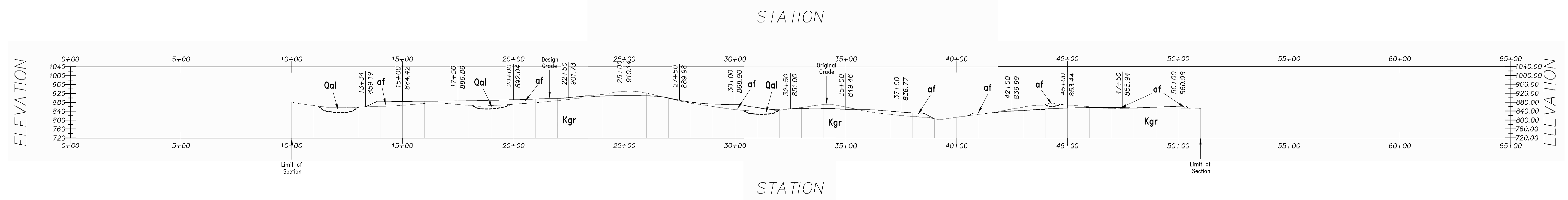
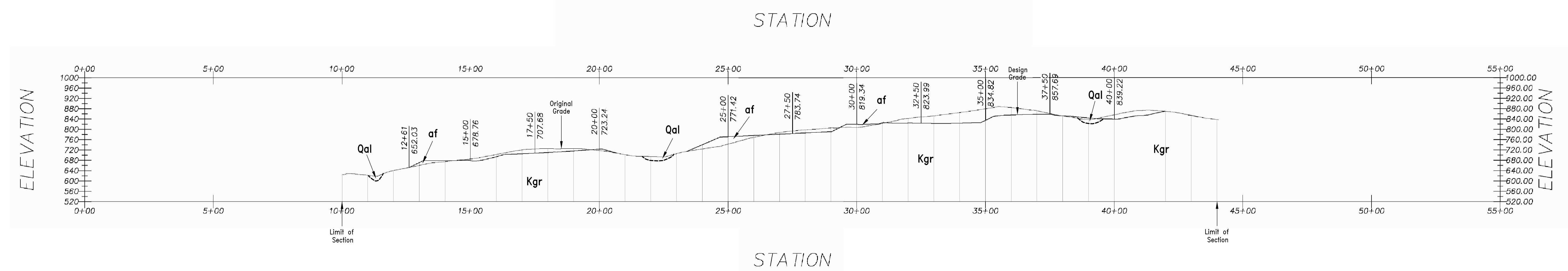


# PROFILE: SECTION D-D



# PROFILE: SECTION E-E



CROSS-SECTIONS D-D', E-E'

SCALE: 1"=200'

SHEET 5



# **APPENDIX A**

## **CITED REFERENCES**

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**APPENDIX B**  
**SUBSURFACE INVESTIGATION**

**TEST PIT LOGS**  
**T-1 THROUGH T-28**

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**  
**MARCH 2012**

Project Las Lilas  
 Date Excavated 12/21/11 & 2/21/12  
 Logged by PJD  
 Equipment Case 580M Extend-a-hoe w/24" bucket

**TABLE I****LOG OF TEST PITS**

| <u>Test</u><br>Pit No.                     | Depth (ft.) | USCS  | Description                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------|-------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-1                                        | 0.0 – 6.5   | SW    | <b><u>ALLUVIUM</u></b> (Qal): WELL GRADED SAND, fine- to coarse-grained, reddish brown, slightly moist, loose.                                                                                                                                                                                                                                       |
|                                            |             | SM    | @ 1 ft. becomes SILTY SAND with clay, dark brown, moist, loose to medium dense; root hairs, occasional gravel and small cobble.                                                                                                                                                                                                                      |
|                                            |             | SC    | @ 2.5 ft. becomes reddish brown.<br>@ 4.5 ft. becomes CLAYEY SAND, fine-grained, yellow brown to olive brown, medium dense.                                                                                                                                                                                                                          |
|                                            | 6.5 – 8.0   |       | <b><u>GRANITIC ROCK</u></b> (Kgr): completely weathered, moderately hard, breaks into fine- to coarse-grained sand, reddish brown to olive brown.<br>@ 7.0 ft. becomes highly weathered, hard.<br>@ 8.0 ft. becomes very hard; refusal.                                                                                                              |
| TOTAL DEPTH 8.0 FT.<br>NO WATER, NO CAVING |             |       |                                                                                                                                                                                                                                                                                                                                                      |
| -----                                      |             |       |                                                                                                                                                                                                                                                                                                                                                      |
| T-2                                        | 0.0 – 1.5   | SM/SC | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY to CLAYEY SAND, dark reddish brown, moist, loose.                                                                                                                                                                                                                                                       |
|                                            | 1.5 – 4.5   |       | <b><u>GRANITIC ROCK</u></b> (Kgr): SILTY SAND with CLAY (Residual Soil), fine- to coarse-grained, reddish brown, slightly moist, medium dense.<br>@ 2.5 ft. becomes dense; trace clay.<br>@ 3.5 ft. highly weathered, moderately hard, breaks into silty fine- to coarse-grained sand.<br>@ 4.0 ft. becomes hard to very hard.<br>@ 4.5 ft. refusal. |
| TOTAL DEPTH 4.5 FT.<br>NO WATER, NO CAVING |             |       |                                                                                                                                                                                                                                                                                                                                                      |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS  | Description                                                                                                                                                                                                                                                                                       |
|------------------------|-------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-3                    | 0.0 – 1.0   | SM    | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND with CLAY, fine- to coarse-grained, dark brown, moist, loose.                                                                                                                                                                                   |
|                        | 1.0 – 8.5   |       | <b><u>GRANITIC ROCK</u></b> (Kgr): completely weathered, moderately hard to hard, olive brown, breaks into clayey fine- to coarse-grained sand.<br>@ 3.0 ft. becomes highly weathered, hard to very hard.<br>@ 8.5 ft. practical refusal.<br><br>TOTAL DEPTH 8.5 FT.<br>NO WATER, NO CAVING       |
| -----                  |             |       |                                                                                                                                                                                                                                                                                                   |
| T-4                    | 0.0 – 3.0   | SM/SC | <b><u>ALLUVIUM</u></b> (Qal): SILTY to CLAYEY SAND, fine- to coarse-grained, dark brown to dark reddish brown, moist, loose.<br>@ 2 ft. becomes medium dense.                                                                                                                                     |
|                        | 3.0 – 8.0   |       | <b><u>GRANITIC ROCK</u></b> (Kgr): completely weathered, moderately hard, breaks into fine- to coarse-grained sand, orangish brown.<br>@ 4.0 ft. becomes hard.<br>@ 5.0 ft. becomes highly weathered, very hard.<br>@ 8.0 ft. practical refusal<br><br>TOTAL DEPTH 8.0 FT.<br>NO WATER, NO CAVING |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No.                      | Depth (ft.) | USCS                                        | Description                                                                                                                                                                              |
|---------------------------------------------|-------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-5                                         | 0.0 – 1.5   | SM                                          | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND with CLAY, fine- to coarse-grained, dark red brown, moist, loose; roots to 3 ft. deep.                                                 |
|                                             | 1.5 – 12.0  | SM                                          | <b><u>OLDER ALLUVIUM</u></b> (Qoal): SILTY SAND with CLAY, fine- to medium-grained, dark brown, slightly moist, medium dense; porous.                                                    |
|                                             |             | SC                                          | @ 3.0 ft. becomes CLAYEY SAND, medium dense to dense.<br>@ 6.0 ft. weakly cemented, pinhole porosity.                                                                                    |
|                                             |             | TOTAL DEPTH 12.0 FT.<br>NO WATER, NO CAVING |                                                                                                                                                                                          |
| -----                                       |             |                                             |                                                                                                                                                                                          |
| T-6                                         | 0.0 – 1.5   | SM/SC                                       | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY to CLAYEY SAND, fine- to medium-grained, dark red brown, moist to wet, loose.                                                               |
|                                             | 1.5 – 13.0  | SM                                          | <b><u>OLDER ALLUVIUM</u></b> (Qoal): SILTY SAND with CLAY, fine- to coarse-grained, dark brown to dark grayish brown, slightly moist, medium dense to dense; weakly cemented, micaceous. |
|                                             |             | SC                                          | @ 6.0 ft. becomes CLAYEY SAND with SILT.                                                                                                                                                 |
|                                             |             | SM/SC                                       | @ 11.0 ft. SILTY to CLAYEY SAND, fine-grained, mottled reddish brown to olive gray.                                                                                                      |
|                                             |             | SM                                          | @ 12.0 ft. SILTY SAND, fine- to coarse-grained.                                                                                                                                          |
| TOTAL DEPTH 13.0 FT.<br>NO WATER, NO CAVING |             |                                             |                                                                                                                                                                                          |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------|-------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-7                    | 0.0 – 10.0  |      | <p><b><u>GRANITIC ROCK</u></b> (Kgr): SILTY SAND with CLAY (Residual Soil), fine- to coarse-grained, reddish brown, slightly moist to moist, loose.<br/>           @ 1.0 ft. becomes medium dense.<br/>           @ 2.0 ft. completely weathered, moderately hard, breaks into fine- to coarse-grained sand, orangish brown; trace silt.<br/>           @ 4.0 ft. becomes olive brown with abundant iron oxide.<br/>           @ 6.0 ft. becomes highly weathered, hard.<br/>           @ 8.0 ft. becomes very hard.<br/>           @ 10.0 ft. practical refusal.</p> <p>TOTAL DEPTH 10.0 FT.<br/>NO WATER, NO CAVING</p> |
| T-8                    | 0.0 – 11.0  |      | <p><b><u>GRANITIC ROCK</u></b> (Kgr): SILTY SAND with CLAY (Residual Soil), fine- to coarse-grained, reddish brown, slightly moist, loose to medium dense.<br/>           @ 2.5 ft. completely weathered, moderately hard, breaks into fine- to coarse-grained sand with silt, orangish brown; abundant iron oxide.<br/>           @ 4.5 ft. becomes gray to olive brown.<br/>           @ 6.0 ft. becomes highly weathered, hard.<br/>           @ 8.5 ft. becomes very hard.<br/>           @ 11.0 ft. practical refusal.</p> <p>TOTAL DEPTH 11.0 FT.<br/>NO WATER, NO CAVING</p>                                       |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                      |
|------------------------|-------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-9                    | 0.0 – 1.0   | SC   | <b><u>TOPSOIL</u></b> (No Map Symbol): CLAYEY SAND, fine- to coarse-grained, reddish brown, moist, loose.                                                                                                                                        |
|                        | 1.0 – 6.0   | SC   | <b><u>OLDER ALLUVIUM</u></b> (Qoal): CLAYEY SAND, fine- to coarse-grained, dark reddish brown to dark grayish brown, slightly moist, medium dense to dense; moderately cemented.<br>@ 6.0 ft. practical refusal.                                 |
|                        |             |      | TOTAL DEPTH 6.0 FT.<br>NO WATER, NO CAVING                                                                                                                                                                                                       |
| -----                  |             |      |                                                                                                                                                                                                                                                  |
| T-10                   | 0.0 – 9.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): completely weathered, moderately hard, breaks into fine- to coarse-grained sand, orangish brown.<br>@ 4.0 ft. becomes hard.<br>@ 6.0 ft. becomes highly weathered, very hard.<br>@ 9.0 ft. practical refusal. |
|                        |             |      | TOTAL DEPTH 9.0 FT.<br>NO WATER, NO CAVING                                                                                                                                                                                                       |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS  | Description                                                                                                                                                                                                                                                                      |
|------------------------|-------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-11                   | 0.0 – 1.5   | SM/SC | <b><u>ALLUVIUM</u></b> (Qal): SILTY to CLAYEY SAND, fine- to coarse- grained, dark brown, moist to wet, loose.                                                                                                                                                                   |
|                        | 1.5 – 7.5   | SC    | <b><u>OLDER ALLUVIUM</u></b> (Qoal): CLAYEY SAND, fine- to coarse-grained, dark reddish brown to dark brown, slightly moist to moist, medium dense to dense; weakly cemented.<br>@ 3.0 ft. becomes dense, moderately cemented.<br><br>TOTAL DEPTH 7.5 FT.<br>NO WATER, NO CAVING |
| -----                  |             |       |                                                                                                                                                                                                                                                                                  |
| T-12                   | 0.0 – 1.5   | SM    | <b><u>TOPSOIL</u></b> (No Map Symbol) SILTY SAND, fine- to coarse-grained, dark reddish brown, slightly moist, loose.                                                                                                                                                            |
|                        | 1.5 – 4.0   | SC    | <b><u>OLDER ALLUVIUM</u></b> (Qoal): CLAYEY SAND, fine- to coarse-grained, dark brown, slightly moist, medium dense to dense.                                                                                                                                                    |
|                        | 4.0 – 6.0   |       | <b><u>GRANITIC ROCK</u></b> (Kgr): highly to moderately weathered, hard to very hard, breaks into olive gray, fine-grained silty sand.<br>@ 6.0 ft. very hard, slightly weathered; refusal.<br><br>TOTAL DEPTH 6.0 FT.<br>NO WATER, NO CAVING                                    |



**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------|-------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-13                   | 0.0 – 3.5   | SM/SC | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY to CLAYEY SAND, fine- to coarse-grained, reddish brown, moist, loose to medium dense.                                                                                                                                                                                                                                                                                                              |
|                        | 3.5 – 5.5   | SM/SC | <b><u>OLDER ALLUVIUM</u></b> (Qoal): SILTY to CLAYEY SAND, fine- to coarse-grained, dark brown, slightly moist, dense; moderately cemented.<br>@ 4.5 ft. becomes very dense.<br>@ 5.5 ft. practical refusal.<br><br>TOTAL DEPTH 5.5 FT.<br>NO WATER, NO CAVING                                                                                                                                                                                  |
| -----                  |             |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| T-14                   | 0.0 – 2.0   | SM    | <b><u>TOPSOIL</u></b> (No Map Symbol) SILTY SAND with CLAY, fine- to coarse-grained, reddish brown, moist, loose.                                                                                                                                                                                                                                                                                                                               |
|                        | 2.0 – 7.5   |       | <b><u>GRANITIC ROCK</u></b> (Kgr): SILTY SAND with CLAY (Residual Soil), fine- to coarse-grained, reddish brown, slightly moist to moist, medium dense.<br>@ 4.0 ft. completely weathered, moderately hard, breaks into fine- to coarse-grained sand with silt, orangish brown; abundant iron oxide<br>@ 6.0 ft. becomes highly weathered, hard to very hard.<br>@ 7.5 ft. practical refusal.<br><br>TOTAL DEPTH 7.5 FT.<br>NO WATER, NO CAVING |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------|-------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-15                   | 0.0 – 1.0   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine- to coarse-grained, brown to dark reddish brown, moist, loose.                                                                                                                                                                                                                                                                                                                                                  |
|                        | 1.0 – 10.0  |      | <b><u>GRANITIC ROCK</u></b> (Kgr): SILTY SAND (Residual Soil), fine- to coarse-grained, reddish brown, moist, loose to medium dense; trace clay.<br>@ 4.5 ft. completely weathered, moderately hard, breaks into fine- to coarse-grained sand with silt, orangish brown.<br>@ 6.0 ft. becomes highly weathered, hard, grayish brown with iron oxide.<br>@ 8.0 ft. becomes very hard.<br>@ 10.0 ft practical refusal.<br><br>TOTAL DEPTH 10.0 FT.<br>NO WATER, NO CAVING |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test<br/>Pit No.</u> | <u>Depth (ft.)</u> | <u>USCS</u> | <u>Description</u>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|--------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-16                    | 0.0 – 1.0          | SM/SC       | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY to CLAYEY SAND, fine- to coarse-grained, brown to dark reddish brown, moist, loose; abundant roots.                                                                                                                                                                                                                                                                                                            |
|                         | 1.0 – 9.5          |             | <b><u>GRANITIC ROCK</u></b> (Kgr): SILTY SAND<br>(Residual Soil), fine- to coarse-grained, reddish brown, moist, loose to medium dense; trace clay.<br>@ 4.0 ft. completely weathered, moderately hard, breaks into fine- to coarse-grained sand with silt, orangish brown.<br>@ 6.0 ft. becomes highly weathered, hard.<br>@ 8.0 ft. becomes very hard.<br>@ 9.5 ft. practical refusal.<br><br>TOTAL DEPTH 9.5 FT.<br>NO WATER, NO CAVING                  |
| -----                   |                    |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| T-17                    | 0.0 – 5.5          |             | <b><u>GRANITIC ROCK</u></b> (Kgr): SILTY SAND<br>(Residual Soil), fine- to coarse-grained, reddish brown, slightly moist, loose to medium dense; trace clay.<br>@ 0.5 ft. completely weathered, moderately hard, breaks into fine- to coarse-grained sand, orangish brown to reddish brown; abundant iron oxide<br>@ 2.5 ft. becomes highly weathered, hard to very hard.<br>@ 5.5 ft. practical refusal.<br><br>TOTAL DEPTH 5.5 FT.<br>NO WATER, NO CAVING |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test<br/>Pit No.</u> | <u>Depth (ft.)</u> | <u>USCS</u> | <u>Description</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|--------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-18                    | 0.0 – 8.0          | SM          | <b><u>ALLUVIUM</u></b> (Qal): SILTY SAND, fine- to coarse- grained, reddish brown, moist, loose; trace clay.                                                                                                                                                                                                                                                                                                                                                                                  |
|                         | 8.0 – 13.0         | SM          | <b><u>OLDER ALLUVIUM</u></b> (Qoal): SILTY SAND with CLAY, fine- to coarse-grained, yellowish brown to dark brown, slightly moist, medium dense; weakly cemented; abundant iron oxide.<br>@ 10.0 ft. becomes dense, moderately cemented.<br><br>TOTAL DEPTH 13.0 FT.<br>NO WATER, NO CAVING                                                                                                                                                                                                   |
| -----                   |                    |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| T-19                    | 0.0 – 2.0          | SM/SC       | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND with CLAY, fine- to coarse-grained, dark brown to dark reddish brown, moist, loose.                                                                                                                                                                                                                                                                                                                                                         |
|                         | 2.0 – 11.0         |             | <b><u>GRANITIC ROCK</u></b> (Kgr): CLAYEY SAND with SILT (Residual Soil), fine- to coarse-grained, reddish brown, moist, medium dense.<br>@ 4.0 ft. completely weathered, moderately hard, breaks into fine- to coarse-grained sand with silt, orangish brown; trace clay.<br>@ 6.5 ft. becomes highly weathered, hard, grayish brown with iron oxide; some small gravel.<br>@ 9.0 ft. becomes very hard.<br>@ 11.0 ft. practical refusal.<br><br>TOTAL DEPTH 11.0 FT.<br>NO WATER, NO CAVING |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------|-------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-20                   | 0.0 – 8.0   |      | <p><b><u>GRANITIC ROCK</u></b> (Kgr): CLAYEY SAND (Residual Soil), fine- to coarse-grained, reddish brown, moist, loose to medium dense; large roots in upper 1 ft.<br/> @ 1.0 ft. completely weathered, moderately hard, breaks into fine- to coarse-grained sand with silt, orangish brown; trace clay.<br/> @ 3.5 ft. becomes highly weathered, hard.<br/> @ 5.5 ft. becomes very hard.<br/> @ 8.0 ft. practical refusal.</p> <p>TOTAL DEPTH 8.0 FT.<br/>NO WATER, NO CAVING</p> <p>-----</p> |
| T-21                   | 0.0 – 3.0   | SM   | <p><b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine- to medium-grained, dark brown to dark reddish brown, moist, loose; roots.</p>                                                                                                                                                                                                                                                                                                                                                        |
|                        | 3.0 – 9.0   | SM   | <p><b><u>OLDER ALLUVIUM</u></b> (Qoal): SILTY SAND, fine- to coarse-grained, reddish brown, slightly moist, medium dense.<br/> @ 6.0 ft. becomes reddish brown to dark grayish brown, weakly to moderately cemented, moderately hard to hard.<br/> @ 9.0 ft. practical refusal.</p> <p>TOTAL DEPTH 9.0 FT.<br/>NO WATER, NO CAVING</p>                                                                                                                                                           |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS  | Description                                                                                                                                                                                                                                                                                                                |
|------------------------|-------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-22                   | 0.0 – 1.5   | SM    | <b><u>TOPSOIL</u></b> (No Map Symbol) SILTY SAND, fine- to coarse-grained, dark brown, slightly moist to moist, loose; trace clay, abundant roots.                                                                                                                                                                         |
|                        | 1.5 – 6.0   | SM/SC | <b><u>OLDER ALLUVIUM</u></b> (Qoal): SILT to CLAYEY SAND, fine- to coarse-grained, grayish brown to reddish brown, slightly moist, medium dense; fine roots, porous.<br>@ 2.5 ft. becomes reddish brown, weakly cemented, moderately hard.                                                                                 |
|                        | 4.0 – 8.5   |       | <b><u>GRANITIC ROCK</u></b> (Kgr): completely to highly weathered, moderately hard, breaks into orange brown, fine- to coarse-grained sand.<br>@ 7.0 ft. becomes moderately weathered, hard.<br>@ 8.5 ft. practical refusal.<br><br>TOTAL DEPTH 8.5 FT.<br>NO WATER, NO CAVING                                             |
| -----                  |             |       |                                                                                                                                                                                                                                                                                                                            |
| T-23                   | 0.0 – 3.0   | SM/SC | <b><u>TOPSOIL</u></b> (No Map Symbol) SILTY to CLAYEY SAND, fine- to coarse-grained, dark reddish brown to dark brown, moist, loose; roots.                                                                                                                                                                                |
|                        | 3.0 – 7.5   | SM    | <b><u>OLDER ALLUVIUM</u></b> (Qoal): SILTY SAND with CLAY, fine- to coarse-grained, reddish brown, slightly moist, medium dense.<br>@ 4.0 ft. becomes dark grayish brown, slightly moist, moderately hard to hard; porous.                                                                                                 |
|                        | 7.5 – 10.0  |       | <b><u>GRANITIC ROCK</u></b> (Kgr): highly to completely weathered, moderately hard, breaks into olive gray, fine- to coarse-grained clayey sand; some clay alteration.<br>@ 9.0 ft. hard, slightly to moderately weathered;<br>@ 10.0 ft. very hard, practical refusal.<br><br>TOTAL DEPTH 10.0 FT.<br>NO WATER, NO CAVING |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test<br/>Pit No.</u> | <u>Depth (ft.)</u> | <u>USCS</u> | <u>Description</u>                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|--------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-24                    | 0.0 – 1.0          | SM          | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine- to coarse-grained, brown to dark reddish brown, moist, loose.                                                                                                                                                                                                                                                                                     |
|                         | 1.0 – 5.0          |             | <b><u>GRANITIC ROCK</u></b> (Kgr): SILTY SAND (Residual Soil), fine- to coarse-grained, reddish brown, moist, loose to medium dense; trace clay.<br>@ 3.0 ft. completely weathered, moderately hard to hard, breaks into fine- to coarse-grained sand with silt, yellowish brown to reddish brown.<br><br>TOTAL DEPTH 5.0 FT.<br>NO WATER, NO CAVING                                                       |
| -----                   |                    |             |                                                                                                                                                                                                                                                                                                                                                                                                            |
| T-25                    | 0.0 – 0.5          | SM          | <b><u>TOPSOIL</u></b> (No Map Symbol) SILTY SAND, fine- to medium-grained, brown, moist, loose; trace clay.                                                                                                                                                                                                                                                                                                |
|                         | 0.5 – 5.0          | SC          | <b><u>OLDER ALLUVIUM</u></b> (Qoal): CLAYEY SAND, fine- to coarse-grained, dark brown, slightly moist to moist, dense; fine roots, porous.<br>@ 4.0 ft. becomes SILTY to CLAYEY SAND, weakly cemented, moderately hard.                                                                                                                                                                                    |
|                         | 5.0 – 12.0         |             | <b><u>GRANITIC ROCK</u></b> (Kgr): completely to highly weathered, moderately hard, breaks into dark grayish to reddish gray, clayey fine- to coarse-grained sand; micaceous, abundant iron oxide development, clay seams.<br>@ 8.0 ft. highly weathered, less clay.<br>@ 10.0 ft. becomes moderately weathered, hard.<br>@ 12.0 ft. practical refusal.<br><br>TOTAL DEPTH 12.0 FT.<br>NO WATER, NO CAVING |

