

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | | BORING NO. |
|----------------|------------|------------------|-------|--------------------|---------------------------------|-------------------------------|-------------|---|--|----------------------|------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-106 (Continued) | |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | | | GROUND EL. | | | |
| | | Sonic Coring | | 532+20, Lt 34 feet | | | | 163 feet | | | |
| | | DATES DRILLED | | HOLE DIAMETER | | | | | | | |
| | | 4/26/11 - 5/2/11 | | 6 inches | | | | | | | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level measured at 17½ feet and 48 feet below the ground surface in shallow and deep monitoring wells, respectively on 6/10/2011. See last page of this boring for details. | | | |
| | | 2 | 2 | 100 | 16.4 | 14 | SM | Moderately infused tar (9%) | | | |
| | | | | | 18.6 | | ML | SANDY SILT - stiff to very stiff, moist, very dark brown (10YR 2/2), fine to medium sand, trace fine to medium gravel, slightly infused tar | | | |
| 25 | | | | | 11.2 | 19 | SM | SILTY SAND - dense, moist, very dark grayish brown (10YR 3/2), fine to medium grained, slightly infused tar, alternating layers of Sandy Silt | | | |
| | | | | | | | | Slightly infused tar (4%) | | | |
| | | | 3 | 100 | 18.9 | | ML | SANDY SILT - hard, moist, dark grayish brown, fine to coarse sand, slightly infused tar | | | |
| 30 | | | | | 16.3 | | ML | SILT with SAND - hard, moist, dark greenish gray, slightly infused tar | | | |
| | | | 4 | 100 | 13.3 | | | | | | |
| | | | | | 12.0 | 38 | SM | SILTY SAND - dense, moist, greenish gray, fine to medium grained, moderately infused tar (9%) | | | |
| | | | | | 19.4 | | ML | SAN PEDRO FORMATION [Qsp] SILT with SAND - hard, moist, dark greenish gray, slightly infused tar | | | |
| 40 | | | 5 | 100 | | | | | | | |

Wilshire / Fairfax Station

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RH
 Prepared/Date: HY/WL 9/27/2011
 Checked/Date: LT/PE 9/27/2011

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Wilshire / Fairfax Station

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | | BORING NO. |
|----------------|------------|------------------|-------|--------------------|---------------------------------|-------------------------------|-------------|--|--|----------------------|------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-106 (Continued) | |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | | | | | | |
| | | Sonic Coring | | 532+20, Lt 34 feet | | | | | | | |
| | | DATES DRILLED | | HOLE DIAMETER | | | | GROUND EL. | | | |
| | | 4/26/11 - 5/2/11 | | 6 inches | | | | 163 feet | | | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level measured at 17½ feet and 48 feet below the ground surface in shallow and deep monitoring wells, respectively on 6/10/2011. See last page of this boring for details. | | | |
| | | | | | 18.0 | | ML | | | | |
| | | | | | 8.5 | 11 | SP-SM | POORLY GRADED SAND with SILT - dense to very dense, moist, dark brown to very dark brown (10YR 2/2), fine to coarse grained, occasionally gravel (up to 3/8 inch in size), slightly infused tar, increasing tar content with depth | | | |
| | 45 | | 6 | 100 | | | | Slightly to moderately infused tar | | | |
| | | | | | 6.1 | | | Saturated with tar, black | | | |
| | 50 | | 7 | 100 | | | | | | | |
| | | | | | 7.9 | | | | | | |
| | | | | | 6.2 | 12 | SM | SILTY SAND - very dense, moist, black, fine to medium grained, occasionally gravel (up to 3/8 inch in size), saturated with tar (15%) | | | |
| | | | | | 4.9 | | GM | SILTY GRAVEL with SAND - very dense, moist, dark gray to black, fine to coarse sand, fine to coarse gravel (up to 3 inches in size), slightly infused tar | | | |
| | | | 8 | 100 | | | | | | | |
| | | | | | 5.3 | | SM | SILTY SAND - dense to very dense, moist, black, fine grained, saturated with tar | | | |
| | 55 | | | | | | | Becomes fine to coarse gravel (up to 2 inches in size) | | | |
| | | | 9 | 100 | | | | Becomes fine grained, saturated with tar (17%) | | | |
| | | | | | 4.6 | 14 | | | | | |
| | 60 | | 10 | 100 | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RH
 Prepared/Date: HY/WL 9/27/2011
 Checked/Date: LT/PE 9/27/2011

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. | |
|----------------|------------|-----------------|-------|--------------------|---------------------------------|-------------------------------|-------------|---|---|-----------------------------|------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-106 (Continued) | |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | DATES DRILLED | | HOLE DIAMETER | | | GROUND EL. |
| | | Sonic Coring | | 532+20, Lt 34 feet | | 4/26/11 - 5/2/11 | | 6 inches | | 163 feet | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level measured at 17½ feet and 48 feet below the ground surface in shallow and deep monitoring wells, respectively on 6/10/2011. See last page of this boring for details. | | | |
| | | | | | 3.9 | | | SM | Occasional fine to coarse gravel, saturated with tar | | |
| | | | | | 3.6 | | | | More fine to coarse rounded to sub-rounded gravel | | |
| | 65 | 3 | 11 | 100 | | | | | No gravel | | |
| | | | | | 4.5 | 18 | | | Fine grained, saturated with tar (19%) | | |
| | 95 | | | | 9.1 | | | ML | SANDY SILT with GRAVEL - very stiff, moist, black, fine to coarse sand, fine to coarse gravel (up to 3 inches in size), shell fragments | | |
| | 70 | | | | | | | ML | Becomes hard, dark greenish gray (5GY 4/1), dark gray and olive gray spots, some calcium carbonate nodules, slightly infused tar to no tar | | |
| | | | | | | | | ML | SILT - hard, moist, dark greenish gray, no tar, layers of Silt with Sand | | |
| | 90 | 4 | 12 | 100 | 32.3 | 10 | | SW-SM | WELL GRADED SAND with SILT - dense to very dense, moist, fine to medium grained, occasionally gravel, moderately infused tar (13%) | | |
| | 75 | | | | 4.2 | | | ML | SILT with SAND - very stiff to hard, moist, dark greenish gray, no tar to slightly infused tar Wood fragments, dark greenish gray, less sand | | |
| | | | | | | | | SP | POORLY GRADED SAND - dense, moist, black, fine to medium grained, saturated with tar | | |
| | 85 | | | | 5.1 | | | SM | SILTY SAND - dense to very dense, moist, black, fine grained, trace fine gravel, saturated with tar | | |
| | 80 | 5 | 13 | 100 | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RH
Prepared/Date: HY/WL 9/27/2011
Checked/Date: LT/PE 9/27/2011

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|---|------------|-----------------|-------|--------------------|------------------------------------|----------------------------------|-------------|---|--|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-106 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | DATES DRILLED | | HOLE DIAMETER | | |
| | | Sonic Coring | | 532+20, Lt 34 feet | | 4/26/11 - 5/2/11 | | 6 inches | | 163 feet |
| GROUND-WATER READINGS | | | | | | | | | | |
| Ground-water level measured at 17½ feet and 48 feet below the ground surface in shallow and deep monitoring wells, respectively on 6/10/2011. See last page of this boring for details. | | | | | | | | | | |
| | | | | | 4.4 | 20 | | SM | Fine grained, occasional gravel, saturated with tar (18%) | |
| | 80 | | | | 6.5 | | | | More gravels, fine to coarse gravel | |
| | 85 | 6 | 13 | 90 | | | | | | |
| | 90 | | | | 2.6 | | | | Becomes coarse grained, alternating layers of Poorly Graded Sand | |
| | 70 | | | | | | | ML | SILT with SAND - very stiff to hard, moist, dark greenish gray (10Y 4/1), fine sand, trace fine gravel, no tar to slightly infused tar | |
| | 95 | 7 | 14 | 100 | | | | | No gravel | |
| | | | | | 4.3 | | | | | |
| | 65 | | | | | | | | | |
| | 100 | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RH
 Prepared/Date: HY/WL 9/27/2011
 Checked/Date: LT/PE 9/27/2011

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. | |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|------------------------|---|---|--|--|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-106 (Continued) | |
| | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | GROUND EL. | | |
| | | | | | | | Sonic Coring | 532+20, Lt 34 feet | 163 feet | | |
| | | | | | | | DATES DRILLED | HOLE DIAMETER | | | |
| | | | | | | | 4/26/11 - 5/2/11 | 6 inches | | | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level measured at 17½ feet and 48 feet below the ground surface in shallow and deep monitoring wells, respectively on 6/10/2011. See last page of this boring for details. | | | |
| 60 | | 8 | 15 | 100 | 20.1 | | | ML | | | |
| | | | | | | | | | Becomes very dark brown, slightly infused tar | | |
| 105 | | | | | 9.5 | 7 | | | | Becomes black, moderately infused tar, trace fine gravel | |
| | | | | | | | | SP-SM | POORLY GRADED SAND with SILT - moist, wet, dark brown, fine grained, some medium to coarse, occasional gravel (up to 3/4 inch in size), moderately infused tar (9%) | | |
| 55 | | | | | 20.5 | | | | FERNANDO FORMATION [Tf] | | |
| | | | | | | | | | SILTSTONE - very stiff to hard, moist, dark greenish gray (10Y 4/1), fine sand, moderately infused to saturated with tar, no gravel | | |
| 110 | | | | | | | | | Some silt, dark greenish gray, no sand to trace sand, slight infused tar to no tar | | |
| 50 | | 9 | 16 | 100 | 7.2 | | | | Shell fragments | | |
| 115 | | | | | | | | | | | |
| 45 | | | | | 21.5 | 77 | | | | Some fine to coarse grained, slightly infused tar (6%) | |
| 120 | | 10 | 17 | 100 | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|--------------------------|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-106 (Continued) |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 532+20, Lt 34 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 4/26/11 - 5/2/11 | 6 inches | 163 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level measured at 17½ feet and 48 feet below the ground surface in shallow and deep monitoring wells, respectively on 6/10/2011. See last page of this boring for details. | | |
| | | | | | | | | END OF BORING AT 122 FEET | | |
| | | | | | | | | NOTES: | | |
| | | | | | | | | Consistency description on this log is based on pocket penetrometer test results and/or visual observation of soil samples. | | |
| | | | | | | | | Hand augered upper 7 feet to avoid damage to utilities. Monitoring well was installed on 4/29/2011. See well construction diagram for S-106. | | |

