## EXPLORATION LOG SA189-A1

**PROJECT:** TRONOX PHASE B **PROJECT NO.**: 20092518V1

**EXPLORATION LOCATION:** TRONOX AREA 1 **EXPLORATION DATE:** 7-14-2009

**EXPLORATION SIZE (dia.):** 3' CORE BARREL **EQUIPMENT:** SDC550-24 SONIC CORE RIG

**ELEVATION:** EXISTING GROUND SURFACE **LOGGED BY:** SEARS/DAVIS

INITIAL DEPTH TO WATER: NOT ENCOUNTERED DATE MEASURED: N/A

FINAL DEPTH TO WATER: NOT ENCOUNTERED

DATE MEASURED: N/A

| FINAL DEPTH TO WATER:                   |                          | NOT EN | COUNTERED DATE MEASURED:  | N/ | 4  |                         | <del></del>          |                                 |                      |
|---|--------------------------|--------|---|----|----|-------------------------|----------------------|---------------------------------|----------------------|
| ELEVATION/<br>DEPTH                     | SOIL & SAMPLE<br>SYMBOLS | USCS   | DESCRIPTION   | Id | 11 | MOISTURE<br>CONTENT (%) | DRY DENSITY<br>(pcf) | Pocket<br>Penetrometer<br>(tsf) | WELL<br>CONSTRUCTION |
| - 0<br>                                 |                          | FILL   | FILL, graded fill   |    |    |                         |                      |                                 |                      |
| - 5<br>-<br>-<br>-<br>- 7.5<br>-<br>-   |                          | SW-SM  | SAND with silt, reddish brown (5YR 4/4), 10%-20% silt, 80%-90% sand, trace gravel, dry, low plasticity  |    |    |                         |                      |                                 |                      |
| - 10<br>-<br>-<br>-<br>-<br>-<br>- 12.5 | 39<br>50<br>38           | SW-SM  | Collect SA189-10B, PID readings: 10.6 eV = 0.1 ppmV, 11.7 eV = 0.0 eVvery dense, dry  |    |    |                         |                      |                                 |                      |
| -<br>-<br>-<br>-<br>15<br>-<br>-        |                          | SW-SC  | SAND with silt, 10%-15% silt, 85%-90% fine to medium sand  SAND with silt, reddish brown (5YR 5/4), 10%-20% silt, 80%-90% fine to medium grained sand | 1  |    |                         |                      |                                 |                      |
| - 17.5                                  |                          |        |   |    |    |                         |                      |                                 |                      |

The descriptions contained within this exploration log apply only at the specific exploration location and at the time the exploration was made. It is not intended to be representative of subsurface conditions at other locations or times.

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| TROCEOT: TROCOCTION 20002010V1 | PROJECT: TR | RONOX PHASE B | PROJECT NO.: | 20092518V1 |
|--------------------------------|-------------|---------------|--------------|------------|
|--------------------------------|-------------|---------------|--------------|------------|

**EXPLORATION LOCATION:** TRONOX AREA 1 **EXPLORATION DATE:** 7-14-2009

**EXPLORATION SIZE (dia.):** 3' CORE BARREL **EQUIPMENT:** SDC550-24 SONIC CORE RIG

**ELEVATION**: EXISTING GROUND SURFACE **LOGGED BY**: SEARS/DAVIS

INITIAL DEPTH TO WATER: NOT ENCOUNTERED

DATE MEASURED: N/A

PATE MEASURED: N/A

| FINAL DEF                  | TH TO WATER:               | NOT EN        | COUNTERED DATE MEASURED:   | N/A    | 4       |                         |                      |                                 |                      |
|----------------------------|----------------------------|---------------|--|--------|---------|-------------------------|----------------------|---------------------------------|----------------------|
| ELEVATION/<br>DEPTH        | SOIL & SAMPLE<br>SYMBOLS   | USCS          | DESCRIPTION  | Ы      | 1       | MOISTURE<br>CONTENT (%) | DRY DENSITY<br>(pcf) | Pocket<br>Penetrometer<br>(tsf) | WELL<br>CONSTRUCTION |
| L                          |                            |               |  |        |         |                         |                      |                                 |                      |
| -                          |                            | СН            | Lean CLAY, reddish brown (5YR 5/4), high plasticity  |        |         |                         |                      |                                 |                      |
| -<br>-<br>- 20<br>-        |                            | SM            | Silty SAND, reddish brown (5YR 5/3), 20%-30% silt, 70%-80% fine sand, low plasticity                                   |        |         |                         |                      |                                 |                      |
| -<br>-<br>- 22.5           |                            | SW            | SAND, dark reddish brown (5YR 3/4), trace silt,  |        |         |                         |                      |                                 |                      |
| -<br>-<br>-<br>- 25<br>-   |                            |               | 90%-95% fine to coarse sand, 2%-8% approximately 2" diameter volcanic sub-angular to sub-rounded gravel, no plasticity |        |         |                         |                      |                                 |                      |
| -<br>-<br>-<br>- 27.5      |                            | ML            | MUDDY CREEK FORMATION: Silt with SAND, reddish brown (2.5YR 5/4), 80%-90% silt, 10%-20% fine sand, moist               |        |         |                         |                      |                                 |                      |
| -<br>-<br>- 30             | 5<br>5<br>8                | ML            | Collect SA189-29B, PID readings: 10.6 eV = 0.2 ppmV, 11.7 eV = 0.0 ppmVstiff moist                                     |        |         |                         |                      |                                 |                      |
| -<br>-<br>-<br>- 32.5<br>- |                            |               | END OF BORING AT 30.5 FEET   |        |         |                         |                      |                                 |                      |
| -<br>-<br>35<br>-          | The descriptions contained | within this a | exploration log apply only at the specific exploration location and at th  | ne tim | e the e | xploration              | was made             |                                 |                      |

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Figure No.