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS  | Description                                                                                                                                                                                                                                                                                                                         |
|------------------------|-------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-26                   | 0.0 – 8.5   |       | <p><b><u>GRANITIC ROCK</u></b> (Kgr): completely weathered, soft to moderately hard, breaks into fine- to coarse-grained sand with clay, dark olive gray.<br/> @ 3.0 ft. becomes hard.<br/> @ 6.5 ft. becomes highly weathered, very hard.<br/> @ 8.5 ft. practical refusal.</p> <p>TOTAL DEPTH 8.5 FT.<br/>NO WATER, NO CAVING</p> |
| -----                  |             |       |                                                                                                                                                                                                                                                                                                                                     |
| T-27                   | 0.0 – 1.0   | SM    | <b><u>TOPSOIL</u></b> (No Map Symbol) SILTY SAND, fine- to coarse-grained, brown to reddish brown, moist, loose.                                                                                                                                                                                                                    |
|                        | 1.0 – 5.5   | SM/SC | <b><u>OLDER ALLUVIUM</u></b> (Qoal): SILTY to CLAYEY SAND, fine- to coarse-grained, grayish brown to reddish brown, slightly moist, medium dense to dense.                                                                                                                                                                          |
|                        | 5.5 – 7.5   |       | <p><b><u>GRANITIC ROCK</u></b> (Kgr): completely weathered, moderately hard, breaks into olive gray, fine- to coarse-grained clayey sand.<br/> @ 6.0 ft moderately weathered, hard.<br/> @ 7.0 ft. very hard, slightly weathered.<br/> @ 7.5 ft. practical refusal.</p> <p>TOTAL DEPTH 7.5 FT.<br/>NO WATER, NO CAVING</p>          |



**TABLE I continued****LOG OF TEST PITS**

| <u>Test<br/>Pit No.</u> | <u>Depth (ft.)</u> | <u>USCS</u> | <u>Description</u>                                                                                                                                                                                                                                                                                                      |
|-------------------------|--------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T-28                    | 0.0 – 0.5          | SM          | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine- to coarse-grained, brown to dark reddish brown, moist, loose.                                                                                                                                                                                                  |
|                         | 0.5 – 7.5          |             | <b><u>GRANITIC ROCK</u></b> (Kgr): completely weathered, moderately hard, breaks into fine- to coarse-grained sand with silt, yellowish brown to reddish brown.<br>@ 5.5' highly weathered, hard, olive gray.<br>@ 7.0 ft. very hard.<br>@ 7.5 ft. practical refusal.<br><br>TOTAL DEPTH 7.5 FT.<br>NO WATER, NO CAVING |

**TEST PIT LOGS**  
**TP-1 THROUGH TP-14**  
**AND TP-23 THROUGH TP-43**

**PACIFIC SOILS ENGINEERING, INC.**  
**MAY 2007**

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

Work Order 401120

May 23, 2007

Work Order 401120  
Date Excavated 4/2/07  
Excavated by CI  
Equipment John Deere 310G Backhoe w/24" bucket

**TABLE I**

**LOG OF TEST PITS**

| <u>Test</u>                                 |             |      |                                                                                                                                                                                                                                                                                |
|---------------------------------------------|-------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pit No.                                     | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                    |
| TP-1                                        | 0.0 – 1.5   | ML   | <u><b>ARTIFICIAL FILL</b></u> (af): SANDY SILT, fine- to coarse-grained, reddish brown, moist, soft.                                                                                                                                                                           |
|                                             | 1.5 – 3.8   |      | <u><b>OLDER ALLUVIUM</b></u> (Qoal): SANDY SILT, fine- to medium-grained, dark brownish red, moist, moderately hard to hard; difficult digging.                                                                                                                                |
| TOTAL DEPTH 3.8 FT.<br>NO WATER, NO CAVING  |             |      |                                                                                                                                                                                                                                                                                |
| -----                                       |             |      |                                                                                                                                                                                                                                                                                |
| TP-2                                        | 0.0 – 10.0  | ML   | <u><b>ARTIFICIAL FILL</b></u> (af): CLAYEY SILT, reddish brown to grayish brown, slightly moist to wet, soft.<br>@ 7.5 ft. becoming dark gray.<br>@ 8.0 ft. some sandy zones, fine- to coarse-grained.<br>@ 9.5 ft. strong organic odor.<br>@ 10.0 ft. trace fine gravel; wet. |
| TOTAL DEPTH 10.0 FT.<br>NO WATER, NO CAVING |             |      |                                                                                                                                                                                                                                                                                |

May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                               |
|------------------------|-------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-3                   | 0.0 – 1.0   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine- to coarse-grained, light reddish brown, dry, loose.                                                                                                                              |
|                        | 1.0 – 2.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): brownish red, slightly moist, moderately hard to very hard; decomposed. @ 2.0 ft. becomes highly weathered, very hard; refusal.<br><br>TOTAL DEPTH 2.0 FT.<br>NO WATER, NO CAVING                      |
| -----                  |             |      |                                                                                                                                                                                                                                           |
| TP-4                   | 0.0 – 0.5   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine- to coarse-grained, slightly moist, loose to moderately dense.                                                                                                                    |
|                        | 0.5 – 6.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): grayish brown to reddish brown, slightly moist, moderately hard to hard; decomposed. @ 3.5 ft. hard; highly weathered. @ 6.0 ft. very hard; refusal.<br><br>TOTAL DEPTH 6.0 FT.<br>NO WATER, NO CAVING |

May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------|-------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-5                   | 0.0 – 8.5   |      | <p><b><u>OLDER ALLUVIUM</u></b> (Qoal): SANDY SILT, fine- to medium-grained, light reddish brown, slightly moist, soft to moderately hard; porous.<br/>           @ 1.5 ft. becoming moderately hard to hard; slightly porous.<br/>           @ 2.0 ft. dark grayish brown; micaceous.<br/>           @ 4.0 ft. becomes CLAYEY SILT, grayish brown to red brown, moist, stiff to very stiff.<br/>           @ 7.5 ft. trace fine gravel; micaceous; difficult digging.</p> <p>TOTAL DEPTH 8.5 FT.<br/>NO WATER, NO CAVING</p> |
| TP-6                   | 0.0 – 6.0   |      | <p><b><u>OLDER ALLUVIUM</u></b> (Qoal): SANDY SILT, fine- to medium-grained, light brown, slightly moist, soft to moderately hard.<br/>           @ 2.5 ft. hard.<br/>           @ 4.0 ft. difficult digging.<br/>           @ 5.5 ft. becomes light reddish brown.</p> <p>TOTAL DEPTH 6.0 FT.<br/>NO WATER, NO CAVING</p>                                                                                                                                                                                                    |

May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                          |
|------------------------|-------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-7                   | 0.0 – 5.5   |      | <b><u>OLDER ALLUVIUM</u></b> (Qoal): CLAYEY SAND, fine- to medium-grained, light brown, slightly moist, soft to moderately hard.<br>@ 3.0 ft. becoming moderately hard, moist.                                                                       |
|                        | 5.5 – 7.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): brownish red to gray brown, moist, hard; decomposed.<br>@ 6.0 ft. becomes moderately weathered.<br>@ 7.0 ft. refusal.<br><br>TOTAL DEPTH 7.0 FT.<br>NO WATER, NO CAVING                                           |
| -----                  |             |      |                                                                                                                                                                                                                                                      |
| TP-8                   | 0.0 – 9.0   | SM   | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND to SANDY SILT, fine- to coarse-grained, slightly moist to moist, loose.<br>@ 4.5 ft. becomes soft to moderately hard; common fine to coarse gravel.<br><br>TOTAL DEPTH 9.0 FT.<br>NO WATER, NO CAVING |

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**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                      |
|------------------------|-------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-9                   | 0.0 – 1.5   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND to CLAYEY SAND, fine- to coarse-grained, brownish red, slightly moist, loose.                                                                                                                                  |
|                        | 1.5 – 6.5   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): reddish brown, slightly moist, moderately hard; decomposed.<br>@ 3.5 ft. brownish gray, slightly moist, hard; highly weathered.<br>@ 6.5 ft. moderately weathered; refusal.<br><br>TOTAL DEPTH 6.5 FT.<br>NO WATER, NO CAVING |
| -----                  |             |      |                                                                                                                                                                                                                                                                  |
| TP-10                  | 0.0 – 2.5   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine- to medium-grained, light reddish brown, slightly moist, loose.                                                                                                                                          |
|                        | 2.5 – 4.5   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): light grayish brown, slightly moist, moderately hard; decomposed.<br>@ 4.5 ft. becomes hard to very hard; moderately weathered; refusal.<br><br>TOTAL DEPTH 4.5 FT.<br>NO WATER, NO CAVING                                    |

May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.)                                | USCS | Description                                                                                                                                         |
|------------------------|--------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-11                  | 0.0 – 2.5                                  | ML   | <b><u>TOPSOIL</u></b> (No Map Symbol): SANDY SILT, fine- to medium-grained, light reddish brown, dry to slightly moist, soft.                       |
|                        | 2.5 – 3.0                                  |      | <b><u>GRANITIC ROCK</u></b> (Kgr): reddish orange, slightly moist, hard; moderately weathered.<br>@ 3.0 ft. very hard; slightly weathered; refusal. |
|                        | TOTAL DEPTH 3.0 FT.<br>NO WATER, NO CAVING |      |                                                                                                                                                     |
| -----                  |                                            |      |                                                                                                                                                     |
| TP-12                  | 0.0 – 1.5                                  | ML   | <b><u>TOPSOIL</u></b> (No Map Symbol) SANDY SILT, fine- to coarse-grained, light reddish brown, slightly moist, soft.                               |
|                        | 1.5 – 3.5                                  |      | <b><u>GRANITIC ROCK</u></b> (Kgr): reddish orange, slightly moist, hard; moderately weathered.<br>@ 3.5 ft. very hard, slightly weathered; refusal. |
|                        | TOTAL DEPTH 3.5 FT.<br>NO WATER, NO CAVING |      |                                                                                                                                                     |



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**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u>    |                                            |             |                                                                                                                                                                                                             |
|----------------|--------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Pit No.</u> | <u>Depth (ft.)</u>                         | <u>USCS</u> | <u>Description</u>                                                                                                                                                                                          |
| TP-13          | 0.0 – 1.5                                  | ML          | <u><b>TOPSOIL</b></u> (No Map Symbol): SANDY SILT, fine- to medium-grained, light reddish brown, dry to slightly moist, soft to firm.                                                                       |
|                | 1.5 – 2.5                                  |             | <u><b>GRANITIC ROCK</b></u> (Kgr): red orange, slightly moist, hard; highly weathered.<br>@ 2.5 ft. becomes very hard; moderately weathered; refusal.                                                       |
|                | TOTAL DEPTH 2.5 FT.<br>NO WATER, NO CAVING |             |                                                                                                                                                                                                             |
| -----          |                                            |             |                                                                                                                                                                                                             |
| TP-14          | 0.0 – 1.0                                  | ML          | <u><b>TOPSOIL</b></u> (No Map Symbol) SANDY SILT, fine- to medium-grained, light reddish brown, dry, soft.                                                                                                  |
|                | 1.0 – 4.5                                  |             | <u><b>GRANITIC ROCK</b></u> (Kgr): reddish orange, slightly moist, moderately hard; decomposed.<br>@ 2.0 ft. becomes hard; highly weathered.<br>@ 4.5 ft. becomes very hard, moderately weathered; refusal. |
|                | TOTAL DEPTH 4.5 FT.<br>NO WATER, NO CAVING |             |                                                                                                                                                                                                             |

May 23, 2007

**TABLE I continued****LOG OF TEST PITS**

| <u>Test</u><br>Pit No.                     | Depth (ft.) | USCS | Description                                                                                                                                             |
|--------------------------------------------|-------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-23<br>(~El. 840)                        | 0.0 – 2.5   | SM   | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, light reddish brown, moist, loose to moderately dense.<br>@ 2.0 ft. bulk.                               |
|                                            | 2.5 – 6.5   | SM   | <b><u>ALLUVIUM</u></b> (Qal): SILTY SAND, dark reddish brown, moist, moderately dense; porous; faint organic smell.<br>@ 5.0 ft. bulk.                  |
|                                            | 6.5 – 9.0   | SM   | <b><u>OLDER ALLUVIUM</u></b> (Qoal): SILTY SAND, reddish brown, moist, moderately dense.                                                                |
|                                            | 9.0 – 9.5   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): reddish brown to light olive brown, moist, hard; highly weathered; friable.<br>@ 9.0 ft. bulk.<br>@ 9.5 ft. refusal. |
| TOTAL DEPTH 9.5 FT.<br>NO WATER, NO CAVING |             |      |                                                                                                                                                         |

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May 23, 2007

TP-23 continued





Work Order 401120

May 23, 2007

TP-23 continued



Work Order 401120

May 23, 2007

Work Order: 401120

Date Excavated: 04/27/07

Excavated by: AB

Equipment: John Deere 310G rubber-tired backhoe

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No.                     | Depth (ft.) | USCS | Description                                                                                                                                                                                     |
|--------------------------------------------|-------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-24<br>(~El. 870)                        | 0.0 – 2.5   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, red brown, slightly moist, loose to moderately dense.                                                                                        |
|                                            | 2.5 – 6.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): red brown with black and white, moist to wet; highly weathered; friable; medium to coarse-grained; micaceous.<br>@ 6.0 ft. moderately hard to hard; refusal. |
| TOTAL DEPTH 6.0 FT.<br>NO WATER, NO CAVING |             |      |                                                                                                                                                                                                 |

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TP-24 continued





Work Order 401120

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TP-24 continued



May 23, 2007

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                      |
|------------------------|-------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-25<br>(~El. 850)    | 0.0 – 4.0   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine-grained, red brown, slightly moist to moist, loose.                                                                                                                                                                                                      |
|                        | 4.0 – 9.0   | SM   | <b><u>GRANITIC ROCK</u></b> (Kgr): dark red brown, moist, soft; micaceous; highly weathered.<br>@ 8.0 ft. light red brown with black and white, moist, moderately hard; freshening; friable, medium- to coarse-grained; micaceous.<br>@ 9.0 ft. hard, refusal.<br><br>TOTAL DEPTH 9.0 FT.<br>NO WATER, NO CAVING |

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Work Order 401120

May 23, 2007

TP-25 continued



May 23, 2007

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                  |
|------------------------|-------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-26<br>(~El. 934)    | 0.0 – 0.5   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine-<br>to medium-grained, light red brown, moist to moist;<br>micaceous.                                                                                                |
|                        | 0.5 – 4.5   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): light reddish brown to<br>reddish yellow with black and white, moist;<br>moderately hard; highly weathered; friable;<br>medium- to coarse-grained; micaceous.<br>@ 4.5 ft. hard; refusal. |
|                        |             |      | TOTAL DEPTH 4.5 FT.<br>NO WATER, NO CAVING                                                                                                                                                                                   |

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TP-26 continued





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**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No.                     | Depth (ft.) | USCS    | Description                                                                                                                                                                                                                       |
|--------------------------------------------|-------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-27<br>(~El. 894)                        | 0.0 – 1.5   | SM      | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, light reddish brown, slightly moist to moist, loose to moderately dense.                                                                                                       |
|                                            |             | SM - CL | @ 0.5 ft. SILTY SAND some CLAY, reddish brown, moist, moderately dense.                                                                                                                                                           |
|                                            | 1.5 – 3.5   |         | <b><u>GRANITIC ROCK</u></b> (Kgr): light reddish yellow with black and white, moist, moderately hard; highly weathered; friable; medium- to coarse-grained; some cemented fragments to 4"; micaceous.<br>@ 3.5 ft. hard; refusal. |
| TOTAL DEPTH 3.5 FT.<br>NO WATER, NO CAVING |             |         |                                                                                                                                                                                                                                   |



May 23, 2007

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                               |
|------------------------|-------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-28<br>(~El. 880)    | 0.0 – 3.0   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine-<br>to medium-grained, light red brown, slightly moist<br>to moist, moderately dense.                             |
|                        |             | SM   | @ 3.0 ft.: SILTY SAND, reddish brown, moist,<br>moderately dense.                                                                                                         |
|                        | 3.0 – 8.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): light reddish brown,<br>moist, moderately hard; highly weathered; friable;<br>medium- to coarse-grained; micaceous.<br>@ 8.0 ft. hard. |
|                        |             |      | TOTAL DEPTH 8.0 FT.<br>NO WATER, NO CAVING                                                                                                                                |

