Geotechnical Engineering Report

Taxiway A Reconstruction

ACI No. 186488

Taos Regional Airport

Taos, New Mexico

July 3, 2018

Terracon Project No. 66185006

Prepared for:

Armstrong Consultants, Inc.
Albuquerque, New Mexico

Prepared by:

Terracon Consultants, Inc.
Albuquerque, New Mexico

July 3, 2018

Armstrong Consultants, Inc.
2305 Renard Place SE
Albuquerque, New Mexico 87106

Attn: Ms. Jacquie Smith
P: (50-5) 508-2192
E: jsmith@armstrongconsultants.com

Re: Geotechnical Engineering Report
Taxiway A Reconstruction
Taos Regional Airport
ACI No. 186488
Roswell, New Mexico
Terracon Project No. 66185006

Dear Ms. Smith:

Terracon has completed geotechnical engineering exploration for the Taxiway A Reconstruction project located at the Taos Regional Airport in Taos, New Mexico. Refer to Figure A1, Site Location Map, for the project location.

The scope of the services performed for this project included site reconnaissance by a geotechnical field technician, a subsurface exploration program, and laboratory testing. These services were performed in general accordance with our proposal number P66185006 dated January 11, 2018 and the Request for Proposal (RFP) entitled *"Taos Regional Airport, Taos, New Mexico - Geotech, ACI No. 186488"* dated January 10, 2018, which included project information, site plan, boring location map and scope of work prepared by Armstrong Consultants, Inc. (Armstrong). The purpose of this study will be to evaluate the pertinent geotechnical conditions at the site and to assist Armstrong in the design and construction of new pavements and other site development elements.

1.0 PROJECT DESCRIPTION

ITEM	DESCRIPTION
Location	Taos Regional Airport in Taos, New Mexico.
Existing improvements	Regional airport with existing runways, taxiways, aprons, and structures.
Existing pavement surface	Asphalt concrete

ITEM	DESCRIPTION
Anticipated pavement section thickness	Unknown
Current ground cover	Asphalt and Portland cement concrete pavement.
Grading	At existing taxiway grade.
Existing topography	Relatively flat to gently sloping down to the south and southwest (assumed).

2.0 SUBSURFACE EXPLORATION AND TESTING PROCEDURES

A total of 29 test borings were drilled at the site between the period of April 26 through May 4, 2018 using a CME-75 truck-mounted drilling rig utilizing a hollow stem auger equipped with a center bit. Sixteen (16) test borings were drilled to a depth of about 6 to 6-½ feet below existing pavement grade and 13 test borings were drilled to a depth of about 15 feet below existing site grade. Borings were performed at the locations designated by Armstrong and were referenced by station number and along taxiway or cross taxiway centerline. Refer to Figure A2, Exploration Location Map, for the boring locations. The station number are shown on each individual boring log.

Lithologic logs of the test borings were recorded by a geotechnical field technician during the drilling operations. The existing pavement materials were measured and documented for each boring location. At selected intervals designated by the RFP (below pavement, 2, 3.5, 5, and 10 feet), samples of subsurface materials and penetration tests were taken by driving split-spoon or ring-lined barrel samplers using a 140-pound hammer falling 30 inches. The number of blows required to advance the samplers the last 12 inches, or less if hard materials were present, of an 18-inch sampling interval was recorded as the standard penetration resistance value (N). An automatic SPT hammer was used to advance the split-spoon or ring-lined barrel samplers. The effect of the automatic hammer's efficiency has been considered in our interpretation and analysis.

In addition, four (4) bulk samples of the subgrade materials were obtained at the designated locations in the RFP (Boring Nos. B-02, B-13, B-21 and B-29). All samples were sealed in the field and then returned to our laboratory for testing and classification.

Groundwater measurements were made in the test borings during and at the completion of drilling.

Upon the completion of the drilling operations, the borings were backfilled with auger cuttings, compacted, and quickcrete and heated asphalt cold patch (matching the existing pavement section thickness) was placed at the top of each boring.

3.0 LABORATORY TESTING PROGRAM

Selected soil samples were tested for the following engineering properties in accordance the referenced ASTM Standards:

- Gradation (ASTM D422)
- Water Content (ASTM D2216)
- Consolidation (ASTM D2435)
- Atterberg Limits (ASTM D4318)
- Dry Density (ASTM D7263)
- Moisture/Density Relationship (ASTM D1557)
- California Bearing Ratio (ASTM D1883)
- Soluble Sulfate Content

As part of the testing program, the soil samples were examined in the laboratory by the field engineer. Based on the material's texture and plasticity, the soil samples were described and classified in accordance with the attached *General Notes* and *the Unified Soil Classification System*, respectively. The estimated group symbols for the *Unified Soil Classification System* are shown in the appropriate column on the boring logs.

The AASHTO and FAA Frost Group classifications were determined for the four (4) bulk samples of the subgrade. A brief description of the Unified System is included in Appendix A.

4.0 SURFACE AND SUBSURFACE CONDITIONS

4.1 Existing Pavement Conditions

Cursory pavement observations were performed on April 26, 2018. Based on limited field observations, the existing pavement appears to be in relatively poor to fair condition with varying degrees of distress. Observed surficial pavement distress included transverse and longitudinal cracking, as well as oxidation, weathering and raveling of the pavement surface. The as-built plans and maintenance records for the pavement were not provided; however, it appeared that some crack filling of the pavement surface may have been performed. The existing pavement thicknesses at the boring locations are as follows:

Boring No.	Station No.	Existing Pavement Thickness (inches)				
		Asphalt Concrete	Portland Cement Concrete	Asphalt Treated Aggregate Base Course	Aggregate Base Course	Select Fill/ Sand and Gravel Subbase
B-01	10+00*	2	N/A	N/A	1.5	18
B-02	12+00	2.5	N/A	N/A	1.5	18
B-03	14+00*	2	N/A	N/A	1.5	18
B-04	14+00	2	N/A	N/A	1.5	18
B-05	16+00	3	N/A	N/A	1.5	18
B-06	18+00	2.5	N/A	N/A	1.5	18
B-07	20+00	2	N/A	N/A	2	12
B-08	22+00	3	N/A	N/A	2	12
B-09	24+00	3	N/A	N/A	3	12
B-10	26+00	3.5	N/A	N/A	2.5	12
B-11	28+00	2.5	N/A	N/A	2	12
B-12	28+00*	3.75	N/A	N/A	N/A	18
B-13	30+00	4	N/A	N/A	2	12
B-14	32+00	3	N/A	N/A	2	11
B-15	34+00	3	N/A	N/A	1.5	18
B-16	36+00	3	N/A	N/A	2.5	18
B-17	38+00	6	N/A	18	N/A	N/A
B-18	40+00	8	N/A	8	N/A	N/A
B-19	42+00	8	N/A	6	N/A	N/A
B-20	42+00*	7	N/A	4	N/A	N/A
B-21	45+00	6	N/A	6.5	N/A	N/A
B-22	47+00	6	N/A	4	N/A	N/A
B-23	49+00	5	N/A	5	N/A	N/A

Boring No.	Station No.	Existing Pavement Thickness (inches)				
		Asphalt Concrete	Portland Cement Concrete	Asphalt Treated Aggregate Base Course	Aggregate Base Course	Select Fill/ Sand and Gravel Subbase
B-24	51+00	4.5	N/A	5	N/A	N/A
B-25	53+00	4	N/A	2.5	N/A	N/A
B-26	55+00	6	4	6	N/A	N/A
B-27	57+00	8	N/A	4	N/A	N/A
B-28	59+00	7	N/A	8	N/A	N/A
B-29	59+00*	7	N/A	8	N/A	N/A

*Cross taxiway

4.2 Subgrade and Subsurface Soil Conditions

Specific conditions encountered at the boring locations are indicated on the individual boring logs. Stratification boundaries on the boring logs represent the approximate location of changes in soil types; in-situ, the transition between materials may be gradual. Details for the borings can be found on the attached boring logs. Based on the results of the borings, subsurface conditions on the project site can be generalized as follows:

Description	Approximate Depth to Bottom of Stratum (feet)	Material Encountered	Consistency/Density
Stratum 1	0.9 to 1.5	Asphalt – 2 to 7.5 inches Concrete* – 4 inches Asphalt Treated Base Course** – 1.5 to 2.5 Aggregate Base Course*** Select Fill**** – Sand and Gravel	N/A
Stratum 2	4 to 11.5	Lean to Fat Clay. The sand and gravel content varied	Soft to Very Stiff
Stratum 3	13	Silt. The sand and gravel content varied	Hard
Stratum 4	2 to 15	Gravel. The clay, silt, sand and cobble content varied	Very Loose to Dense
Stratum 5	6 to 15	Sand. The silt, clay and gravel content varied	Loose to Very Dense

*Encountered in Boring No. B-26

** Encountered in Boring Nos. B-17 through B-29
***Encountered in Boring Nos. B-01 through B-11 and B-13 through B-16
****Encountered in Boring Nos. B-01 through B-16

Laboratory tests were conducted on selected soil samples and the test results are presented on the attached laboratory test sheets in Appendix B.

The four (4) bulk samples that were retrieved during the field exploration and taken to the laboratory for further observation by the project geotechnical engineer were classified in accordance with the Unified Soil Classification System (USCS), the American Association of State Highway and Transportation Officials (AASHTO) classification system, and by the FAA Frost Group (AC 150/5320-6E) as outlined below.

Boring No.	USCS Classification	AASHTO Classification	FAA Frost Group
B-02	SM	A-2-6	FG-3
B-13	GC	A-2-6	FG-3
B-21	CL	A-7-6	FG-4
B-29	CH	A-7-6	FG-4

Four (4) Atterberg limits tests were performed on the bulk samples of the subgrade obtained from depths ranging from 1 to 5 feet below existing site grades. Liquid Limit (LL) values for the subgrade materials ranged from 38 to 56. The plasticity index (PI) values for the subgrade materials ranged from 13 to 32. The percent fines of the bulk samples ranged from 32 to 69%.

The in-situ dry densities and moisture contents of the subgrade soils ranged from about 71 to 115 pounds per cubic foot (pcf) and 2.5 to 32 percent, respectively.

Laboratory test results indicate that the surface and near surface soils typically exhibit low consolidation/compression potential at in-situ moisture contents. The near surface soils exhibit a low to high tendency for consolidation/compression and non- to low tendency for expansion (swell) when wetted under heavy pavement loads. When water is added to samples of laboratory compacted near-surface soils, we anticipate that the compacted soils will exhibit non- to low expansive potential and non- to low consolidation potential when subjected to light loading conditions such as those imposed by pavements.

Four (4) moisture density relations (Proctor) tests were performed on selected samples of the subgrade obtained from depths ranging from 1 to 5 feet below existing site grades. The results of this testing is summarized below:

Boring No.	USCS Classification	AASHTO Classification	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
B-02	SM	A-2-6	108.5	16.6
B-13	GC	A-2-6	112.3	15.1
B-21	CL	A-7-6	102.4	20.0
B-29	CH	A-7-6	96.0	24.9

Four (4) California Bearing Ratio (CBR) tests were performed on selected samples of the subgrade obtained from depths ranging from 1 to 5 feet below existing site grades. The CBR tests were performed on subgrade samples compacted at approximately 95% maximum dry density and at or near optimum moisture content determined by ASTM D1557. A standard surcharge load of 10 pounds and saturated conditions were used for the tests. CBR values for the subgrade materials are summarized below:

Boring No.	USCS Classification	AASHTO Classification	CBR Value (0.100")	CBR Value (0.200")
B-02	SM	A-2-6	14.7	8.6
B-13	GC	A-2-6	9.9	7.4
B-21	CL	A-7-6	5.1	3.8
B-29	CH	A-7-6	8.0	6.2

The in-situ moisture contents of the subgrade soils ranged from 3.9 to 20.5%, the in-situ densities of the soils ranged from 89 to 111 pounds per cubic foot (pcf). Detailed in-situ moisture content and dry density values are shown on the individual boring logs and in the Summary of Laboratory Results Table in Appendix B.

The results of the soluble sulfate testing on the four (4) bulk samples are summarized below:

Boring No.	USCS Classification	AASHTO Classification	Soluble Sulfates (mg/kg)
B-02	SM	A-2-6	3,100
B-13	GC	A-2-6	100
B-21	CL	A-7-6	170

Boring No.	USCS Classification	AASHTO Classification	Soluble Sulfates (mg/kg)
B-29	CH	A-7-6	3,300

5.0 GROUNDWATER INFORMATION

Groundwater was not observed in the test borings at the time of field exploration, nor when checked upon completion of drilling. These observations represent groundwater conditions at the time of the field exploration and may not be indicative of other times, or at other locations. Groundwater conditions can change with varying seasonal and weather conditions, and other factors.

Fluctuations in groundwater levels can best be determined by implementation of a groundwater monitoring plan. Such a plan would include installation of groundwater monitoring wells, and periodic measurement of groundwater levels over a sufficient period of time.

The possibility of groundwater fluctuations should be considered when developing design and construction plans for the project.

6.0 ANALYSIS AND RECOMMENDATIONS

6.1 Geotechnical Considerations

The site appears suitable for the proposed pavement reconstruction based upon existing pavement and geotechnical conditions encountered in the test borings. The on-site subsurface soils are considered to be relatively poor to fair quality subgrade materials for aircraft support.

Variable subsurface subgrade conditions were encountered that will require particular attention in the design and construction; soft to very stiff clays and loose to very dense sands. In addition, elevated moisture contents and potentially unstable soils were encountered in the majority of the borings. Therefore, some stabilization or drying of the subgrade materials should be anticipated and required during construction, especially during wet seasons. Potential stabilization measures are outlined in subsequent sections of this report.

The observed pavement distress included transverse and longitudinal cracking, as well as oxidation, weathering and raveling of the pavement surface.

The existing pavement section thickness was variable in terms of the type and thickness of materials across the taxiway. It appears that the pavement section for approximate western ½ of the taxiway incorporated asphalt concrete and aggregate base course overlying a zone of select fill. It appears that the pavement section for approximate eastern ½ of the taxiway incorporated asphalt concrete and asphalt treated base course. The pavement materials consisted of asphalt concrete, Portland cement concrete, asphalt treated base course, aggregate base course and select fill. The asphalt pavement surface course varied from 2 to 8 inches. The Portland cement concrete, aggregate base course, asphalt treated base course and/or select fill were encountered in the borings. Four (4) inches of Portland cement concrete was encountered beneath the asphalt concrete in one (1) boring. The aggregate base course ranged from 1.5 to 3 inches. The asphalt treated base course ranged from 4 to 18 inches. The select fill ranged from 12 to 18 inches.

Due to the variability in the pavement materials type and thickness and the requirement to maintain existing site grades, it is our opinion that in-situ reclamation or recycling of the existing pavement materials is not feasible.

6.2 Corrosivity

Laboratory test results indicate the on-site soils exhibit soluble sulfate concentrations of 100 and 3,300 mg/kg. Results of soluble sulfate testing indicate that ASTM Type V or a modified Type II Portland cement should be considered for all project concrete on and below grade. Foundation concrete should be designed for moderate sulfate exposure in accordance with the provisions of the ACI Design Manual, Section 318, Chapter 4.

7.0 EARTHWORK

7.1 Site Preparation

Strip and remove existing pavement materials, and other deleterious materials from proposed new pavement reconstruction areas. Exposed surfaces should be free of mounds and depressions which could prevent uniform compaction.

Evidence of underground facilities and utilities were observed within and near the project site during the site reconnaissance. Therefore, such features could be encountered during construction. If unexpected fills or underground facilities are encountered, such features should be removed and the excavation thoroughly cleaned prior to backfill placement and/or construction.

7.2 Excavation

It is anticipated that shallow excavations for the proposed construction can be accomplished with conventional earthmoving equipment.

Based upon the borings, we do not anticipate groundwater will be encountered in excavations up to 15 feet in depth. Pumping from sumps may be utilized to control water within excavations.

Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction will likely encounter unstable conditions. Soft and loose subgrade conditions along with elevated moisture contents were encountered in the majority of the borings. Moisture contents as high as 32 percent were encountered in the borings. There, unstable subgrade conditions should be anticipated and expected during construction. The stability of the subgrade may be affected by precipitation, repetitive construction traffic or other factors. If unstable conditions develop, workability may be improved by scarifying and drying. Overexcavation of wet zones and replacement with granular materials may be necessary. Use of lime, fly ash, kiln dust, cement or geotextiles/geogrids could also be considered as a stabilization technique. Laboratory evaluation is recommended to determine the effect of chemical stabilization on subgrade soils prior to construction. Lightweight excavation equipment may be required to reduce subgrade pumping.

The individual contractor(s) is responsible for designing and constructing stable, temporary excavations as required to maintain stability of both the excavation sides and bottom. Excavations should be sloped or shored in the interest of safety following local, and federal regulations, including current OSHA excavation and trench safety standards.

7.3 Pavement Maintenance and Surface Drainage

Preventative maintenance consists of both localized maintenance (e.g. crack sealing and patching) and global maintenance (e.g. surface sealing). Preventative maintenance is usually the first priority when implementing a planned pavement maintenance program and provides the highest return on investment for pavements.

Pavement design methods are intended to provide structural sections with adequate thickness over a particular subgrade such that wheel loads are reduced to a level that subgrade can support. The support characteristics of the subgrade for pavement design do not account for the shrink movements of the soils encountered on this project. Thus the pavement may be adequate for a structural standpoint, yet still experience cracking and deformation due to shrink related movement of the subgrade. It is, therefore, important to minimize moisture changes in the subgrade to reduce collapse/consolidation movements.

Future performance of pavements constructed at the airport facility will be dependent upon several factors, including:

- Maintaining stable moisture content of the subgrade soils.
- Providing for a planned program of preventative maintenance.

The performance of all pavements can be enhanced by minimizing excess moisture which can reach the subgrade soils. The following recommendations could be considered:

- site grading at a minimum 2% grade away from the pavements;
- subgrade and the pavement surface have a minimum ¼ inch per foot slope to promote proper surface drainage.
- consider appropriate edge drainage and pavement under drain systems,
- install pavement drainage surrounding areas anticipated for frequent wetting
- install joint sealant and seal cracks immediately,
- compaction of any utility trenches for landscaped area to the same criteria as the pavement subgrade.
- seal all landscaped areas in, or adjacent to pavements to minimize or prevent moisture migration to subgrade soils;

8.0 GENERAL COMMENTS

Terracon should be retained to provide observation and testing services during grading, excavation, pavement construction and other earth-related construction phases of the project.

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, express or implied, are intended or made. Site safety,

excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

We have appreciated being of service to you in the geotechnical field and laboratory testing phase of this project. If you have any questions concerning this letter, test results, and consulting services, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

Sam G. Zsiga
Staff Engineer

MICHAEL E. ANDERSON
NEW MEXICO
12132
PROFESSIONAL ENGINEER

Michael E. Anderson, P.E.
Principal

Enclosures: Appendix A
- Site Location Map
- Exploration Location Plan
- Boring Logs
- General Notes
- Unified Soil Classification System

Appendix B
- Laboratory Test Results

APPENDIX A

FIELD EXPLORATION

SITE LOCATION

Taos Regional Airport ■ Taos, NM

June 8, 2018 ■ Terracon Project No. 66185006

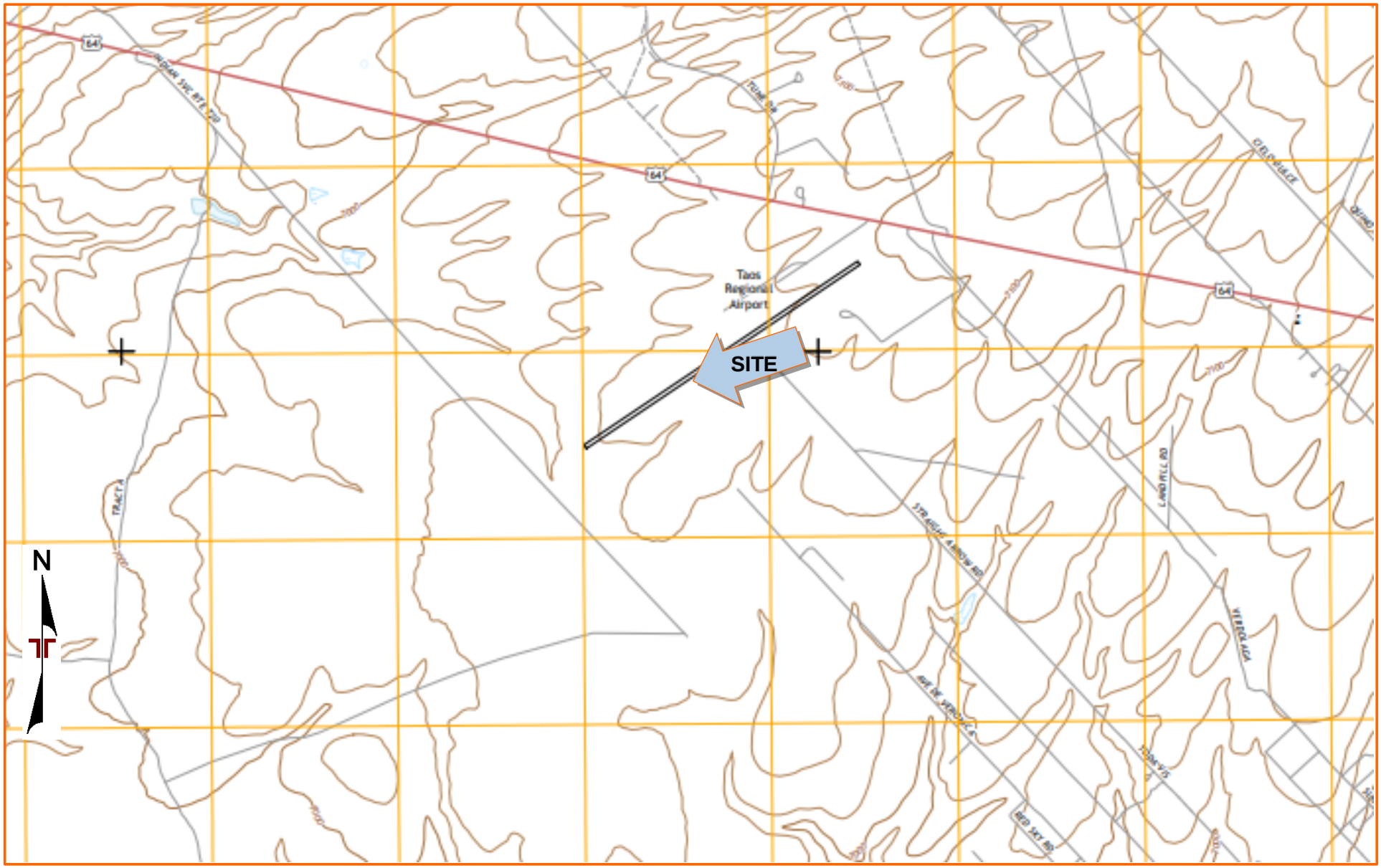


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY QUADRANGLES INCLUDE: LOS CORDOVAS, NM (1/1/1964).

EXPLORATION PLAN

Taos Regional Airport ■ Taos, NM

June 8, 2018 ■ Terracon Project No. 66185006

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

BORING LOG NO. B-01

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4554° Longitude: -105.6786°

Station: Cross Taxiway Station No. 10+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.2		**ASPHALT - 2"**											
0.3		**AGGREGATE BASE COURSE - 1.5"**											
1.8		**SELECT FILL - 18"**											
		SANDY LEAN CLAY/FAT CLAY (CL/CH), brown, medium stiff				3-2-4 N=6				22			66
4.0		**FAT CLAY (CH)**, brown to white, stiff				4-6-6 N=12				25			71
5.0		**CLAYEY SAND (SC)**, brown, medium dense	5			29				23	85		23
6.0		***Boring Terminated at 6 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-04-2018 | Boring Completed: 05-04-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-3

BORING LOG NO. B-02

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4558° Longitude: -105.6785°

Station: 12+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.2		**ASPHALT - 2.5"**											
0.3		**AGGREGATE BASE COURSE - 1.5"**										38-25-13	32
1.8		**SELECT FILL - 18"**											
2.0		**SILTY SAND WITH GRAVEL (SM)**, brown				3-6-5 N=11				21			75
3.5		**LEAN TO FAT CLAY (CL/CH)**, trace gravel, brown to tan, stiff											
5.0		**SANDY LEAN CLAY (CL)**, brown to white, medium stiff	5			3-2-4 N=6				23			50
9.0		**CLAYEY SAND (SC)**, brown, loose				11				31	71		44
13.0		**SANDY SILT (ML)**, white, hard	10			14-22-23 N=45				13			
15.0		**SILTY SAND (SM)**, brown	15										
		Boring Terminated at 15 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-04-2018 | Boring Completed: 05-04-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-4

BORING LOG NO. B-03

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4558° Longitude: -105.6777°

Station: Cross Taxiway Station No. 14+00

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	0.2 **ASPHALT - 2"**											
	0.3 **AGGREGATE BASE COURSE - 1.5"**											
	1.8 **SELECT FILL - 18"**											
	LEAN TO FAT CLAY (CL/CH), brown to white, medium stiff				2-3-4 N=7				24			82
	3.5											
	4.0 **SANDY LEAN CLAY (CL)**, brown, stiff				14				25	90		62
	SILTY SAND (SM), white, medium dense	5										
					4-5-11 N=16				32			37
	6.5											
	Boring Terminated at 6.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-04-2018 | Boring Completed: 05-04-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-5

BORING LOG NO. B-04

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4561° Longitude: -105.6779°

Station: 14+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.2		**ASPHALT - 2"**											
0.3		**AGGREGATE BASE COURSE - 1.5"**											
1.8		**SELECT FILL - 18"**											
		LEAN CLAY/FAT CLAY (CL/CH), brown, stiff				4-5-8 N=13				19			69
3.5													
		LEAN CLAY WITH SAND (CL), brown, stiff				4-6-8 N=14				21			77
4.5			5										
		CLAYEY SAND (SC), trace gravel, brown to tan, medium dense				26				26			48
6.0		***Boring Terminated at 6 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-04-2018 | Boring Completed: 05-04-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-6

BORING LOG NO. B-05

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2
Latitude: 36.4564° Longitude: -105.6773°
Station: 16+00

DEPTH	GRAPHIC LOG	DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.3		**ASPHALT - 3"**											
0.4		**AGGREGATE BASE COURSE - 1.5"**											
1.9		**SELECT FILL - 18"**											
		SILTY SAND (SM), trace clay, brown, medium dense			X	10-7-5 N=12				5			10
3.5		**LEAN CLAY (CL)**, brown, very stiff				18				20	98		73
5.0		**SILTY SAND (SM)**, white, very dense	5		X	11-23-33 N=56				22			32
			10		X	26-50				16			
15.0		***Boring Terminated at 15 Feet***	15										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018
Drill Rig: CME 75 | Driller: EDI
Project No.: 66185006 | Exhibit: A-7

BORING LOG NO. B-06

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4567° Longitude: -105.6768°

Station: 18+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.2		**ASPHALT - 2.5"**											
0.3		**AGGREGATE BASE COURSE - 1.5"**											
1.8		**SELECT FILL - 18"**											
3.0		**SANDY LEAN CLAY WITH GRAVEL (CL)**, brown, medium stiff				6-4-4 N=8				17			62
5.0		**LEAN TO FAT CLAY (CL/CH)**, trace gravel, brown, medium stiff	5			3-4-3 N=7				19			77
6.0		**CLAYEY GRAVEL WITH SAND (GC)**, brown, very loose				6				13		50-18-32	44
		Boring Terminated at 6 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-8

BORING LOG NO. B-07

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.457° Longitude: -105.6762°

Station: 20+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.2		**ASPHALT - 2"**											
0.3		**AGGREGATE BASE COURSE - 2"**											
1.3		**SELECT FILL - 12"**											
		SANDY LEAN CLAY WITH GRAVEL (CL), brown, stiff				12				21	97		70
						6-7-7 N=14				25			67
			5			3-4-7 N=11				25			57
9.0													
		CLAYEY GRAVEL (GC), brown, dense											
			10			2-15-24 N=39				8			
15.0			15										
		Boring Terminated at 15 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-9

BORING LOG NO. B-08

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4573° Longitude: -105.6756°

Station: 22+00

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	0.3 **ASPHALT - 3"**											
	0.4 **AGGREGATE BASE COURSE - 2"**											
	1.4 **SELECT FILL - 12"**											
	CLAYEY SAND WITH GRAVEL (SC), brown, medium dense			X	13-7-5 N=12				10			37
	3.0 **LEAN CLAY/FAT CLAY (CL/CH)**, brown to light brown, soft to stiff			X	2-3-1 N=4				20			68
		5		X	11				23	78		75
	6.0 ***Boring Terminated at 6 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-10

BORING LOG NO. B-09

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4576° Longitude: -105.6751°

Station: 24+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.3		**ASPHALT - 3"**											
0.5		**AGGREGATE BASE COURSE - 3"**											
1.5		**SELECT FILL - 12"**											
		SILTY GRAVEL (GM), trace clay, light brown, medium dense			X	8-9-5 N=14				12			12
3.0		**LEAN TO FAT CLAY (CL/CH)**, brown to light brown, medium stiff to stiff			X	13				23	83		72
			5		X	2-3-6 N=9				28			87
			10		X	2-2-3 N=5				22			
11.5		**SILTY GRAVEL (GM)**, light brown											
15.0		***Boring Terminated at 15 Feet***	15										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-11

BORING LOG NO. B-10

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4579° Longitude: -105.6746°

Station: 26+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.3		**ASPHALT - 3.5"**											
0.5		**AGGREGATE BASE COURSE - 2.5"**											
1.5		**SELECT FILL - 12"**											
		SANDY LEAN CLAY (CL), with sand, medium brown, stiff				8-7-4 N=11				19			57
			5			3-4-4 N=8				21			56
						11				22	82		66
6.0		***Boring Terminated at 6 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-12

BORING LOG NO. B-11

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4582° Longitude: -105.6737°

Station: 28+00

DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.2	**ASPHALT - 2.5"**											
0.4	**AGGREGATE BASE COURSE - 2"**											
1.4	**SELECT FILL - 12"**											
	SILTY GRAVEL (GM), with clay, light brown, loose				8-4-4 N=8				12			36
3.0												
	SANDY FAT CLAY (CH), brown to tan, stiff				13				14	98		60
		5			2-3-7 N=10				18			71
9.0												
	SILTY GRAVEL (GM), light brown to medium brown, very dense	10			21-34-37 N=71				3			
15.0		15										
	Boring Terminated at 15 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-13

BORING LOG NO. B-12

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4581° Longitude: -105.6736°

Station: Cross Taxiway Station No. 28+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.3		**ASPHALT - 3.75"**											
		SELECT FILL - 18"											
1.8		**CLAYEY SAND WITH GRAVEL (SC)**, medium brown, loose to medium dense				2-3-4 N=7				6			17
4.0		**LEAN CLAY/FAT CLAY (CL/CH)**, brown to tan, very stiff				12				12	107		42
			5										
						3-6-9 N=15				20			75
6.5		***Boring Terminated at 6.5 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-14

BORING LOG NO. B-13

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4585° Longitude: -105.6734°

Station: 30+00

DEPTH	GRAPHIC LOG	DESCRIPTION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.3		**ASPHALT - 4"**										~~38-17-21~~	34
0.5		**AGGREGATE BASE COURSE - 2"**				13-13-13 N=26				8			23
1.5		**SELECT FILL - 12"**											
2.0		**CLAYEY GRAVEL WITH SAND (GC)**, brown, medium dense				21				31	84		76
		LEAN TO FAT CLAY (CL/CH), tan, very stiff	5			3-11-16 N=27				26			78
9.0		**SILTY GRAVEL (CH)**, trace cobbles, light brown, dense	10			9-19-14 N=33				5			13
15.0		***Boring Terminated at 15 Feet***	15										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-15

BORING LOG NO. B-14

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4588° Longitude: -105.6728°

Station: 32+00

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	0.3 **ASPHALT - 3"**											
	0.4 **AGGREGATE BASE COURSE - 2"**											
	1.3 **SELECT FILL - 11"**				18				5	110		10
	2.0 **SILTY GRAVEL (GM)**, brown, loose											
	LEAN TO FAT CLAY (CL/CH), tan, very stiff											
					5-10-12 N=22				29			76 55
		5			4-6-10 N=16				22			
	6.5 ***Boring Terminated at 6.5 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-16

BORING LOG NO. B-15

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4591° Longitude: -105.6722°

Station: 34+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.3		**ASPHALT - 3"**											
0.4		**AGGREGATE BASE COURSE - 1.5"**											
1.9		**SELECT FILL - 18"**											
2.0		**CLAYEY GRAVEL (GC)**, brown, stiff											
		CLAYEY SAND (SC), trace gravel, brown, medium dense			X	3-4-6 N=10				14			46
4.0		**LEAN CLAY WITH GRAVEL (CL)**, brown, soft to medium stiff			X	1-2-1 N=3				18			67
			5										
						9				12	91		47
9.0		**SILTY GRAVEL (GM)**, brown, very dense											
			10		X	20-24-50/5"				2			
15.0		***Boring Terminated at 15 Feet***	15										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-17

BORING LOG NO. B-16

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4594° Longitude: -105.6717°

Station: 36+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.3		**ASPHALT - 3"**											
0.5		**AGGREGATE BASE COURSE - 2.5"**											
2.0		**SELECT FILL - 18"**											
3.0		**LEAN CLAY/FAT CLAY (CL/CH)**, trace gravel, brown, stiff				2-3-6 N=9				23			90
4.0		**CLAYEY SAND WITH GRAVEL (SC)**, brown, loose											
		FAT CLAY (CH), brown, soft to medium stiff				13				14	97		40
			5										
6.5						1-2-2 N=4				20			
		Boring Terminated at 6.5 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 05-03-2018 | Boring Completed: 05-03-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-18

BORING LOG NO. B-17

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2
Latitude: 36.4597° Longitude: -105.6711°
Station: 38+00

DEPTH	GRAPHIC LOG	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.5	**ASPHALT - 6"**										
	ASPHALT TREATED BASE COARSE - 18"										
2.0											
	FAT CLAY (CH), trace gravel, red brown, loose			13				10	115		22
4.0											
	SANDY LEAN CLAY (CL), light brown, stiff			2-4-5 N=9				22			68
5				3-4-6 N=10				25			66
8.0											
	SILTY GRAVEL (GM), brown, very dense										
10				11-32-35 N=67				3			
15.0											
15	***Boring Terminated at 15 Feet***										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018
Drill Rig: CME 75 | Driller: EDI
Project No.: 66185006 | Exhibit: A-19

BORING LOG NO. B-18

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4601° Longitude: -105.6705°

Station: 40+00

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	0.7 **ASPHALT - 8"**											
	1.3 **ASPHALT TREATED BASE COARSE - 8"**											
	SANDY FAT CLAY WITH GRAVEL (CH), dark brown, stiff				6-5-7 N=12				18			61
	3.0 **CLAYEY SAND (SC)**, trace to with gravel, brown to dark brown, loose				18				9	105		26
		5			15-5-4 N=9				11			36
	6.5 ***Boring Terminated at 6.5 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-20