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|-------------|--|---------------------|--------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | S-107 |
| | | | | | | | | Sonic Coring | 571+83, Lt 105 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 3/23/11 - 3/25/11 | 6 inches | 136 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | | | | | | | 6-inch thick Asphalt Concrete over 4-inch thick Base Coarse | | |
| | | | | | | | | QUATERNARY YOUNGER ALLUVIUM [Qal] SILT to SILTY CLAY - very moist, black, trace fine to medium sand, roots to 3/4-inch size | | |
| | | | | | | | | SILT - moist, medium brown (10YR 5/3) to yellowish brown (10YR 5/4), some fine to medium sand, some roots (up to 1 inch in size), some clay | | |
| | | | | | | | | SILTY CLAY with SAND - medium stiff, moist, dark brown (7.5YR 3/2), fine sand, medium to high plasticity, trace roots and other fibrous material | | |
| | | | | | | | | SILTY SAND - medium dense, moist, dark brown 7.5YR 3/3), fine grained, trace fine gravel, layers of Clayey Sand | | |
| | | 1 | 2 | 90 | | | | SANDY SILT - stiff, moist, dark brown (7.5YR 3/3), fine sand, some clay | | |
| | | | | | | | | Occasional gravel (up to 2 inches in size) | | |
| | | | | | | | | WELL GRADED SAND with SILT and GRAVEL - medium dense, moist, strong brown (7.5YR 4/6), fine to coarse grained, fine to coarse gravel | | |
| | | | | | | | | LEAN CLAY - medium stiff, moist, dark brown (7.5YR 3/3), trace fine sand, medium to high plasticity Trace roots and fibrous material | | |
| | | | | | 24.7 | | | Fine to medium sand, trace fine gravel | | |

Wilshire / La Cienega Station

(CONTINUED ON FOLLOWING FIGURE)

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 Prepared/Date: YN/WL 9/22/2011
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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|----------------------------------|-------|---------------------|------------------------------------|----------------------------------|-------------|--|--|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-107 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | | | GROUND EL. | | |
| | | Sonic Coring | | 571+83, Lt 105 feet | | | | 136 feet | | |
| | | DATES DRILLED | | HOLE DIAMETER | | | | | | |
| | | 3/23/11 - 3/25/11 | | 6 inches | | | | | | |
| | | GROUND-WATER READINGS | | | | | | | | |
| | | Ground-water level not measured. | | | | | | | | |
| | | 2 | 3 | 100 | | | CL | | | |
| | 25 | | | | 21.5 | | CL | SAN PEDRO FORMATION [Qsp] LEAN CLAY - hard, moist, gray (5Y 5/1), trace fine sand | | |
| | | | 4 | 100 | 21.6 | | | Becomes dark to very dark gray (5Y 3/1 to 4/1), trace fine to medium sand, occasional fine gravel | | |
| | 30 | | | | 27.8 | | | | | |
| | | | 5 | 100 | 19.4 | 45 | SC | CLAYEY SAND - dense, moist, very dark gray (5Y 4/1), fine to coarse grained, trace fine gravel (up to 3/8 inch in size), sandier lense | | |
| | 35 | | | | | | CL-ML | SILTY CLAY - stiff, moist, olive green, trace fine sand, slightly more plastic | | |
| | | | | | 35.0 | | CH | FAT CLAY - stiff, moist, very dark gray (5Y 4/1), some fine sand | | |
| | 40 | | 6 | 100 | | | | | | |

Wilshire / La Cienega Station

(CONTINUED ON FOLLOWING FIGURE)

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|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|--|---------------------|------------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-107 (Continued) |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | GROUND EL. 136 feet |
| | | | | | | | | Sonic Coring | 571+83, Lt 105 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | |
| | | | | | | | | 3/23/11 - 3/25/11 | 6 inches | |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | | | | | | CH | Some grayish black | | |
| | | | | | | | CL | SANDY LEAN CLAY - stiff, moist, very dark gray (5Y 4/1), some grayish black lenses, fine sand | | |
| 45 | | 7 | 100 | | 23.5 | 62 | | | | |
| | | | | | 18.2 | 29 | SM | SILTY SAND - medium dense to dense, moist, gray (2.5Y 5/0), fine to medium grained, trace coarse, trace coarse, trace fine gravel (up to 3/8 inch in size) | | |
| | | | | | 20.0 | 46 | SC | CLAYEY SAND - dense, moist, dark greenish gray (5GY 3/1), fine to coarse grained, trace fine gravel (up to 3/8 inch in size) | | |
| 50 | | 8 | 100 | | | | | | | |
| | | | | | 17.4 | 34 | SM | SILTY SAND - dense, moist, dark greenish gray (5GY 3/1), fine to medium grained, trace coarse, some fine to coarse gravel (up to 1 inch in size) | | |
| | | | | | | | | | | |
| 55 | | 9 | 100 | | | | | | | |
| | | | | | 12.9 | 11 | SW-SM | WELL GRADED SAND with SILT and GRAVEL - loose to medium dense, moist, dark greenish gray, fine to coarse grained, fine to coarse gravel (up to 1 inch in size) | | |
| | | | | | | | CL | SANDY LEAN CLAY - stiff to very stiff, moist, dark greenish gray, fine to medium sand, trace coarse, occasional gravel (up to 3/8 inch in size) | | |
| 60 | | 10 | 100 | | 24.4 | 55 | | | | |

Wilshire / La Cienega Station

(CONTINUED ON FOLLOWING FIGURE)

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | | BORING NO. |
|----------------|------------|----------------------------------|-------|---------------------|---------------------------------|-------------------------------|-------------|---|--|----------------------|------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-107 (Continued) | |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | | | GROUND EL. | | | |
| | | Sonic Coring | | 571+83, Lt 105 feet | | | | 136 feet | | | |
| | | DATES DRILLED | | HOLE DIAMETER | | | | | | | |
| | | 3/23/11 - 3/25/11 | | 6 inches | | | | | | | |
| | | GROUND-WATER READINGS | | | | | | | | | |
| | | Ground-water level not measured. | | | | | | | | | |
| | | | | | | | CL | | | | |
| | | | | | | | SC-SM | SILTY, CLAYEY SAND - dense, moist, dark greenish gray, fine to medium grained, trace coarse, trace fine to coarse gravel (up to 3/4 inch in size), angular to rounded | | | |
| 65 | | | 11 | 100 | 20.9 | 35 | | | | | |
| | | | | | 35.7 | | MH | ELASTIC SILT with SAND - stiff, moist, dark greenish gray, fine to medium sand | | | |
| 70 | | | 12 | 100 | | | | | | | |
| 65 | | | | | 25.2 | | | | | | |
| | | | | | 30.8 | 85 | | | | | |
| 75 | | | 13 | 100 | | | | | | | |
| 60 | | | | | 13.4 | 35 | SM | SILTY SAND - dense, moist, dark greenish gray, fine to medium grained, trace coarse, occasional fine gravel (up to 3/8 inch in size) More Silt and Clay, occasional gravels (up to 2 1/2 inches in size) | | | |
| | | | | | 16.8 | | | | | | |
| | | | 14 | 100 | | | ML | SILT - moist, dark greenish gray, fine sand, no gravel | | | |
| 80 | | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/22/2011
 Checked/Date: LT/PE 9/22/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|----------------------------------|-------|---------------------|------------------------------------|----------------------------------|-------------|---|--|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-107 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | | | GROUND EL. | | |
| | | Sonic Coring | | 571+83, Lt 105 feet | | | | 136 feet | | |
| | | DATES DRILLED | | HOLE DIAMETER | | | | | | |
| | | 3/23/11 - 3/25/11 | | 6 inches | | | | | | |
| | | GROUND-WATER READINGS | | | | | | | | |
| | | Ground-water level not measured. | | | | | | | | |
| 55 | | | | | | | ML | | | |
| | | | | | 27.2 | | | | | |
| 85 | | 15 | 100 | | 22.4 | 58 | CL | SANDY LEAN CLAY - stiff, moist, dark greenish gray, fine to coarse sand | | |
| 50 | | | | | | | | Becomes greenish gray | | |
| | | | | | 24.2 | | ML | SANDY SILT - stiff, moist, greenish gray (5GY 5/1), fine sand, trace fine to coarse gravel | | |
| | | | | | | | | Trace fine to medium gravel | | |
| 90 | | 16 | 100 | | 19.6 | | | Cobble (up to 3½ inches in size) | | |
| 45 | | | | | | | | Becomes dark greenish gray | | |
| | | | | | | | | Layer of Silty Sand, fine to coarse gravel | | |
| 95 | | 17 | 100 | | | | | | | |
| 40 | | | | | | | SM | SILTY SAND - dense, moist, greenish gray, fine to coarse grained, trace fine to coarse gravel | | |
| | | | | | | | ML | SILT with SAND - very stiff to hard, moist, dark greenish gray (5GY 4/1), fine sand | | |
| | | 18 | 100 | | | | | More sand | | |
| 100 | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/22/2011
 Checked/Date: LT/PE 9/22/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|---------------------|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-107 (Continued) |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 571+83, Lt 105 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | |
| | | | | | | | | 3/23/11 - 3/25/11 | 6 inches | |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 35 | | | | | | | | | | |
| | | | | | | | | Becomes very dark greenish gray | | |
| | | | 19 | 100 | | | | More sand, fine to coarse | | |
| 105 | | | | | | | | More Silt | | |
| 30 | | | | | | | | Trace fine to coarse gravel | | |
| | | | 20 | 100 | | | | Becomes fine grained, trace clay, no gravel | | |
| 110 | | | | | | | | Alternating layers of Silty Clay, some clayey silts | | |
| 25 | | | 21 | 100 | | | | Becomes very stiff, very dark greenish gray (5GY 3/1) | | |
| 115 | | | | | | | | | | |
| 20 | | | 22 | 100 | | | | | | |
| 120 | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/22/2011
 Checked/Date: LT/PE 9/22/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | BORING NO. | | | | | | | | |
|-------------------|---------------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|-----------------------------|-----------------|-------------------|--------------|---------------------|---------------|---------------|-------------------|----------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | S-107 (Continued) | | | | | | | | |
| | | | | | | | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DRILLING METHOD</td> <td style="width: 50%;">BOREHOLE LOCATION</td> </tr> <tr> <td>Sonic Coring</td> <td>571+83, Lt 105 feet</td> </tr> <tr> <td>DATES DRILLED</td> <td>HOLE DIAMETER</td> </tr> <tr> <td>3/23/11 - 3/25/11</td> <td>6 inches</td> </tr> </table> | | DRILLING METHOD | BOREHOLE LOCATION | Sonic Coring | 571+83, Lt 105 feet | DATES DRILLED | HOLE DIAMETER | 3/23/11 - 3/25/11 | 6 inches |
| DRILLING METHOD | BOREHOLE LOCATION | | | | | | | | | | | | | | | | |
| Sonic Coring | 571+83, Lt 105 feet | | | | | | | | | | | | | | | | |
| DATES DRILLED | HOLE DIAMETER | | | | | | | | | | | | | | | | |
| 3/23/11 - 3/25/11 | 6 inches | | | | | | | | | | | | | | | | |
| | | | | | | | | GROUND-WATER READINGS | | | | | | | | | |
| | | | | | | | | Ground-water level not measured. | | | | | | | | | |
| 15 | | | | | | | ML | SANDY SILT - stiff, moist, very dark greenish gray (5GY 3/1), fine sand, occasional fine gravel (up to 1/2 inch in size), round | | | | | | | | | |
| | | | | | | | | END OF BORING AT 122 FEET | | | | | | | | | |
| | | | | | | | | NOTES: | | | | | | | | | |
| | | | | | | | | Consistency description on this log is based on pocket penetrometer test results and/or visual observation of soil samples. | | | | | | | | | |
| | | | | | | | | Hand augered upper 5 feet to avoid damage to utilities. | | | | | | | | | |
| | | | | | | | | Borehole grouted with cement-bentonite slurry and patched with asphalt concrete. | | | | | | | | | |
| 125 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |
| 130 | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 135 | | | | | | | | | | | | | | | | | |
| 0 | | | | | | | | | | | | | | | | | |
| 140 | | | | | | | | | | | | | | | | | |

