# DRILL HOLE LOG

# BORING NO. 08-AF2-B1



**PROJECT:** I-15 UTAH COUNTY CORRIDOR - AF2, I-15 OVER AM. FORK 200 SOUTH
**CLIENT:** UTAH DEPARTMENT OF TRANSPORTATION
**LOCATION:** N:306,840 E:555,094
**DRILLING METHOD:** 96-CME-55 / N.W. CASING TO 45'
**DRILLER:** L. HILER
**DEPTH TO WATER - INITIAL:** N.M. **AFTER 24 HOURS:** 20.0'

**PROJECT NUMBER:** 200801.200
**DATE STARTED:** 9/4/08
**DATE COMPLETED:** 9/5/08
**GROUND ELEVATION:** 4566.7'
**LOGGED BY:** G. PEASLEE, J. BOONE

| Elev. (ft) | Depth (ft) | Lithology | Sample Type | Sample Rec. (in) | Sample See Legend | Sample USCS (AASHTO) | Material Description | | Dry Density (pcf) | Moisture Content (%) | Atter. Liquid Limit | Atter. Plast. Index | Gradation Gravel (%) | Gradation Sand (%) | Gradation Silt/Clay (%) | Other Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4565 | | | | 0 | 0,8,6,(29) | - | no recovery | 4" CONCRETE SIDEWALK<br>CLAY<br>(driller's observation) | | | | | | | | |
| 4560 | 5 | | | 11 | 5,14,23,(83) | GP-GM (*A-1-a*) | dk. brown, moist, dense | | | 7.4 | | NP | 57 | 33 | 10 | |
| 4555 | 10 | | | 11 | 17,25,25,(80) | GP-GM (*A-1-a*) | dk. brown, wet, dense | | | 5.9 | | NP | 60 | 32 | 8 | |
| 4550 | 15 | | | 0 | 8,4,5,(12) | - | no recovery | | | | | | | | | |
| | | | | | | | | GRAVEL W/SILT & SAND<br>possible cobbles, some loose layers | | | | | | | | |
| 4545 | 20 | | | 10 | 14,18,20,(44) | GP-GM (*A-1-a*) | lt. brown, wet, med. dense | | | 5.6 | | NP | 61 | 32 | 7 | |
| 4540 | 25 | | | 0 | 9,10,7,(26) | - | no recovery | | | | | | | | | |
| 4535 | 30 | | | 1 | 9,13,10,(20) | GP-GM | lt. brown, wet, loose to med. dense | | | | | | | | | |
| 4530 | 35 | | | 14 | 11,21,19,(40) | SM (*A-4(0)*) | brown, wet, dense | SILTY SAND | | 20.3 | | NP | 0 | 57 | 43 | |
| 4525 | 40 | | | 18 | Pushed *0.34* | CL-ML (*A-4(4)*) | brown, moist, firm | SILTY CLAY | 95.1 | 26.4 | 26 | 5 | 0 | 7 | 93 | CT UU |
| 4520 | 45 | | | 16 | 1,2,2,(4) *0.24* | CH | brown, moist, soft | FAT CLAY | | | | | | | | |

DH_LOGV1 08-AF2.GPJ US EVAL.GDT 4/14/09

RB&G ENGINEERING, INC.

**LEGEND:**

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; *0.45* — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED *0.45* — Torvane (tsf)

**OTHER TESTS**
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer
SS = Soluble Salt
DC = Dispersive Clay

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**LOGGED BY:** G. PEASLEE, J. BOONE