BORING LOG NO. B-19

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4604° Longitude: -105.67°

Station: 42+00

DEPTH	GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.7												
ASPHALT - 8"												
1.2												
ASPHALT TREATED BASE COARSE - 6"												
CLAYEY SAND WITH GRAVEL (SC), light brown, medium dense				X	20-10-7 N=17				11			28
3.5												
LEAN CLAY/FAT CLAY (CL/CH), brown, stiff to very stiff				X	6-7-8 N=15				20			51
		5		X	15				24	100		75
8.0												
SILTY GRAVEL (GM), light brown, medium dense												
		10		X	8-11-9 N=20				9			
12.0												
SILTY SAND (SM), trace gravel, brown												
15.0												
Boring Terminated at 15 Feet		15										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-21

BORING LOG NO. B-20

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4605° Longitude: -105.6693°

Station: Cross Taxiway Station No. 42+00

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	0.6 **ASPHALT - 7"**											
	0.9 **ASPHALT TREATED BASE COARSE - 4"**											
	LEAN CLAY (CL), trace gravel, brown, medium stiff to stiff				4-3-5 N=8				20			72
					11				18	98		71
	5.0											
	SANDY LEAN CLAY (CL), trace gravel, brown, medium stiff to stiff	5			3-4-4 N=8				20			66
	6.5 ***Boring Terminated at 6.5 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-22

BORING LOG NO. B-21

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4608° Longitude: -105.6691°

Station: 45+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.5		**ASPHALT - 6"**											
1.0		**ASPHALT TREATED BASE COARSE - 6.5"**											
		SANDY LEAN CLAY (CL), trace gravel, brown, medium stiff, some lean clay with sand lenses				4-2-3 N=5				14 21		49-20-29	69 75
4.0		**FAT CLAY (CH)**, trace gravel, brown, medium stiff to stiff				3-4-3 N=7				24			83
			5			10				18	104		90
9.0		**SILTY SAND WITH GRAVEL (SM)**, light brown, loose											
			10			3-2-3 N=5				6			
13.0		**SILTY GRAVEL (GM)**, light brown											
15.0		***Boring Terminated at 15 Feet***	15										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-23

BORING LOG NO. B-22

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4611° Longitude: -105.6686°

Station: 47+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.5		**ASPHALT - 6"**											
0.8		**ASPHALT TREATED BASE COARSE - 4"**											
		CLAYEY GRAVEL (GC), brown, loose				27-3-3 N=6				12			20
3.0		**LEAN CLAY/FAT CLAY (CL/CH)**, trace gravel, brown to tan, stiff				15				20	100		70
			5			3-4-7 N=11				18			59
9.0		**SILTY GRAVEL (GM)**, light brown, medium dense											
			10			3-7-4 N=11				3			
11.5		***Boring Terminated at 11.5 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-24

BORING LOG NO. B-23

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4614° Longitude: -105.668°

Station: 49+00

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.4		**ASPHALT - 5"**											
0.8		**ASPHALT TREATED BASE COARSE - 5"**											
1.0		**WELL GRADED GRAVEL WITH SAND (GW)**, brown											
		LEAN TO FAT CLAY (CL/CH), brown, medium stiff				7				26	95		83
4.0		**SANDY LEAN CLAY (CL)**, trace gravel, tan, medium stiff to stiff				2-2-2 N=4				21			
			5			3-5-6 N=11				22			57
9.0		**SILTY GRAVEL (GM)**, brown, very dense	10			14-38-50 N=88				7			67
13.0		**CLAYEY GRAVEL (GC)**, brown											
15.0		***Boring Terminated at 15 Feet***	15										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-25

BORING LOG NO. B-24

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4617° Longitude: -105.6675°

Station: 51+00

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
	0.4 **ASPHALT - 4.5"**											
	0.8 **ASPHALT TREATED BASE COARSE - 5"**											
	2.0 **CLAYEY SAND WITH GRAVEL (SC)**, light brown, loose				16-4-4 N=8				12			23
	3.0 **SILTY GRAVEL (GM)**, light brown, loose											
	SANDY LEAN CLAY (CL), trace gravel, light brown, loose				16				22	92		58
	5.0	5										
	CLAYEY SAND (SC), trace gravel, light brown, loose				2-3-4 N=7				21			49
	6.5 ***Boring Terminated at 6.5 Feet***											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-26

BORING LOG NO. B-25

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.462° Longitude: -105.6668°

Station: 53+00

DEPTH	GRAPHIC LOG		WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.3		**ASPHALT - 4"**										
0.5		**ASPHALT TREATED BASE COARSE - 2.5"**										
		WELL GRADED GRAVEL WITH SAND (GW), medium brown, dense			33				9	103		3
3.0												
4.0		**SANDY LEAN TO FAT CLAY (CL/CH)**, brown, soft to medium stiff			1-2-2 N=4				19			60
		LEAN CLAY WITH SAND (CL), brown to tan, soft to medium stiff			2-3-5 N=8				22			72
9.0												
		SILTY GRAVEL (GM), brown to light brown, dense			12-21-24 N=45				5			
15.0		***Boring Terminated at 15 Feet***										

5 10 15

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-27-2018 | Boring Completed: 04-27-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-27

BORING LOG NO. B-26

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4623° Longitude: -105.6664°

Station: 55+00

DEPTH	GRAPHIC LOG	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.5	**ASPHALT - 6"**										
1.0	**ASPHALT TREATED BASE COARSE - 6"**										
1.3	**CONCRETE - 4"**										
2.0	**LEAN TO FAT CLAY (CL/CH)**, brown, stiff		X	2-4-5 N=9				21			77
	LEAN CLAY WITH SAND (CL), brown, medium stiff to stiff		X	2-3-5 N=8				21			68
5			X	9				24	90		74
6.0	***Boring Terminated at 6 Feet***										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-26-2018 | Boring Completed: 04-26-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-28

BORING LOG NO. B-27

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2

Latitude: 36.4626° Longitude: -105.6658°

Station: 57+00

DEPTH	GRAPHIC LOG	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.7	**ASPHALT - 8"**										
1.0	**ASPHALT TREATED BASE COARSE - 4"**										
2.0	**CLAYEY SAND WITH GRAVEL (SC)**, light brown to brown, loose			8				25	98		82
	LEAN CLAY/FAT CLAY (CL/CH), brown, stiff										
				3-6-7 N=13				25			79
5				3-5-6 N=11				24			71
9.0	**SILTY GRAVEL (GM)**, trace clay, brown, very dense										
10				17-27-28 N=55				3			
15.0	***Boring Terminated at 15 Feet***										
15											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-26-2018 | Boring Completed: 04-26-2018

Drill Rig: CME 75 | Driller: EDI

Project No.: 66185006 | Exhibit: A-29

BORING LOG NO. B-28

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2
Latitude: 36.463° Longitude: -105.6652°
Station: 59+00

DEPTH	GRAPHIC LOG	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.6	**ASPHALT - 7"**										
1.3	**ASPHALT TREATED BASE COARSE - 8"**										
	LEAN CLAY (CL), brown, medium stiff			3-4-5 N=9				22			77
4.0				11				23	99		84
	LEAN TO FAT CLAY (CL/CH), brown to tan, stiff			3-3-7 N=10				24			78
8.0				5-6-7 N=13				26			
	Boring Terminated at 8 Feet										

5

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-26-2018 | Boring Completed: 04-26-2018
Drill Rig: CME 75 | Driller: EDI
Project No.: 66185006 | Exhibit: A-30

BORING LOG NO. B-29

PROJECT: Taos Regional Airport

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

SITE: Taos Regional Airport
Taos, NM

LOCATION See Exhibit A-2
Latitude: 36.463° Longitude: -105.6646°
Station: Cross Taxiway Station No. 59+00

DEPTH	GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	STRENGTH TEST: TEST TYPE	STRENGTH TEST: COMPRESSIVE STRENGTH (tsf)	STRENGTH TEST: STRAIN (%)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS: LL-PL-PI	PERCENT FINES
0.6												
ASPHALT - 7"												
1.3												
ASPHALT TREATED BASE COARSE - 8"												
SANDY FAT CLAY (CH), trace gravel, brown, stiff					7-9-5 N=14				18 23		56-24-32	59 60
4.0					18				26	86		70
LEAN CLAY/FAT CLAY (CL/CH), trace gravel, tan, stiff to very stiff		5			6-9-9 N=18				29			59
6.0												
CLAYEY SAND (SC), tan, loose					6-6-3 N=9				26			
8.0												
Boring Terminated at 8 Feet												

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
Hollow Stem Auger

Abandonment Method:
Borings backfilled with soil cuttings upon completion.
Sealed with bituminous cold patch at surface.

See Exhibit A-3 for description of field procedures.
See Appendix B for description of laboratory procedures and additional data (if any).
See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

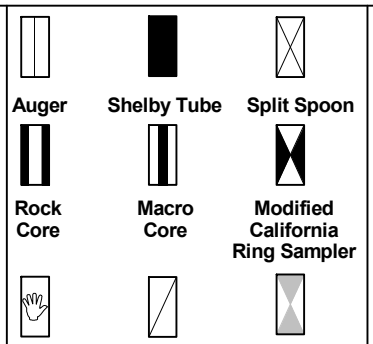
Terracon
4905 Hawkins St NE
Albuquerque, NM

Boring Started: 04-26-2018 | Boring Completed: 04-26-2018
Drill Rig: CME 75 | Driller: EDI
Project No.: 66185006 | Exhibit: A-31

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING



WATER LEVEL

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

FIELD TESTS

(HP)	Hand Penetrometer
(T)	Torvane
(b/f)	Standard Penetration Test (blows per foot)
N	N value
(PID)	Photo-Ionization Detector
(OVA)	Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance			
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Ring Sampler Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength, Qu, psf**	**Standard Penetration or N-Value Blows/Ft.**	**Ring Sampler Blows/Ft.**
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

Terracon

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or $1 > Cc > 3$ [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F,G,H]
			Fines classify as CL or CH		GC	Clayey gravel [F,G,H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or $1 > Cc > 3$ [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G,H,I]
			Fines classify as CL or CH		SC	Clayey sand [G,H,I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A" line [J]		CL	Lean clay [K,L,M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K,L,M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K,L,M,N]
			Liquid limit - not dried			Organic silt [K,L,M,O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K,L,M]
			PI plots below "A" line		MH	Elastic Silt [K,L,M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K,L,M,P]
			Liquid limit - not dried			Organic silt [K,L,M,Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

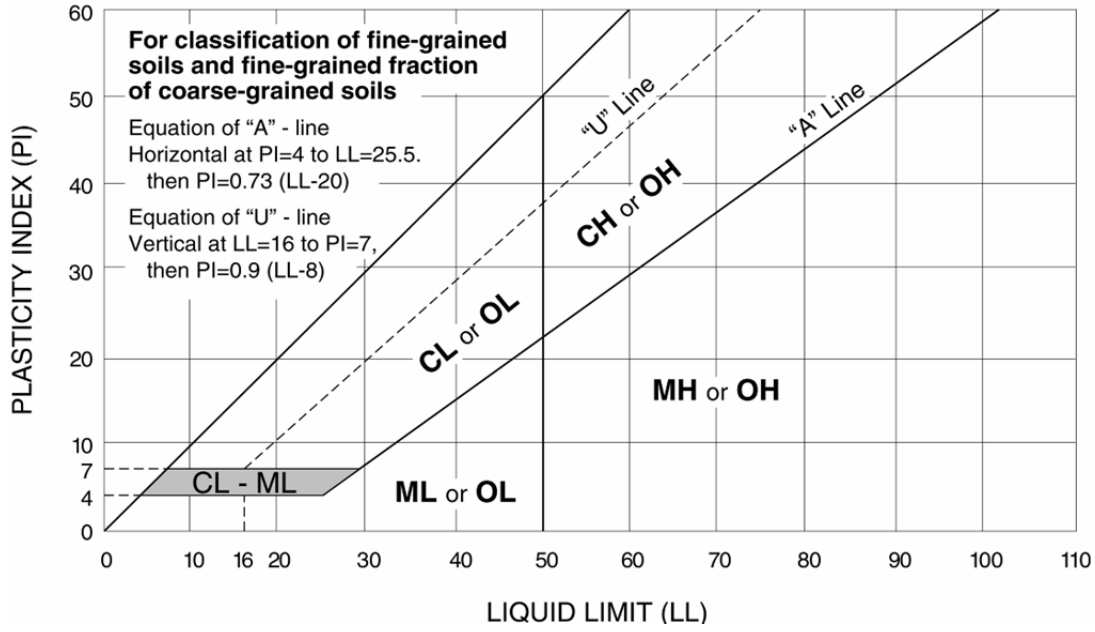
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



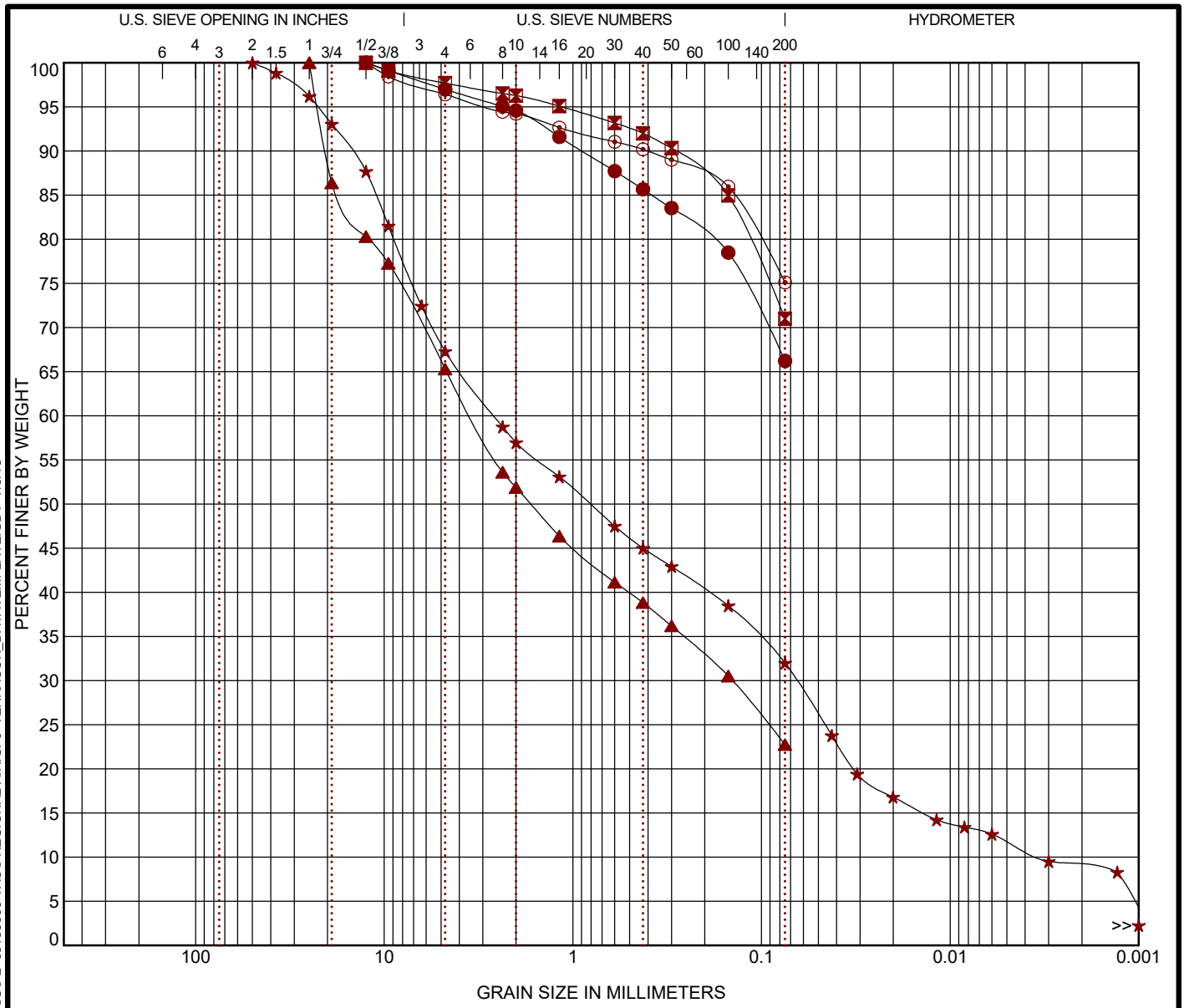
Terracon

APPENDIX B

LABORATORY TESTING

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



	Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-01	1.5 - 3		22					
⊠	B-01	3.5 - 5		25					
▲	B-01	5 - 6	FAT CLAY(CH)	23					
★	B-02	0 - 2	SILTY SAND with GRAVEL(SM)		38	25	13	0.49	778.93
⊙	B-02	1.5 - 3		21					

	Boring ID	Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-01	1.5 - 3	12.5				3.0	30.8		66.2	
⊠	B-01	3.5 - 5	12.5				2.3	26.7		71.0	
▲	B-01	5 - 6	25	3.46	0.143		34.7	42.5		22.7	
★	B-02	0 - 2	50	2.612	0.065	0.003	32.7	35.3	20.2		11.8
⊙	B-02	1.5 - 3	12.5				3.6	21.3		75.1	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
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PROJECT NUMBER: 66185006

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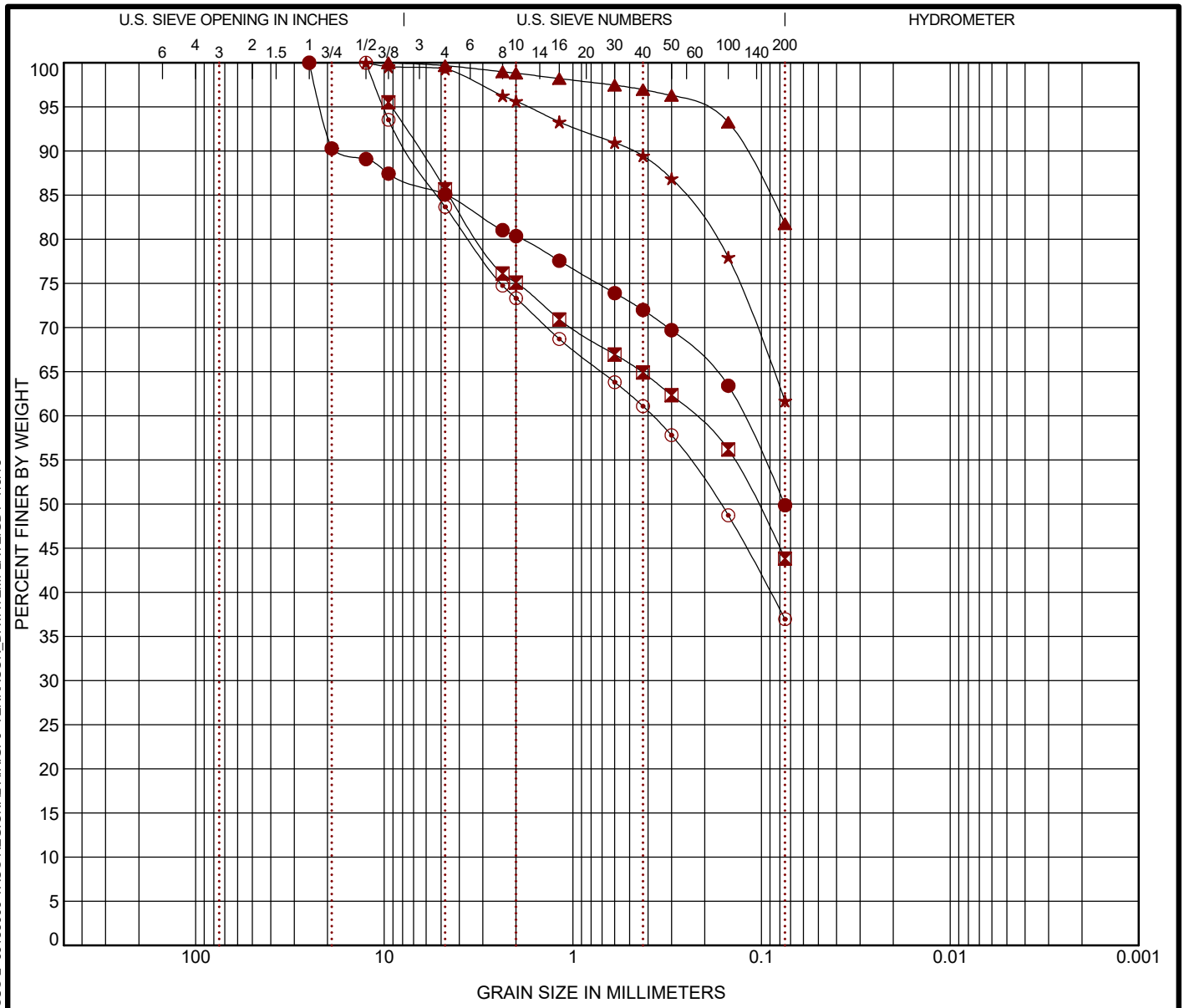
Albuquerque, NM

EXHIBIT: B-2

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-02	3.5 - 5		23					
⊠	B-02	5 - 6	SANDY LEAN CLAY(CL)	31					
▲	B-03	1.5 - 3		24					
★	B-03	3.5 - 4.5		25					
⊙	B-03	5 - 6.5		32					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-02	3.5 - 5	25	0.126			14.9	35.2		49.9	
⊠	B-02	5 - 6	9.5	0.23			9.9	41.8		43.8	
▲	B-03	1.5 - 3	9.5				0.3	17.9		81.8	
★	B-03	3.5 - 4.5	12.5				0.7	37.6		61.7	
⊙	B-03	5 - 6.5	12.5	0.379			16.3	46.7		37.0	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

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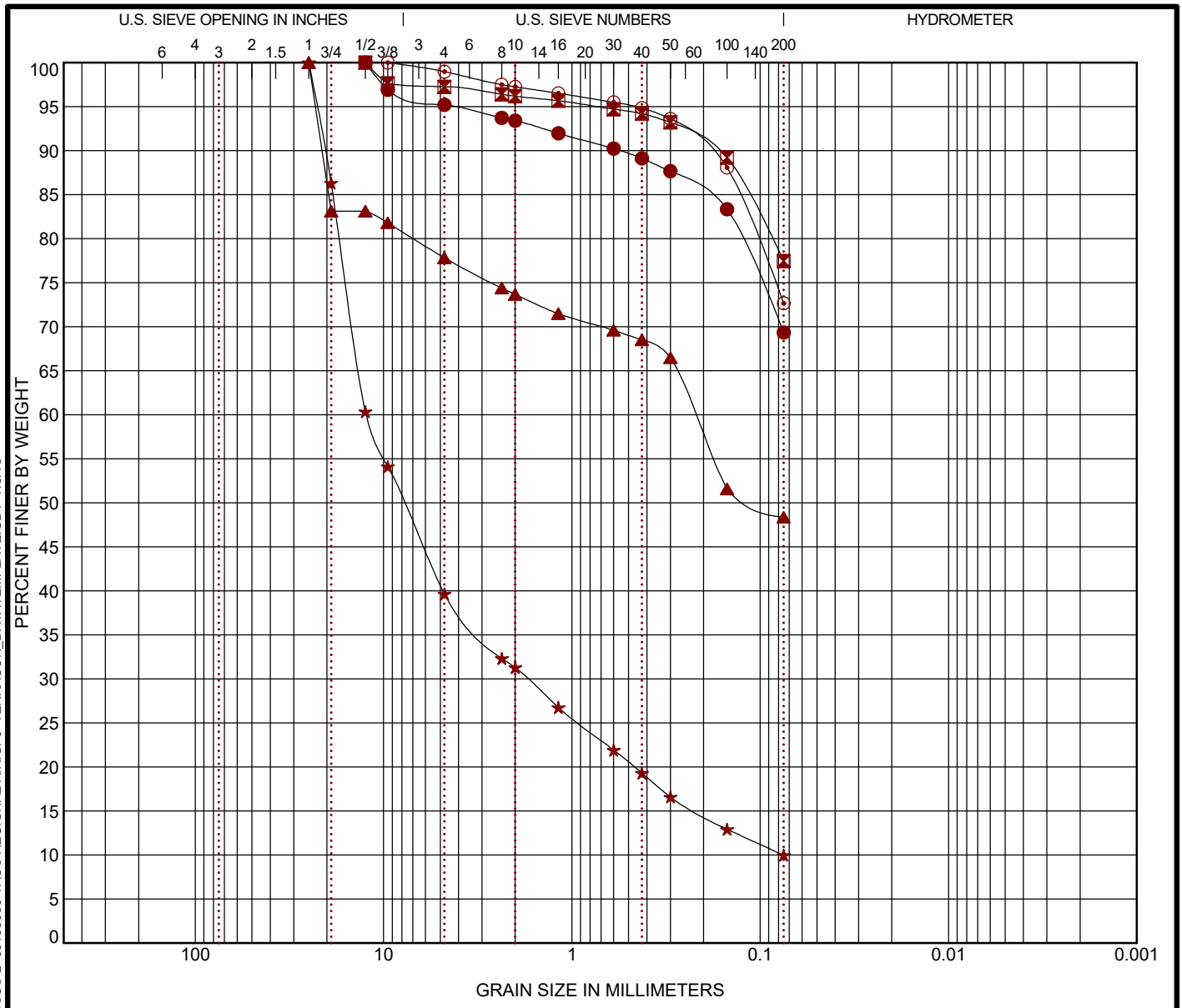
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-3

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-04	1.5 - 3		19					
⊠	B-04	3.5 - 5		21					
▲	B-04	5 - 6	CLAYEY SAND(SC)	26					
★	B-05	1.5 - 3		5				3.19	163.17
⊙	B-05	3.5 - 4.5	LEAN CLAY(CL)	20					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-04	1.5 - 3	12.5				4.8	25.9		69.3	
⊠	B-04	3.5 - 5	12.5				2.7	19.8		77.5	
▲	B-04	5 - 6	25	0.222			22.2	29.5		48.4	
★	B-05	1.5 - 3	25	12.306	1.721	0.075	60.4	29.7		10.0	
⊙	B-05	3.5 - 4.5	9.5				1.0	26.3		72.7	

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SITE: Taos Regional Airport
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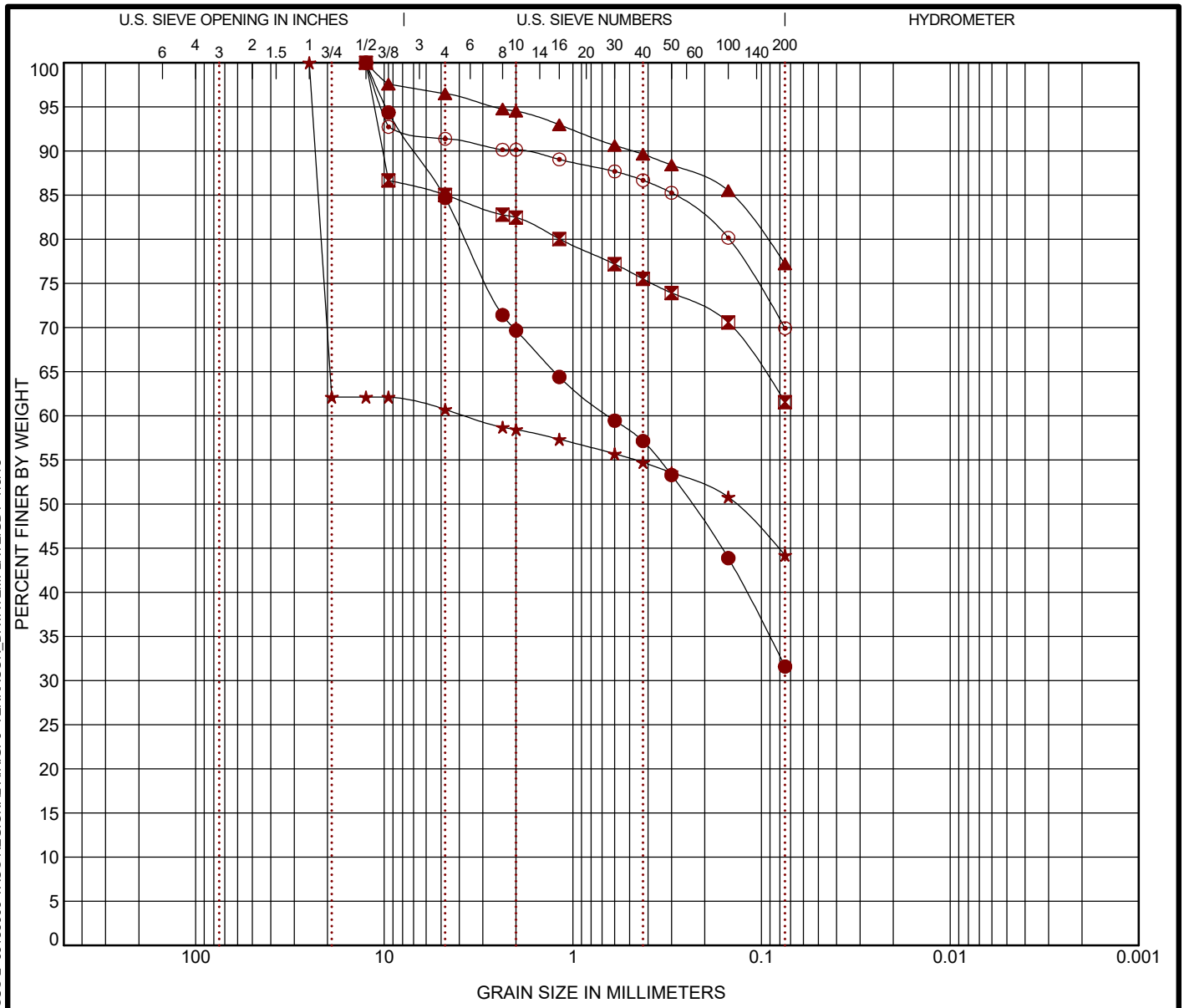
EXHIBIT: B-4

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-05	5 - 6.5		22					
⊠	B-06	1.5 - 3		17					
▲	B-06	3.5 - 5		19					
★	B-06	5 - 6	CLAYEY GRAVEL with SAND (GC)	13	50	18	32		
⊙	B-07	1.5 - 2.5	SANDY LEAN CLAY with GRAVEL(CL)	21					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-05	5 - 6.5	12.5	0.647			15.3	53.1		31.6	
⊠	B-06	1.5 - 3	12.5				15.0	23.5		61.6	
▲	B-06	3.5 - 5	12.5				3.5	19.3		77.2	
★	B-06	5 - 6	25	3.695			39.3	16.5		44.2	
⊙	B-07	1.5 - 2.5	12.5				8.6	21.5		69.9	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

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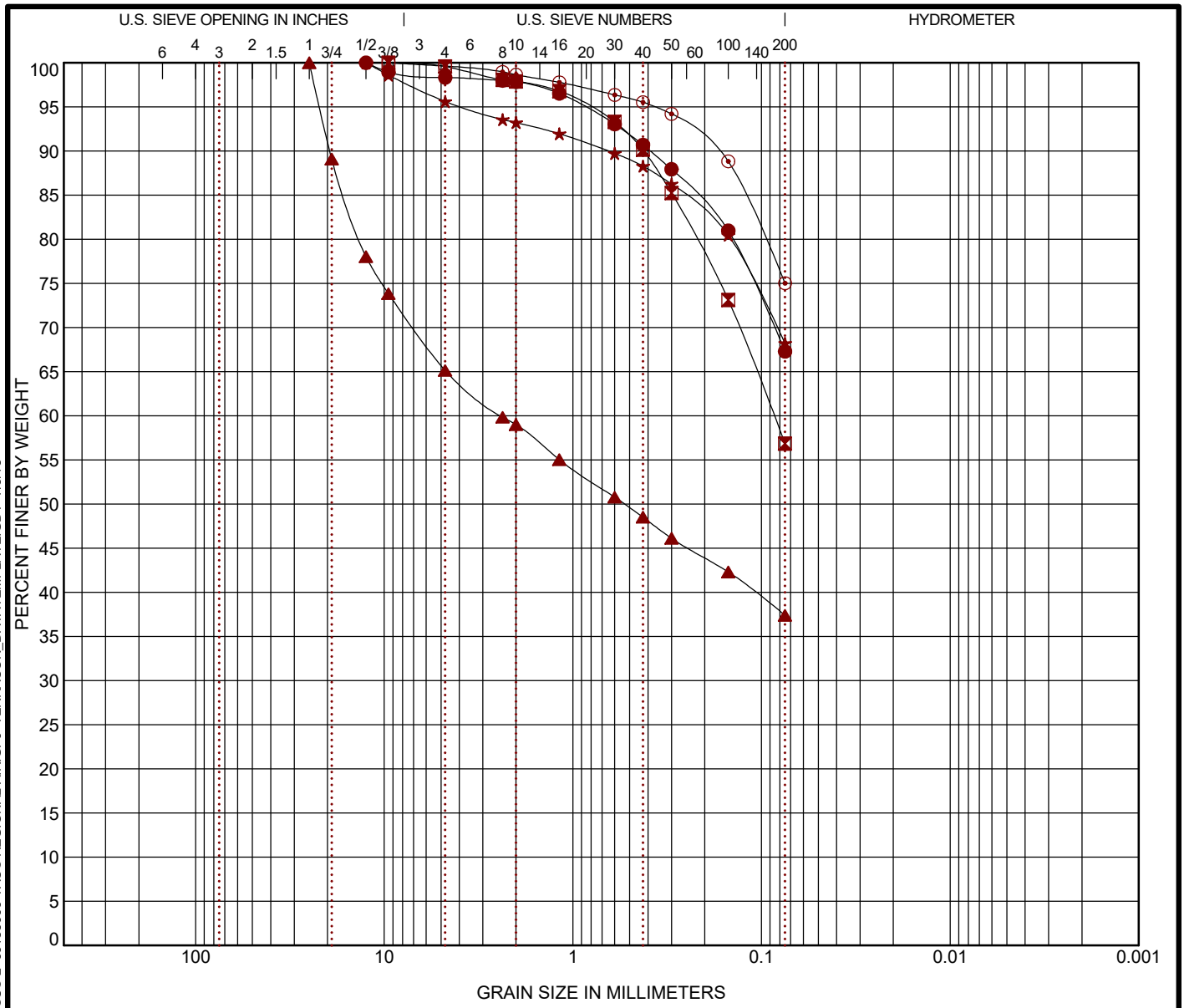
Albuquerque, NM

EXHIBIT: B-5

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
B-07	3.5 - 5		25					
B-07	5 - 6.5		25					
B-08	1.5 - 3		10					
B-08	3.5 - 5		20					
B-08	5 - 6	LEAN CLAY/FAT CLAY(CL/CH)	23					