Field Tech: RS
 Prepared/Date: YN/WL 9/22/2011
 Checked/Date: LT/PE 9/22/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | BORING NO. | | | | | | | | | | | | |
|----------------------------------|--------------------|-------|-------|------------|---------------------------------|-------------------------------|-------------|---|--------------|-----------------|-------------------|--------------|--------------------|---------------|---------------|---------------------|----------|-----------------------|--|----------------------------------|--|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | S-108 | | | | | | | | | | | | |
| | | | | | | | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">DRILLING METHOD</th> <th style="width: 50%;">BOREHOLE LOCATION</th> </tr> <tr> <td>Sonic Coring</td> <td>606+90, Lt 24 feet</td> </tr> <tr> <th style="width: 50%;">DATES DRILLED</th> <th style="width: 50%;">HOLE DIAMETER</th> </tr> <tr> <td>3/28/11 and 3/29/11</td> <td>6 inches</td> </tr> <tr> <th colspan="2">GROUND-WATER READINGS</th> </tr> <tr> <td colspan="2">Ground-water level not measured.</td> </tr> </table> | | DRILLING METHOD | BOREHOLE LOCATION | Sonic Coring | 606+90, Lt 24 feet | DATES DRILLED | HOLE DIAMETER | 3/28/11 and 3/29/11 | 6 inches | GROUND-WATER READINGS | | Ground-water level not measured. | |
| DRILLING METHOD | BOREHOLE LOCATION | | | | | | | | | | | | | | | | | | | | |
| Sonic Coring | 606+90, Lt 24 feet | | | | | | | | | | | | | | | | | | | | |
| DATES DRILLED | HOLE DIAMETER | | | | | | | | | | | | | | | | | | | | |
| 3/28/11 and 3/29/11 | 6 inches | | | | | | | | | | | | | | | | | | | | |
| GROUND-WATER READINGS | | | | | | | | | | | | | | | | | | | | | |
| Ground-water level not measured. | | | | | | | | | | | | | | | | | | | | | |
| 170 | 5 | | | | | | SM | 8-inch thick Asphalt Concrete over 4-inch thick Portland Cement Concrete, 4-inch thick Base Course | | | | | | | | | | | | | |
| | | | | | | | SM | FILL - SILTY SAND with GRAVEL - moist, brown, fine to coarse | | | | | | | | | | | | | |
| | | | | | | | CL | QUATERNARY YOUNGER ALLUVIUM [Qal] SANDY LEAN CLAY - medium stiff to hard, moist, brown, trace slate gravel | | | | | | | | | | | | | |
| 165 | | | | | | | SM | SILTY SAND - moist, dark yellowish brown (10YR 4/4), fine grained, some subangular to subrounded gravel (up to 3/4 inch in size) | | | | | | | | | | | | | |
| 10 | | | | | | | ML | Gravel (up to 1 inch in size) | | | | | | | | | | | | | |
| 160 | | 1 | 1A | 100 | | | ML | SILT - very stiff, moist, very dark grayish brown (10YR 3/2), trace coarse grained, fine gravel, alternating with layers of Silty Clay | | | | | | | | | | | | | |
| 15 | | | | | | | SC | CLAYEY SAND with GRAVEL - dense to hard, damp to moist, dark brown (10YR 3/2), fine to coarse grained, subangular gravel (up to 1/2-inch in size), alternating with Sandy Clay with Gravel | | | | | | | | | | | | | |
| 155 | | | | | | | ML | Layers of Silty Sand with gravel (up to 3/4 inch in size) | | | | | | | | | | | | | |
| 20 | | | | | | | ML | QUATERNARY OLDER ALLUVIUM [Qalol] SANDY SILT - very stiff, moist, brown (10YR 4/3), trace coarse grained, some clay | | | | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|------------------------------|------------|-------|-------|------------|---------------------------------|-------------------------------|------------------------|---|-------------------|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-108 (Continued) |
| | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | GROUND EL. | |
| | | | | | | | Sonic Coring | 606+90, Lt 24 feet | 172 feet | |
| | | | | | | | DATES DRILLED | HOLE DIAMETER | | |
| | | | | | | | 3/28/11 and 3/29/11 | 6 inches | | |
| GROUND-WATER READINGS | | | | | | | | Ground-water level not measured. | | |
| 150 | | 2 | 2A | 100 | | | ML | | | |
| 25 | | | | | | | SC | CLAYEY SAND with GRAVEL - dense, moist, brown (10YR 4/3), fine to coarse grained, subangular to subrounded (up to 1 inch in size), layers of Sandy Clay with Gravel | | |
| 145 | | | | | | | SM | SILTY SAND with GRAVEL - dense, moist, brown (10YR 4/3), fine to coarse grained, subangular to subrounded gravel (up to 1 inch in size), some clay | | |
| 30 | | | | | | | | Becomes gray (10YR 5/1) | | |
| 140 | | 3 | 3A | 100 | | | | | | |
| 35 | | | | | | | | Becomes wet | | |
| 135 | | | | | | | | | | |
| 40 | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

THIS RECORD IS AN INTERPRETATION OF SURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|--|---------------------------|------------------------|
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | S-108 (Continued) |
| | | | | | | | | Sonic Coring | 606+90, Lt 24 feet | |
| | | | | | | | | 3/28/11 and 3/29/11 | HOLE DIAMETER 6 inches | GROUND EL. 172 feet |
| | | | | | | | | GROUND-WATER READINGS Ground-water level not measured. | | |
| 130 | | 4 | 4A | 95 | | | SM | 1 inch layer of Sandy Silt | | |
| 45 | | | | | | | CL | LEAN CLAY - medium stiff, wet, mottled, dark grayish brown (10YR 4/2) to strong brown (7.5YR 4/1), trace coarse sand, some silt | | |
| 125 | | | | | | | | | | |
| 50 | | 5 | 5A | 100 | | | | | | |
| 120 | | | | | 14.0 | 33 | SM | SILTY SAND - medium dense to dense, wet, brown (10YR 4/3), fine to coarse grained, some gravel (up to 3/8 inch in size), trace clay, occasional Silt and Clay lenses | | |
| 55 | | 1 | 1 | 100 | | | CL-ML | SILTY CLAY - soft to medium stiff, wet, dark brown (10YR 3/3), occasional sandy lenses | | |
| 115 | | | | | 25.7 | | | Layer of Sandy Silt, trace Clay | | |
| | | | | | | | | Becomes very dark grayish brown (10YR 3/2), some dispersed organics | | |
| | | | | | | | | Becomes stiff to very stiff | | |
| 60 | | 2 | 2 | 100 | 26.4 | | | Abundant calcium carbonate nodules, cemented hard | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|---------------------------|------------------------|
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | S-108 (Continued) |
| | | | | | | | | Sonic Coring | 606+90, Lt 24 feet | |
| | | | | | | | | 3/28/11 and 3/29/11 | HOLE DIAMETER 6 inches | GROUND EL. 172 feet |
| | | | | | | | | GROUND-WATER READINGS Ground-water level not measured. | | |
| 110 | | | | | | | CL-ML | Some oxidized subhorizontal laminations | | |
| 65 | | 3 | 3 | 100 | 22.4 | 85 | MH | ELASTIC SILT - very stiff, wet, olive gray (5Y 5/2), some fine to coarse sand, occasional gravel (up to 3/8 inch in size), some calcium carbonate nodules, dispersed, cemented and uncemented | | |
| 105 | | | | | | | | More dispersed calcium carbonate nodules | | |
| 70 | | 4 | 4 | 100 | 21.4 | | | Becomes wet, dark grayish brown (10YR 4/2) with some dark yellowish brown mottling (10YR 4/6), some calcium carbonate nodules cemented and uncemented | | |
| | | | | | | | | More calcium carbonate nodules (up to about 1/2 inch in size), cemented | | |
| | | | | | 25.2 | 81 | | Layers of Elastic Silt with Sand, some calcium carbonate nodule dispersed cemented and uncemented (up to 1/2 inch in size) | | |
| 75 | | 5 | 5 | 100 | 24.6 | | | Becomes brown (10YR 4/3) | | |
| | | | | | | | | Some concentrated calcium carbonate nodules (up to 3/4 inch in size) | | |
| | | | | | 16.8 | 71 | CH | FAT CLAY with SAND - stiff, moist, brown (10YR 4/3), fine to coarse sand, occasional gravel (up to 3/8 inch in size) | | |
| 80 | | 6 | 6 | 100 | | | | | | |

