

AGEC

Applied GeoTech

February 27, 2015

Ivory Homes
3340 North Center Street
Lehi, UT 84043

Attention: Ken Watson
EMAIL: kenw@ivorydevelopment.com

Subject: Geotechnical Consultation
Midas Crossing
11800 South 2700 West
Riverton, Utah
Project No.1130360

Gentlemen:

Applied Geotechnical Engineering Consultants, Inc. conducted a geotechnical investigation for the proposed Midas Crossing Development at 11800 South 2700 West in Riverton, Utah. We presented our findings and recommendations in a report dated June 6, 2013 under Project No. 1130360.

We were requested to excavate five additional exploratory test pits at the site to better define the depth of moisture-sensitive soil and fill in the eastern portion of the proposed development.

FIELD STUDY

Test Pits TP-1A through TP-5A were excavated on January 28, 2015 at the approximate locations indicated on Figure 1. The test pits were excavated using a trackhoe provided by Hadco. The test pits were logged and soil samples obtained by an engineer from AGECE. Logs of the subsurface conditions encountered in the test pits are graphically shown on Figure 4. Logs of the previous test pits excavated at the site are presented on Figures 2 and 3 and legend and notes are presented on Figure 5.

The test pits were backfilled without significant compaction. The backfill in the test pits should be properly compacted where it will support proposed buildings, pavement or other improvements.

SUBSURFACE CONDITIONS

The subsurface conditions encountered in the additional test pits consist of approximately 2, 3, 1, 1 and 2 feet of fill and/or topsoil in Test Pits TP-1A through TP-5A, respectively. Clay with a porous structure and potentially moisture-sensitive was encountered below the fill and topsoil extending to depths of approximately 9½, 10½, 5½, 7½ and 9½ feet below the ground surface in Test Pits TP-1A through TP-5A, respectively. Clay, silt, sand and gravel were encountered below the moisture-sensitive soil extending to the maximum depth of the test pits, which was approximately 14 to 16 feet below the ground surface.

Additional laboratory tests were conducted on samples from Test Pits TP-4A and TP-5A at depths of approximately 8 and 10 feet below the ground surface, respectively. The samples tested were obtained from the natural clay below the porous material. The samples tested were found to have moisture contents ranging from 10 to 19 percent and natural dry densities ranging from 69 to 80 pounds per cubic foot (pcf). Consolidation tests conducted on the samples described above indicate that the material tested compressed a small to moderate amount with the addition of light to moderate loads and did not appear to be moisture-sensitive. Results of the tests are presented on Figures 9 and 10.

SUBSURFACE WATER

No subsurface water was encountered in the test pits to the maximum depth investigated.

CONCLUSIONS AND RECOMMENDATIONS

Based on our understanding of the proposed construction as described in the above-referenced geotechnical report, the subsurface conditions encountered in the test pits from the original study and the additional study and the results of laboratory testing, the following conclusions and recommendations are given to supplement the information contained in the above-referenced report:

1. Fill and/or topsoil was encountered to depths of approximately 2, 3, 1, 1 and 2 feet below the ground surface in Test Pits TP-1A through TP-5A, respectively. Fill and topsoil should be removed from below areas of proposed buildings, pavement and other improvements.
2. Potentially moisture-sensitive soil that collapses and becomes more compressible when wetted was encountered to depths of approximately 9½, 10½, 5½, 7½ and 9½ feet below the ground surface in Test Pits TP-1A through TP-5A, respectively. This material is indicated as porous on the logs of the test pits (see Figures 2 through 4). The potentially moisture-sensitive soil should be removed from below proposed buildings.

3. A representative of AGEC should observe the excavations for the proposed residences prior to placement of structural fill or footings.
4. Recommendations given in the above-referenced report should be followed.

LIMITATIONS

This letter has been prepared in accordance with generally accepted geotechnical engineering practices in the area for the use of the client. The conclusions and recommendations are based on information obtained from the test pits excavated at the approximate locations indicated on Figure 1 and the results of laboratory testing. Variations in subsurface conditions may not become evident until additional exploration or excavation is conducted. If the proposed construction, subsurface conditions or groundwater level is found to be different from what is described above, we should be notified to reevaluate the recommendations given.