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TP-28 continued



Work Order 401120

May 23, 2007

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                         |
|------------------------|-------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-29<br>(~El. 888)    | 0.0 – 1.0   | SM   | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine-<br>to medium-grained, light red brown, slightly moist<br>to moist, loose to moderately dense.                              |
|                        | 1.0 – 5.5   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): light reddish brown,<br>moist, moderately hard; highly weathered; friable;<br>medium- to coarse-grained; micaceous..<br>@ 5.5 ft. hard; friable. |
|                        |             |      | TOTAL DEPTH 5.5 FT.<br>NO WATER, NO CAVING                                                                                                                                          |



May 23, 2007

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                    |
|------------------------|-------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-30<br>(~El. 902)    | 0.0 – 0.5   | SM   | <b><u>ARTIFICIAL FILL</u></b> (Af): SILTY SAND, fine- to medium-grained, light red brown, slightly moist, loose to moderately dense.                                                                                           |
|                        | 0.5 – 5.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): light reddish brown, moist, moderately hard; highly weathered; friable; medium- to coarse-grained; micaceous.<br>@ 5.0 ft. hard; refusal.<br><br>TOTAL DEPTH 5.0 FT.<br>NO WATER, NO CAVING |



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Work Order 401120

May 23, 2007

TP-30 continued



May 23, 2007

**TABLE I continued**

**LOG OF TEST PIT**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                    |
|------------------------|-------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-31<br>(~El. 831)    | 0.0 – 0.25  | SM   | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, fine- to medium-grained, light red brown, slightly moist, loose to moderately dense.                                                                                           |
|                        | 0.25 – 3.0  |      | <b><u>GRANITIC ROCK</u></b> (Kgr): light reddish brown, moist, moderately hard; highly weathered; friable; medium- to coarse-grained; micaceous.<br>@ 3.0 ft. hard; refusal.<br><br>TOTAL DEPTH 3.0 FT.<br>NO WATER, NO CAVING |



May 23, 2007

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                                |
|------------------------|-------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-32<br>(~El. 824)    | 0.0 – 4.0   | SM   | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, fine- to medium-grained, red brown to dark brown, moist to wet, loose to medium dense; roots; plastic pipe.                                                                                                                                                                |
|                        | 4.0 – 9.0   | SM   | <b><u>ALLUVIUM</u></b> (Qal): SILTY SAND some CLAY, dark brown to gray, moist to wet; granitic rock fragments; friable.<br>@ 5.0 ft. bulk.<br>@ 8.0 ft. <u>caving, saturated</u> .<br>@ 9.0 ft. <u>groundwater</u> (seepage and accumulating).<br><br>TOTAL DEPTH 9.0 FT.<br><b><u>WATER AS NOTED, CAVING AS NOTED</u></b> |

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TP-32 continued





Work Order 401120

May 23, 2007

TP-32 continued





May 23, 2007

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                           |
|------------------------|-------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-33<br>(~El. 841)    | 0.0 – 1.0   | SM   | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, fine- to medium-grained, light red brown, slightly moist, loose to moderately dense.                                                                                                                                  |
|                        | 1.0 – 5.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): light reddish brown, moist, moderately hard; highly weathered; friable; medium- to coarse-grained; micaceous.<br>@ 3.0 ft. 10% fragments to 4" size.<br>@ 5.0 ft. hard; refusal.<br><br>TOTAL DEPTH 5.0 FT.<br>NO WATER, NO CAVING |





May 23, 2007

**TABLE I continued**

**LOG OF TEST PITS**

| <u>Test<br/>Pit No.</u>                    | <u>Depth (ft.)</u> | <u>USCS</u> | <u>Description</u>                                                                                                                                                           |
|--------------------------------------------|--------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-34<br>(~El. 852)                        | 0.0 – 0.5          | SM          | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, fine- to medium-grained, light red brown, slightly moist, loose to moderately dense.                                         |
|                                            | 0.5 – 4.0          | SM          | <b><u>ALLUVIUM</u></b> (Qal): SILTY SAND, dark reddish brown, moist, moderately dense; porous; faint organic smell.<br>@ 3.0 ft. bulk.                                       |
|                                            | 4.0 – 5.5          |             | <b><u>GRANITIC ROCK</u></b> (Kgr): light reddish brown, moist, moderately hard; highly weathered; friable; medium- to coarse-grained; micaceous.<br>@ 5.5 ft. hard; refusal. |
| TOTAL DEPTH 5.5 FT.<br>NO WATER, NO CAVING |                    |             |                                                                                                                                                                              |



May 23, 2007

Work Order 401120  
Date Excavated 5/10/07 – 5/11/07  
Excavated by DTW  
Equipment: John Deere 310SG Backhoe w/24"bucket

**TABLE I**

**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | <u>Depth (ft.)</u> | <u>USCS</u> | <u>Description</u>                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------|--------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-35                  | 0.0 – 0.5          |             | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND, fine- to medium-grained, brown to reddish brown, dry, loose; trace pinhole porosity; trace roots.                                                                                                                                                                                                                                                                                                   |
|                        | 0.5 – 9.0          |             | <b><u>GRANITIC ROCK</u></b> (Kgr): grayish brown to brownish gray; dry to slightly moist, soft to moderately hard; friable ; highly weathered; freshens with depth; trace roots to ~3.0 ft.; excavates to SILTY SAND, medium- to coarse-grained with some gravel.<br>@ 2.0 ft. brownish gray to gray; slightly moist to moist, moderately hard; moderate digging.<br>@ 4.0 ft. gray to dark gray, moist; hard digging.<br>@ 9.0 ft. practical refusal. |

TOTAL DEPTH 9.0 FT.  
NO WATER, NO CAVING



see next page



Work Order 401120

May 23, 2007

TP-35 continued



May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                         |
|------------------------|-------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-36                  | 0.0 – 3.0   |      | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, dark brown to brownish black, moist, loose; trace boulders; trace gravel; abundant trash (metal/bottles, etc.).<br>@ 2.5 ft. minor <u>seepage</u> .                                 |
|                        | 3.0 – 3.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): brownish gray to gray, moist, very hard; refusal.<br><br>TOTAL DEPTH 3.0 FT.<br><u>WATER</u> AS NOTED, NO CAVING                                                                                 |
| -----                  |             |      |                                                                                                                                                                                                                                     |
| TP-37                  | 0.0 – 4.0   |      | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, dark brown to brownish black, moist, loose; trace boulders; trace gravel; abundant trash (metal/bottles, etc.).<br>@ 3.5 ft. <u>water</u> .                                         |
|                        | 4.0 – 6.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): brownish gray with orange hues, moist, hard; weathered; excavates to SILTY SAND, medium- to coarse-grained.<br>@ 6.0 ft. refusal.<br><br>TOTAL DEPTH 6.0 FT.<br><u>WATER</u> AS NOTED, NO CAVING |

Work Order 401120

May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                     |
|------------------------|-------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-38                  | 0.0 – 3.0   |      | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, dark brown to brownish black, moist, loose; trace boulders; trace gravel; abundant trash (metal/bottles, etc.). |
|                        | 3.0 – 3.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): gray, moist, hard to very hard; refusal.<br><br>TOTAL DEPTH 3.0 FT.<br>NO WATER, NO CAVING                                   |



May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u>    |                    |             |                                                                                                                                                                                                    |
|----------------|--------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Pit No.</u> | <u>Depth (ft.)</u> | <u>USCS</u> | <u>Description</u>                                                                                                                                                                                 |
| TP-39          | 0.0 – 3.0          |             | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, dark brown to brownish black, moist, loose; trace boulders; trace gravel; abundant trash (metal/bottles, etc.).<br>@ 2.0 ft. minor <u>caving</u> . |
|                | 3.0 – 7.0          |             | <b><u>ALLUVIUM</u></b> (Qal): SILTY SAND, fine- to medium-grained, dark brown to brown, slightly moist, loose; trace porosity; trace roots; trace 12" minus granitic boulders.                     |
|                | 7.0 – 8.5          |             | <b><u>GRANITIC ROCK</u></b> (Kgr): grayish brown with orange hues, moist, hard; weathered; excavates to SILTY SAND, medium- to coarse-grained, minor <u>seepage</u> .<br>@ 8.5 ft. refusal.        |

TOTAL DEPTH 8.5 FT.

WATER AS NOTED, CAVING AS NOTED



see next page



Work Order 401120

May 23, 2007

TP-39 continued





May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------|-------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-40                  | 0.0 – 2.0   |      | <b><u>TOPSOIL</u></b> (No Map Symbol): SILTY SAND with cobbles; medium- to coarse-grained, dark grayish brown (10YR 4/2) to brown (10YR 4/3), slightly moist to moist, loose; trace 12" minus granitic boulders.                                                                                                                                                                                                           |
|                        | 0.2 – 7.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): orange brown, slightly moist; weathered; friable; freshens with depth; easy digging; trace 12" minus corestones; excavates to GRAVELLY SAND, medium- to coarse-grained. @ 5.0 ft. brownish gray with trace orange hues, moist, hard; hard digging; excavates to SILTY SAND due to scratching with teeth. @ 7.0 ft. practical refusal.<br><br>TOTAL DEPTH 7.0 FT.<br>NO WATER, NO CAVING |



see next page



Work Order 401120

May 23, 2007

TP-40 continued





May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No. | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------|-------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-41                  | 0.0 – 3.0   |      | <b><u>ALLUVIUM</u></b> (Qal): CLAYEY SAND, fine- to medium-grained with some coarse-grained, very dark grayish brown (10YR 3/2) to dark brown (10YR 3/3), slightly moist to moist, soft.                                                                                                                                                                                                     |
|                        | 3.0 – 5.0   |      | <b><u>GRANITIC ROCK</u></b> (Kgr): reddish brown with orange hues, medium- to coarse phenocrysts; slightly moist, soft to moderately hard; highly weathered; freshens with depth; trace gravel; friable; easy digging; excavates to SAND, medium- to coarse-grained.<br>@ 4.0 ft. moderately hard digging.<br>@ 5.0 ft. practical refusal.<br><br>TOTAL DEPTH 5.0 FT.<br>NO WATER, NO CAVING |



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Work Order 401120

May 23, 2007

TP-41 continued



May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u><br>Pit No.                                                | Depth (ft.) | USCS | Description                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------|-------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TP-42                                                                 | 0.0 – 2.0   |      | <b><u>ARTIFICIAL FILL</u></b> (af): SILTY SAND, medium- to coarse-grained, grayish brown (10YR 5/2) to pale brown (10YR 6/3), dry to slightly moist, loose.                                                                                                                                                                                                                             |
|                                                                       | 2.0 – 9.0   |      | <b><u>ALLUVIUM</u></b> (Qal): SILTY SAND, medium- to coarse-grained, very dark brown (10YR 2/2) to reddish brown (5YR 4/4), slightly moist to moist, loose; trace CLAYEY overbank deposits; cross-bedded; repeated fining up sequences; very easy digging.<br>@ 5.0 ft. <u>caving</u> .<br>@ 6.0 ft. moist.<br>@ 7.5 ft. moist to wet.<br>@ 8.5 ft. <u>saturated</u> ; <u>seepage</u> . |
|                                                                       | 9.0 – 11.0  |      | <b><u>GRANITIC ROCK</u></b> (Kgr): dark gray, moist, moderately hard to hard; hard digging; excavates to SILTY SAND with gravel, fine- to medium-grained.                                                                                                                                                                                                                               |
| TOTAL DEPTH 11.0 FT.<br><u>WATER</u> AS NOTED, <u>CAVING</u> AS NOTED |             |      |                                                                                                                                                                                                                                                                                                                                                                                         |

See next page



Work Order 401120

May 23, 2007

TP-42 continued





May 23, 2007

**TABLE I**  
**LOG OF TEST PITS**

| <u>Test</u>    |                    |             |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|--------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Pit No.</u> | <u>Depth (ft.)</u> | <u>USCS</u> | <u>Description</u>                                                                                                                                                                                                                                                                                                                                                                                                             |
| TP-43          | 0.0 – 4.0          |             | <b><u>GRANITIC ROCK</u></b> (Kgr): reddish brown (5YR 4/4) to strong brown (7.5 YR 5/6), dry; highly weathered; abundant porosity; trace roots; excavates to CLAYEY SAND, medium- to coarse-grained.<br>@ 1.0 ft. reddish brown to orange brown, dry to slightly moist, moderately hard to hard; hard digging; excavates to coarse SAND with trace gravel.<br>@ 3.0 ft. brownish gray to gray.<br>@ 4.0 ft. practical refusal. |