Boring ID	Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
B-07	3.5 - 5	12.5				1.7	31.0		67.3	
B-07	5 - 6.5	9.5	0.086			0.4	42.7		56.9	
B-08	1.5 - 3	25	2.414			34.9	27.7		37.4	
B-08	3.5 - 5	12.5				4.4	27.4		68.2	
B-08	5 - 6	9.5				0.4	24.6		75.0	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
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Terracon
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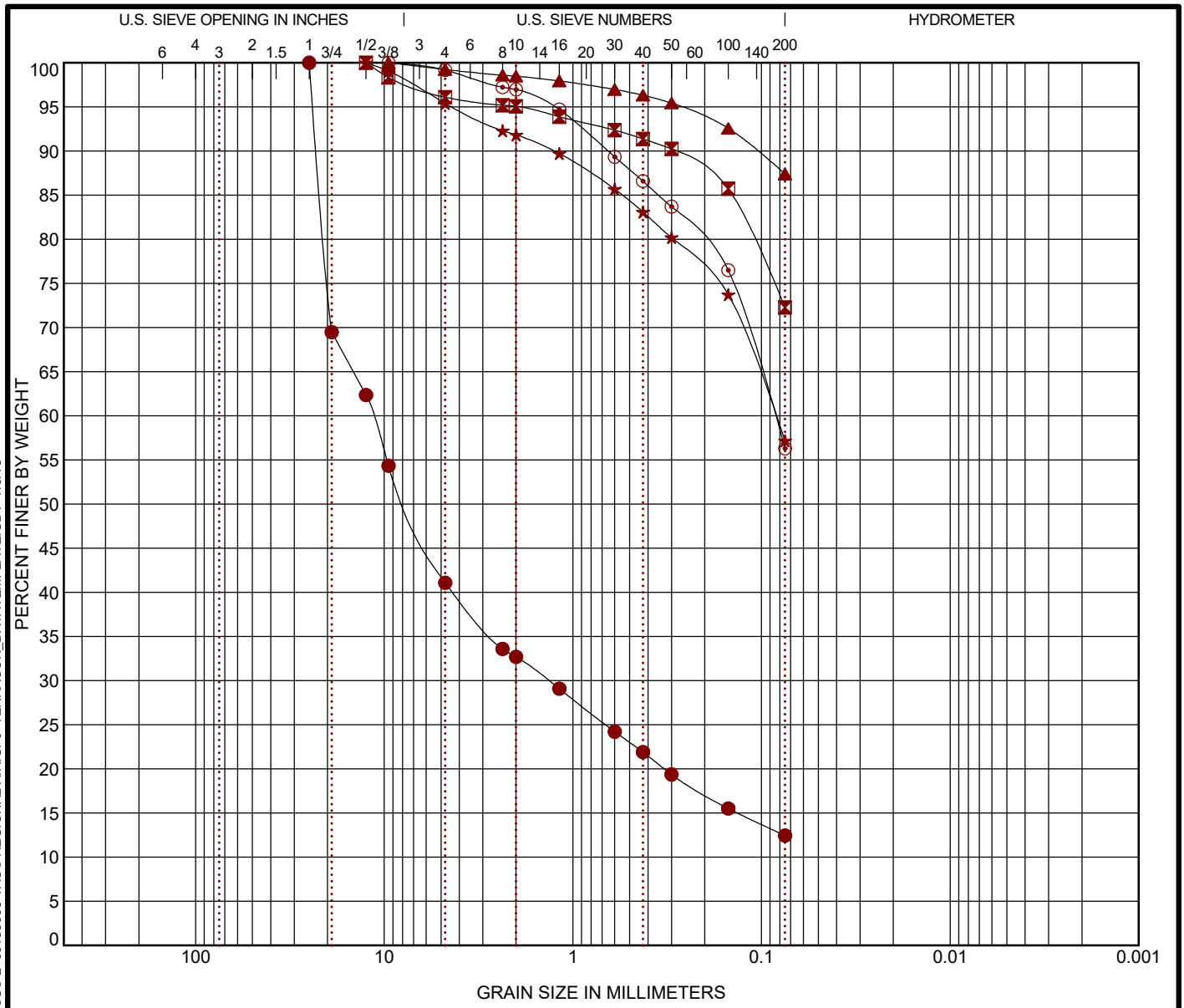
EXHIBIT: B-6

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-09	1.5 - 3		12				3.66	267.30
⊠	B-09	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)	23					
▲	B-09	5 - 6.5		28					
★	B-10	1 - 2.5		19					
⊙	B-10	3.5 - 5		21					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-09	1.5 - 3	25	11.533	1.35		58.9	28.6		12.4	
⊠	B-09	3.5 - 4.5	12.5				3.9	23.8		72.3	
▲	B-09	5 - 6.5	9.5				0.8	11.8		87.4	
★	B-10	1 - 2.5	12.5	0.084			4.6	38.2		57.2	
⊙	B-10	3.5 - 5	9.5	0.085			0.8	42.9		56.3	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
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Terracon
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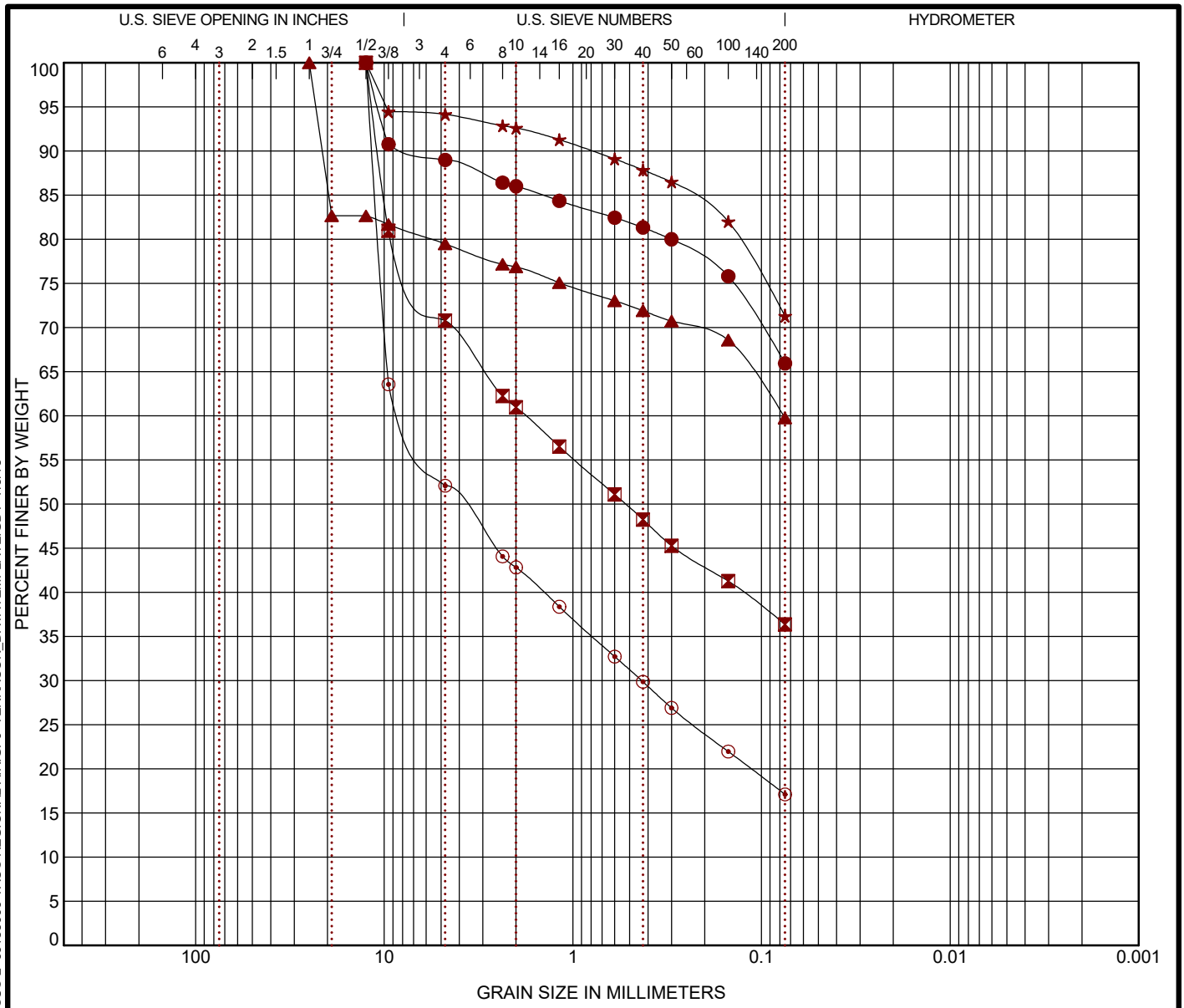
EXHIBIT: B-7

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
B-10	5 - 6	SANDY LEAN CLAY(CL)	22					
B-11	1 - 2.5		12					
B-11	3.5 - 4.5	SANDY FAT CLAY(CH)	14					
B-11	5 - 6.5		18					
B-12	1 - 2.5		6					

Boring ID	Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
B-10	5 - 6	12.5				11.0	23.0		65.9	
B-11	1 - 2.5	12.5	1.785			29.2	34.4		36.4	
B-11	3.5 - 4.5	25	0.077			20.5	19.7		59.7	
B-11	5 - 6.5	12.5				5.8	22.9		71.3	
B-12	1 - 2.5	12.5	7.663	0.432		47.9	35.0		17.1	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
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Terracon
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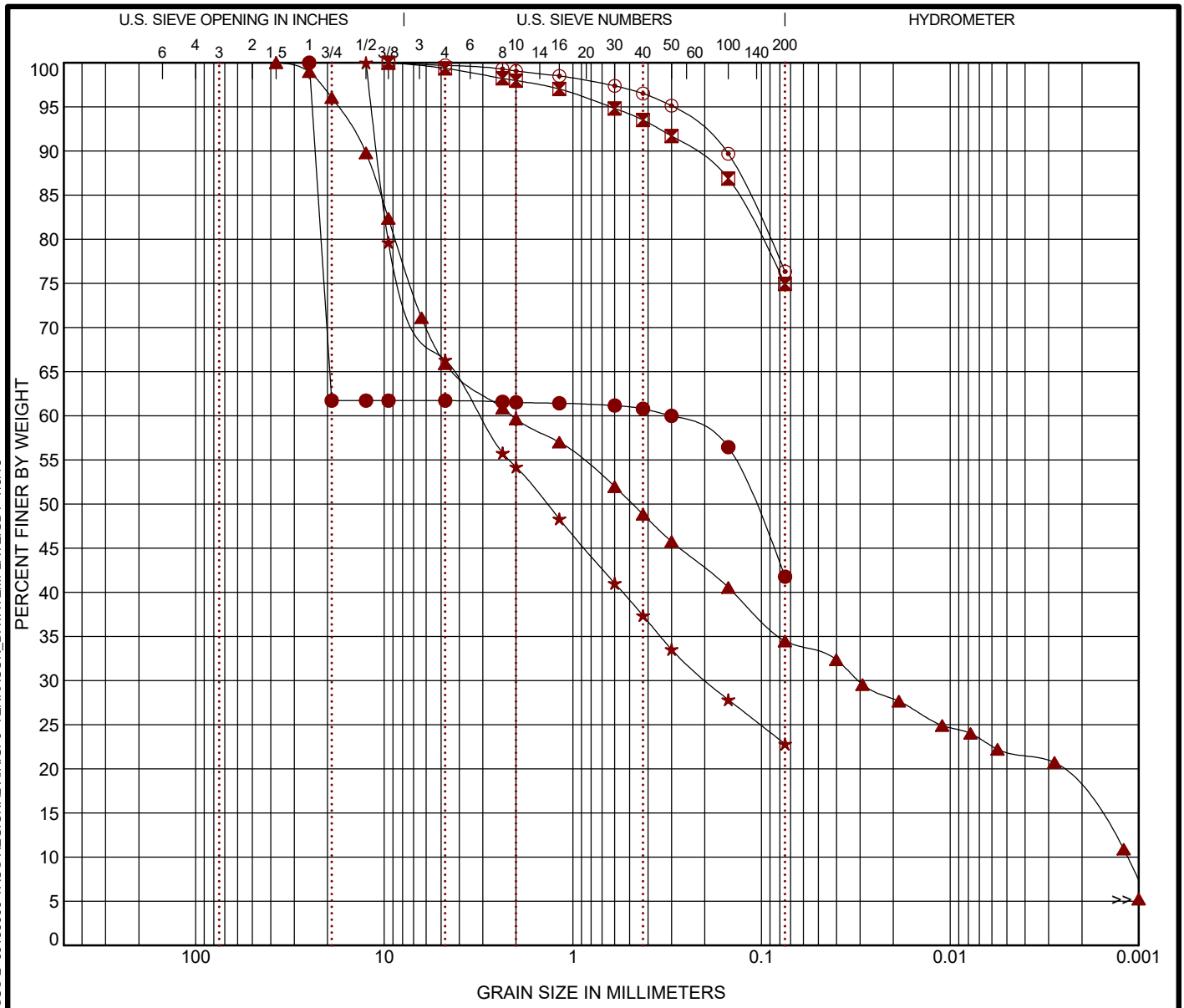
EXHIBIT: B-8

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
B-12	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)	12					
B-12	5 - 6.5		20					
B-13	0 - 1	CLAYEY GRAVEL with SAND(GC)		38	17	21	0.39	1833.12
B-13	0.5 - 2		8					
B-13	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)	31					

Boring ID	Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
B-12	3.5 - 4.5	25	0.301			38.3	20.0		41.8	
B-12	5 - 6.5	9.5				0.6	24.4		74.9	
B-13	0 - 1	37.5	2.101	0.031	0.001	34.1	31.4	12.5		22.0
B-13	0.5 - 2	12.5	3.122	0.195		33.7	43.5		22.8	
B-13	3.5 - 4.5	9.5				0.3	23.4		76.3	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
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PROJECT NUMBER: 66185006

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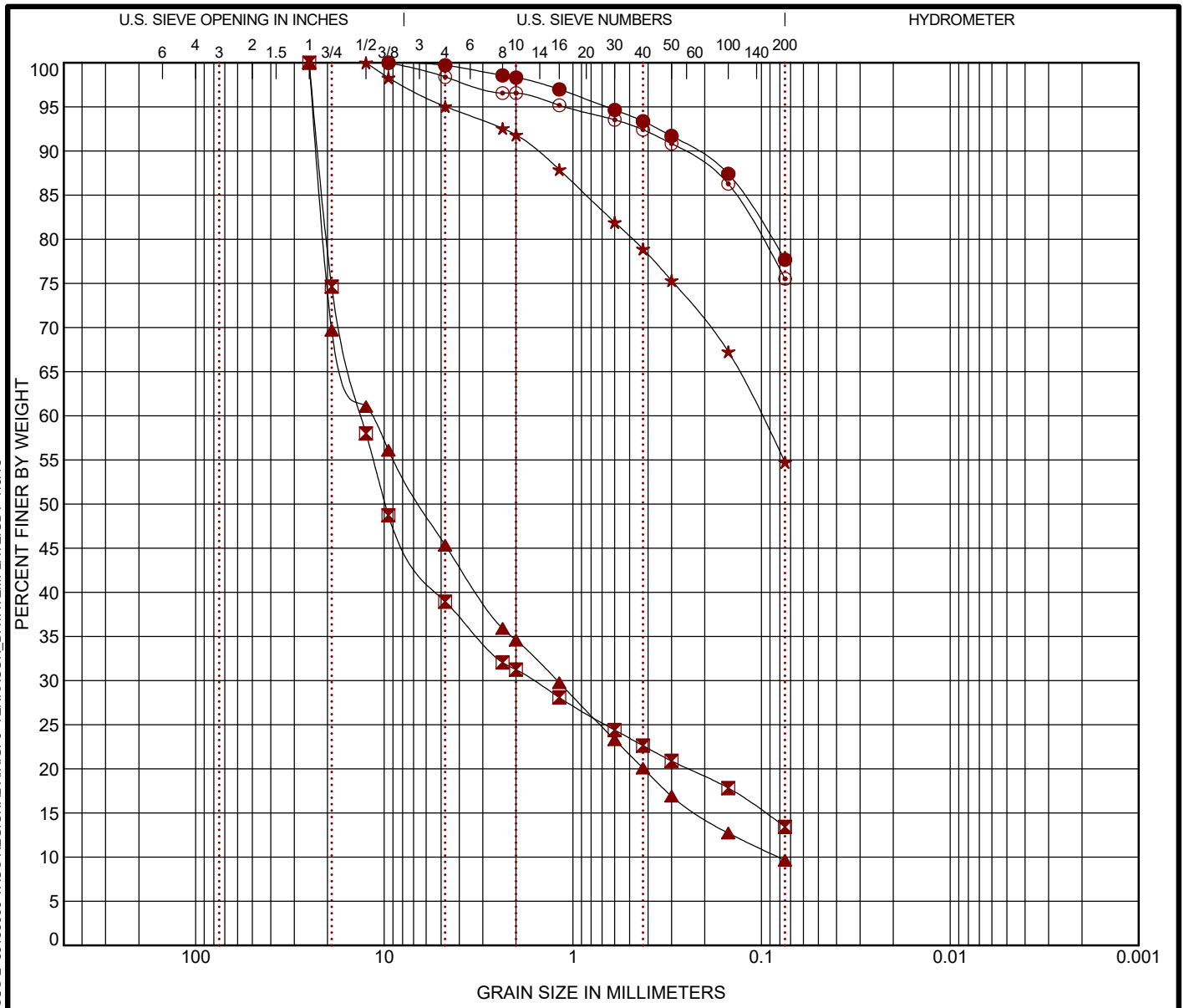
EXHIBIT: B-9

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-13	5 - 6.5		26					
⊠	B-13	10 - 11.5		5					
▲	B-14	1 - 2		5				1.53	145.03
★	B-14	3.5 - 5		29					
⊙	B-14	4							

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-13	5 - 6.5	9.5				0.3	22.0		77.7	
⊠	B-13	10 - 11.5	25	13.143	1.626		61.1	25.5		13.4	
▲	B-14	1 - 2	25	11.798	1.212	0.081	54.7	35.7		9.6	
★	B-14	3.5 - 5	12.5	0.1			5.0	40.3		54.7	
⊙	B-14	4	9.5				1.6	22.9		75.5	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

PROJECT NUMBER: 66185006

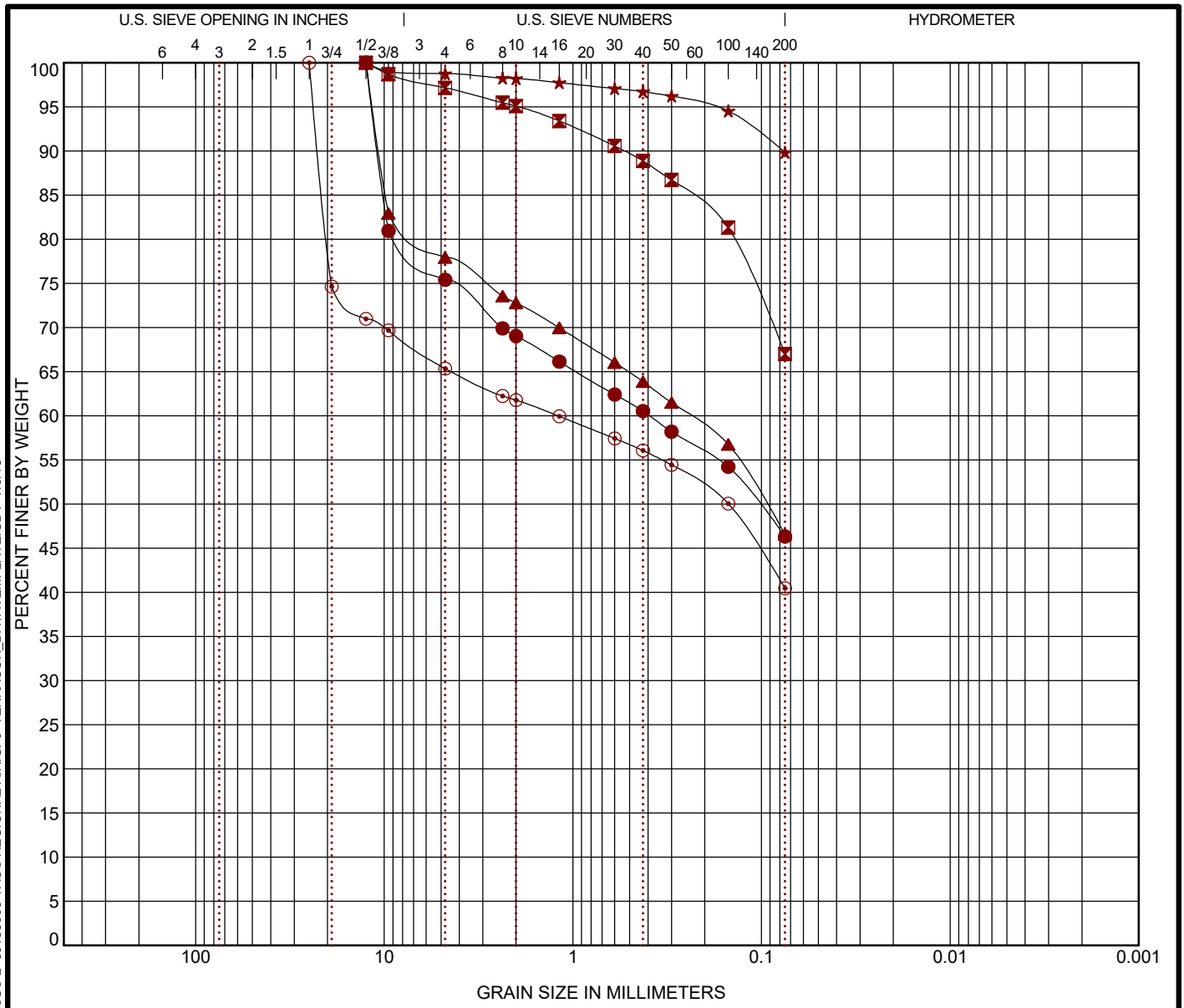
CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-10

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 66185006 TAOS REGIONAL AIR.GPJ TERRACON_DATATEMPLATE.GDT 7/3/18

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-15	1.5 - 3		14					
⊠	B-15	3.5 - 5		18					
▲	B-15	6 - 7	LEAN CLAY with GRAVEL(CL)	12					
★	B-16	1.5 - 3		23					
⊙	B-16	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)	14					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-15	1.5 - 3	12.5	0.392			24.6	29.1		46.3	
⊠	B-15	3.5 - 5	12.5				2.8	30.2		67.0	
▲	B-15	6 - 7	12.5	0.241			22.1	31.4		46.6	
★	B-16	1.5 - 3	12.5				1.2	8.9		89.8	
⊙	B-16	3.5 - 4.5	25	1.201			34.7	24.9		40.5	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

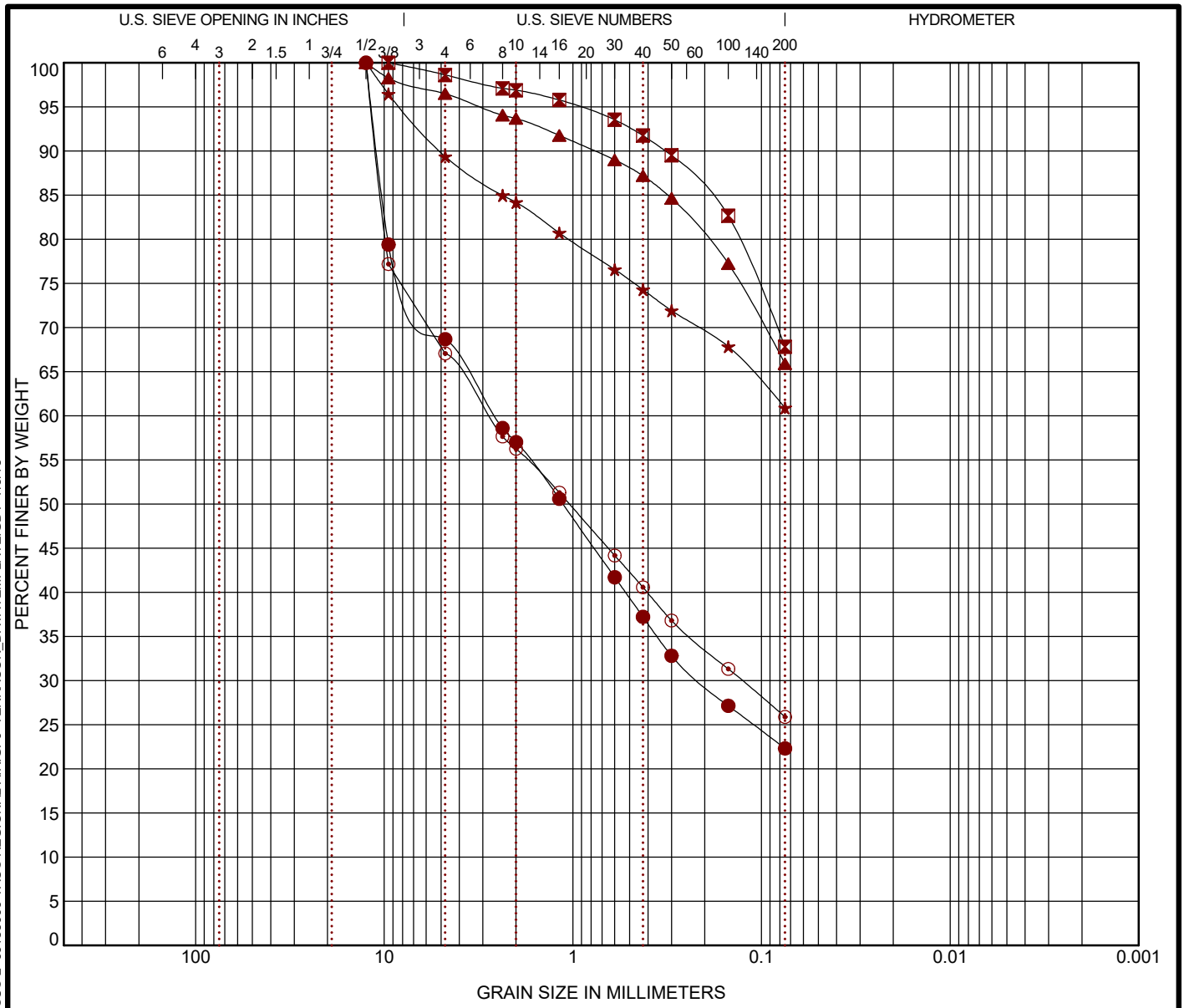
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-11

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-17	1.5 - 2.5	FAT CLAY(CH)	10					
⊠	B-17	3.5 - 5		22					
▲	B-17	5 - 6.5		25					
★	B-18	1.5 - 3		18					
⊙	B-18	3.5 - 4.5	CLAYEY SAND(SC)	9					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-17	1.5 - 2.5	12.5	2.6	0.213		31.3	46.4		22.3	
⊠	B-17	3.5 - 5	9.5				1.4	30.8		67.8	
▲	B-17	5 - 6.5	12.5				3.5	30.6		65.9	
★	B-18	1.5 - 3	12.5				10.6	28.5		60.9	
⊙	B-18	3.5 - 4.5	12.5	2.809	0.127		32.9	41.2		25.9	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

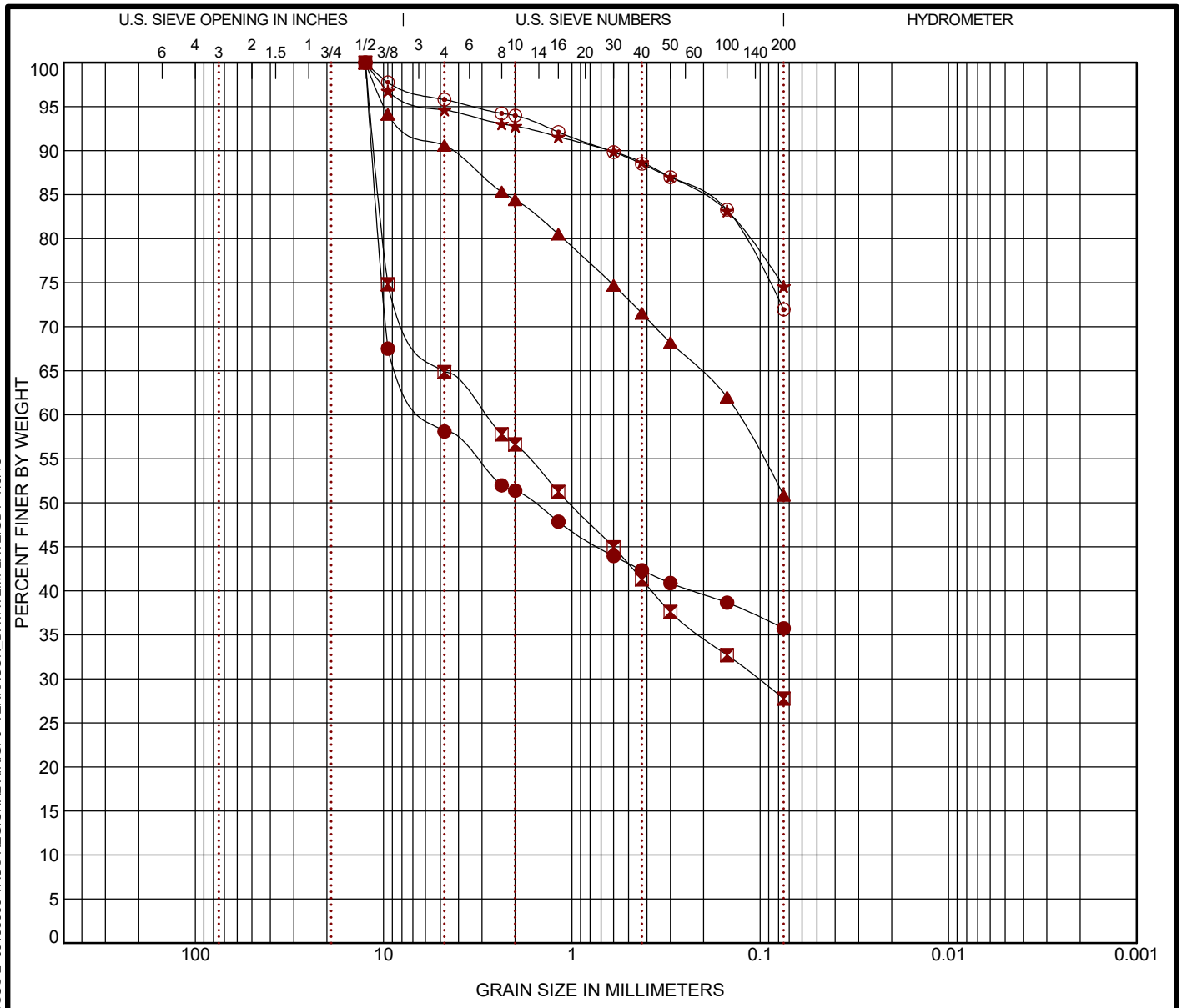
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-12

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
B-18	5 - 6.5		11					
B-19	1 - 2.5		11					
B-19	3.5 - 5		20					
B-19	5 - 6	LEAN CLAY/FAT CLAY(CL/CH)	24					
B-20	1 - 2.5		20					

Boring ID	Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
B-18	5 - 6.5	12.5	5.465			41.9	22.4		35.7	
B-19	1 - 2.5	12.5	2.936	0.103		35.2	37.1		27.8	
B-19	3.5 - 5	12.5	0.132			9.4	39.7		50.8	
B-19	5 - 6	12.5				5.4	20.0		74.6	
B-20	1 - 2.5	12.5				4.2	23.8		71.9	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

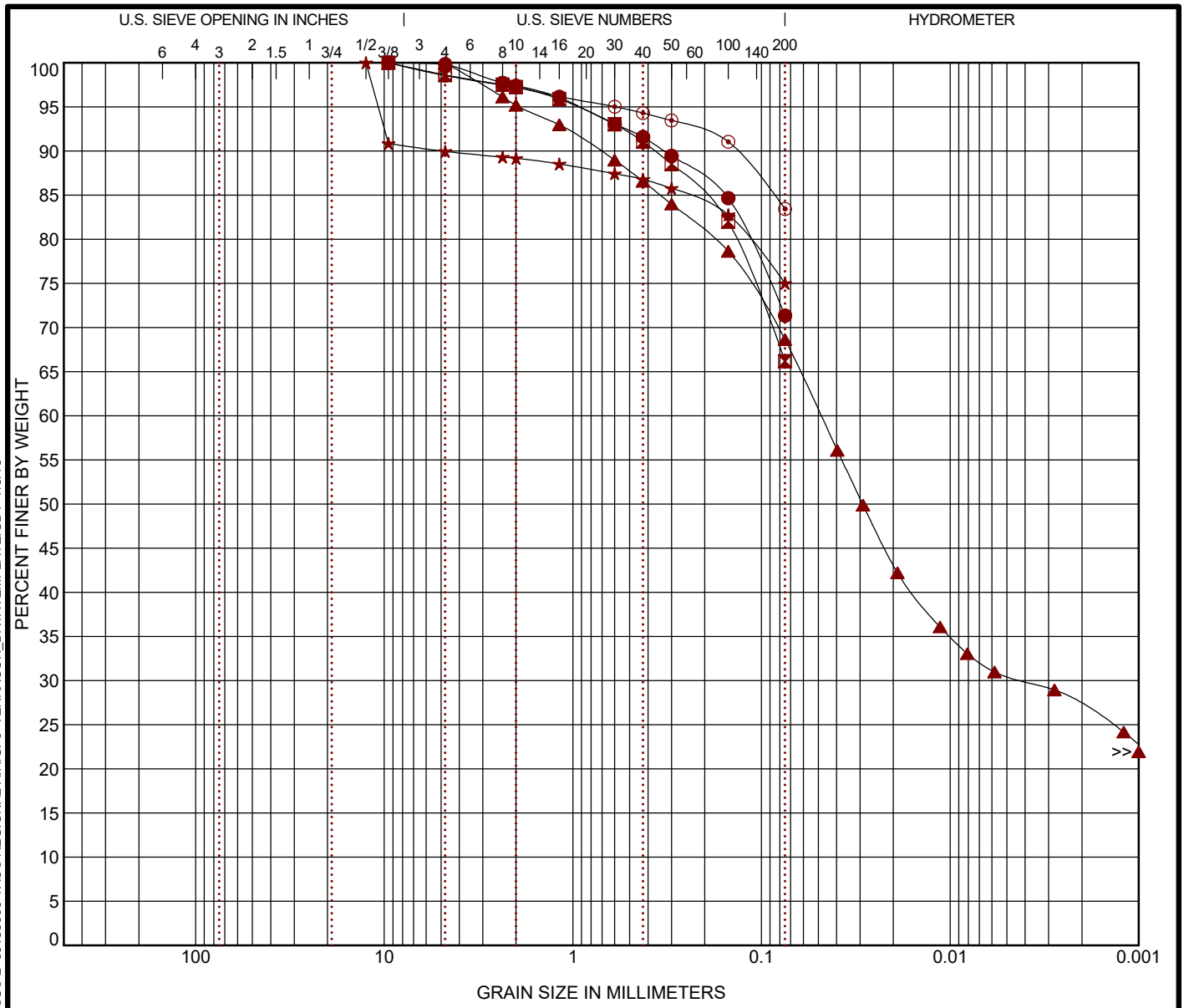
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-13

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-20	3.5 - 4.5	LEAN CLAY(CL)	18					
⊠	B-20	5 - 6.5		20					
▲	B-21	0 - 3	SANDY LEAN CLAY (CL)	14	49	20	29		
★	B-21	1 - 2.5		21					
⊙	B-21	3.5 - 5		24					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-20	3.5 - 4.5	9.5				0.2	28.5		71.3	
⊠	B-20	5 - 6.5	9.5				1.4	32.4		66.2	
▲	B-21	0 - 3	4.75	0.048	0.004		0.0	31.4	38.1		30.6
★	B-21	1 - 2.5	12.5				10.0	14.9		75.0	
⊙	B-21	3.5 - 5	9.5				1.5	15.1		83.4	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