Sincerely,

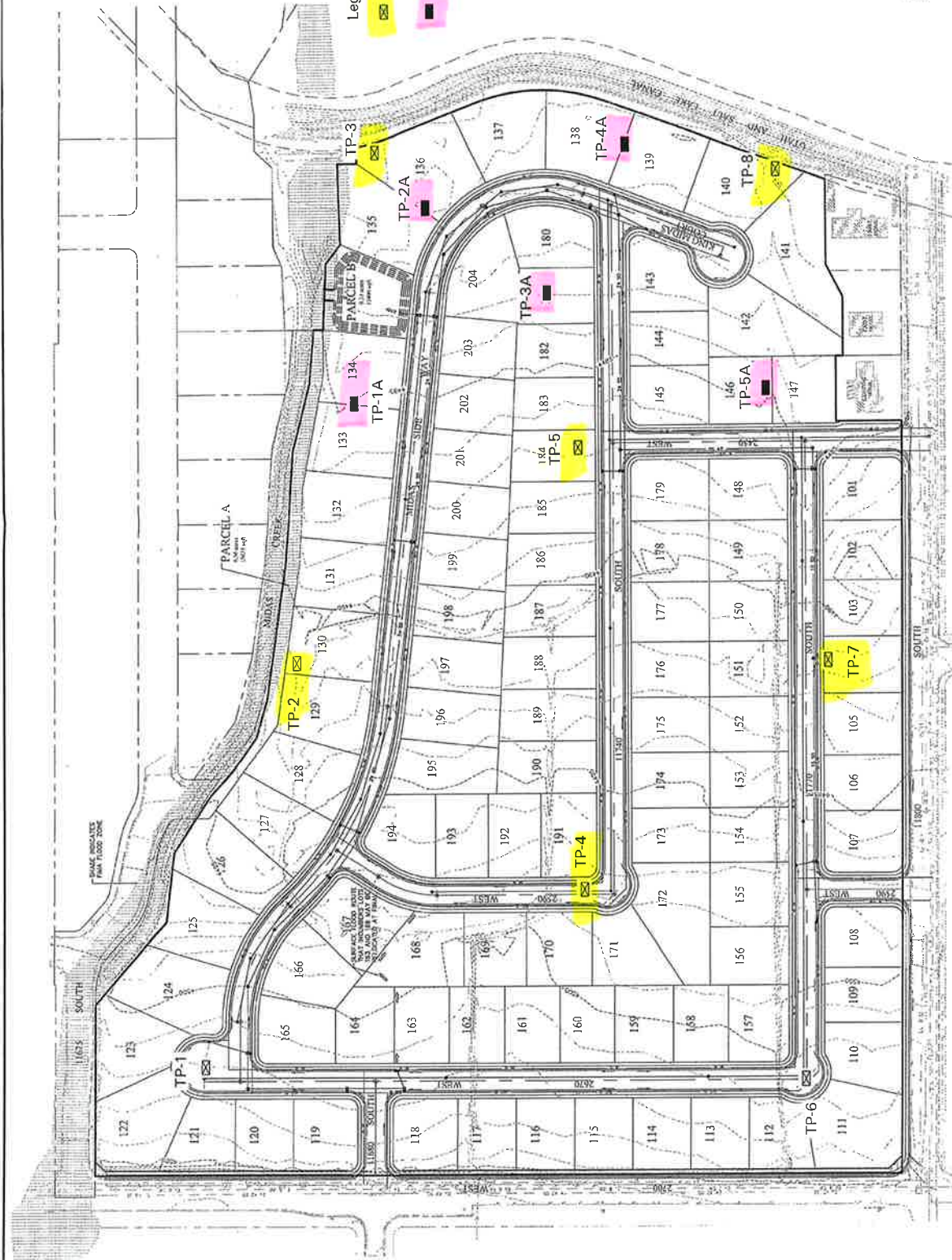
APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.



Jay R. McQuivey, P.E.

Reviewed by DRH, P.E., P.G.
JRM/bw

MIDAS CROSSING
11800 SOUTH 2700 WEST
RIVERTON, UTAH



Legend:
TP-1 Test pits excavated for original study
TP-1A Test pits excavated for this additional study



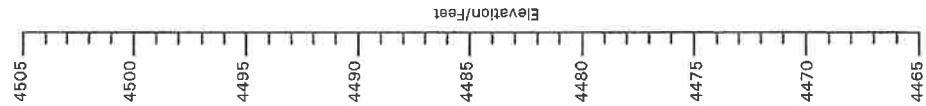
0 100 200 300 feet
Approximate Scale

Figure 1

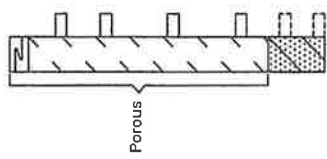
Locations of Test Pits

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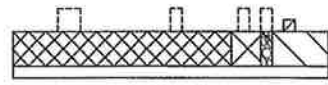


