IMMEDIATE RESPONSE ACTION STATUS REPORT #1

FORMER AEROVOX FACILITY
740 BELLEVILLE AVENUE
NEW BEDFORD, MA
RTN 4-0601

Prepared for

AVX Corporation
801 17th Avenue South
Myrtle Beach, SC 29578

August 2014

URS

URS Corporation
1155 Elm Street, Suite 401
Manchester, New Hampshire 03101

PN: 39744051

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LIST OF ACRONYMS & ABBREVIATIONS

ACO	Administrative Consent Order (MassDEP-AVX Agreement)
AOC	Administrative Order on Consent (EPA-AVX Agreement)
AST	Aboveground Storage Tank
AVX	AVX Corporation
bgs	below ground surface
COCs	Constituents of Concern
CVOC	Chlorinated Volatile Organic Compound
DNAPL	Dense Non-Aqueous Phase Liquid
EPA	United States. Environmental Protection Agency
FID	Flame Ionization Detector
IRA	Immediate Response Action
LSP	Licensed Site Professional
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
MHW	Mean High Water
MIP	Membrane Interface Probe
MM	Monitoring and Maintenance
OHM	Oil and Hazardous Material
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethene or Percloroethene
PID	Photoionization Detector
ppm	parts per million
RTN	Release Tracking Number
TCE	Trichloroethene
TSS	Total suspended solids
UCL	Upper Concentration Limit
URS	URS Corporation
XSD	Halogen Specific Detector

1.0 INTRODUCTION

On behalf of AVX Corporation (AVX), URS Corporation (URS) has prepared this *Immediate Response Action Status Report* (Status Report) for the disposal site known as the former Aerovox Facility (Site) located at 740 Belleville Avenue in New Bedford, Massachusetts. On April 10, 2014, URS notified MassDEP of the presence of dense non-aqueous phase liquid (DNAPL) at a thickness of greater than 0.5-inch per 310 CMR 40.0313(1).

MassDEP verbally approved an Immediate Response Action (IRA) consisting of assessment actions pursuant to the MCP, 310 CMR 40.0414(1), including assessment of the extent and recoverability of DNAPL in the vicinity of MW-15D and removal actions pursuant to the MCP 310 CMR 40.0414(2) including utilizing low-energy methods (bailing and pumping) to remove DNAPL from MW-15D and from any newly installed monitoring wells that exhibit DNAPL thickness greater than ½ inch. The IRA condition is being addressed under the existing Release Tracking Number (RTN) for the Site, 4-0601. This Status Report is being submitted to provide an update on the assessment and removal of DNAPL in the vicinity of monitoring well MW-15D which is located in the northeast corner of the Site adjacent to the Acushnet River.

The Site assessment and remediation under Massachusetts General Law Chapter 21E and the MCP is subject to the Administrative Consent Order and Notice of Responsibility (ACO) between AVX and the Massachusetts Department of Environmental Protection (MassDEP) and the Massachusetts Office of the Attorney General, effective as of June 3, 2010 (ACO-SE-09-3P-016).

2.0 RELEVANT CONTACTS (310 CMR 40.0424(A))

The property is owned by the City of New Bedford, Massachusetts (the City). Contact information for the City's representative is as follows:

Ms. Michelle Paul
Director of Environmental Stewardship
City of New Bedford
133 Williams Street, Room 304
New Bedford, MA 02740
Phone Number: 508-991-6188

The person assuming responsibility for conducting IRA activities is:

Mr. Evan Slavitt
AVX Corporation
801 17th Avenue South, P.O. Box 867
Myrtle Beach, SC 29578
Phone Number: 843-946-0714

The Licensed Site Professional (LSP) for the site is:

Ms. Marilyn Wade, LSP No. 4315
URS Corporation
1155 Elm Street, Suite 401
Manchester, NH 03101
Phone Number: 603-606-4824

3.0 DISPOSAL SITE DESCRIPTION

3.1 SITE INFORMATION

The Disposal Site is located at 740 Belleville Avenue, Bristol County, New Bedford, Massachusetts. **Figure 1**, Site Location Plan, shows the Site location with respect to the surrounding topography and features, and **Figure 2**, Site Plan shows historic investigation locations across the site. The coordinates of the Site (referenced to the corner of Belleville Avenue and Hadley Street) are latitude 41° 40’ 25.12” N and longitude 70° 55’ 13.84” W (UTM coordinates 340135.53m E and 4615326.34m N).

The Disposal Site at the time it was tier classified (and at the time the ACO became effective) was defined as the Aerovox property (Property) which encompasses approximately 10.3 acres and has the following boundaries:

- The northern boundary of the Property is the existing Aerovox northern property line which is located approximately in the middle of Graham Street, a private alley that lies between Aerovox and a factory operated by Precix, Inc.
- The southern boundary of the Property is the existing Aerovox southern property line which is located approximately in the middle of Hadley Street, a private street that lies between Aerovox and a factory operated by Acushnet Company (Titleist).
- The western boundary of the Property is the existing Aerovox western property line along Belleville Avenue, and
- The eastern boundary of the Property is the existing sheet pile wall (inclusive of the wall itself) running generally in a north-south orientation along the Acushnet River, and the line formed by the elevation of Mean High Water (MHW) where the sheet pile wall is not present.

The Property is currently a vacant, asphalt paved parking lot. The land surrounding the Property is used industrially to the south and north, and residentially to the west. The Acushnet River is immediately east of the Site. The Acushnet River and the area below MHW east of the Site is by definition the New Bedford Harbor Superfund Site, which is separate and distinct from the Disposal Site that is the subject of this IRA Status Report.

3.2 SITE HISTORY

The Site formerly contained an approximately 450,000 square foot manufacturing building and associated ancillary buildings along with a parking lot located on industrially-zoned land. Originally constructed as a mill, the main building included a two story wing along Belleville Avenue and a three story wing across the north side of the Property adjacent to Graham Street. Ancillary structures included a brick sewer pump station and a brick boiler house that were located along the south side of the main manufacturing building, and a brick structure that housed electrical switching equipment that was located at the southwest corner of the main building. All above ground infrastructure on the Site was demolished and removed in 2011. All subsurface utilities were disconnected and filled in place, with the exception of the storm sewer system which drains the paved area, and the former septic sewer system which included a pump house vault and connecting line running to the City sewer system in Belleville Avenue. The vault was temporarily filled and covered, and the line capped and left in place. The Property has been capped with asphalt and the area that is not part of Hadley or Graham Street is secured by perimeter fencing.

3.3 DESCRIPTION OF THE RELEASE

Electrical component manufacturing began at the Site in approximately 1938. Beginning in the 1940s, use of dielectric fluid containing polychlorinated biphenyls (PCBs) in capacitor manufacturing started. It has been estimated that up to 100,000,000 pounds of PCBs were used at the Facility during Aerovox operations (EPA, 1997). In addition to the use of PCBs, Aerovox also utilized a trichloroethene (TCE) capacitor degreasing operation. Inspections, assessments and sampling programs from the 1980s forward, undertaken by the former owner and operator Aerovox, Inc. as well as EPA, confirmed the presence of PCBs in soils under the concrete foundation, in soils outside the building and mixed into the asphalt parking lot, in groundwater, and throughout the interior of the building.

A specific release mechanism or volume is not documented; rather the release is presumed to be the result of the historic manufacturing of electrical components at the Facility over forty years of industrial activity. Releases most likely occurred from spills and improper storage of Oil and Hazardous Material (OHM). Releases to the environment including soil, groundwater, and the adjacent Acushnet River likely occurred through surface spills and through floor drains and stormwater outfall systems.

3.4 POTENTIAL SURROUNDING RECEPTORS

Relative to the Site as a whole, under current conditions, potential human exposure to Site related COCs is limited to the potential for direct contact with unpaved surface soils south of the Property on the adjacent Acushnet (Titleist) owned area, and the potential for vapor intrusion of COCs present beneath the Precix building north of the Property. Direct contact by employees and trespassers on the Titleist property is presently controlled by security fencing and temporary gravel access roads. Exposure by Precix employees through vapor intrusion is being assessed as part of the Phase II, and indoor air sampling to date has not shown impacts to indoor air above

MassDEP commercial/industrial indoor air screening levels. Direct contact by human or ecological receptors with impacted soils and groundwater within the Property itself is eliminated by the presence of the asphalt cap. The small area of the Property in the northwest corner that is not paved is outside the fence and has been converted to a small park. However, sampling in this area has not identified COCs above laboratory detection limits. The Site is served by municipal water and sewer, and groundwater is not a drinking water source. A deed restriction is in place that prohibits the use of Site groundwater. Relative to the DNAPL that is the subject of this IRA Status Report, there is no complete pathway for human receptors to be exposed to the DNAPL which is present more than 35 feet below the ground surface.

Potential off-site ecological receptors are limited to those species that may come in contact with COCs through the Acushnet River. Potential off-site receptors related to the Acushnet River are being addressed under the separate New Bedford Harbor Superfund Site and are not part of the MCP response actions. However, source control and/or management of migration of COCs from the Site to the river will be part of the MCP response actions and will be assessed in conjunction with this IRA.

4.0 STATUS OF IMEDIATE RESPONSE ACTIONS

4.1 DNAPL GAUGING AND REMOVAL

Beginning on May 19, 2014, URS has conducted bi-weekly DNAPL recovery from monitoring well MW-15D. Subsequent recovery events occurred on June 2, 2014, June 16, 2014, and June 30, 2014. The Membrane Interface Probe (MIP) investigation (see below) was ongoing on July 14, 2014 in the vicinity of MW-15D and MW-15B; therefore, DNAPL recovery was not completed on that date.

During each DNAPL recover event, the thickness of DNAPL in the well is first measured using a weighted string. Once the measurement is recorded, dedicated polyethylene tubing is then deployed to the bottom of the well and the discharge end connected to a peristaltic pump. DNAPL that is located at the bottom of the well is then extracted using the peristaltic pump and discharged into a 5-gallon bucket. Pumping is continued until there is no longer any visible evidence of DNAPL being discharged from the tubing. The discharge consists of a mixture of groundwater and DNAPL extracted from the well. By carefully decanting the water collected into a separate container, the volume of the recovered DNAPL is then measured by decanting into a graduated jar. In general, the amount of groundwater and DNAPL collected during the recovery efforts is approximately 0.25 gallons, with the DNAPL itself comprising only 3-5 ounces (or 100-200 ml) each recovery event. To date, the amount of recoverable DNAPL is estimated at approximately 500 ml, whereas the volume of water extracted is estimated at 0.5 gallons. The recovered water/DNAPL mixture is stored in a 5-gallon bucket with lid which is then placed in a 55-gallon drum. After the DNAPL recovery effort is completed, the dedicated tubing is removed from the well and placed in a separate bucket with lid which is also stored in the 55 gallon drum. The drum is stored in a drum shed with secondary containment located on the site. The following table summarizes DNAPL recovery to date:

Table 1 – DNAPL Gauging and Recovery Volume

Date	DNAPL Thickness* (inches)	Volume* (ounces)
5/19/14	7	12**
6/2/14	4.5	12**
6/16/15	4.5	5.5
6/30/14	6	5
7/27/14	3.5	3.4
	Cumulative Volume:	33.9 ounces (or 0.30 gallons)

Notes:
*Measurement is estimated.
**Measurement was reported as 8 to 16 ounces; Average value was used.
DNAPL thickness is measured using a weighted string.

Presence of DNAPL has also been gauged in MW-15B. A trace of DNAPL has been observed in MW-15B (weighted string is intermittently stained, but not continuously at bottom of string). To date measurable DNAPL has not been observed in any other wells installed at the Site.

4.2. MEMBRANE INTERFACE PROBE (MIP)

On July 14, 2014, URS mobilized to the site with Columbia Technologies to complete additional MIP work in the vicinity of MW-15B/MW-15D with the objective of identifying potential chlorinated volatile organic compound (CVOC) DNAPL in this area to aid in advancement of additional soil borings. Both the original MIP survey for the site, done as part of the Phase II Comprehensive Site Assessment in November 2013, and this supplemental MIP survey were conducted as a qualitative tool to identify in three dimensions the target area for subsequent targeted quantitative sampling and analysis, keying on areas where the majority of the mass resides or is transported. The proposed MIP locations were identified on Figure 3 of the IRA Plan. This figure has been updated to include the MIP identification numbers, and is attached as **Figure 3** to this report. The MIP tooling was advanced at 11 new MIP locations, designated MIP45 through MIP-55, and re-advance at prior MIP location MIP-15.

The Columbia MIP report is attached as Appendix A. The following table summarizes the MIP findings. Note that although the MIP recorded PID, FID and XSD readings, the XSD results are presented below as they most closely represent the qualitative presence of the site CVOCs, including TCE. The MIP tooling is not a good detector for PCBs, however in the area that is the focus of the IRA, TCE and PCBs are typically co-located.

Table 2 – July 2014 MIP Observations

MIP ID	Terminal Depth (feet bgs)	Highest XSD Reading (mV)	Depth of Highest MIP XSD Reading
MIP-45	28.00	1.12E+05	20
MIP-46	26.65	1.43E+05	24
MIP-47	26.85	2.30E+05	19
MIP-48	29.15	1.26E+05	17.0 & 21.25
MIP-49	27.60	1.59E+05	26
MIP-50	28.35	1.26E+05	20
MIP-51	28.60	1.21E+05	18.0
MIP-52	21.20	8.7E+04	9.5
MIP-53	21.10	8.85E+04	7.75
MIP-54	23.70	8.47E+04	21.75
MIP-55	26.65	1.15E+05	22.00
MIP-15RE	29.90	9.17E+05	27.75

Additional details, including the full graphs of the PID, FID and XSD readings at each location are provided in the MIP report in Appendix A. A notable decrease in the MIP readings during this investigation was observed compared to the first MIP investigation, conducted in November 2013. During the November 2013 MIP survey, the "background" (non- or less-impacted soils were represented by XSD readings hovering around the 1.0E+05mV to 3.0E+05mV). As a result, another MIP was advanced adjacent to the MIP-15 location (identified as MIP-15RE) for comparison purposes. A comparison of the two logs indicates that the November 2013 MIP profile readings were approximately 2 to 5 times that of the July 2014 readings. Based on the relative response of the July MIP, locations for subsequent Geoprobe™ boring installation and soil sampling were selected.

4.3 GEOPROBE INVESTIGATION

On July 18, 2014, soil borings were advanced at or adjacent to the MIP locations using a Geoprobe™. The objective of the geoprobe investigation was to delineate the presence of DNAPL in the subsurface in the area surrounding MW-15D. A total of eight borings were advanced. One boring was advanced at MIP-11 location. This location had the highest MIP reading from the November 2013 MIP investigation. The remaining borings were advanced at MIP-45, MIP-46, MIP-47, MIP-48, MIP-49, MIP-54, southwest of MIP-55 (MIP-55S), and southeast of MIP-50 (MIP-50E). Analysis of these samples is pending.

During advancement of the borings, potential DNAPL was observed at MIP-48 and MIP-50 at depths of approximately 30-feet to 31-feet bgs at both locations. The following table summarizes preliminary information for each of the Geoprobe borings.

Table 3 – DNAPL Delineation Boring Observations

Boring ID	Refusal Depth (feet bgs)	DNAPL Observed?	Highest PID (ppm)/ Depth (feet bgs)	Comments
MIP-45	28.5	No	16.8 / 19-20	Gravelly sand in bottom of macrocore liner at refusal
MIP-46	27.5	No	34.6 / 21-22	Sandy gravel in bottom of macrocore liner at refusal
MIP-47	27	No	362 / 23-24	Sandy gravel in bottom of macrocore liner at refusal
MIP-48	31	Yes	5,000 / 30-31	DNAPL was observed at 30-31 feet; till identified in bottom of macrocore
MIP-49	29.5	No	74 / 20-25	Till identified in bottom of macrocore
MIP-50E	31'	Yes	91.1 / 22-24	DNAPL observed at approximately 31 feet; till identified in bottom of macrocore
MIP-54	27	No	16.3 / 0-5	Fill material 0 to 5 feet bgs; till was observed in bottom of macrocore at 27 feet
MIP-55S	27.5	Yes	200 / 18-20	DNAPL observed at 6.5 to 7.5 feet bgs over peat
MIP-11	37	No	520 / 27-29	Till identified in bottom of macrocore.

At least one soil sample was submitted for laboratory analysis of PCBs and CVOCs from each boring. Additional samples were submitted on hold and may be analyzed pending the initial results.

4.4 Summary of IRA Findings to Date

Based on the DNAPL assessment and recovery efforts to date, and the concurrent ongoing Phase II Comprehensive Site Assessment work, the following observations and findings can be made regarding the presence, nature and extent of DNAPL. Note that the assessment work is ongoing at the time of submittal of this Status Report (both for the IRA and for the Phase II) and subsequent data may alter or modify these findings.

- Analysis of a sample of the measurable DNAPL present in deep overburden well MW-15D found that the non-aqueous material contains 62,900 mg/kg of CVOCs and 666,000 mg/kg of PCBs. The CVOCs in the DNAPL include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene, 1,2,4-trichlorobenzene and 1,4-dichlorobenzene. The PCBs in the DNAPL include Aroclors 1242 and 1254.
- The measurable DNAPL in MW-15D is not readily recoverable, i.e. it responds slowly to pumping and recharges into the well slowly (over a period of days) once it is removed.

- The measurable DNAPL is present in the deeper overburden in a well that is screened in the till layer just above bedrock (MW-15D).
- Subsequent borings extending out from this location that encountered the till layer and also indicate the potential for DNAPL to be present at depth include MIP-48 approximately ten feet to the north and MIP – 50E approximately ten feet to the southwest. The remaining borings surrounding MW-15D either did not encounter a till layer, or encountered till, but no evidence of DNAPL at depth.
- The conceptual site model for the IRA condition includes the discharge of combined PCBs and CVOCs into a former drainage swale along the north wall of the former Aerovox plant. Compiling the IRA assessment boring information with the Phase II information and prior subsurface data collected by others, a preliminary cross section along the line of this swale has been prepared and is provided in Appendix B

5.0 MANAGEMENT OF REMEDIATION WASTE (310 CMR 40.0424(c))

DNAPL, contaminated soil, contaminated groundwater, and contaminated personal protective equipment (PPE) are being generated during IRA activities. The DNAPL generated from recovery activities is temporarily stored in a covered 5-gallon pail that is stored within a 55-gallon drum in the temporary drum storage unit (with integral secondary containment). Soils, decontamination water, and PPE are stored in separate 55-gallon drums, along with similar materials generated during other investigation on the site (not part of this IRA). Wastes generated prior to July 21, 2014, with the exception of the recovered DNAPL, were transported for off-site disposal on July 21, 2014. Waste generated during IRA activities after that date were transported for off-site disposal on July 29, 2014. Refer to Appendix C for copies of the waste manifests.

6.0 OTHER RELATED INFORMATION (310 CMR 40.-0425(3) (d))

Pursuant to the Administrative Settlement Agreement and Order on Consent for Non-Time Critical Removal Action (AOC) between AVX and the EPA, effective June 3, 2010, a Monitoring and Maintenance (MM) Plan for the Aerovox Site was prepared by URS for AVX in fulfillment of Sections III.H.4. and III.I. of the Non-Time Critical Removal Action Scope of Work, Appendix B to the AOC. The MM Plan was also prepared in accordance with the Action Memorandum for the Site, issued by EPA on December 23, 2009, and the Toxic Substances Control Act Determination. The MM Plan describes who will be doing monitoring and maintenance for the cap and sheet pile wall, what monitoring and maintenance is required, when monitoring and maintenance will be performed, and in general terms how monitoring and maintenance will be conducted.

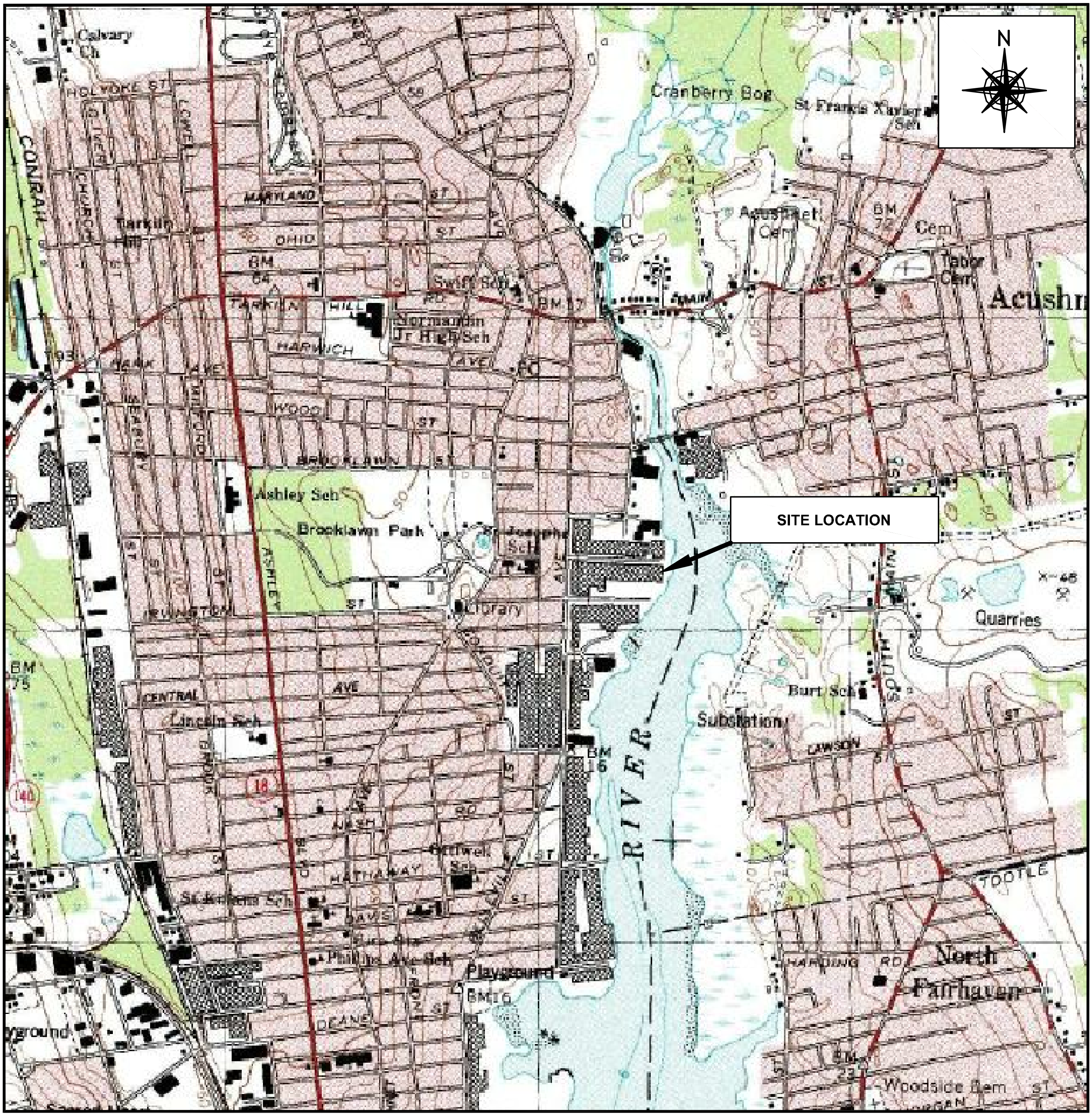
One of the requirements of the MM Plan is that the weeds growing through cracks in the cap be sprayed with herbicide and removed annually. On June 16, 2014, SumCo Eco Contracting of

Salem, MA applied herbicide to existing weed growth. Harvesting of the dead vegetation is ongoing at this time.

7.0 LSP OPINION (310 CMR 40.0425(3)(e))

The IRA activities to date have been successful in removing a limited quantity of DNAPL and providing additional assessment of the extent of DNAPL around MW-15D. The IRA has been and will continue to be conducted in conformance with the IRA Plan submitted to MassDEP on June 9, 2014.