TOTAL DEPTH 4.0 FT.  
NO WATER, NO CAVING



see next page



Work Order 401120

May 23, 2007

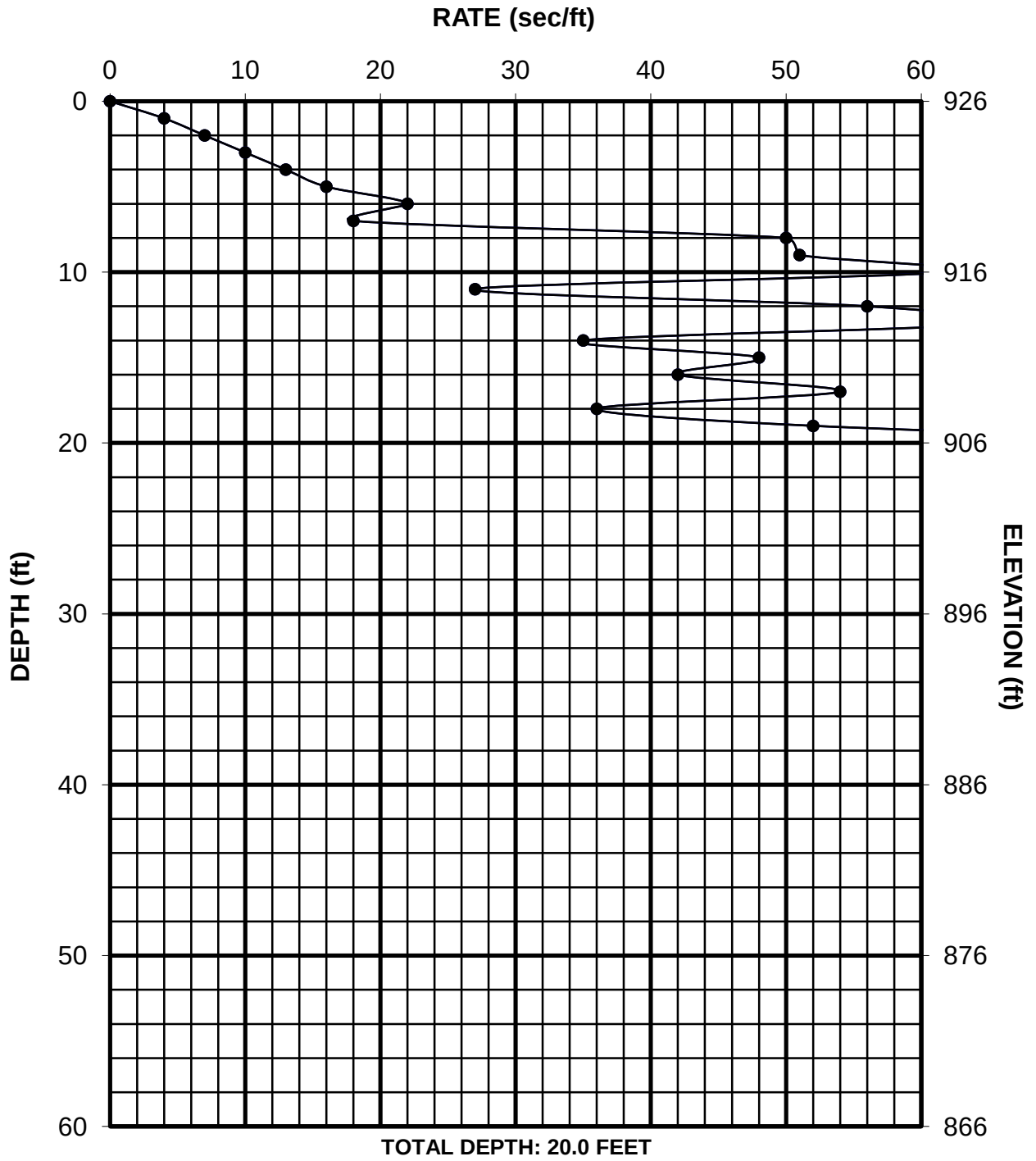
TP-43 continued



**AIR TRACK BORING**  
**AT-1 THROUGH AT-19**

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**  
**MARCH 2012**

# AT-1

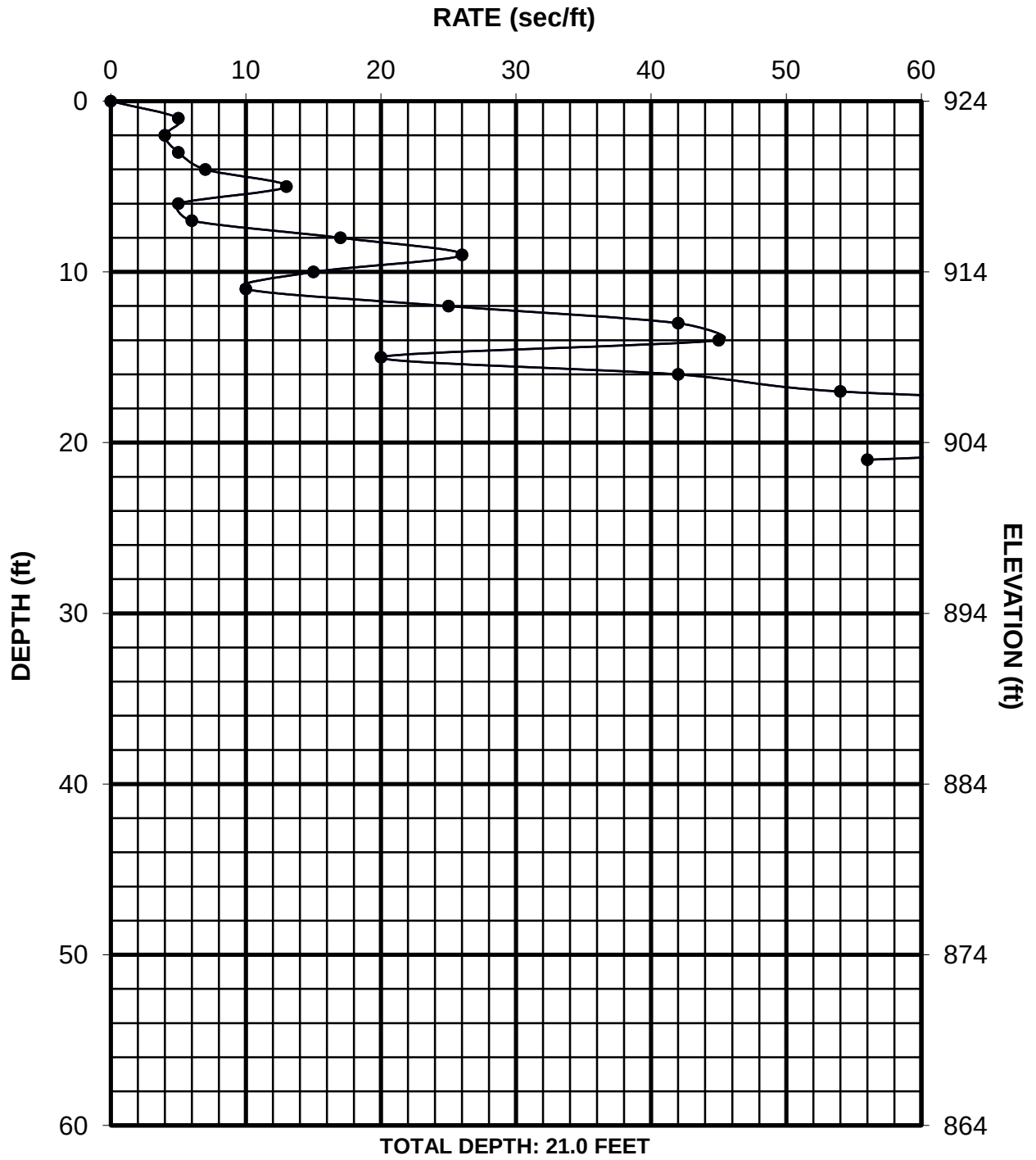


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-2



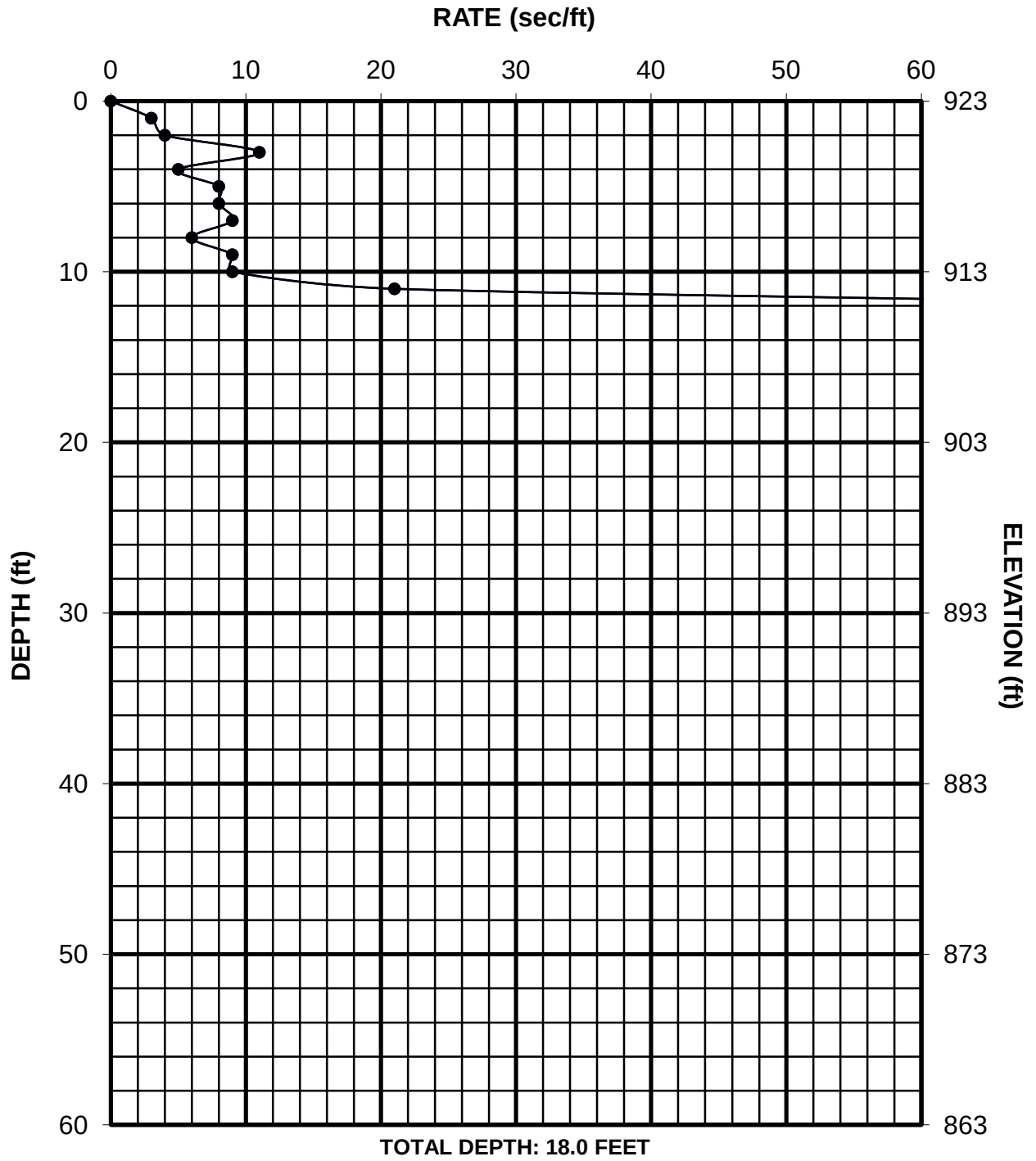
EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**



# AT-3

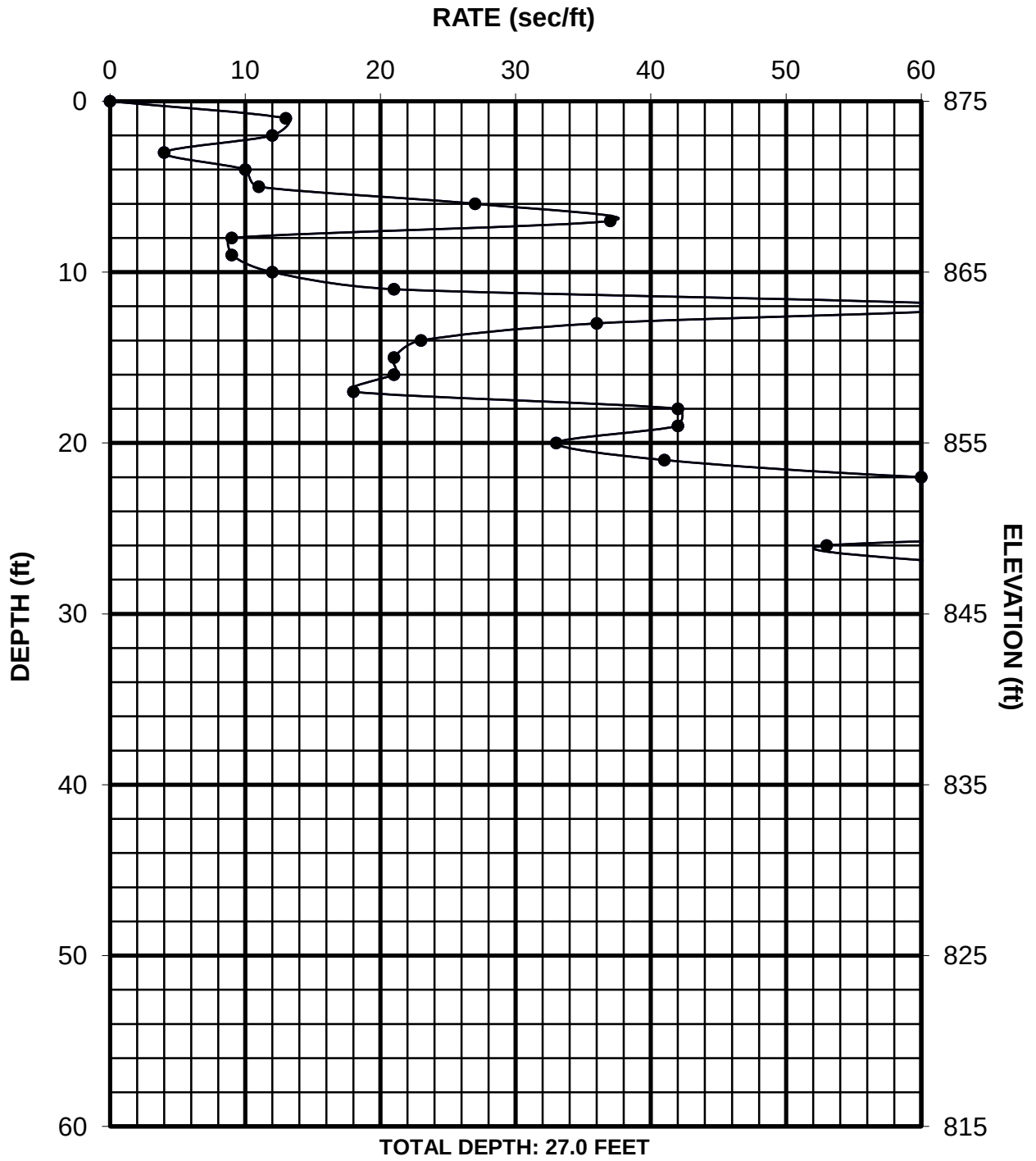


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-4

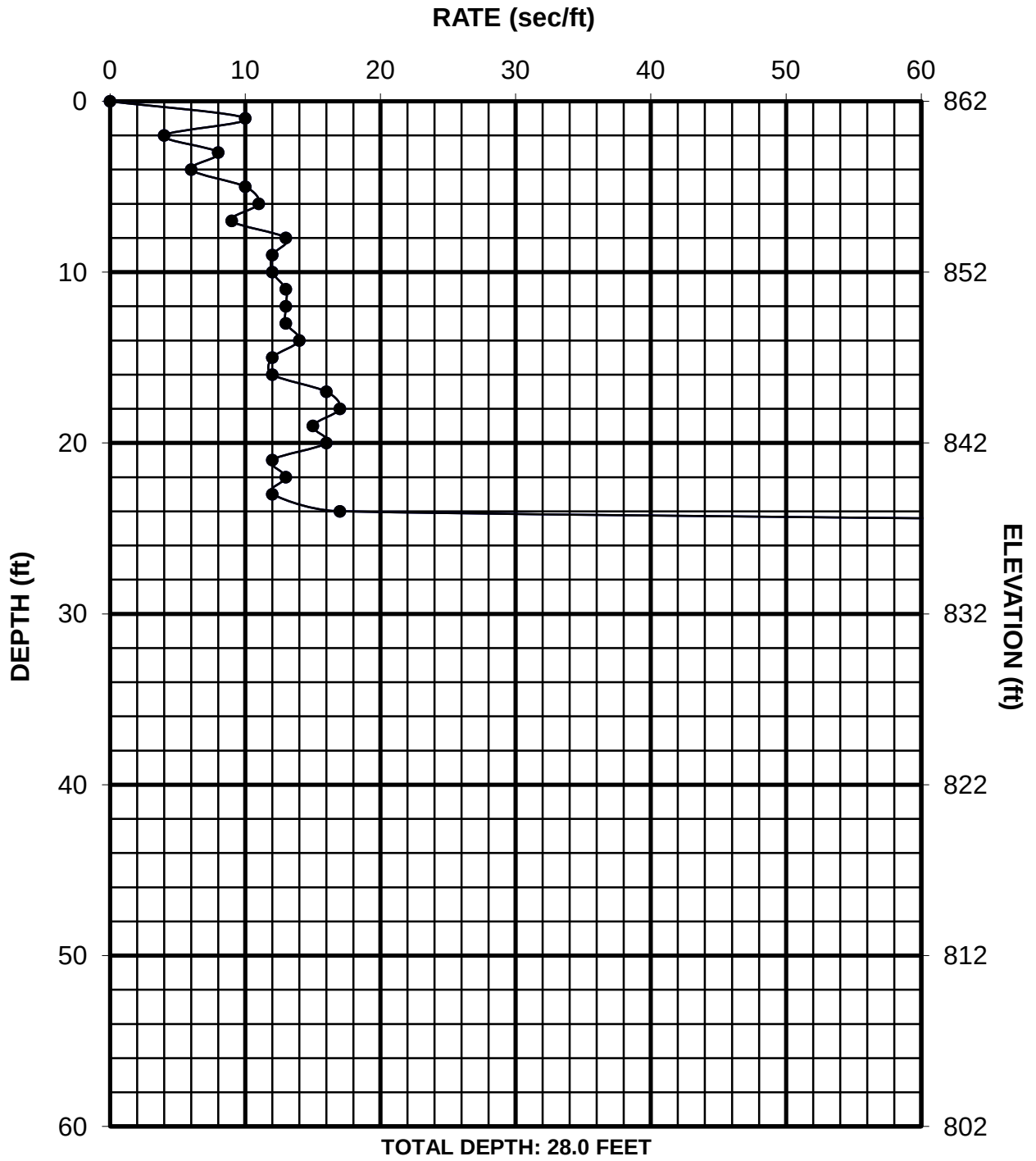


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-5

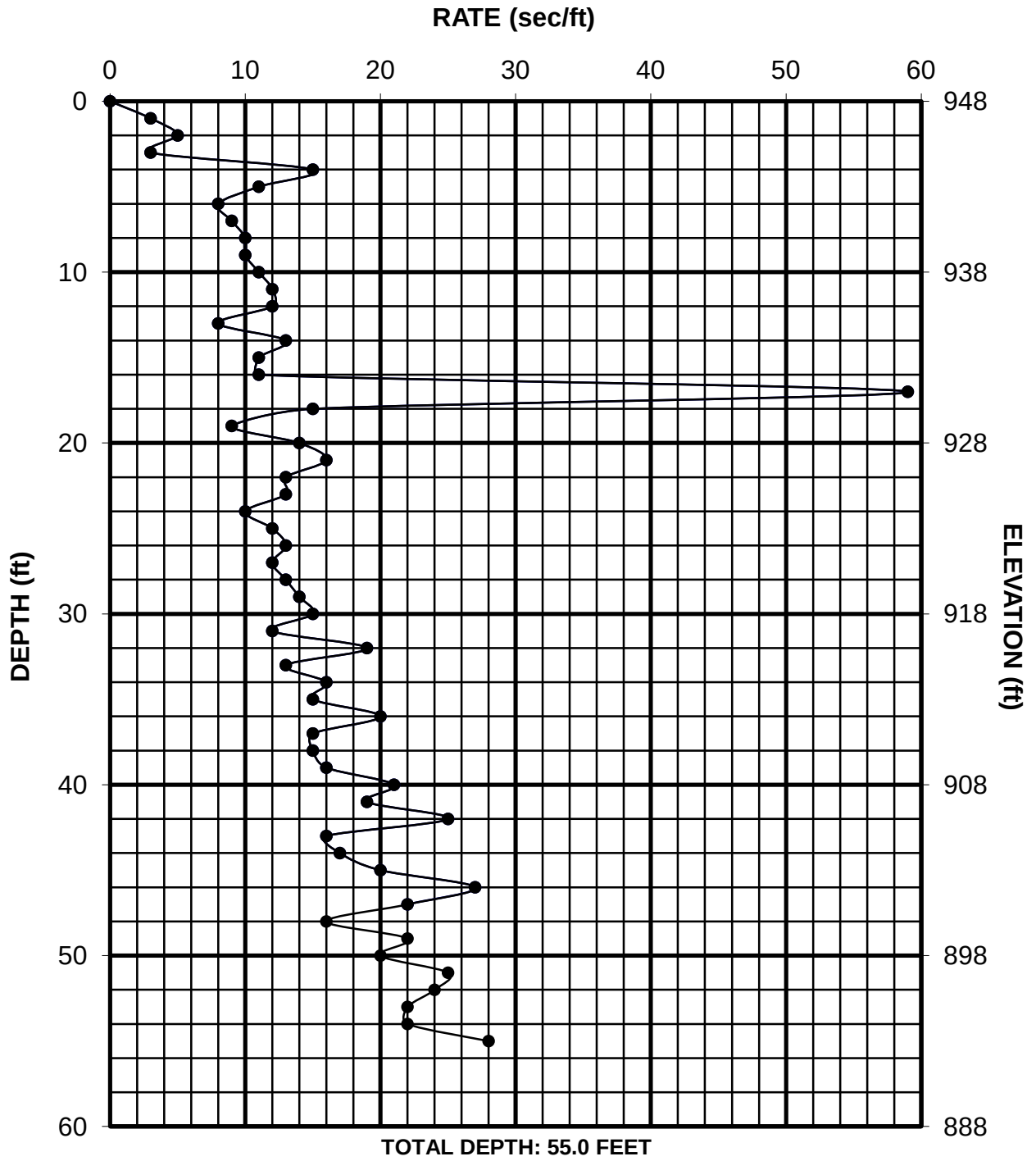


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-6



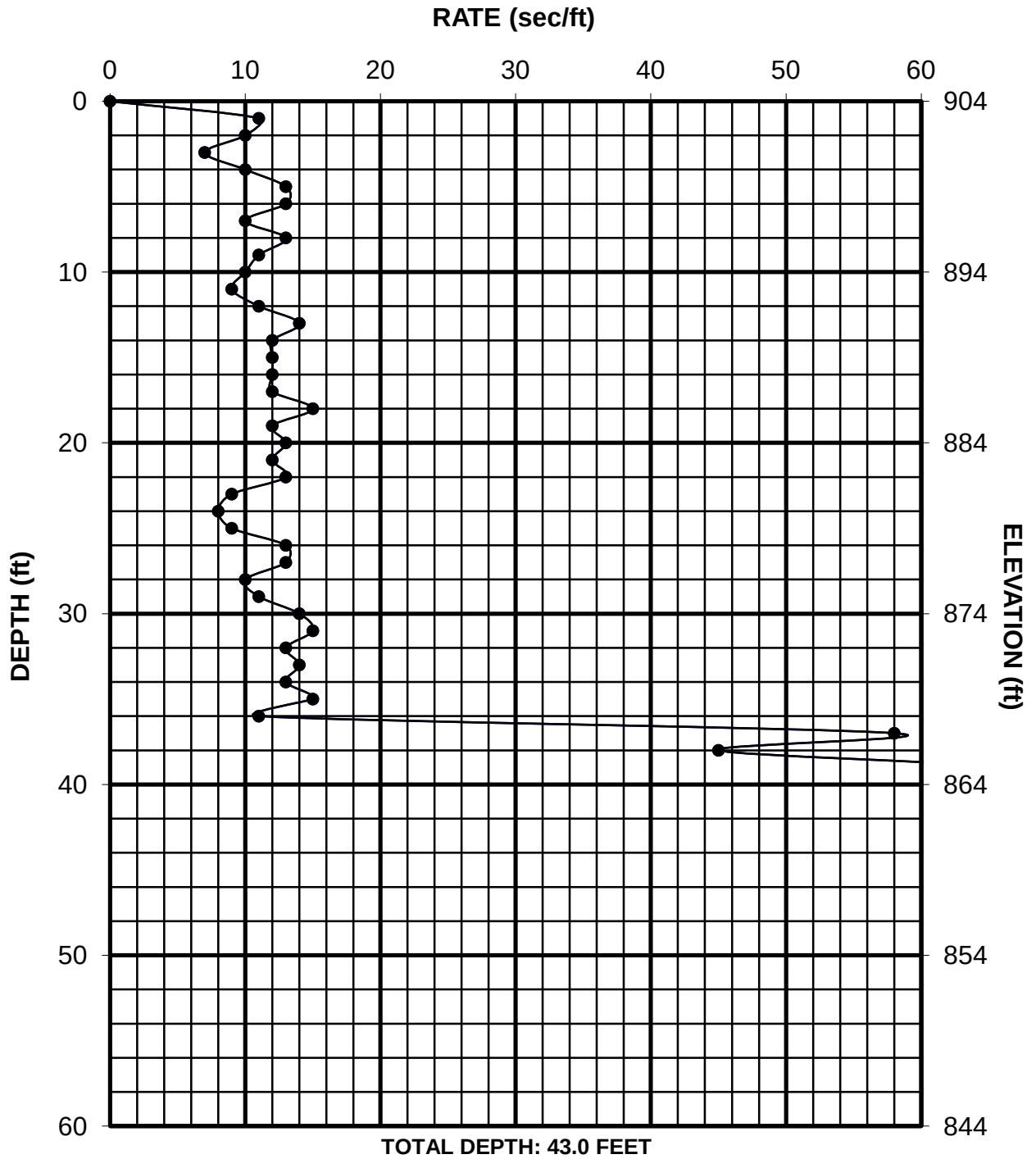
EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**