TP-4
Elev. 4498'

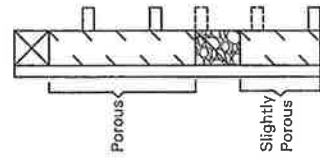


Porous

TP-3
Elev. 4482'



TP-2
Elev. 4491'

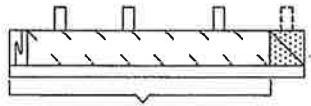


Porous

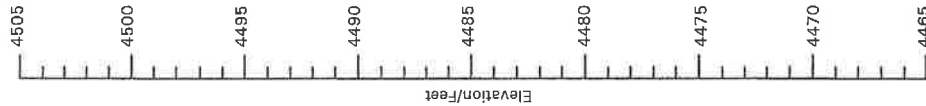
Slightly Porous

WC = 17
DD = 94
-200 = 90

TP-1
Elev. 4502'



Porous



See Figure 5 for Legend and Notes

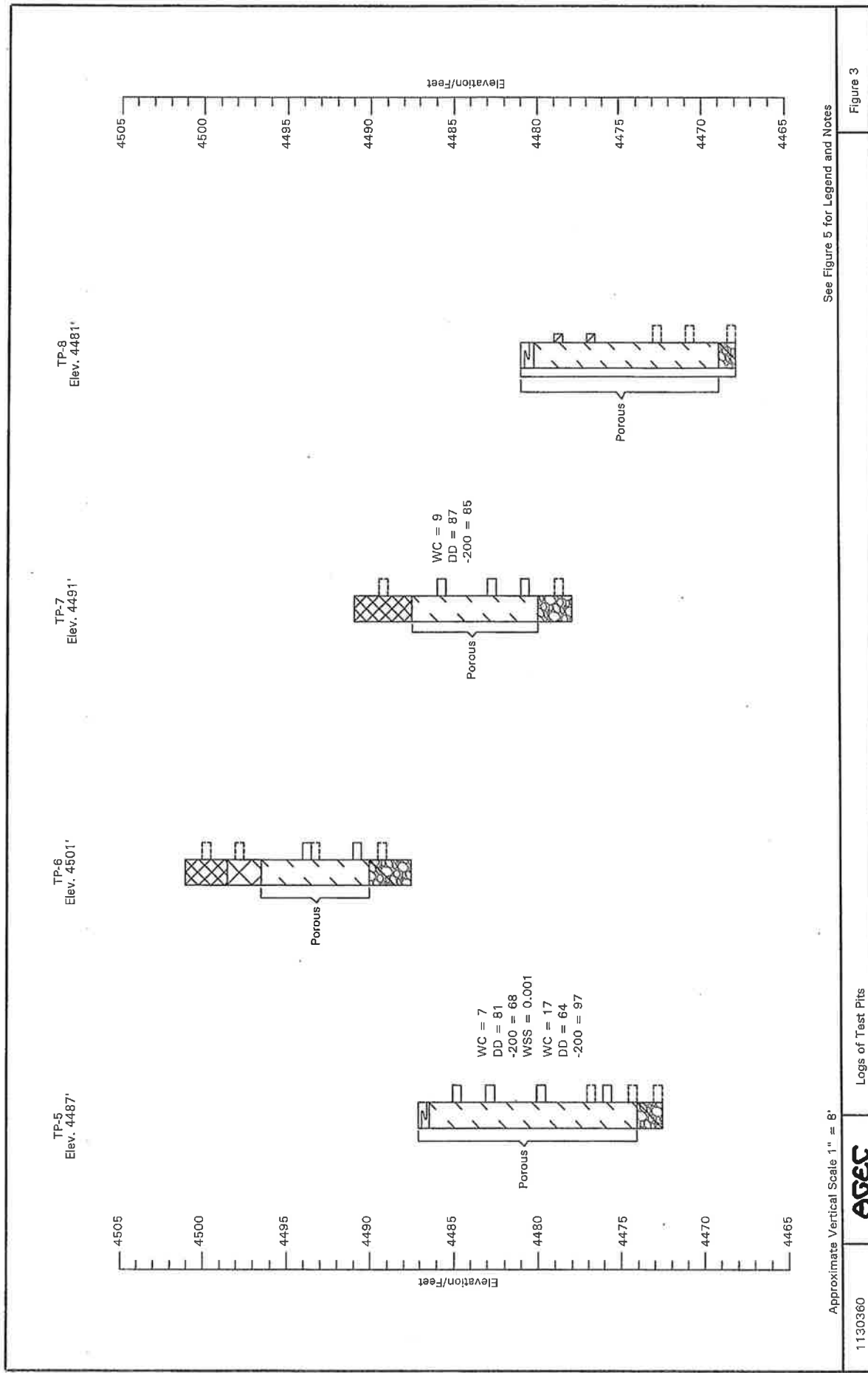
Figure 2

Approximate Vertical Scale 1" = 8'

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Logs of Test Pits