FIGURES



0	2000	4000

APPROXIMATE SCALE IN FEET

BASEMAP SOURCE:

USGS 7.5-minute Series Topographic Map
New Bedford North Quadrangle
1979 (photorevised 1975)

SITE LOCATION PLAN

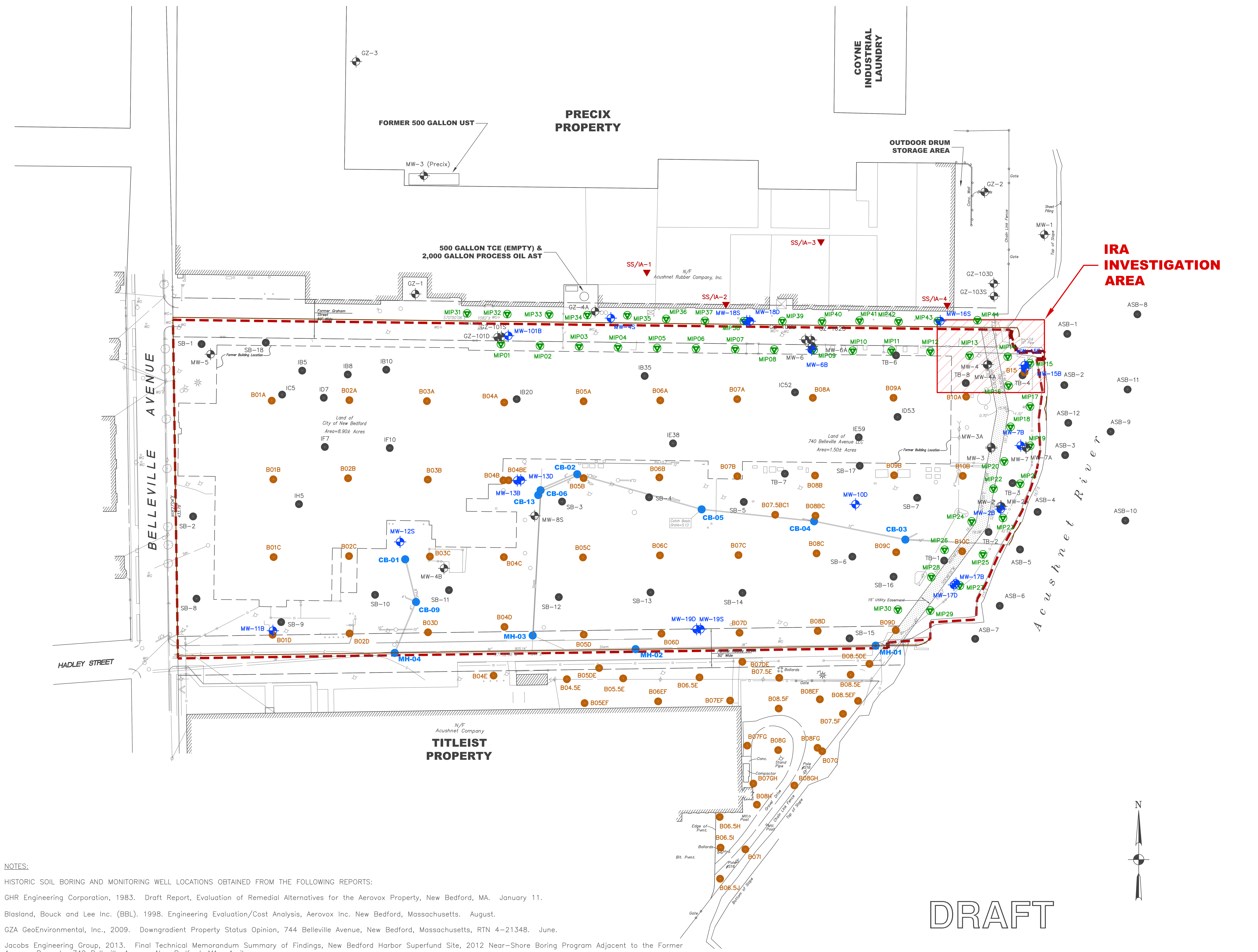
AEROVOX FACILITY
740 BELLEVILLE AVENUE
NEW BEDFORD, MASSACHUSETTS

URS

5 Industrial Way
Salem, New Hampshire 03079
TEL: (603) 893-0616
FAX: (603) 893-6240
http://www.urscorp.com

SCALE:	NTS	DRAWN BY:	KP	JOB NO.:	39744051
DATE:	06/14	APPR. BY:	JU	FIGURE 1	

T:\acad-project\AVX\CADD\SWPP\Figure 1 Topo.dwg User: dennis_burnheimer Jan 17, 2011 - 3:19pm

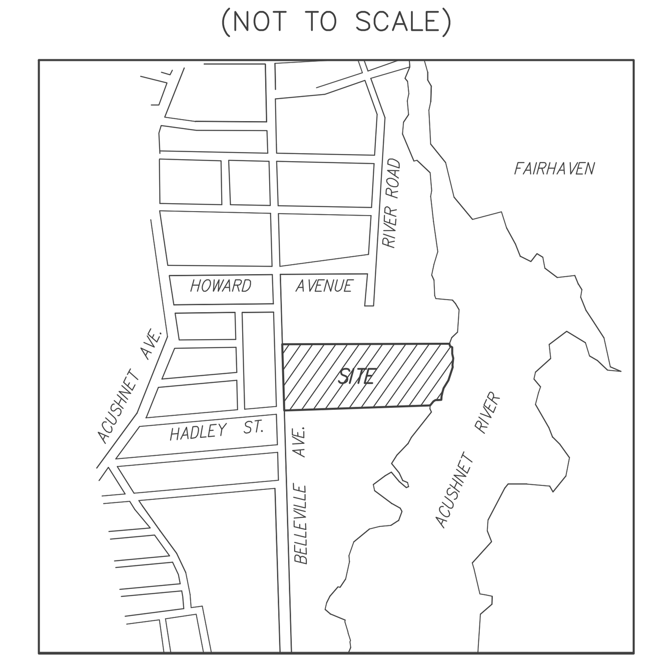


LEGEND

- MONITORING WELL (URS)
- SOIL BORING (URS)
- MIP BORING (URS)
- INDOOR AIR/SUB SLAB VAPOR POINT (URS)
- HISTORIC SOIL BORING INSTALLED BY OTHERS*
- HISTORIC MONITORING WELL INSTALLED BY OTHERS*
- CB/MH — CATCH BASIN/MANHOLE
- PROPERTY LINE
- RTN SITE BOUNDARY

Bush	Manhole
Catch Basin	Utility Pole
Coniferous Tree	Water Gate
Deciduous Tree	Hydrant
Gas Gate	Light Pole

LOCATION MAP
(NOT TO SCALE)



NOTES:

HISTORIC SOIL BORING AND MONITORING WELL LOCATIONS OBTAINED FROM THE FOLLOWING REPORTS:

GHR Engineering Corporation, 1983. Draft Report, Evaluation of Remedial Alternatives for the Aerovox Property, New Bedford, MA. January 11.

Blasland, Bouck and Lee Inc. (BBL). 1998. Engineering Evaluation/Cost Analysis, Aerovox Inc. New Bedford, Massachusetts. August.

GZA GeoEnvironmental, Inc., 2009. Downgradient Property Status Opinion, 744 Belleville Avenue, New Bedford, Massachusetts, RTN 4-21348. June.

Jacobs Engineering Group, 2013. Final Technical Memorandum Summary of Findings, New Bedford Harbor Superfund Site, 2012 Near-Shore Boring Program Adjacent to the Former Aerovox Property, 740 Belleville Avenue, New Bedford, MA. April.

RTN SITE BOUNDARY AS DEPICTED ON EXHIBIT 3, COOPERATION & SETTLEMENT AGREEMENT, AEROVOX PROPERTY, DEPARTMENT OF THE ARMY NEW ENGLAND DISTRICT CORPS OF ENGINEERS, DATED DECEMBER 2009.

URS

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0 140 280
SCALE IN FEET

PROJECT NO:	39744051
DESIGN: DB	SCALE: AS SHOWN
APPROVED: MW	DATE: JUNE 2014
DRAWN: FS	FILE NO: AVX - Site Plan
CLIENT:	AVX CORPORATION
PROJECT:	IRA WORK PLAN 740 BELLEVILLE AVENUE NEW BEDFORD, MA
TITLE:	SITE PLAN
FIGURE NO.:	2

APPENDIX A

MIP Report

COLUMBIA TECHNOLOGIES

SmartData Solutions®

High Resolution Site Characterization Using Membrane Interface Probe /Hydraulic Profiling Tool (MiHpt) and Electrical Conductivity (EC) Technologies Former Aerovox Facility 740 Belleville Avenue New Bedford, Massachusetts 02745

PREPARED FOR

URS Corporation
1155 Elm Street, Suite 401
Manchester, New Hampshire 03101

July 25, 2014

PREPARED BY

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FIGURES

APPENDICES

Introduction

URS Corporation (URS) contracted **COLUMBIA Technologies, LLC (COLUMBIA)** to conduct a high resolution site characterization of a trichloroethylene (TCE) release associated with a former manufacturing facility located in New Bedford, Massachusetts, in order to supplement the former direct sensing investigation. This investigation involved identifying the vertical and horizontal extent of volatile organic compounds (VOCs) contained in the subsurface and was completed around the existing building on the property.

Direct sensing tooling used at the site included the Membrane Interface Probe (MIP) technology to map the dissolved phase, vapor phase and sorbed phase of VOCs, the Hydraulic Profiling Tool (HPT) technology to collect subsurface soil hydraulic permeability information and the Electrical Conductivity (EC) technology to characterize soil electrical conductivity. All three technologies are contained in a single downhole tool, the MiHpt Probe, allowing **COLUMBIA** to collect multiple lines of evidence with a single push at each location.

A description of the equipment and processes used in this characterization survey and a report of results are presented in Appendix A.

Investigation Methods

The first investigation was conducted from November 18th, 2013 through November 26th, 2013 and consisted of 44 MiHpt locations. The revisit investigation was conducted on July 14th, 2014 and July 15th, 2014 and consisted of 12 MiHpt locations. Depth of direct sensing logging ranged from 13.3 feet to 43.25 feet below ground surface (bgs). A Geoprobe® Direct Push Technology (DPT) drilling rig was used to advance the locations. Each location was selected by **URS's** representative onsite, and the termination depth of each location was determined by **COLUMBIA's** representative onsite. The results from each location are shown in Appendices B and C. A site location map and maximum concentration maps have been prepared for easier visualization of the site.

SmartData Solutions®

COLUMBIA's *SmartData Solutions*® is a patented process (U.S. Patent No, 7,058,509) that enables the rapid processing of field data into easy to understand 2D visualizations posted to a password protected website. Immediately upon completion of each direct sensing location, the dataset is wirelessly delivered to **COLUMBIA's** remote servers for Quality Assurance/Quality Control (QA/QC) review and upload to a password secure website. This enables a complete check of the dataset prior to completion of fieldwork.

Log Anomalies and Field Notes

Location MIP-04 was completed in two separate pushes, due to shallow refusal at 9 feet bgs on the first attempt. The two logs were spliced together at 8 feet bgs. Location MIP-49 was also completed in two separate pushes, due to a carrier gas leak at 18.8 feet bgs on the first attempt. The two logs were spliced together at 16 feet bgs. All spliced logs are presented together in Appendices B and C.

No other log anomalies were noted.

SmartData Solutions® is a registered trademark of COLUMBIA Technologies LLC.
Geoprobe® is a registered trademark of Geoprobe Systems, Inc.

Figure 1 Sitemap and Locations
November 18th, 2013 – November 26th, 2013, July 14th, 2014 – July 15th, 2014

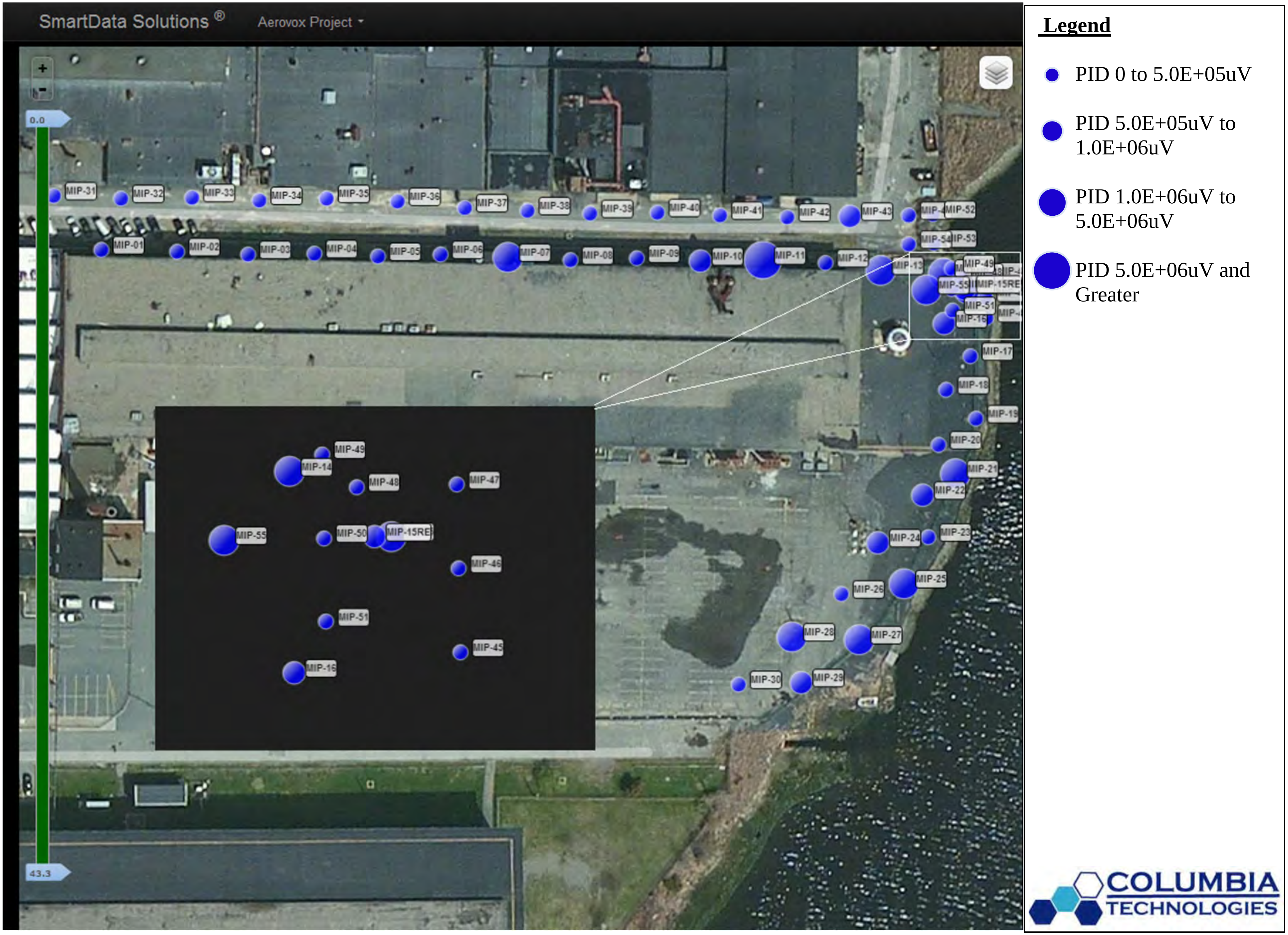


Figure 2 Maximum PID Response in Entire Borehole, Size Graded Icons
November 18th, 2013 – November 26th, 2013, July 14th, 2014 – July 15th, 2014

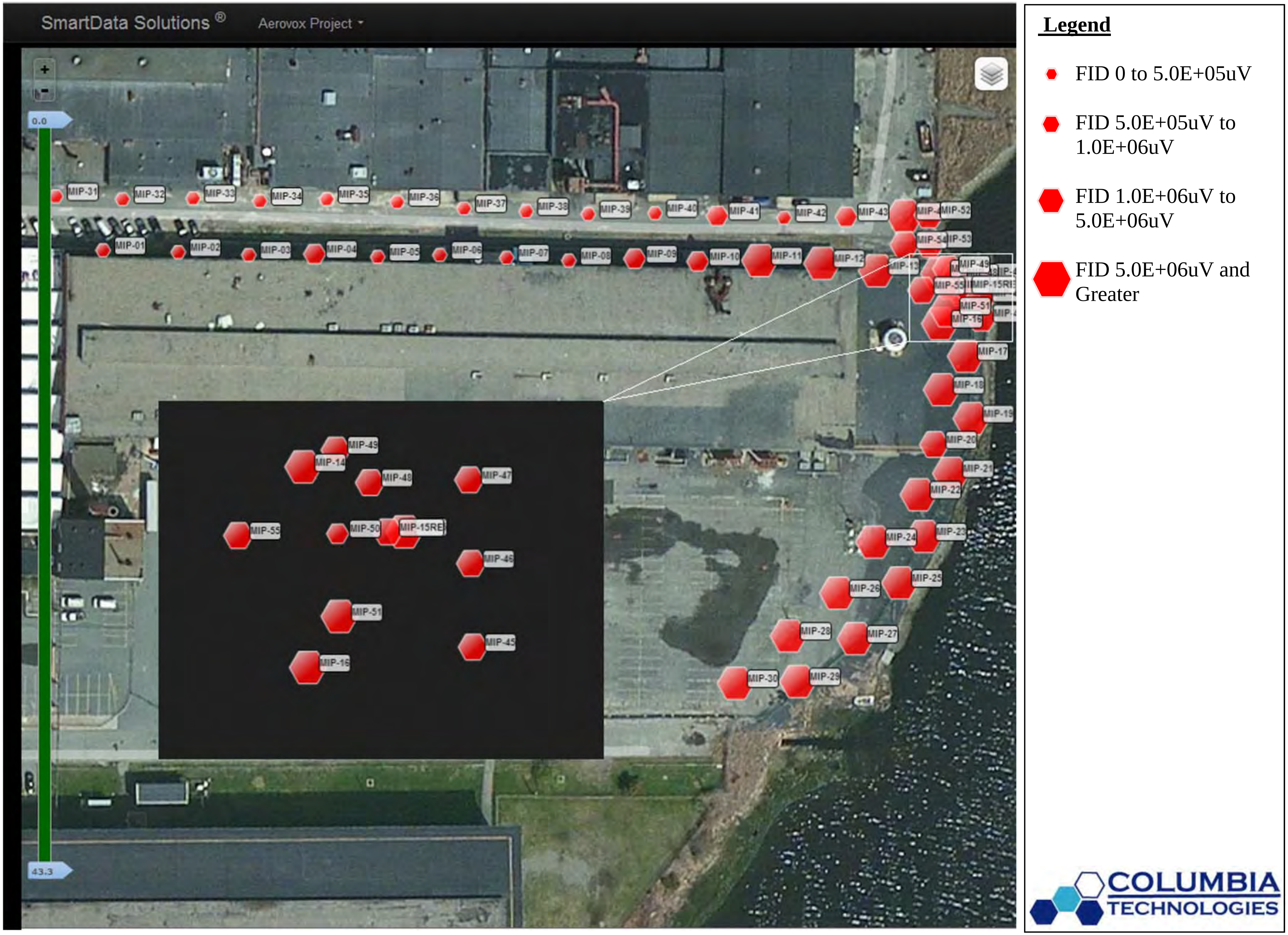


Figure 3 Maximum FID Response in Entire Borehole, Size Graded Icons
November 18th, 2013 – November 26th, 2013, July 14th, 2014 – July 15th, 2014

Legend

- XSD 0 to 5.0E+05uV
- XSD 5.0E+05uV to 1.0E+06uV
- XSD 1.0E+06uV to 5.0E+06uV
- XSD 5.0E+06uV and Greater

Figure 4 Maximum XSD Response in Entire Borehole, Size Graded Icons
November 18th, 2013 – November 26th, 2013, July 14th, 2014 – July 15th, 2014

APPENDIX A

MiHpt Equipment Description

MiHpt Equipment Description

The MiHpt probe is approximately 24-inches in length and 1.5-inches in diameter. The probe is driven into the ground at the nominal rate of 12-inches per minute using a DPT rig.

The MiHpt probe was developed by Geoprobe Systems® and contains three separate systems: the soil Electrical Conductivity, or EC tool; the Hydraulic Profiling Tool, or HPT; and the Membrane Interface Probe, or MIP. EC, HPT parameters, MIP chemical response, MIP operating parameters, rate of push speed and temperature are collected by the MiHpt Field Instrument, and displayed continuously in real time during each push of the probe.

EC: Soil electrical conductivity, the inverse of soil resistivity, is measured using a dipole arrangement. In this process, an alternating electrical current is transmitted through the soil from the center, isolated pin of the probe. This current is then passed back to the probe body. The voltage response of the imposed current to the soil is measured across these same two points. Conductivity is measured in Siemens/meter, and due to the low conductivity of earth materials, the EC probe uses milliSiemens/meter (mS/m). The probe is reasonably accurate in the range of 5 to 400 mS/m.

The electrical properties of soil vary by geological setting. Therefore, conductivity measurements will vary both in magnitude and the relative change from one soil type to another in each geological setting. In general, at a given location, lower conductivity values are characteristic of larger particles such as cobbles and sands, while higher conductivities are characteristic of finer sized particles such as finer sand, silts and clays. Observed conductivities significantly higher than 400 mS/m are indicative of ionic materials other than soil. Examples include saltwater intrusion, presence of ionic chemicals from storage or injection, or potentially soil mixtures with metallic compounds.

HPT: The HPT portion of the system is used to create high resolution, real-time profiles of soil hydraulic properties, which can be used to infer permeability and hydraulic conductivity. The HPT system consists of a controller, a pump, a transfer line (trunkline) which is pre-strung through the DPT rods, a pressure transducer, a permeable screen, and a field computer.

HPT screening is performed simultaneously with the MIP and EC logging. As the tool is advanced, water is pumped through the trunkline and passes into the soil through the permeable screen. The flow is regulated as to be as constant as possible. The pressure required to inject the constant flow of water into the soil, known as the HPT pressure, is monitored by the pressure transducer and recorded on the field computer in pounds per square inch (psi) versus depth. The flow rate of the water into the soil formation is also measured and recorded in milliliters per minute (mL/min) versus depth. Static pressure measurements (dissipation tests) can also be made by stopping at discrete intervals, allowing users to determine the static water level. The dissipation test provides an estimate of the static water level, based on the hydraulic head imposed on the probe at rest as compared to the pressure measured at the surface prior to starting each location push. Dissipation tests are best run in coarser grained materials (sands and gravels) to assure that the local ambient hydrostatic pressure is measured quickly and accurately.

To perform a dissipation test, the MiHpt probe is advanced to a depth below the water table and the HPT water flow is stopped. The pressure dissipation (reduction of pressure gradient caused by forcibly pumping water into the formation) is monitored until a stable value is observed. The dissipation usually takes the shape of a curve approaching an inflection point or stable value. The stable value is then used for the hydraulic pressure at that depth and can be used to estimate static water depth. The HPT software can also provide an estimate of K (a value used in hydrogeologic calculations) to provide an interpretation of the hydraulic permeability of the formation.

MIP: The MIP portion of the probe is used to create high resolution, real-time profiles of subsurface VOC contamination. The operating principle is based on heating the soil and/or water around a semi-permeable polymer membrane to 121º Celsius (C), which allows VOCs to partition across this membrane. The MIP can be used in saturated or unsaturated soils, as water does not pass through the membrane. Nitrogen is used as an inert carrier gas, and travels from a surface supply down a transfer tubing which sweeps across the back of the membrane and returns any captured VOCs to the installed detectors at the surface. It takes approximately 60 seconds for the nitrogen gas stream to travel through 150 feet of inert tubing and reach the detectors.

COLUMBIA utilizes three chemical detectors on the MIP: a Photo Ionization Detector (PID), a Flame Ionization Detector (FID) and a Halogen Specific Detector (XSD), mounted on a laboratory grade SRI 8610C gas chromatograph (GC). The output signal from the detectors is captured by the MIP/EC data logging system installed on a laptop computer.

The PID detector consists of a special ultraviolet (UV) lamp mounted on a thermostatically controlled, low volume, flow-through cell. The temperature is adjustable from ambient temperature to 250ºC. The 10.2 electron volt (eV) UV lamp emits energy at a wavelength of 120 nanometers, which is sufficient to ionize most aromatics such as benzene, toluene, xylene, etc., and many other molecules such as hydrogen sulfide (H_2S), hexane, and ethanol whose ionization potential is below 10.2 eV. The PID also emits a response for chlorinated compounds containing double-bonded carbons (halogenated ethylenes), such as trichloroethylene (TCE) and tetrachloroethylene (PCE). Methanol and water, which have ionization potentials greater than 10.2 eV, do not respond on the PID. Since the PID is non-destructive, it is often run first in series with other detectors for multiple analyses from a single injection.

The FID utilizes a hydrogen flame to combust compounds in the carrier gas. The FID responds linearly over several orders of magnitude, and the response is very stable from day to day. This detector responds to any molecule with a carbon-hydrogen bond, but poorly to compounds such as H_2S, carbon tetrachloride, or ammonia. The carrier gas effluent from the GC column is mixed with hydrogen and burned. This combustion ionizes the analyte molecules. A collector electrode attracts the negative ions to the electrometer amplifier, producing an analog signal, which is directed to the data system input.

The XSD detector consists of a ceramic probe, platinum wire (anode) and platinum bead (cathode) mounted inside a high temperature reactor. The XSD is sensitive to halogen atoms including bromine, chlorine and fluorine. The detector reactor combusts the incoming sample into a stream of air and converts halogenated organics into free halogen atoms. The free halogen atoms will then react with alkali atoms on the surface of the electrically charged platinum bead, which functions as an electron emitter. When this reaction takes place, the current is measured and transmitted to the data system.

Depth in feet is measured and recorded using a precision potentiometer with a 100-inch linear range. The potentiometer is mounted onto the mast of the DPT rig and a counter-weight anchored to the foot of the rig. Measurements are recorded on the down stroke of the mast, as the tooling string is pushed into the ground, and is accurate within 1/10th of an inch. The reference elevation (depth) reported for each individual boring is established by setting the data logger to zero feet with the membrane on the MIP/EC probe aligned with the ground surface. True boring elevations can be established with the addition of survey data if provided for in the scope of work.

MiHpt System Performance Test

As a quality control check, the MIP system response is evaluated prior to and upon completion of each MIP location. An aqueous phase performance test is performed using specific compounds designed to evaluate the sensitivity of the particular probe, transfer line and detector suite to be used. The resulting values are recorded and compared to predetermined values.

The EC dipole is also evaluated using a brass and stainless steel test jig, resulting in known values of 55 and 290 mS. Results must fall within 10% of the expected values; otherwise corrective action must be performed.

The HPT sensor is also evaluated using static (no flow) and dynamic (with flow at approximately 270ml/min) hydraulic pressure measurements at two different head elevations, 6-inches apart. The difference for each test should be 0.2 psi, +/- 10%; otherwise corrective action must be performed.

General MiHpt Log Interpretation

Each MiHpt log includes six separate graphs of data. The Y axis on all graphs is depth. The first three graphs are displays of measures of chemical detector response: PID, FID, and XSD, measured in microvolts (μV). These graphs are a linear scale, and provide a relative comparison of total detector response between boring locations. The fourth graph displays HPT pressure in psi and flow rate measured in mL/min. In general, higher HPT pressure readings and lower flow rates indicate lower soil permeability, while lower HPT pressure readings and higher flow rate readings indicate higher soil permeability. The fifth graph shows estimated K value, in feet/day (ft/day), indicating the hydraulic permeability of the formation. The static groundwater level is also displayed on the graphs. The sixth graph displays the EC, measured in mS/m. Lower soil conductivities are indicative of coarser grained particles, such as sands and silty sands, and higher soil conductivities are indicative of finer grained particles, such as clays and silty clays.

The HPT pressure and electrical conductivity can be used to identify hydraulic permeable layers, confining units and preferential migration pathways. This information is useful for creating contaminate fate and transport models, selecting monitoring well location and screen intervals, and targeting zones for remedial injections.

Interpreting MIP Results and Comparison to Sampling and Laboratory Analyses

A typically configured MIP system is effective at profiling the relative distribution of certain VOCs and relative soil types versus depth. The typical MIP system will detected VOCs with boiling points of 121ºC or less; with vapor pressures above approximately 0.14 psi; and with non-polar hydrophobic compound structures. The sensitivity or in-situ detection level of a MIP system is dependent on many different factors. **COLUMBIA's** systems and protocols are standardized to provide reliable and comparable detection and logging of chlorinated VOCs (CVOCs) on the order of 200 ppb in-situ concentrations. Petroleum based VOCs are reliably logged at 1 part per million (ppm) in-situ concentrations. Each of **COLUMBIA's** MIP system configurations are performance tested prior to use and if requested, MIP systems may be specially configured for atypical compounds of concern (COCs) and site conditions.