AT-7

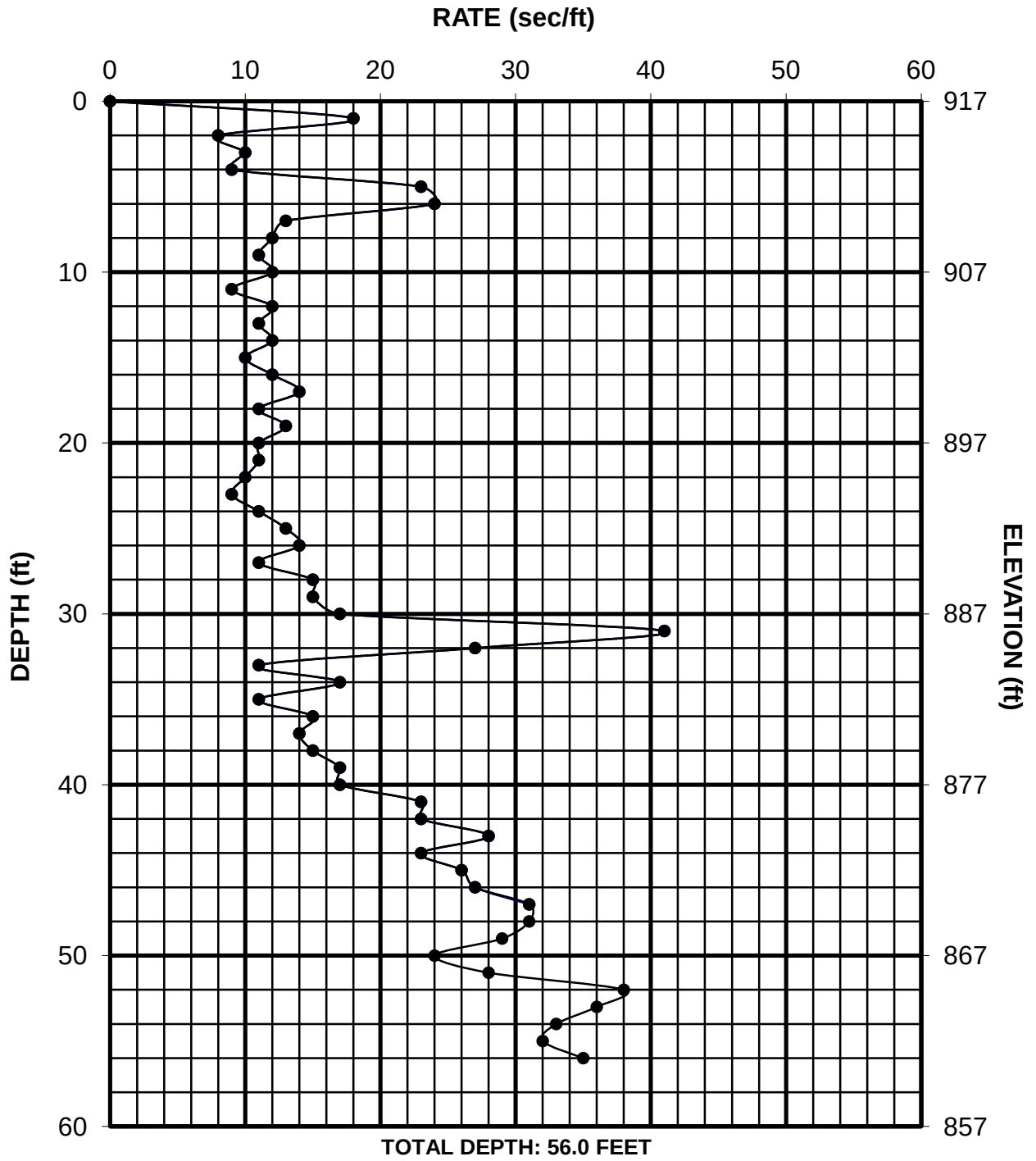


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-8

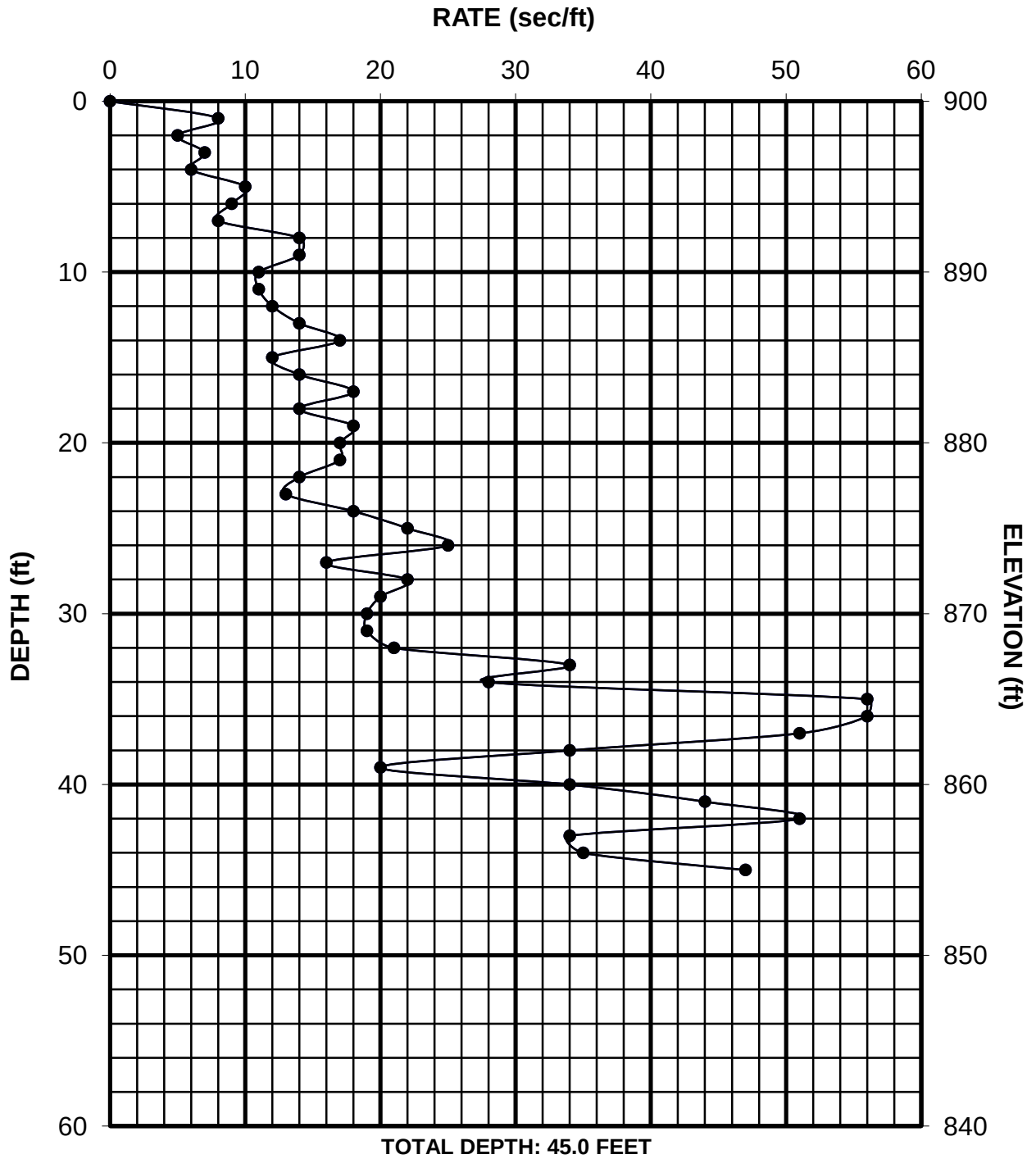


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

AT-9

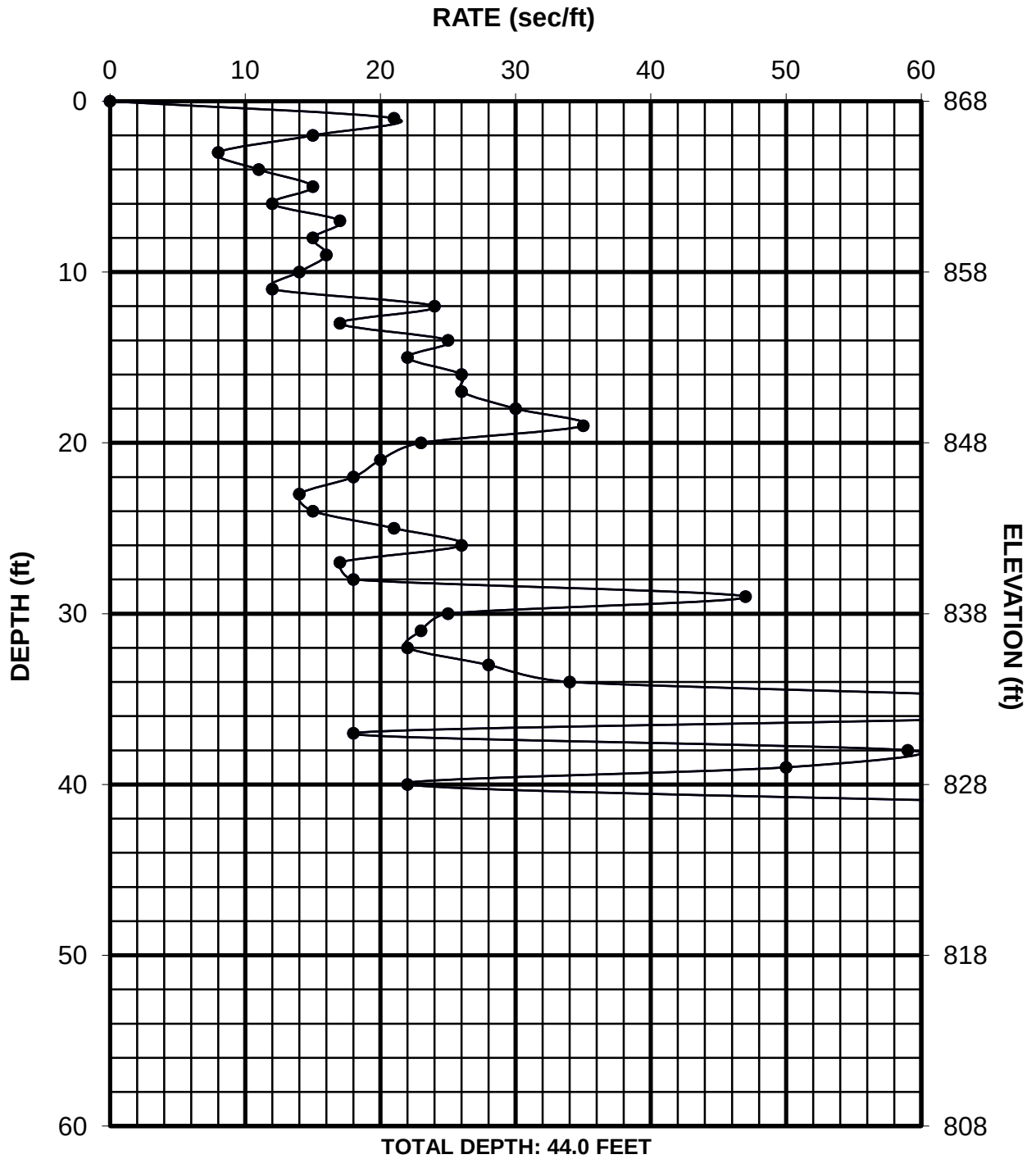


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-10



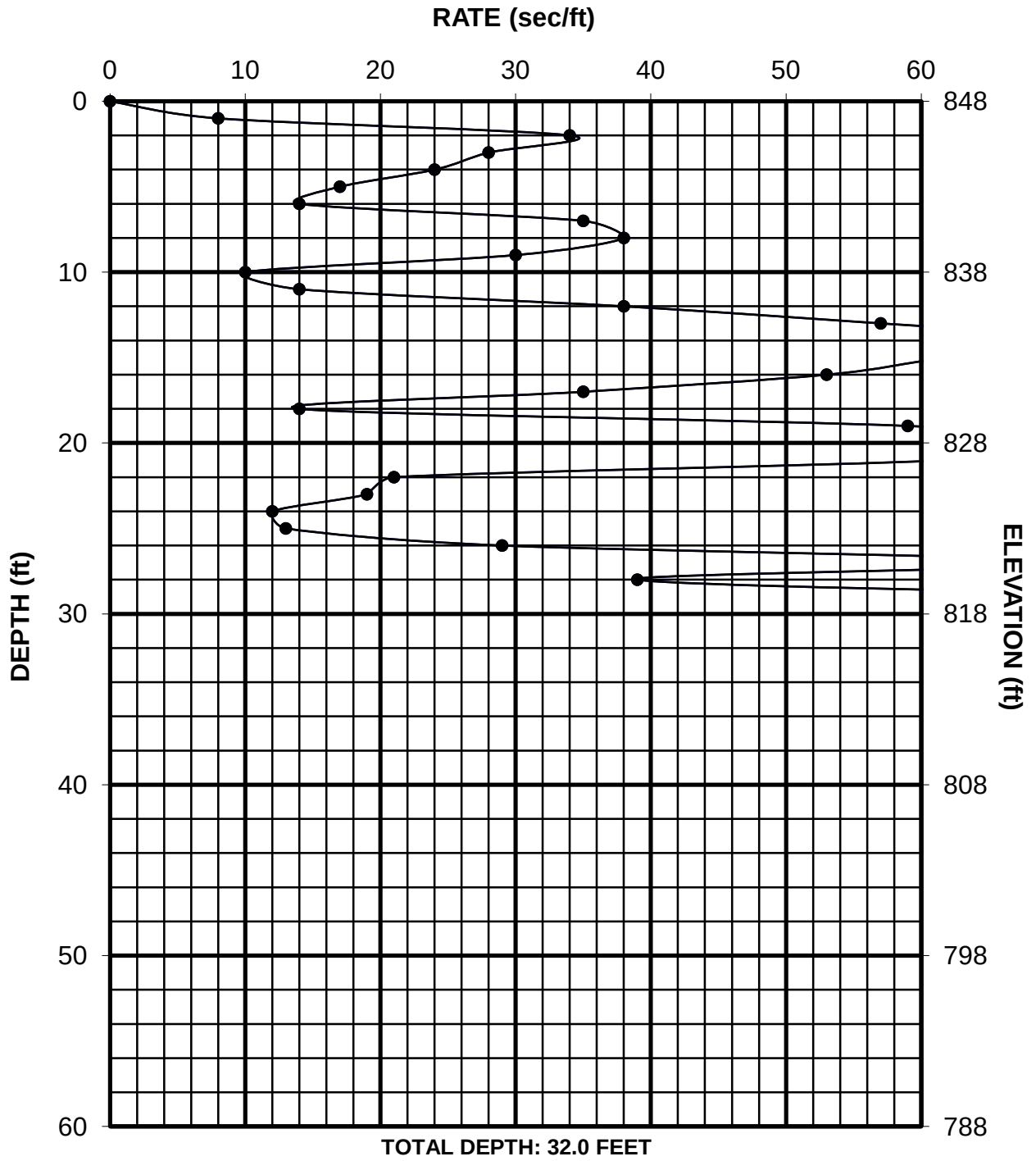
EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**