| Elev. (ft) | Depth (ft) | Lithology | Sample Type | Sample Rec. (in) | Sample See Legend | USCS (AASHTO) | Material Description | | Dry Density (pcf) | Moisture Content (%) | Atter. Liquid Limit | Atter. Plast. Index | Gradation Gravel (%) | Gradation Sand (%) | Gradation Silt/Clay (%) | Other Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4515 | | | | 16 | Pushed 0.55 | CH (A-7-6(35)) | brown, moist, stiff | FAT CLAY | 66.7 | 50.7 | 57 | 29 | 0 | 0 | 100 | CT UC |
| 4510 | 55 | | | 16 | 8,9,9,(17) 0.27 | CL-ML | gray-brown, moist, firm | SILTY CLAY silty sand layers to 4" thick | | | | | | | | |
| 4505 | 60 | | | 17 | Pushed 0.52 | CL (A-7-6(20)) | dk. gray, moist, stiff | | 82.0 | 38.0 | 42 | 18 | 0 | 2 | 98 | CT UU |
| 4500 | 65 | | | 24 | 0/24",(0) 0.24 | CL | dk. gray, moist, soft | | | | | | | | | |
| 4495 | 70 | | | 14 | Pushed 0.60 | CL (A-7-6(23)) | dk. gray, moist, stiff | LEAN CLAY occasional silt lenses & layers to 1" thick | 86.4 | 34.6 | 43 | 21 | 0 | 2 | 98 | CT UC |
| 4490 | 75 | | | 23 | 0,3,1,(3) 0.48 | CL (A-7-6(23)) | dk. gray, moist, firm | | | 30.1 | 45 | 24 | 0 | 10 | 90 | |
| 4485 | 80 | | | 9 | Pushed | GM | gray, wet | SILTY GRAVEL W/SAND | | | | | | | | |
| | | | | | | SC | dk. gray, wet | CLAYEY SAND W/GRAVEL | | | | | | | | |
| | | | | 19 | 10,12,11,(17) 0.43 | CL (A-6(13)) | brown, moist, firm | LEAN CLAY bedding at ~45° angle | | 28.8 | 35 | 16 | 0 | 13 | 87 | |
| 4480 | 85 | | | 9 | 32,62/5" | GM (A-1-a) | lt. brown, wet, very dense | | | 7.6 | | NP | 51 | 35 | 14 | |
| 4475 | 90 | | | 2 | 30,60,53,(81) | GM | lt. brown, wet, very dense | SILTY GRAVEL W/SAND possible cobbles | | | | | | | | |
| 4470 | 95 | | | 7 | 29,62/3.5" | GM | lt. brown, wet, very dense | | | | | | | | | |

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UNDISTURBED SAMPLE: PUSHED 0.45 — Torvane (tsf)

**OTHER TESTS**
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**DRILLER:** L. HILER

**DEPTH TO WATER - INITIAL:** N.M. **AFTER 24 HOURS:** 20.0'

**PROJECT NUMBER:** 200801.200

**DATE STARTED:** 9/4/08

**DATE COMPLETED:** 9/5/08

**GROUND ELEVATION:** 4566.7'

**LOGGED BY:** G. PEASLEE, J. BOONE

| Elev. (ft) | Depth (ft) | Lithology | Sample Type | Sample Rec. (in) | Sample See Legend | Sample USCS (AASHTO) | Material Description | Dry Density (pcf) | Moisture Content (%) | Atter. Liquid Limit | Atter. Plast. Index | Gradation Gravel (%) | Gradation Sand (%) | Gradation Silt/Clay (%) | Other Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 4 | 19,28,49,(53) | GM | lt. brown, wet, dense | | | | | | | | |
| 4465 | | | | | | | | | | | | | | | |
| | 105 | | | | | | | | | | | | | | |
| 4460 | | | | | | | | | | | | | | | |
| | 110 | | | | | | | | | | | | | | |
| 4455 | | | | | | | | | | | | | | | |
| | 115 | | | | | | | | | | | | | | |
| 4450 | | | | | | | | | | | | | | | |
| | 120 | | | | | | | | | | | | | | |
| 4445 | | | | | | | | | | | | | | | |
| | 125 | | | | | | | | | | | | | | |
| 4440 | | | | | | | | | | | | | | | |
| | 130 | | | | | | | | | | | | | | |
| 4435 | | | | | | | | | | | | | | | |
| | 135 | | | | | | | | | | | | | | |
| 4430 | | | | | | | | | | | | | | | |
| | 140 | | | | | | | | | | | | | | |
| 4425 | | | | | | | | | | | | | | | |
| | 145 | | | | | | | | | | | | | | |
| 4420 | | | | | | | | | | | | | | | |

DH_LOGV1 08-AF2.GPJ US EVAL.GDT 4/14/09

RB&G ENGINEERING, INC.

**LEGEND:**

DISTURBED SAMPLE — 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; 0.45 — Torvane (tsf)

**OTHER TESTS**

UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
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# DRILL HOLE LOG

# BORING NO. 08-AF2-B2



**PROJECT:** I-15 UTAH COUNTY CORRIDOR - AF2, I-15 OVER AM. FORK 200 SOUTH
**CLIENT:** UTAH DEPARTMENT OF TRANSPORTATION
**LOCATION:** N:306,995 E:555,448
**DRILLING METHOD:** 08-CME-55 / N.W. CASING TO 50'
**DRILLER:** D. SAMPSON
**DEPTH TO WATER - INITIAL:** ▽ 21.0' **AFTER 24 HOURS:** ▼ N.M.