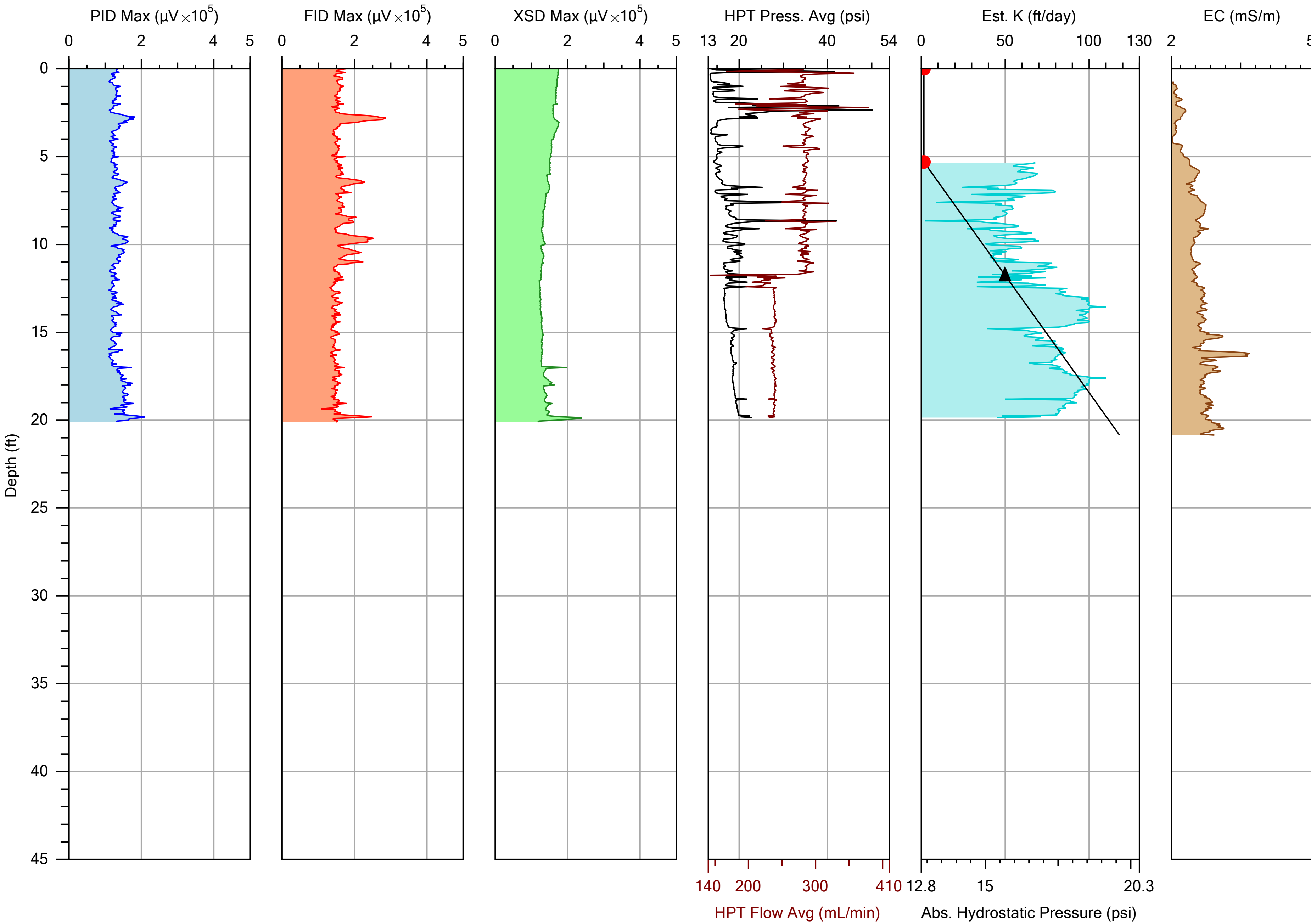
An understanding of the principles of operation and performance of the configured MIP detectors is essential to properly interpreting the MIP log results. For example, a CVOC with an ionization potential greater than 10.2 eV will respond on the XSD but not on the PID equipped with a 10.2 eV lamp. A hydrophillic compound such as an alcohol or ketone will normally be scrubbed out of the MIP gas stream by the MIP Membrane and the installed dryer and never reach the detectors. A CVOC with a small number of chlorine atoms such as vinyl chloride or cis 1,2-Dichloroethylene (DCE) will have a lower response on the XSD than a CVOC containing three or four chlorine atoms. Each shortfall in detector or system performance can be overcome by properly configuring and testing the MIP system for the site specific COCs prior to use. Additionally, the in-field performance tests performed before and after each boring are critical to monitor the performance of the MIP system from the membrane through to the data logging system.

Generalized correlations between MIP response and laboratory sample results can be inferred, but cannot be viewed as a linear comparison. MIP response and laboratory results are collected, analyzed and reported in different units and by different procedures, so correlation is not an exact one-to-one comparison. For example, not all VOCs present and analyzed in laboratory instruments with compound separation are detected and measured by a typical MIP system. The MIP process uses a membrane extraction process from a heated zone of varying subsurface matrix of soil, water, and/or vapor. Soil and groundwater results involve the collection of a sample, extraction of sub-sample at the surface, and then transporting them to a laboratory for further extraction and analysis. These two processes are different by definition.

Unusual or invalid responses on the MIP system can result from malfunctions such as carrier or makeup gas leakage, gas flow blockage, heater failure, and carryover of water vapor or excessive chemical saturation. Each MIP detector will respond differently to each of these malfunctions. The most common cause of false positive responses for CVOCs is water carryover or blockage of carrier gas flow. The most common causes of false negative are improperly adjusted gas flows or leakage and inoperative detectors. **COLUMBIA's** operators are trained to recognize these problems and to take the appropriate corrective action in the field.

APPENDIX B

MiHpt Logs, 2013 Visit



COLUMBIA TECHNOLOGIES

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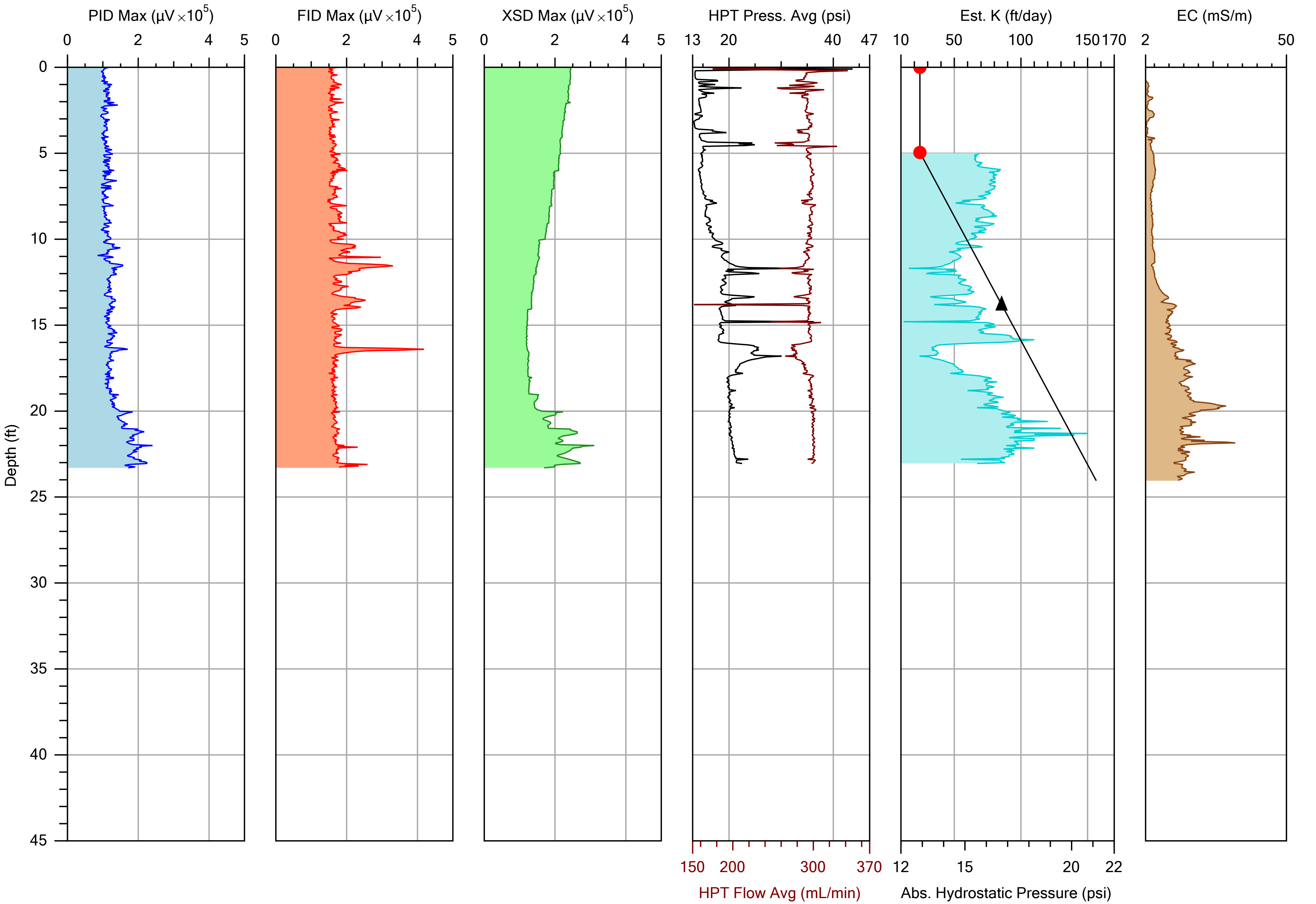

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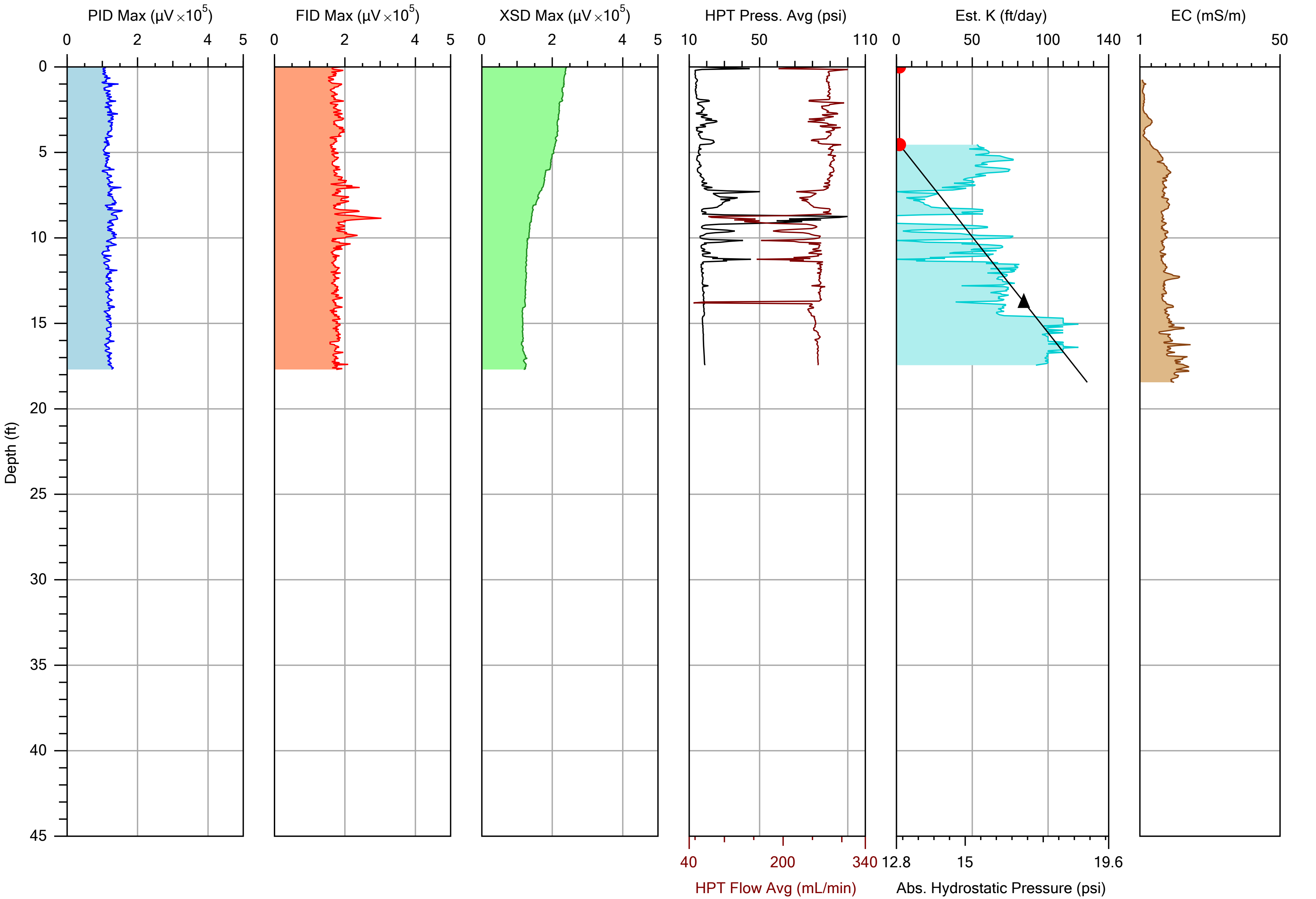

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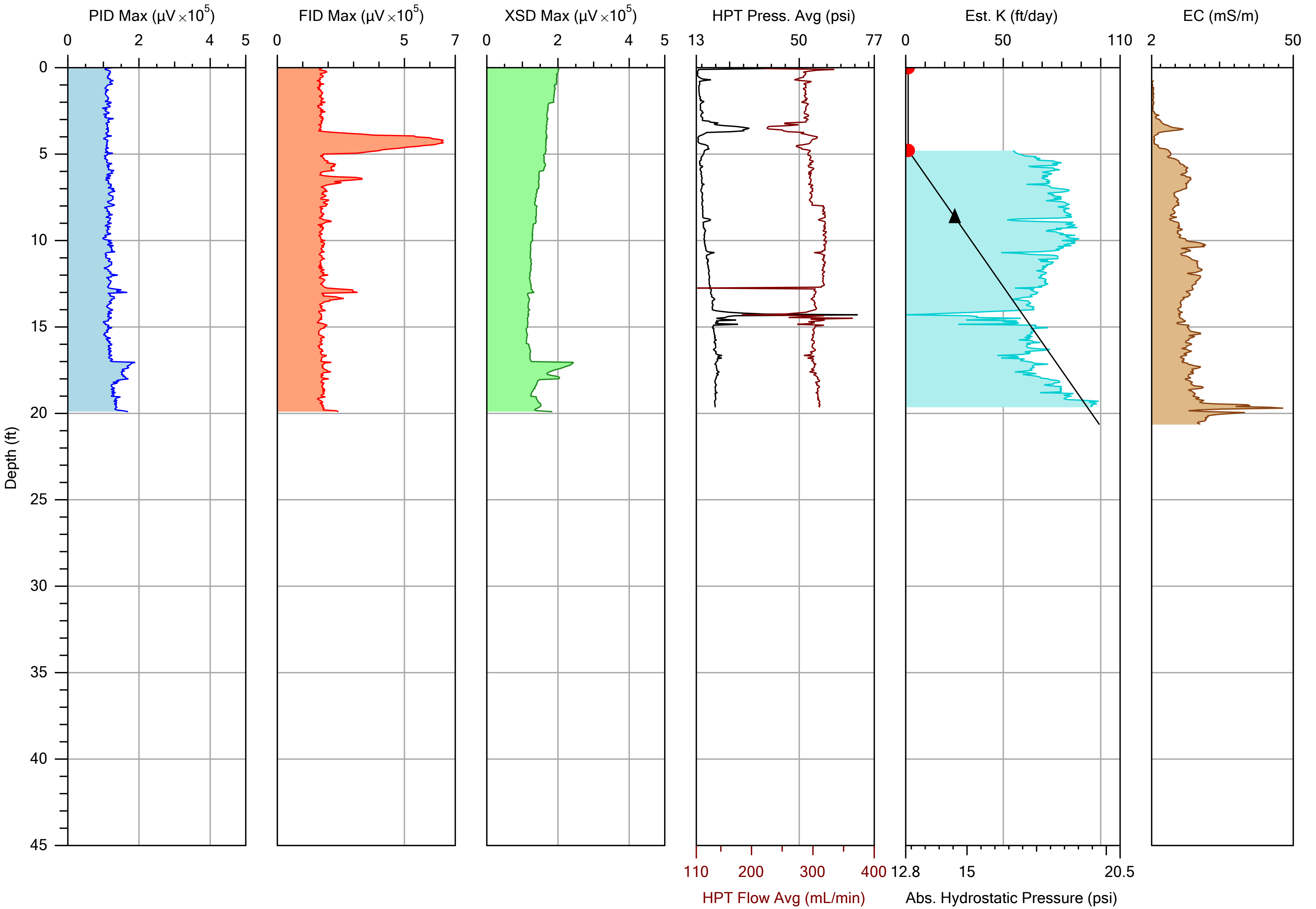

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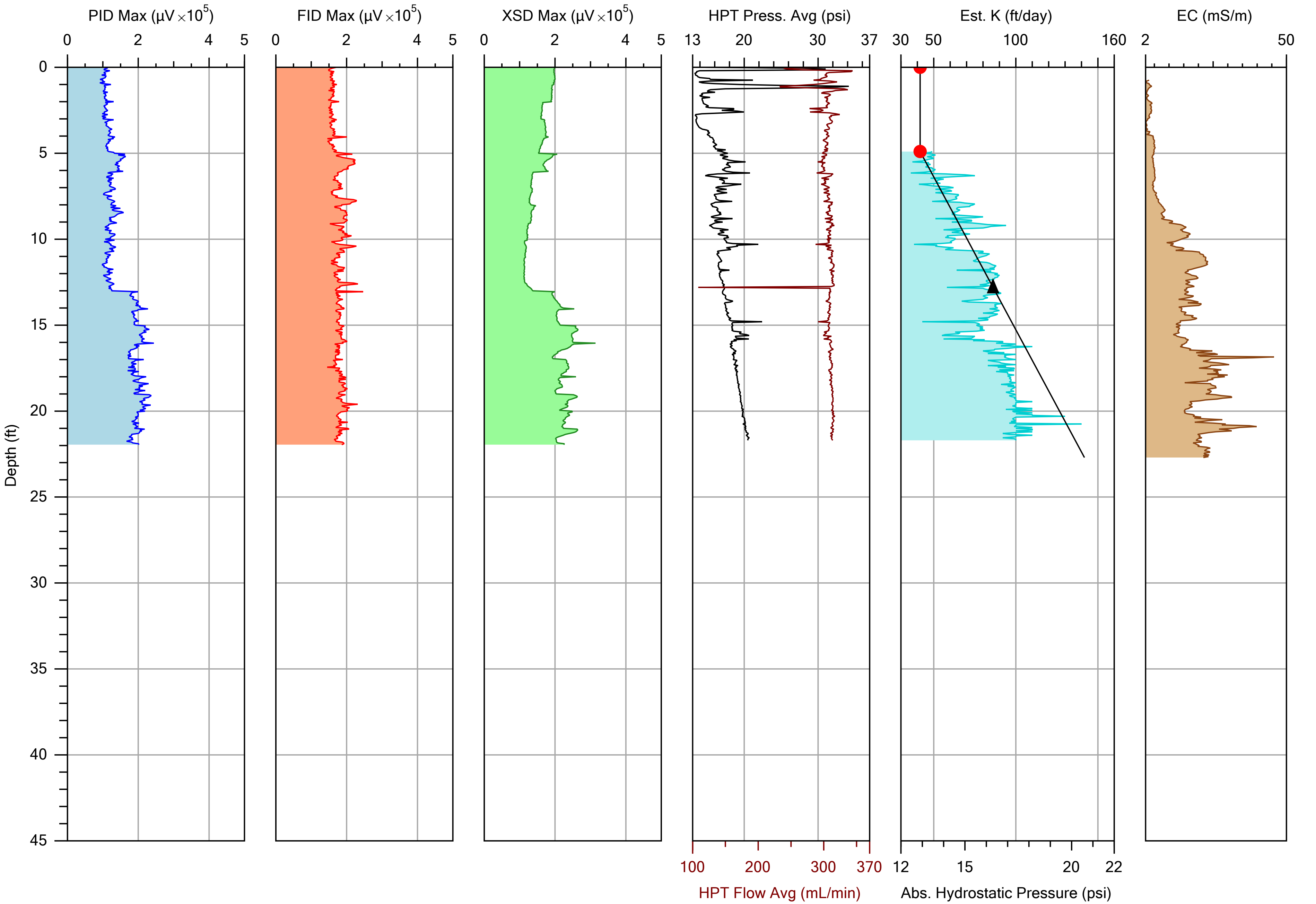

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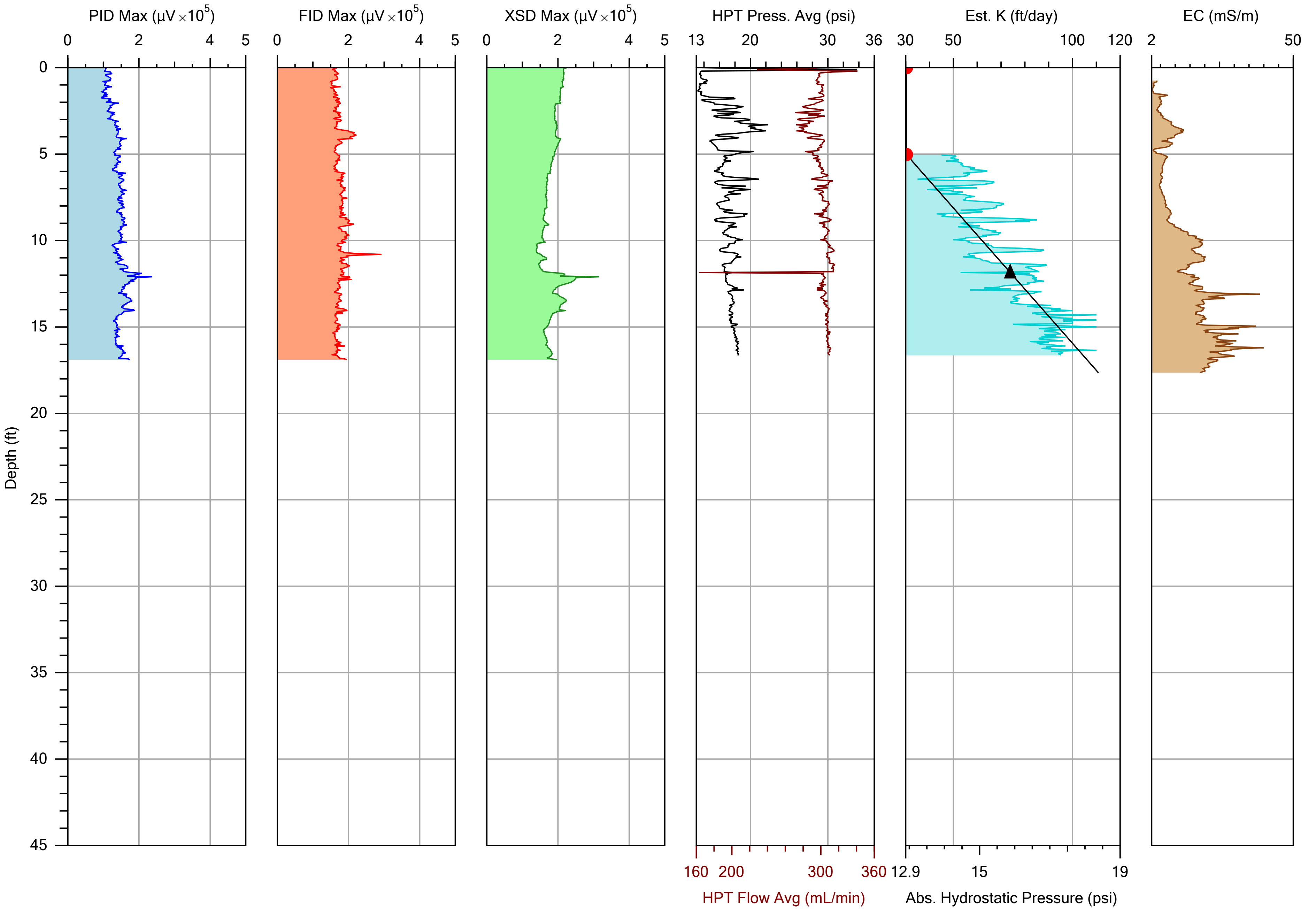

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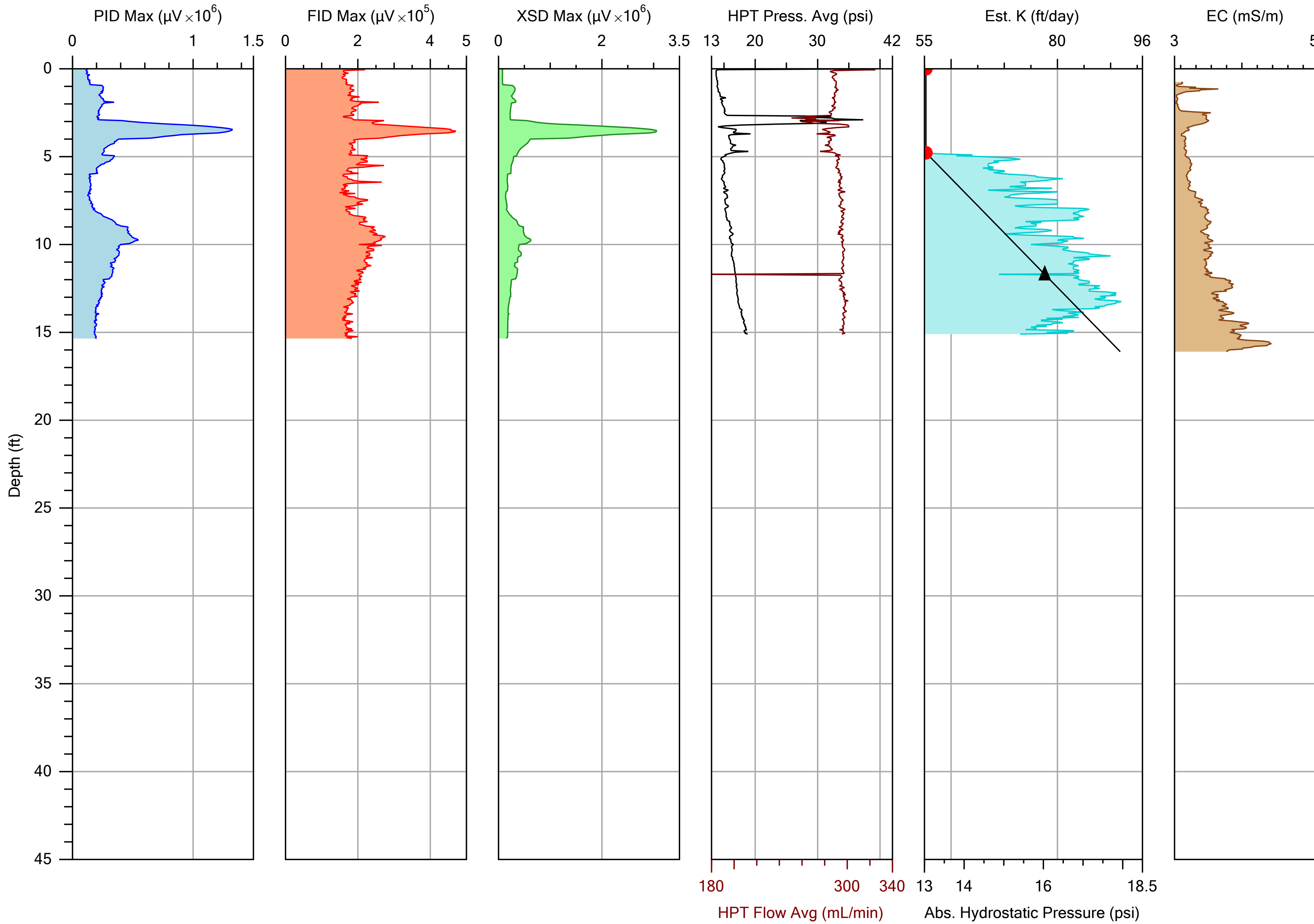