# AT-11

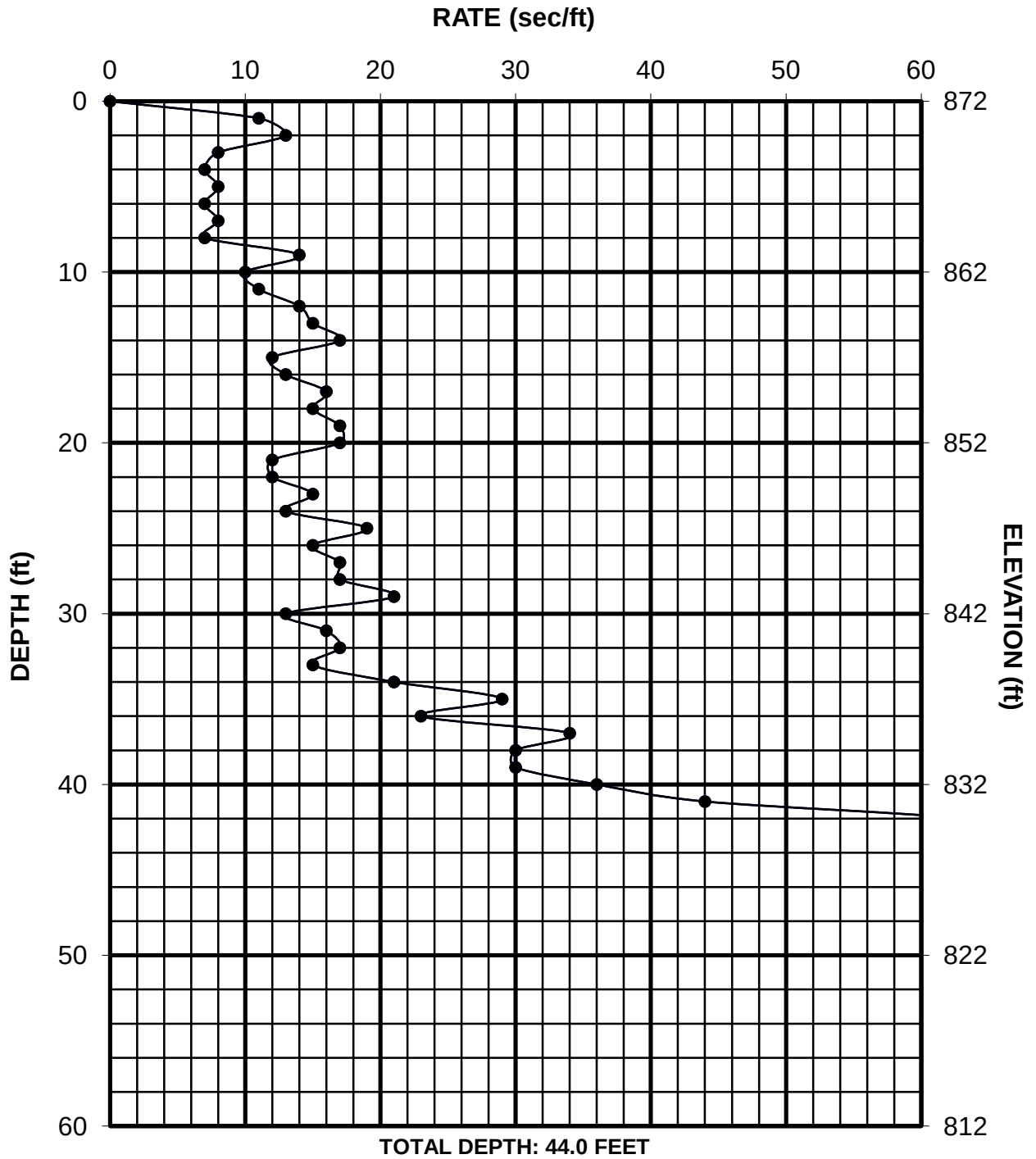


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-12

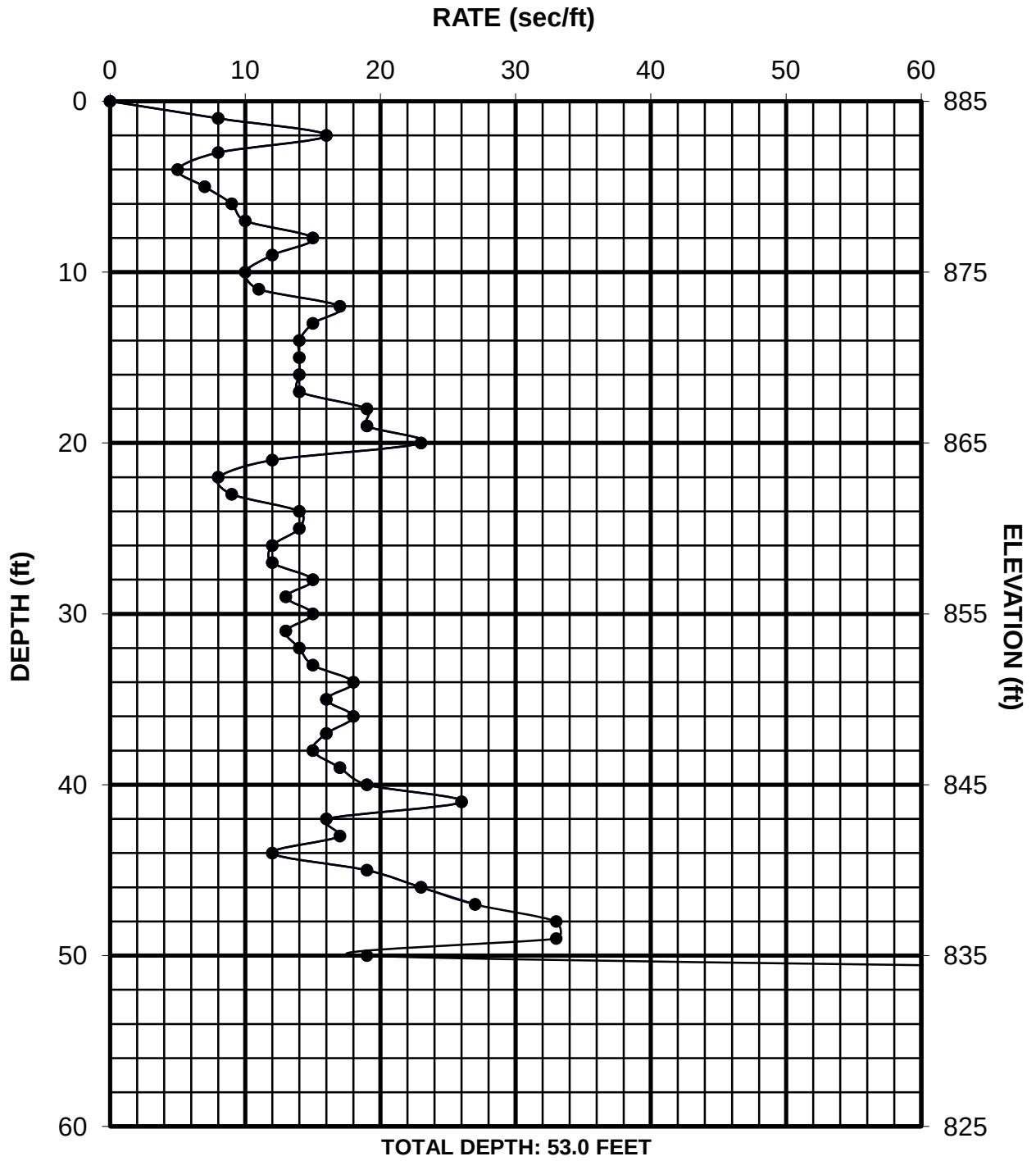


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-13

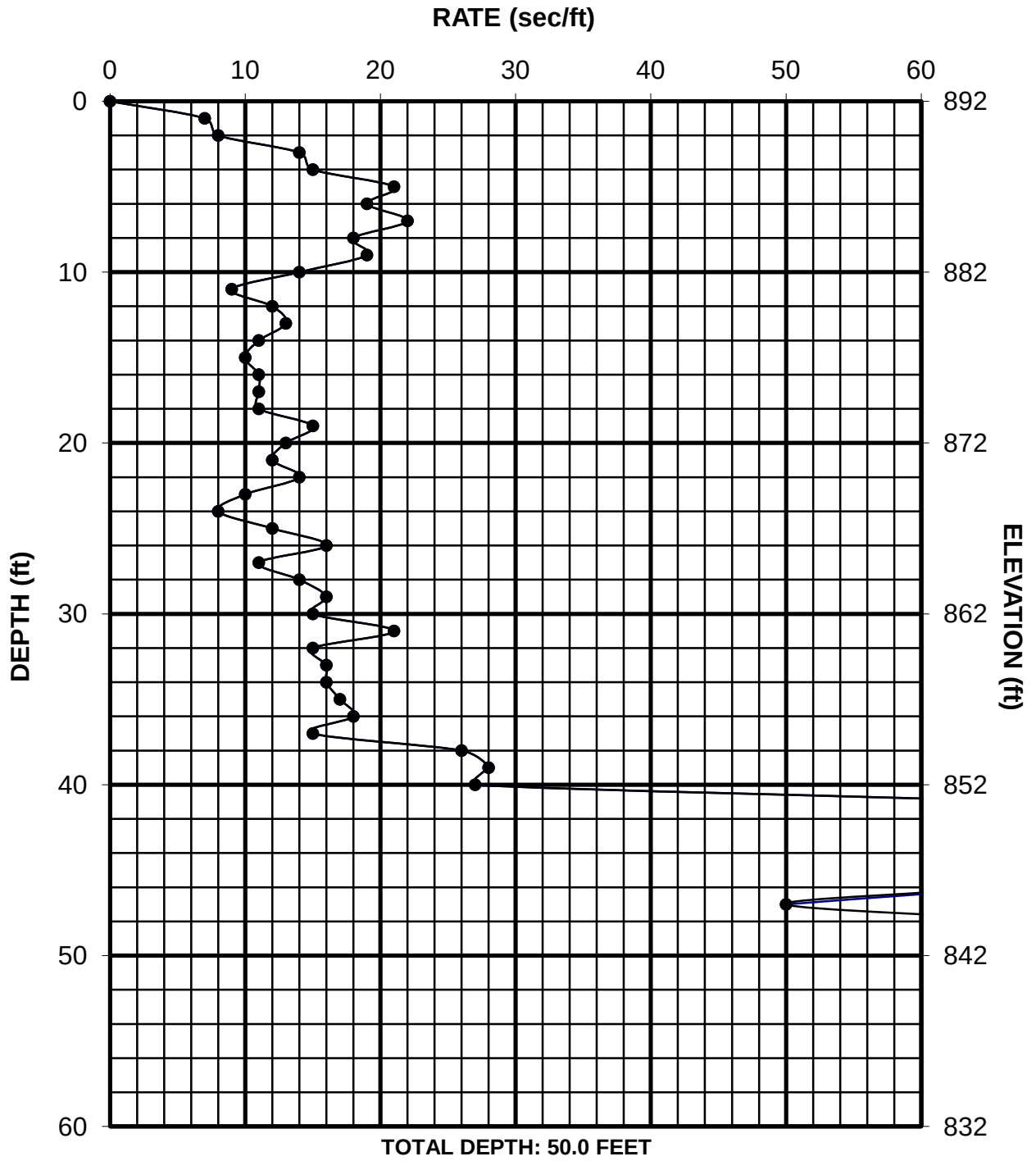


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-14



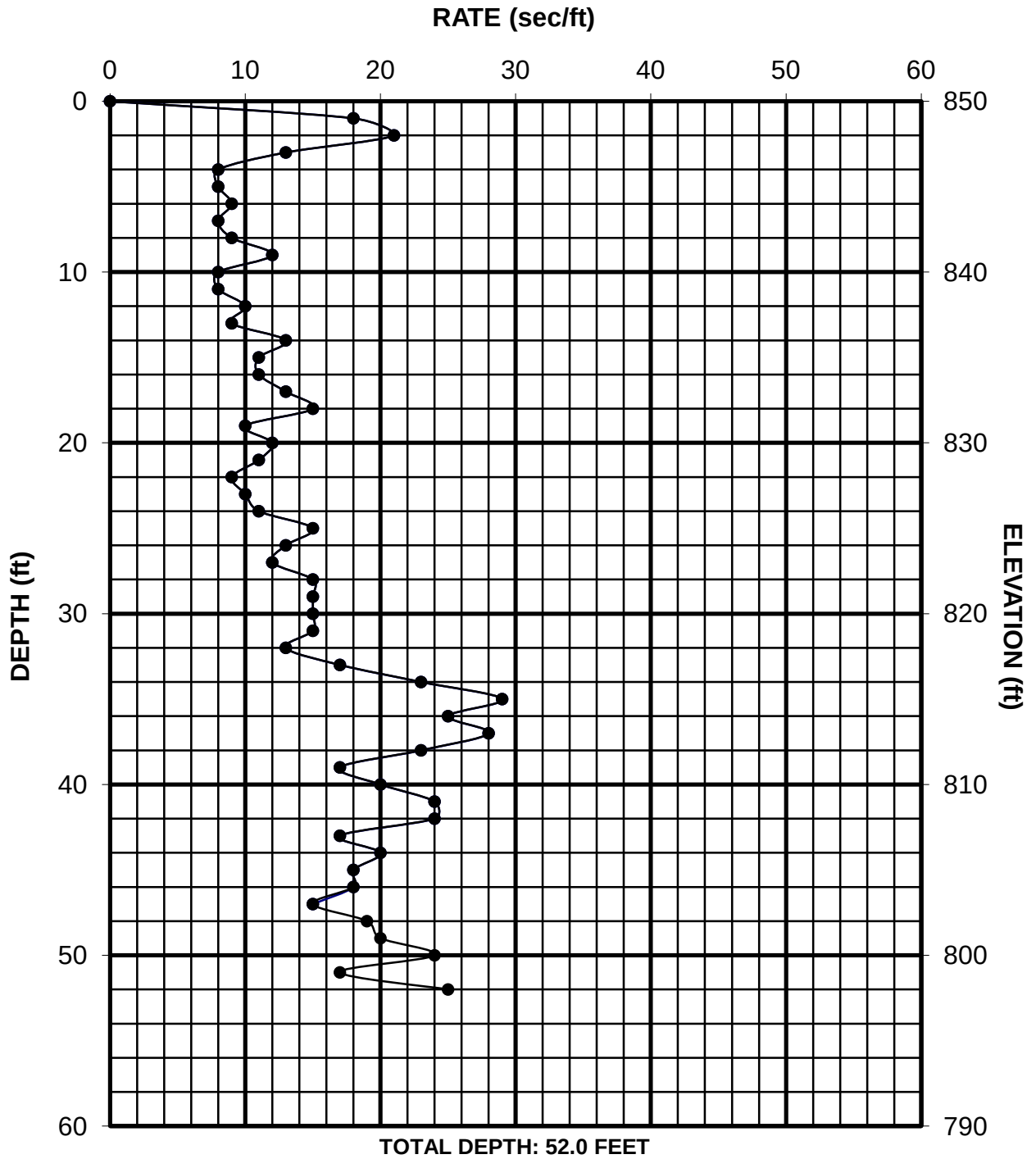
EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**