Tunnel

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

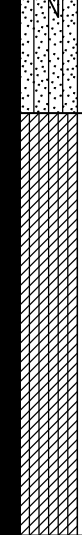
THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|---|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-108 (Continued) |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 606+90, Lt 24 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | |
| | | | | | | | | 3/28/11 and 3/29/11 | 6 inches | |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | | | | 14.9 | | | CH | More sand, some calcium carbonate nodule | |
| | | | | | 17.3 | 66 | | CL | SANDY LEAN CLAY - medium stiff, wet, fine to medium sand, trace gravel (up to 3/8 inch in size), alternating pockets of fine to coarse grained sand | |
| | 85 | 7 | 7 | 100 | | | | SC | CLAYEY SAND with GRAVEL - dense, wet, varying colors, fine to coarse grained, fine to coarse gravel (up to 1 inch in size) | |
| | | | | | 9.5 | 24 | | | Gravel becomes more rounded | |
| | | | | | 10.9 | | | | Some silt and clay lenses | |
| | 90 | 8 | 8 | 100 | | | | | More gravel (up to 1 1/2 inch in size) | |
| | | | | | 10.7 | 27 | | SM | SILTY SAND with GRAVEL - dense, moist, olive brown, fine to coarse grained, fine to coarse gravel (up to 1 1/2 inches in size) | |
| | 80 | | | | | | | | | |
| | | | | | 7.8 | 7 | | GW-GM | WELL GRADED GRAVEL with SILT - dense, moist, olive brown, fine to coarse sand, fine to coarse gravel (up to 2 inches in size) | |
| | 95 | 9 | 9 | 100 | | | | | Some clay | |
| | | | | | 14.3 | | | | Cemented calcium carbonate nodules, pockets of gravel | |
| | 75 | | | | | | | CL | SAN PEDRO FORMATION [Qsp] SANDY LEAN CLAY - very stiff to hard, wet, light olive brown (2.5Y 5/3), gravel (up to 1/2 inch in size), abundant calcium carbonate, dispersed nodules and cement, partially cemented, layers of Clayey Sand with Gravel | |
| | | | | | 22.7 | 69 | | ML | SANDY SILT - stiff to very stiff, wet, olive brown (2.5Y 4/3), varying dark yellowish brown (10YR 4/6) mottling, fine sand, some medium to coarse, trace gravel (up to 3/4 inch in size), occasional micaceous, some very fine Sandy Silt lenses | |
| | 100 | 10 | 10 | 100 | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|---|--|----------------------|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-108 (Continued) |
| | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | GROUND EL. | |
| | | | | | | | | Sonic Coring | 606+90, Lt 24 feet | 172 feet |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | |
| | | | | | | | | 3/28/11 and 3/29/11 | 6 inches | |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 70 | | | | | | |  | Trace calcium carbonate nodule, occasional sand lenses | | |
| 105 | | 11 | 11 | 100 | 29.0 | | | SILTY CLAY - stiff, wet, strongly mottled, olive brown (2.5Y 4/3) to strong brown (7.5Y 4/6) | | |
| 65 | | | | | 32.5 | | | END OF BORING AT 107 FEET | | |
| 110 | | | | | | | | NOTES: Consistency description on this log is based on pocket penetrometer test results and/or visual observation of soil samples. Hand augered upper 8 feet to avoid damage to utilities. Borehole grouted with cement-bentonite slurry and patched with asphalt concrete. | | |
| 120 | | | | | | | | | | |

Field Tech: RS
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|---|--------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-109 |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 647+82, Lt 49 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 2/20/2011 - 4/21/2011 | 6 inches | 231 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | | | | | | | 10-inch thick Asphalt Concrete over 6-inch thick Portland Cement Concrete | | |
| | | | | | | | | ML | <u>FILL [Af]</u> SILT - moist, dark brown, some clay | |
| | | | | | | | | CL | <u>QUATERNARY YOUNGER ALLUVIUM [Qal]</u> LEAN CLAY - medium stiff, moist, dark brown (7.5YR 3/4), trace fine grained, small calcium carbonate nodules Some root fragments Trace fine to coarse gravel, angular Fine to coarse sand, fine to coarse gravel Layers of Silty Sand | |
| | | 1 | 1 | 90 | 22.3 | | | CL | SANDY LEAN CLAY - hard, moist, dark brown (7.5YR 3/4), trace fine to coarse sand, trace fine to coarse gravel, calcium carbonate nodule | |
| | | | | | 17.3 | | | | | |
| | | | | | 20.1 | | | | | |

Wilshire / Rodeo Station

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/24/2011
 Checked/Date: LT/PE 9/24/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|--------------------|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-109 (Continued) |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 647+82, Lt 49 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 2/20/2011 - 4/21/2011 | 6 inches | 231 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | 2 | 2 | 95 | 12.6 | 51 | CL | More sand and gravel, small pockets of Clayey Sand with Gravel | | |
| | 25 | | | | | | | No Core Recovery from 27 to 29.5 feet | | |
| | | 3 | 3 | 75 | 21.5 | | CL | SANDY LEAN CLAY - medium stiff, moist, dark brown (7.5YR 3/4), fine to medium sand, trace fine gravel | | |
| | 30 | | | | | | CL-ML | SILTY CLAY with SAND - medium stiff, moist, dark brown, fine sand, trace fine and coarse gravel | | |
| | | | | | 8.4 | 31 | CL-ML | QUATERNARY OLDER ALLUVIUM [Qalol] SILTY CLAY with SAND - medium stiff, moist, dark brown, fine sand, trace fine and coarse gravel | | |
| | | | | | | | SM | SILTY SAND with GRAVEL - dense, moist, strong brown, fine to coarse grained, fine to coarse gravel (up to 1 inch in size), subrounded | | |
| | 35 | | | | 5.2 | | | Becomes reddish gray (5YR 5/2) | | |
| | | | | | | | | Becomes gray (5YR 6/1) | | |
| | | | | | | | | No core recovery from 37.0 to 38.5 feet | | |
| | | 4 | 70 | | | | SM | Becomes reddish brown (5YR 4/3) | | |
| | 40 | | | | | | | Fine to coarse sand, fine to coarse subrounded to angular gravel, gray (5Y 5/1) | | |

Wilshire / Rodeo Station

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/24/2011
 Checked/Date: LT/PE 9/24/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. | |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|-------------|---|--------------------|-----------------------------|--|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-109 (Continued) | |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | | |
| | | | | | | | | Sonic Coring | 647+82, Lt 49 feet | | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. | |
| | | | | | | | | 2/20/2011 - 4/21/2011 | 6 inches | 231 feet | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level not measured. | | | |
| | | | | | 3.9 | 28 | SM | No core recovery from 42 to 42.5 feet | | | |
| | | | | | 4.5 | | SP | POORLY GRADED SAND with GRAVEL - medium dense, moist, brown (7.5YR 4/4), fine to coarse grained, fine gravel | | | |
| | | 5 | 90 | | | | | Layer of Clayey Silt, trace fine sand | | | |
| 45 | | | | | 9.2 | 34 | SM | SILTY SAND with GRAVEL - very dense, moist, dark brown (7.5YR 3/4), fine to coarse grained, fine to medium gravel (up to 1 inch in size), angular to subrounded | | | |
| | | | | | | | ML | SILT - hard, moist, dark brown, trace fine sand, trace fine gravel, some clay | | | |
| | | | | | | | | More sand and gravel | | | |
| | | | | | | | SM | SILTY SAND - dense, moist, brown (7.5YR 4/2) with some gray bands, fine to coarse grained, trace fine gravel | | | |
| | | 6 | 100 | | 17.7 | | CL | LEAN CLAY with SAND - hard, moist, dark brown (7.5YR 3/2), fine sand | | | |
| 50 | | | | | | | | | | | |
| | | | | | 24.4 | | CL-ML | SILTY CLAY - medium stiff to stiff, moist, dark brown, trace fine sand, occasional fine gravel | | | |
| | | 7 | 100 | | | | | | | | |
| 55 | | | | | 16.4 | 57 | CL | SANDY LEAN CLAY - medium stiff, moist, dark brown, fine to coarse sand, trace fine gravel (up to 3/4 inch in size) | | | |
| | | | | | | | | Layer of Silt with Gravel, subrounded gravel (up to 1 inch in size), some clay | | | |
| | | | | | 15.3 | | | Trace fine gravel | | | |
| 60 | | 8 | 100 | | | | | | | | |

Wilshire / Rodeo Station

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
Prepared/Date: YN/WL 9/24/2011
Checked/Date: LT/PE 9/24/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-----------------|-------|--------------------|---------------------------------|-------------------------------|-------------|---|------------|--|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-109 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | DATES DRILLED | | HOLE DIAMETER | GROUND EL. | |
| | | Sonic Coring | | 647+82, Lt 49 feet | | 2/20/2011 - 4/21/2011 | | 6 inches | 231 feet | |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | | | | 19.2 | | <p>CL</p> | | | |
| | | | | | 18.1 | 53 | | | | Alternating with layers of Sandy Silt with Gravel |
| | 65 | 9 | 100 | | 24.0 | | | | | Becomes dark brown, trace fine to medium sand, occasional fine to coarse gravel |
| | | | | | 24.9 | | | | | Layers of Sandy Silt with Gravel Cobble (up to 4 inches in size) Becomes dark brown, trace fine to coarse sand |
| | 70 | 10 | 100 | | | | | | | Becomes brown (10YR 4/3) and varying colors (white, yellowish, orange, red, gray, black), fine gravel, subrounded |
| | | | | | 16.6 | | | | | Becomes dark reddish brown (5YR 4/3) |
| | 75 | 11 | 100 | | | | | | | Occasional gravel (up to 1 inch in size) |
| | | | | | 13.6 | 41 | | | | CLAYEY SAND - very dense, moist, brown (10YR 4/3) and varying colors, fine to coarse grained, fine to coarse gravel (up to 3 inches in size), subrounded |
| | 80 | 12 | 100 | | | | | | | SC |