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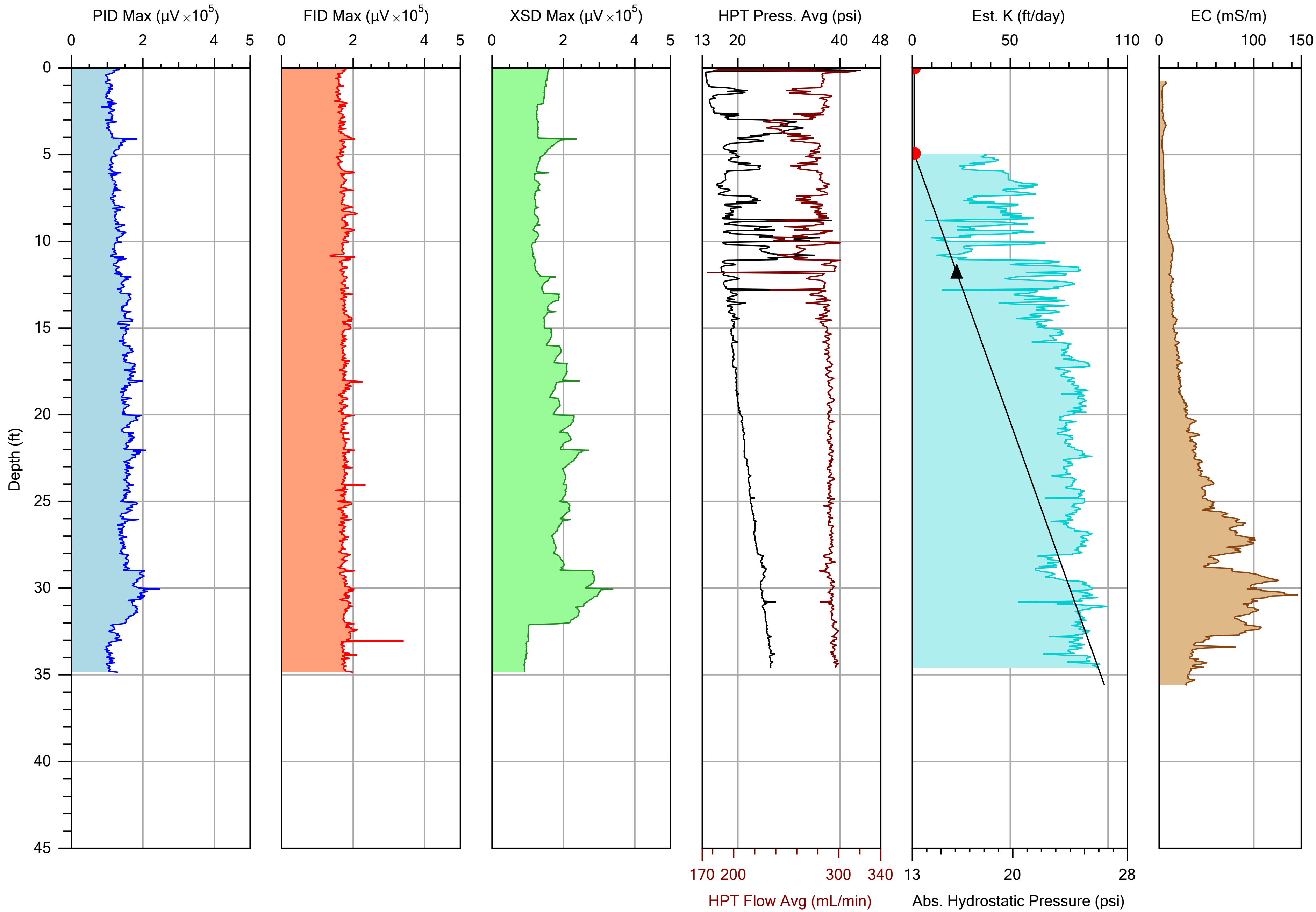

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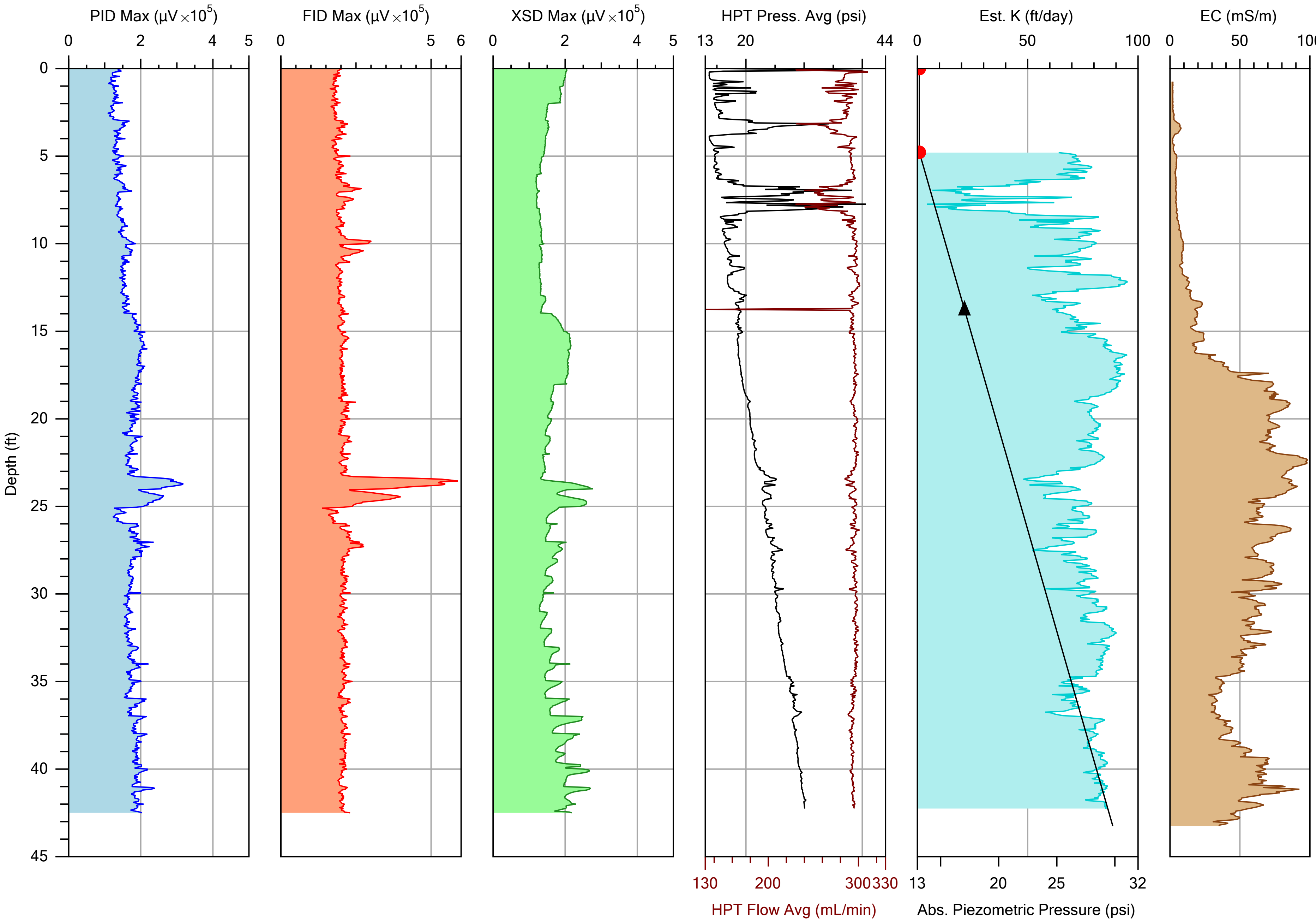

COLUMBIA TECHNOLOGIES

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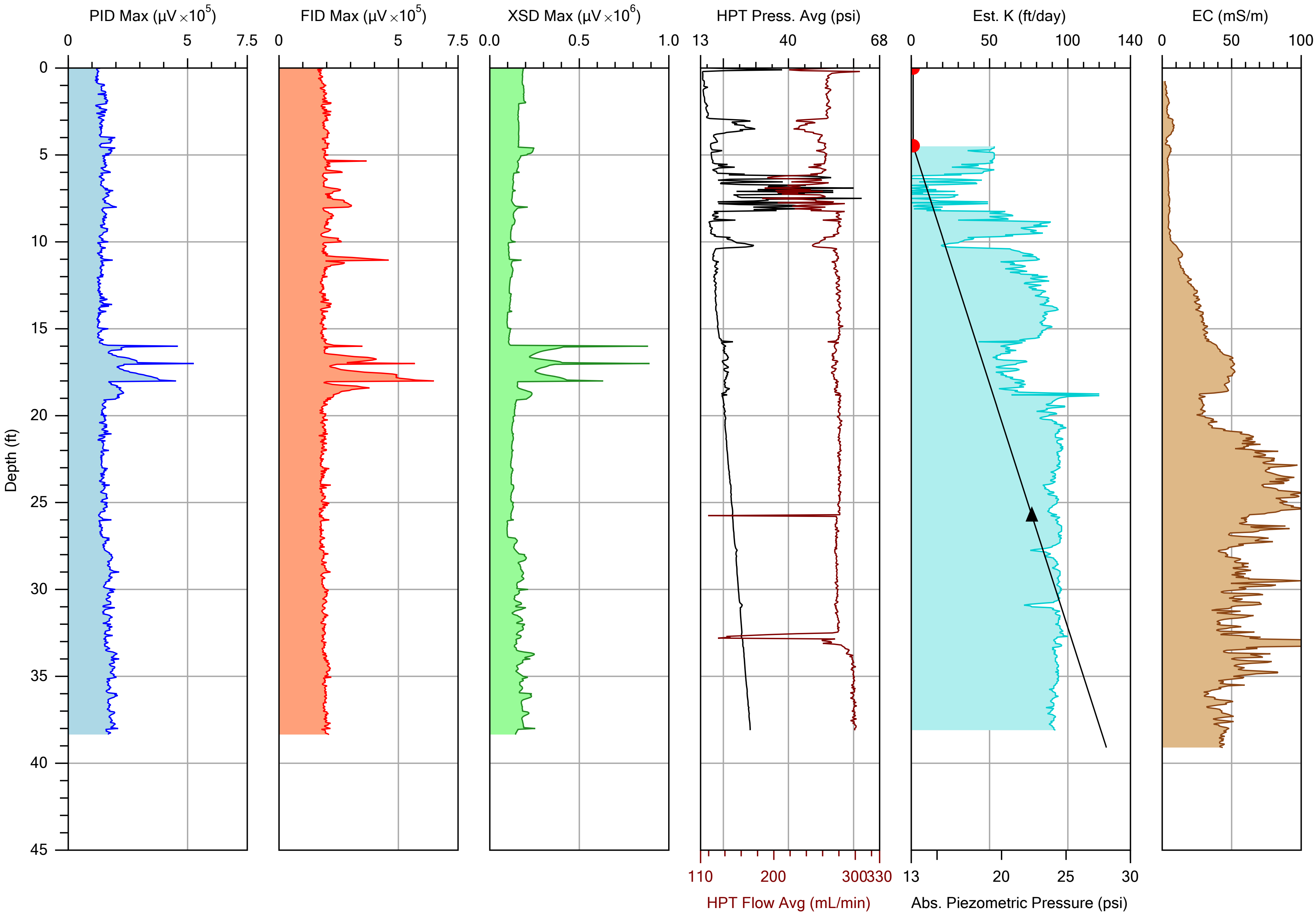

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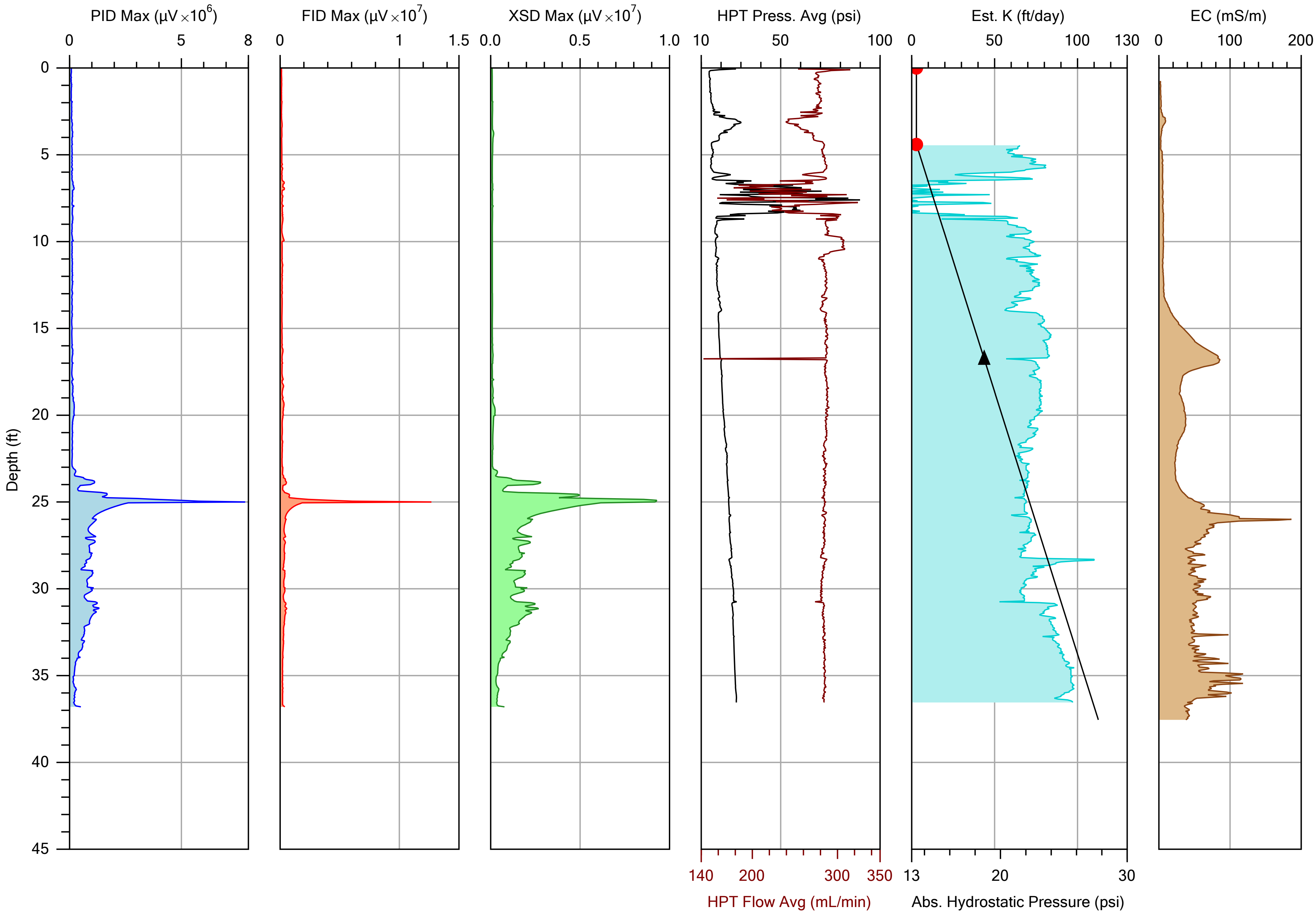

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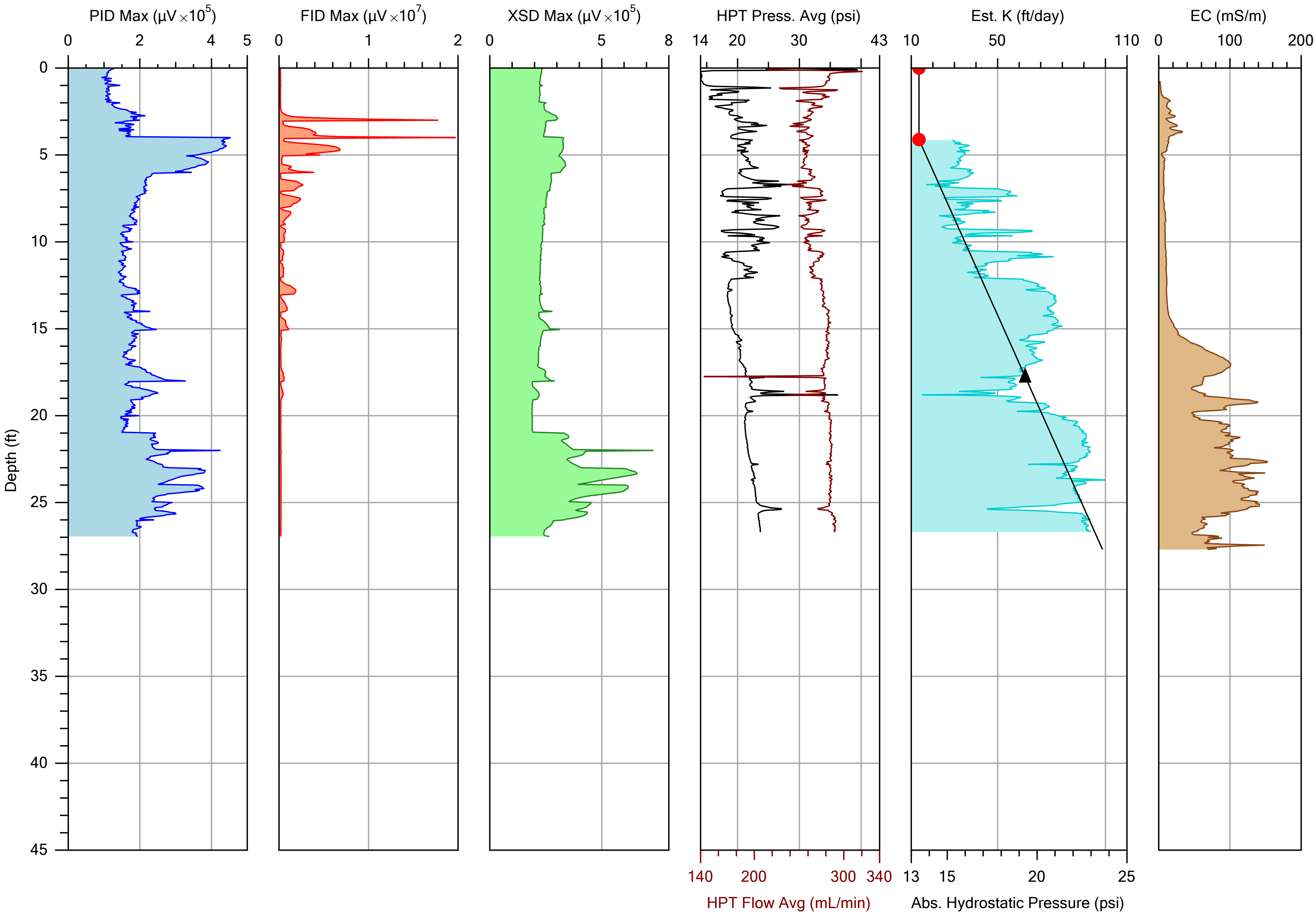

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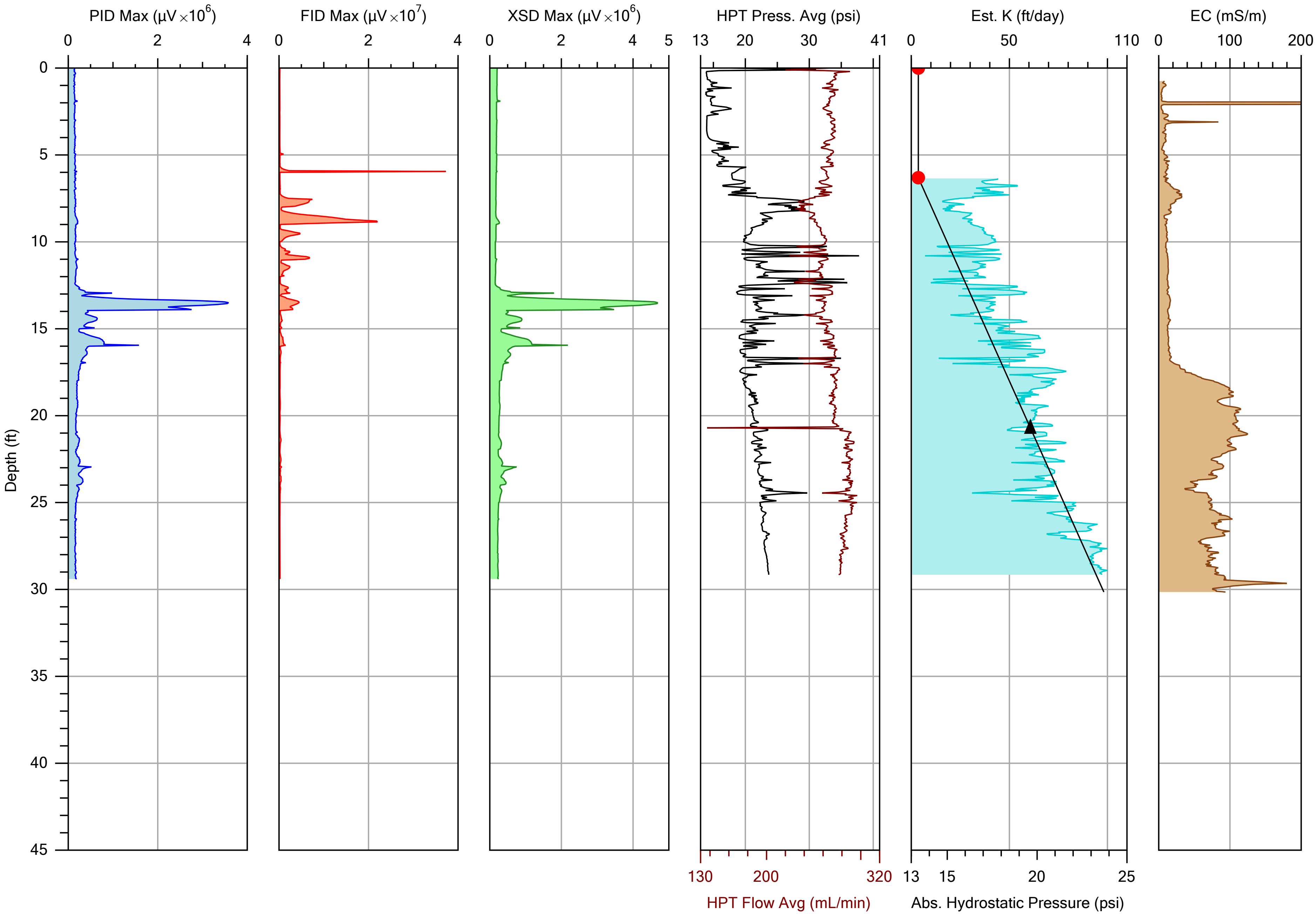

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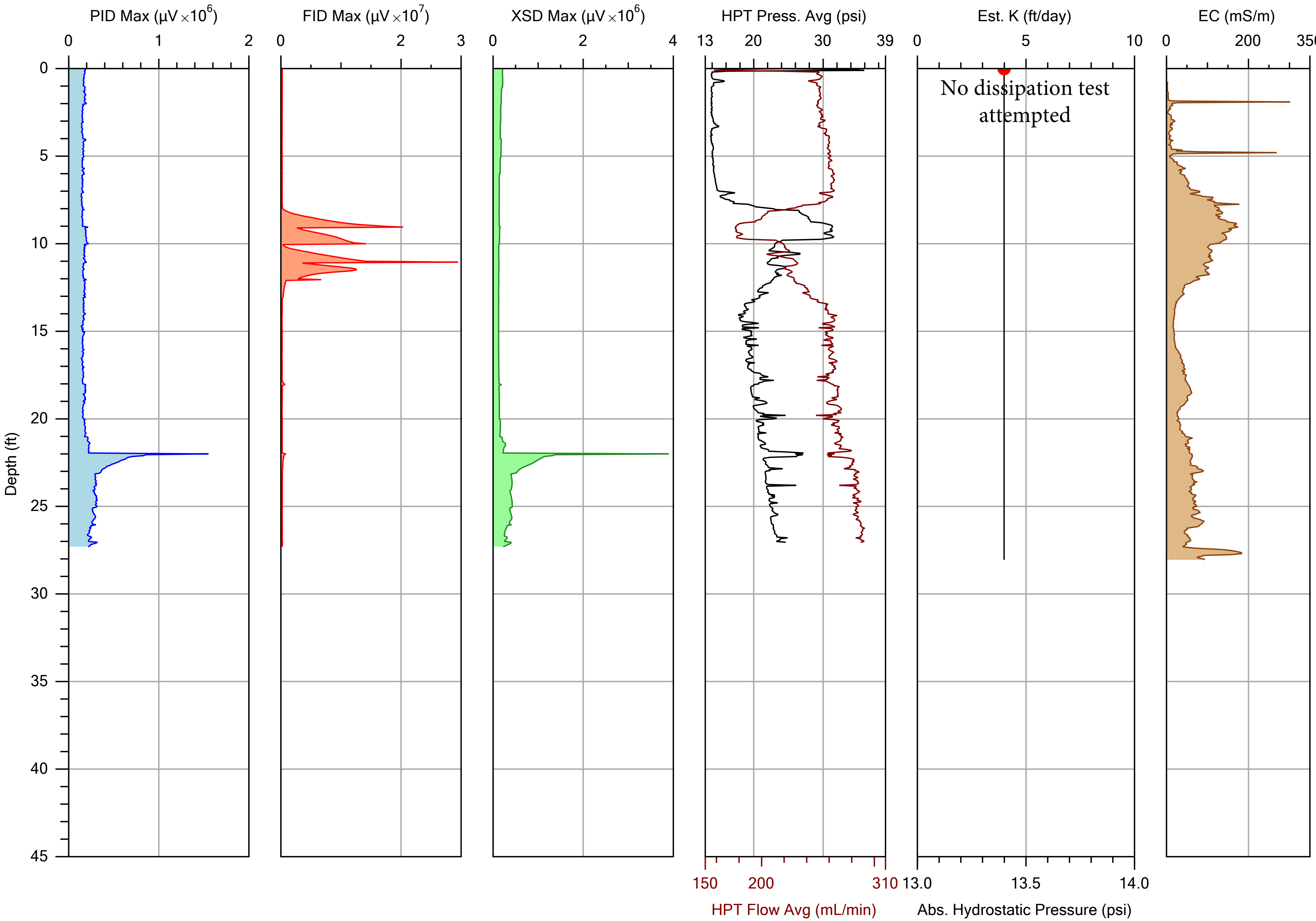