See Figure 5 for Legend and Notes

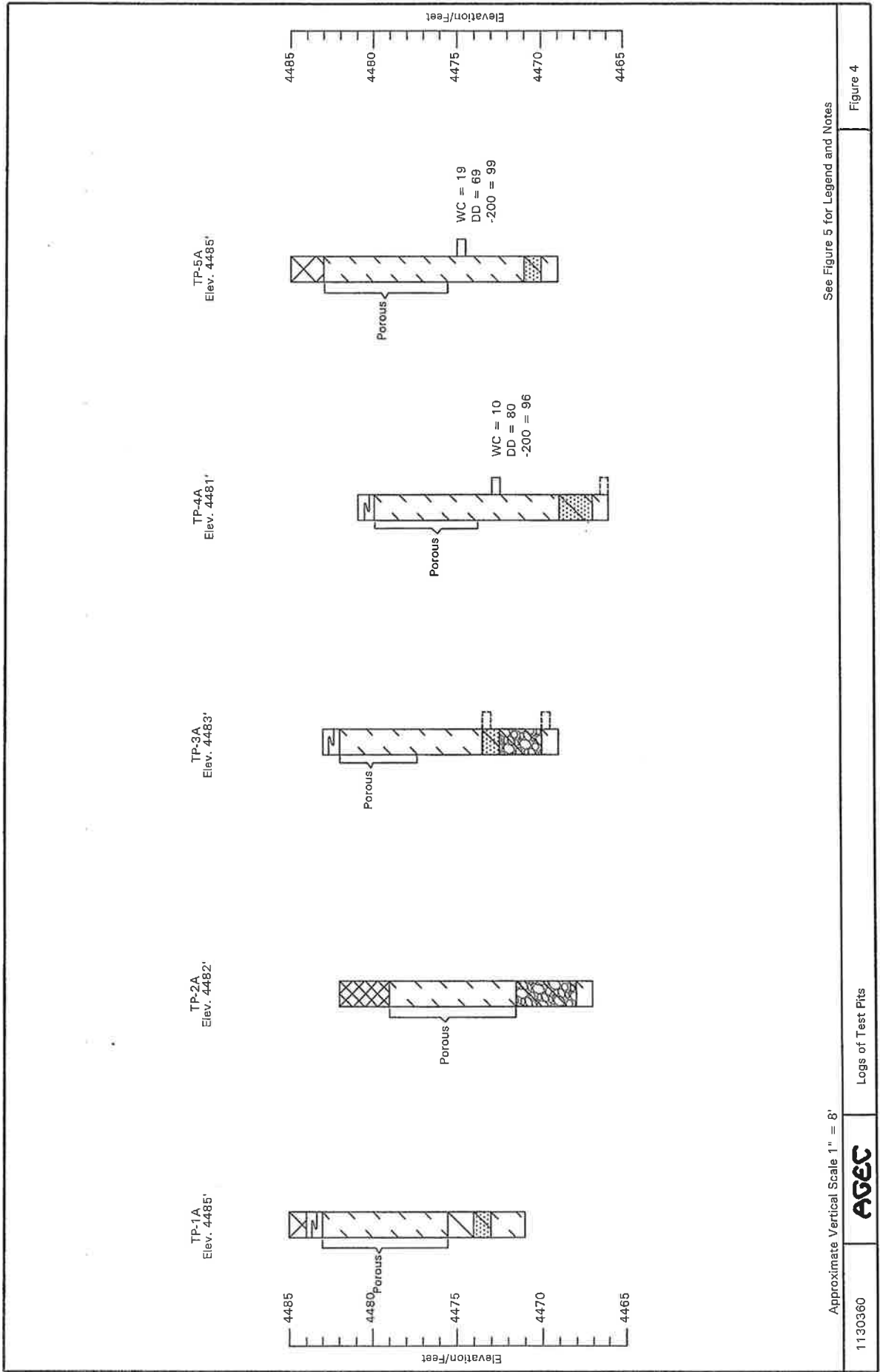
Figure 3

Approximate Vertical Scale 1" = 8'

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Logs of Test Pits





See Figure 5 for Legend and Notes

Figure 4

Approximate Vertical Scale 1" = 8'

Logs of Test Pits

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LEGEND:



Fill; silty sand with gravel, slightly moist, light brown, roots.