Wilshire / Rodeo Station

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/24/2011
 Checked/Date: LT/PE 9/24/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. | |
|----------------|------------|-----------------|-------|--------------------|------------------------------------|----------------------------------|-------------|---|--|-----------------------------|------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-109 (Continued) | |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | DATES DRILLED | | HOLE DIAMETER | | | GROUND EL. |
| | | Sonic Coring | | 647+82, Lt 49 feet | | 2/20/2011 - 4/21/2011 | | 6 inches | | 231 feet | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level not measured. | | | |
| 150 | | | | | | | SC | | | | |
| | | | | | 16.7 | | ML | SANDY SILT - very stiff to hard, moist, brown (7.5YR 4/3), fine to medium sand, trace fine gravel | | | |
| 85 | | 13 | 100 | | | | SM | SILTY SAND - moist, brown (10YR 4/3), trace fine to coarse grained, some fine gravel, (up to 1/2 inch in size), some Sandy Silt seams | | | |
| 145 | | | | | 11.8 | 46 | | Becomes olive brown (2.5YR 4/3), large slate gravel | | | |
| | | 14 | 48 | | 20.7 | 81 | CL | LEAN CLAY with SAND - hard, moist, brown (10YR 4/3), fine to medium grained, trace coarse, trace fine gravel (up to 3/8 inch in size) | | | |
| 90 | | | | | | | | No core recovery from 89.6 to 92 feet | | | |
| 140 | | | | | 18.7 | | | More Sand | | | |
| | | 15 | 100 | | | | SM | SILTY SAND - dense, moist, olive brown (2.5YR 4/3), fine to coarse grained, some fine gravel (up to 1/2 inch in size) | | | |
| 135 | | | | | 9.8 | 36 | | Becomes dark greenish gray (5G 3/1), trace fine to medium gravel | | | |
| | | | | | 9.1 | | | | | | |
| 100 | | 16 | 100 | | | | CL-ML | SAN PEDRO FORMATION [Qsp] SILTY CLAY - hard, moist, dark greenish gray, trace fine sand, occasional fine gravel | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/24/2011
 Checked/Date: LT/PE 9/24/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|------------------------|---|---|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-109 (Continued) |
| | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | GROUND EL. | |
| | | | | | | | Sonic Coring | 647+82, Lt 49 feet | 231 feet | |
| | | | | | | | DATES DRILLED | HOLE DIAMETER | | |
| | | | | | | | 2/20/2011 - 4/21/2011 | 6 inches | | |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 130 | | | | | 23.3 | | | CL-ML | Becomes very dark greenish gray | |
| | | | | | 21.7 | | | CL | LEAN CLAY - stiff, moist, dark greenish gray | |
| | | 4 | 17 | 67 | | | | | Becomes dark greenish gray more sand between 102 to 102.3 feet | |
| 105 | | | | | | | | | More silt, trace fine to coarse gravel | |
| 125 | | | | | | | | | | |
| 110 | | | | | | | | | More sand and gravel | |
| 120 | | | | | | | | | Less sand and gravel, fine to coarse grained, fine gravel | |
| 115 | | | | | | | | | | |
| 115 | | | | | | | | | More sand and gravel, occasional large subround to round gravel | |
| | | | | | | | | | | |
| | | | | | 13.1 | | | | | |
| 120 | | 18 | 100 | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RS
 Prepared/Date: YN/WL 9/24/2011
 Checked/Date: LT/PE 9/24/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | BORING NO. | | | | | | | |
|-----------------------|--------------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|--|-----------------------------|-----------------|-------------------|--------------|--------------------|---------------|---------------|-----------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | S-109 (Continued) | | | | | | | |
| | | | | | | | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DRILLING METHOD</td> <td style="width: 50%;">BOREHOLE LOCATION</td> </tr> <tr> <td>Sonic Coring</td> <td>647+82, Lt 49 feet</td> </tr> <tr> <td>DATES DRILLED</td> <td>HOLE DIAMETER</td> </tr> <tr> <td>2/20/2011 - 4/21/2011</td> <td>6 inches</td> </tr> </table> | | DRILLING METHOD | BOREHOLE LOCATION | Sonic Coring | 647+82, Lt 49 feet | DATES DRILLED | HOLE DIAMETER | 2/20/2011 - 4/21/2011 |
| DRILLING METHOD | BOREHOLE LOCATION | | | | | | | | | | | | | | | |
| Sonic Coring | 647+82, Lt 49 feet | | | | | | | | | | | | | | | |
| DATES DRILLED | HOLE DIAMETER | | | | | | | | | | | | | | | |
| 2/20/2011 - 4/21/2011 | 6 inches | | | | | | | | | | | | | | | |
| | | | | | | | | GROUND-WATER READINGS | GROUND EL. | | | | | | | |
| | | | | | | | | Ground-water level not measured. | 231 feet | | | | | | | |
| 110 | | | | | | | | | | | | | | | | |
| | | | | | | | | END OF BORING AT 122 FEET | | | | | | | | |
| | | | | | | | | NOTES: Consistency description on this log is based on pocket penetrometer test results and/or visual observation of soil samples. Hand augered upper 7 feet to avoid damage to utilities. Borehole grouted with cement-bentonite slurry and patched with asphalt concrete. | | | | | | | | |
| | 125 | | | | | | | | | | | | | | | |
| | 105 | | | | | | | | | | | | | | | |
| | 130 | | | | | | | | | | | | | | | |
| | 100 | | | | | | | | | | | | | | | |
| | 135 | | | | | | | | | | | | | | | |
| | 95 | | | | | | | | | | | | | | | |
| | 140 | | | | | | | | | | | | | | | |

Field Tech: RS
 Prepared/Date: YN/WL 9/24/2011
 Checked/Date: LT/PE 9/24/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|-------------|--|-------------------|--------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-110 |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 710+7, Lt 78 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 2/22/2011 - 2/24/2011 | 6 inches | 282 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 280 | | | | | | | SM | FILL [Af] SILTY SAND - moist to wet, brown, fine grained, some gravel and cobble (up to 3 inches in size), layers of Poorly Graded Sand with Silt, some glass debris | | |
| 275 | 5 | | 1 | 62 | | | ML | QUATERNARY OLDER ALLUVIUM [Qalo] SANDY SILT - wet, very dark brown (10YR 2/2), trace to some subangular gravel, (up to 3/4- inch in size), mainly slate shale and siltstone, some dispersed organics, trace clay At 6 to 8.5': No core recovery | | |
| 270 | 10 | 2 | | 50 | | | CL-ML | Becomes dark yellowish brown (10YR 3/4), more gravel, fewer organics Becomes very dark brown (10YR 2/2), trace fine gravel Becomes dark yellowish brown (10YR 4/6) | | |
| 265 | 15 | | | | | | ML | SILTY CLAY - soft to medium stiff, wet, dark yellowish brown (10YR 4/6), trace fine gravel | | |
| 260 | 20 | | | | | | CL- | At 17.0 - 27.0': Samples recovered in bags SANDY SILT with GRAVEL - medium stiff, wet, very dark brown (10YR 2/2) to dark yellowish brown (10YR 4/3), subangular shale, slate and sandstone (up to 3/4- inch in size), occasional sand lenses | | |
| | | | | | | | CL- | SILTY CLAY - medium stiff, moist, very dark brown, varying fine sand, | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: PR/MF
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011



THIS RECORD IS AN INTERPRETATION OF SURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|----------------------------------|-------|-------------------|---------------------------------|-------------------------------|-------------|---|--|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-110 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | | | GROUND EL. | | |
| | | Sonic Coring | | 710+7, Lt 78 feet | | | | 282 feet | | |
| | | DATES DRILLED | | HOLE DIAMETER | | | | | | |
| | | 2/22/2011 - 2/24/2011 | | 6 inches | | | | | | |
| | | GROUND-WATER READINGS | | | | | | | | |
| | | Ground-water level not measured. | | | | | | | | |
| 260 | | 3 | 90 | | | | ML | trace coarse sand and fine gravel, layers of Silt with Clay | | |
| 255 | | | | | | | ML | SANDY SILT with GRAVEL - stiff, wet, very dark brown, some clay | | |
| 250 | | 4 | 100 | | | | SM | SILTY SAND with GRAVEL - moist, brown to dark grayish brown, fine to coarse grained, mainly subrounded to subangular slate and sandstone gravel (up to 1 inch in size) | | |
| 245 | | 5 | 100 | 22.2 | 59 | | ML | SILT - very soft, wet, brown (7.5YR 4/3) to very dark grayish brown (10YR 2/2), fine to coarse sand, trace fine gravel, slate and sandstone, poorly consolidated, trace clay | | |
| 240 | | | | | | | ML | SANDY SILT - soft to medium stiff, wet, mottled grayish brown (10YR 5/2) to brown (7.5YR 4/4), fine sand, trace medium to coarse, texture defined by variable oxidation (alternating oxidized and unoxidized) | | |
| 235 | | 6 | 100 | 21.3 | | | | Lenticular sand lense (2-inch thick) | | |
| 230 | | | | | | | | Zone of sand and gravel | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: PR/MF
Prepared/Date: YN/WL 9/30/2011
Checked/Date: LT/PE 9/30/2011

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. | |
|----------------|------------|-----------------|-------|-------------------|------------------------------------|----------------------------------|--|---|---|-----------------------------|------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-110 (Continued) | |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | DATES DRILLED | | HOLE DIAMETER | | | GROUND EL. |
| | | Sonic Coring | | 710+7, Lt 78 feet | | 2/22/2011 - 2/24/2011 | | 6 inches | | 282 feet | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level not measured. | | | |
| 240 | | | | | 9.7 | 13 |  | GC-GM | SILTY, CLAYEY GRAVEL with SAND - medium dense, wet, dark brown (10YR 3/3), mainly subangular slate, some metabasalt and quartzite, fine to coarse sand, grades to fine to coarse gravels (up to 1 inch in size), lower contact is gradational | | |
| 45 | | 7 | 100 | 17.8 | | |  | CL | LEAN CLAY - stiff, wet, strongly mottled, dark grayish brown (2.5YR 3/4) to brown (7.5YR 4/4), occasional dark reddish brown (5YR 3/4) mottling, subhorizontal, dark brown Becomes dark brown, (1/4 inch thick), bedding appears subhorizontal Prominent wavy, subhorizontal laminations, very dark grayish brown (10YR 4/2) to dark reddish brown (5YR 3/2) Subrounded sandstone clast (1 inch in size) Occasional fine to medium sand | | |
| 235 | | | | | | | | | Mottling becomes less prominent, brown (7.5YR 4/4) with some dark grayish brown (10YR 4/2) mottling | | |
| 50 | | 8 | 100 | 38.0 | 99 | | | | Some wavy, subhorizontal laminations | | |
| 230 | | | | | | | | | CLAYEY GRAVEL - loose, wet, brown (7.5YR 4/2), clasts up to 3 inches in size, mainly subangular to subrounded slate More sand | | |
| 55 | | 9 | 100 | 20.0 | | | | | SANDY LEAN CLAY - very stiff, wet, brown (10YR 4/4), fine sand, trace medium to coarse | | |
| 225 | | | | | | | | | | | |
| 60 | | 10 | 100 | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: PR/MF
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-----------------|-------|-------------------|------------------------------------|----------------------------------|-------------|--|--|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-110 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | DATES DRILLED | | HOLE DIAMETER | | |
| | | Sonic Coring | | 710+7, Lt 78 feet | | 2/22/2011 - 2/24/2011 | | 6 inches | | 282 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 220 | | | | | 17.1 | 68 | CL | At 61.4': Some gravel (up to 3/4 inch in size) Becomes yellowish brown (10YR 5/4) | | |
| 65 | | 11 | 100 | | 16.7 | 37 | SM | Layer of Silty Sand, fine to coarse grained, some fine gravel (up to 3/4 inch in size), clasts (up to 1 inch in size), mainly subangular slate and subrounded shale and sandstone, Clayey Sand lenses | | |
| | | | | | 14.0 | 19 | SM | SILTY SAND with GRAVEL - wet, yellowish brown (6YR 5/4), fine to coarse grained, fine gravel (up to 3/4 inch in size), mainly subangular to subrounded slate, some subrounded shale | | |
| 70 | | 12 | 100 | | 6.3 | 29 | | More sand Clasts (up to 3 inches in size), mainly angular to subangular slate, some subangular sandstone, varying colors | | |
| 75 | | 13 | 100 | | 16.7 | 11.6 | | Granitic clast, unweathered, subrounded, (2 inches in size) Becomes very dark grayish brown (10YR 3/2), clasts (up to 3/4-inch in size), mainly subangular slate and subangular to subrounded shale and sandstone, matrix is fine to coarse grained sand, some silt | | |
| | | | | | | | ML | SANDY SILT - stiff, wet, brown (10YR 4/4), trace fine gravel, layers of Clayey Sand | | |
| 80 | | 14 | 100 | | 12.1 | 10 | SW-SM | WELL GRADED SAND with SILT and GRAVEL - dense, wet, brown (10YR 4/4), fine to coarse grained, fine to coarse gravel (up to 1 inch in size), mainly subrounded slate and shale | | |

