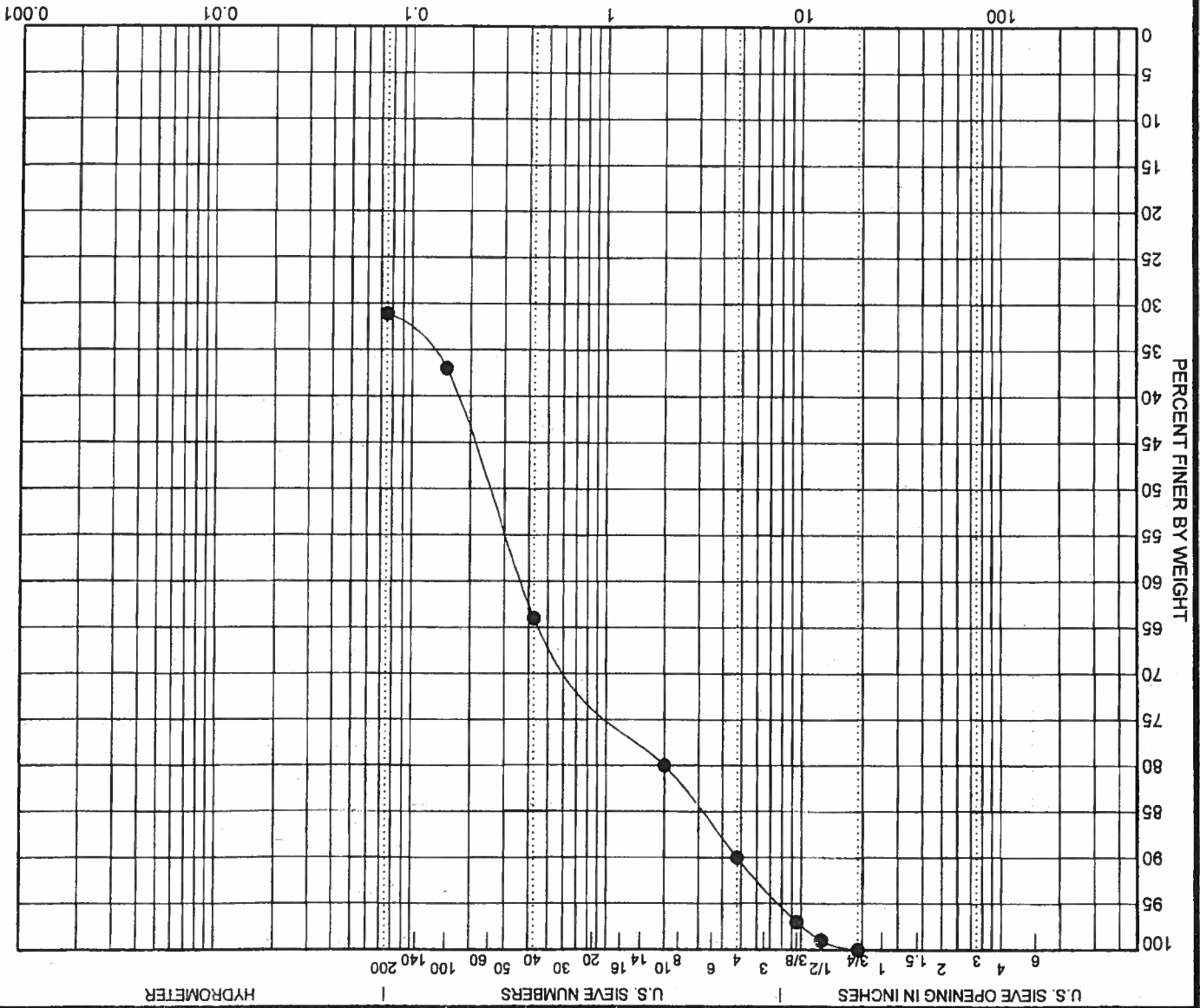
Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 21	10.0	0.364			10.0	58.9	31.1	
Classification								
● 21	10.0	CLAYEY SAND(SC)			LL	PL	PI	Cu
					23	15	8	

COBBLES	GRAVEL	SAND	SILT OR CLAY
coarse fine	coarse fine	coarse medium fine	

GRAIN SIZE IN MILLIMETERS



GEO-TEST

JS GRAIN SIZE 1-51112 100 ACRE SUBDIVISION GPJ GEO TEST GOT 1/12/06

Project: 100 Acre Subdivision, South Carmelot
 Location: Los Lunas, NM
 Number: 1-51112