**PROJECT NUMBER:** 200801.200
**DATE STARTED:** 12/16/08
**DATE COMPLETED:** 12/17/08
**GROUND ELEVATION:** 4572.2'
**LOGGED BY:** M. HANSEN, J. BOONE

| Elev. (ft) | Depth (ft) | Lithology | Sample Type | Sample Rec. (in) | Sample See Legend | USCS (AASHTO) | Material Description | | Dry Density (pcf) | Moisture Content (%) | Atter. Liquid Limit | Atter. Plast. Index | Gradation Gravel (%) | Gradation Sand (%) | Gradation Silt/Clay (%) | Other Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 10 | 39,15,10,(53) | SM | brown, slightly moist, very dense | SILTY SAND W/GRAVEL oil stained (fill) | | | | | | | | |
| 4570 | | | | | | | | | | | | | | | | |
| | 5 | | | 11 | 4,3,4,(16) | CL-ML (A-4(1)) | brown, moist, stiff | SANDY SILTY CLAY | | 15.7 | 24 | 7 | 5 | 37 | 58 | |
| 4565 | | | | | | | | | | | | | | | | |
| | 10 | | | 12 | 3,3,4,(12) | SM (A-4(0)) | brown, very moist, med. dense | SILTY SAND | | 18.3 | | NP | 4 | 56 | 40 | DS |
| 4560 | | | | 10 | 7,7,7,(22) | GM | brown, very moist, loose | | | | | | | | | |
| | 15 | | | 10 | 12,23,22,(64) | GM (A-1-a) | brown, wet, dense | | | 6.6 | | NP | 54 | 33 | 13 | |
| 4555 | | | | | | | | SILTY GRAVEL W/SAND possible cobbles | | | | | | | | |
| | 20 | | ▽ | 10 | 18,14,32,(57) | GM | brown, wet, dense | | | | | | | | | |
| 4550 | | | | | | | | | | | | | | | | |
| | 25 | | | 9 | 8,9,10,(22) | GP-GM | brown, wet, med. dense | GRAVEL W/SILT & SAND possible cobbles | | | | | | | | |
| 4545 | | | | | | | | | | | | | | | | |
| | 30 | | | 13 | 6,7,6,(15) | SM (A-2-4(0)) | brown, wet, med. dense | | | 24.4 | | NP | 0 | 85 | 15 | 4% -0.005 mm |
| 4540 | | | | 8 | 5,11,11,(24) | SM | brown, wet, med. dense | SILTY SAND | | | | | | | | |
| | 35 | | | 16 | 4,3,6,(10) | SM (A-4(0)) | brown, wet, med. dense | | | 31.8 | | NP | 0 | 61 | 39 | 6% -0.005 mm |
| 4535 | | | | 16 | 4,4,8,(13) | ML (A-4(0)) | brown, wet, med. dense | | | 28.0 | | NP | 0 | 50 | 50 | 8% -0.005 mm |
| | 40 | | | 17 | 6,7,10,(25) | ML (A-4(0)) | gray-brown, wet, med. dense | SANDY SILT silty sand layers to 10" thick | | 26.7 | | NP | 0 | 40 | 60 | |
| 4530 | | | | 16 | 5,6,11,(17) | ML | gray, wet, med. dense | | | | | | | | | |
| | 45 | | | 8 | 3,4,5,(9) 0.30 | CL-ML (A-4(4)) | gray, moist, firm | SILTY CLAY | | 27.7 | 28 | 6 | 0 | 14 | 86 | 19% -0.005 mm |
| 4525 | | | | 17 | 0.29 3,4,4,(8) 0.20 | CL-ML ML | gray, moist, firm / gray-brown, very moist, soft | SILT plastic | | | | | | | | |

DH_LOGV1 08-AF2.GPJ US EVAL.GDT 4/14/09

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UNDISTURBED SAMPLE — PUSHED; 0.45 — Torvane (tsf)

**OTHER TESTS**
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# DRILL HOLE LOG

# BORING NO. 08-AF2-B2



**PROJECT:** I-15 UTAH COUNTY CORRIDOR - AF2, I-15 OVER AM. FORK 200 SOUTH
**CLIENT:** UTAH DEPARTMENT OF TRANSPORTATION
**LOCATION:** N:306,995 E:555,448
**DRILLING METHOD:** 08-CME-55 / N.W. CASING TO 50'
**DRILLER:** D. SAMPSON
**DEPTH TO WATER - INITIAL:** ▽ 21.0' **AFTER 24 HOURS:** ▼ N.M.