Tunnel

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: PR/MF
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. | |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|---|------------------------------|--|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-110 (Continued) | |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | | |
| | | | | | | | | Sonic Coring | 710+7, Lt 78 feet | | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. | |
| | | | | | | | | 2/22/2011 - 2/24/2011 | 6 inches | 282 feet | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level not measured. | | | |
| | | | | | 9.9 | 38 | | SM | SILTY SAND - dense, wet, fine to coarse grained, some fine gravel (up to 1/2 inch in size) | | |
| | | | | | | | | | Sharp contact, erosional, appears to dip 10-20 degrees | | |
| | | | 15 | 100 | | | | CL-ML | SILTY CLAY - very stiff, wet, brown (7.5YR 4/4), some fine sand, trace fine to coarse gravel, alternating layers of Silty Sand and Sandy Silt | | |
| | 85 | | | | 18.9 | | | | Becomes dark yellowish brown (10YR 4/4) | | |
| | | | | | | | | | Becomes brown (7.5YR 4/3) | | |
| | 195 | | | | | | | | Becomes dark grayish brown (10YR 4/2) mottled with faint brown (7.5YR 4/4), some wavy, subhorizontal laminations | | |
| | | | 16 | 100 | | | | | Becomes strongly mottled, dark brown (7.5YR 3/3) to very dark gray (7.5YR 3/3) | | |
| | 90 | | | | | | | ML | SANDY SILT with GRAVEL - very stiff, wet, brown (7.5YR 4/4), clasts (up to 3/4-inch in size), mainly angular to subangular slate, subangular shale and sandstone, some subrounded quartzite, some clay | | |
| | 190 | | | | | | | | | | |
| | | | 17 | 100 | | | | GM | SILTY GRAVEL - dense, wet, dark grayish brown (10YR 5/2), clasts (up to 3/4-inch in size), mainly subangular slate, lesser subangular to subrounded shale and sandstone, some subangular granite clasts, trace to some clay | | |
| | 95 | | | | | | | | | | |
| | 185 | | | | | | | | | | |
| | | | 18 | 100 | | | | | More clay, gradational | | |
| | 100 | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: PR/MF
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

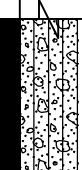
THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-----------------|-------|-------------------|------------------------------------|----------------------------------|-------------|--|--|------------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-110 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | DATES DRILLED | | HOLE DIAMETER | | |
| | | Sonic Coring | | 710+7, Lt 78 feet | | 2/22/2011 - 2/24/2011 | | 6 inches | | 282 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 180 | | 19 | 100 | | | | GM-GC | SILTY, CLAYEY GRAVEL - very stiff, wet, very dark gray (2.5YR 3/1), clasts (up to 3/4- inch in size), mainly subangular to subrounded slate, shale and sandstone, fine to coarse sand, irregular sharp contact, oxidized beds | | |
| | | | | | | | ML | SANDY SILT with GRAVEL - stiff, wet, very dark grayish brown (10YR 3/2) to brown (10YR 4/4), clasts (up to 1/2- inch in size, some to 1 inch), mainly subangular to subrounded slate, some subrounded to rounded shale and sandstone, trace gravel, some clay | | |
| 105 | | 20 | 100 | | | | CL-ML | SILTY CLAY - very stiff, wet, dark brown (7.5YR 3/3) to dark gray (2.5YR 4/1), mottled, varying color, trace coarse sand, trace manganese oxide | | |
| | | | | | | | | Increasing sand, some fine gravel, some wavy subhorizontal laminations | | |
| 175 | | | | | | | ML | SANDY SILT with GRAVEL - very stiff, moist, brown to dark gray, clasts (up to 1 inch in size), subangular to subrounded slate, subrounded shale and sandstone | | |
| | | 21 | 100 | | | | | Layers of Sandy Silty Clay, some brown (7.5YR 4/2) mottling, trace coarse sand, some wavy subhorizontal laminations | | |
| 110 | | | | | | | | More gravel, subhorizontal laminations, fine to coarse | | |
| 170 | | | | | | | CL | LEAN CLAY - very stiff, wet, olive brown (2.5Y 4/3) mottling with strong brown (7.5YR 4/4), trace coarse sand, trace calcium carbonate nodules, occasional sand pockets | | |
| | | 22 | 100 | | | | | Calcium carbonate nodules (up to 1/4 inch in size), some rounded fine gravel | | |
| 115 | | | | | | | ML | SANDY SILT with GRAVEL - very stiff, wet, olive brown (2.5YR 4/3) and yellowish brown (10YR 5/4) mottling, some coarse sand, fine gravel (up to 3/4 inch in size), subangular slate and subrounded shale and sandstone, calcium carbonate nodules (up to 1/4 inch in size) | | |
| 165 | | | | | | | | Becomes light yellowish brown (2.5Y 6/3), more fine gravel (up to 1/2- inch in size, some 3/4- inch), subangular slate, fewer shale and sandstone | | |
| 120 | | 23 | 100 | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: PR/MF
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|---|--|--|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic Drilling Rig | | S-110 (Continued) |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 710+7, Lt 78 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 2/22/2011 - 2/24/2011 | 6 inches | 282 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 160 | | | | | | |  | ML | Becomes light yellow brown (2.5YR 6/3) | |
| | | | | | | | | END OF BORING AT 122 FEET | | |
| | | | | | | | | NOTES: Consistency description on this log is based on pocket penetrometer test results and/or visual observation of soil samples. Hand augered upper 6 feet to avoid damage to utilities. Borehole grouted with cement-bentonite slurry and patched with asphalt concrete. | | |
| 125 | | | | | | | | | | |
| 155 | | | | | | | | | | |
| 130 | | | | | | | | | | |
| 150 | | | | | | | | | | |
| 135 | | | | | | | | | | |
| 145 | | | | | | | | | | |
| 140 | | | | | | | | | | |

Field Tech: PR/MF
 Prepared/Date: YN/WL 9/30/2011
 Checked/Date: LT/PE 9/30/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|-------------|--|---|--------------|
| | | | | | | | | Boart Longyear / 600T Trusonic drill rig | | S-111 |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 692+57, Rt 16 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 2/14/2011 - 2/18/2011 | 6 inches | 249 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | | | | | | | 12-inch thick Asphalt Concrete | | |
| | | | | | | | | CL-ML | FILL [Af] SILT to SILTY CLAY with GRAVEL - moist, dark brown to gray (7.5YR 3/3 to 7.5Y 6/1), slate gravel (up to 1 inch in size) | |
| 245 | 5 | | | | | | | | No core recovery from 7½ to 11' | |
| 240 | 10 | 1 | 1 | 65 | | | | CL-ML | QUATERNARY YOUNGER ALLUVIUM [Qal] SILTY CLAY - stiff, very moist, dark brown to dark yellowish brown (7.5YR 3/3 to 10YR 3/4), trace to some coarse sand, some subangular to subrounded slate gravel (up to ½ inch in size), layer of Silt | |
| 235 | 15 | | | | | | | ML | SILT - moist, dark yellowish brown (10YR 3/4), fine sand and trace to some clay, some slate gravel (up to 1½ inches in size), few shale fragments, alternating with layers of Sandy Silt | |
| 230 | 20 | | | | | | | | No core recovery from 17 to 20' | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
 Prepared/Date: PK/WL 10/1/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| DRILLING COMPANY/DRILLING EQUIPMENT | | | | | | | BORING NO. | | |
|--|------------|-------|--------------------|------------|------------------------------------|----------------------------------|-----------------------------|---|--|
| Boart Longyear / 600T Trusononic drill rig | | | | | | | S-111 (Continued) | | |
| DRILLING METHOD | | | BOREHOLE LOCATION | | | | GROUND EL. | | |
| Sonic Coring | | | 692+57, Rt 16 feet | | | | 249 feet | | |
| DATES DRILLED | | | HOLE DIAMETER | | | | GROUND EL. | | |
| 2/14/2011 - 2/18/2011 | | | 6 inches | | | | 249 feet | | |
| GROUND-WATER READINGS | | | | | | | | | |
| Ground-water level not measured. | | | | | | | | | |
| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | | |
| 225 | 25 | 2 | 2 | 70 | | | ML | Becomes dark yellowish brown (10YR 3/4), fine sand and trace gravel, subrounded to well rounded slate gravel (up to 3/4 inch in size) | |
| | | | | | | | SM | SILTY SAND - moist, dark yellowish brown, fine to medium-grained, some gravel, subrounded to well rounded (up to 1 inch in size) | |
| | | | | | | | ML | <u>QUATERNARY OLDER ALLUVIUM [Qalol]</u> SILT with SAND - moist, dark yellowish brown (10YR 3/4), fine sand, trace subrounded to well rounded gravel (up to 1-inch in size) | |
| | | | | | | | | Some clay No core recovery from 27' to 27.9' | |
| 220 | 30 | 3 | 3 | 80 | | | ML | SANDY SILT - moist, dark yellowish brown (10YR 3/4), fine grained, trace clay, occasional slate gravel (up to 2 inches in size), disturbed, alternating with layers of Silty Sand | |
| | | | | | | | ML | SILT - moist, dark yellowish brown, fine sand, some shale fragments, some clay More clay | |
| | | | | | | | | Lenses of Silty Sand, moist, dark olive brown (2.5YR 3/3), massive | |
| 215 | 35 | | 4 | 100 | | | SM | SILTY SAND with GRAVEL - moist, dark olive green (5Y 3/3), fine to medium grained, slate gravel, subround to suboval (up to 1 1/2 inches in size), 3 to 4-inch thick, occasional interbedded Sandy Silt | |
| | | | | | | 16 | | Becomes wet, fine to coarse grained, gravel (up to 3/4 inch in size) | |
| 210 | | | 5 | 100 | | | | Becomes fine to medium grained, trace gravel (up to 1/2 inch in size) | |
| 40 | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
 Prepared/Date: PK/WL 10/1/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. | |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|-------------|--|--------------------|-----------------------------|--|
| | | | | | | | | Boart Longyear / 600T Trusononic drill rig | | S-111 (Continued) | |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | | |
| | | | | | | | | Sonic Coring | 692+57, Rt 16 feet | | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. | |
| | | | | | | | | 2/14/2011 - 2/18/2011 | 6 inches | 249 feet | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level not measured. | | | |
| | | | | | 8.4 | 20 | SM | Becomes fine to coarse sand, more gravel | | | |
| 205 | 45 | 6 | 100 | | | | GP-GC | POORLY GRADED GRAVEL with CLAY and SAND - dense, wet, dark olive gray (5Y 3/2), medium to coarse sand, some fine, gravel (up to 1 inch in size), alternating with Clayey Sand and Silty Sand | | | |
| | | | | | 8.2 | 12 | SM | SILTY SAND with GRAVEL - dense, wet, fine to coarse shale gravel, trace clay, some quartz, iron | | | |
| | | | | | | | GC-GM | SILTY CLAYEY GRAVEL with SAND - wet, dark olive gray (5Y 3/2), fine to coarse sand, subrounded to well rounded slate gravel (up to 3 inches in size), cobbles (up to 3 1/2 inches in size) | | | |
| 200 | | 7 | 100 | | 8.5 | 13 | SW | WELL GRADED SAND with GRAVEL - wet, dark olive gray, gravel (up to 1/2 inch in size) | | | |
| | 50 | | | | | | GC-GM | SILTY CLAYEY GRAVEL with SAND - dense, wet, very dark grayish brown (10YR 3/2), fine to coarse sand, slate gravel (up to 1 inch in size), some sandstone | | | |
| | | | | | 22.7 | 89 | CL | LEAN CLAY - moist, olive brown (2.5Y 4/3), some fine sand | | | |
| 195 | 55 | 8 | 100 | | | | CL-ML | SILTY CLAY - hard, moist, grayish brown (2.5Y 5/2), fine sand, some clay Becomes very moist, trace wood and charcoal fragments | | | |
| | | | | | | | SC | LAKWOOD FORMATION [Qlw] CLAYEY SAND - dense, moist, olive (5Y 5/3), fine grained | | | |
| | | | | | | | SM | SILTY SAND - dense, moist, olive (5Y 5/4), fine grained, some medium, layers of Poorly Graded Sand with Silt Becomes light olive (5Y 6/3) | | | |
| 60 | | 9 | 100 | | 5.0 | 16 | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
Prepared/Date: PK/WL 10/1/2011
Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | | BORING NO. |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|-------------|--|--|----------------------|------------------------|
| | | | | | | | | Boart Longyear / 600T Trusononic drill rig | | S-111 (Continued) | |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | | GROUND EL. 249 feet |
| | | | | | | | | Sonic Coring | 692+57, Rt 16 feet | | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | | |
| | | | | | | | | 2/14/2011 - 2/18/2011 | 6 inches | | |
| | | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | | Ground-water level not measured. | | | |
| | | | | | | | | SM | | | |
| | | | | | | | | SC-SM | SILTY CLAYEY SAND - dense, moist, olive gray (5Y 5/2), fine grained | | |
| | | | | | | | | SM | SILTY SAND - dense, wet, pale olive (5Y 6/3) and olive yellow (5Y 6/8) mottling, fine grained, some iron oxide | | |
| | | | 10 | 100 | | | | SC-SM | SILTY CLAYEY SAND - dense, wet, pale olive (5Y 5/2), fine grained | | |
| | 65 | | | | 15.8 | | | SP-SM | POORLY GRADED SAND with SILT - medium dense, wet, olive yellow (5Y 6/3 and 5Y 6/8) and mottled pale olive, fine to medium grained | | |
| | | | | | | | | | Becomes light olive, (5Y 6/4) | | |
| | | | | | | | | | Becomes wet, 1 inch mottled with iron oxide stains, vague stratification at base | | |
| | 70 | | 11 | 100 | 16.9 | 10 | | SM | SILTY SAND - medium dense, wet, pale olive (5Y 6/4), fine grained | | |
| | | | | | | | | | No core recovery from 72 to 74' | | |
| | | | | | | | | | Trace medium grained, (2.5Y 5/6) | | |
| | 75 | | | | 13.3 | | | SP-SM | POORLY GRADED SAND with SILT - wet, light olive brown (2.5Y 5/4), fine to medium grained, trace coarse, some gravels (up to 3/4 inch in size), predominantly slate | | |
| | | | 12 | 80 | | | | GP-GM | POORLY GRADED GRAVEL with SILT and SAND - dense, wet, light brown, fine to coarse sand, slate gravel (up to 1 1/2 inches in size), quartzite | | |
| 170 | | | | | 8.2 | 11 | | | | | |
| 80 | | | | | | | | | | | |