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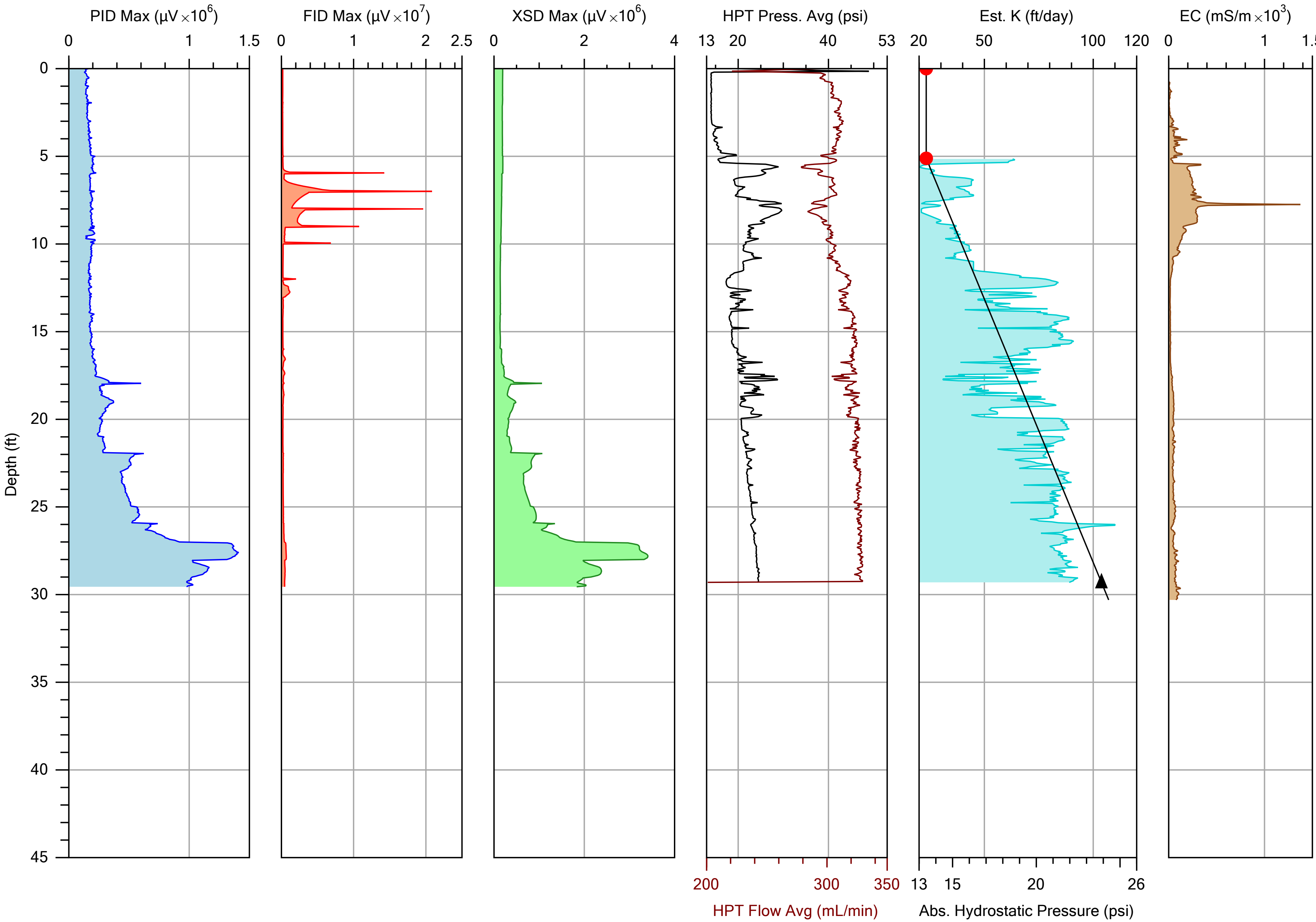

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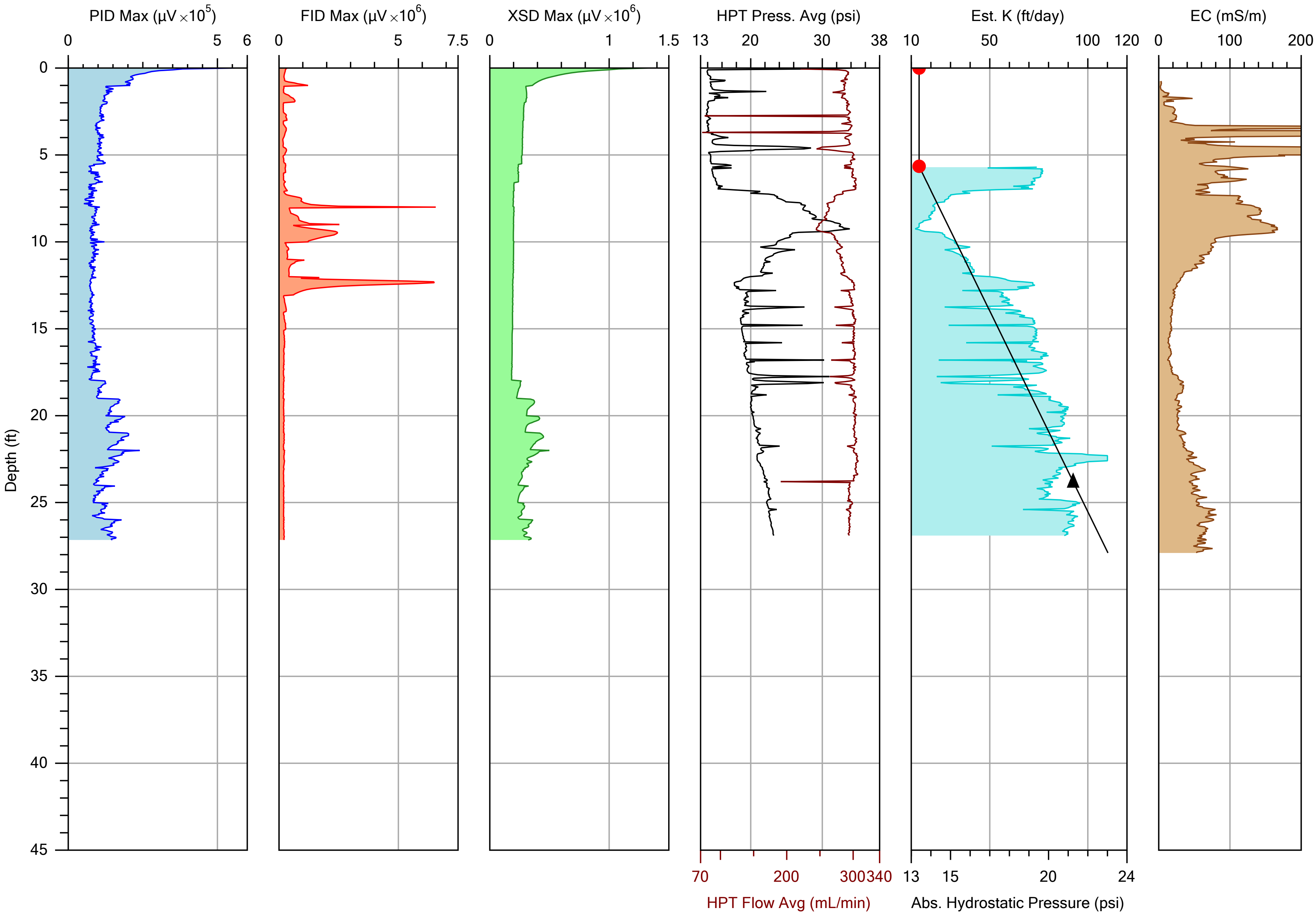

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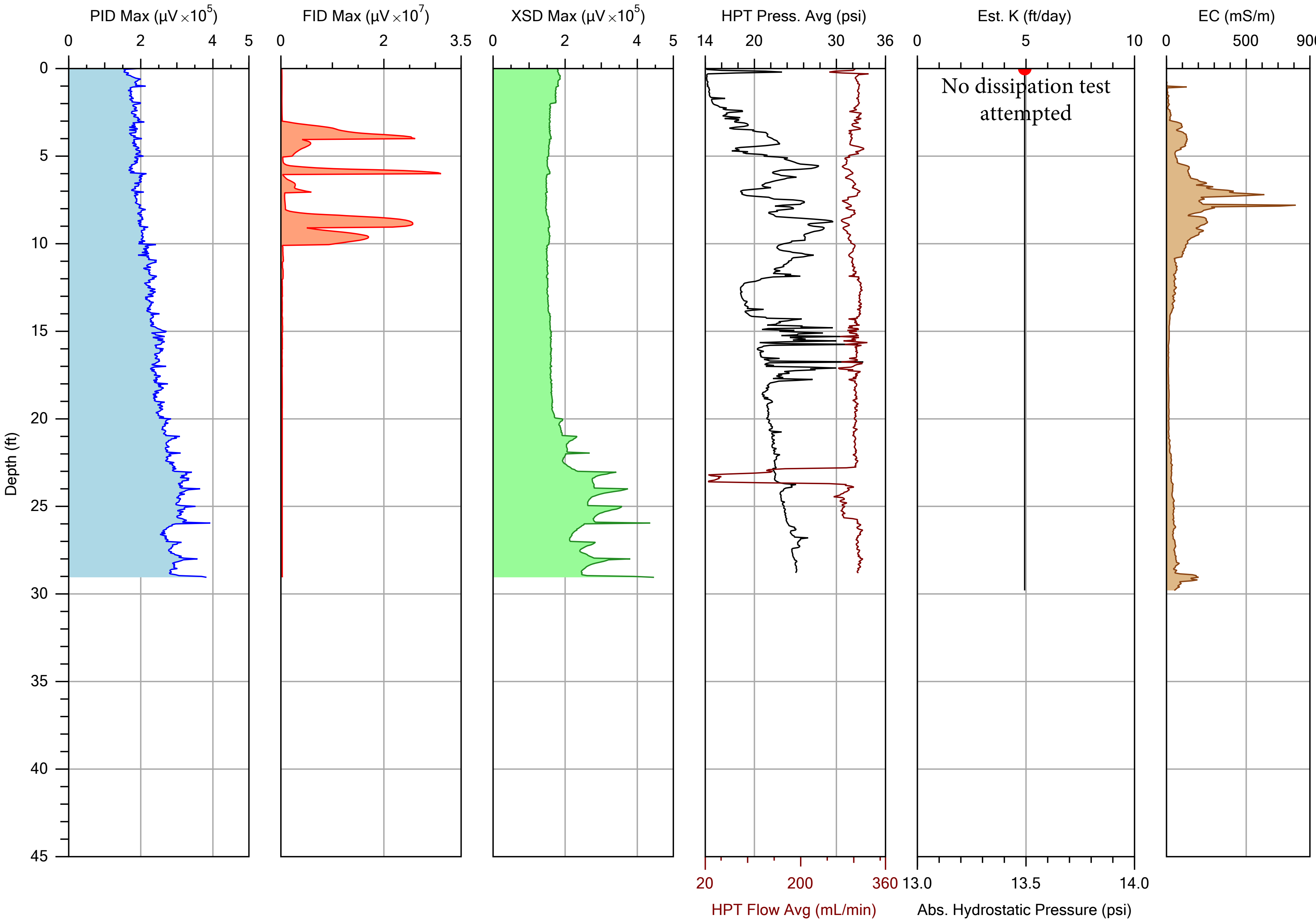

COLUMBIA TECHNOLOGIES

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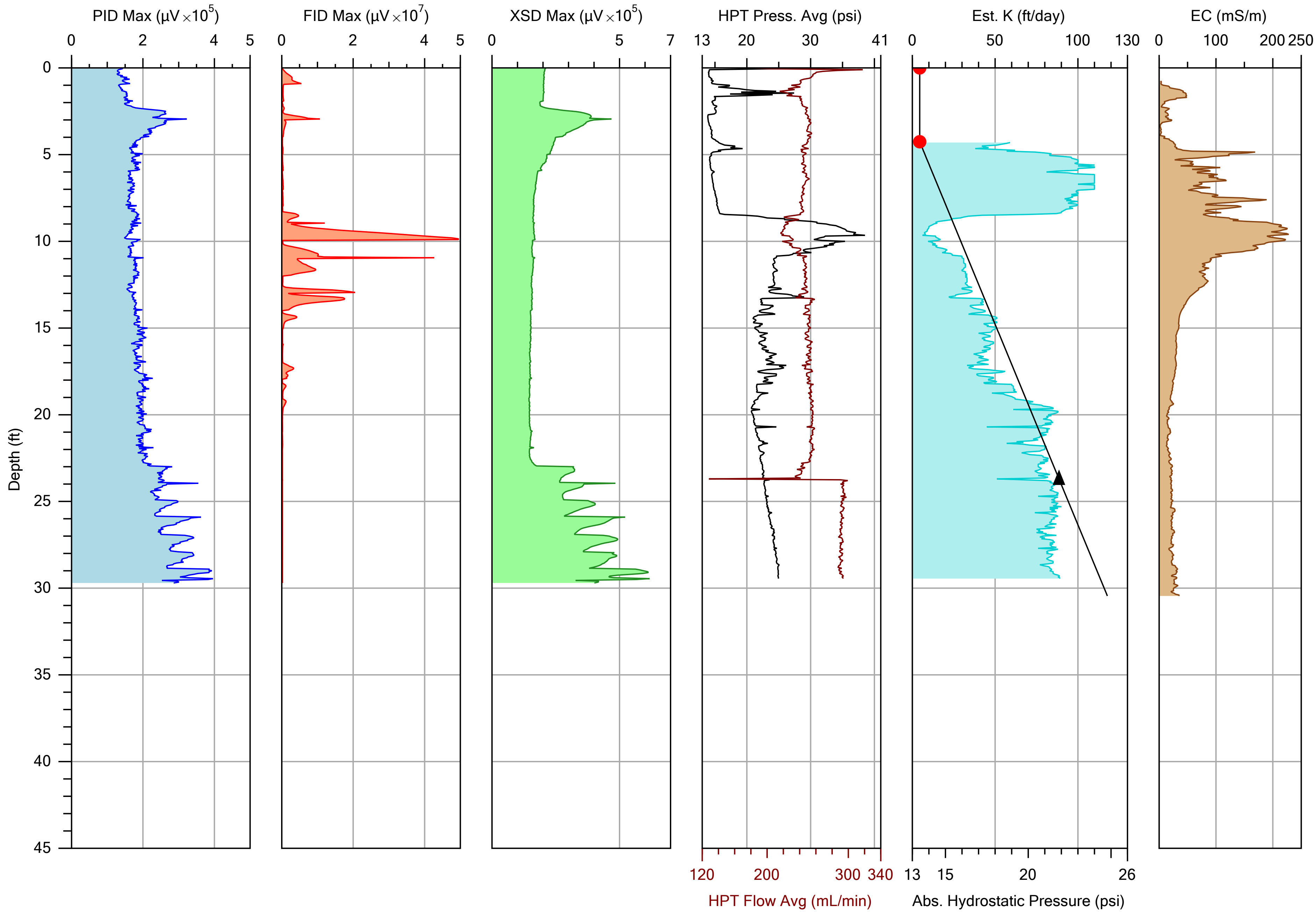

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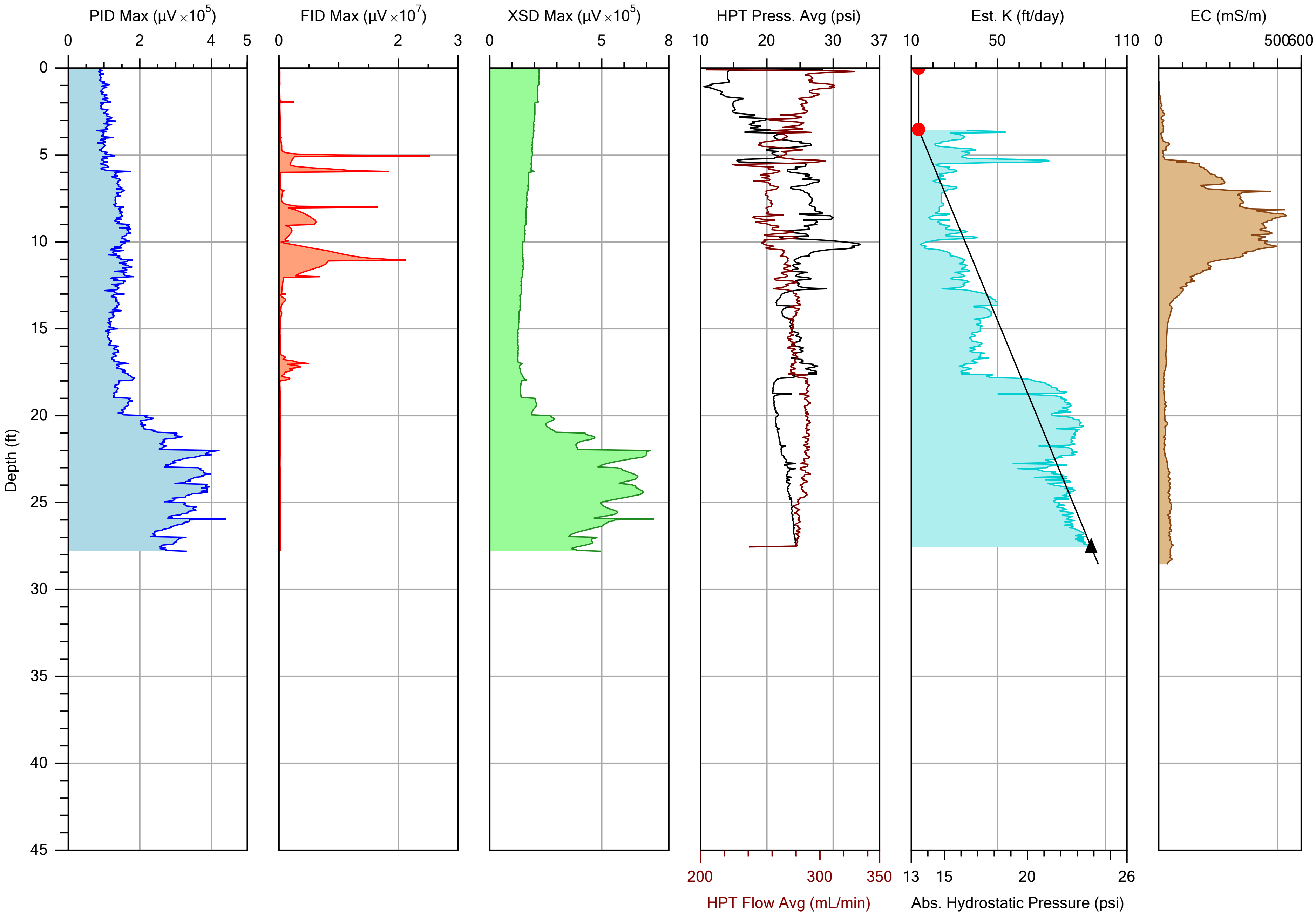

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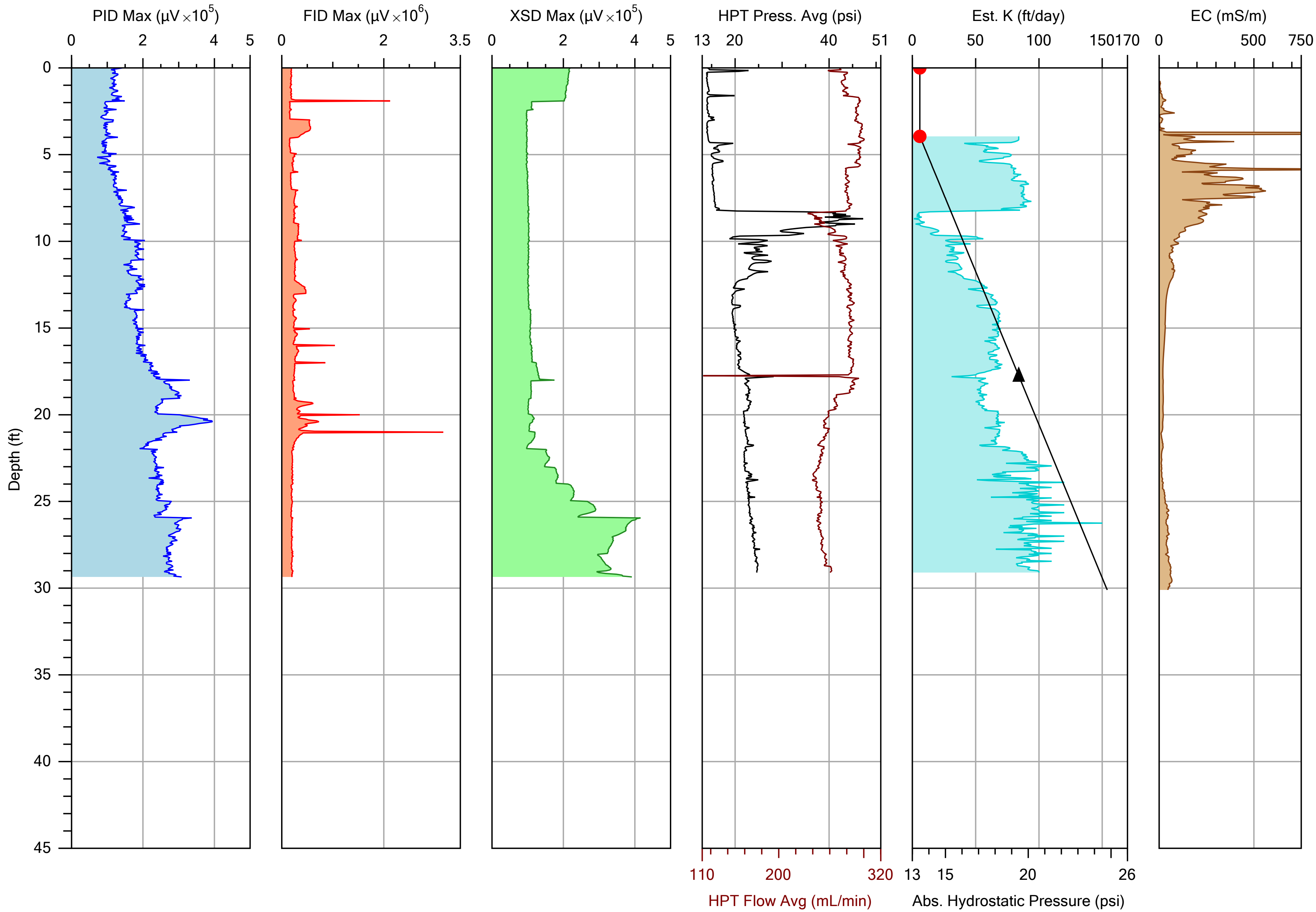

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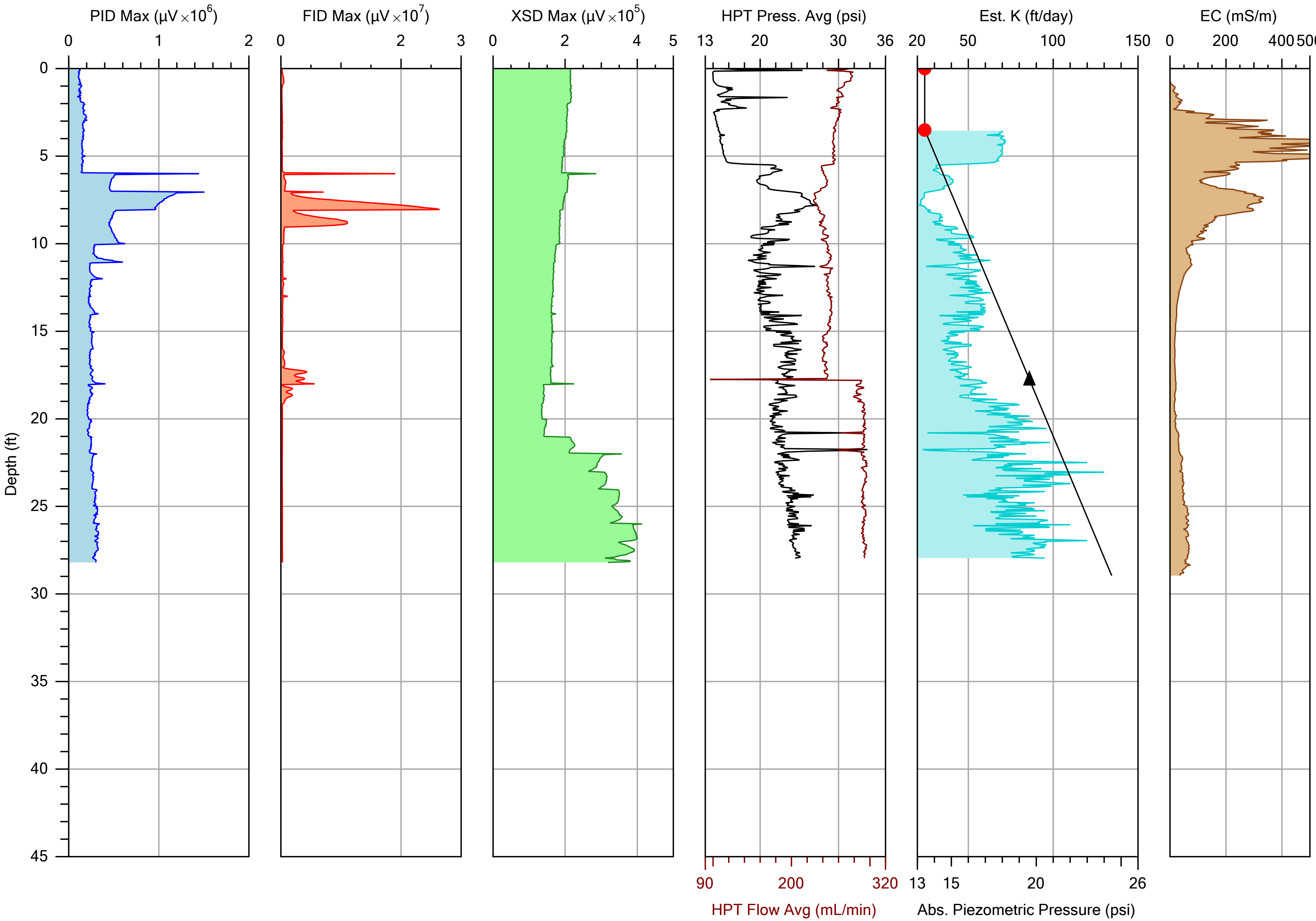

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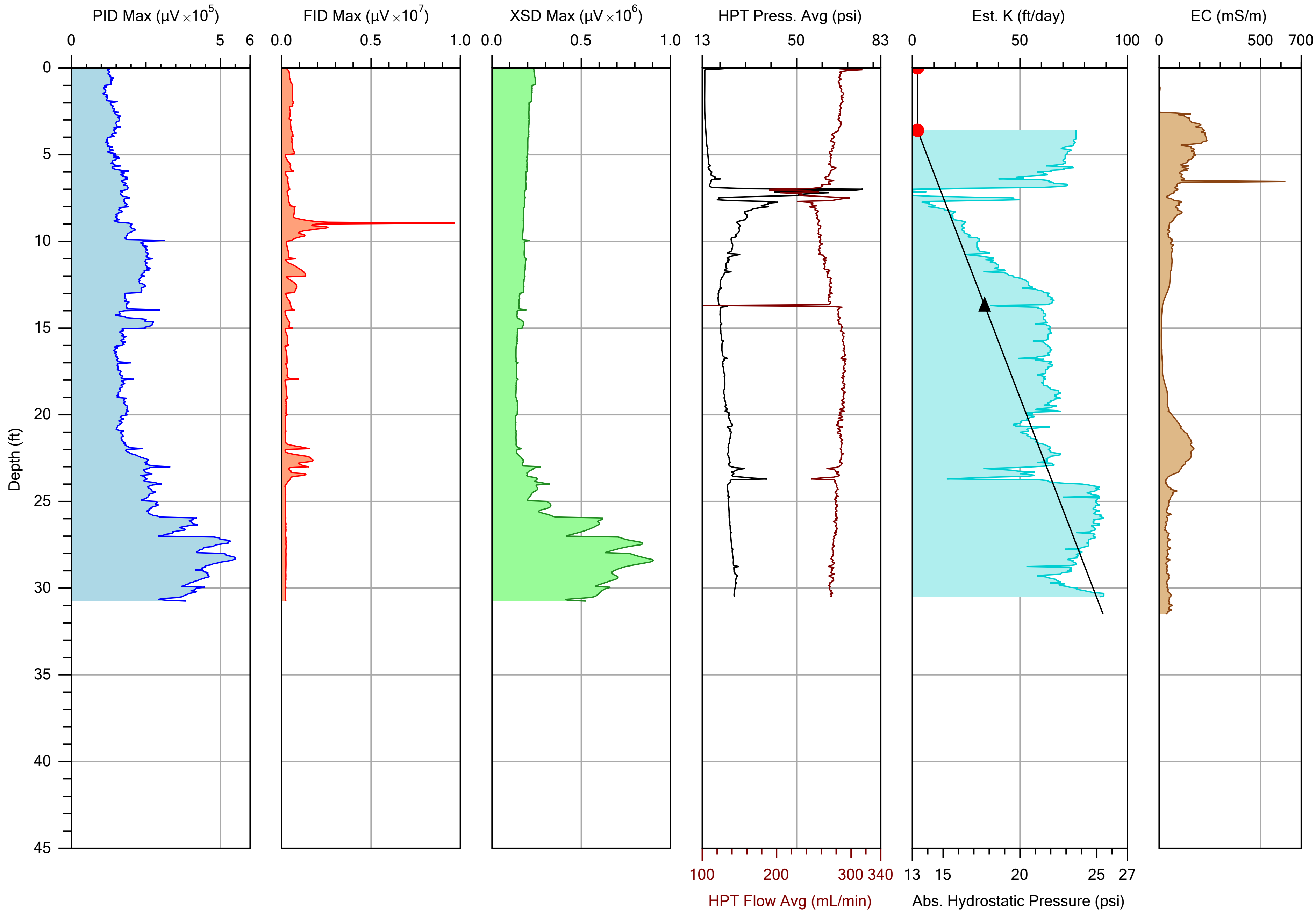