**PROJECT NUMBER:** 200801.200
**DATE STARTED:** 12/16/08
**DATE COMPLETED:** 12/17/08
**GROUND ELEVATION:** 4572.2'
**LOGGED BY:** M. HANSEN, J. BOONE

| Elev. (ft) | Depth (ft) | Lithology | Sample Type | Sample Rec. (in) | Sample See Legend | Sample USCS (AASHTO) | Material Description | | Dry Density (pcf) | Moisture Content (%) | Atter. Liquid Limit | Atter. Plast. Index | Gradation Gravel (%) | Gradation Sand (%) | Gradation Silt/Clay (%) | Other Tests |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ☒ | 16 | Pushed *0.45* *0.22* | ML | gray-brown, wet, soft to firm | SILT plastic | 81.0 | 36.6 | 34 | 8 | 0 | 0 | 100 | CT UU |
| 4520 | | | | | | | | | | | | | | | | |
| | 55 | | ■ | 0 | 2,2,3,(5) | - | no recovery | | | | | | | | | |
| 4515 | | | ■ | 18 | 2,5,5,(9) *0.32* | CL (*A-4(6)*) | dk. gray, moist, firm | | | 25.5 | 28 | 9 | 0 | 19 | 81 | |
| | 60 | | ☒ | 5 | Pushed *0.30* | CL | dk. gray, moist, firm | | | | | | | | | |
| 4510 | | | | | | | | LEAN CLAY silt lenses | | | | | | | | |
| | 65 | | ☒ | 18 | Pushed *0.40* | CL | dk. gray, moist, firm | | | | | | | | | |
| 4505 | | | | | | | | | | | | | | | | |
| | 70 | | ■ | 18 | 5,7,9,(14) *0.60* | CL | dk. gray, moist, stiff | | | | | | | | | |
| 4500 | | | | | | | | | | | | | | | | |
| | 75 | | ■ | 16 | 21,24,26,(41) | SM (*A-2-4(0)*) | dk. gray, wet, dense | SILTY SAND | | 20.3 | | NP | 0 | 75 | 25 | |
| 4495 | | | | | | | | | | | | | | | | |
| | 80 | | ■ | 18 | 0,5,10,(12) *0.43* | CL | gray, moist, firm | LEAN CLAY | | | | | | | | |
| 4490 | | | | | | ML | gray-brown, wet | SILT W/SAND plastic, many sand & clay lenses & layers to 0.25" thick | | | | | | | | |
| | 85 | | ☒ | 9 | Pushed *0.31* | ML (*A-4(5)*) | gray-brown, wet, firm | | | 20.4 | 34 | 7 | 0 | 24 | 76 | |
| 4485 | | | | | | | | | | | | | | | | |
| | 90 | | ■ | 14 | 31,31,40,(55) | GM | gray-brown, wet, dense | SILTY GRAVEL W/SAND possible cobbles | | | | | | | | |
| 4480 | | | | | | | | | | | | | | | | |
| | 95 | | ■ | 14 | 32,61,45,(80) | GM (*A-1-b*) | gray-brown, wet, very dense | | | 9.0 | | NP | 45 | 39 | 16 | |
| 4475 | | | | | | | | | | | | | | | | |

DH_LOGV1 08-AF2.GPJ US EVAL.GDT 4/14/09

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**LEGEND:**

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UNDISTURBED SAMPLE ☒ PUSHED *0.45* ← Torvane (tsf)

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# DRILL HOLE LOG

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**DRILLER:** D. SAMPSON

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 6 | 71/6",(REF) | GM | gray-brown, wet, very dense | | | | | | | | |
| 4470 | | | | | | | | | | | | | | | |
| | 105 | | | | | | | | | | | | | | |
| 4465 | | | | | | | | | | | | | | | |
| | 110 | | | | | | | | | | | | | | |
| 4460 | | | | | | | | | | | | | | | |
| | 115 | | | | | | | | | | | | | | |
| 4455 | | | | | | | | | | | | | | | |
| | 120 | | | | | | | | | | | | | | |
| 4450 | | | | | | | | | | | | | | | |
| | 125 | | | | | | | | | | | | | | |
| 4445 | | | | | | | | | | | | | | | |
| | 130 | | | | | | | | | | | | | | |
| 4440 | | | | | | | | | | | | | | | |
| | 135 | | | | | | | | | | | | | | |
| 4435 | | | | | | | | | | | | | | | |
| | 140 | | | | | | | | | | | | | | |
| 4430 | | | | | | | | | | | | | | | |
| | 145 | | | | | | | | | | | | | | |
| 4425 | | | | | | | | | | | | | | | |

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