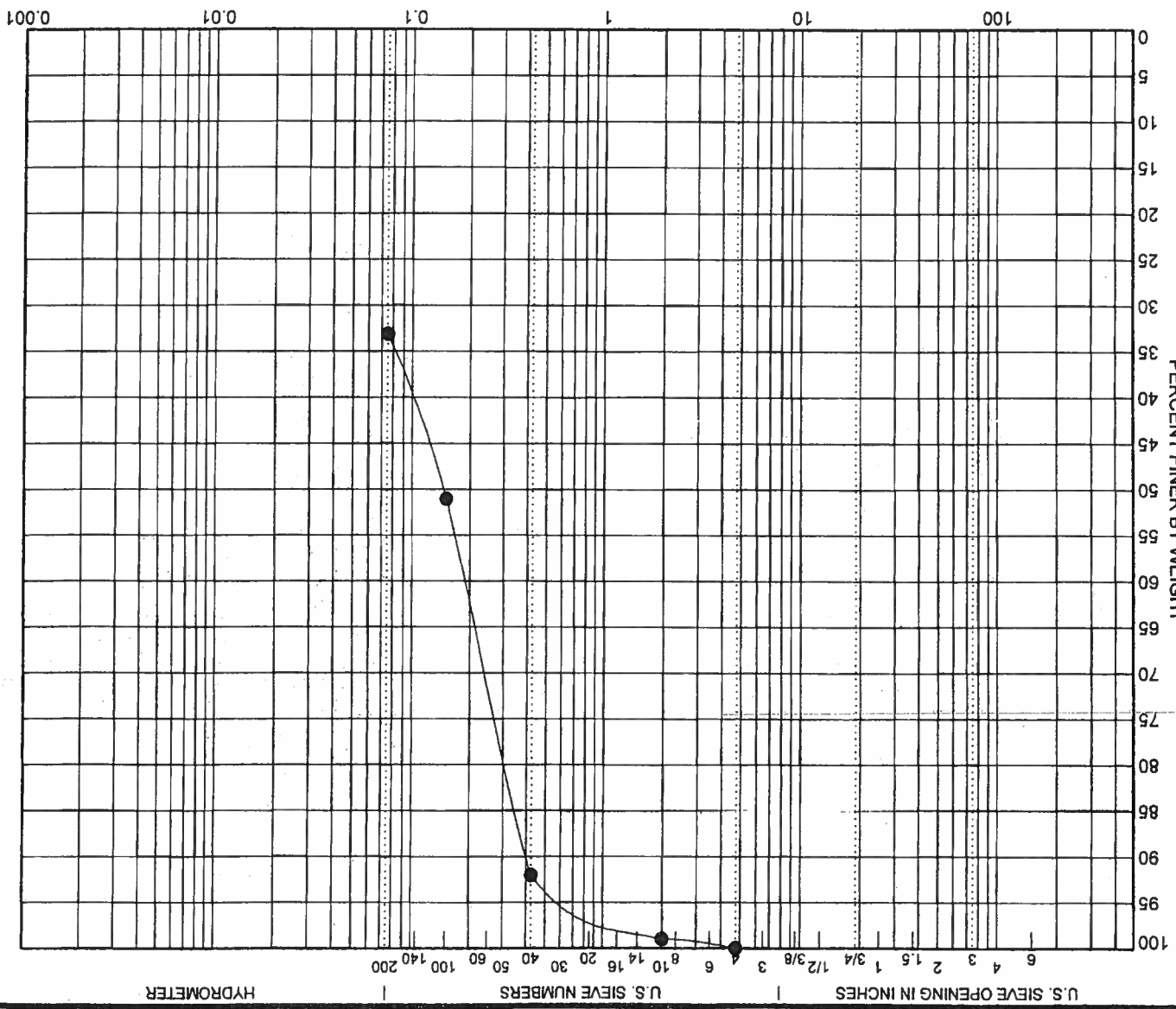
GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 23	4.75	0.189			0.0	66.9	33.1	