Tunnel

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
 Prepared/Date: PK/WL 10/1/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|----------------------------------|-------|--------------------|------------------------------------|----------------------------------|-------------|--|--|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusononic drill rig | | S-111 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | | | GROUND EL. | | |
| | | Sonic Coring | | 692+57, Rt 16 feet | | | | 249 feet | | |
| | | DATES DRILLED | | HOLE DIAMETER | | | | | | |
| | | 2/14/2011 - 2/18/2011 | | 6 inches | | | | | | |
| | | GROUND-WATER READINGS | | | | | | | | |
| | | Ground-water level not measured. | | | | | | | | |
| | | | | | 19.6 | | | SP-SM | POORLY GRADED SAND with SILT - wet, olive yellow (2.5Y 6/8), very fine to fine grained, trace subrounded to well rounded trace gravel (up to 1 1/2 inches in size) | |
| | | | | | 21.6 | 14 | | SM | SILTY SAND - wet, light olive brown (5Y 5/4) and dark yellowish brown (10YR 4/6) mottling, fine grained, trace medium, iron oxide | |
| 165 | 85 | 13 | 100 | | 15.6 | | | | Fine to medium grained, dark yellowish brown (10YR 4/6) to dark brown Becomes dark yellowish brown (10YR 4/6) | |
| | | | | | 17.1 | 13 | | | Alternating with layers of Poorly Graded Sand, fine to medium grained, trace silt, trace gravel (up to 3/4 inch in size) | |
| 160 | 90 | 14 | 100 | | | | | | Becomes wet, light brownish gray (10YR 6/2), iron oxide dark yellowish brown (10YR 4/6) | |
| | | | | | | | | SP-SM | POORLY GRADED SAND with SILT - wet, light brownish gray (10YR 6/2) and dark yellowish brown (10YR 4/6), fine grained, some subrounded to well rounded slate gravel (up to 1/2 inch in size), quartz, some iron oxide stain | |
| | | | | | | | | SM | SILTY SAND - wet, light brownish gray, fine to very fine grained, iron, some manganese oxide staining, some subparallel subhorizontal dips | |
| 155 | 95 | 15 | 100 | | 22.1 | | | SP-SM | POORLY GRADED SAND with SILT - wet, fine to medium grained, predominately fine quartz, iron oxide | |
| | | | | | | | | | Interfingering Silty Sand, wet, light olive brown (2.5Y 5/4), very fine to fine grained, some iron oxide (10YR 4/3) Various colors (2.5Y 5/3 to 2.5Y 4/3) | |
| | | | | | | | | | No recovery from 97 to 98 1/2' | |
| 150 | | 16 | 70 | | | | | SM | SAN PEDRO FORMATION [Qsp] SILTY SAND - wet, very dark gray (5Y 3/1), fine grained, occasional fossils intact gastropod shells | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
 Prepared/Date: PK/WL 10/1/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | | BORING NO. |
|-----------------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-----------------------|--|--|----------------------|------------------------|
| | | | | | | | | Boart Longyear / 600T Trusononic drill rig | | S-111 (Continued) | |
| | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | | | GROUND EL. 249 feet |
| | | | | | | | Sonic Coring | 692+57, Rt 16 feet | | | |
| | | | | | | | DATES DRILLED | HOLE DIAMETER | | | |
| | | | | | | | 2/14/2011 - 2/18/2011 | 6 inches | | | |
| GROUND-WATER READINGS | | | | | | | | Ground-water level not measured. | | | |
| 145 | 105 | 17 | 100 | | | | SM | Alternating with layers of Sandy Silt, wet, very dark gray, fine to very fine grained 3-inch cemented zone containing gastropods, very dark gray (5Y 3/1), calcium carbonate nodules, small wood fragment, gastropod shells (up to 1/2 inch in size) | | | |
| 140 | 110 | 18 | 100 | | | | ML | Less gastropod shells 3-inch thick carbonate cemented zone 2-inch by 3-inch carbonate cemented zone, some silt Becomes wet, very dark gray (5Y 3/1), trace to few shell fragments (gastropods, bivalves), occasional subrounded rock fragments | | | |
| 135 | 115 | 19 | 100 | | | | ML | 3-inch thick cementation with gastropod fragments SANDY SILT - wet, dark gray, very fine to fine sand, trace scattered shell fragments, some intact gastropods Trace clay 3-inch thick carbonate concretion Volcanic rock fragments, gravel concretionary clast containing sublong slate fragments (up to 1/2 inch in size), shell fragments | | | |
| 130 | | 20 | 100 | | | | | SILT - hard, moist, very dark gray (5Y 3/1), trace coarse sand, some granitic rock fragments, some clay Becomes greenish black, 1/2 inch granite clasts Layers of Sandy Silt with Clay, very stiff to hard, fine to coarse sand | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
 Prepared/Date: PK/WL 10/1/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|----------------------------------|--|-------------------|------------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonics drill rig | | S-111 (Continued) |
| | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | GROUND EL. | |
| | | | | | | | Sonic Coring | 692+57, Rt 16 feet | 249 feet | |
| | | | | | | | DATES DRILLED | HOLE DIAMETER | | |
| | | | | | | | 2/14/2011 - 2/18/2011 | 6 inches | | |
| | | | | | | | GROUND-WATER READINGS | | | |
| | | | | | | | Ground-water level not measured. | | | |
| | | | | | | | ML | | | |
| | | | 21 | 52 | | | SC | Becomes 3 inches clast, subrounded, scattered granitic rock fragments (up to 1/2 inch in size) CLAYEY SAND - very dark greenish gray (10Y 1-3/10GY), fine to coarse grained No core recovery from 124.6 to 127' | | |
| 125 | 125 | | | | | | GP-GM | POORLY GRADED GRAVEL with SAND and SILT - very dense, moist, dark grayish green (5GY 4/2), fine to medium sand, subangular to well rounded gravel (up to 2 inches in size), locally clast supported Layers of Poorly Graded Sand, fine grained, trace subrounded to well rounded gravel Becomes dense, moist, subrounded to well rounded gravel (up to 3 inches in size) Layers of Silty Sand - moist, (5GY 4/2), fine to medium grained, occasional gravels at base (up to 1 inch in size) Gravel (up to 1 1/2 inches in size) No core recovery from 132 to 132.8' | | |
| 120 | 130 | 22 | 98 | | | | SP-SM | POORLY GRADED SAND with SILT and GRAVEL - moist, grayish green (5GY 5/2), fine grained, fine to coarse gravel (up to 3 inches in size) | | |
| | | | | | | | SM | SILTY SAND with GRAVEL - moist, greenish gray, fine grained, gravel (up to 1 inch in size) | | |
| 115 | 135 | 23 | 84 | | | | SP-SM | POORLY GRADED SAND with SILT and GRAVEL - moist, greenish gray (10GY 5/1), gravel (up to 1/2 inch in size), granite, some slate and quartzite | | |
| | | | | | | | | Becomes medium grained, trace fine gravel (up to 1/2 inch in size) at base of bed | | |
| | | | | | | | | Becomes light greenish gray (5GY 7/1), trace subrounded to well rounded gravel (up to 1 1/2 inches in size) Becomes dense, dark greenish gray (10GY 4/1), fine to medium grained | | |
| 110 | | 24 | 98 | | | | | Trace well rounded gravel (up to 1 inch in size) | | |
| 140 | | | | | | | SM | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: DL
 Prepared/Date: PK/WL 10/1/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|---|--------------------|------------------------------|
| | | | | | | | | Boart Longyear / 600T Trusononic drill rig | | S-111 (Continued) |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 692+57, Rt 16 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 2/14/2011 - 2/18/2011 | 6 inches | 249 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | | | | | | | SILTY SAND with GRAVEL - moist, very dark greenish gray (5G-1/ 3/1), fine grained, trace subrounded to well rounded gravels (up to 1 inch in size) POORLY GRADED SAND with SILT - dense, moist, very dark greenish gray (10Y 4/1), fine grained, trace fine gravel | | |
| | | | | | | | | SILTY SAND - wet, very dark greenish gray (5G-1 3/1), very fine to fine grained Thick bed, massive | | |
| 105 | 145 | 25 | 100 | | | | | Becomes dense, moist, greenish black (10Y 2.5/1), fine grained, few gravel (up to ¾ inch in size), well rounded to rounded Occasional rounded to well rounded gravels (up to 1 inch in size) | | |
| 100 | 150 | 26 | 100 | | | | | END OF BORING AT 150 FEET | | |
| | | | | | | | | NOTES: Consistency description on this log is based on pocket penetrometer test results and/or visual observation of soil samples. Hand augered upper 8½ feet to avoid damage to utilities. Borehole grouted with cement-bentonite slurry and patched with asphalt concrete. | | |
| 95 | 155 | | | | | | | | | |
| 90 | | | | | | | | | | |
| 160 | | | | | | | | | | |