PROJECT NUMBER: 66185006

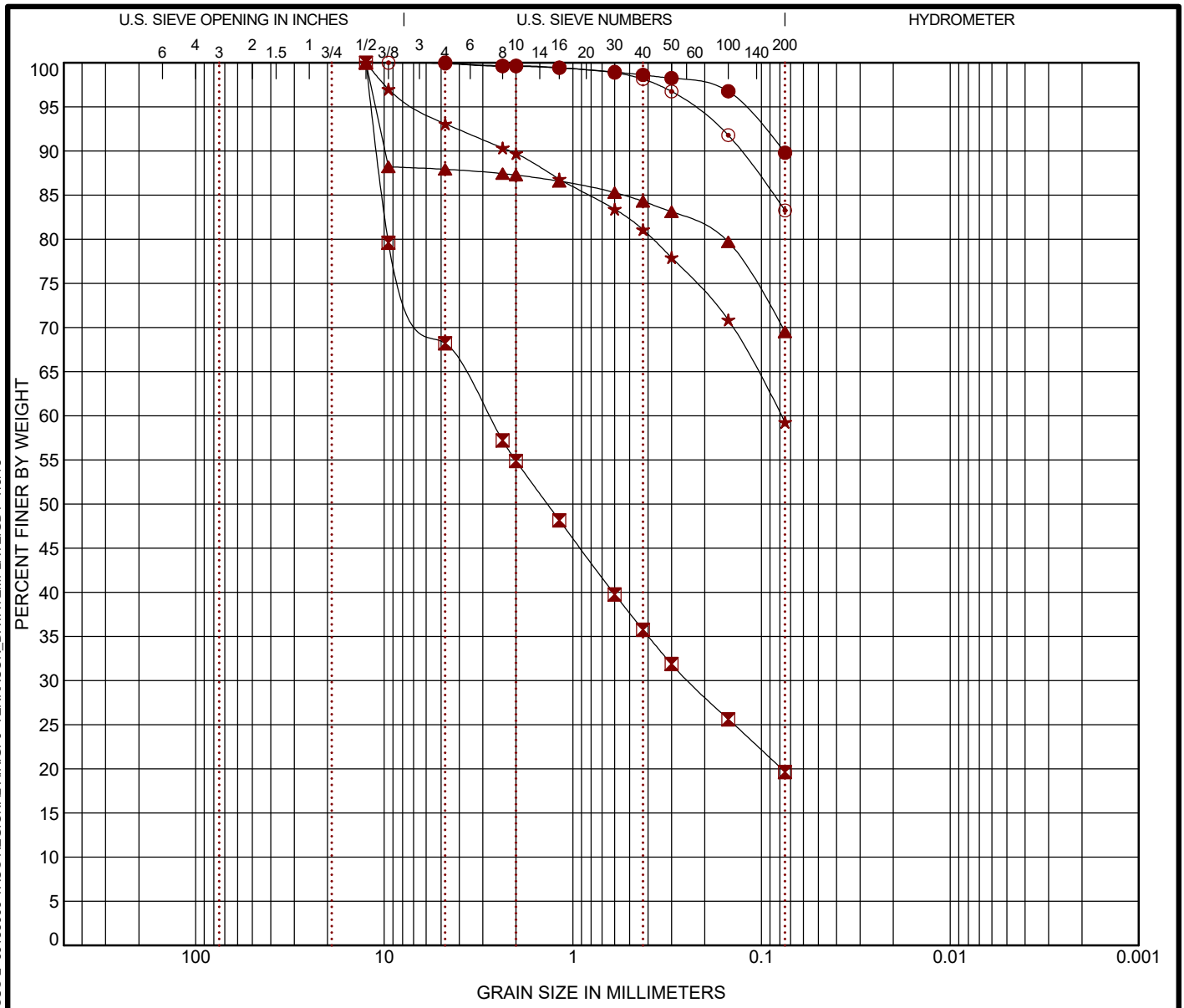
CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-14

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS-2 66185006 TAOS REGIONAL AIR.GPJ TERRACON_DATATEMPLATE.GDT 7/3/18

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-21	5 - 6	FAT CLAY(CH)	18					
⊠	B-22	1.5 - 3		12					
▲	B-22	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)	20					
★	B-22	5 - 6.5		18					
⊙	B-23	1.5 - 2.5		26					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-21	5 - 6	4.75				0.0	10.2		89.8	
⊠	B-22	1.5 - 3	12.5	2.818	0.244		31.8	48.6		19.6	
▲	B-22	3.5 - 4.5	12.5				12.1	18.4		69.5	
★	B-22	5 - 6.5	12.5	0.078			6.9	33.8		59.3	
⊙	B-23	1.5 - 2.5	9.5				0.1	16.6		83.3	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

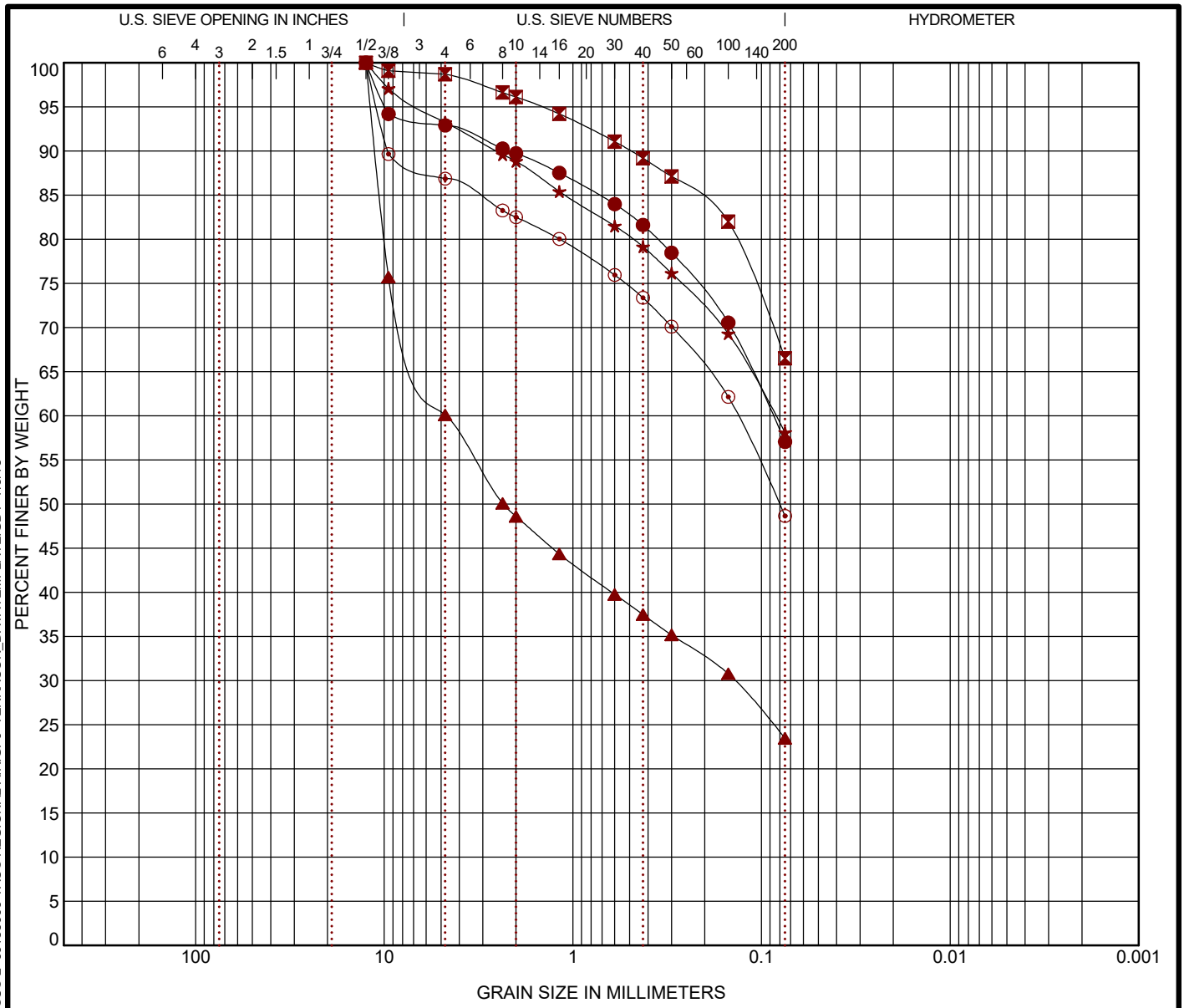
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-15

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-23	5 - 6.5		22					
⊠	B-23	10 - 11.5		7					
▲	B-24	1 - 2.5		12					
★	B-24	3.5 - 4.5	SANDY LEAN CLAY(CL)	22					
⊙	B-24	5 - 6.5		21					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-23	5 - 6.5	12.5	0.087			7.1	35.8		57.1	
⊠	B-23	10 - 11.5	12.5				1.3	32.2		66.5	
▲	B-24	1 - 2.5	12.5	4.715	0.139		39.9	36.6		23.5	
★	B-24	3.5 - 4.5	12.5	0.084			6.8	35.1		58.1	
⊙	B-24	5 - 6.5	12.5	0.134			13.1	38.2		48.7	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

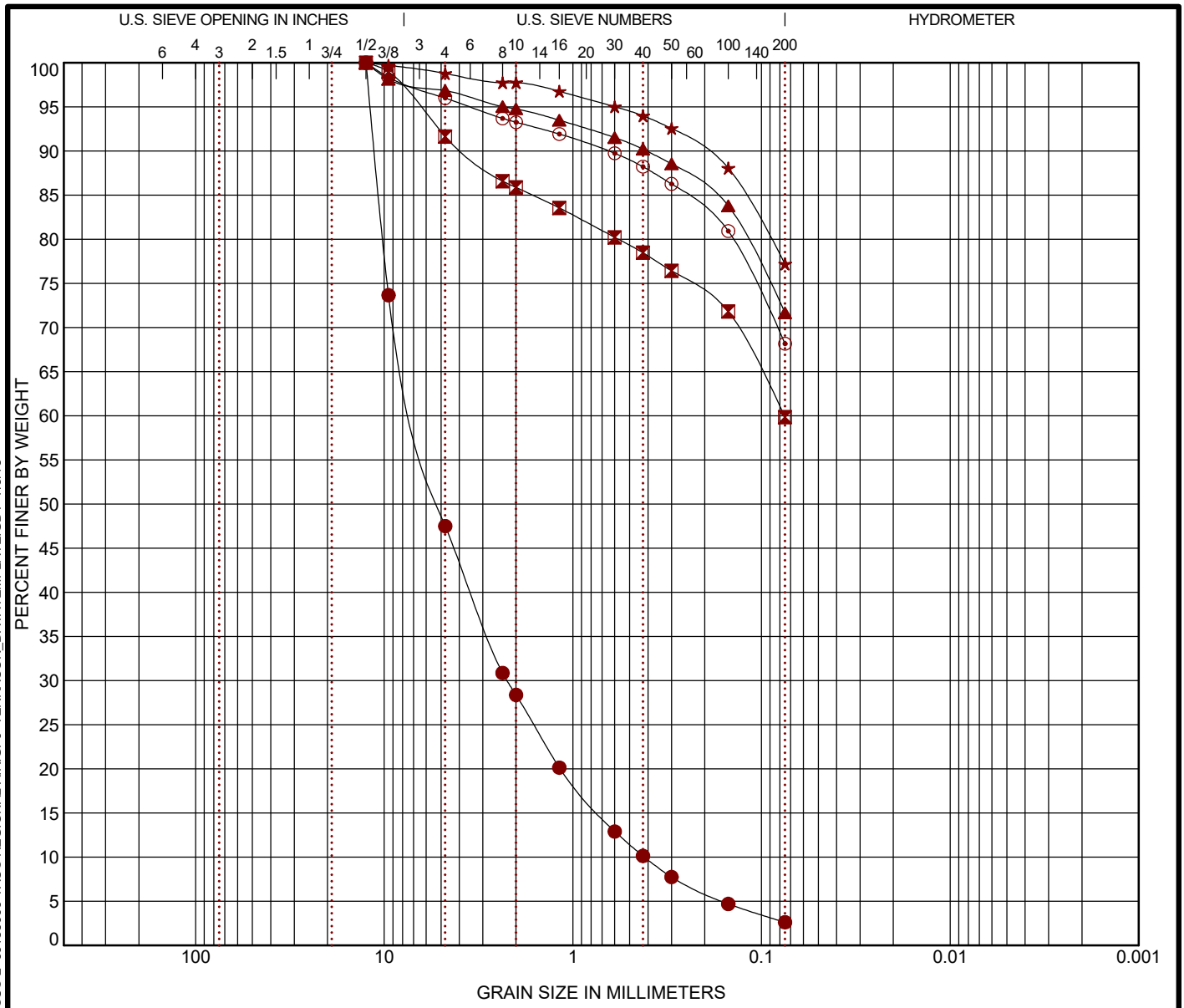
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-16

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-25	1 - 2	WELL-GRADED GRAVEL with SAND (GW)	9				1.80	15.86
⊠	B-25	3.5 - 5		19					
▲	B-25	5 - 6.5		22					
★	B-26	1.5 - 3		21					
⊙	B-26	3.5 - 5		21					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-25	1 - 2	12.5	6.615	2.229	0.417	52.5	44.9		2.6	
⊠	B-25	3.5 - 5	12.5	0.076			8.4	31.8		59.8	
▲	B-25	5 - 6.5	12.5				3.2	25.2		71.7	
★	B-26	1.5 - 3	12.5				1.2	21.6		77.2	
⊙	B-26	3.5 - 5	12.5				4.0	27.8		68.2	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

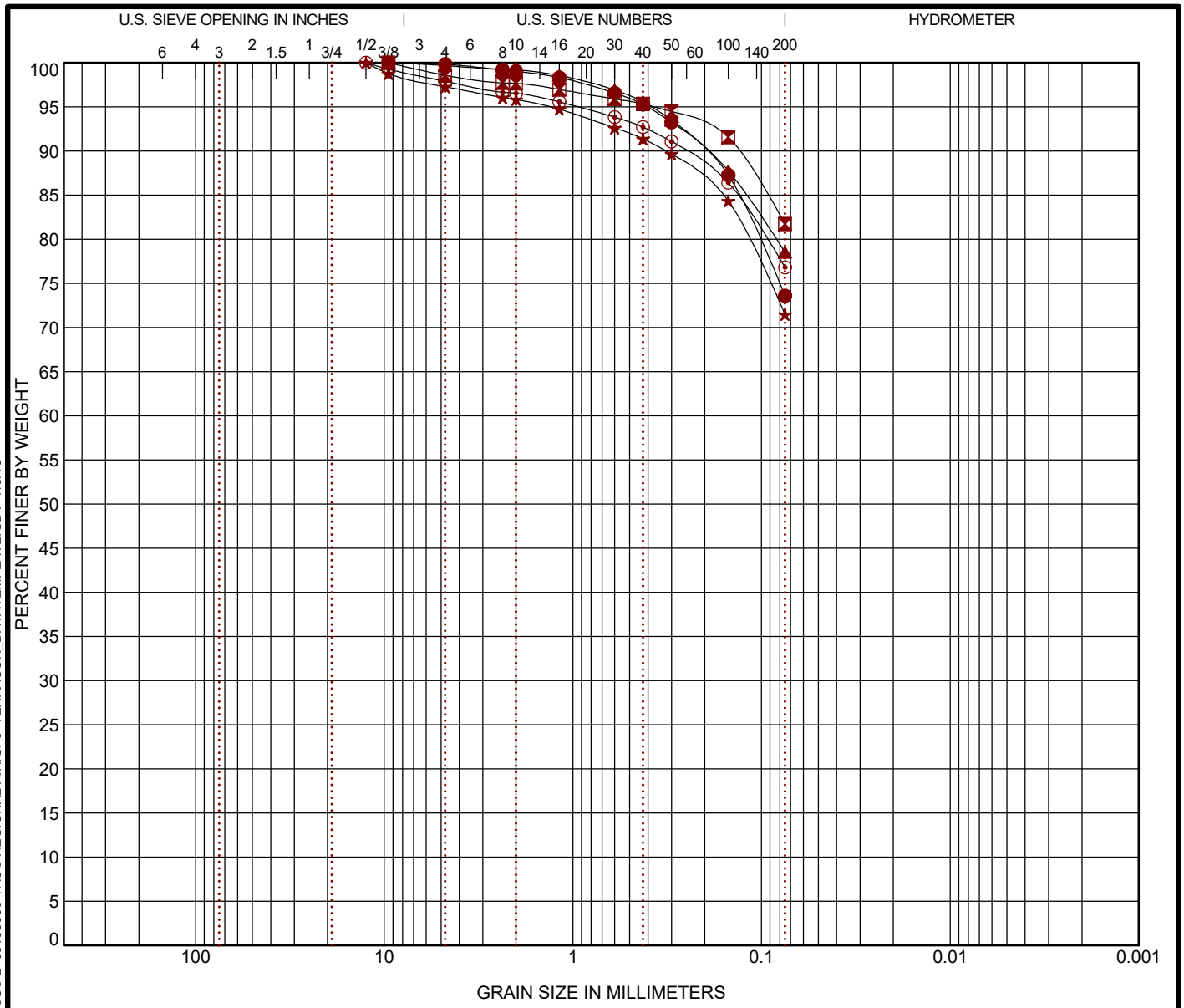
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-17

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-26	5 - 6	LEAN CLAY with SAND(CL)	24					
⊠	B-27	1 - 2	LEAN CLAY/FAT CLAY(CL/CH)	25					
▲	B-27	3.5 - 5		25					
★	B-27	5 - 6.5		24					
⊙	B-28	1.5 - 3		22					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-26	5 - 6	9.5				0.2	26.3		73.6	
⊠	B-27	1 - 2	9.5				1.4	16.9		81.7	
▲	B-27	3.5 - 5	9.5				0.3	21.2		78.5	
★	B-27	5 - 6.5	12.5				2.7	25.8		71.5	
⊙	B-28	1.5 - 3	12.5				2.1	21.1		76.8	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

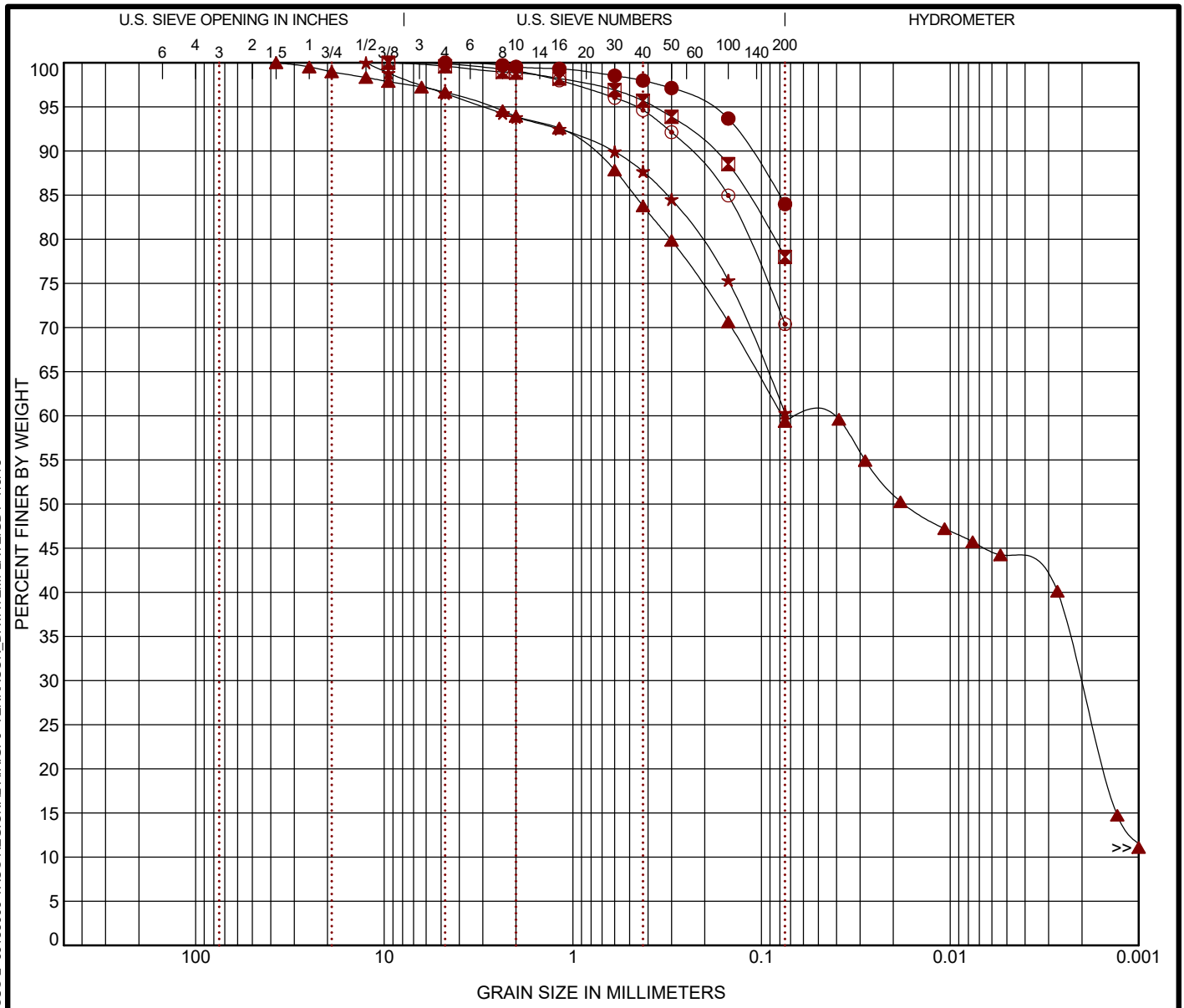
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-18

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
●	B-28	3.5 - 4.5		23					
⊠	B-28	5 - 6.5		24					
▲	B-29	0 - 3	SANDY FAT CLAY (CH)	18	56	24	32		
★	B-29	1.5 - 3		23					
⊙	B-29	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)	26					

Boring ID		Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
●	B-28	3.5 - 4.5	4.75				0.0	16.0		84.0	
⊠	B-28	5 - 6.5	9.5				0.4	21.6		78.0	
▲	B-29	0 - 3	37.5	0.041	0.002		3.3	37.3	15.6		43.8
★	B-29	1.5 - 3	12.5				3.5	36.2		60.3	
⊙	B-29	3.5 - 4.5	9.5				0.1	29.5		70.4	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

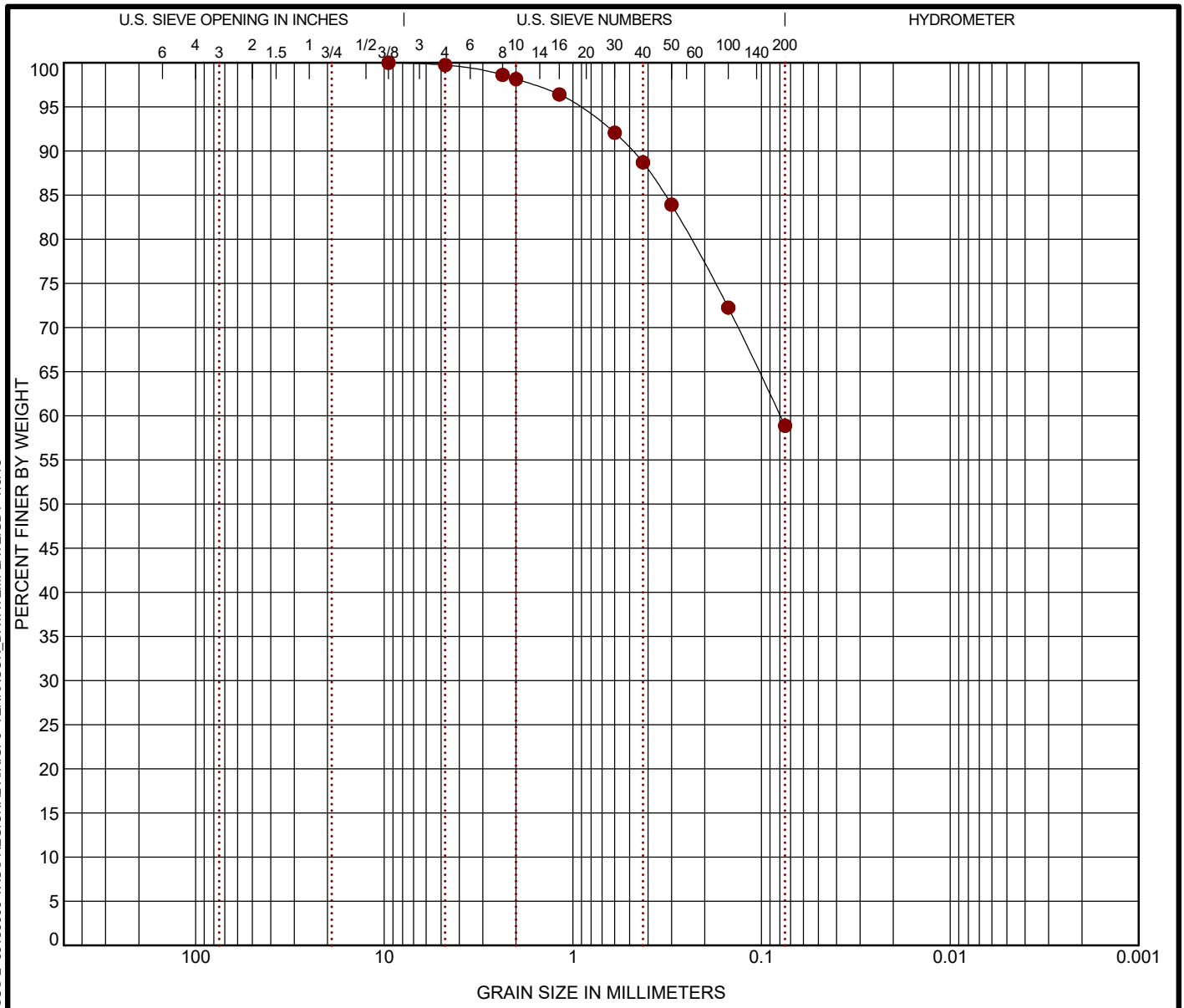
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-19

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID	Depth	USCS Classification	WC (%)	LL	PL	PI	Cc	Cu
B-29	5 - 6.5		29					

Boring ID	Depth	D_{100}	D_{60}	D_{30}	D_{10}	%Gravel	%Sand	%Silt	%Fines	%Clay
B-29	5 - 6.5	9.5	0.08			0.3	40.9		58.9	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

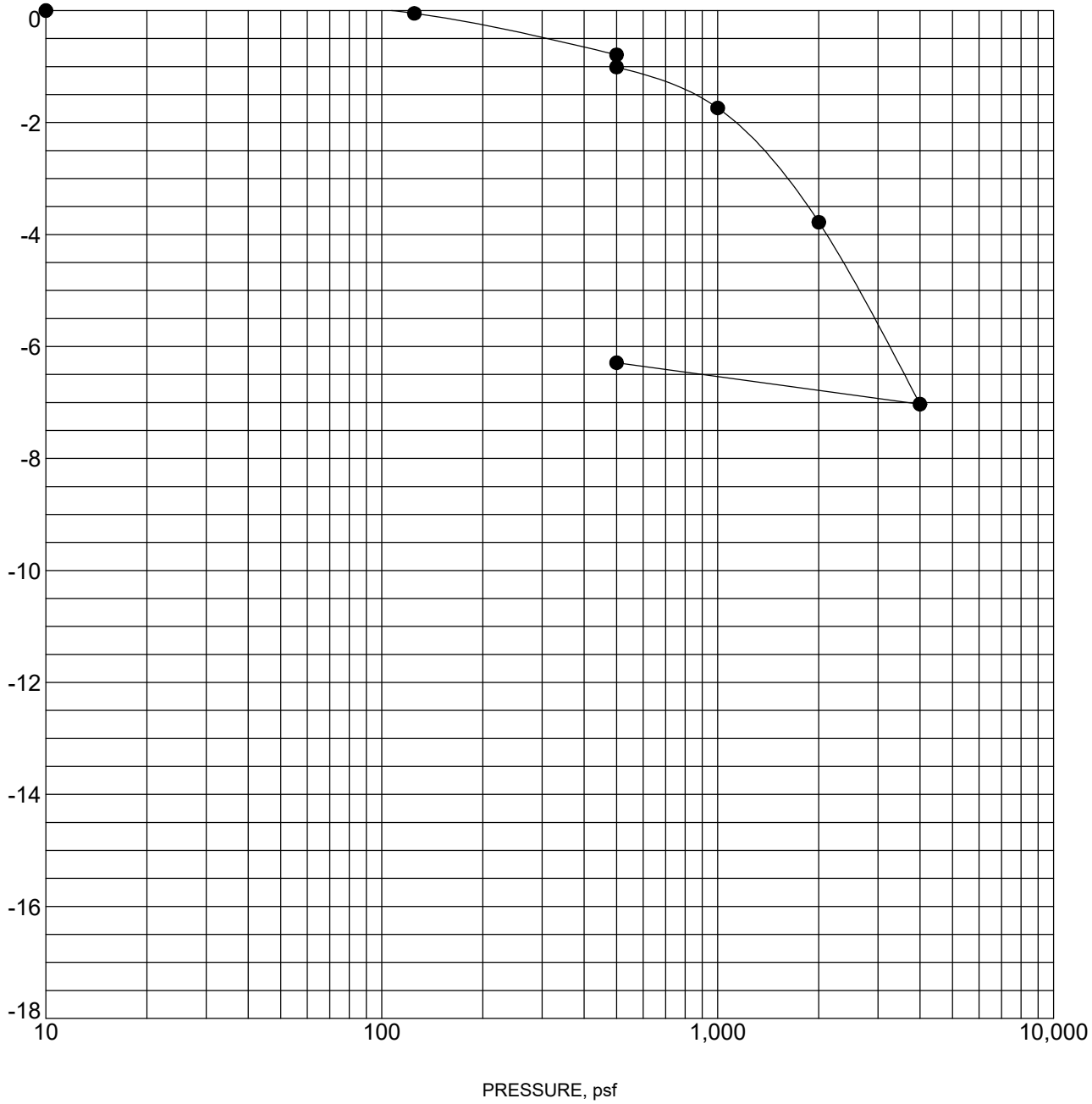
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-20

SWELL CONSOLIDATION TEST

ASTM D2435



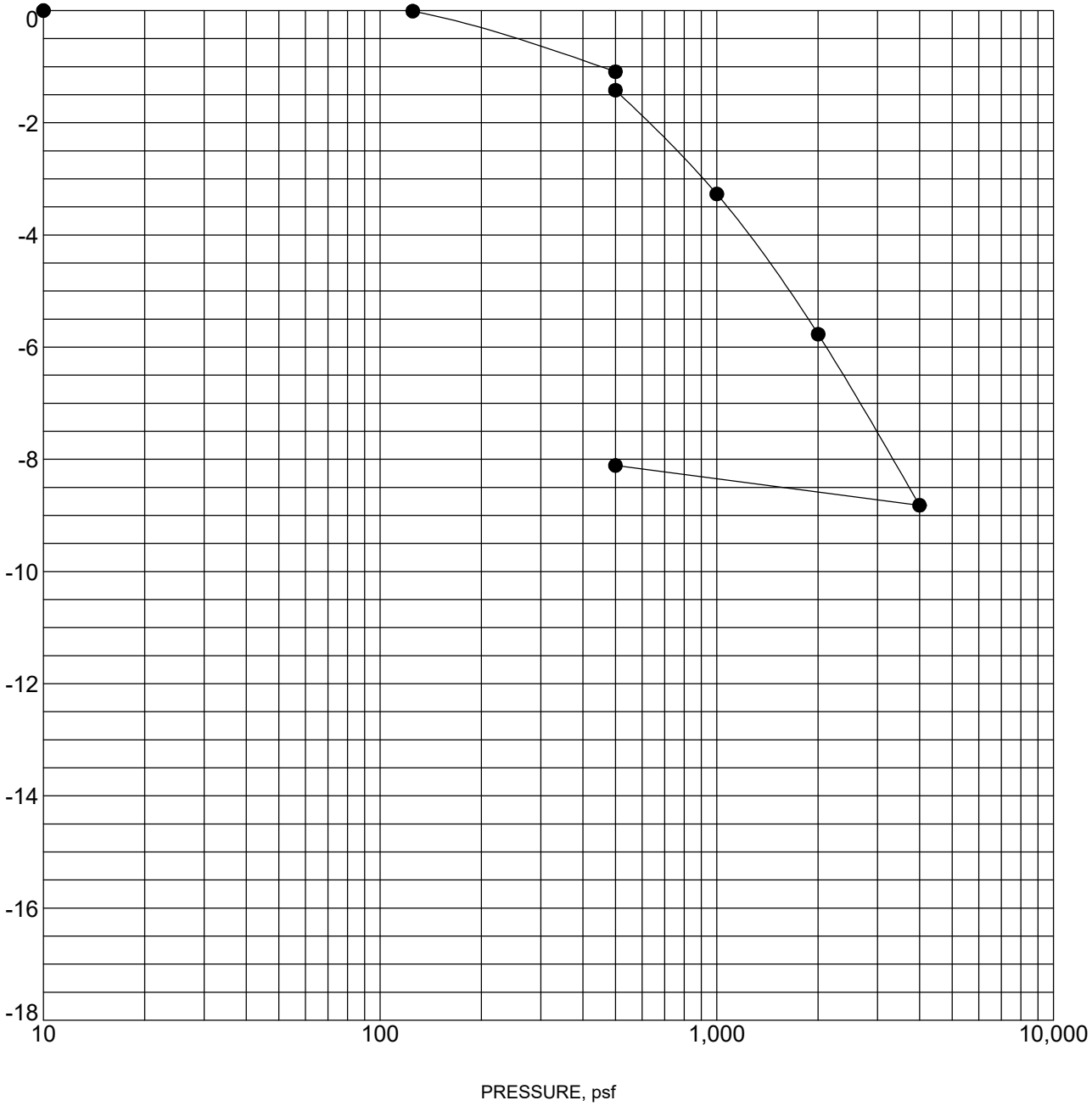
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-01	5 - 6 ft	FAT CLAY(CH)	85	23