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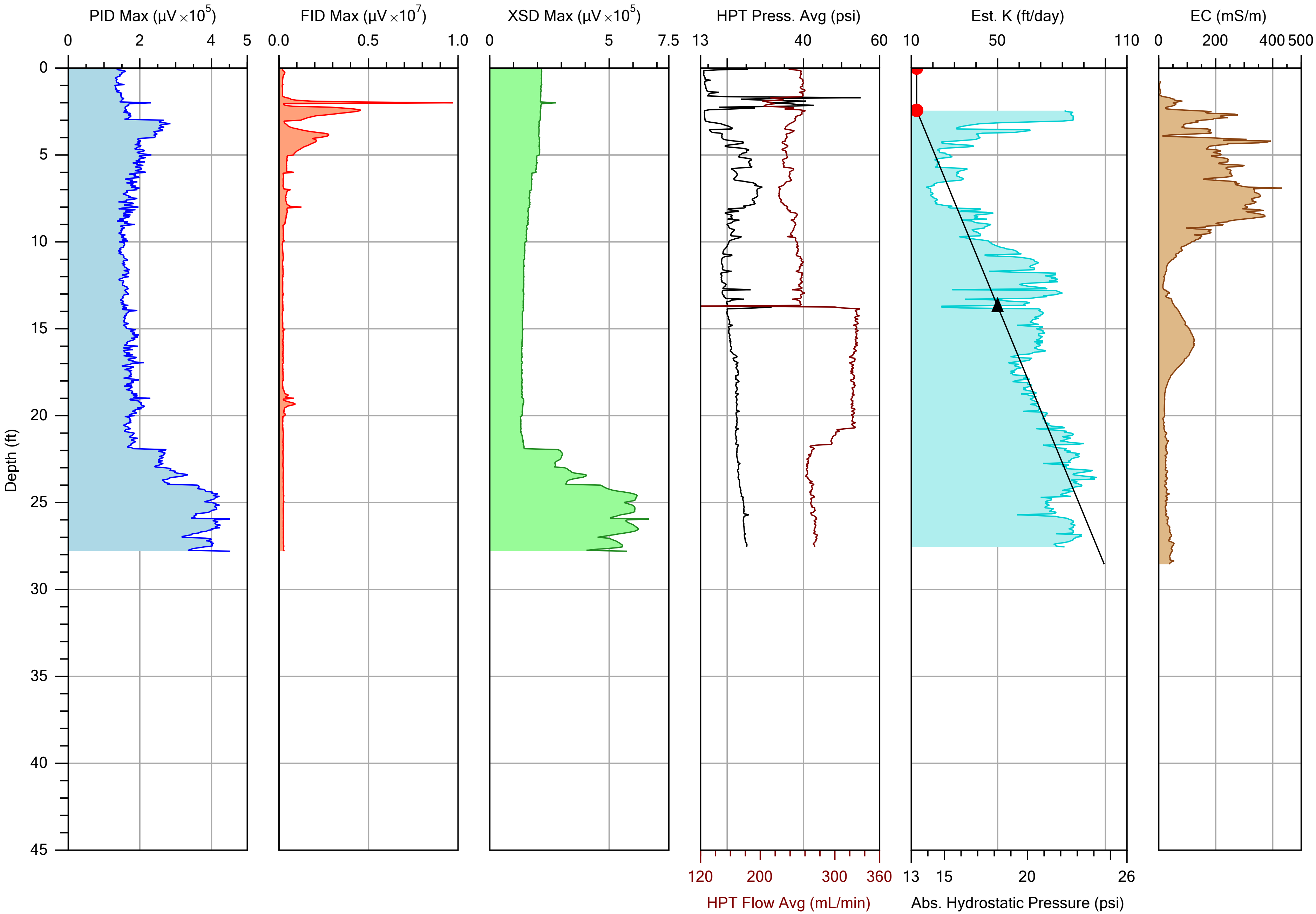

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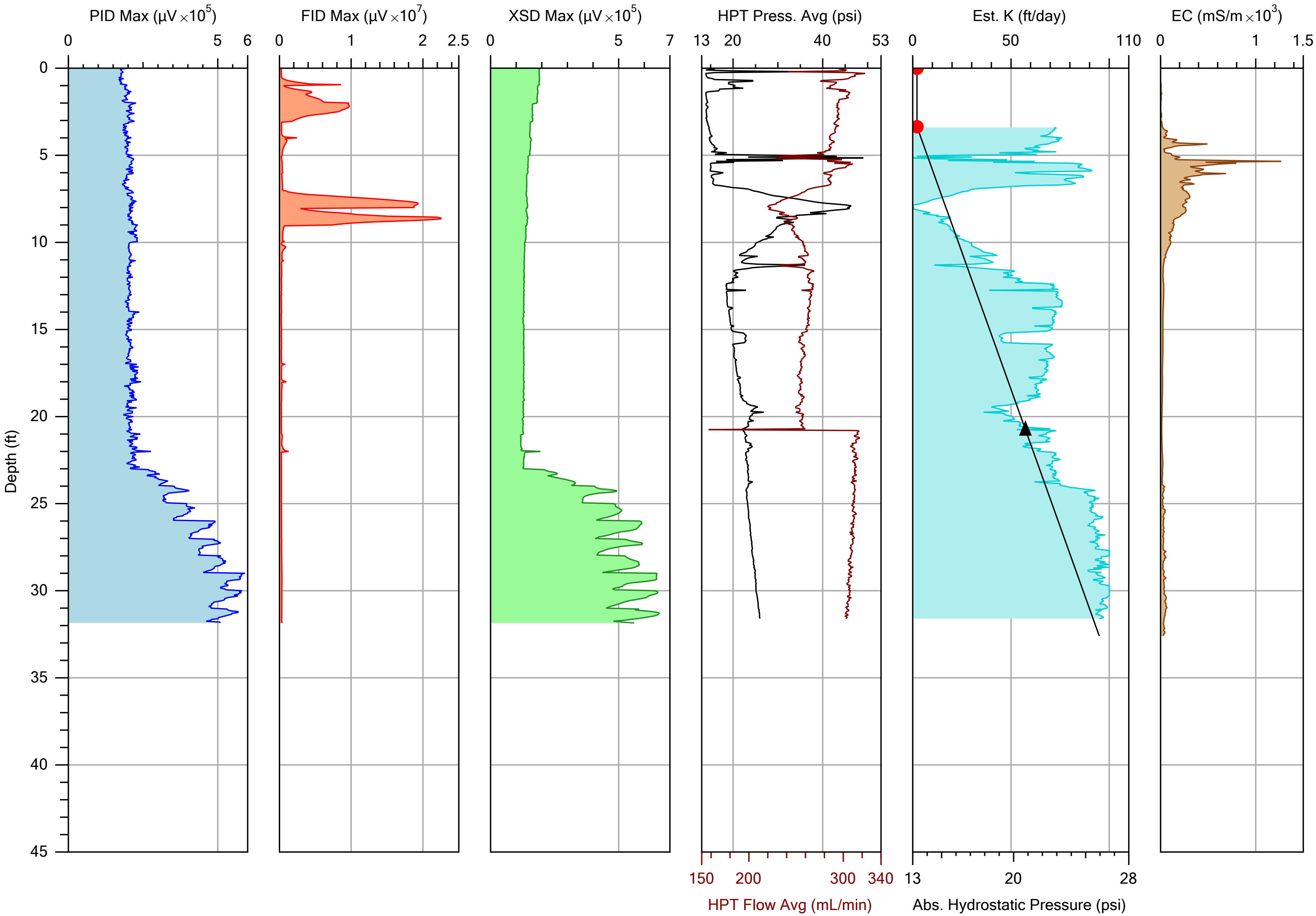

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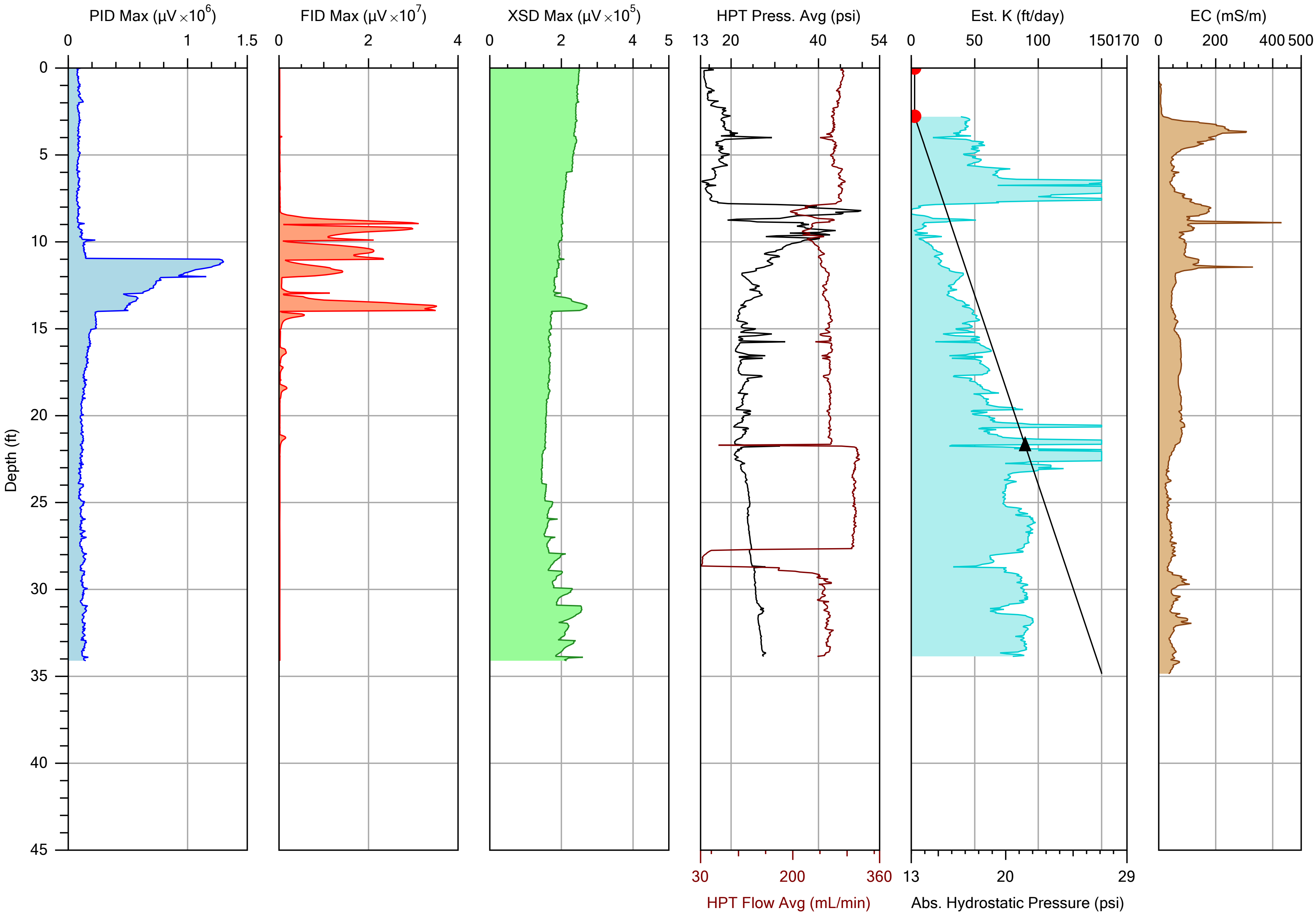

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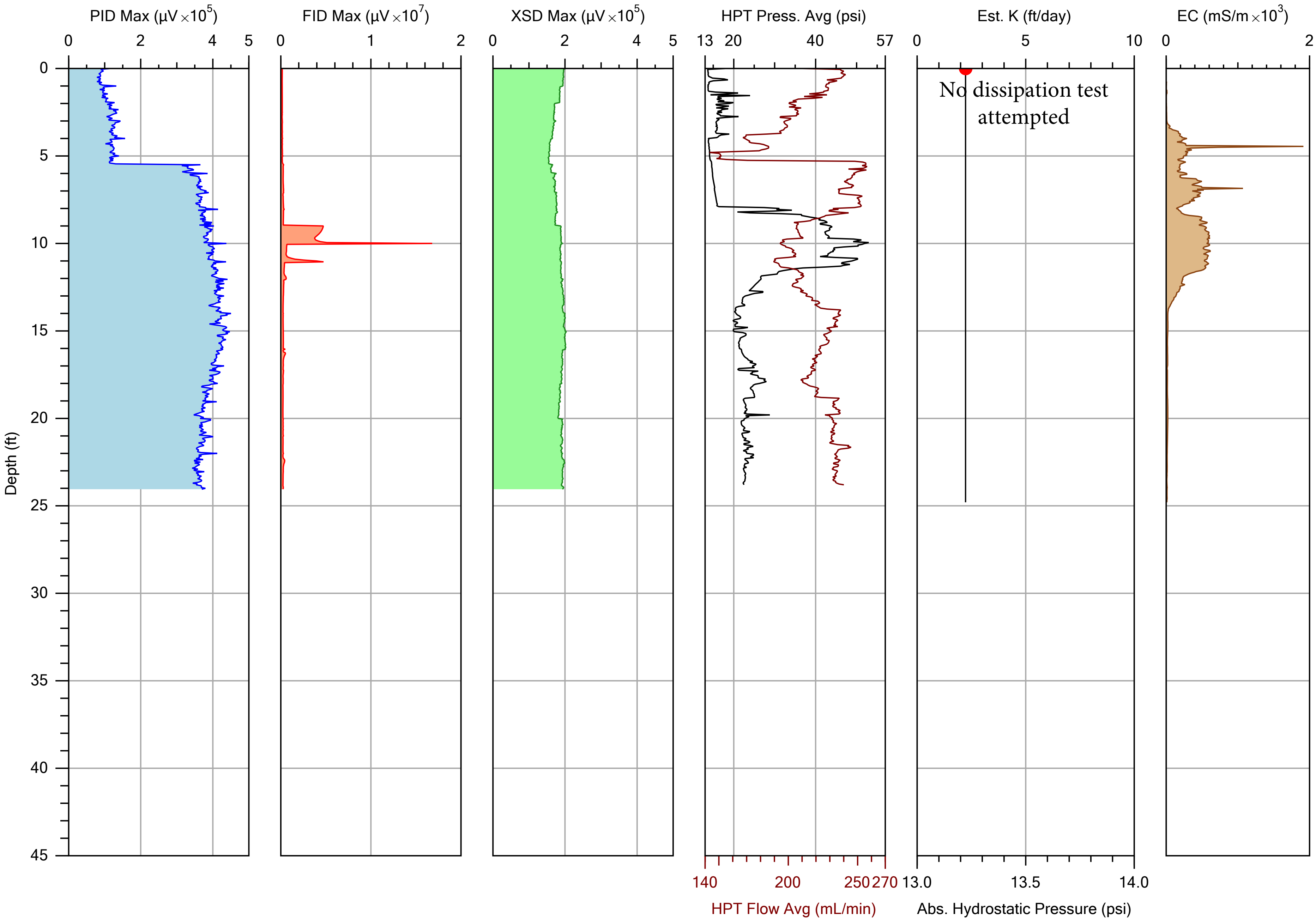

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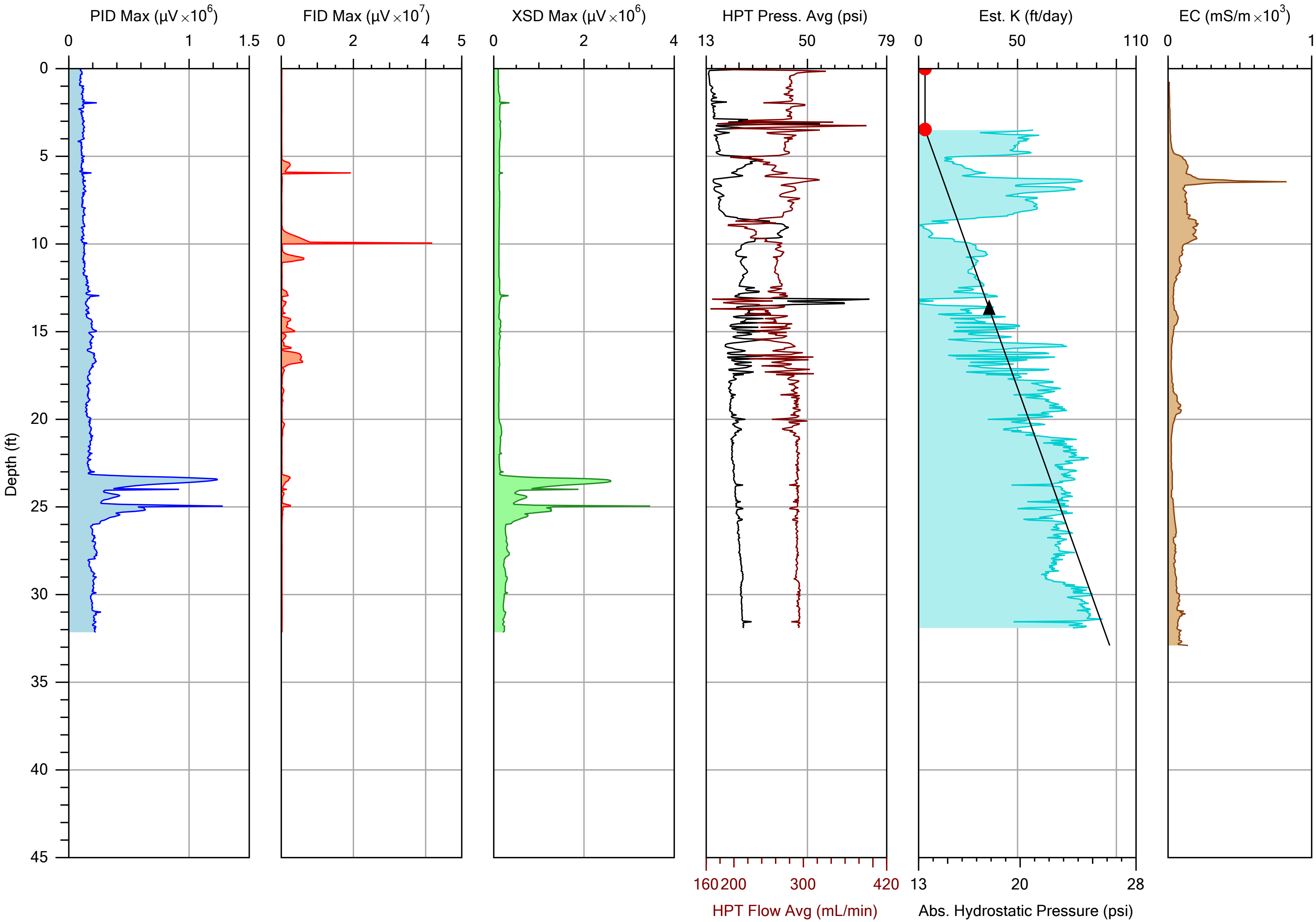

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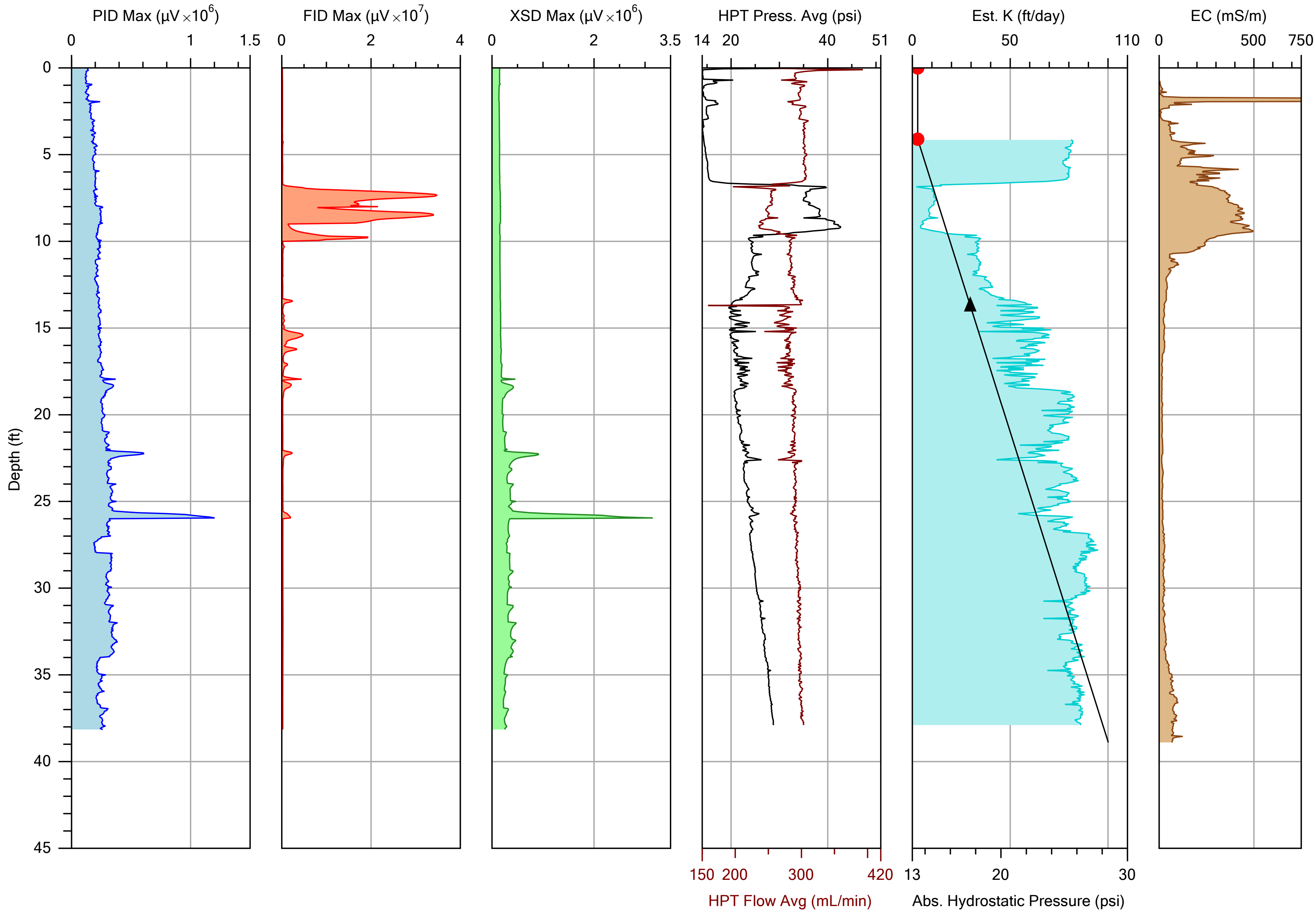

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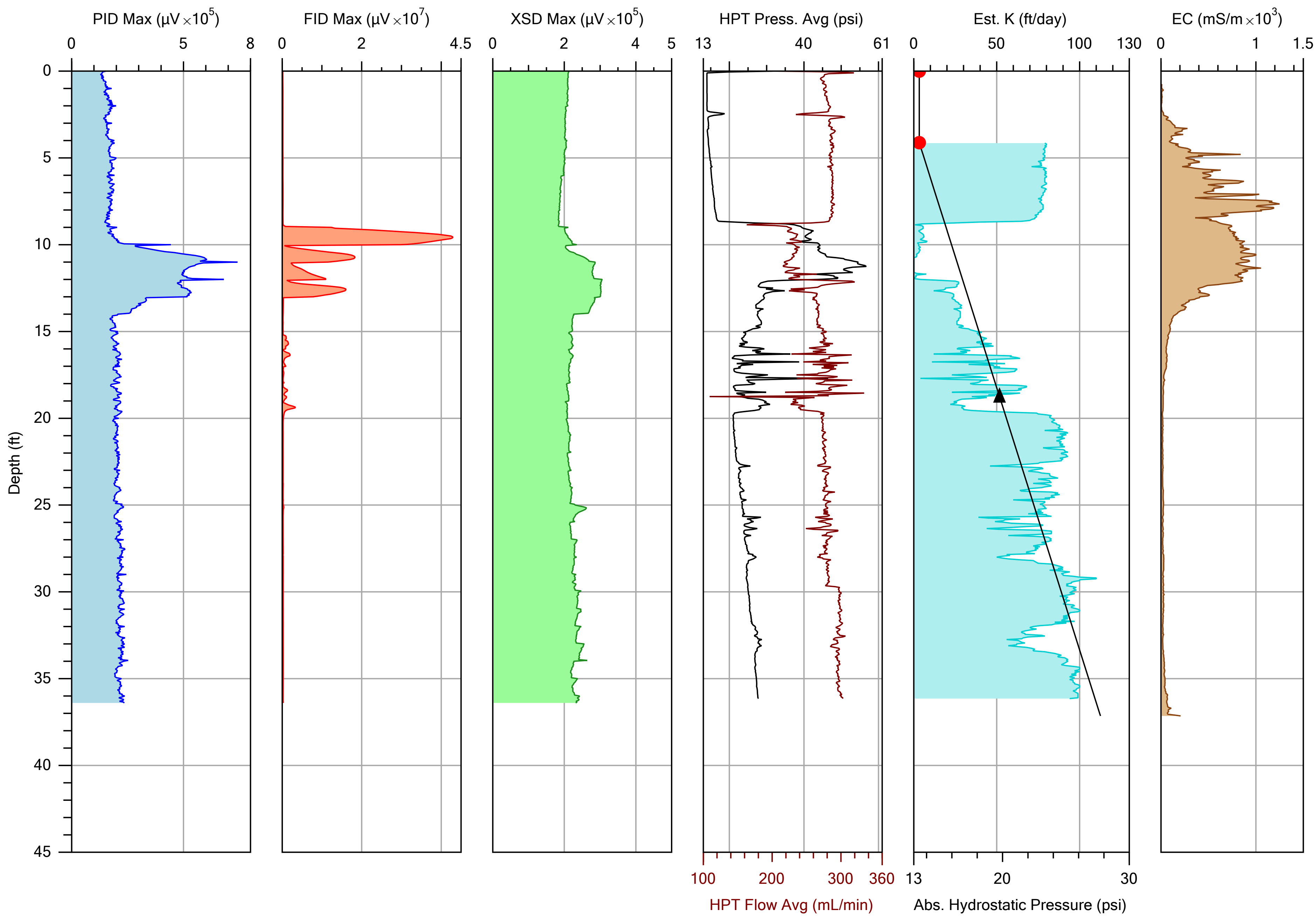