# AT-15

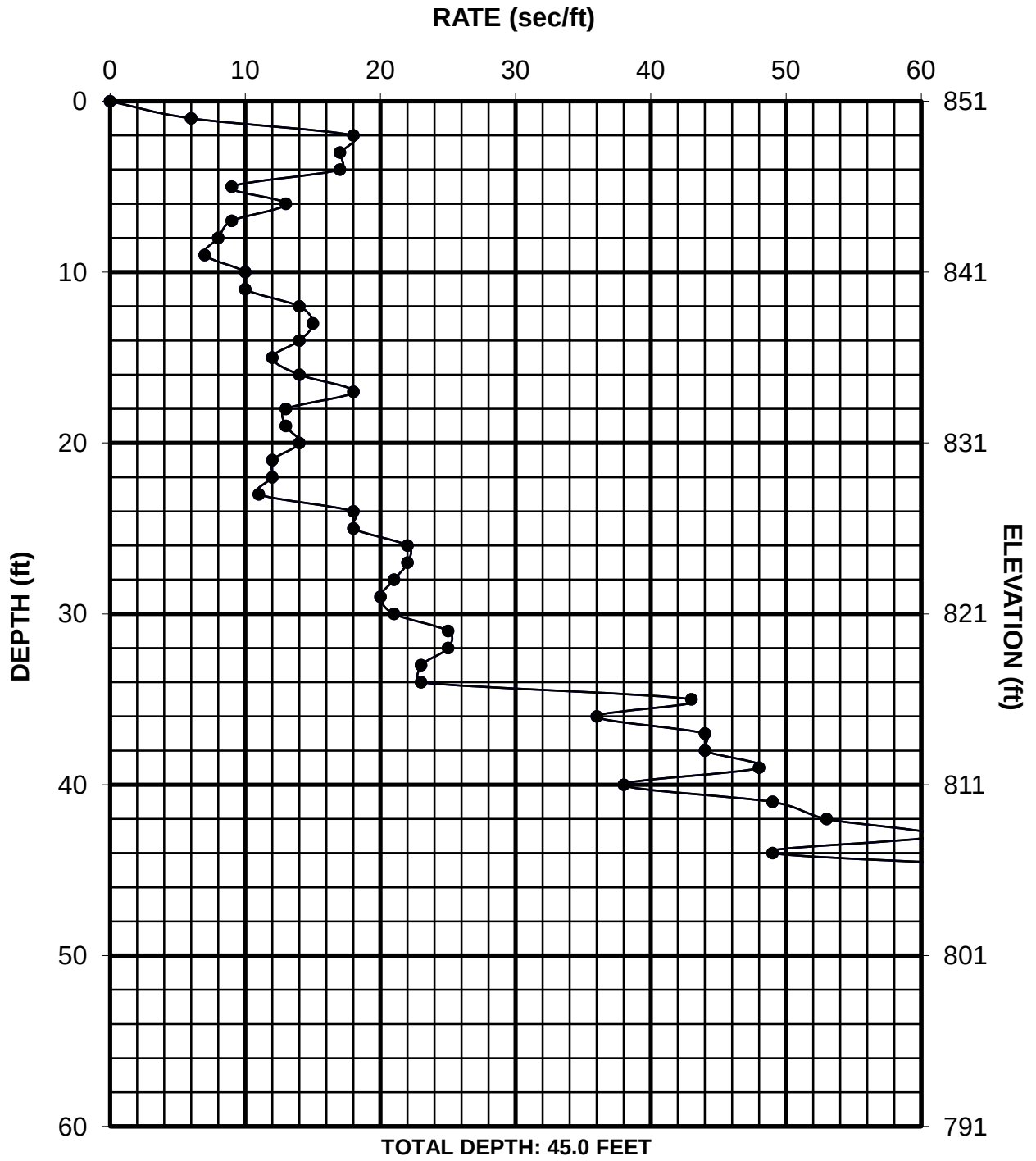


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-16

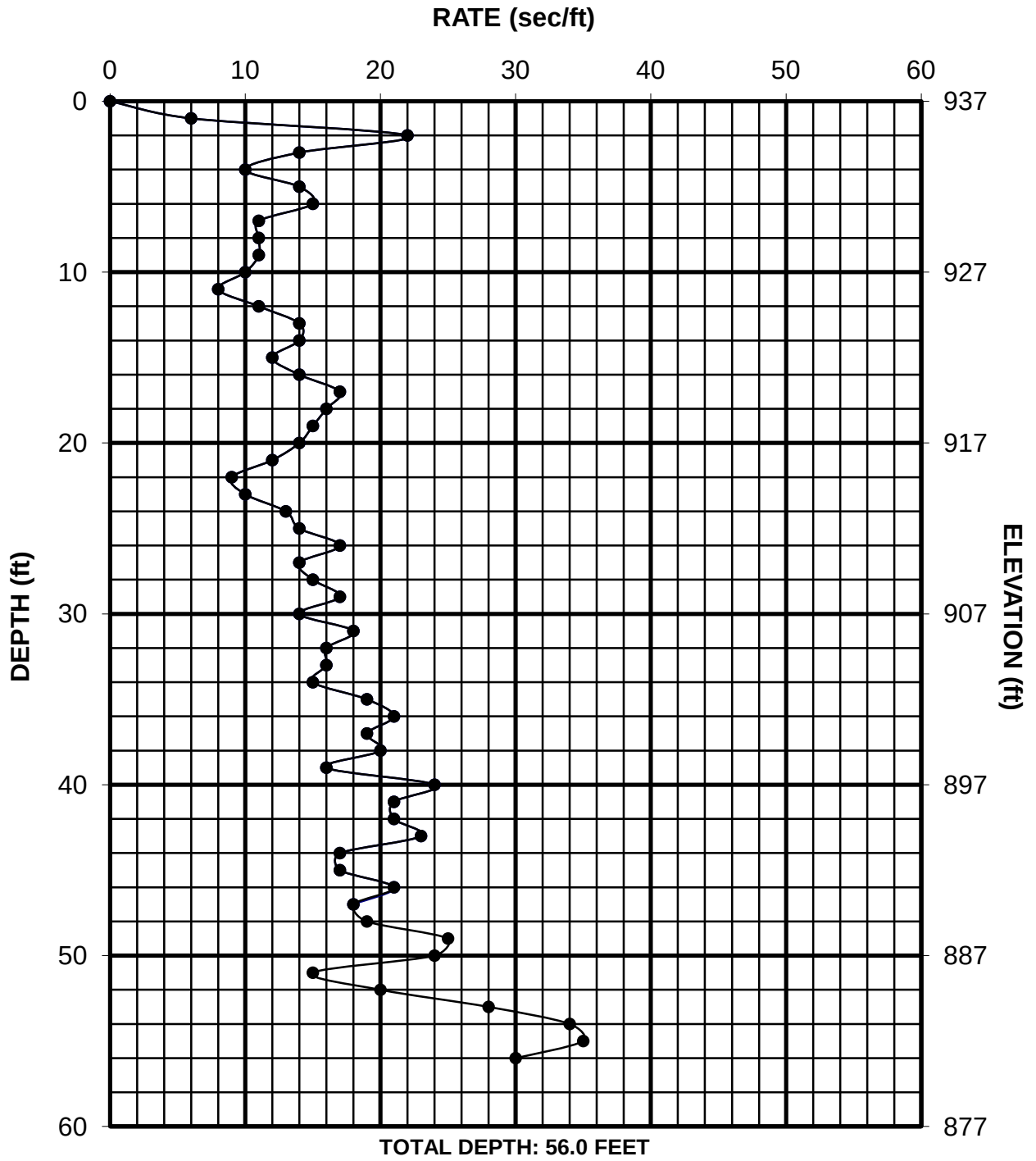


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-17

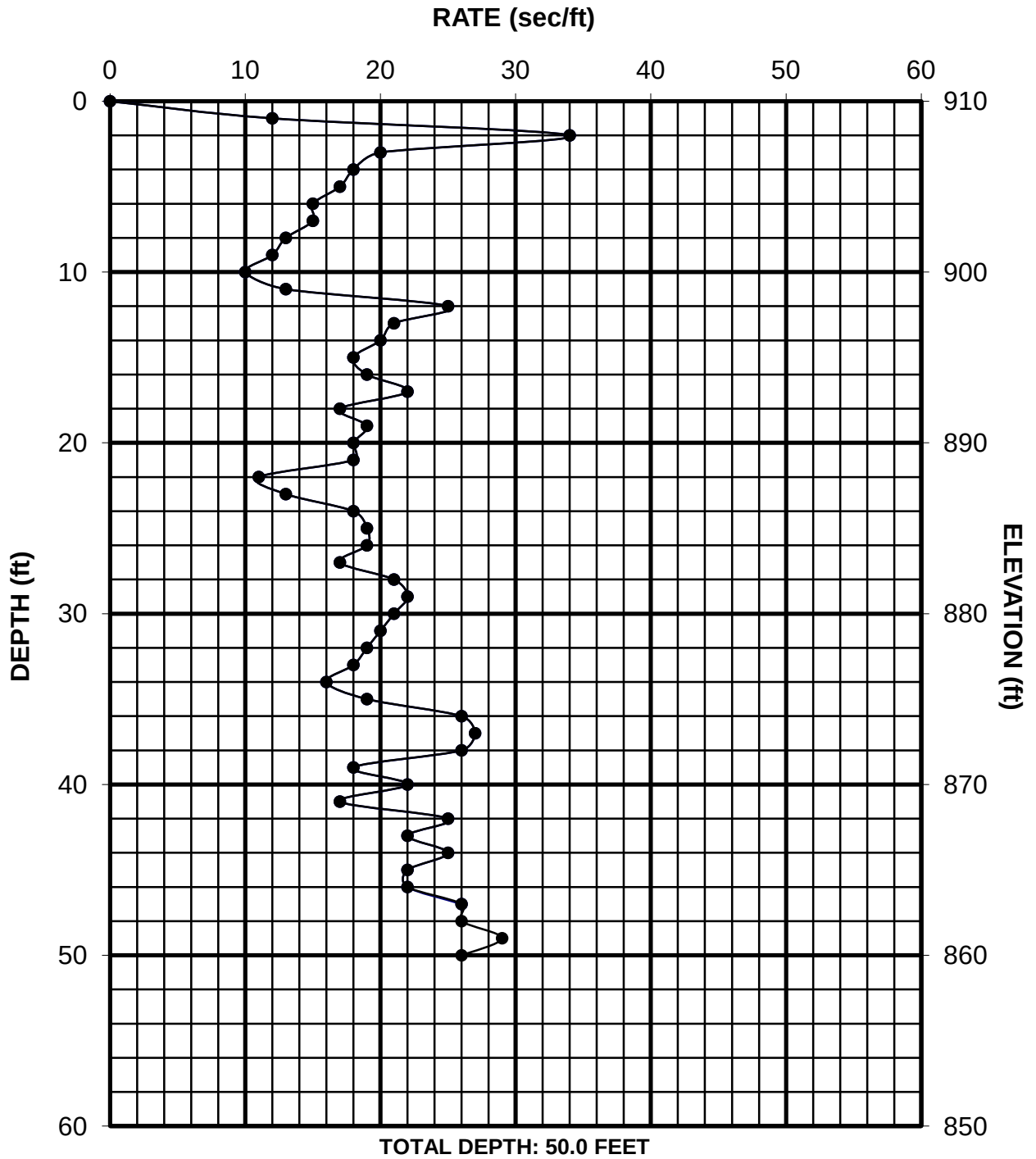


EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-18



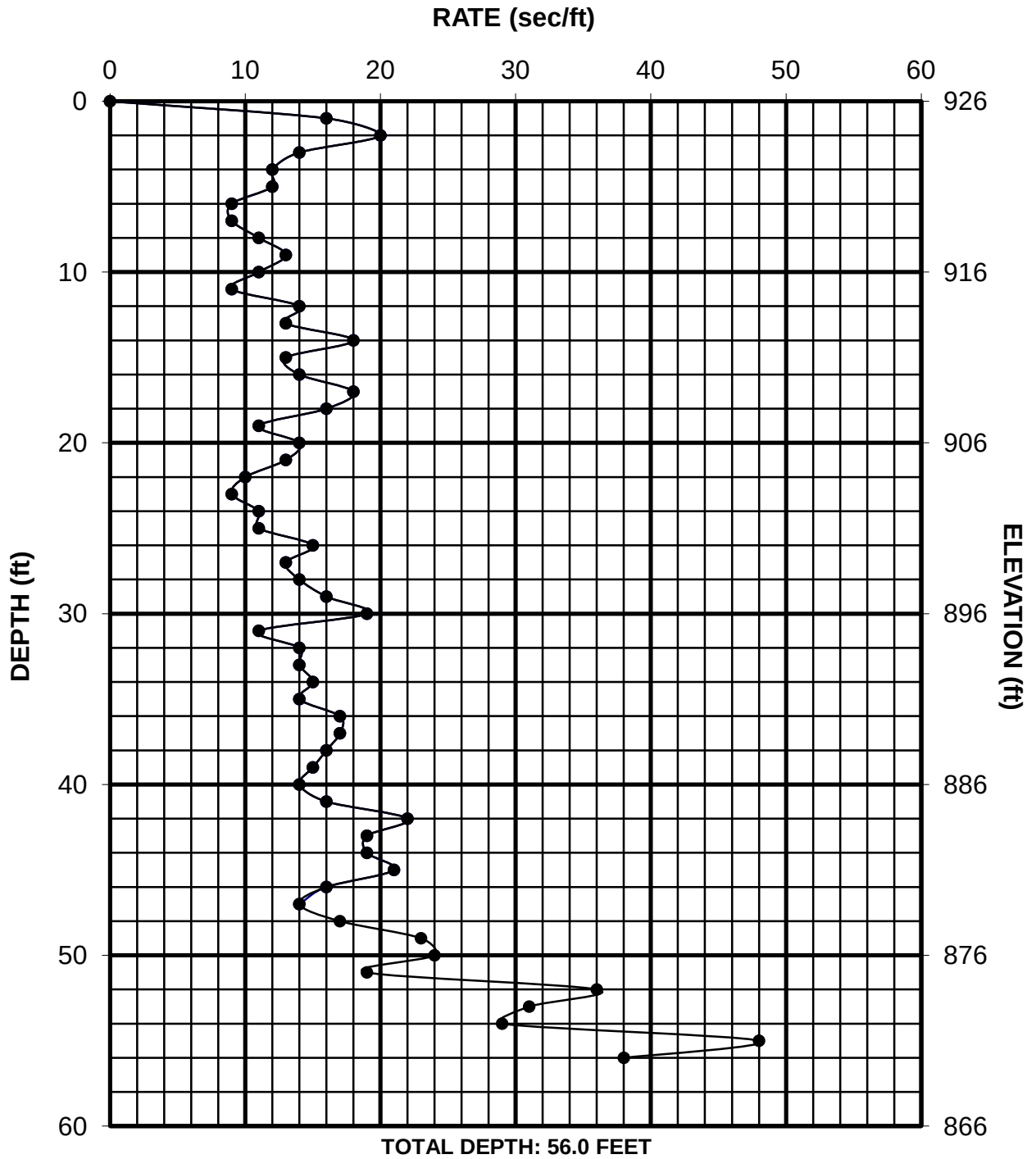
EQUIPMENT: INGERSOLL RAND ECM-370

BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**



# AT-19



EQUIPMENT: INGERSOLL RAND ECM-370

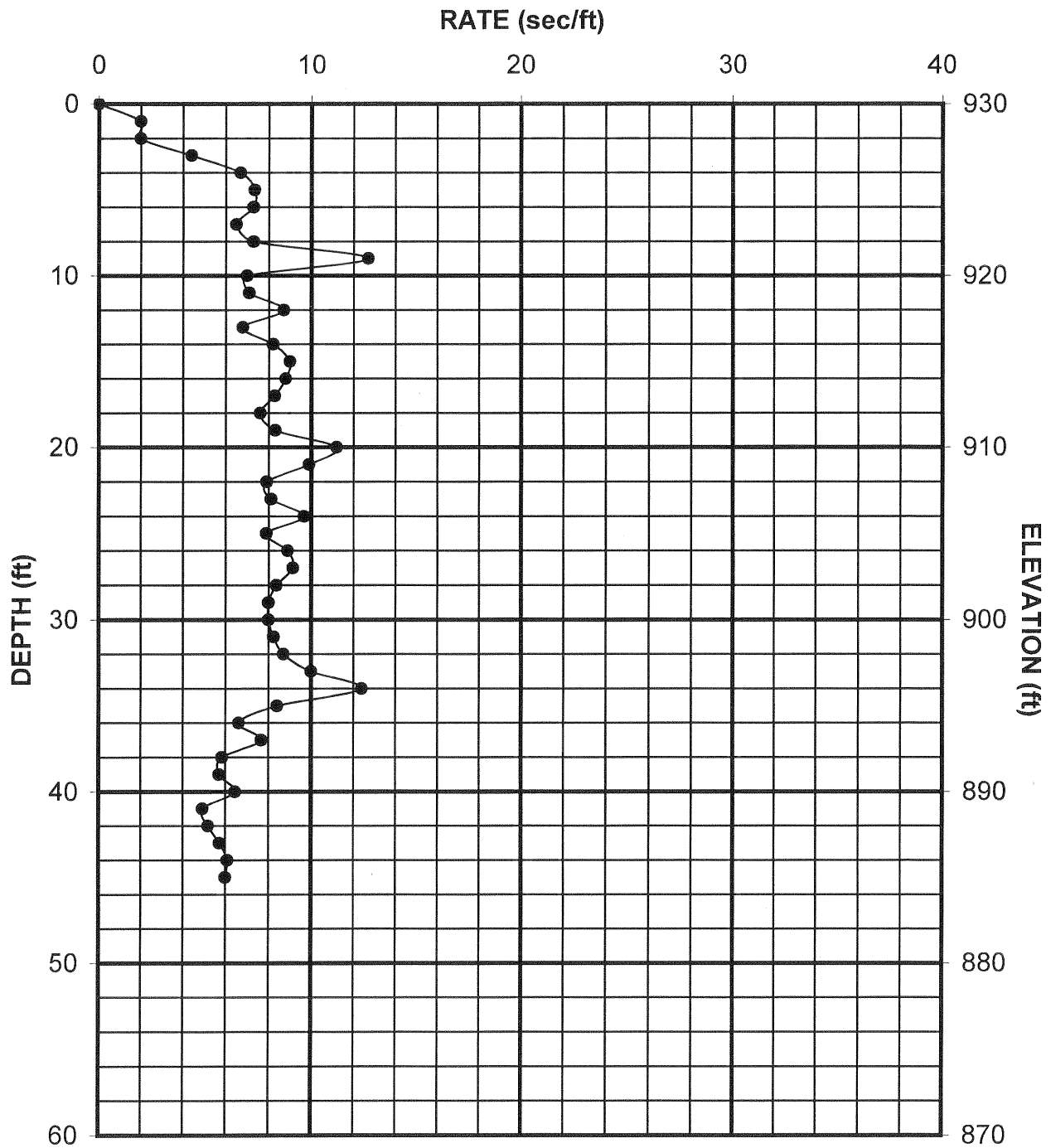
BIT SIZE: 4"

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

**AIR TRACK BORINGS**  
**AT-101 THROUGH AT-121**  
**PACIFIC SOILS ENGINEERING, INC.**  
**MAY 2007**

**ADVANCED GEOTECHNICAL SOLUTIONS, INC.**

# AT-101



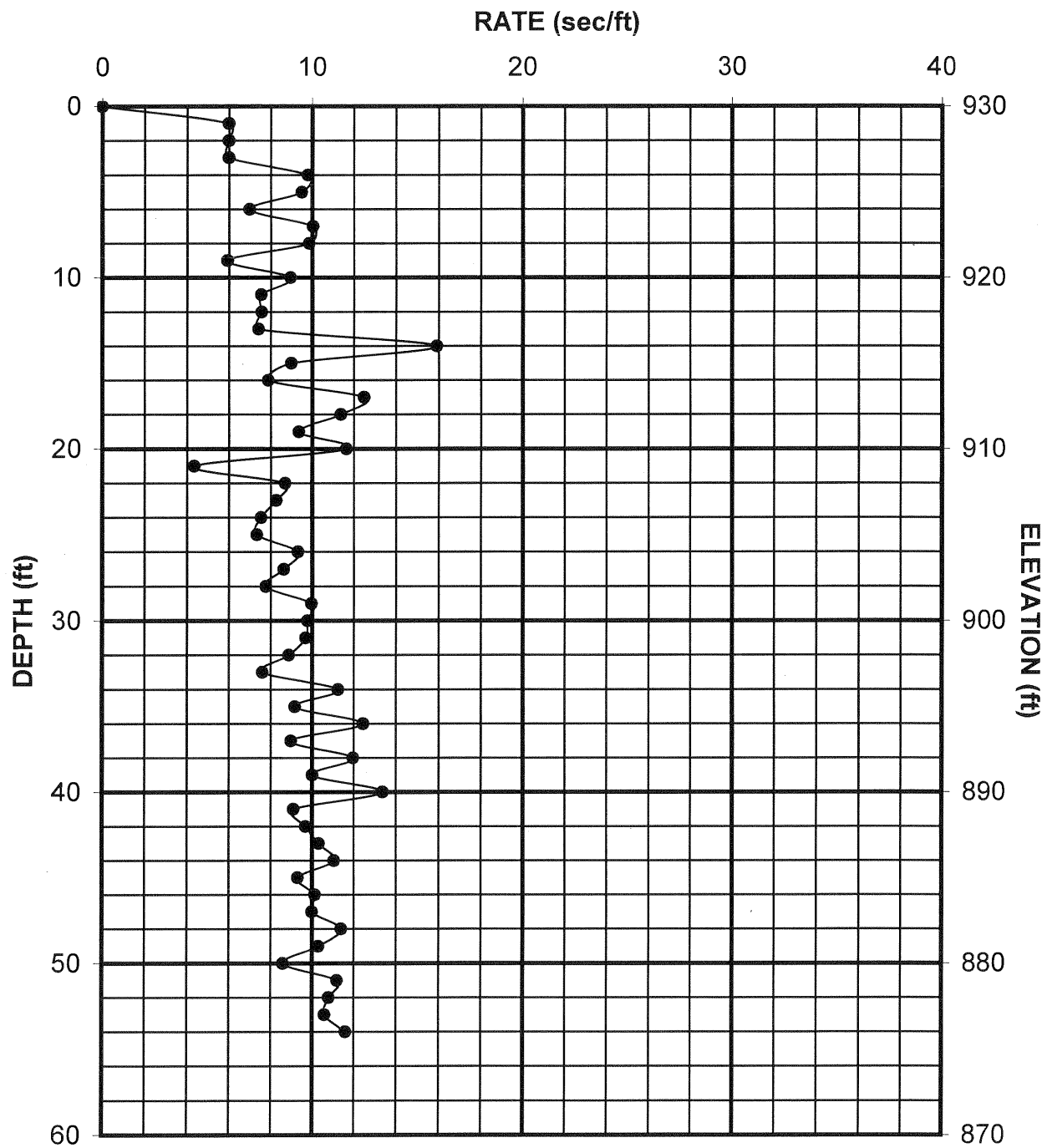
EQUIPMENT - INGERSOLL RAND  
ECM-590  
BIT SIZE = 4.5"



PACIFIC SOILS ENGINEERING, INC.  
7715 Convoy Ct., San Diego, CA 92111  
Work Order: 401120

PLATE A - 1

# AT-102



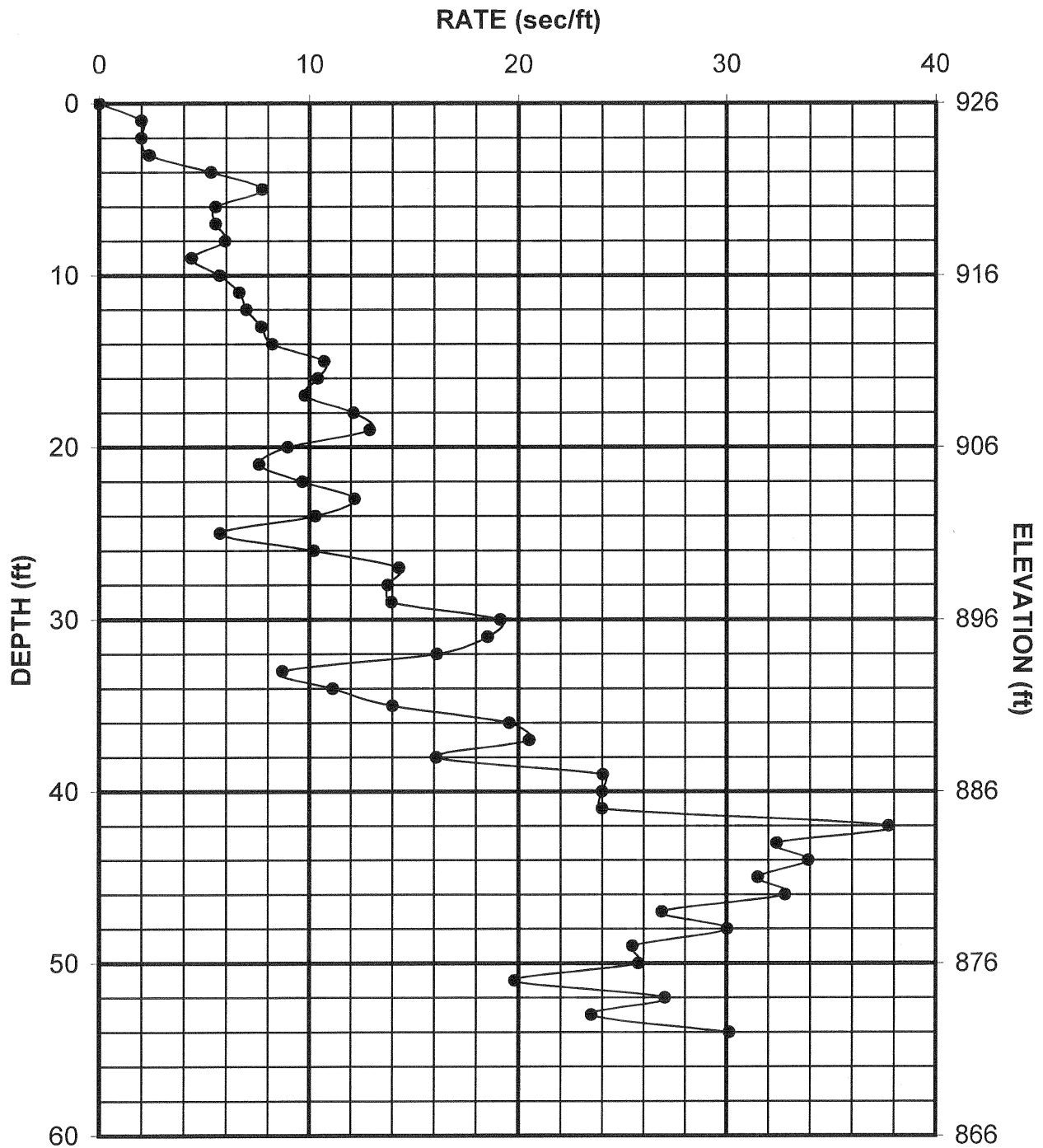
EQUIPMENT - INGERSOLL RAND  
ECM-590  
BIT SIZE = 4.5"



PACIFIC SOILS ENGINEERING, INC.  
7715 Convoy Ct., San Diego, CA 92111  
Work Order: 401120

PLATE A - 2

# AT-103



EQUIPMENT -      INGERSOLL RAND  
                         ECM-590  
BIT SIZE =      4.5"

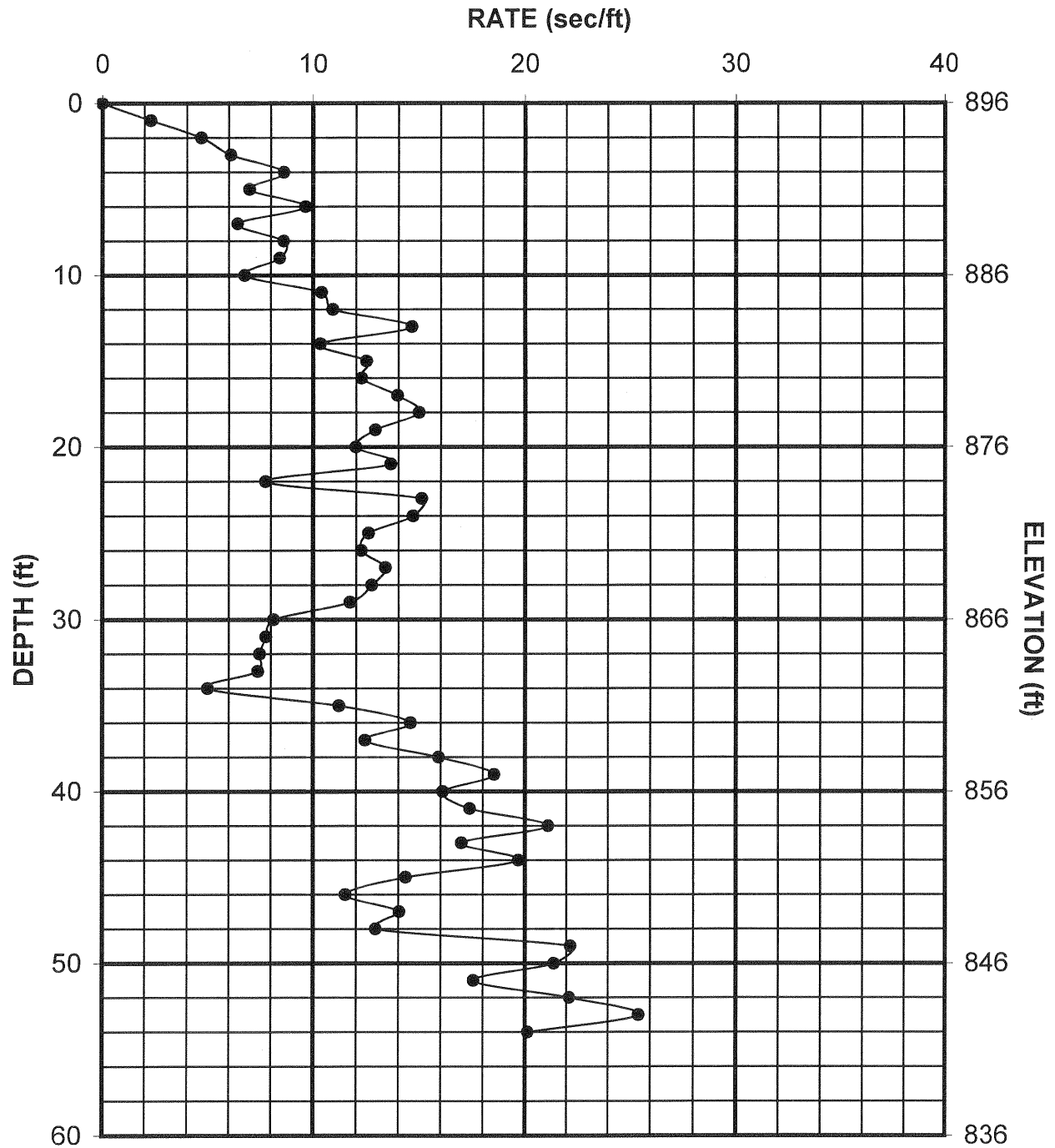


PACIFIC SOILS ENGINEERING, INC.  
7715 Convoy Ct., San Diego, CA 92111  
Work Order: 401120