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-21

SWELL CONSOLIDATION TEST

ASTM D2435



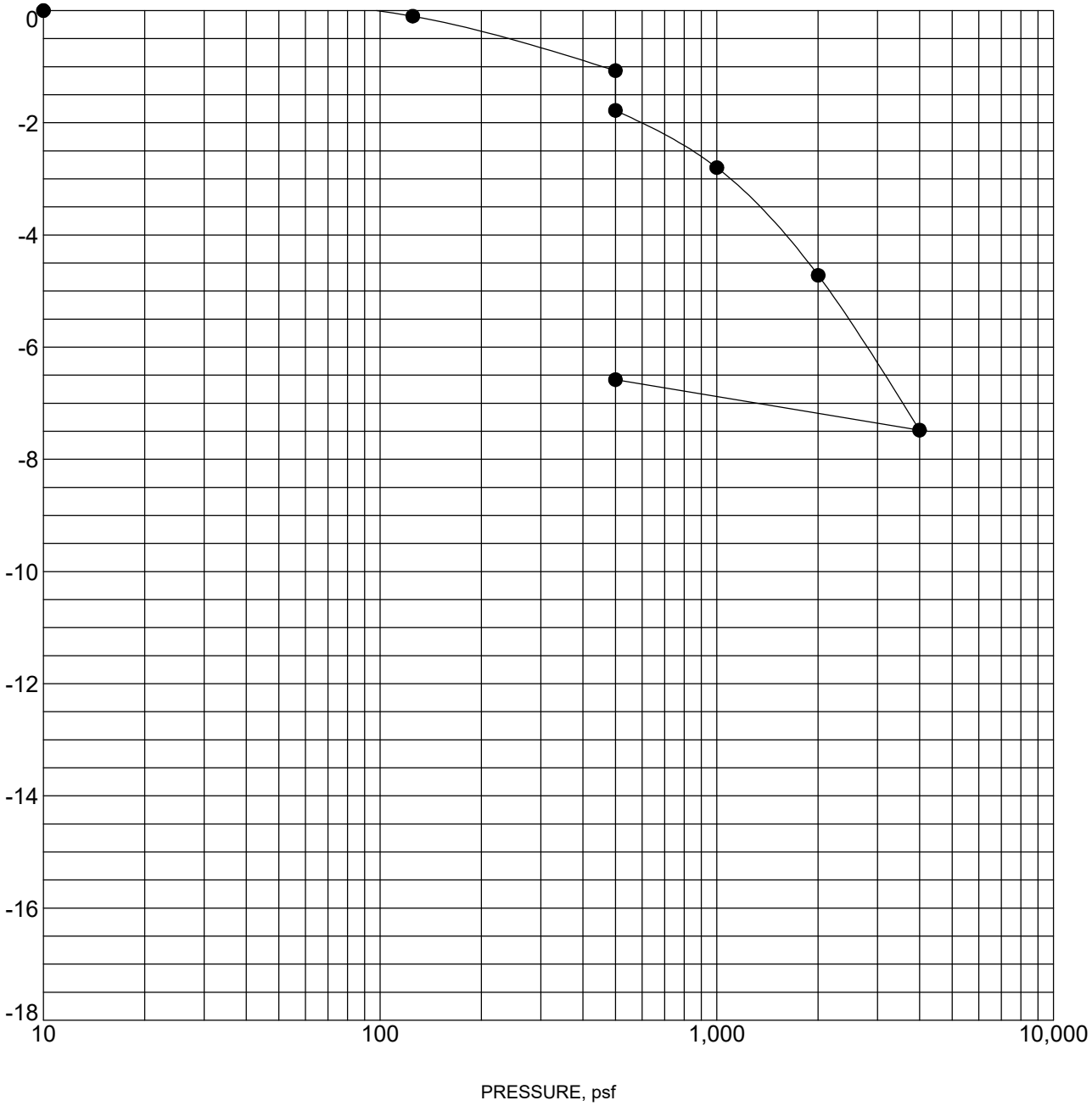
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-02	5 - 6 ft	SANDY LEAN CLAY(CL)	71	31

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-22

SWELL CONSOLIDATION TEST

ASTM D2435



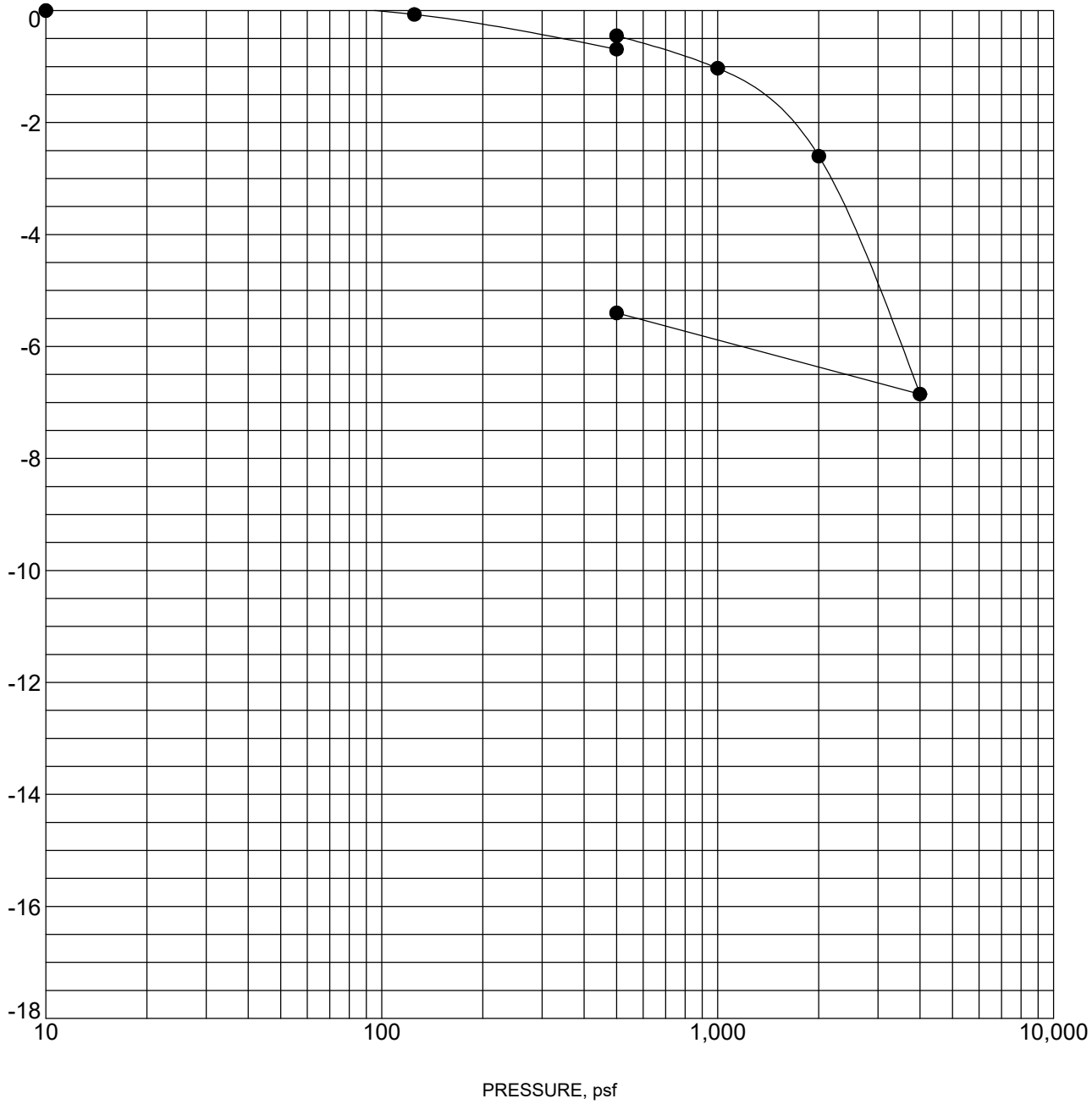
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-04	5 - 6 ft	CLAYEY SAND(SC)		

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-23

SWELL CONSOLIDATION TEST

ASTM D2435



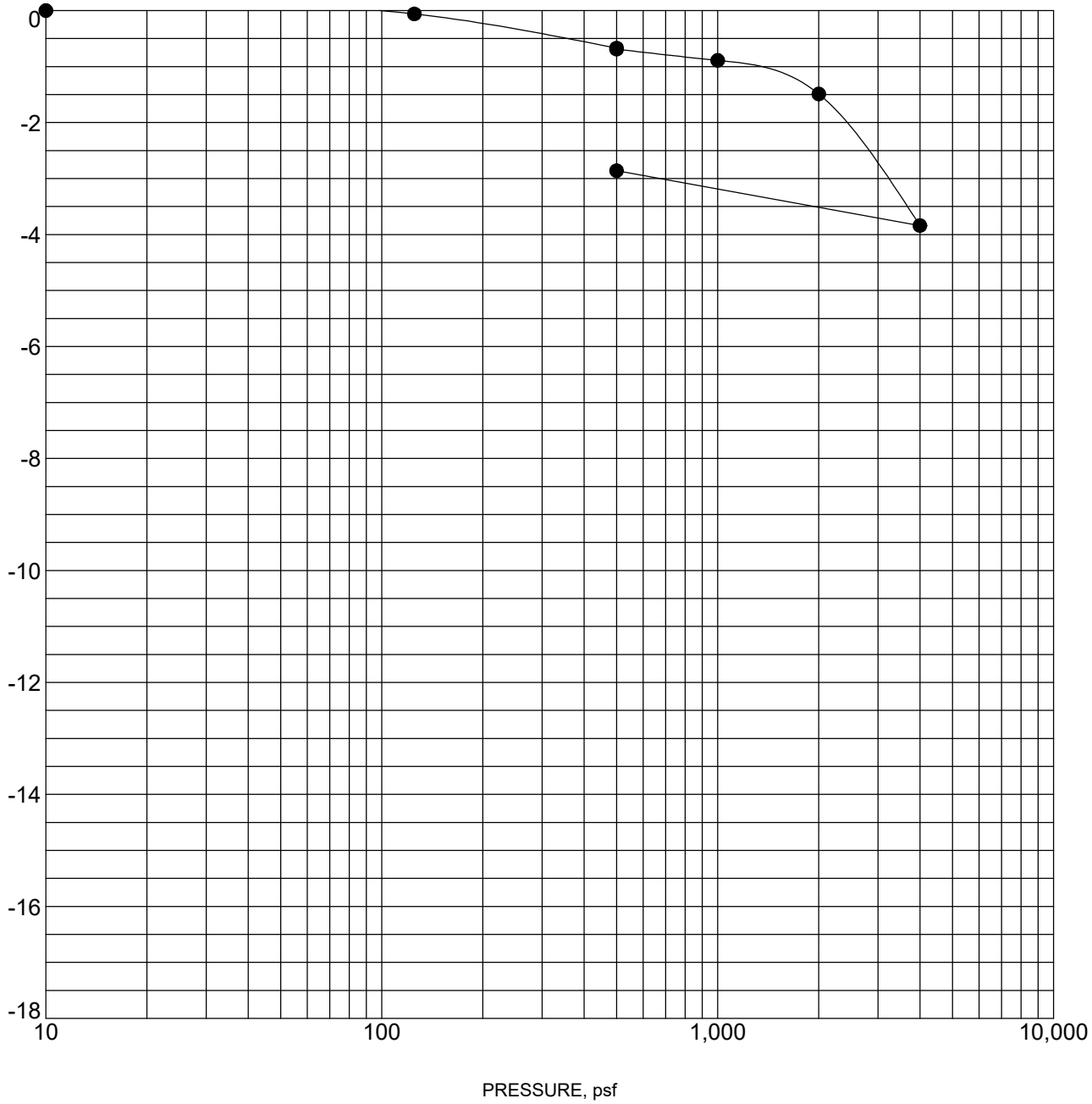
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-05 3.5 - 4.5 ft	LEAN CLAY(CL)	98	20

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-24

SWELL CONSOLIDATION TEST

ASTM D2435



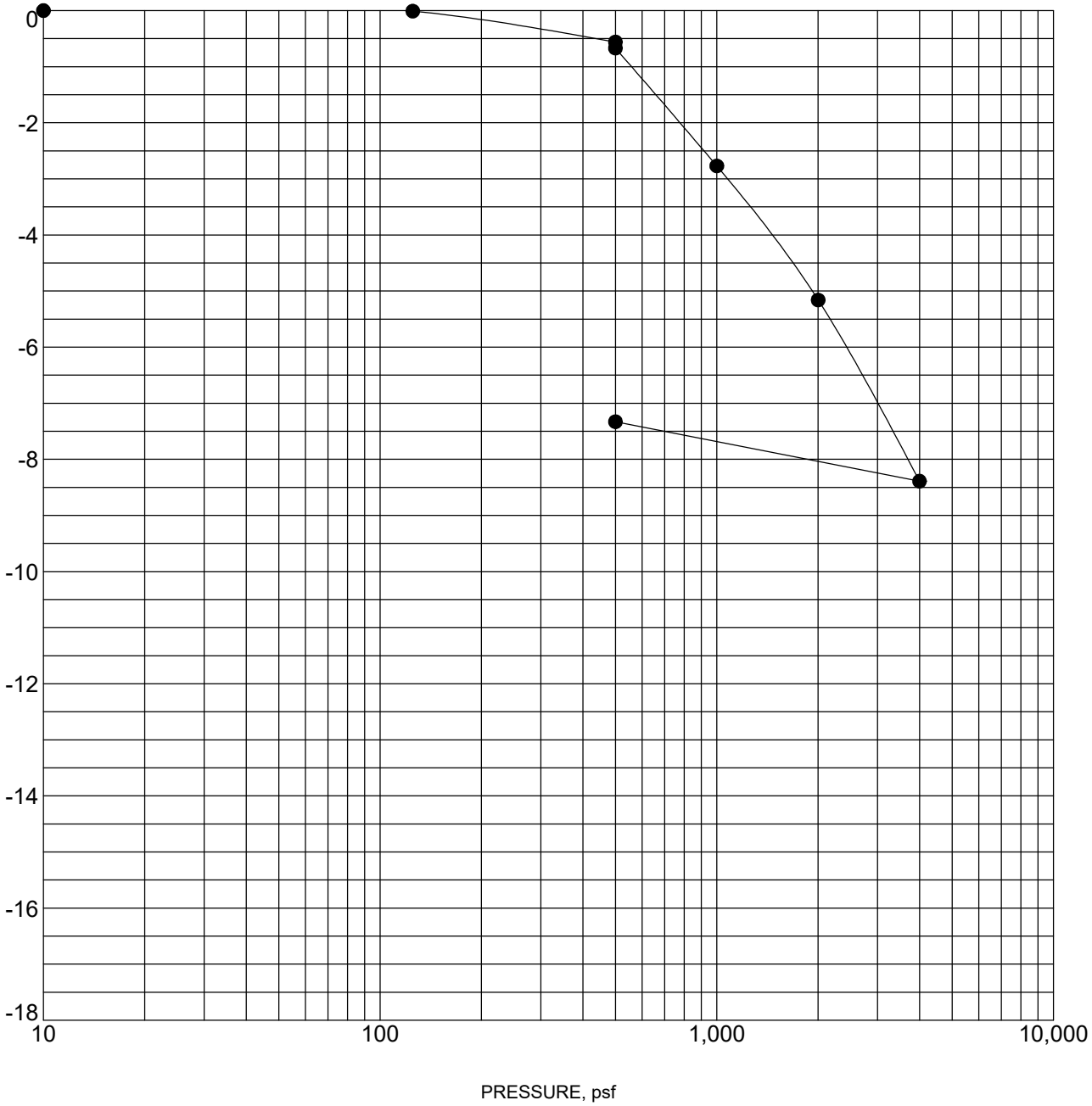
Specimen Identification		Classification	γ_d, pcf	WC, %
● B-07 1.5 - 2.5 ft		SANDY LEAN CLAY with GRAVEL(CL)	97	21

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-25

SWELL CONSOLIDATION TEST

ASTM D2435



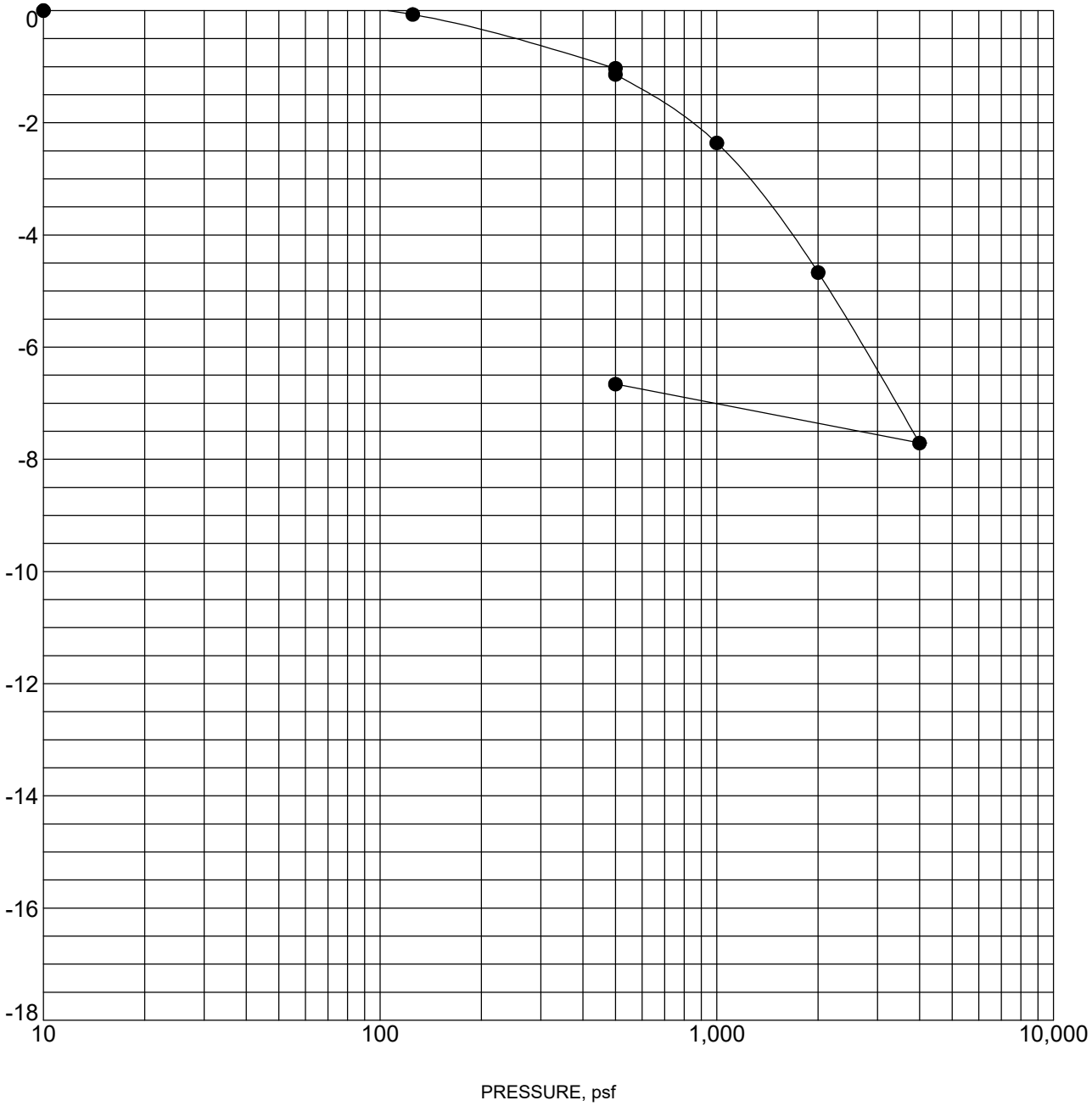
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-08	5 - 6 ft	LEAN CLAY/FAT CLAY(CL/CH)	78	23

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-26

SWELL CONSOLIDATION TEST

ASTM D2435



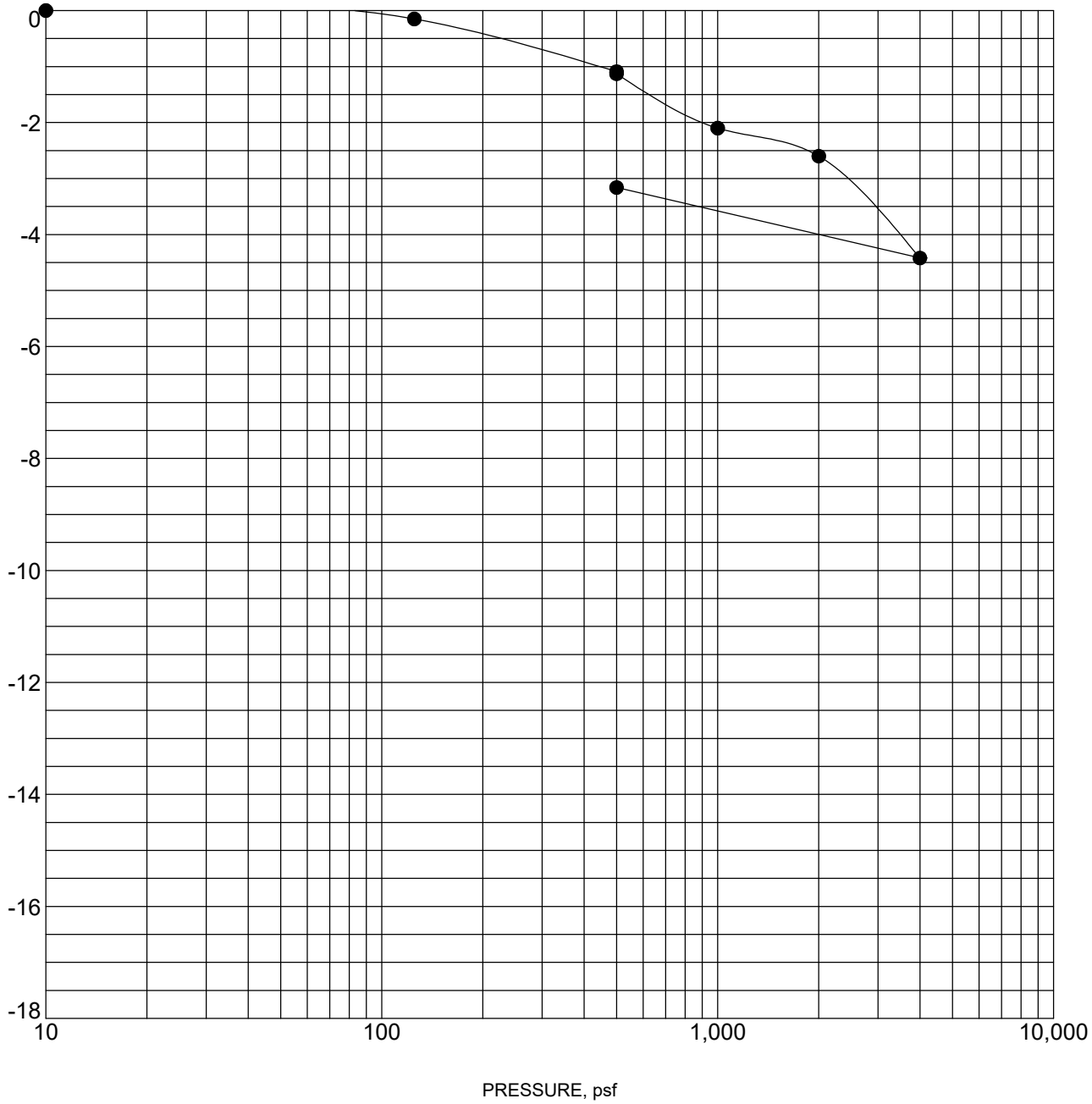
Specimen Identification		Classification	γ_d, pcf	WC, %
● B-09 3.5 - 4.5 ft		LEAN CLAY/FAT CLAY(CL/CH)	83	23

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-27

SWELL CONSOLIDATION TEST

ASTM D2435



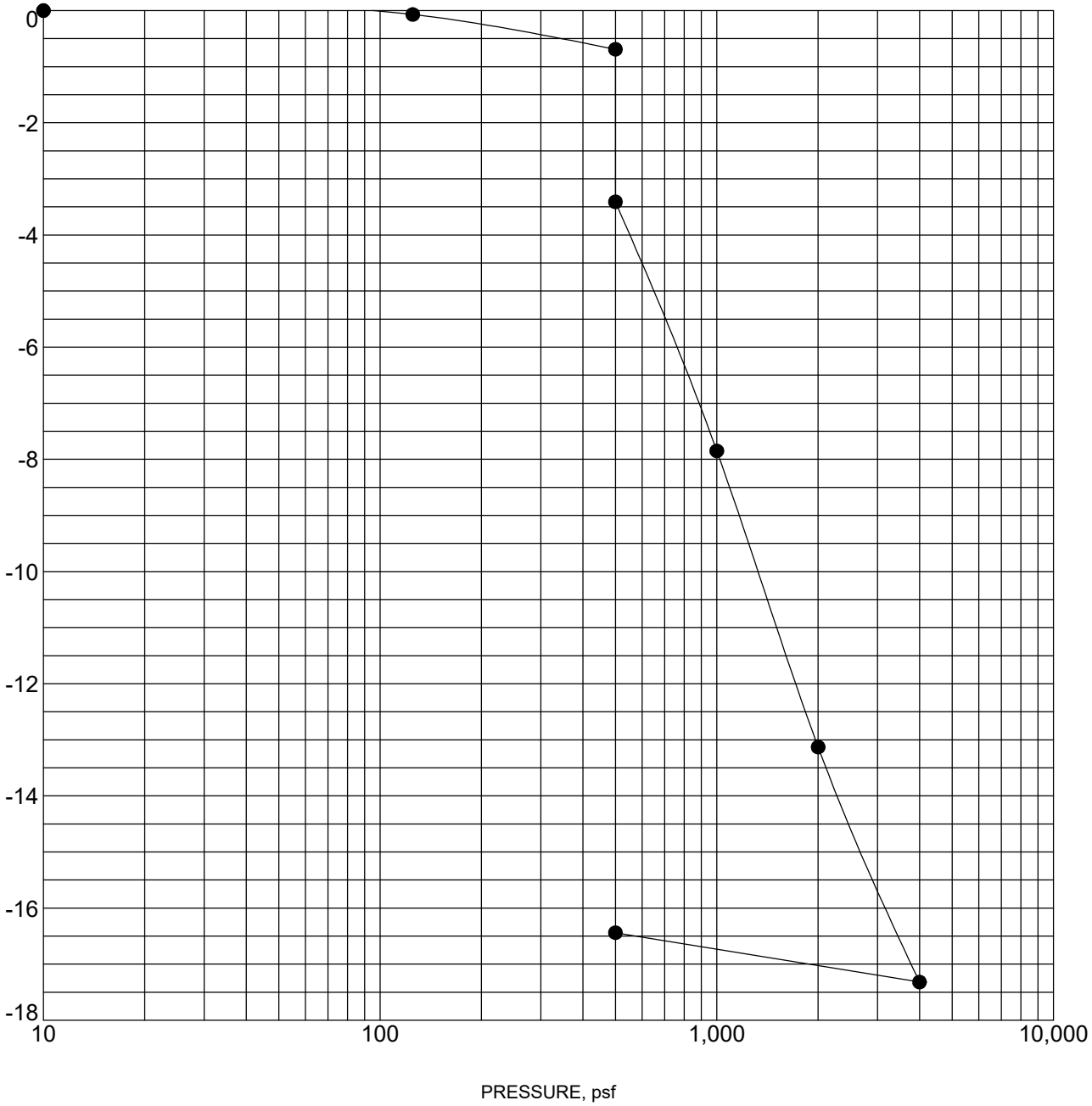
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-10	5 - 6 ft	SANDY LEAN CLAY(CL)	82	22

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-28

SWELL CONSOLIDATION TEST

ASTM D2435



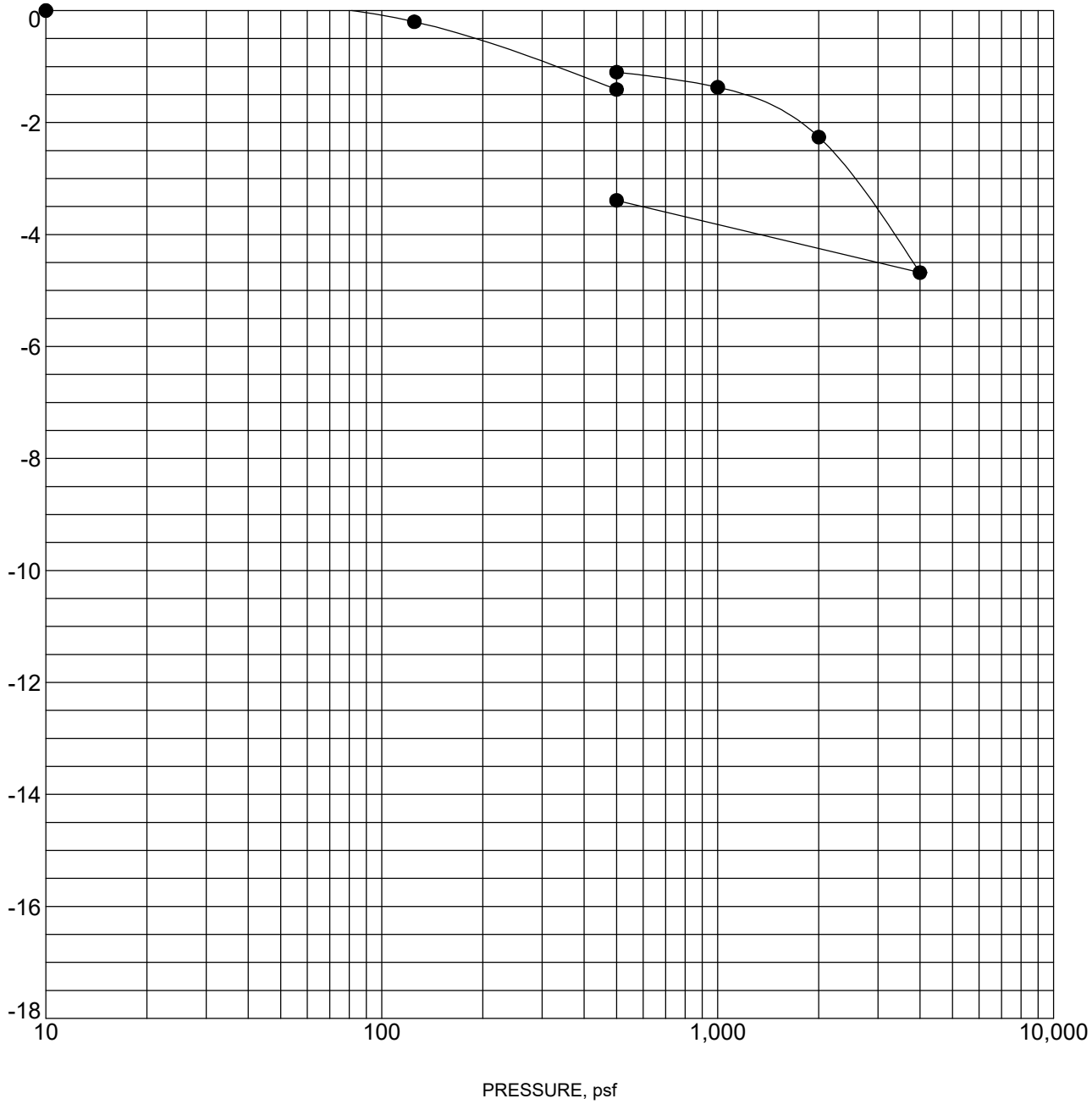
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-11 3.5 - 4.5 ft	SANDY FAT CLAY(CH)	98	14

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-29

SWELL CONSOLIDATION TEST

ASTM D2435



Specimen Identification		Classification	γ_d, pcf	WC, %
● B-12 3.5 - 4.5 ft		LEAN CLAY/FAT CLAY(CL/CH)	107	12

NOTES:

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

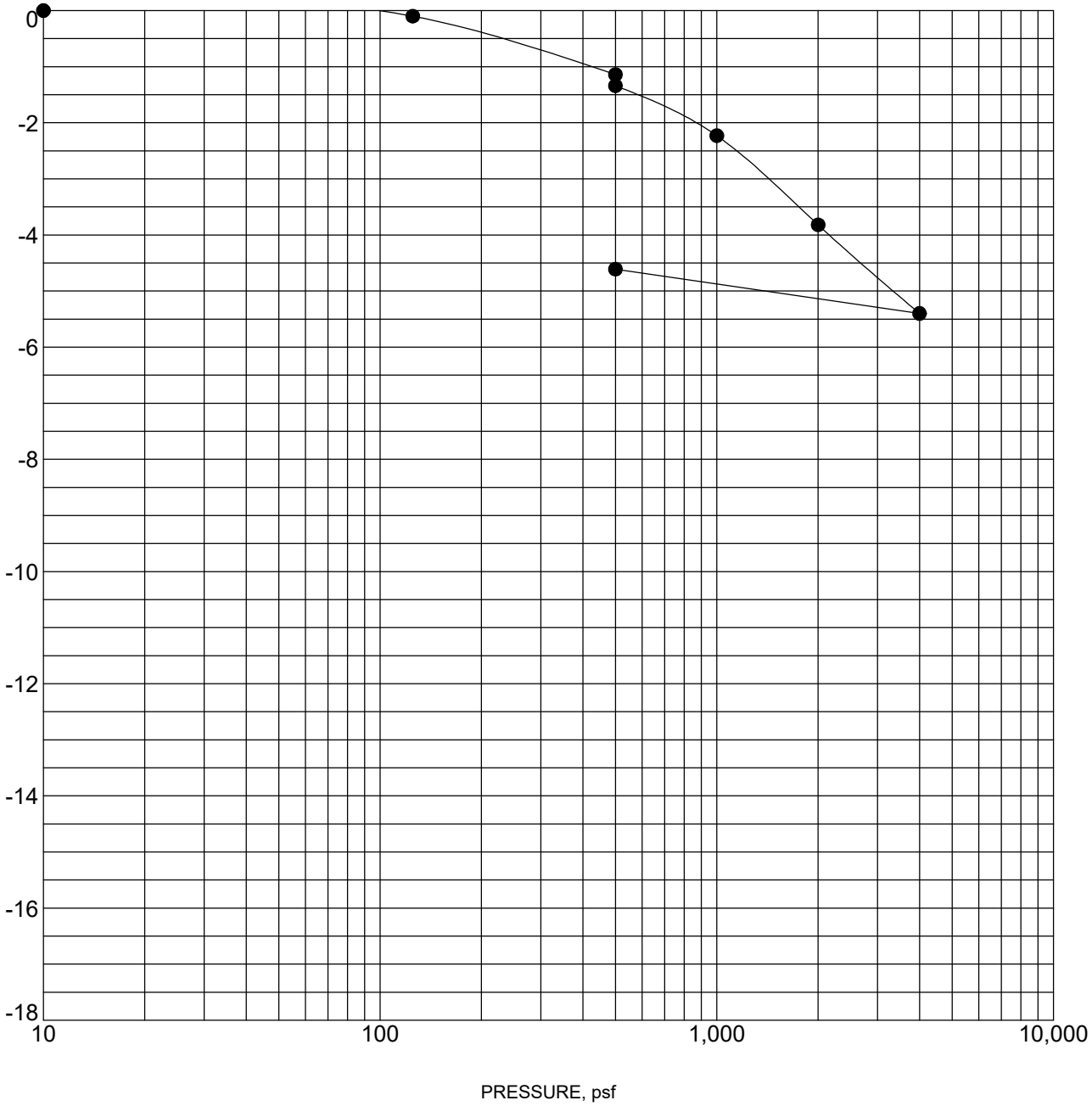
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-30