Field Tech: DL
 Prepared/Date: PK/WL 10/1/2011
 Checked/Date: HP/PE 10/2/2011

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|--|-------------------|--------------|
| | | | | | | | | Boart Longyear / 600T Trusonic drill rig | | S-113 |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | |
| | | | | | | | | Sonic Coring | 763+65, Lt 3 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. |
| | | | | | | | | 2/25/11 - 2/28/11 | 6 inches | 297 feet |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| | | | | | | | | 12 inch thick Asphalt Concrete consisting of 2 layers | | |
| 295 | | | | | | | SM | FILL [af] SILTY SAND - moist, brown, fine to medium grained, trace gravel | | |
| 5 | | | | | | | CL | QUATERNARY OLDER ALLUVIUM (Qalo) SANDY LEAN CLAY - very stiff, moist, brown to dark brown (7.5YR 4/2), fine sand, some fine gravel | | |
| 290 | | | | | | | | Becomes hard | | |
| | | | | | | | | Less gravel | | |
| 10 | | | | | | | | More sand | | |
| 285 | | 1 | 2 | 100 | | | | More clay | | |
| 15 | | | | | | | | | | |
| 280 | | | | | | | | | | |
| 20 | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RM
 Prepared/Date: PK/WL 9/30/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|------------------------------------|----------------------------------|-------------|--|-------------------|------------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic drill rig | | S-113 (Continued) |
| | | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | GROUND EL. 297 feet |
| | | | | | | | | Sonic Coring | 763+65, Lt 3 feet | |
| | | | | | | | | DATES DRILLED | HOLE DIAMETER | |
| | | | | | | | | 2/25/11 - 2/28/11 | 6 inches | |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 275 | | 2 | 3 | 100 | | | | | | |
| 25 | | | | | | | | | | |
| 270 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 265 | | 3 | 4 | 100 | | | | | | |
| 35 | | | | | | | | | | |
| 260 | | | | | | | | | | |
| 40 | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RM
 Prepared/Date: PK/WL 9/30/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|------------------------------|------------|-------|-------|------------|---------------------------------|-------------------------------|------------------------|--|-------------------|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic drill rig | | S-113 (Continued) |
| | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | GROUND EL. | |
| | | | | | | | Sonic Coring | 763+65, Lt 3 feet | 297 feet | |
| | | | | | | | DATES DRILLED | HOLE DIAMETER | | |
| | | | | | | | 2/25/11 - 2/28/11 | 6 inches | | |
| GROUND-WATER READINGS | | | | | | | | Ground-water level not measured. | | |
| 255 | | 4 | 5 | 100 | | | CL | More fine sand | | |
| | | | | | | | | Trace fine gravel, trace coarse sand | | |
| 45 | | | | | | | | Less sand | | |
| 250 | | | | | | | | Trace fine sand | | |
| | | | | | | | | Layers of Sandy Clay with Gravel, fine to coarse sand, fine to coarse gravel | | |
| 245 | | 5 | 6 | 100 | | | SC | CLAYEY SAND with GRAVEL - medium dense to dense, moist, dark brown to brown (7.5YR 4/3), fine to coarse grained, fine to coarse gravel, alternating layers of Silty Sand | | |
| | | | | | | | CL | LEAN CLAY with SAND - very stiff to hard, moist, dark brown (7.5YR 4/3), fine sand, layers of silty clay, trace fine gravel | | |
| 55 | | | | | | | | Layers of Silty Clay, trace fine gravel, occasional sand lenses, some red sandstone fragment | | |
| 240 | | | | | | | | | | |
| | | 6 | 7 | 88 | | | | | | |
| 60 | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RM
 Prepared/Date: PK/WL 9/30/2011
 Checked/Date: HP/PE 10/2/2011

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| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|----------------------------------|-------|-------------------|------------------------------------|----------------------------------|-------------|---|--|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusonic drill rig | | S-113 (Continued) |
| | | DRILLING METHOD | | BOREHOLE LOCATION | | | | GROUND EL. | | |
| | | Sonic Coring | | 763+65, Lt 3 feet | | | | 297 feet | | |
| | | DATES DRILLED | | HOLE DIAMETER | | | | | | |
| | | 2/25/11 - 2/28/11 | | 6 inches | | | | | | |
| | | GROUND-WATER READINGS | | | | | | | | |
| | | Ground-water level not measured. | | | | | | | | |
| | | | | | | | CL | SANDY LEAN CLAY - moist, dark brown, fine to coarse sand, trace fine to coarse gravel | | |
| | 235 | | | | 10.6 | | SC | CLAYEY SAND - dense, moist, light olive brown (2.5Y 5/3) with small pockets of pale yellow, yellow, black and orange, fine to coarse grained, some fine to coarse gravel (up to 1 inch in size), trace coarse | | |
| | 65 | * | 8 | 100 | | | | Becomes brown (7.5YR 5/4) | | |
| | | | | | 12.4 | | | More gravel between 66 to 67.8 feet | | |
| | 230 | | | | 9.7 | 46 | | Becomes dark yellowish brown, some fine to coarse gravel | | |
| | | | | | 11.7 | | | | | |
| | 70 | * | 9 | 100 | | | | Less gravel, fine grained | | |
| | 225 | | | | 14.3 | | ML | SANDY SILT - hard, moist, dark yellowish brown, lenses of light olive brown and black, fine grained, some fine to coarse gravel | | |
| | | | | | | | | Trace gravel | | |
| | 75 | * | 10 | 100 | | | | | | |
| | 220 | | | | 20.9 | | | | | |
| | 80 | * | 11 | 100 | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RM
 Prepared/Date: PK/WL 9/30/2011
 Checked/Date: HP/PE 10/2/2011

THIS RECORD IS AN INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. LATITUDE AND LONGITUDE OF BORING LOCATION SHOWN ON LOGS ARE APPROXIMATE. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

| ELEVATION (ft) | DEPTH (ft) | BOX # | RUN # | % RECOVERY | MOISTURE CONTENT (% of dry wt.) | PERCENT PASSING No. 200 SIEVE | SAMPLE LOC. | DRILLING COMPANY/DRILLING EQUIPMENT | | BORING NO. |
|----------------|------------|-------|-------|------------|---------------------------------|-------------------------------|-------------------|--|---|-----------------------------|
| | | | | | | | | Boart Longyear / 600T Trusononic drill rig | | S-113 (Continued) |
| | | | | | | | DRILLING METHOD | BOREHOLE LOCATION | | |
| | | | | | | | Sonic Coring | 763+65, Lt 3 feet | | |
| | | | | | | | DATES DRILLED | HOLE DIAMETER | GROUND EL. | |
| | | | | | | | 2/25/11 - 2/28/11 | 6 inches | 297 feet | |
| | | | | | | | | GROUND-WATER READINGS | | |
| | | | | | | | | Ground-water level not measured. | | |
| 215 | | | | | | | | ML | | |
| | | * | 12 | 98 | 12.8 | 42 | | | Layer of Clayey Sand, varying colors (red, gray, yellowish brown), fine to coarse sand, some fine gravel (up to 3/4 inch in size) | |
| 85 | | | | | | | | | Becomes black, trace fine sand | |
| | | | | | 11.7 | | | | | |
| 210 | | | | | 10.7 | 11 | | SW-SM | WELL GRADED SAND with SILT and GRAVEL - loose to medium dense, moist, dark brown (7.5YR 3/2), fine to coarse grained, fine gravel, occasional coarse (up to 1 inch in size) | |
| | | * | 13 | 98 | | | | | Layers of Sandy Silt with Clay, dark yellowish brown, lenses of light olive brown fine sand, trace fine to medium gravel of varying colors | |
| 90 | | | | | 12.4 | | | | | |
| | | * | 14 | 98 | | | | | | |
| 205 | | | | | | | | | | |
| | | * | 14 | 98 | | | | | | |
| 95 | | | | | 16.4 | | | | | |
| | | * | 15 | 100 | | | | SC | CLAYEY SAND - hard, moist, dark yellowish brown (7.5YR 3/3), fine to coarse grained, trace fine gravel (up to 1/2 inch in size) | |
| 200 | | | | | 12.5 | 46 | | | | |
| | | * | 15 | 100 | | | | SP- | POORLY GRADED SAND with SILT - loose to medium dense, moist, brown, | |
| 100 | | | | | | | | | | |

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: RM
 Prepared/Date: PK/WL 9/30/2011
 Checked/Date: HP/PE 10/2/2011