Specimen Identification	Classification	LL	PL	PI	Cu
● 23	CLAYEY SAND(SC)	22	12	10	

COBBLES	coarse	fine	coarse	medium	fine
	GRAVEL			SAND	

GRAIN SIZE IN MILLIMETERS



GEO-TEST

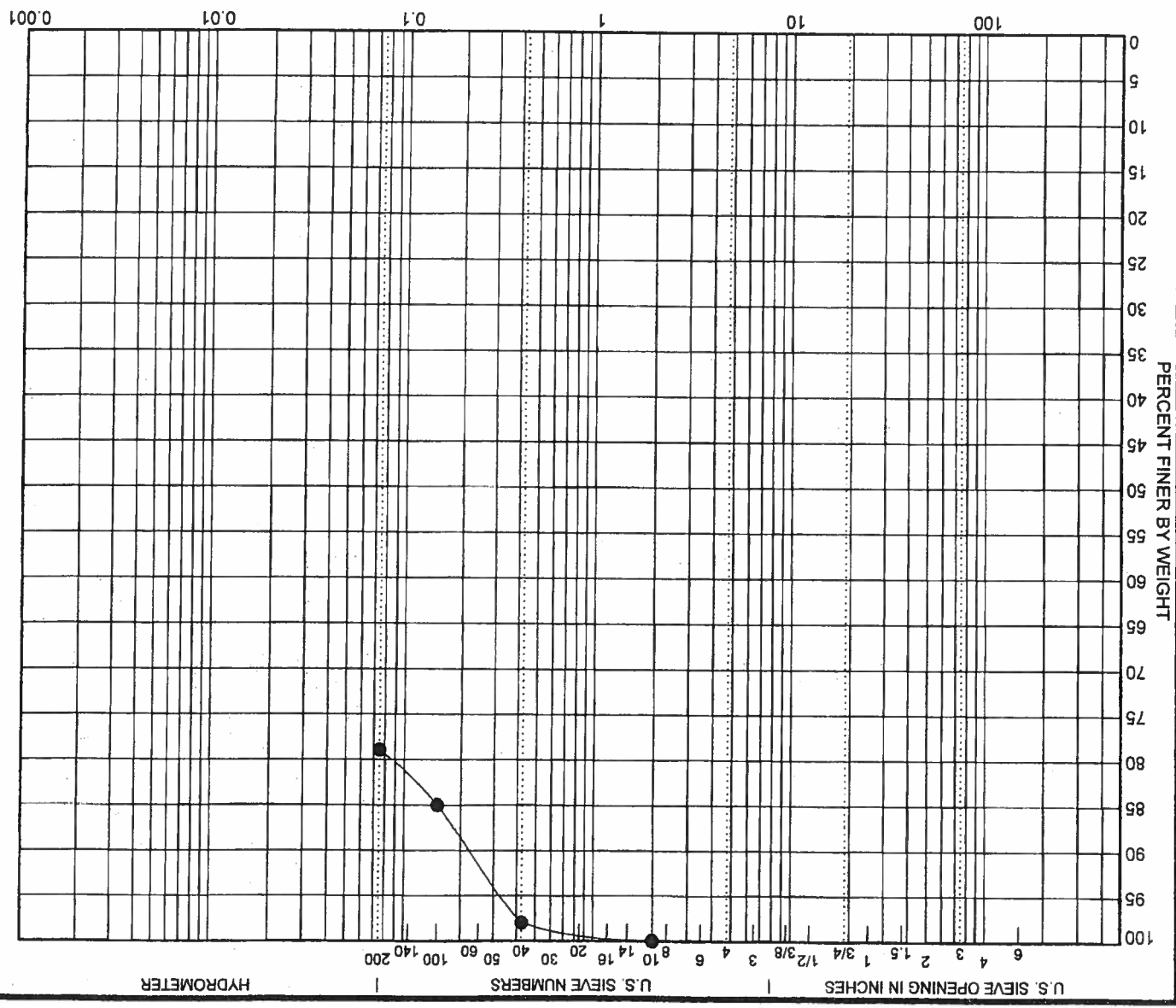
Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 25	10.0	2			0.0	21.1	78.9	
● 25	10.0				44	19	25	
Classification	LEAN CLAY with SAND(CL)							
Specimen Identification	LL	PL	PI	Cc	Cu			