SWELL CONSOLIDATION TEST

ASTM D2435



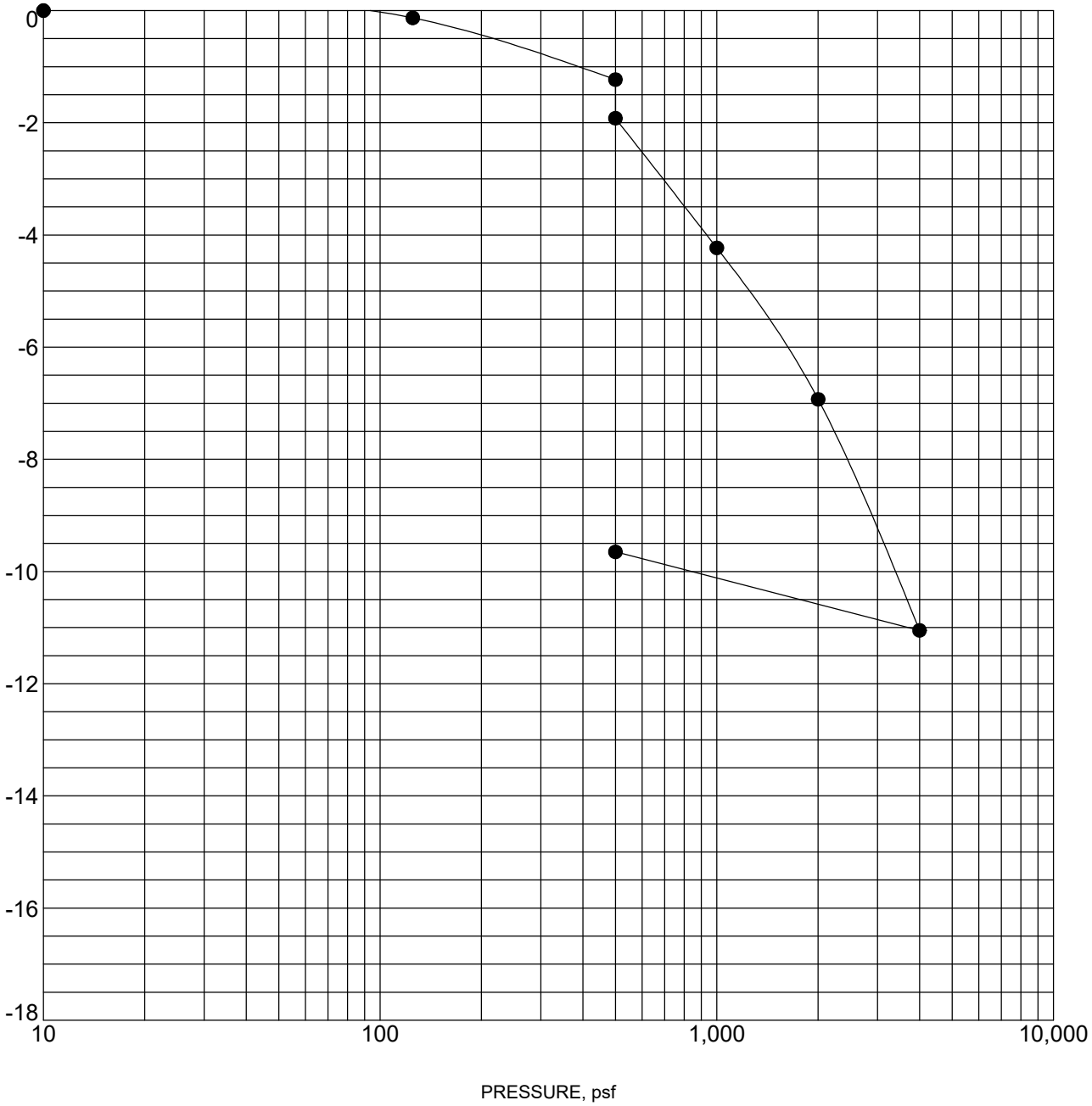
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-13 3.5 - 4.5 ft	LEAN CLAY/FAT CLAY(CL/CH)	84	31

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-31

SWELL CONSOLIDATION TEST

ASTM D2435



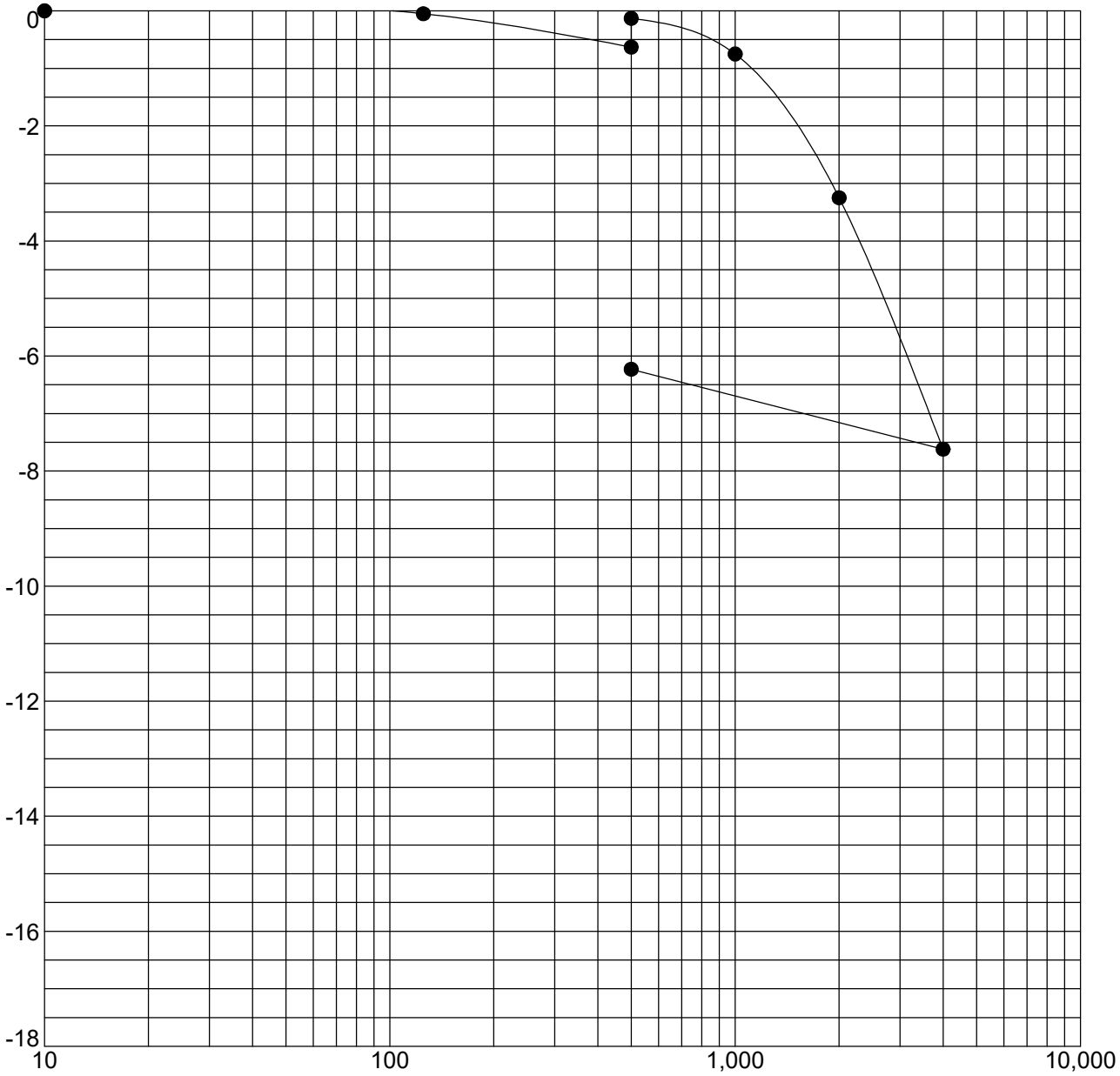
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-15	6 - 7 ft	LEAN CLAY with GRAVEL(CL)	91	12

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-32

SWELL CONSOLIDATION TEST

ASTM D2435



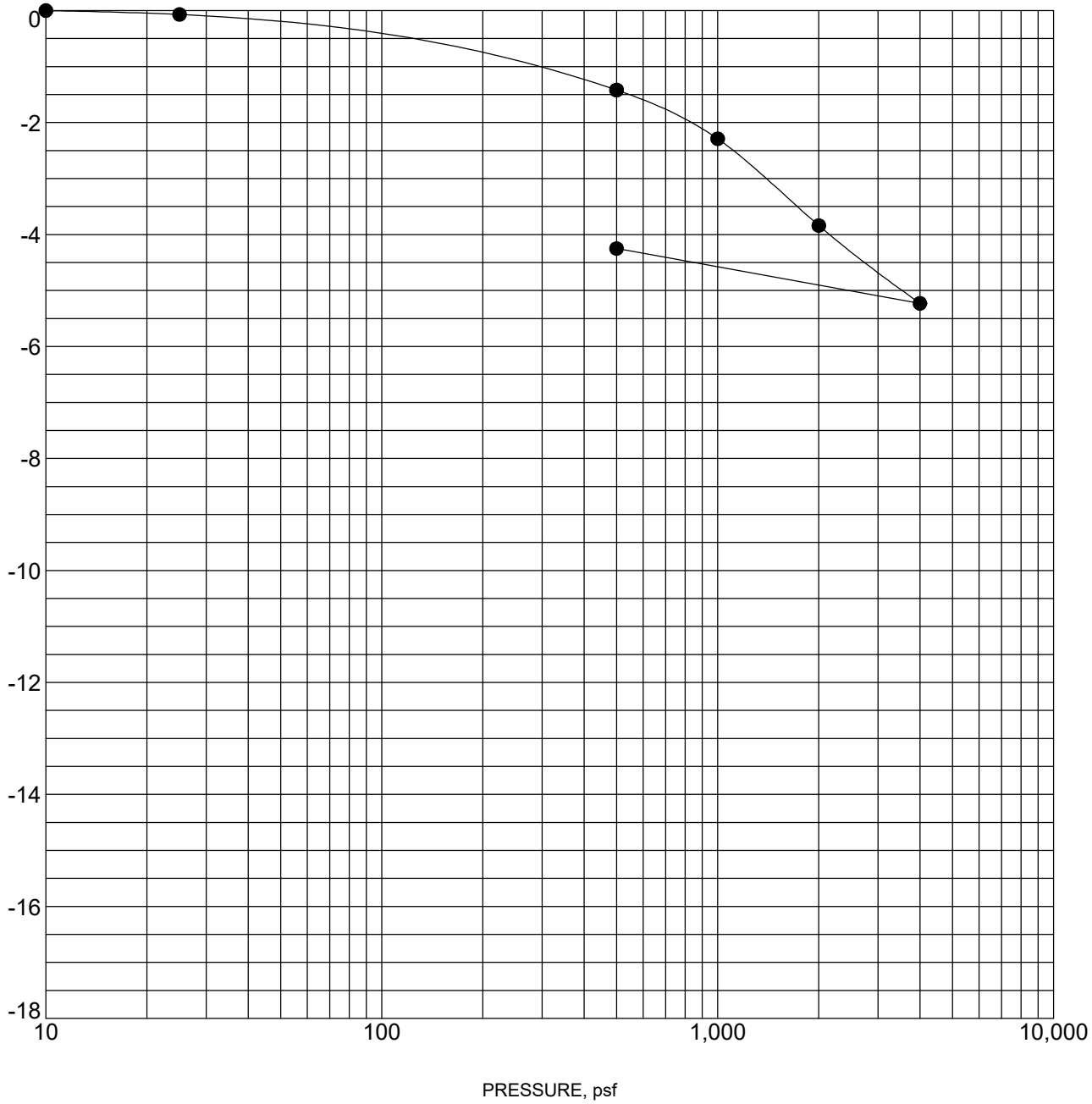
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-16 3.5 - 4.5 ft	LEAN CLAY/FAT CLAY(CL/CH)	97	14

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-33

SWELL CONSOLIDATION TEST

ASTM D2435



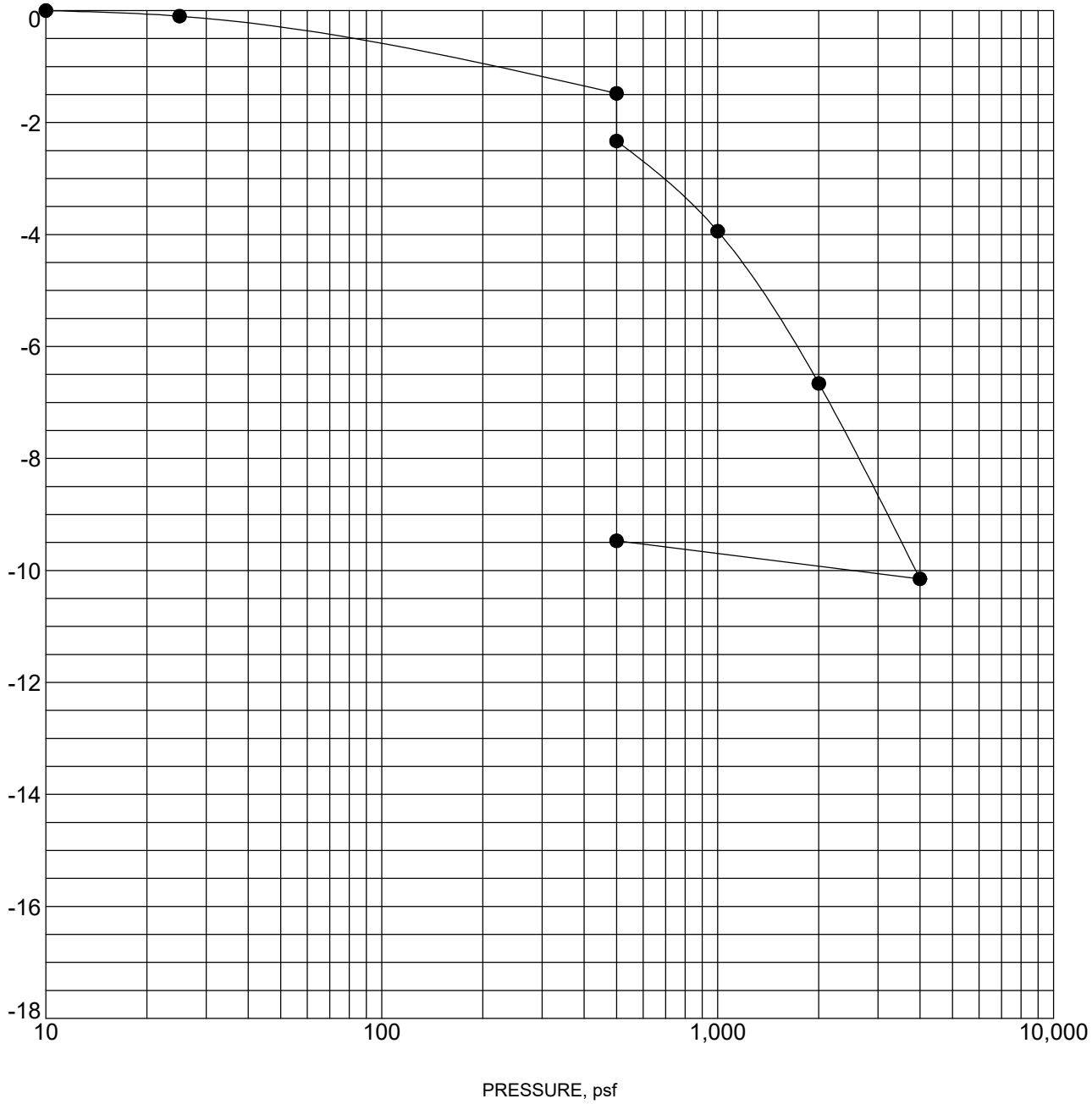
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-17 1.5 - 2.5 ft	FAT CLAY(CH)	115	10

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-34

SWELL CONSOLIDATION TEST

ASTM D2435



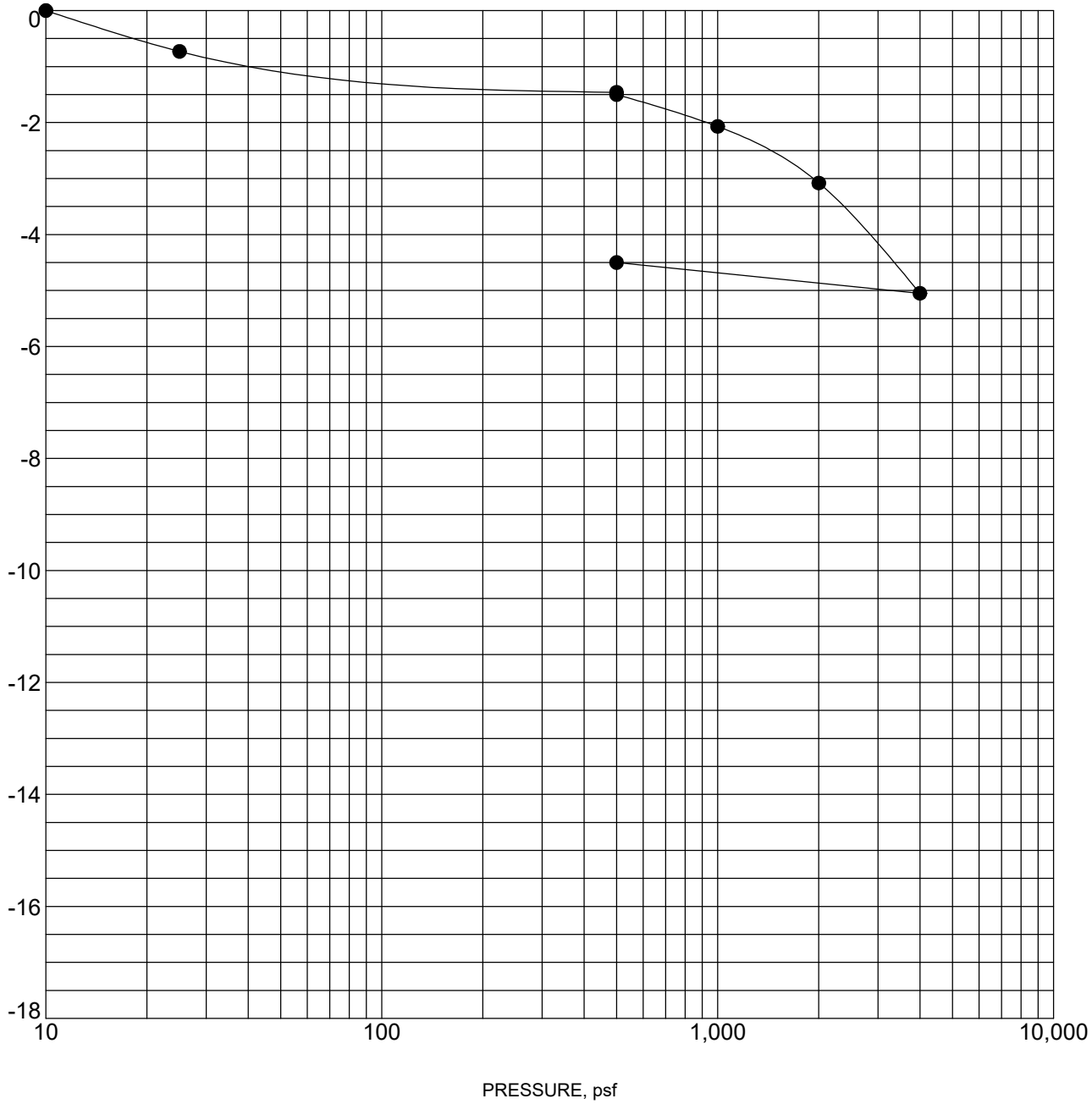
Specimen Identification		Classification	γ_d, pcf	WC, %
● B-18 3.5 - 4.5 ft		CLAYEY SAND(SC)	105	9

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-35

SWELL CONSOLIDATION TEST

ASTM D2435



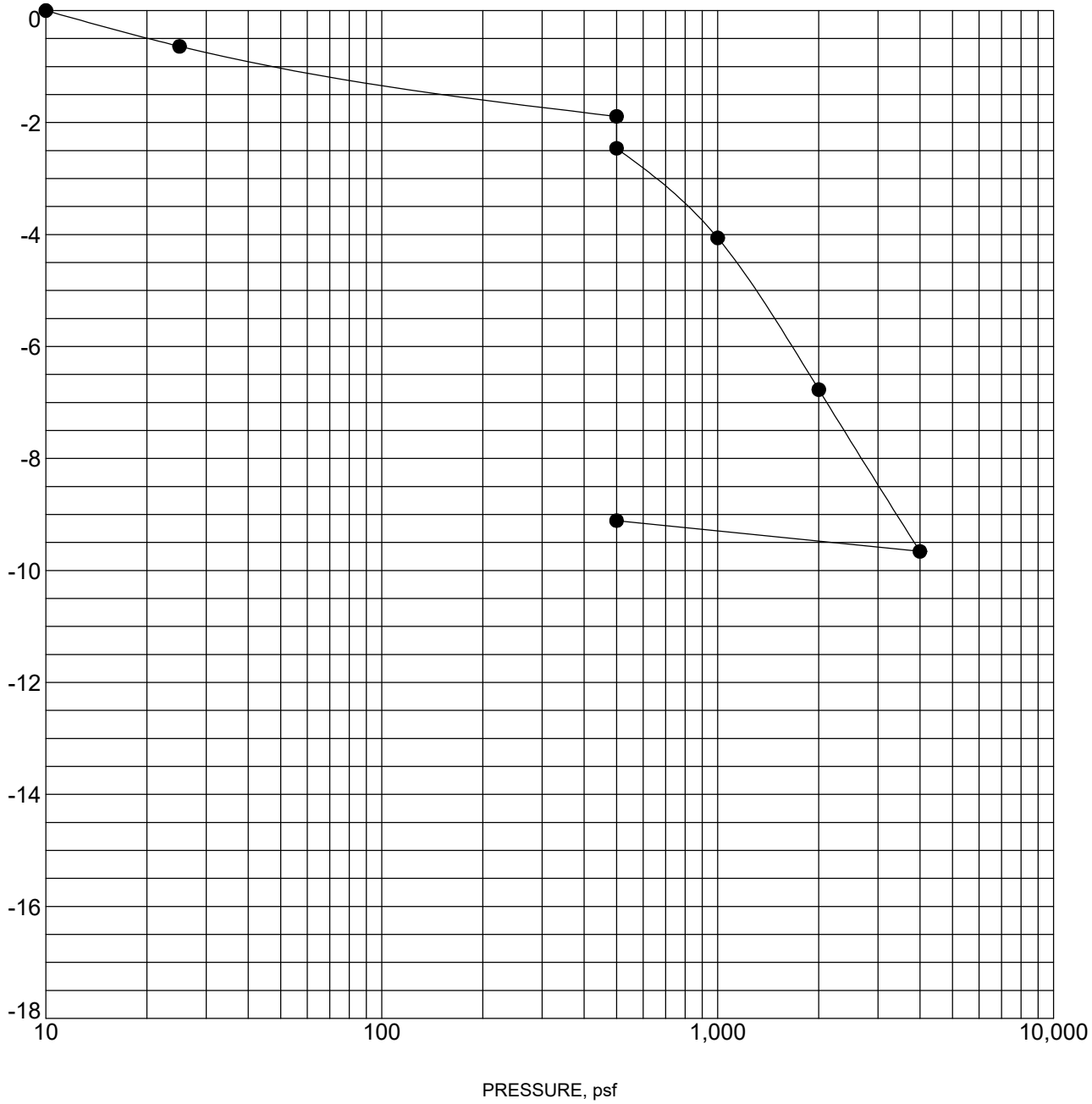
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-19	5 - 6 ft	LEAN CLAY/FAT CLAY(CL/CH)	100	24

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-36

SWELL CONSOLIDATION TEST

ASTM D2435



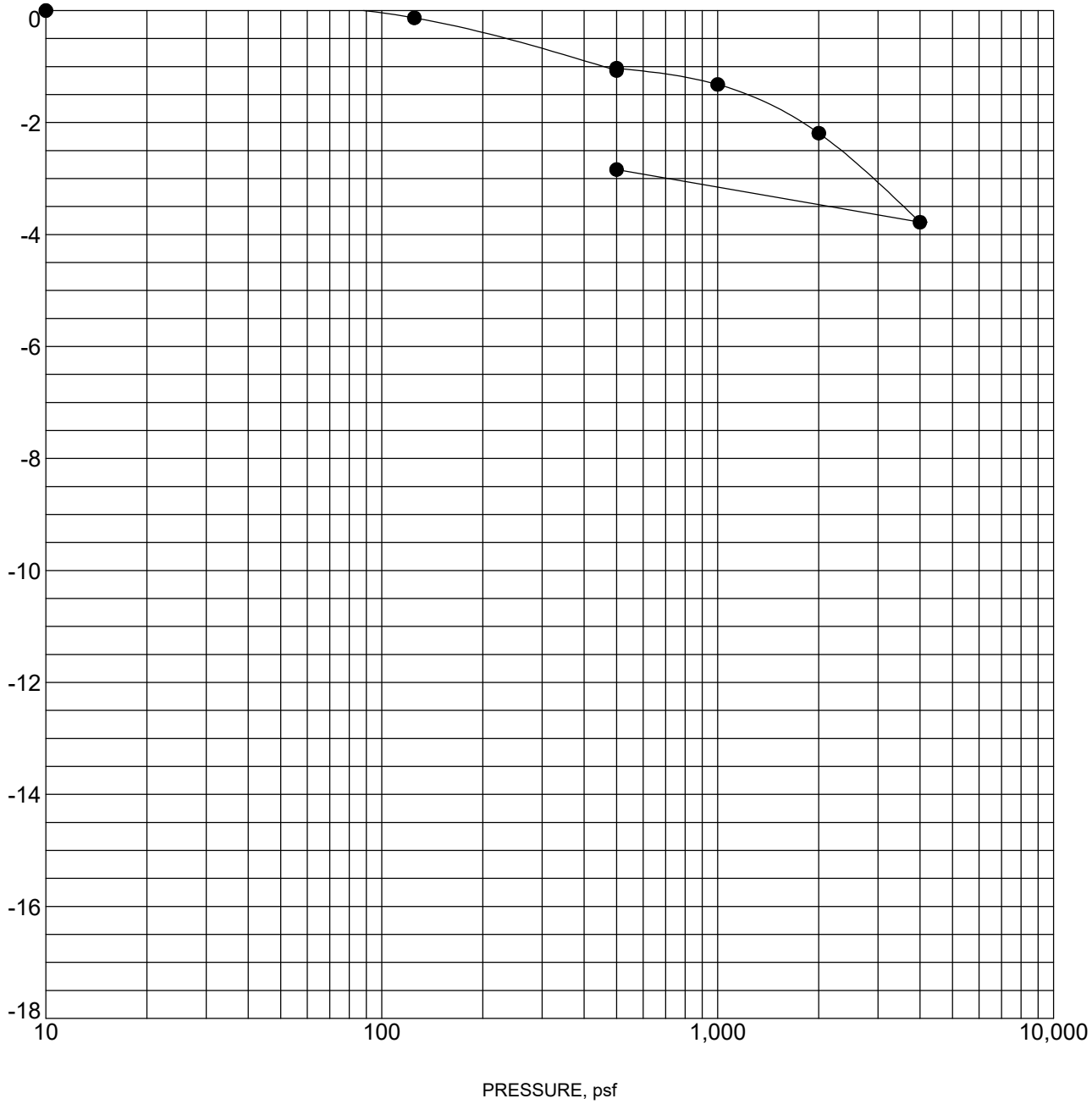
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-20 3.5 - 4.5 ft	LEAN CLAY(CL)	98	18

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-37

SWELL CONSOLIDATION TEST

ASTM D2435



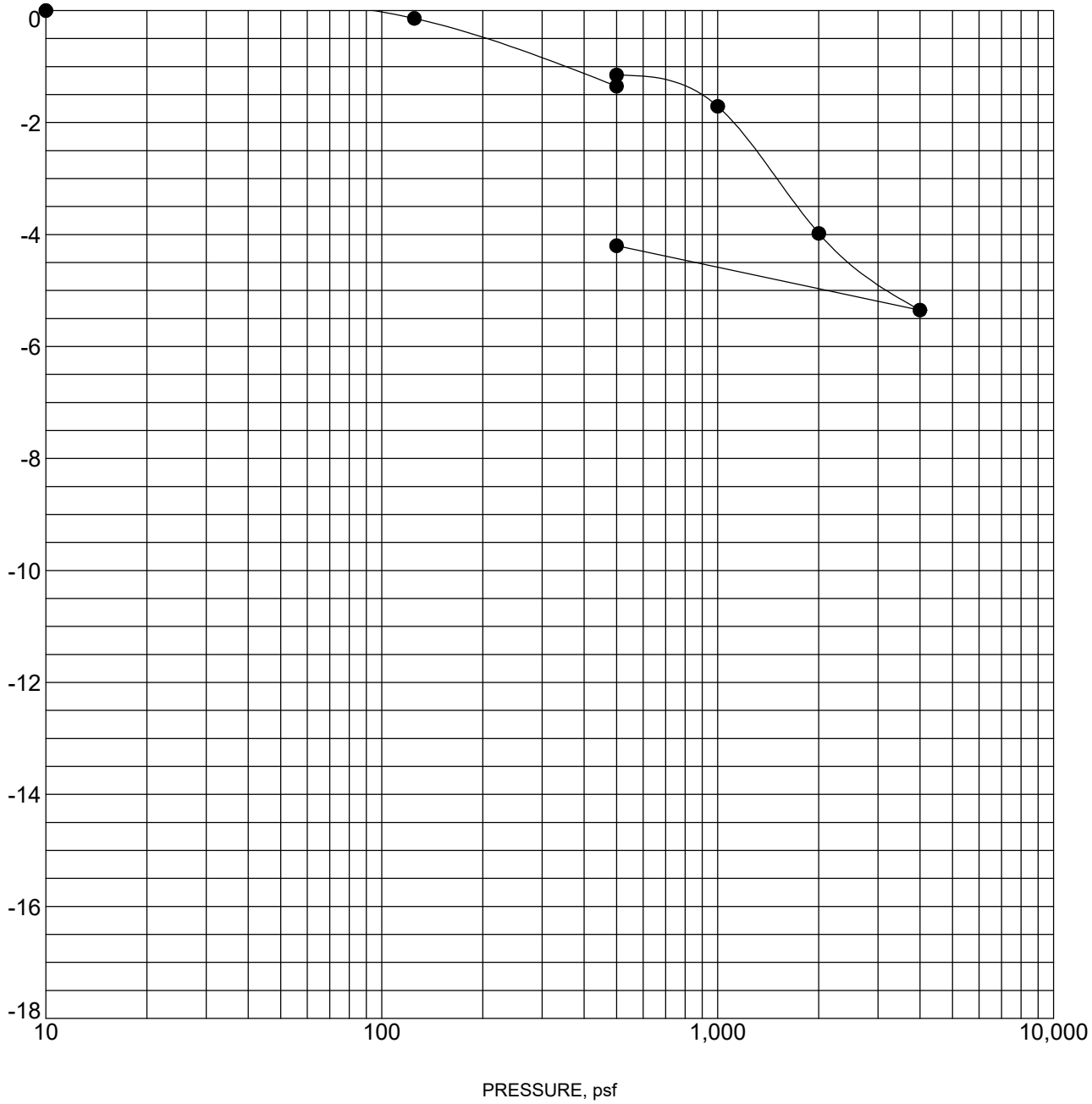
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-21	5 - 6 ft	FAT CLAY(CH)	104	18

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-38

SWELL CONSOLIDATION TEST

ASTM D2435



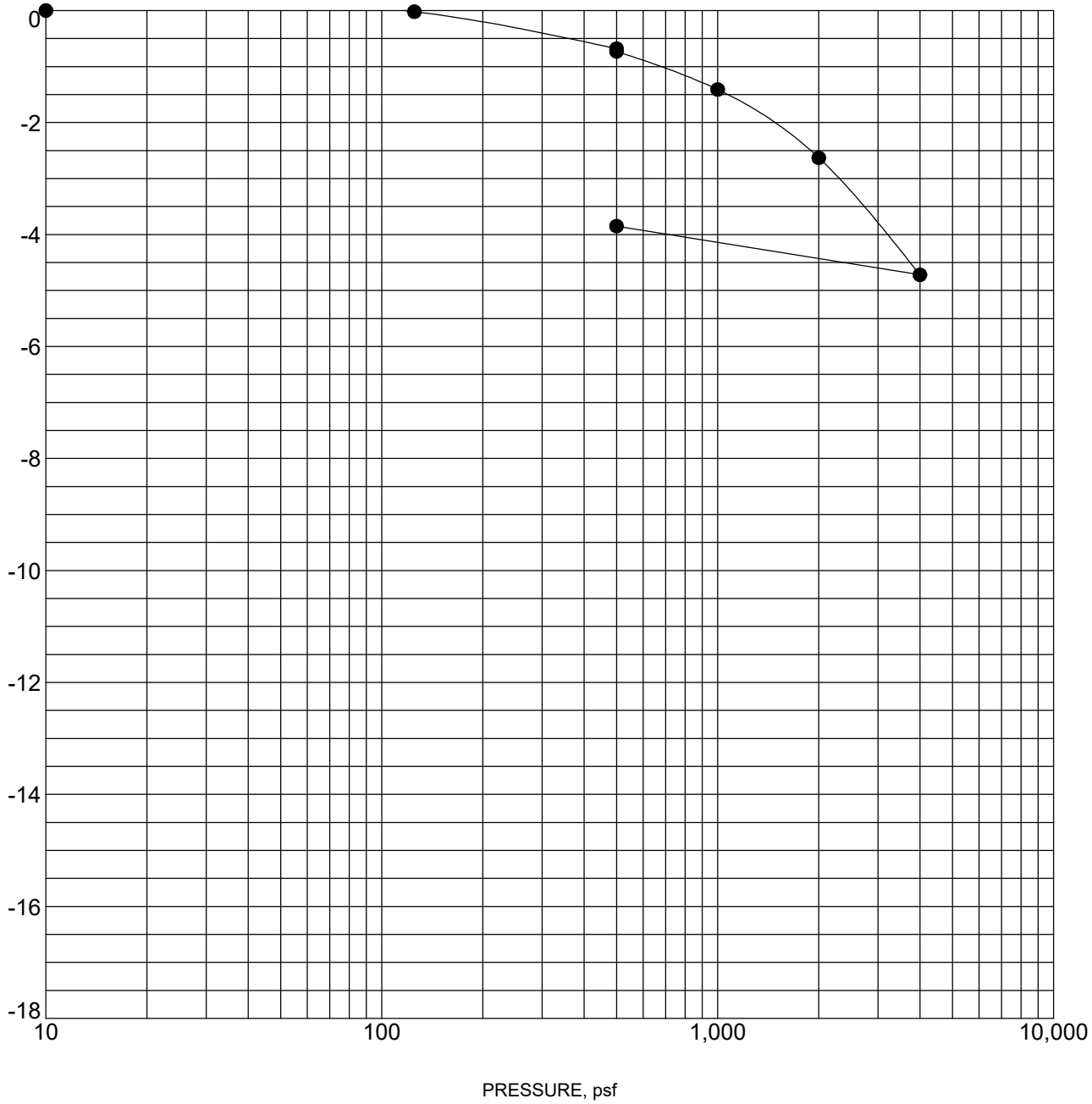
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-22 3.5 - 4.5 ft	LEAN CLAY/FAT CLAY(CL/CH)	100	20