Fill; lean clay with sand, slightly moist to moist, brown to gray, mottled.



Topsoil; lean clay with sand to silty sand, slightly moist, brown, roots.



Lean Clay (CL); small to moderate amount of sand, silty clay and silt layers, slightly moist, brown to gray, porous.



Silt (ML); medium dense, moist, grayish brown.



Silty Sand (SM); small amount of gravel, medium dense, slightly moist, brown.



Poorly-graded Gravel with Silt and Sand (GP-GM); medium dense, slightly moist, brown.



Poorly-graded Gravel with Sand (GP); medium dense, slightly moist, brown.



Indicates relatively undisturbed hand drive sample taken.



Indicates disturbed sample taken.



Indicates relatively undisturbed block sample taken.

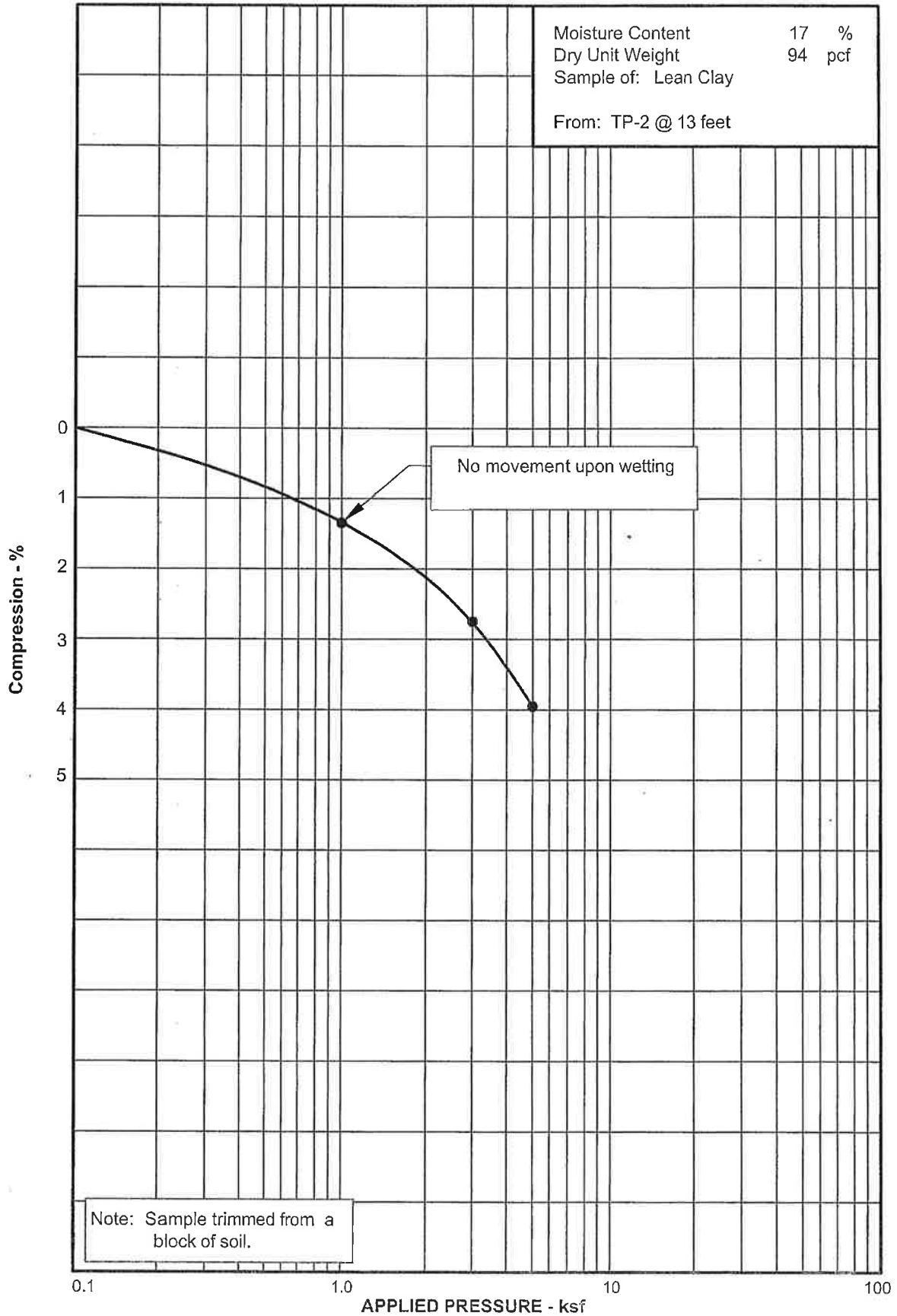


Indicates slotted 1 1/2 inch PVC pipe installed in the test pit to the depth shown.

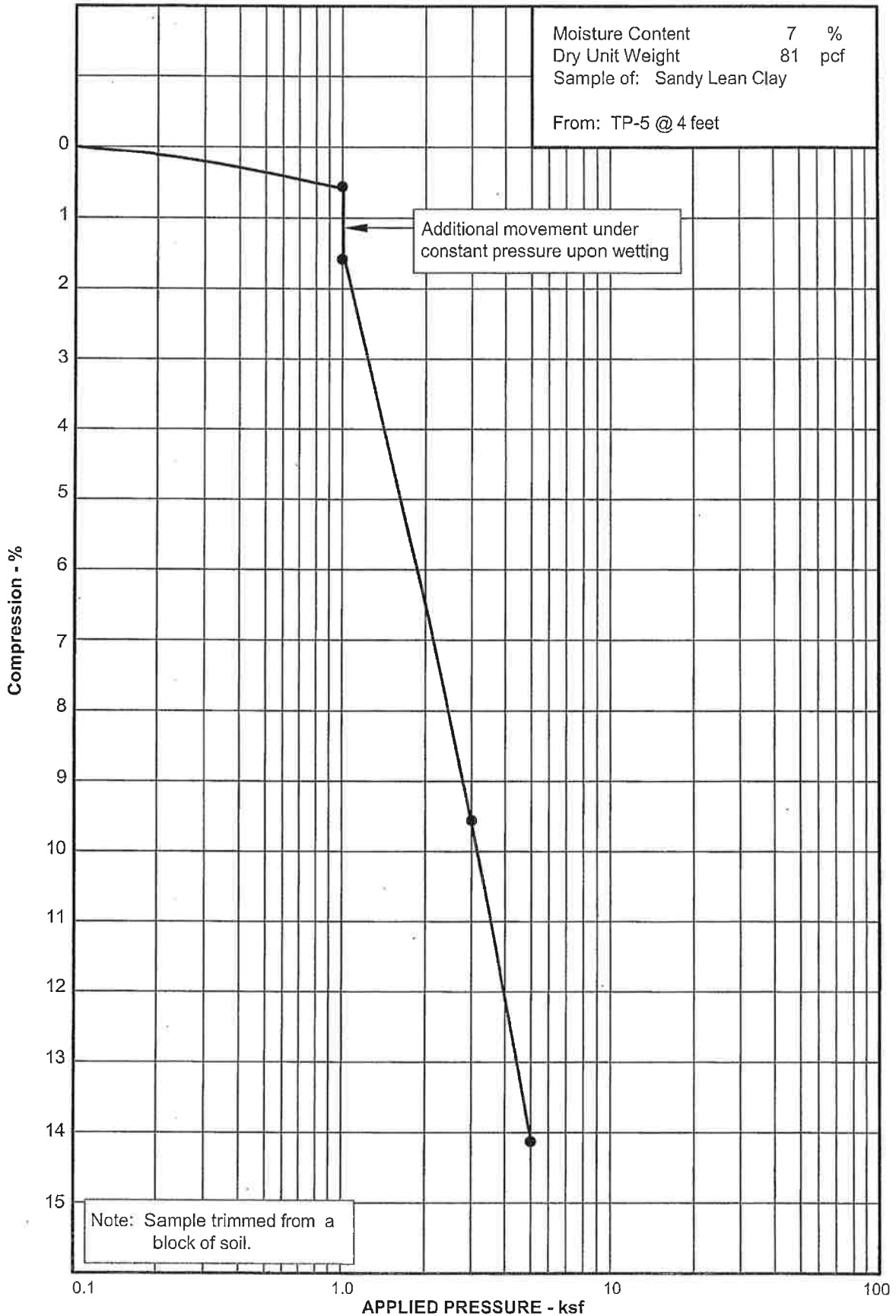
NOTES:

1. Test Pits TP-1 through TP-8 were excavated on May 16 and 17, 2013 with a rubber-tired backhoe. Test Pits TP-1A through TP-8A were excavated on January 28, 2015 with a trackhoe.
2. Locations of test pits were measured approximately by pacing from features shown on the site plan provided.
3. Elevations of test pits were determined from the contours shown on Figure 1.
4. The test pit locations and elevations should be considered accurate only to the degree implied by the method used.
5. The lines between the materials shown on the test pit logs represent the approximate boundaries between material types and the transitions may be gradual.
6. No free water was encountered in the test pits at the time of excavation.
7. WC = Water Content (%);
DD = Dry Density (pcf);
-200 = Percent Passing No. 200 Sieve;
WSS = Water Soluble Sulfates (%).

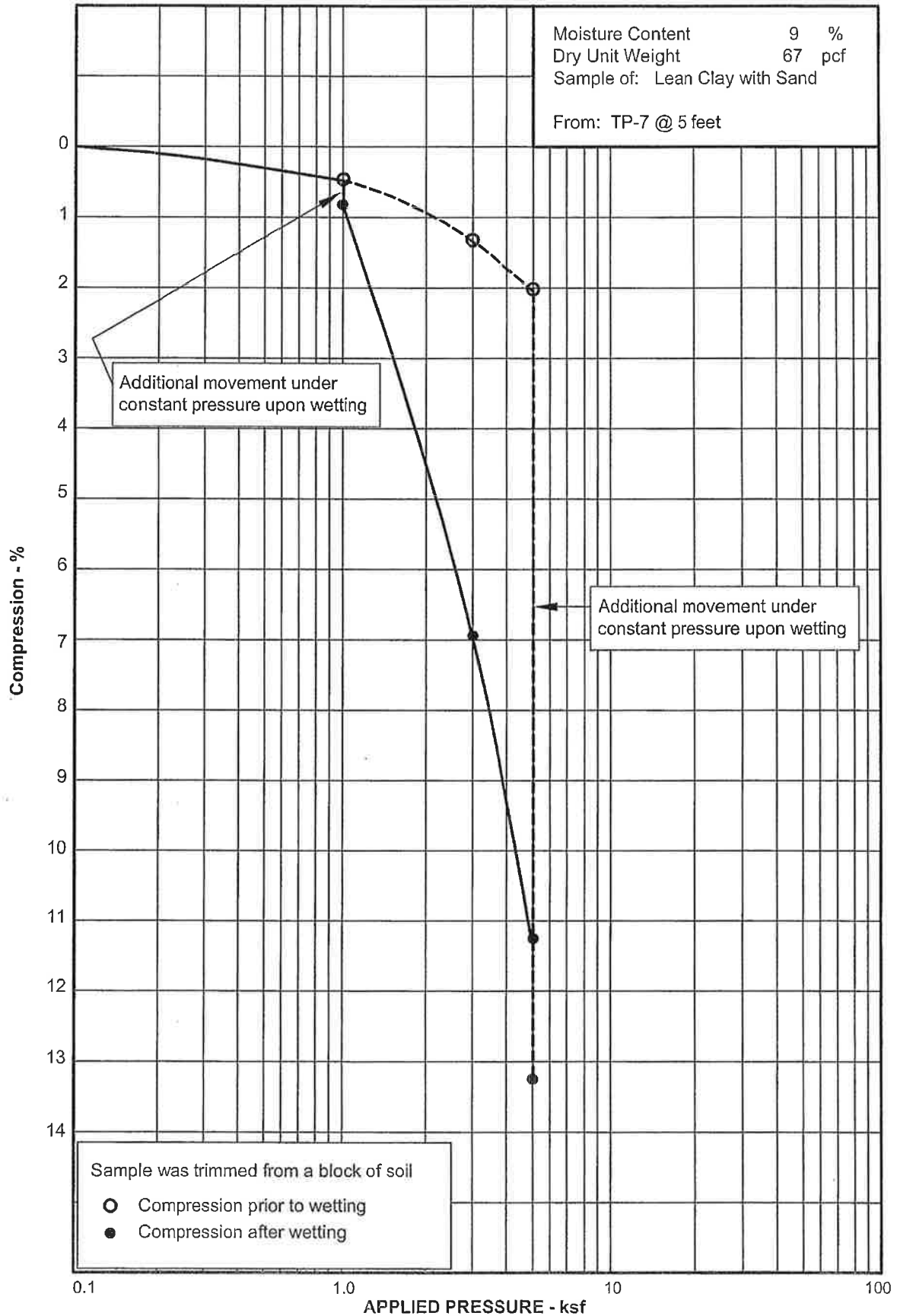
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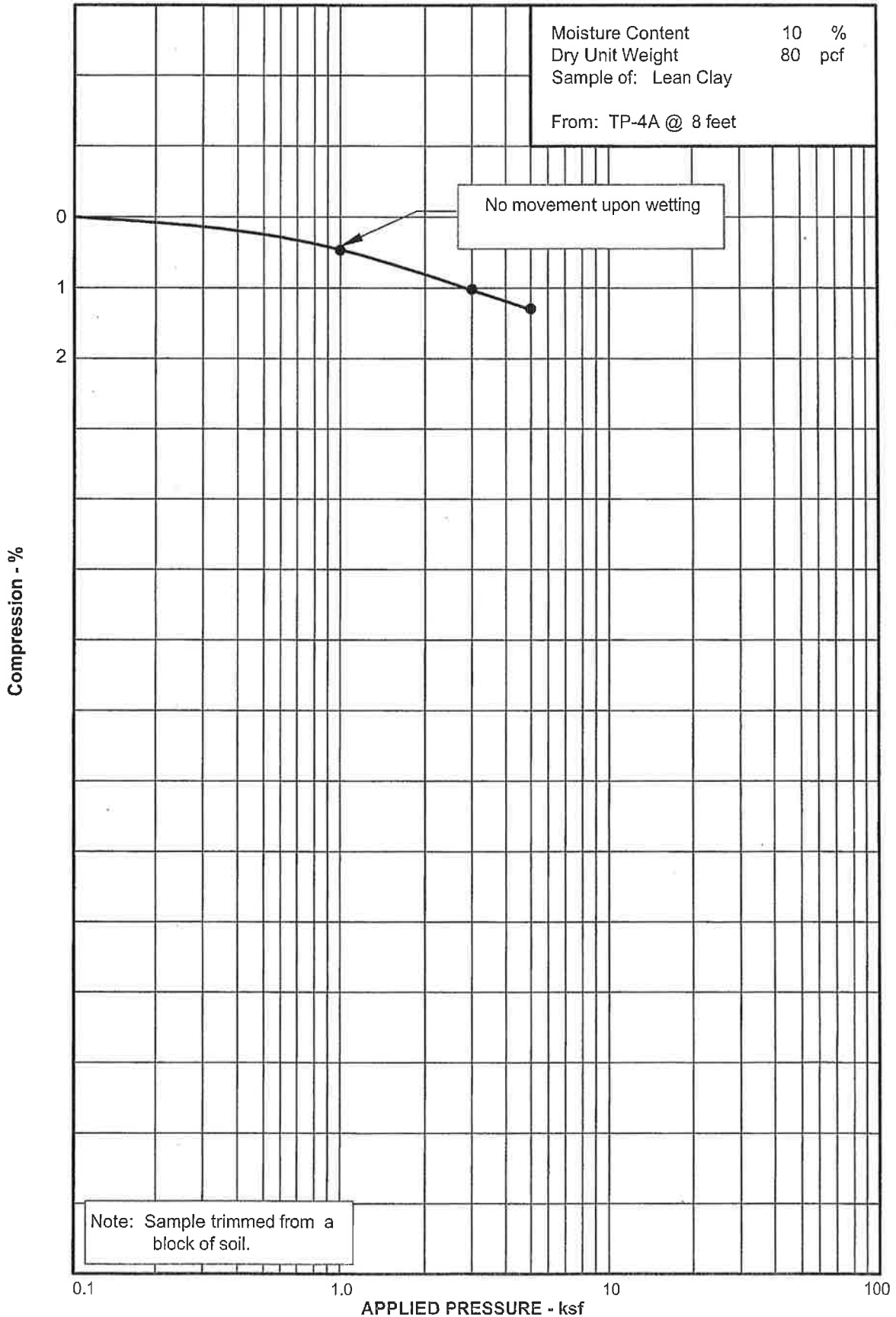
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