COBBLES	GRAVEL	SAND	SILT OR CLAY
coarse fine	coarse fine	coarse medium fine	

GRAIN SIZE IN MILLIMETERS



GEO-TEST

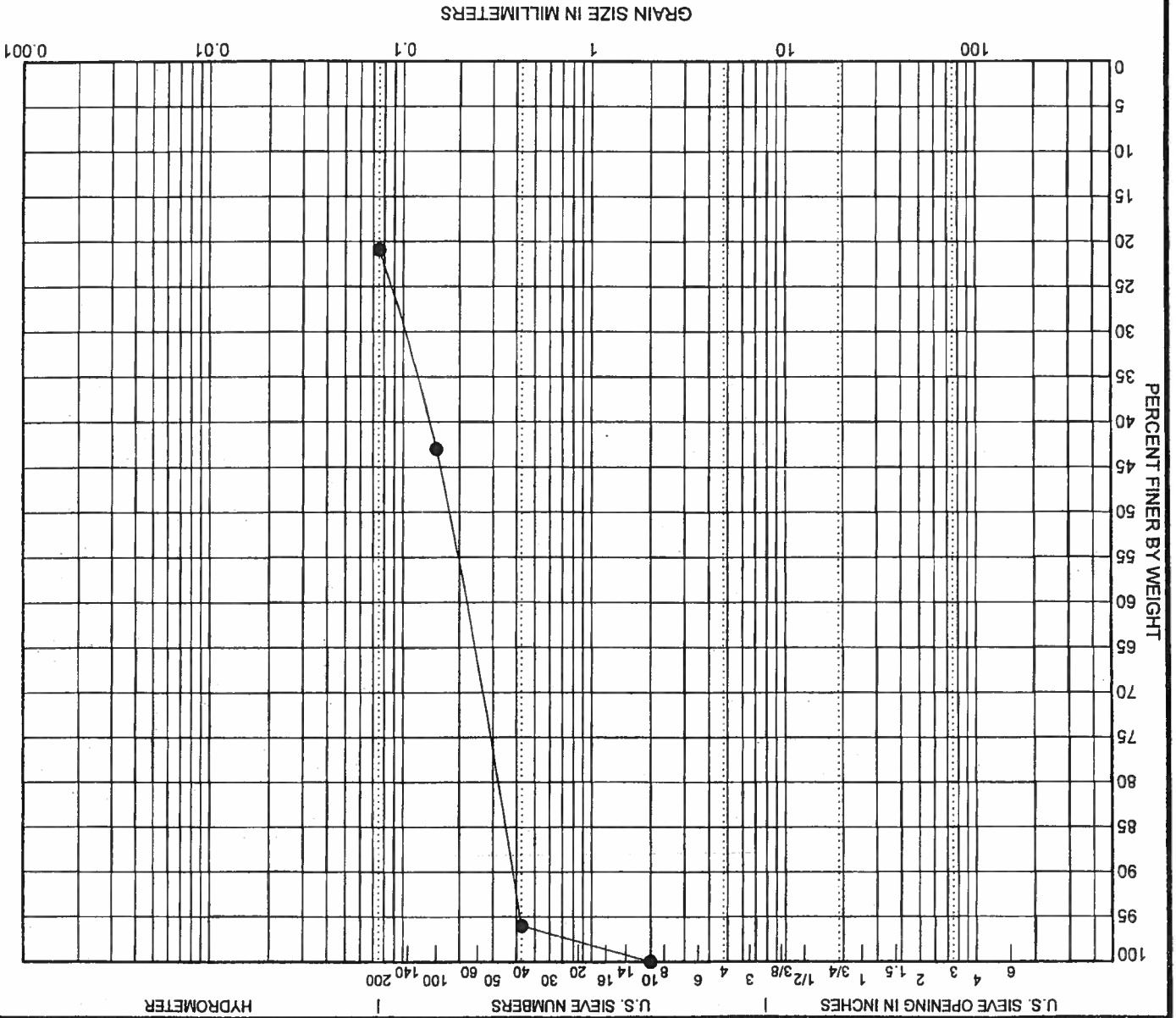
Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 26	2.5	0.209	0.1	0.0	79.1	20.9		

Specimen Identification	Classification	LL	PL	PI	Cc	Cu
● 26	SILTY SAND(SM)					