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-39

SWELL CONSOLIDATION TEST

ASTM D2435



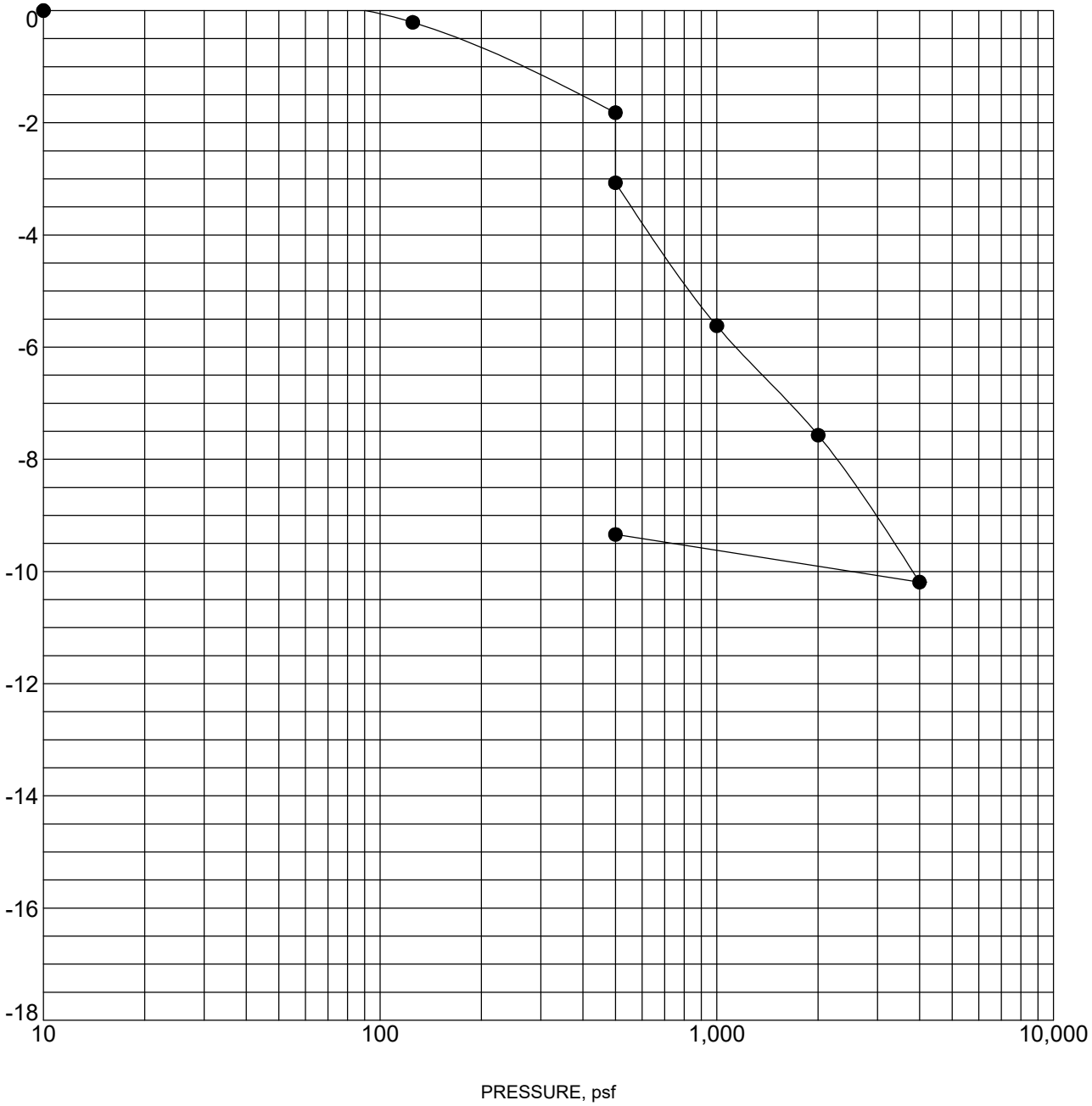
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-24 3.5 - 4.5 ft	SANDY LEAN CLAY(CL)	92	22

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-40

SWELL CONSOLIDATION TEST

ASTM D2435



Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-25	1 - 2 ft	WELL-GRADED GRAVEL with SAND(GW)	103	9

NOTES:

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

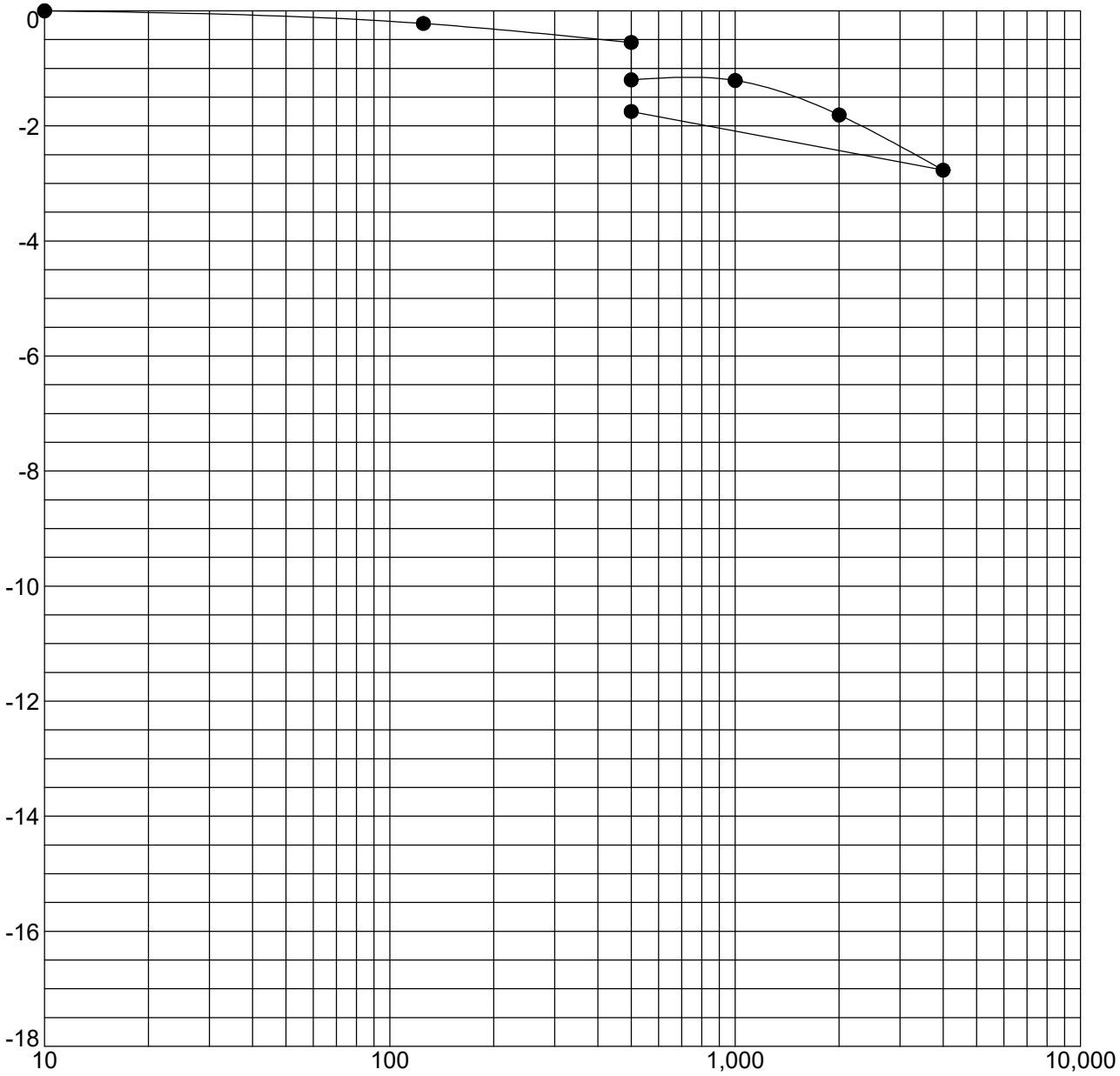
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-41

SWELL CONSOLIDATION TEST

ASTM D2435



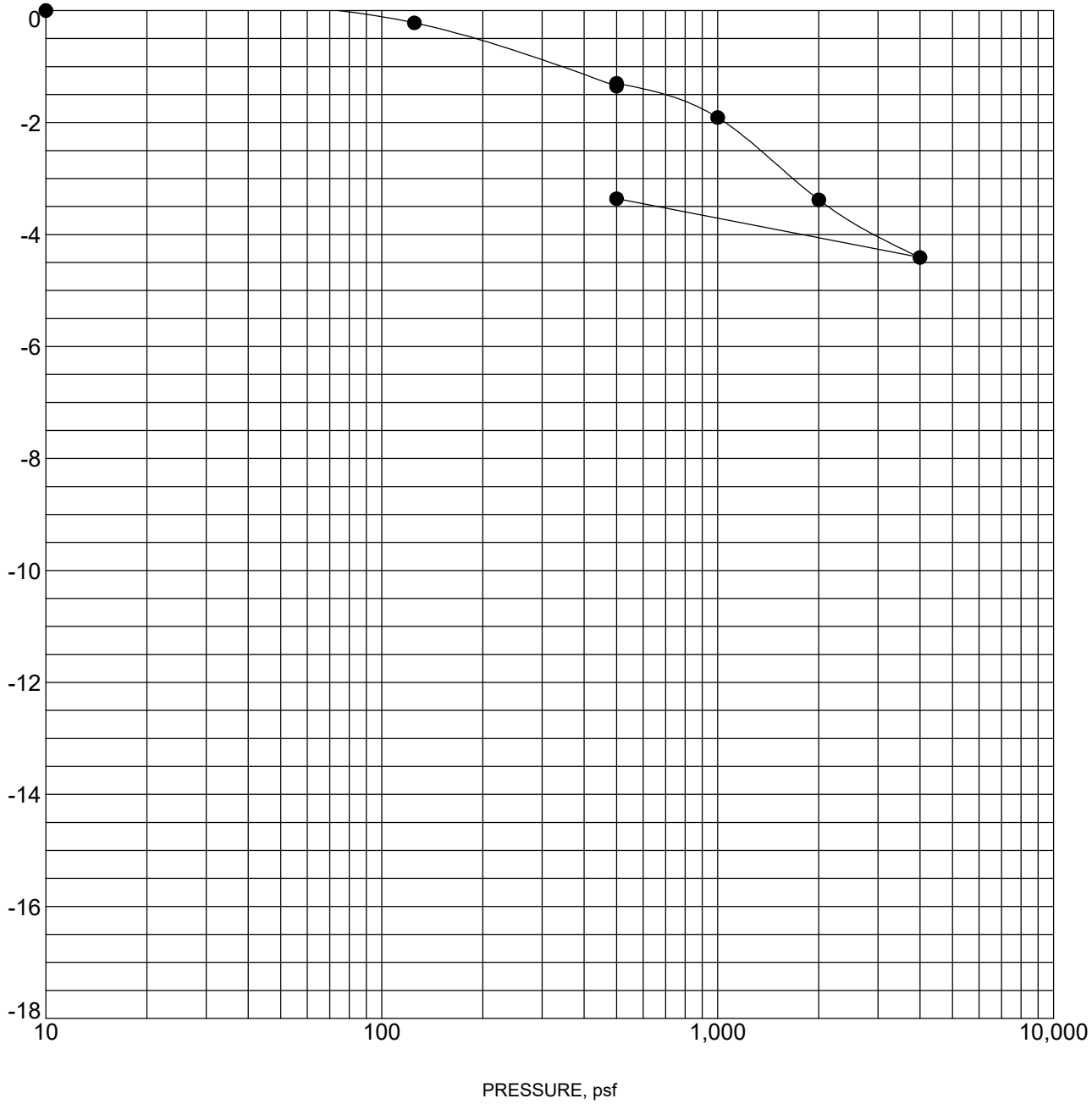
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-26	5 - 6 ft	LEAN CLAY with SAND(CL)	90	24

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-42

SWELL CONSOLIDATION TEST

ASTM D2435



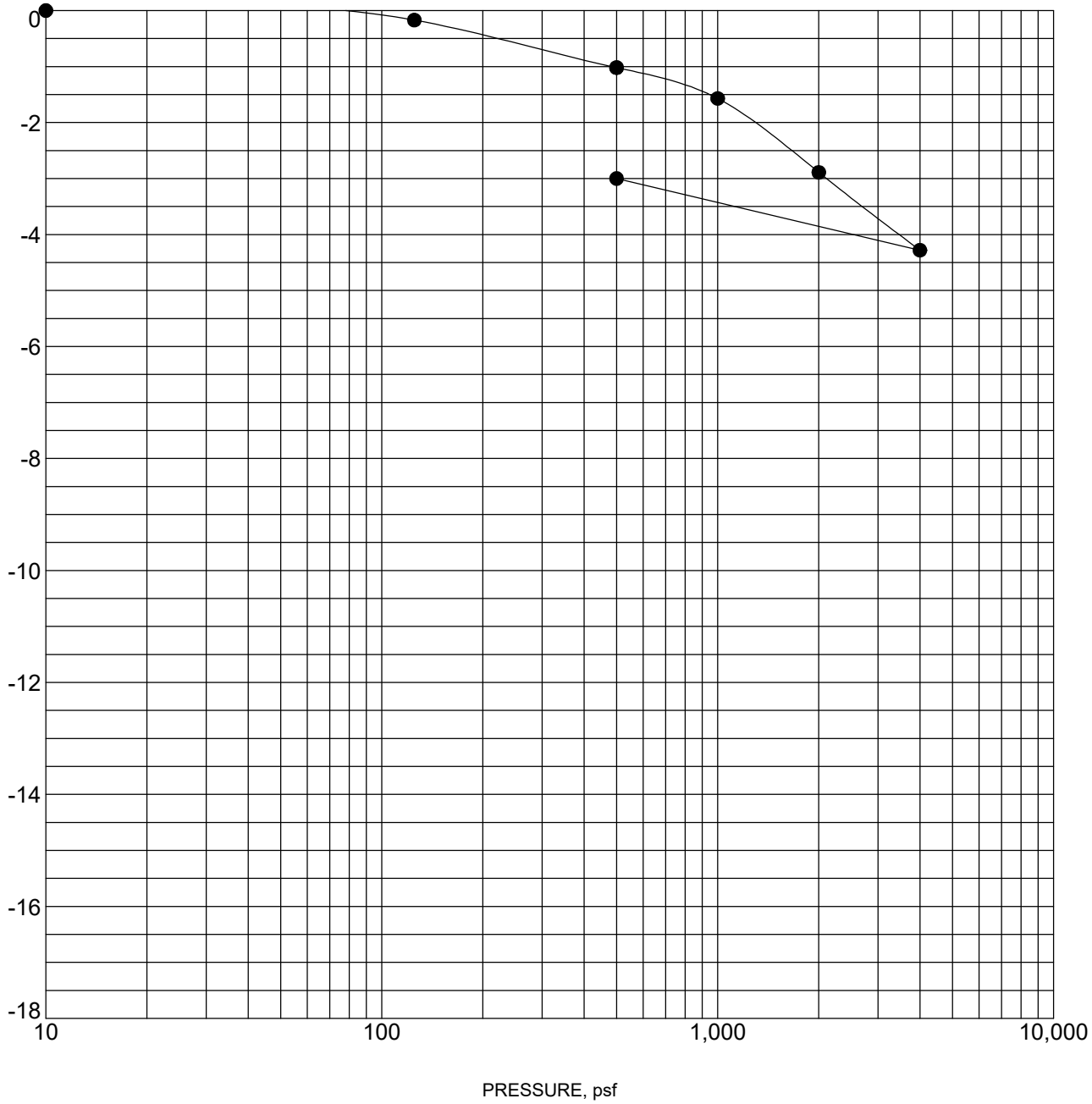
Specimen Identification			Classification	γ_d, pcf	WC, %
●	B-27	1 - 2 ft	LEAN CLAY/FAT CLAY(CL/CH)	98	25

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-43

SWELL CONSOLIDATION TEST

ASTM D2435



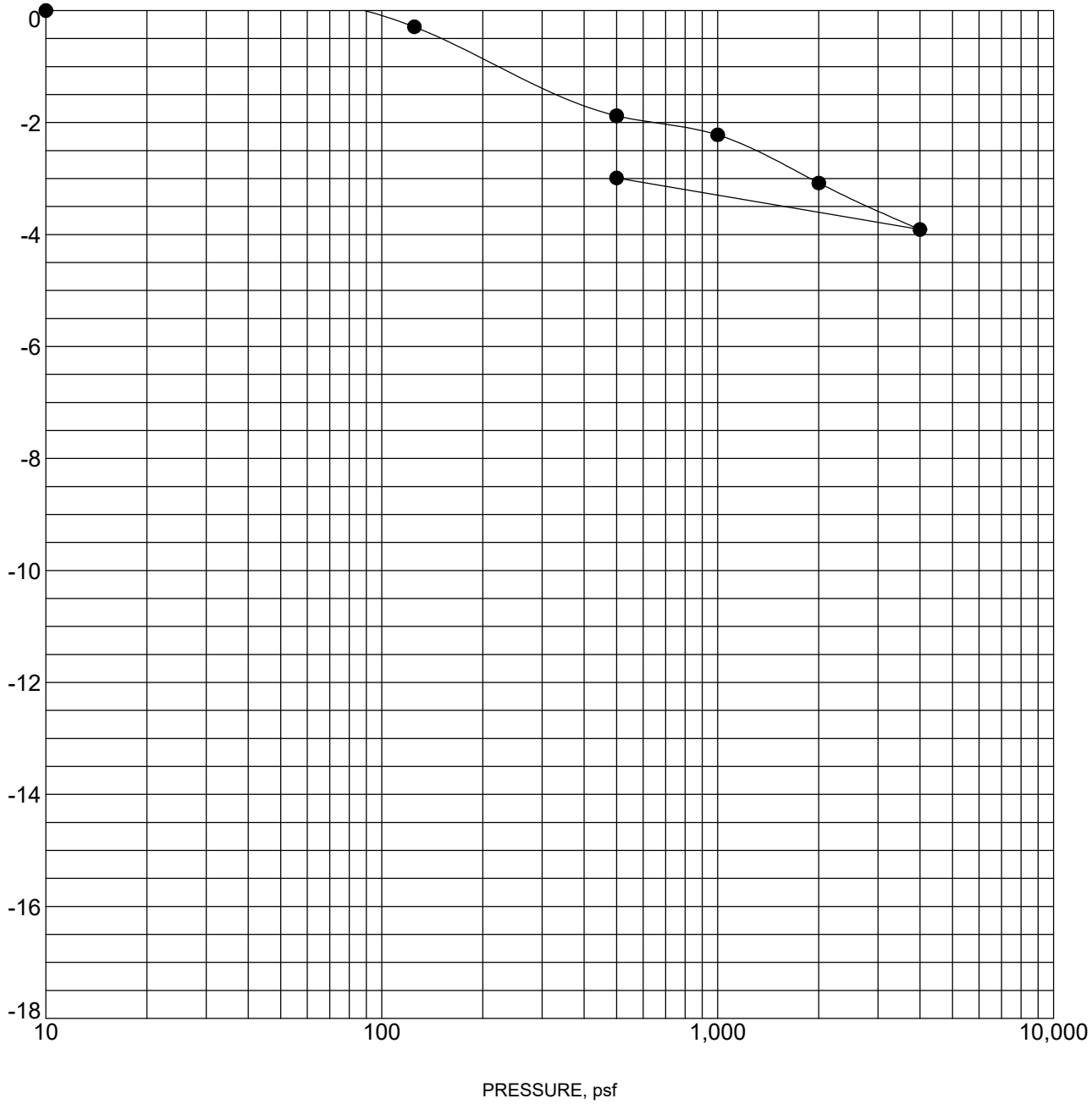
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-28 3.5 - 4.5 ft		99	23

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-44

SWELL CONSOLIDATION TEST

ASTM D2435



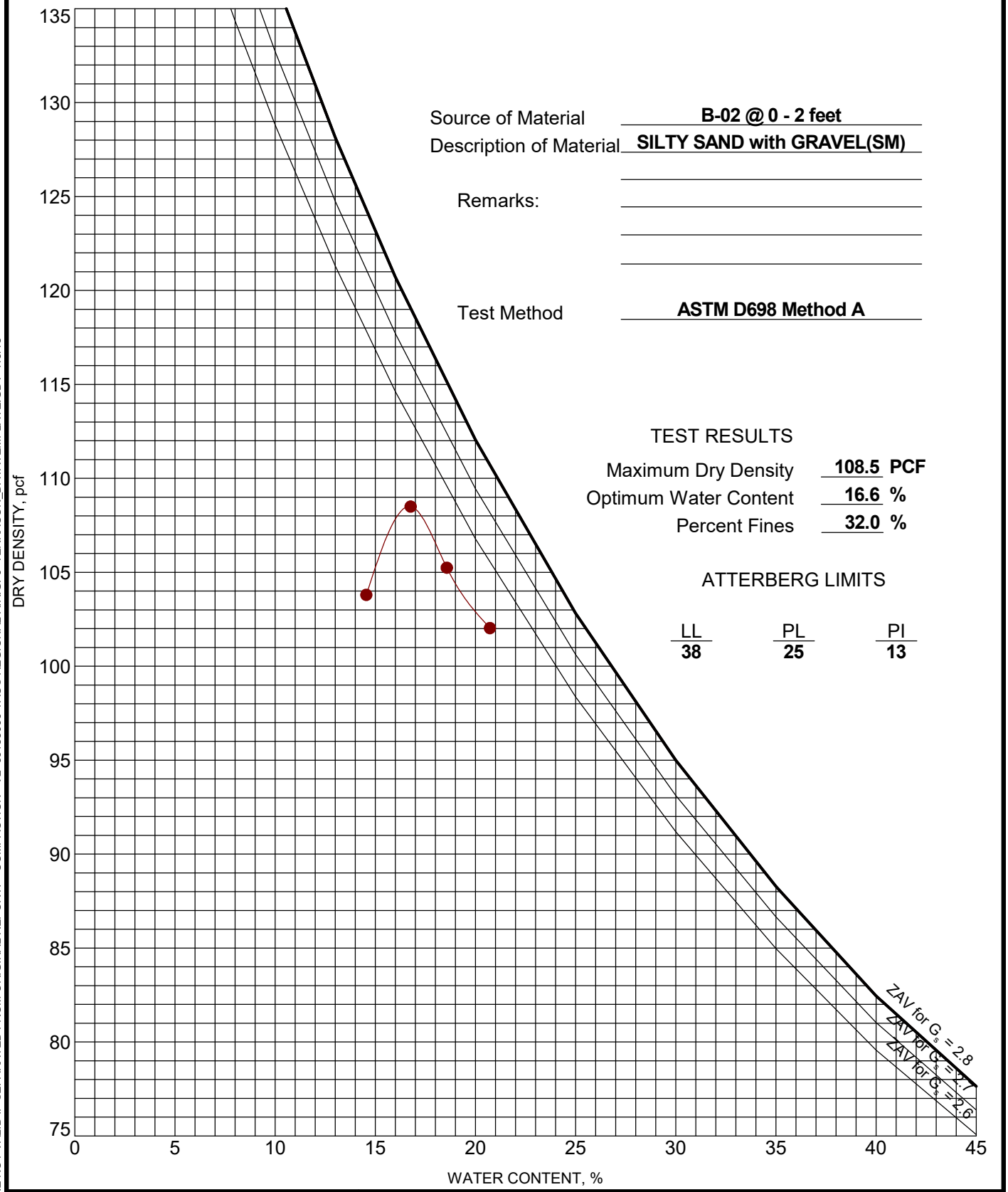
Specimen Identification		Classification	γ_d, pcf	WC, %
●	B-29 3.5 - 4.5 ft	LEAN CLAY/FAT CLAY(CL/CH)	86	26

NOTES:

PROJECT: Taos Regional Airport	Terracon 4905 Hawkins St NE Albuquerque, NM	PROJECT NUMBER: 66185006
SITE: Taos Regional Airport Taos, NM		CLIENT: Armstrong Consultants Inc Albuquerque, NM
		EXHIBIT: B-45

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material: **B-02 @ 0 - 2 feet**

Description of Material: **SILTY SAND with GRAVEL(SM)**

Remarks:

Test Method: **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density	**108.5** PCF
Optimum Water Content	**16.6** %
Percent Fines	**32.0** %

ATTERBERG LIMITS

LL	PL	PI
38	**25**	**13**

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

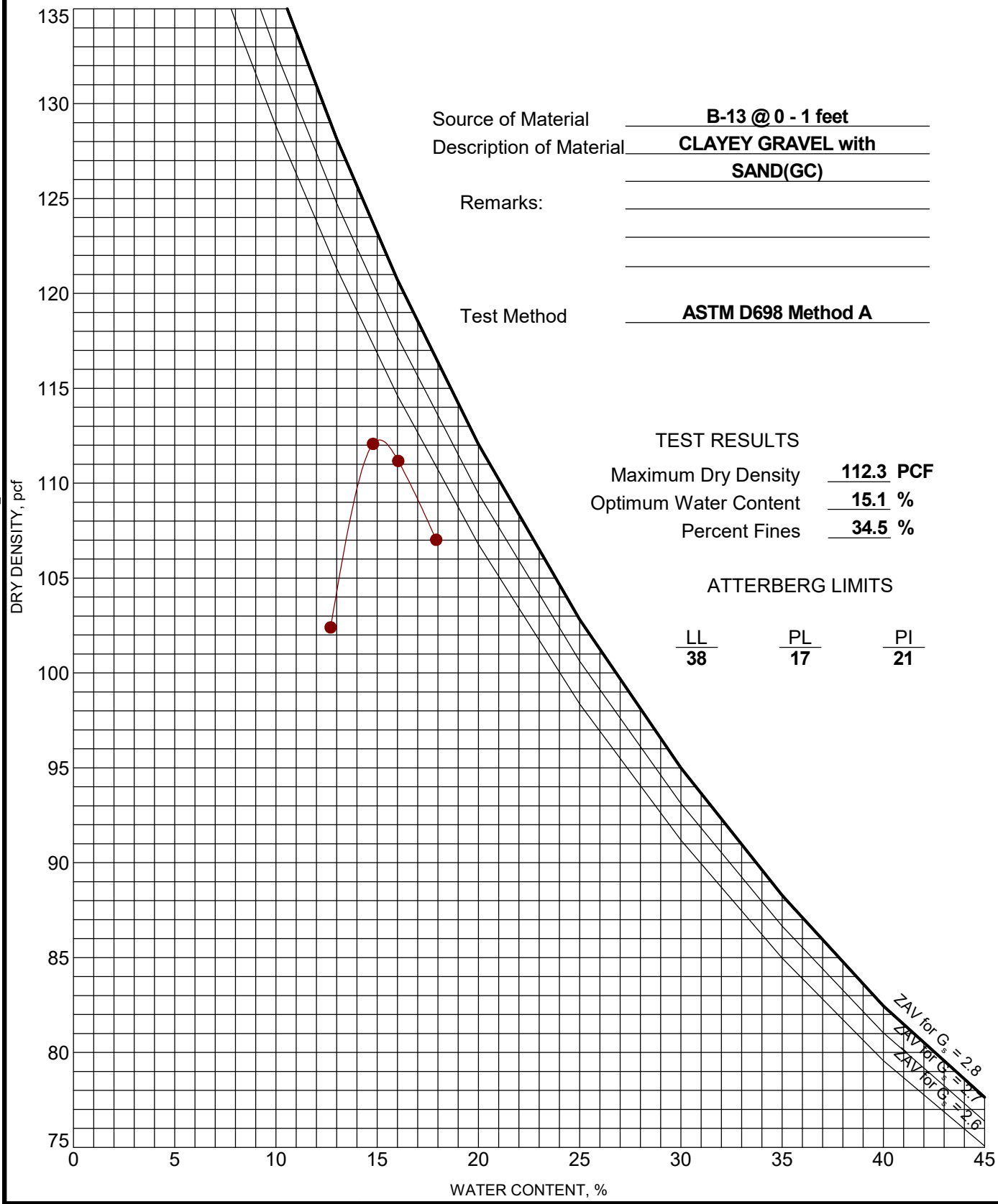
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-46

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material: **B-13 @ 0 - 1 feet**

Description of Material: **CLAYEY GRAVEL with SAND(GC)**

Remarks:

Test Method: **ASTM D698 Method A**

TEST RESULTS

Maximum Dry Density	**112.3**	**PCF**
Optimum Water Content	**15.1**	**%**
Percent Fines	**34.5**	**%**

ATTERBERG LIMITS

LL	PL	PI
38	**17**	**21**

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 66185006 TAOS REGIONAL AIR.GPJ TERRACON_DATATEMPLATE.GDT 7/3/18

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

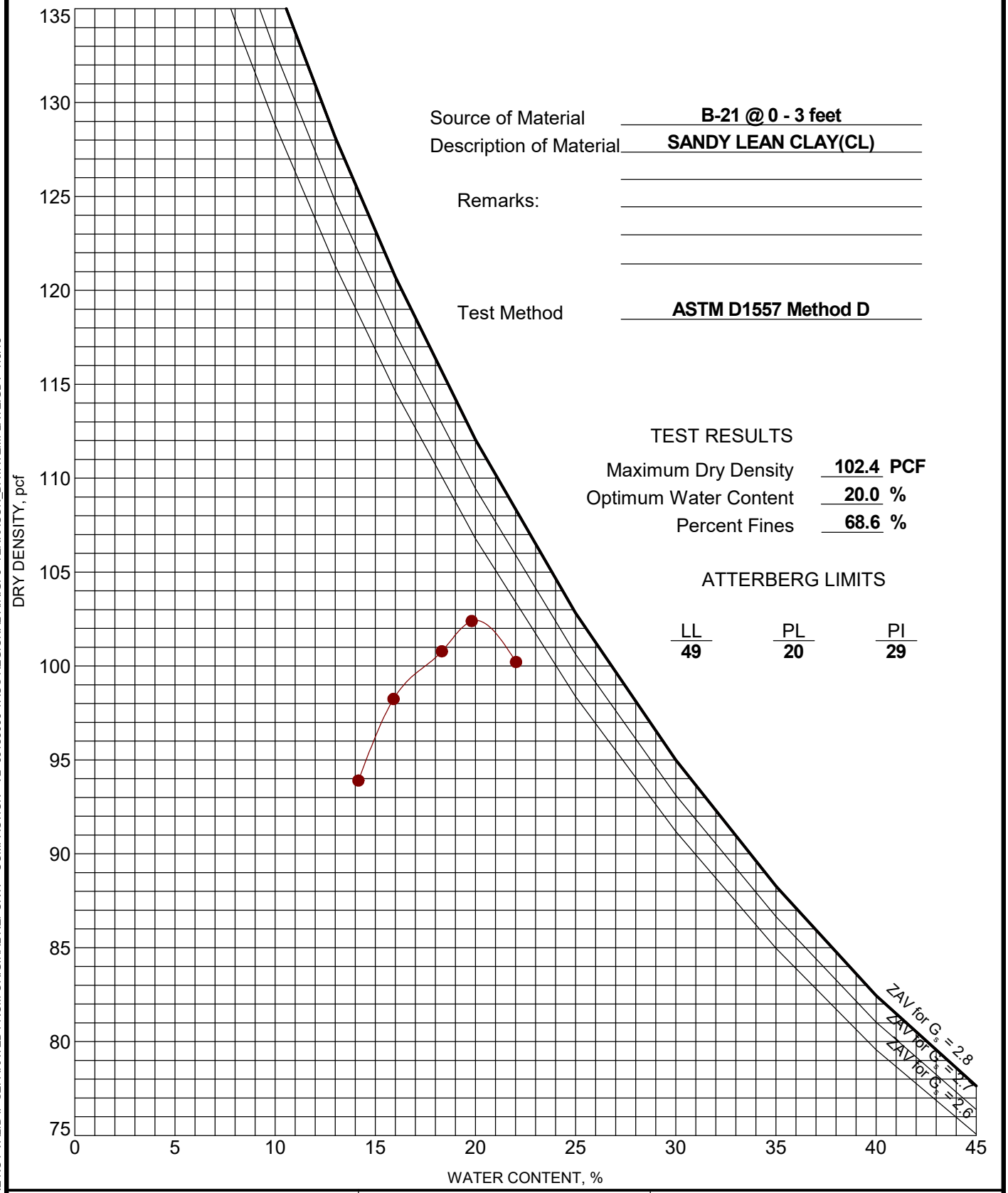
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-47

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material: **B-21 @ 0 - 3 feet**

Description of Material: **SANDY LEAN CLAY(CL)**

Remarks:

Test Method: **ASTM D1557 Method D**

TEST RESULTS

Maximum Dry Density	**102.4**	**PCF**
Optimum Water Content	**20.0**	**%**
Percent Fines	**68.6**	**%**

ATTERBERG LIMITS

LL	PL	PI
49	**20**	**29**

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

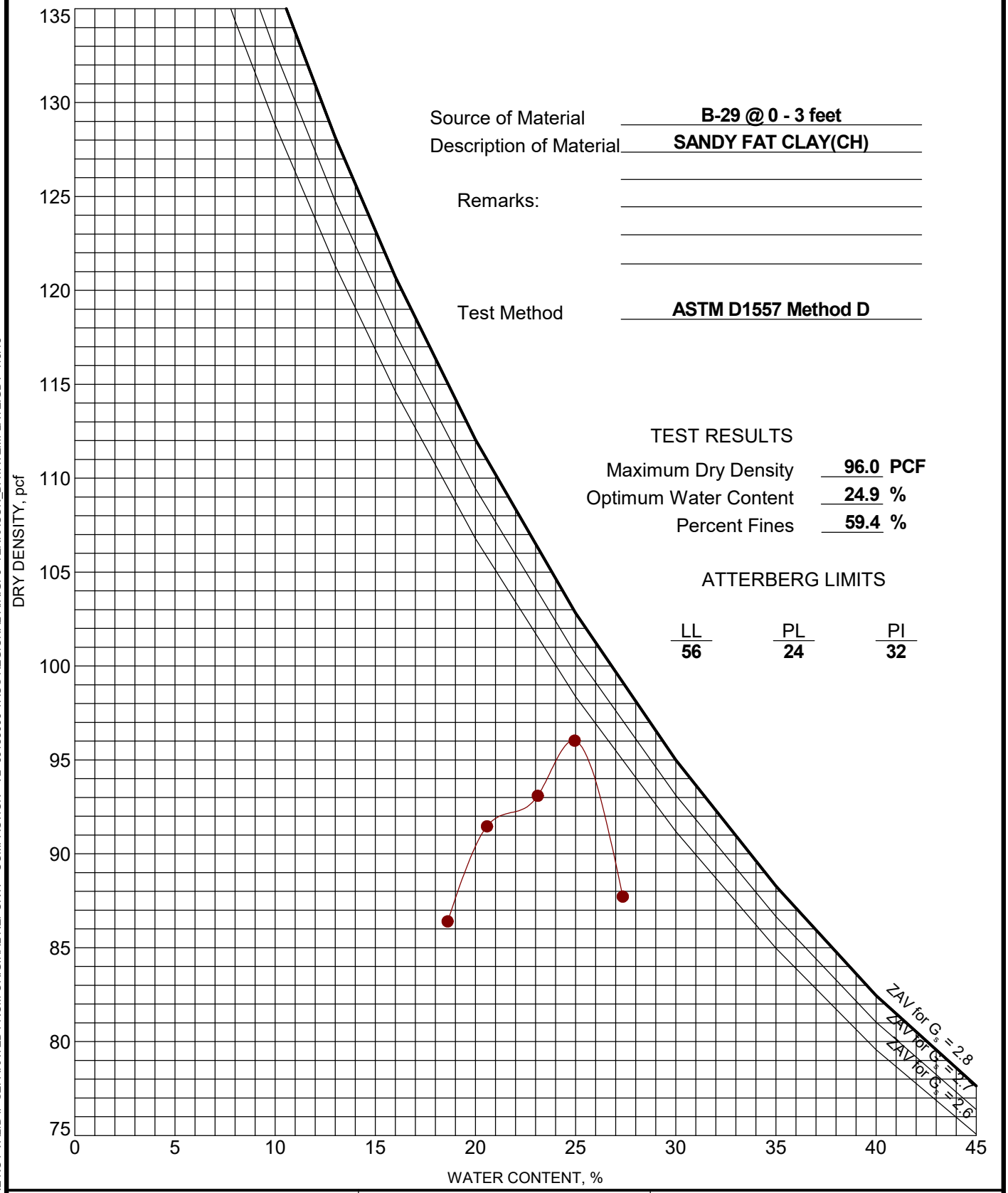
PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-48