PLATE A - 3



# AT-104



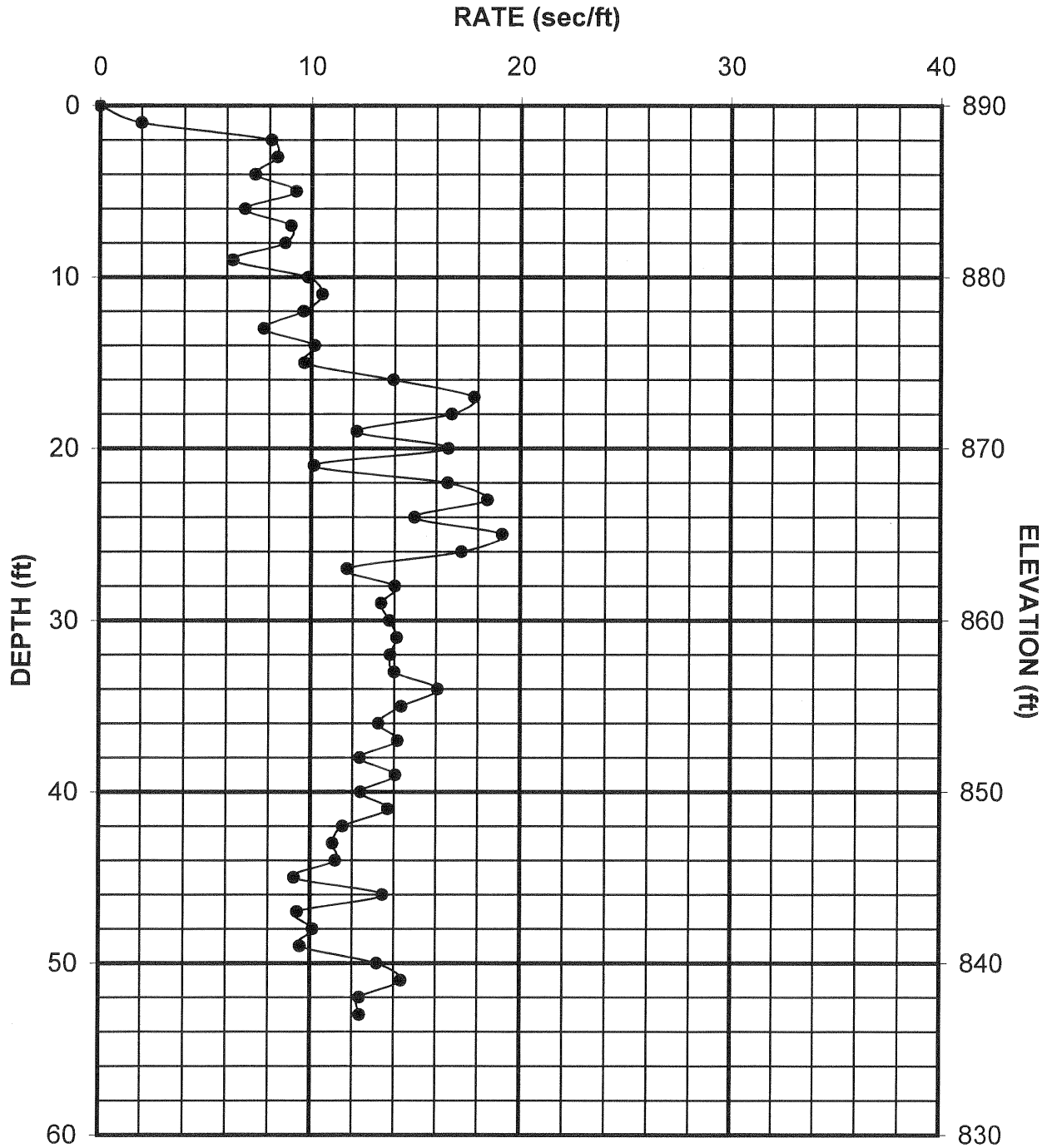
EQUIPMENT - INGERSOLL RAND  
ECM-590  
BIT SIZE = 4.5"



PACIFIC SOILS ENGINEERING, INC.  
7715 Convoy Ct., San Diego, CA 92111  
Work Order: 401120

PLATE A - 4

# AT-105



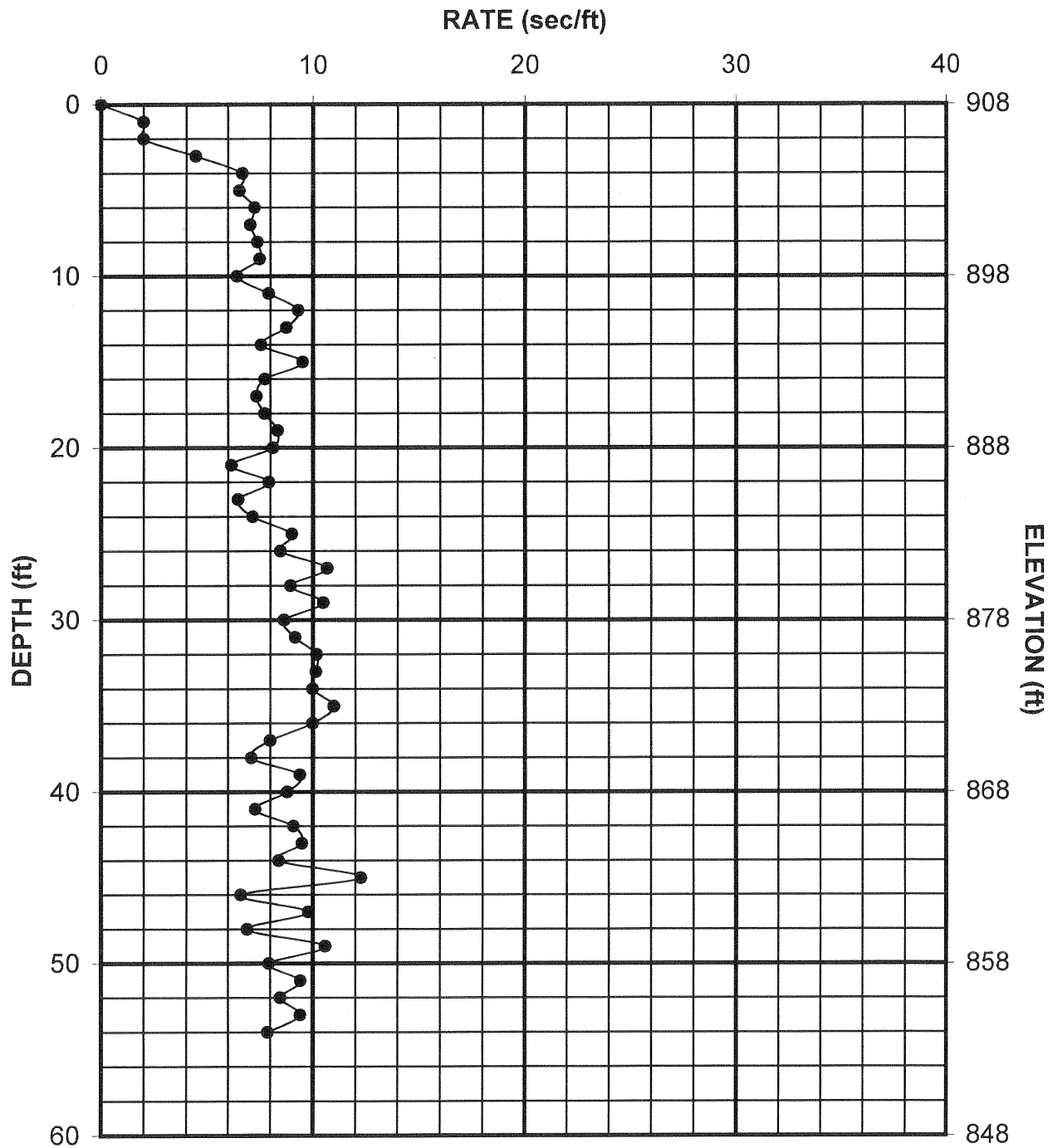
EQUIPMENT - INGERSOLL RAND  
ECM-590  
BIT SIZE = 4.5"



PACIFIC SOILS ENGINEERING, INC.  
7715 Convoy Ct., San Diego, CA 92111  
Work Order: 401120

PLATE A - 5

# AT-106



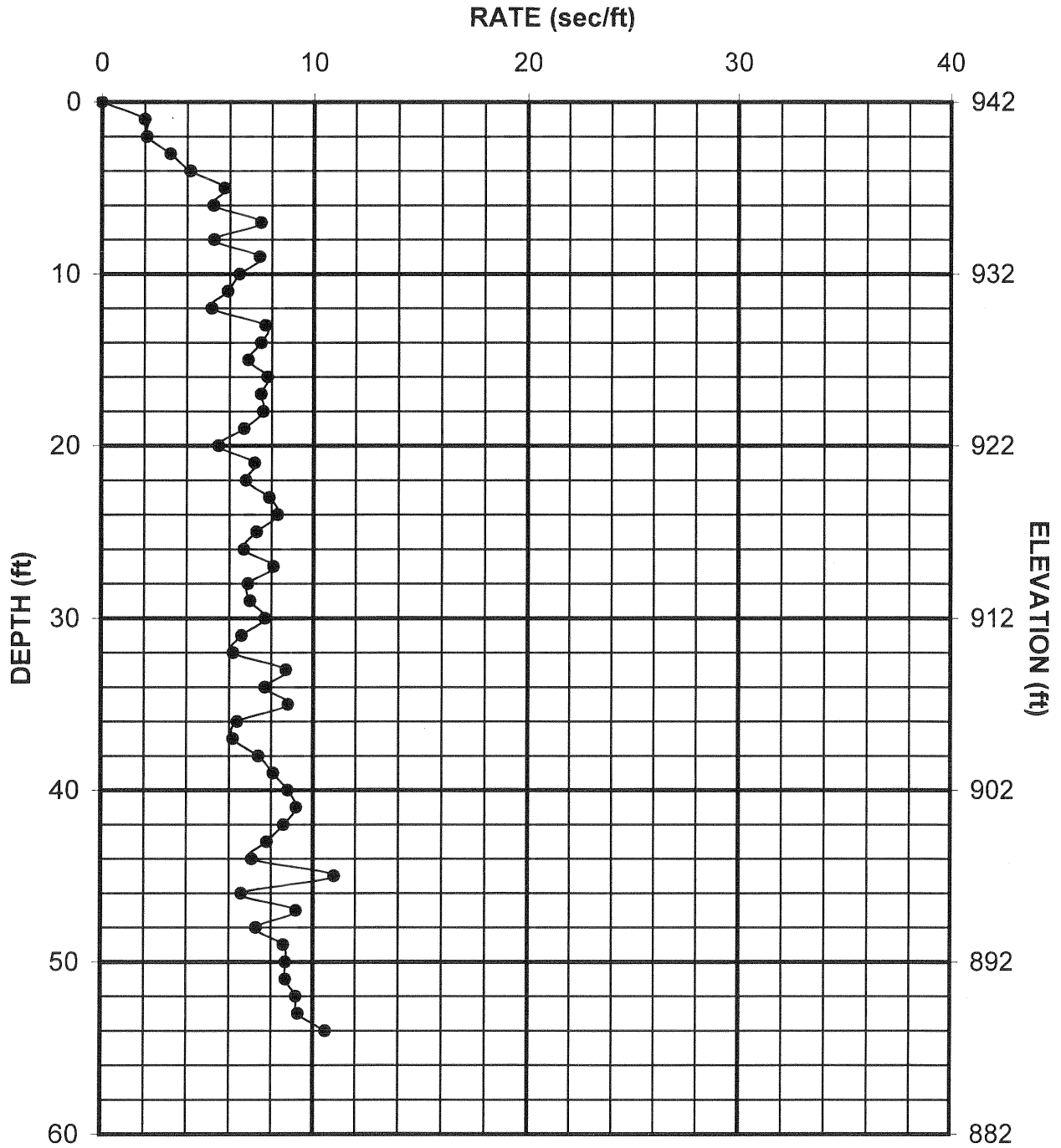
EQUIPMENT - INGERSOLL RAND  
ECM-590  
BIT SIZE = 4.5"



PACIFIC SOILS ENGINEERING, INC.  
7715 Convoy Ct., San Diego, CA 92111  
Work Order: 401120

PLATE A - 6

# AT-107



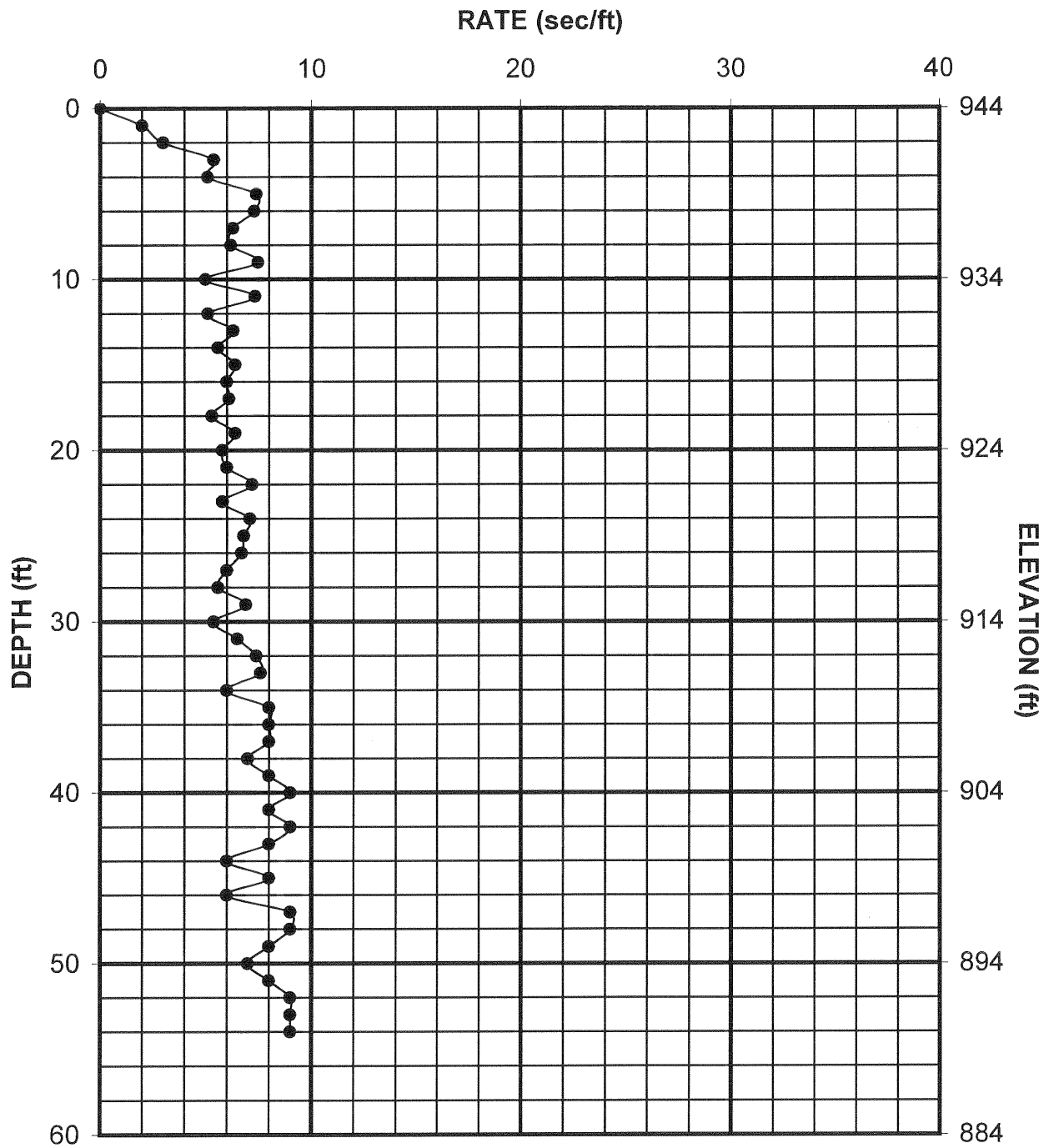
EQUIPMENT - INGERSOLL RAND  
ECM-590  
BIT SIZE = 4.5"



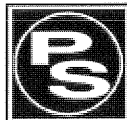
PACIFIC SOILS ENGINEERING, INC.  
7715 Convoy Ct., San Diego, CA 92111  
Work Order: 401120

PLATE A - 7

# AT-108



EQUIPMENT - INGERSOLL RAND  
 BIT SIZE = 4.5" ECM-590

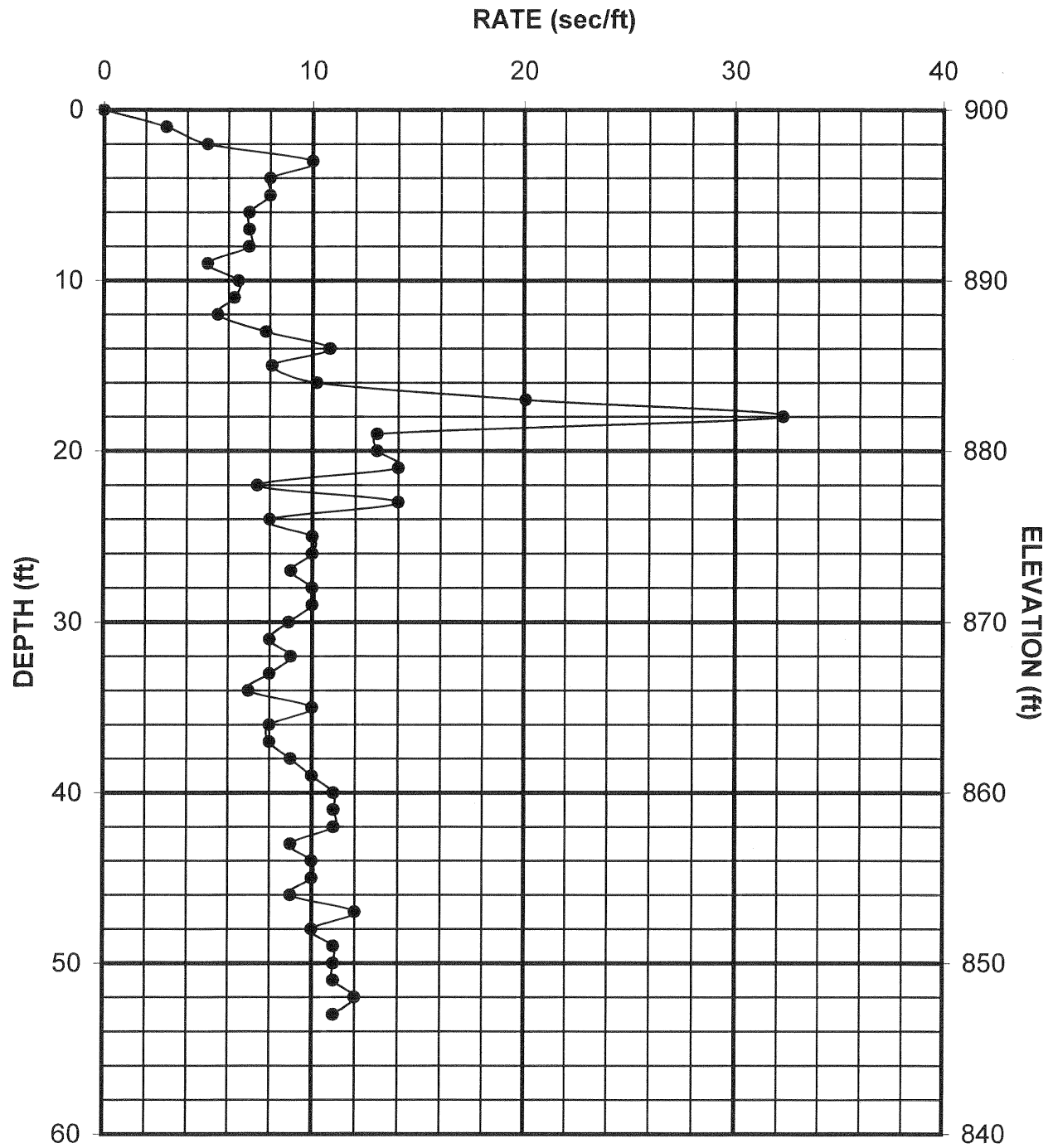


PACIFIC SOILS ENGINEERING, INC.  
 7715 Convoy Ct., San Diego, CA 92111  
 Work Order: 401120

PLATE A - 8



# AT-109



EQUIPMENT - INGERSOLL RAND  
ECM-590  
BIT SIZE = 4.5"



PACIFIC SOILS ENGINEERING, INC.  
7715 Convoy Ct., San Diego, CA 92111  
Work Order: 401120

PLATE A - 9