COBBLES	GRAVEL	SAND	SILT OR CLAY
coarse fine	coarse fine	coarse medium fine	



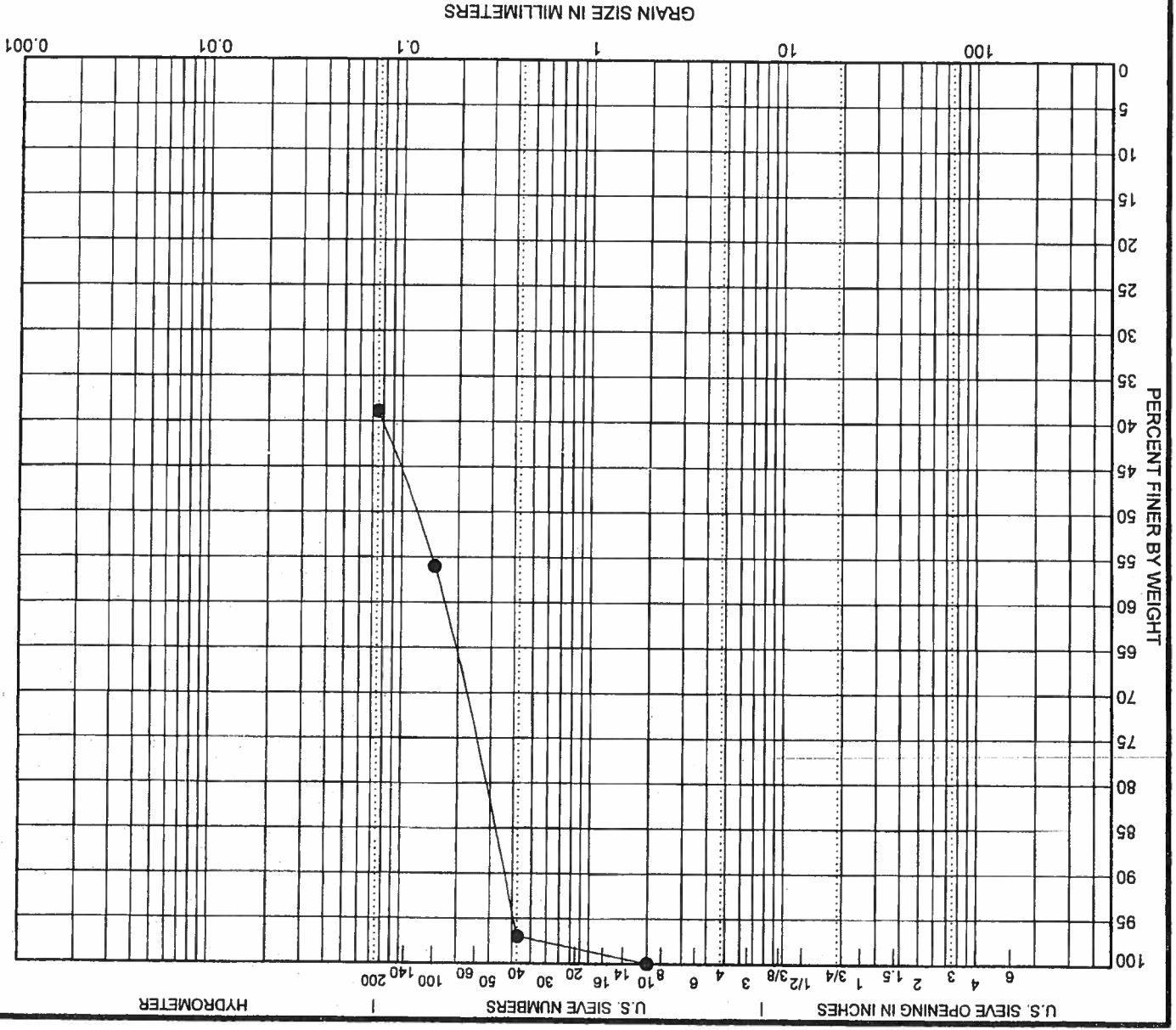
GEO-TEST

Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	28	D100	2	D60	0.166	D30		D10	0.0	%Sand	61.1	%Silt	38.9	%Clay	
Classification	5.0	SILTY SAND(SM)													
LL	NP	PL	NP	PI	CC	Cu									