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557



Source of Material: **B-29 @ 0 - 3 feet**

Description of Material: **SANDY FAT CLAY(CH)**

Remarks:

Test Method: **ASTM D1557 Method D**

TEST RESULTS

Maximum Dry Density	**96.0**	**PCF**
Optimum Water Content	**24.9**	**%**
Percent Fines	**59.4**	**%**

ATTERBERG LIMITS

LL	PL	PI
56	**24**	**32**

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-49

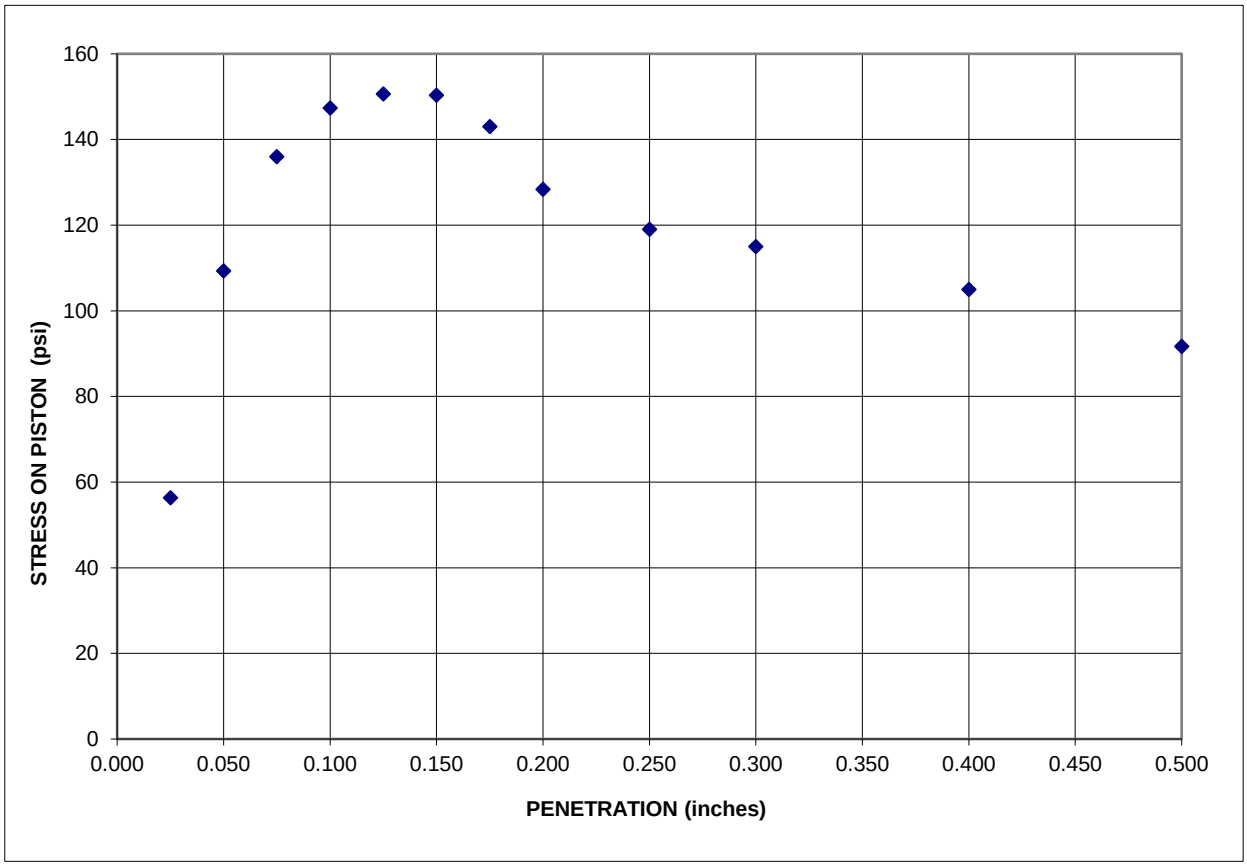
PROJECT:	Taos Regional Airport	**JOB NO:**	66185006
LOCATION:	Albuquerque, NM	**WORK ORDER NO:**	
MATERIAL:	Silty Sand w/Gravel (SM)	**LAB NO:**	1579
SAMPLE SOURCE:	B-02 @ 0-2' (Bulk)	**DATE SAMPLED:**	

CBR(CALIFORNIA BEARING RATIO) OF LABORATORY-COMPACTED SOILS
ASTM D1833 (SOAKED)

COMPACTION(%)	95
COMPACTION METHOD	D1557 MODIFIED HAMMER
	5 LIFTS @ 15 BLOWS/LIFT
SAMPLE CONDITION	SOAKED
PERCENT SWELL	0.13%
% MOISTURE (TOP 1")	17.3%
SURCHARGE WEIGHT	10 lbs
% RETAINED 19mm SIEVE	0%

	BEFORE SOAK	
DRY DENSITY	102.9	lbs./cu.ft
PERCENT MOISTURE	16.7	%

PENETRATION	0.100	0.200
CORRECTION	0.00	0.00
CORRECTED CBR	14.7	8.6
CBR (SOAKED)	**15**	



REVIEWED BY _____

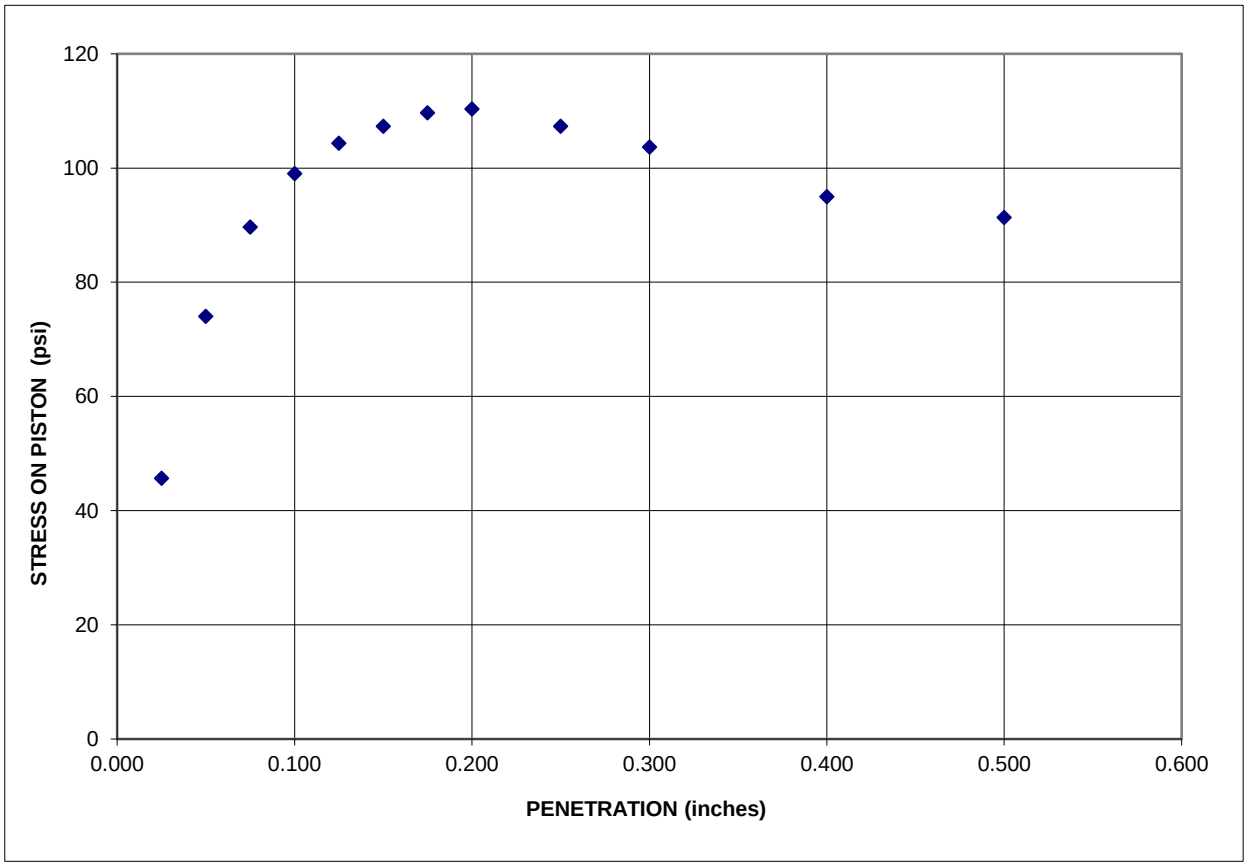
PROJECT:	Taos Regional Airport	**JOB NO:**	66185006
LOCATION:	Albuquerque, NM	**WORK ORDER NO:**	
MATERIAL:	Clayey Gravel w/Sand (GC)	**LAB NO:**	1579
SAMPLE SOURCE:	B-13 @ 0-1' (Bulk)	**DATE SAMPLED:**	

CBR(CALIFORNIA BEARING RATIO) OF LABORATORY-COMPACTED SOILS
ASTM D1833 (SOAKED)

COMPACTION(%)	95
COMPACTION METHOD	D1557 MODIFIED HAMMER
	5 LIFTS @ 15 BLOWS/LIFT
SAMPLE CONDITION	SOAKED
PERCENT SWELL	0.07%
% MOISTURE (TOP 1")	16.4%
SURCHARGE WEIGHT	10 lbs
% RETAINED 19mm SIEVE	0%

PENETRATION	0.100	0.200
CORRECTION	0.00	0.00
CORRECTED CBR	9.9	7.4
CBR (SOAKED)	**9.9**	

BEFORE SOAK		
DRY DENSITY	106.9	lbs./cu.ft
PERCENT MOISTURE	14.8	%



REVIEWED BY _____

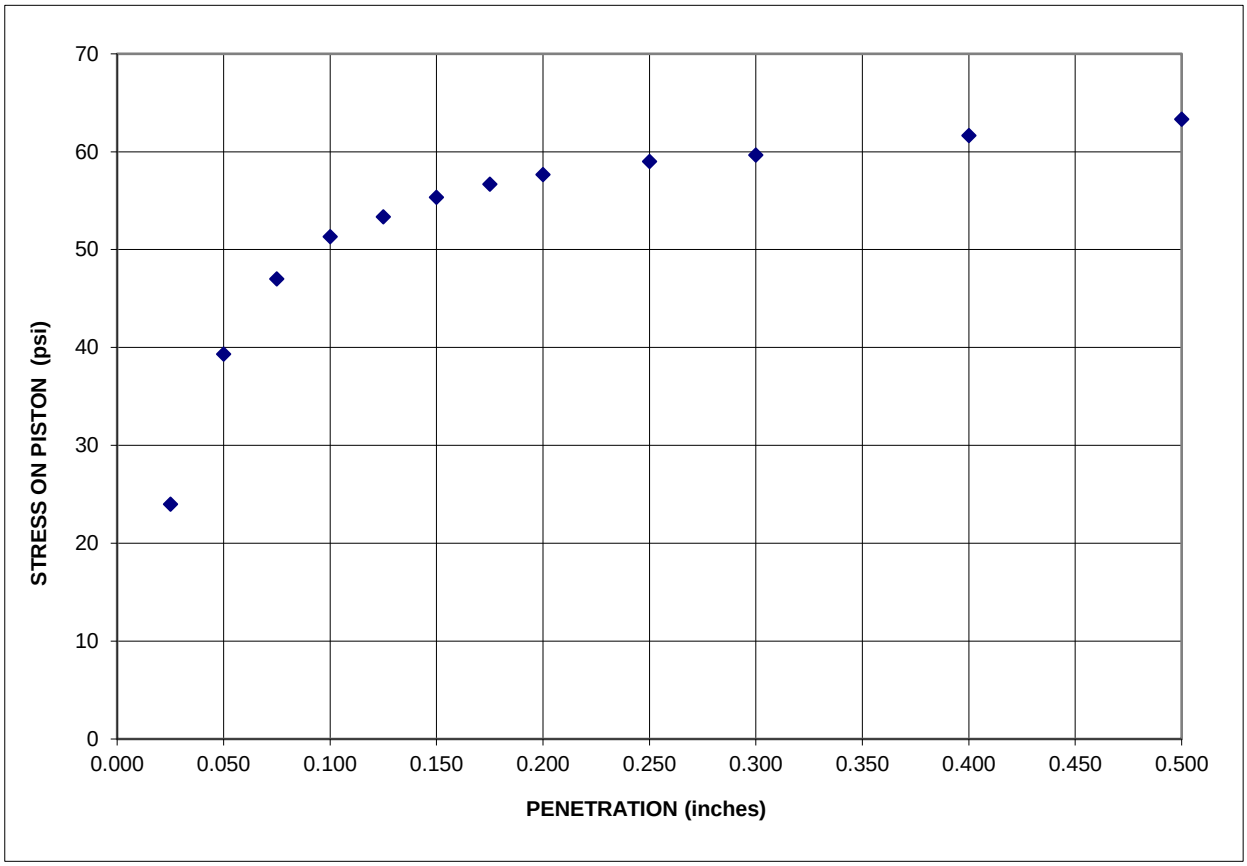
PROJECT:	Taos Regional Airport	**JOB NO:**	66185006
LOCATION:	Albuquerque, NM	**WORK ORDER NO:**	
MATERIAL:	Sandy Lean Clay (CL)	**LAB NO:**	1579
SAMPLE SOURCE:	B-21 @ 0-3' (Bulk)	**DATE SAMPLED:**	

CBR(CALIFORNIA BEARING RATIO) OF LABORATORY-COMPACTED SOILS
ASTM D1833 (SOAKED)

COMPACTION(%)	95
COMPACTION METHOD	D1557 MODIFIED HAMMER
	5 LIFTS @ 10 BLOWS/LIFT
SAMPLE CONDITION	SOAKED
PERCENT SWELL	0.24%
% MOISTURE (TOP 1")	21.8%
SURCHARGE WEIGHT	10 lbs
% RETAINED 19mm SIEVE	0%

PENETRATION	0.100	0.200
CORRECTION	0.00	0.00
CORRECTED CBR	5.1	3.8
CBR (SOAKED)	**5**	

	BEFORE SOAK
DRY DENSITY	97.2 lbs./cu.ft
PERCENT MOISTURE	19.8 %



REVIEWED BY _____

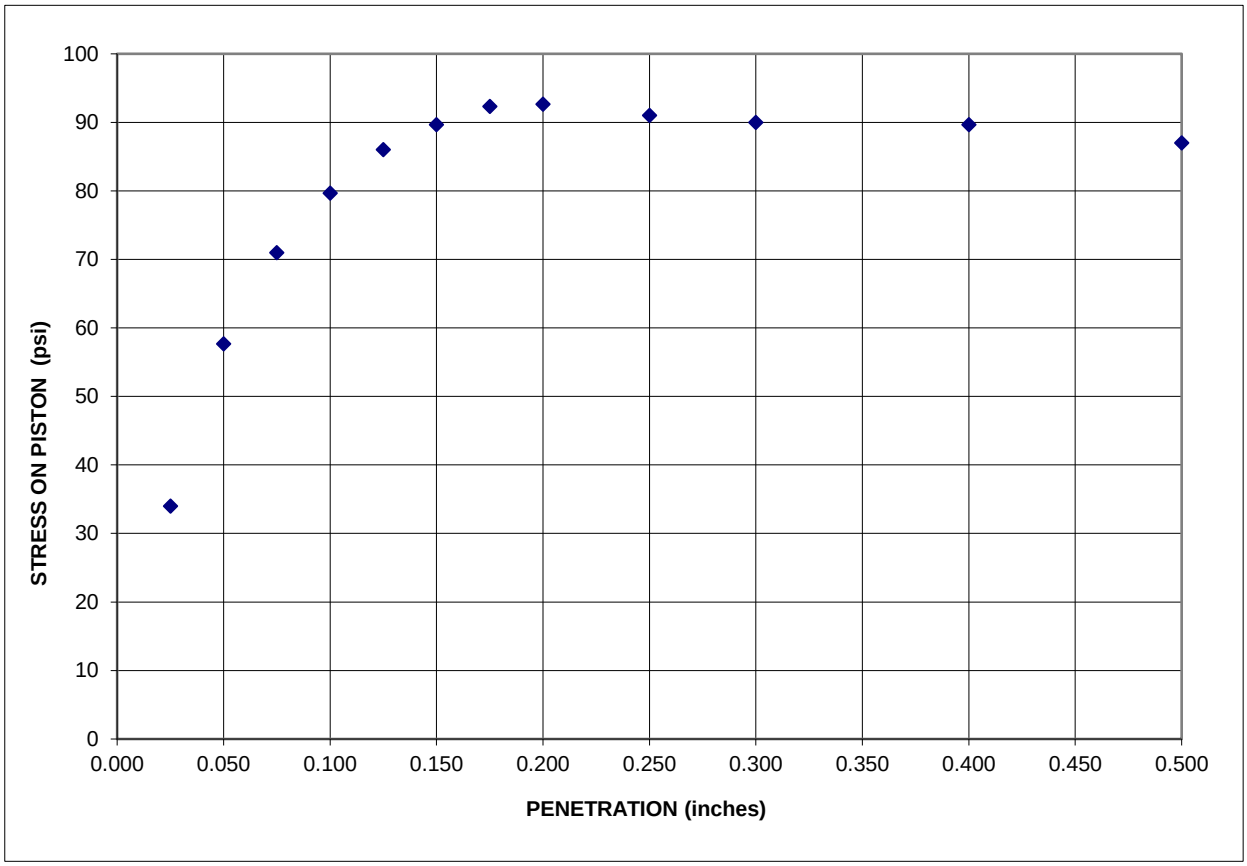
PROJECT:	Taos Regional Airport	**JOB NO:**	66185006
LOCATION:	Albuquerque, NM	**WORK ORDER NO:**	
MATERIAL:	Sandy Fat Clay (CH)	**LAB NO:**	1579
SAMPLE SOURCE:	B-29 @ 0-3' (Bulk)	**DATE SAMPLED:**	

CBR(CALIFORNIA BEARING RATIO) OF LABORATORY-COMPACTED SOILS
ASTM D1833 (SOAKED)

COMPACTION(%)	95
COMPACTION METHOD	D1557 MODIFIED HAMMER
	5 LIFTS @ 9 BLOWS/LIFT
SAMPLE CONDITION	SOAKED
PERCENT SWELL	0.44%
% MOISTURE (TOP 1")	25.7%
SURCHARGE WEIGHT	10 lbs
% RETAINED 19mm SIEVE	0%

	BEFORE SOAK	
DRY DENSITY	91.5	lbs./cu.ft
PERCENT MOISTURE	24.6	%

PENETRATION	0.100	0.200
CORRECTION	0.00	0.00
CORRECTED CBR	8.0	6.2
CBR (SOAKED)	**8**	



REVIEWED BY _____

Summary of Laboratory Results

BORING ID	Depth	USCS Classification and Soil Description	Compressive Strength (tsf)	Liquid Limit	Plastic Limit	Plasticity Index	% <#200 Sieve	% Gravel	% Sand	% Silt	% Clay	Water Content (%)	Dry Density (pcf)
B-01	1.5 - 3						66.2	3.0	30.8			21.5	
B-01	3.5 - 5						71.0	2.3	26.7			24.8	
B-01	5 - 6	FAT CLAY(CH)					22.7	34.7	42.5			22.7	84.6
B-02	0 - 2	SILTY SAND with GRAVEL(SM)		38	25	13	32.0	32.7	35.3	20.2	11.8		
B-02	1.5 - 3						75.1	3.6	21.3			21.2	
B-02	3.5 - 5						49.9	14.9	35.2			22.8	
B-02	5 - 6	SANDY LEAN CLAY(CL)					43.8	9.9	41.8			30.6	71.3
B-02	6.5												
B-02	10 - 11.5											13.5	
B-03	1.5 - 3						81.8	0.3	17.9			24.4	
B-03	3.5 - 4.5						61.7	0.7	37.6			24.8	90.1
B-03	5 - 6.5						37.0	16.3	46.7			32.2	
B-04	1.5 - 3						69.3	4.8	25.9			19.5	
B-04	3.5 - 5						77.5	2.7	19.8			20.6	
B-04	5 - 6	CLAYEY SAND(SC)					48.4	22.2	29.5			25.8	
B-05	1.5 - 3						10.0	60.4	29.7			4.7	
B-05	3.5 - 4.5	LEAN CLAY(CL)					72.7	1.0	26.3			20.5	98.3
B-05	5 - 6.5						31.6	15.3	53.1			22.1	
B-05	10 - 11											15.9	
B-06	1.5 - 3						61.6	15.0	23.5			16.9	
B-06	3.5 - 5						77.2	3.5	19.3			18.9	
B-06	5 - 6	CLAYEY GRAVEL with SAND(GC)		50	18	32	44.2	39.3	16.5			13.5	
B-07	1.5 - 2.5	SANDY LEAN CLAY with					69.9	8.6	21.5			21.0	97.5
		GRAVEL(CL)											
B-07	3.5 - 5						67.3	1.7	31.0			24.9	
B-07	5 - 6.5						56.9	0.4	42.7			25.4	
B-07	10 - 11.5											8.0	
B-08	1.5 - 3						37.4	34.9	27.7			10.3	
B-08	3.5 - 5						68.2	4.4	27.4			20.1	
B-08	5 - 6	LEAN CLAY/FAT CLAY(CL/CH)					75.0	0.4	24.6			23.2	77.8
B-09	1.5 - 3						12.4	58.9	28.6			11.9	
B-09	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)					72.3	3.9	23.8			23.1	82.9
B-09	5 - 6.5						87.4	0.8	11.8			28.4	
B-09	10 - 11.5											22.1	
B-10	1 - 2.5						57.2	4.6	38.2			18.9	
B-10	3.5 - 5						56.3	0.8	42.9			21.1	
B-10	5 - 6	SANDY LEAN CLAY(CL)					65.9	11.0	23.0			21.6	82.5
B-11	1 - 2.5						36.4	29.2	34.4			11.5	
B-11	3.5 - 4.5	SANDY FAT CLAY(CH)					59.7	20.5	19.7			14.3	98.2
B-11	5 - 6.5						71.3	5.8	22.9			18.0	
B-11	10 - 11.5											2.9	
B-12	1 - 2.5						17.1	47.9	35.0			6.0	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-54

Summary of Laboratory Results

BORING ID	Depth	USCS Classification and Soil Description	Compressive Strength (tsf)	Liquid Limit	Plastic Limit	Plasticity Index	% <#200 Sieve	% Gravel	% Sand	% Silt	% Clay	Water Content (%)	Dry Density (pcf)
B-12	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)					41.8	38.3	20.0			11.6	106.9
B-12	5 - 6.5						74.9	0.6	24.4			19.7	
B-13	0 - 1	CLAYEY GRAVEL with SAND(GC)		38	17	21	34.5	34.1	31.4	12.5	22.0		
B-13	0.5 - 2						22.8	33.7	43.5			7.8	
B-13	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)					76.3	0.3	23.4			31.4	83.6
B-13	5 - 6.5						77.7	0.3	22.0			26.2	
B-13	10 - 11.5						13.4	61.1	25.5			5.4	
B-14	1 - 2						9.6	54.7	35.7			4.6	109.9
B-14	3.5 - 5						54.7	5.0	40.3			28.6	
B-14	4						75.5	1.6	22.9				
B-14	5 - 6.5											21.8	
B-15	1.5 - 3						46.3	24.6	29.1			13.6	
B-15	3.5 - 5						67.0	2.8	30.2			18.3	
B-15	6 - 7	LEAN CLAY with GRAVEL(CL)					46.6	22.1	31.4			12.3	91.2
B-15	10 - 11.42											2.5	
B-16	0 - 2												
B-16	1.5 - 3						89.8	1.2	8.9			22.7	
B-16	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)					40.5	34.7	24.9			13.6	97.4
B-16	5 - 6.5											20.4	
B-16	10												
B-17	1.5 - 2.5	FAT CLAY(CH)					22.3	31.3	46.4			10.4	115.2
B-17	3.5 - 5						67.8	1.4	30.8			22.0	
B-17	5 - 6.5						65.9	3.5	30.6			24.7	
B-17	10 - 11.5											3.0	
B-18	1.5 - 3						60.9	10.6	28.5			17.5	
B-18	3.5 - 4.5	CLAYEY SAND(SC)					25.9	32.9	41.2			9.0	104.8
B-18	5 - 6.5						35.7	41.9	22.4			11.1	
B-19	1 - 2.5						27.8	35.2	37.1			10.8	
B-19	3.5 - 5						50.8	9.4	39.7			20.4	
B-19	5 - 6	LEAN CLAY/FAT CLAY(CL/CH)					74.6	5.4	20.0			23.7	100.0
B-19	10 - 11.5											9.2	
B-20	1 - 2.5						71.9	4.2	23.8			20.2	
B-20	3.5 - 4.5	LEAN CLAY(CL)					71.3	0.2	28.5			17.9	97.9
B-20	5 - 6.5						66.2	1.4	32.4			20.1	
B-21	0 - 3	SANDY LEAN CLAY(CL)		49	20	29	68.6	0.0	31.4	38.1	30.6	14.2	
B-21	1 - 2.5						75.0	10.0	14.9			21.3	
B-21	3.5 - 5						83.4	1.5	15.1			23.8	
B-21	5 - 6	FAT CLAY(CH)					89.8	0.0	10.2			18.0	104.1
B-21	10 - 11.5											6.4	
B-22	1.5 - 3						19.6	31.8	48.6			12.3	
B-22	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)					69.5	12.1	18.4			19.9	99.9
B-22	5 - 6.5						59.3	6.9	33.8			18.0	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-55

Summary of Laboratory Results

BORING ID	Depth	USCS Classification and Soil Description	Compressive Strength (tsf)	Liquid Limit	Plastic Limit	Plasticity Index	% <#200 Sieve	% Gravel	% Sand	% Silt	% Clay	Water Content (%)	Dry Density (pcf)
B-22	10 - 11.5											2.8	
B-23	1.5 - 2.5						83.3	0.1	16.6			26.1	95.1
B-23	3.5 - 5											21.1	
B-23	5 - 6.5						57.1	7.1	35.8			21.7	
B-23	10 - 11.5						66.5	1.3	32.2			6.7	
B-24	1 - 2.5						23.5	39.9	36.6			11.9	
B-24	3.5 - 4.5	SANDY LEAN CLAY(CL)					58.1	6.8	35.1			22.4	91.9
B-24	5 - 6.5						48.7	13.1	38.2			20.8	
B-25	1 - 2	WELL-GRADED GRAVEL with					2.6	52.5	44.9			9.2	102.5
		SAND(GW)											
B-25	3.5 - 5						59.8	8.4	31.8			19.0	
B-25	5 - 6.5						71.7	3.2	25.2			22.0	
B-25	10 - 11.5											5.2	
B-26	1.5 - 3						77.2	1.2	21.6			21.5	
B-26	3.5 - 5						68.2	4.0	27.8			20.8	
B-26	5 - 6	LEAN CLAY with SAND(CL)					73.6	0.2	26.3			24.2	89.7
B-27	1 - 2	LEAN CLAY/FAT CLAY(CL/CH)					81.7	1.4	16.9			25.2	97.6
B-27	3.5 - 5						78.5	0.3	21.2			25.5	
B-27	5 - 6.5						71.5	2.7	25.8			23.5	
B-27	10 - 11.5											2.9	
B-28	1.5 - 3						76.8	2.1	21.1			22.4	
B-28	3.5 - 4.5						84.0	0.0	16.0			23.5	99.2
B-28	5 - 6.5						78.0	0.4	21.6			24.0	
B-28	6.5 - 8											26.2	
B-29	0 - 3	SANDY FAT CLAY(CH)		56	24	32	59.4	3.3	37.3	15.6	43.8	17.9	
B-29	1.5 - 3						60.3	3.5	36.2			22.8	
B-29	3.5 - 4.5	LEAN CLAY/FAT CLAY(CL/CH)					70.4	0.1	29.5			26.2	86.3
B-29	5 - 6.5						58.9	0.3	40.9			28.8	
B-29	6.5 - 8											25.6	

PROJECT: Taos Regional Airport

SITE: Taos Regional Airport
Taos, NM

Terracon
4905 Hawkins St NE
Albuquerque, NM

PROJECT NUMBER: 66185006

CLIENT: Armstrong Consultants Inc
Albuquerque, NM

EXHIBIT: B-56

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 25, 2018

Mike Anderson

Terracon
4905 Hawkins, NE
Albuquerque, NM 87109
TEL: (505) 797-4287
FAX (505) 797-4288

RE: Taos Regional Airport OrderNo.: 1805A18

Dear Mike Anderson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/17/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1805A18**
Date Reported: **5/25/2018**

CLIENT: Terracon
Project: Taos Regional Airport
Lab ID: 1805A18-001 **Matrix:** SOIL

Client Sample ID: B-02 (Bulk)
Collection Date: 5/17/2018 2:00:00 PM
Received Date: 5/17/2018 2:10:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Sulfate	3100	75		mg/Kg	50	5/22/2018 7:14:27 PM	38246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: B-13 (Bulk)
Project: Taos Regional Airport
Collection Date: 5/17/2018 2:00:00 PM
Lab ID: 1805A18-002 **Matrix:** SOIL **Received Date:** 5/17/2018 2:10:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Sulfate	100	1.5		mg/Kg	1	5/22/2018 4:29:43 AM	38246

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805A18**

25-May-18

Client: Terracon

Project: Taos Regional Airport

Sample ID	**MB-38246**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**38246**	RunNo:	**51408**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/21/2018**	SeqNo:	**1673973**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	1.5								

Sample ID	**LCS-38246**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**38246**	RunNo:	**51408**					
Prep Date:	**5/21/2018**	Analysis Date:	**5/21/2018**	SeqNo:	**1673974**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	28	1.5	30.00	0	92.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-Alb | Work Order Number: 1805A18 | RcptNo: 1

Received By: **Anne Thorne** 5/17/2018 2:10:00 PM Anne Thorne

Completed By: **Michelle Garcia** 5/17/2018 3:53:21 PM Michelle Garcia

Reviewed By: 05/18/18

Labeled by: JB 05/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
	not required. Temp. 25.3		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? JB

Checked by: _____

05/18/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Chain-of-Custody Record

Client: TERRACON CONSULTANTS, INC

Mailing Address: 4905 HAWKINS ST NE

Phone #: 505-797-4287

email or Fax#: 505-797-4288

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: TAOS REGIONAL AIRPORT

Project #: 66183006

Project Manager: MIKE ANDERSON

Sampler: RV

On Ice: ☐ Yes ☒ No

Sample Temperature: 2.5.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
5/17/18	2:10pm	Soil	B-02 (BULK)			1805A18 001								✓								
↓	↓	↓	B-13 (BULK)			002								✓	✓							

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/17/18	2:10pm			05/17/18	1415
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 14, 2018

Mike Anderson

Terracon
4905 Hawkins, NE
Albuquerque, NM 87109
TEL: (505) 797-4287
FAX (505) 797-4288

RE: Taos Regional Airport OrderNo.: 1805268

Dear Mike Anderson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/3/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **1805268**
Date Reported: **5/14/2018**

CLIENT: Terracon
Client Sample ID: B-21 @ 0-3
Project: Taos Regional Airport
Collection Date: 5/1/2018
Lab ID: 1805268-001
Matrix: SOIL
Received Date: 5/3/2018 2:35:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Sulfate	170	30		mg/Kg	20	5/8/2018 4:29:15 PM	37984

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Terracon
Client Sample ID: B-29 @ 0-3
Project: Taos Regional Airport
Collection Date: 5/1/2018
Lab ID: 1805268-002
Matrix: SOIL
Received Date: 5/3/2018 2:35:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Sulfate	3300	75		mg/Kg	50	5/10/2018 8:03:17 PM	38010

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1805268**

14-May-18

Client: Terracon

Project: Taos Regional Airport

Sample ID	**MB-37984**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**37984**	RunNo:	**51112**				
Prep Date:	**5/8/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1661424**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	1.5								

Sample ID	**LCS-37984**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**37984**	RunNo:	**51112**				
Prep Date:	**5/8/2018**	Analysis Date:	**5/8/2018**	SeqNo:	**1661425**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	29	1.5	30.00	0	96.0	90	110			

Sample ID	**MB-38010**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**38010**	RunNo:	**51146**				
Prep Date:	**5/9/2018**	Analysis Date:	**5/9/2018**	SeqNo:	**1662412**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	1.5								

Sample ID	**LCS-38010**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**38010**	RunNo:	**51146**				
Prep Date:	**5/9/2018**	Analysis Date:	**5/9/2018**	SeqNo:	**1662413**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	28	1.5	30.00	0	93.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: TER-Alb | Work Order Number: 1805268 | RcptNo: 1

Received By: Erin Melendrez 5/3/2018 2:35:00 PM

Completed By: Ashley Gallegos 5/4/2018 8:57:57 AM

Reviewed By: JMD 5/4/18 Labeled by: ENM

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH 4 (<2 or >12 unless noted) ENM 5/3/18
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	ENM 5/3/18
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person	
Regarding:			
Client Instructions:			

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	22.8	Good	Not Present			

Chain-of-Custody Record

Client: Terracon Inc.

Mailing Address: 4905 Hawkins
ABQ, NM, 87109

Phone #: 505-797-4287

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other ____

☐ EDD (Type) ____

Turn-Around Time:
☒ Standard ☐ Rush ____

Project Name: Taos Regional Airport

Project #: 66185006

Project Manager: Mike Anderson

Sampler:

On Ice: ☐ Yes ☒ No

Sample Temperature: 22.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805268	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
5.1.18	/	Soil	~~B-@21-0.3~~			~~-06~~								/								
↓		↓	~~B.@29-0.3~~											/								
			B.21@0.3			-001								X								
			B.29@0.3			-002								X	SAR 05/03/18							

Date:	Time:	Relinquished by:	Received by:	Date	Time
5.3.18	1435	[signature]	[signature]	5/3/18	1435
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.