COBBLES	GRAVEL	SAND	SILT OR CLAY	
	coarse			fine



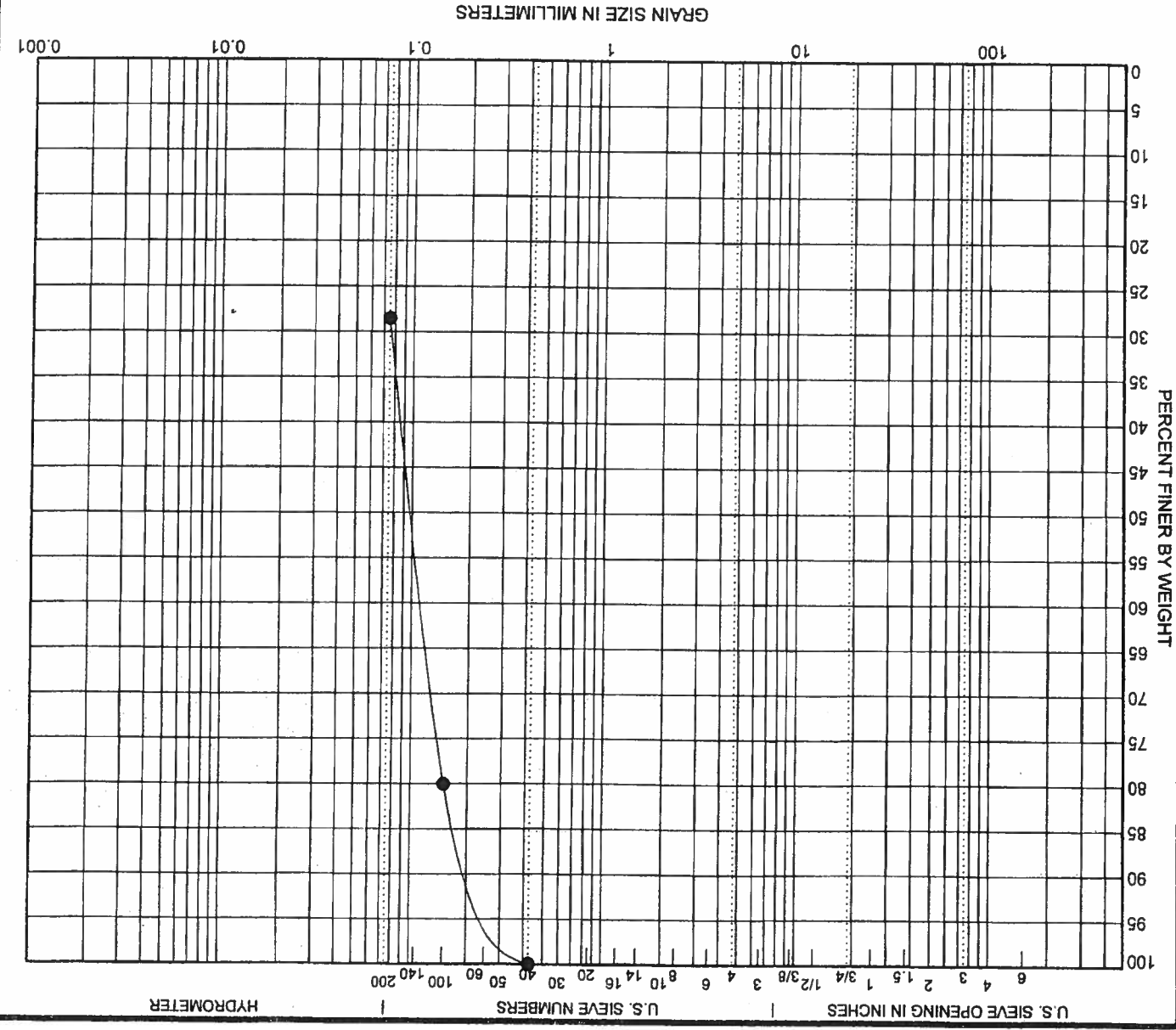
GEO-EST

Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 29	10.0	0.425	0.115	0.077	0.0	71.5	28.5	
● 29	10.0	Classification						
		LL	NP	NP	NP	PL	PI	Cc
								Cu

COBBLES	GRAVEL	SAND	SILT OR CLAY
	coarse fine	coarse medium fine	



GEO-TEST

Project: 100 Acre Subdivision, South Camelot
 Location: Los Lunas, NM
 Number: 1-51112

GRAIN SIZE DISTRIBUTION

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● 30	2.5	0.266	0.158	0.0	85.9	14.1		

Specimen Identification	Classification				SILTY SAND(SM)			
● 30	LL	PL	NP	NP	LL	PL	NP	NP

COBBLES	GRAVEL	SAND	SILT OR CLAY
	coarse fine	coarse medium fine	