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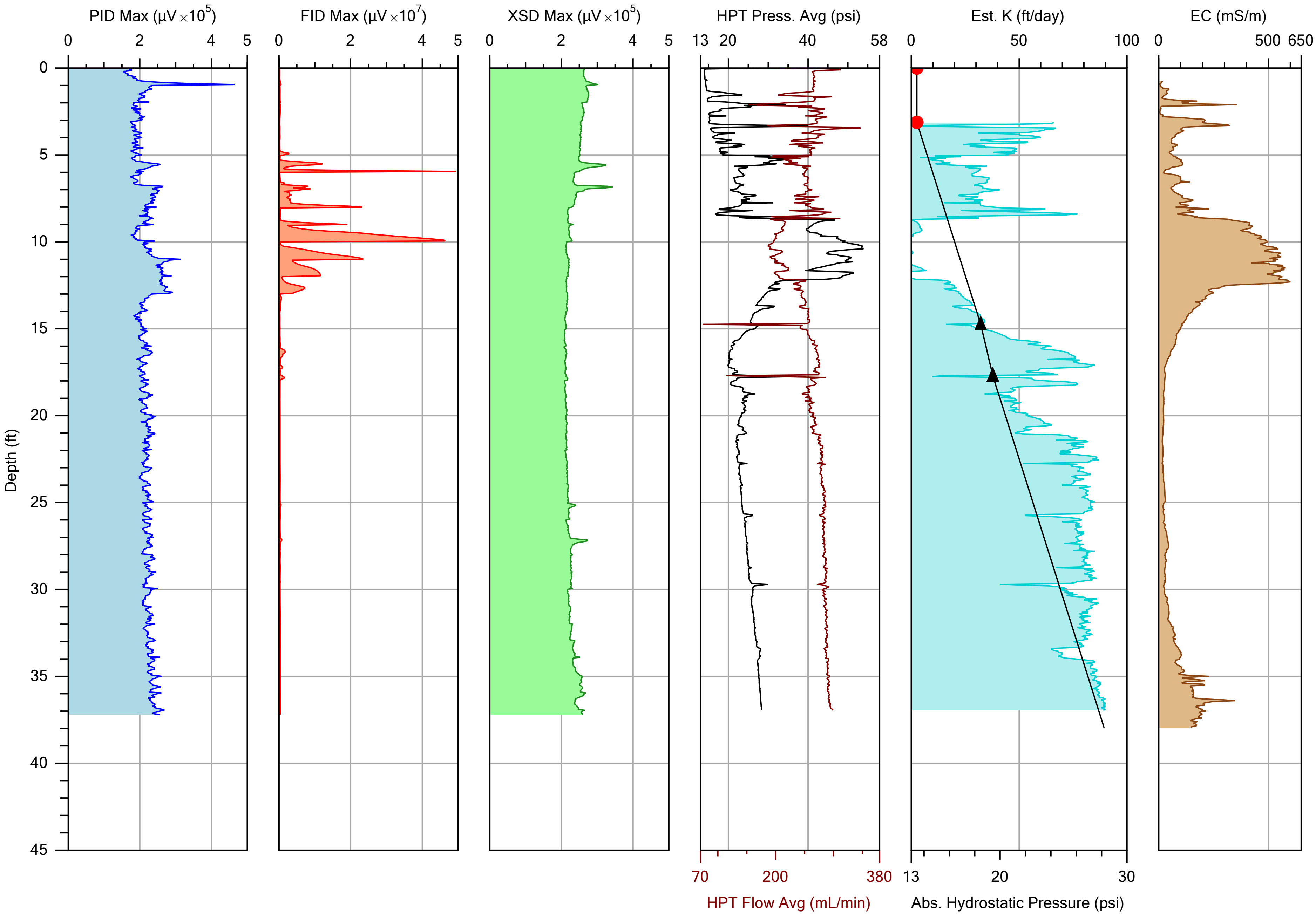

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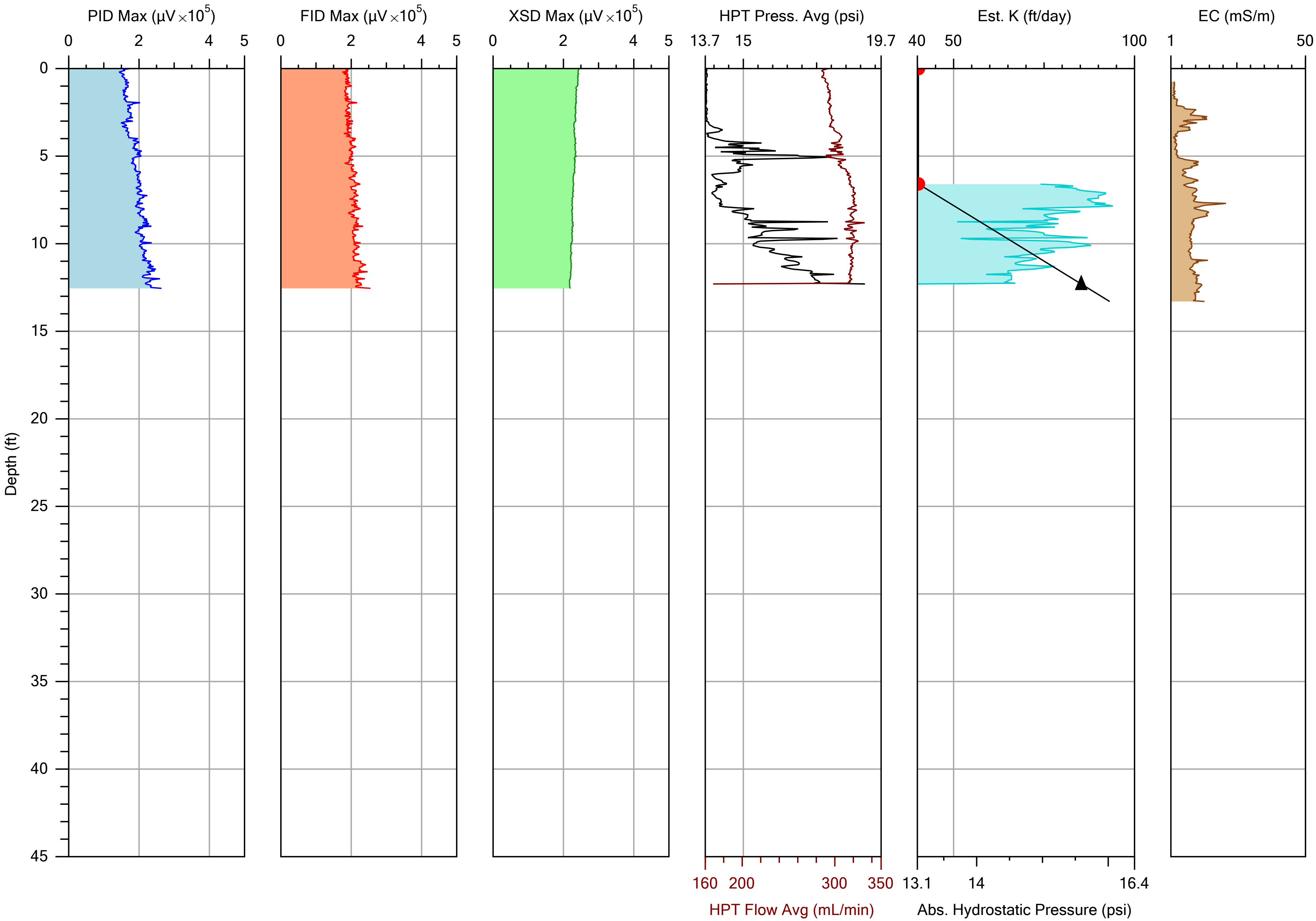

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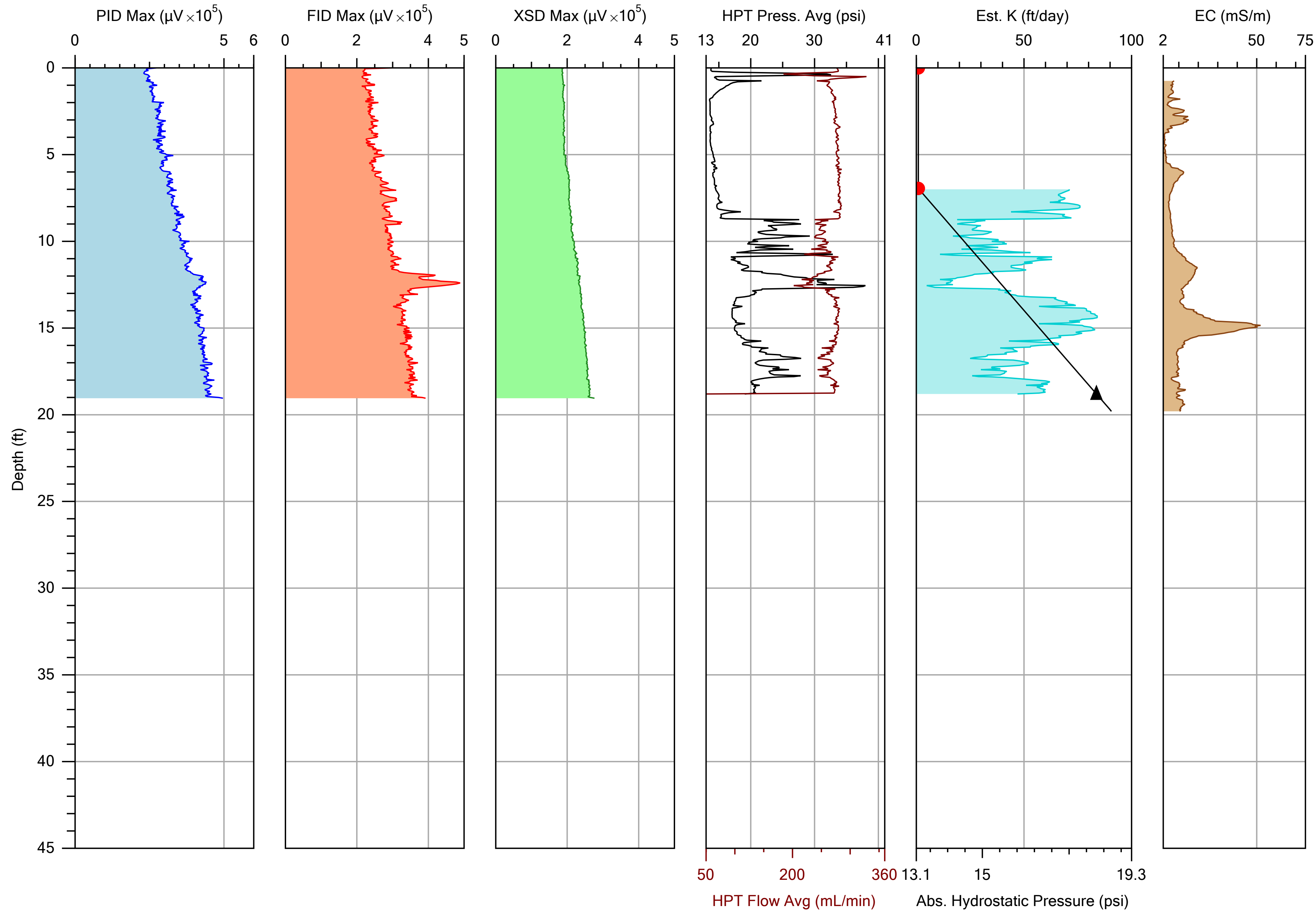

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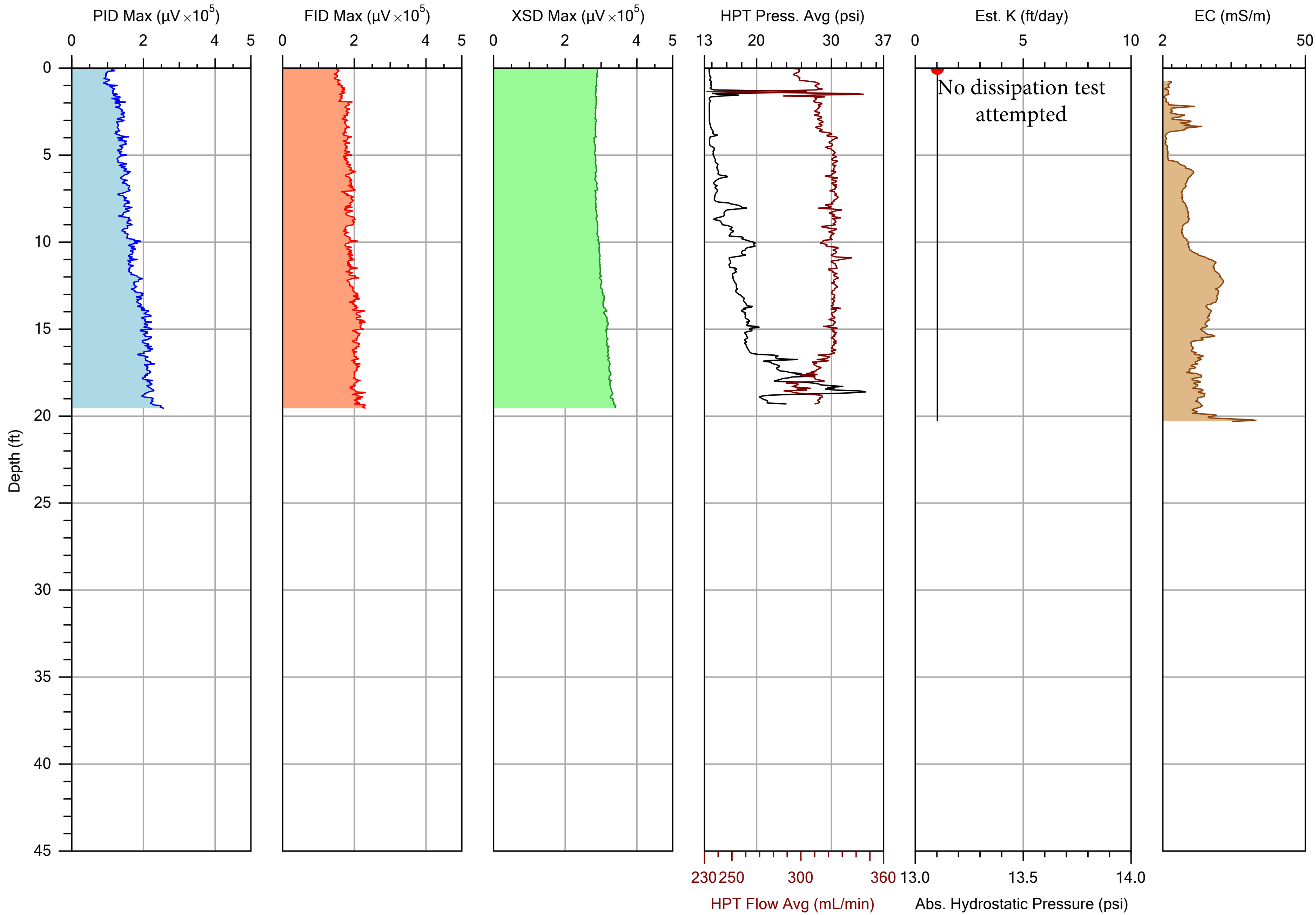
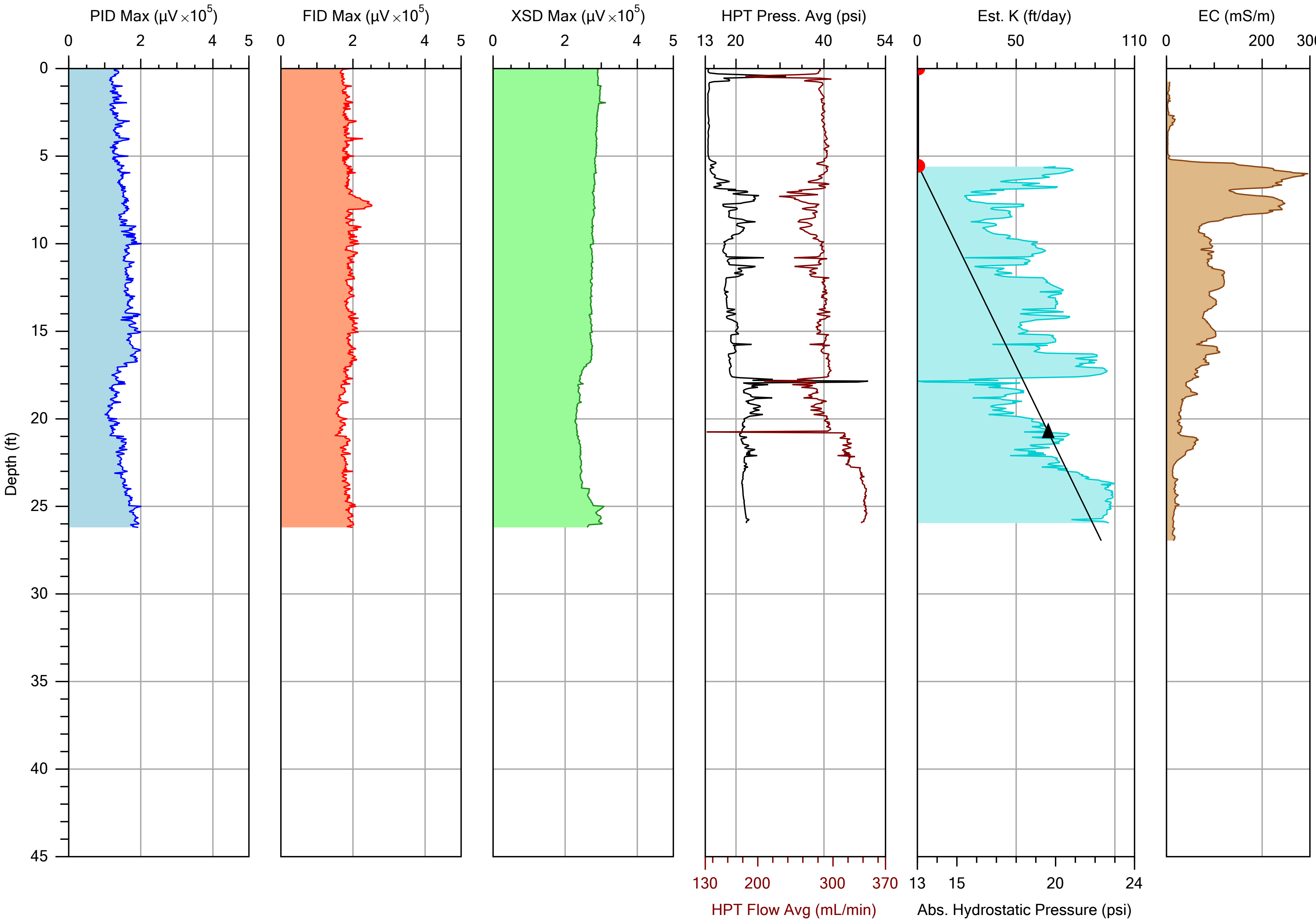
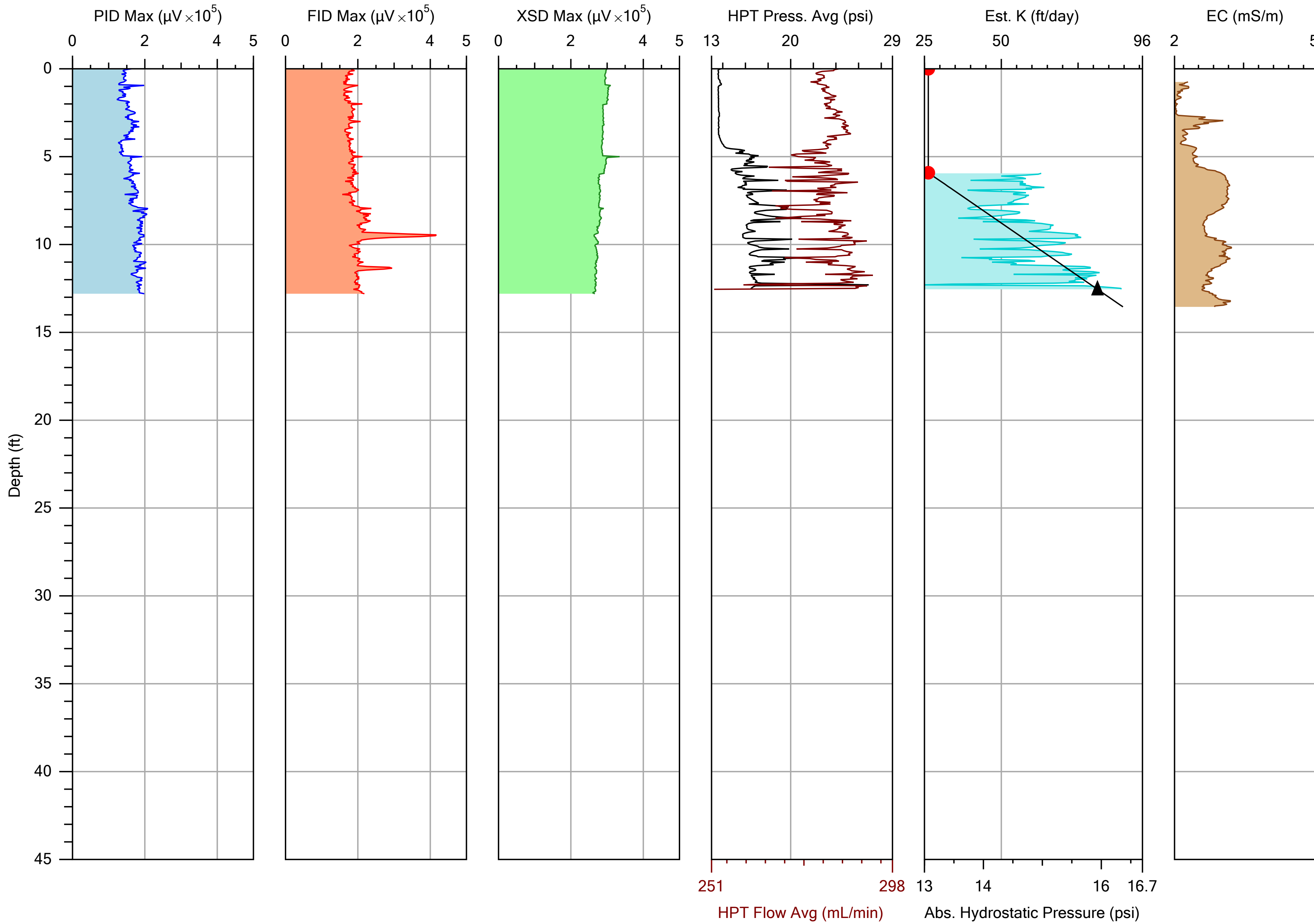


COLUMBIA TECHNOLOGIES

		File: MIP-33.MHP
Company: Columbia Technologies	Operator: MMA	Date: 11/23/2013
Project ID: Former Aerovox Facility	Client: URS	Location:



Company: Columbia Technologies	Operator: MMA	File: MIP-34.MHP
Project ID: Former Aerovox Facility	Client: URS	Date: 11/23/2013
		Location:



COLUMBIA TECHNOLOGIES

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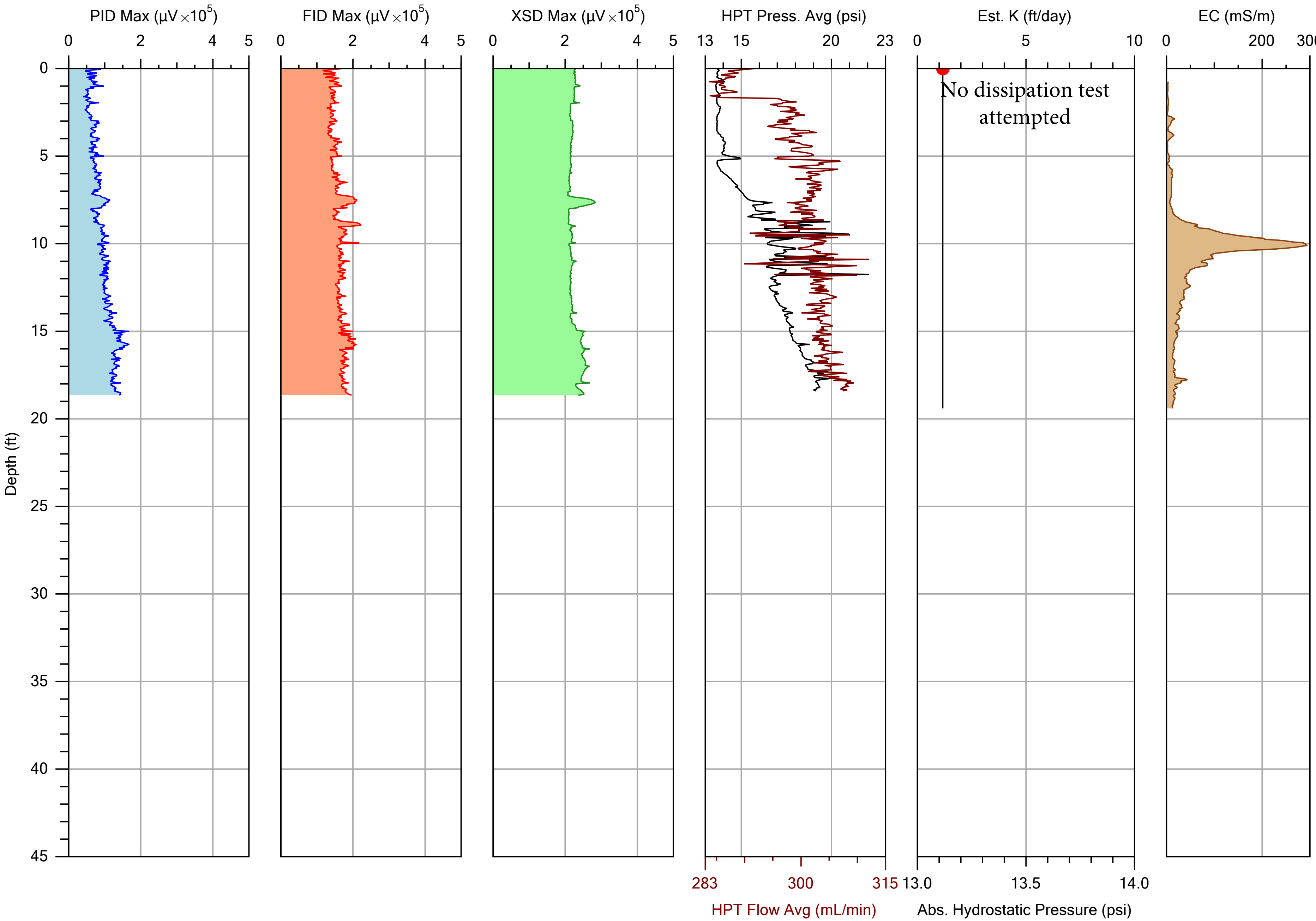
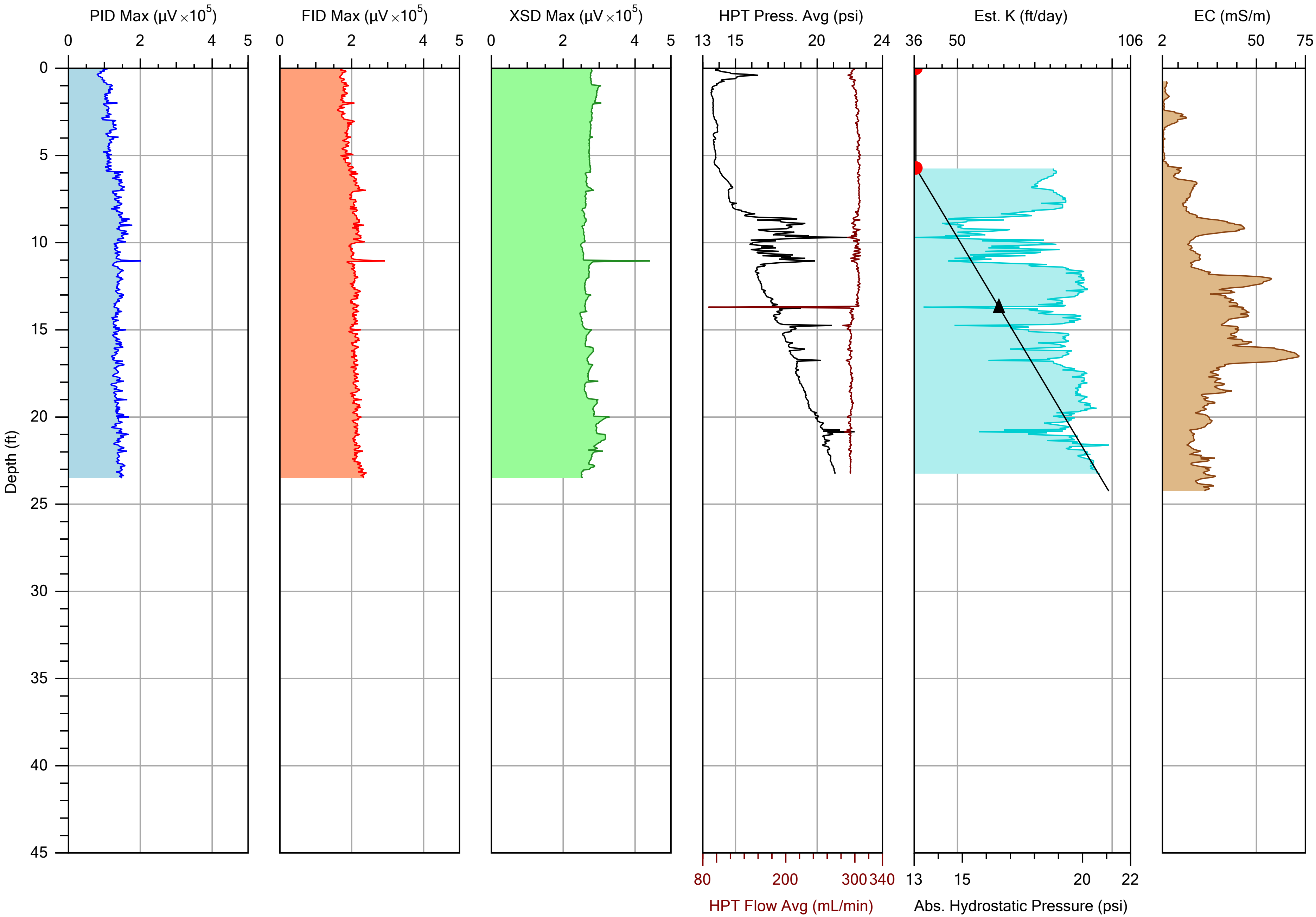
Company: Columbia Technologies	Operator: MMA	Date: 11/23/2013
Project ID: Former Aerovox Facility	Client: URS	Location:

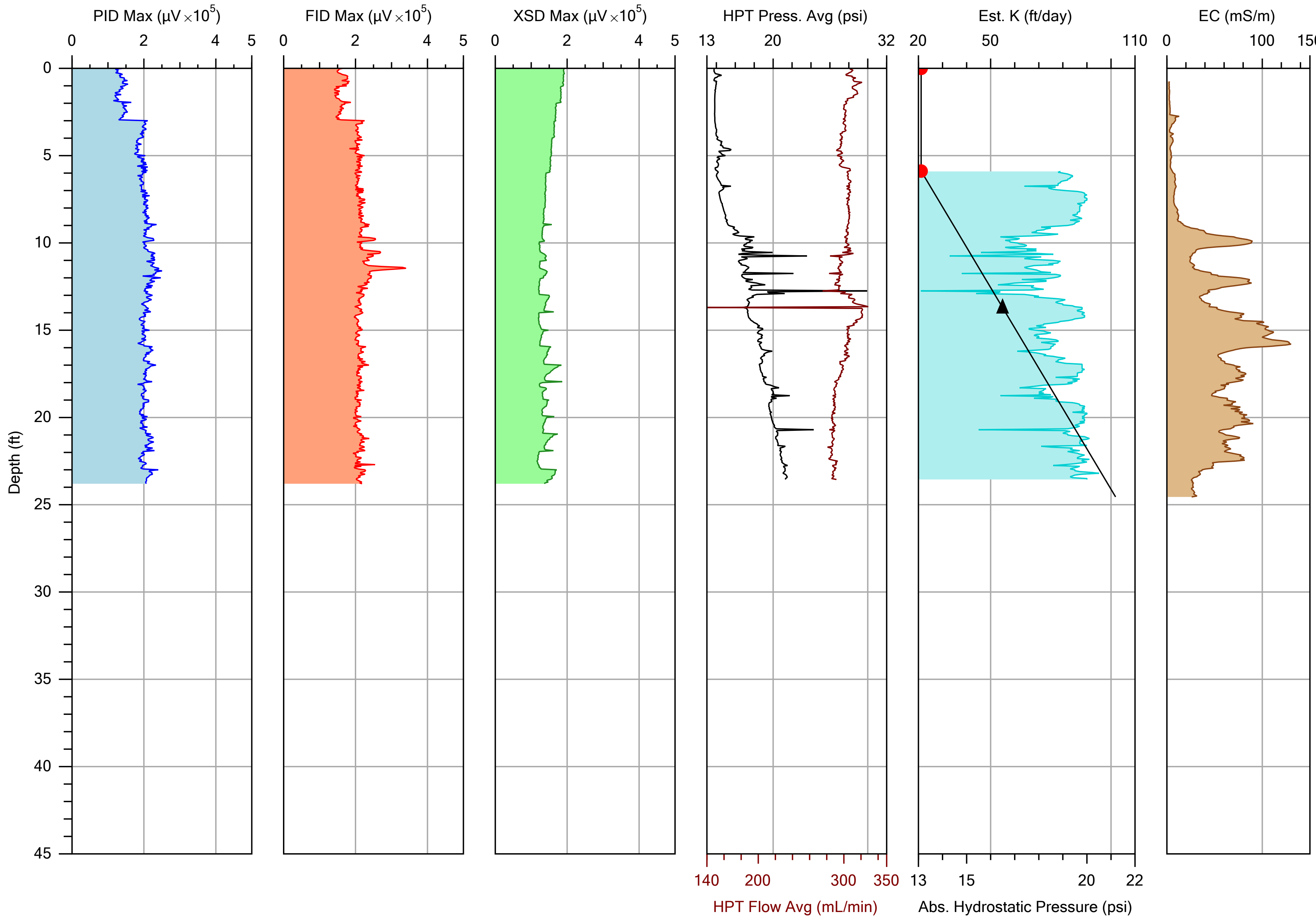


Company: Columbia Technologies	Operator: MMA	File: MIP-36.MHP
Project ID: Former Aerovox Facility	Client: URS	Date: 11/23/2013
		Location:



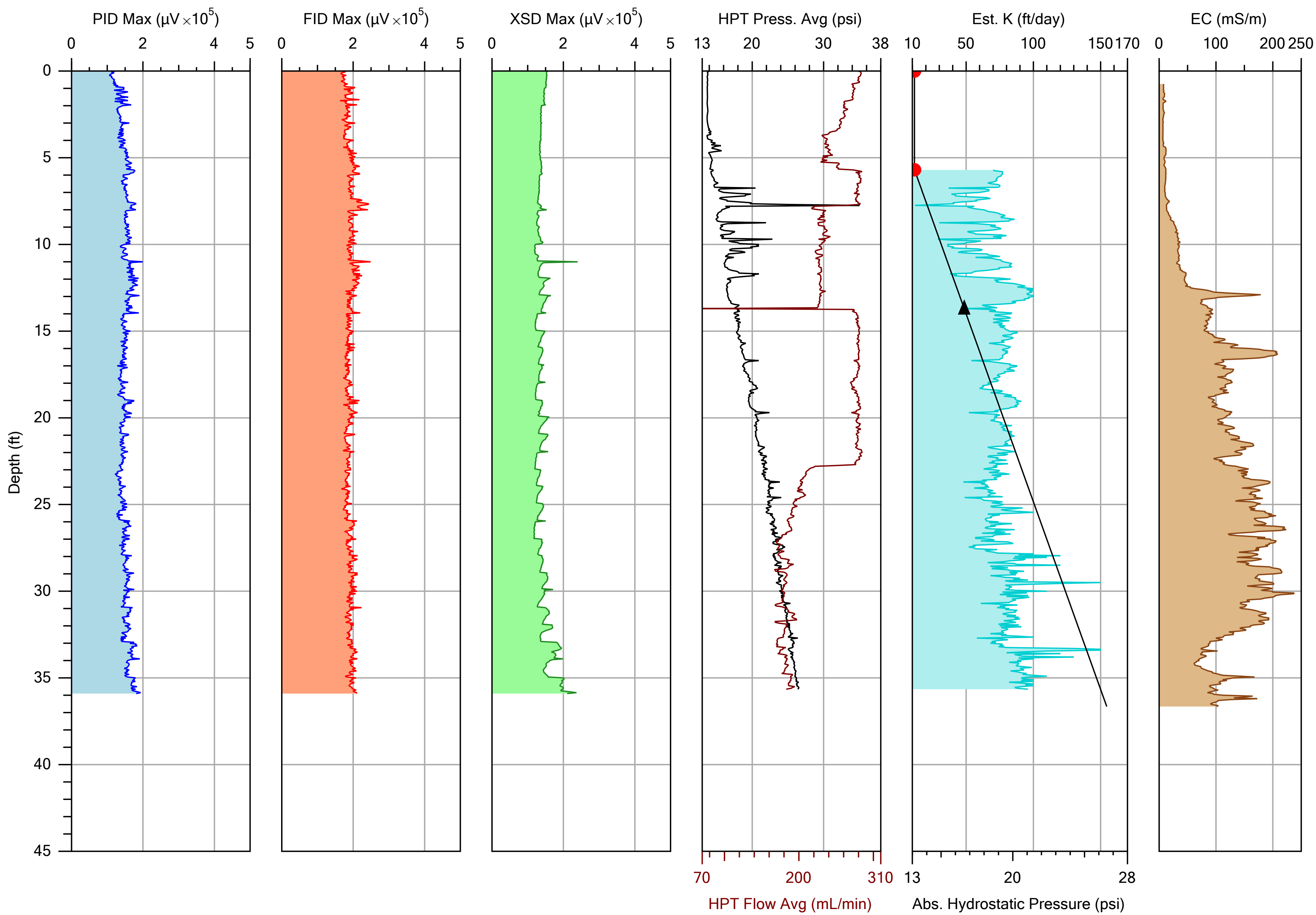
COLUMBIA TECHNOLOGIES

		File: MIP-37.MHP
Company: Columbia Technologies	Operator: MMA	Date: 11/23/2013
Project ID: Former Aerovox Facility	Client: URS	Location:



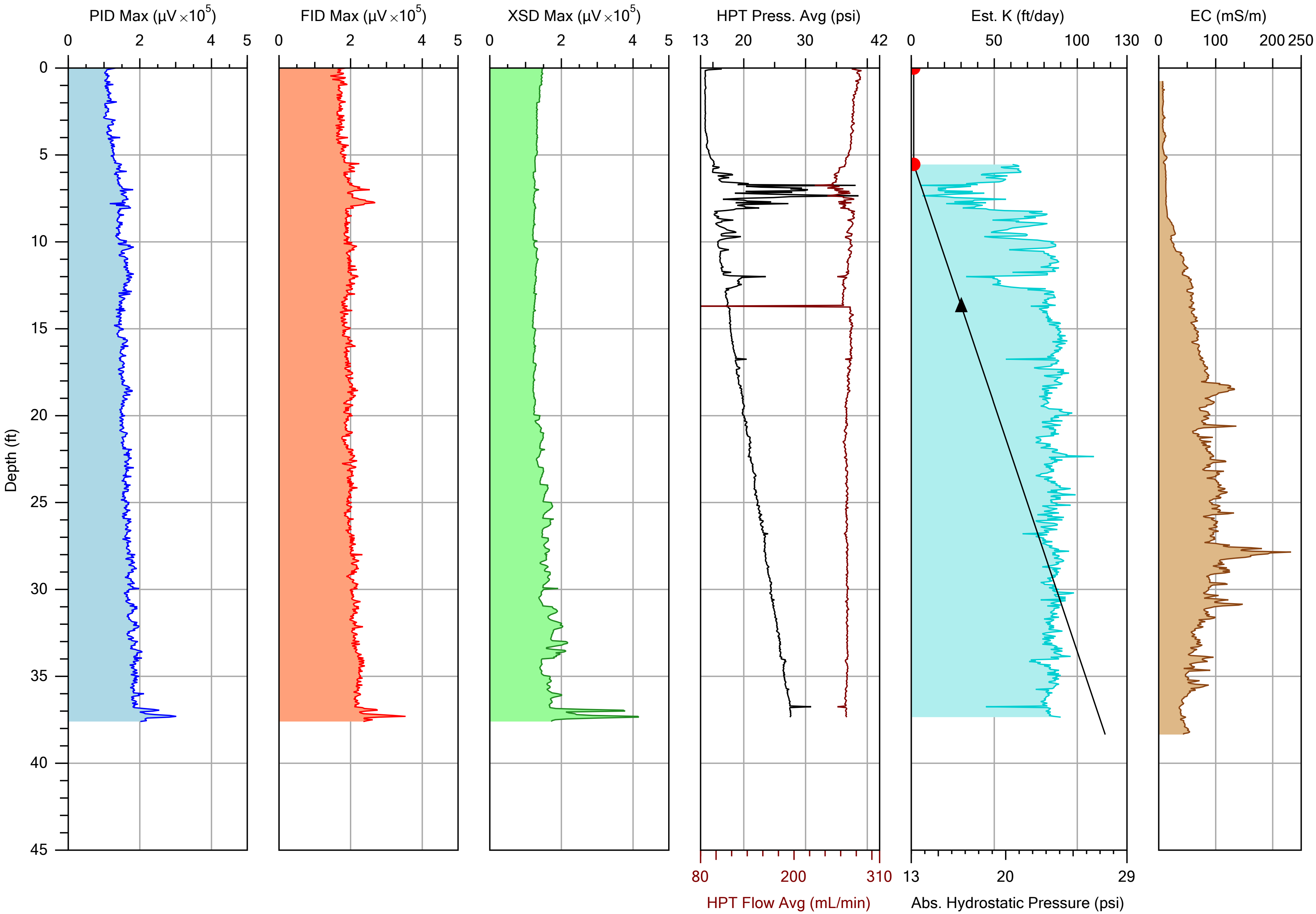
COLUMBIA TECHNOLOGIES

		File: MIP-38.MHP
Company: Columbia Technologies	Operator: MMA	Date: 11/24/2013
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

		File: MIP-39.MHP
Company: Columbia Technologies	Operator: MMA	Date: 11/24/2013
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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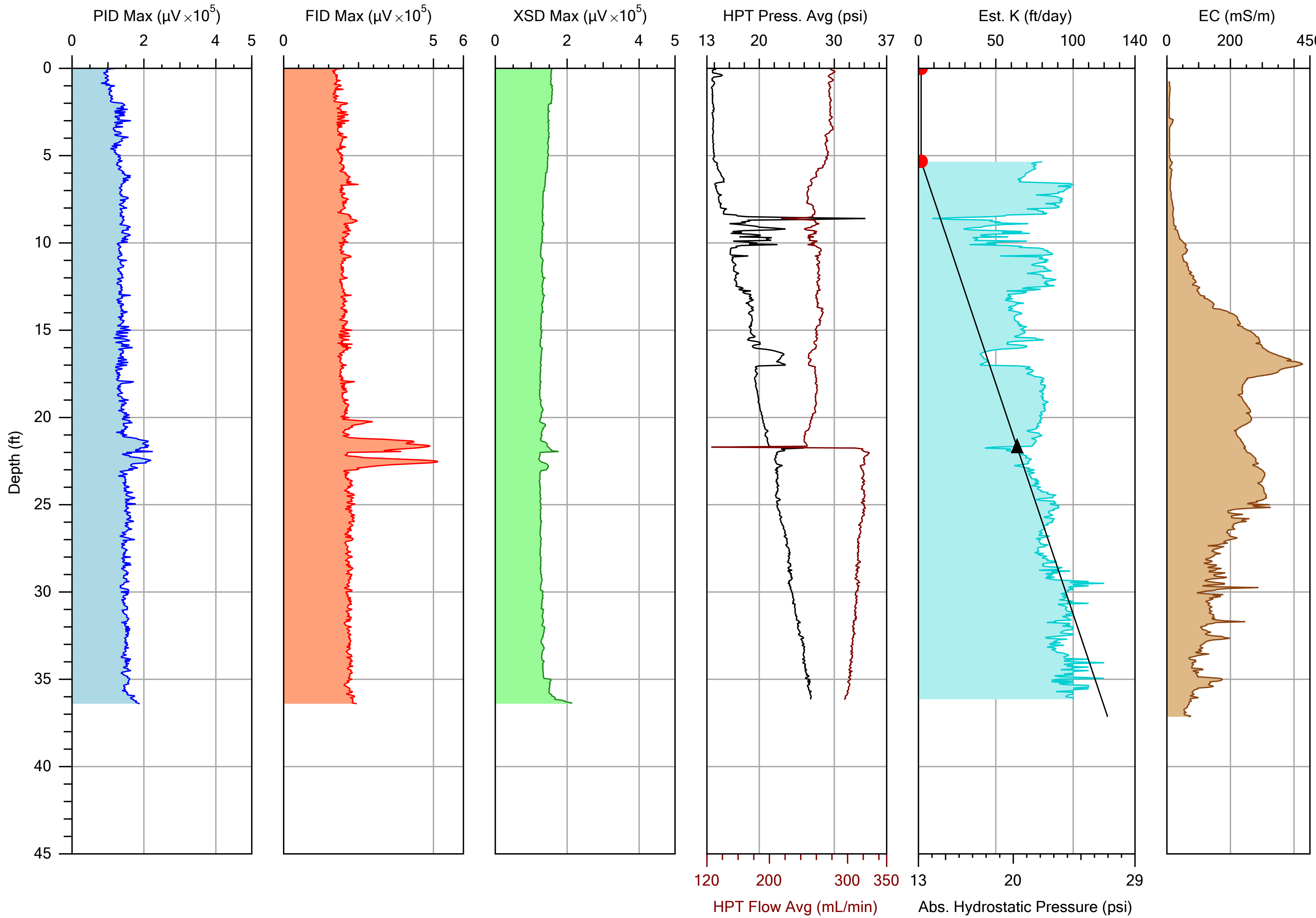
Company: Columbia Technologies	Operator: MMA	Date: 11/24/2013
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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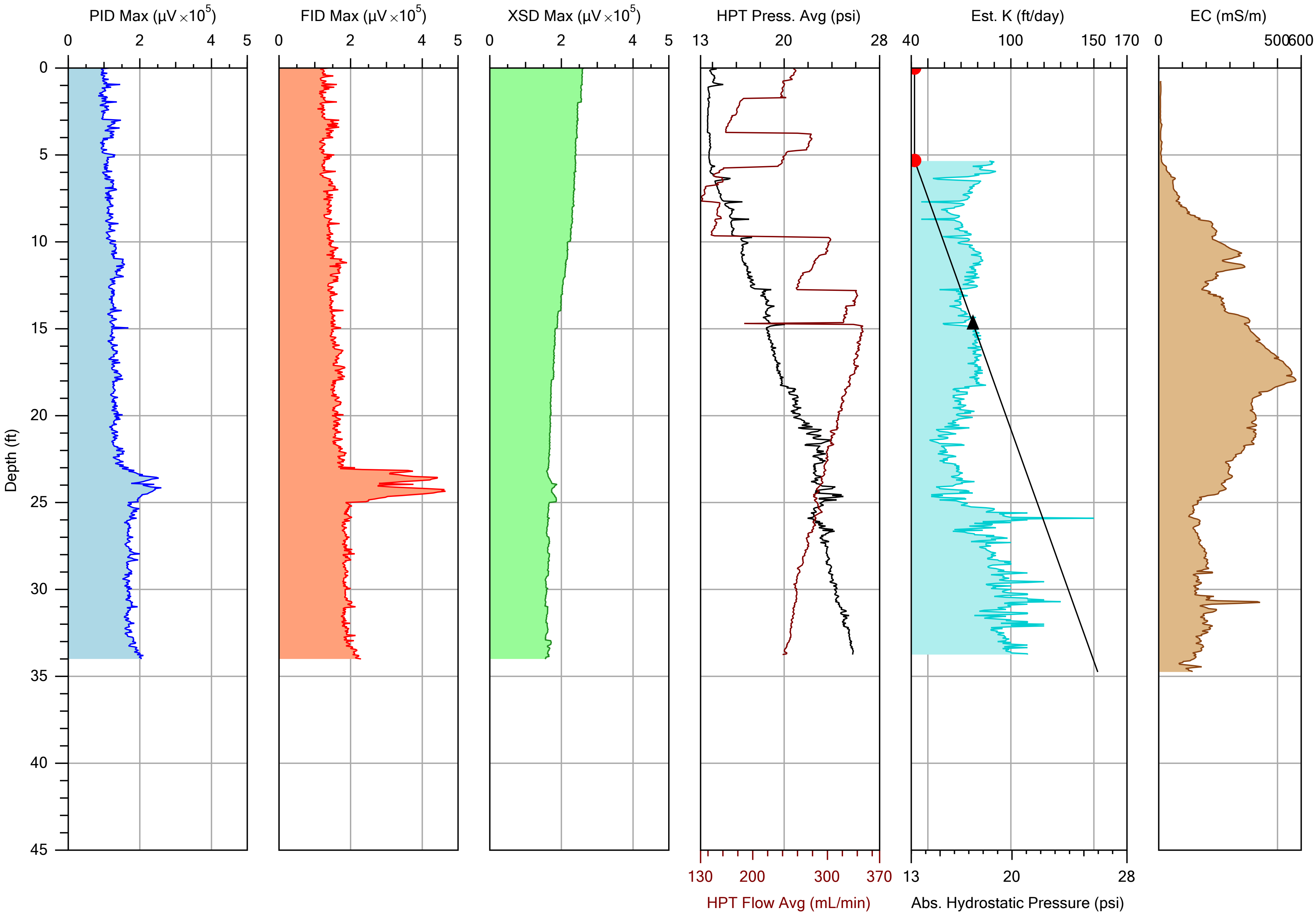
Company: Columbia Technologies	Operator: MMA	Date: 11/24/2013
Project ID: Former Aerovox Facility	Client: URS	Location:



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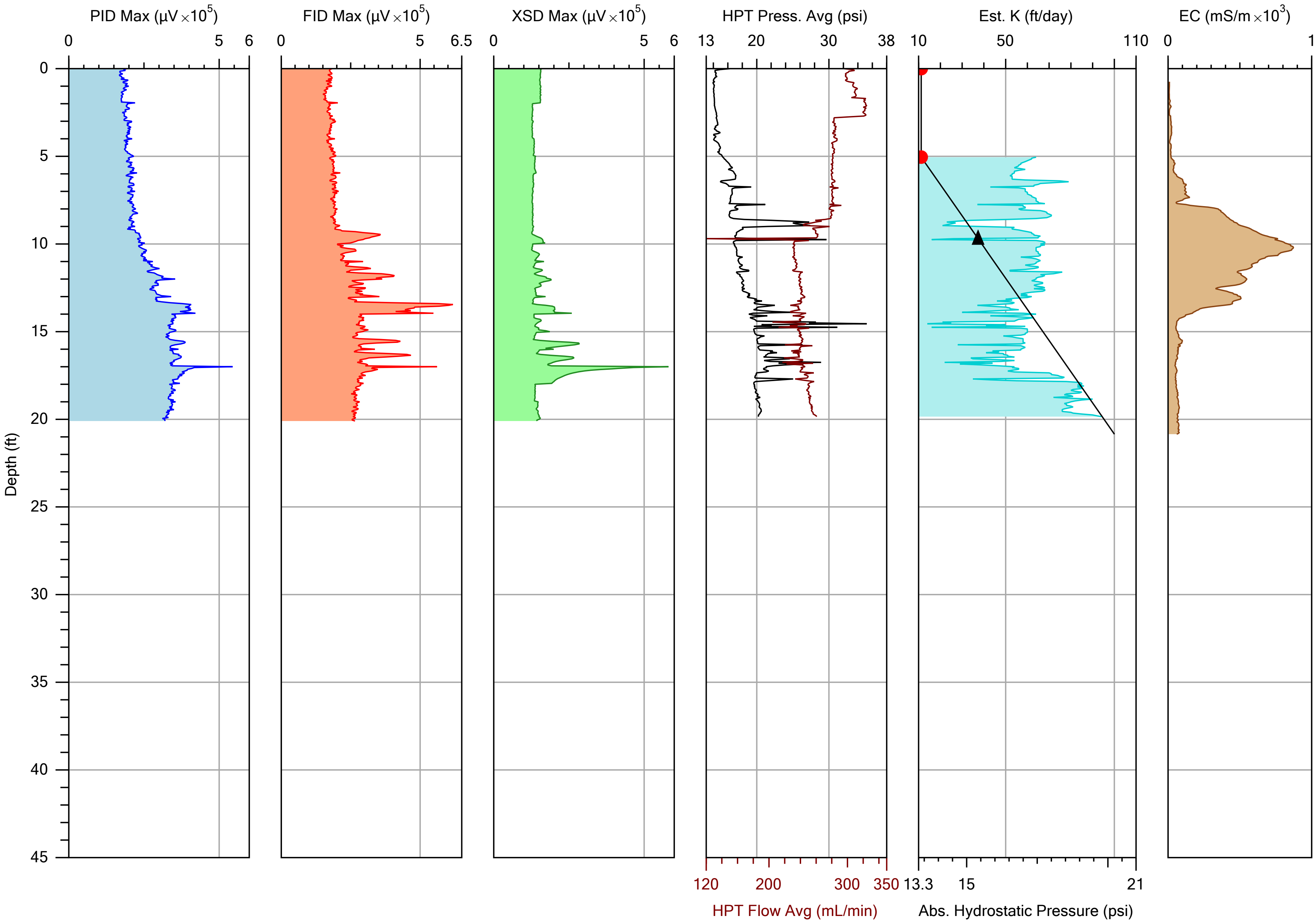
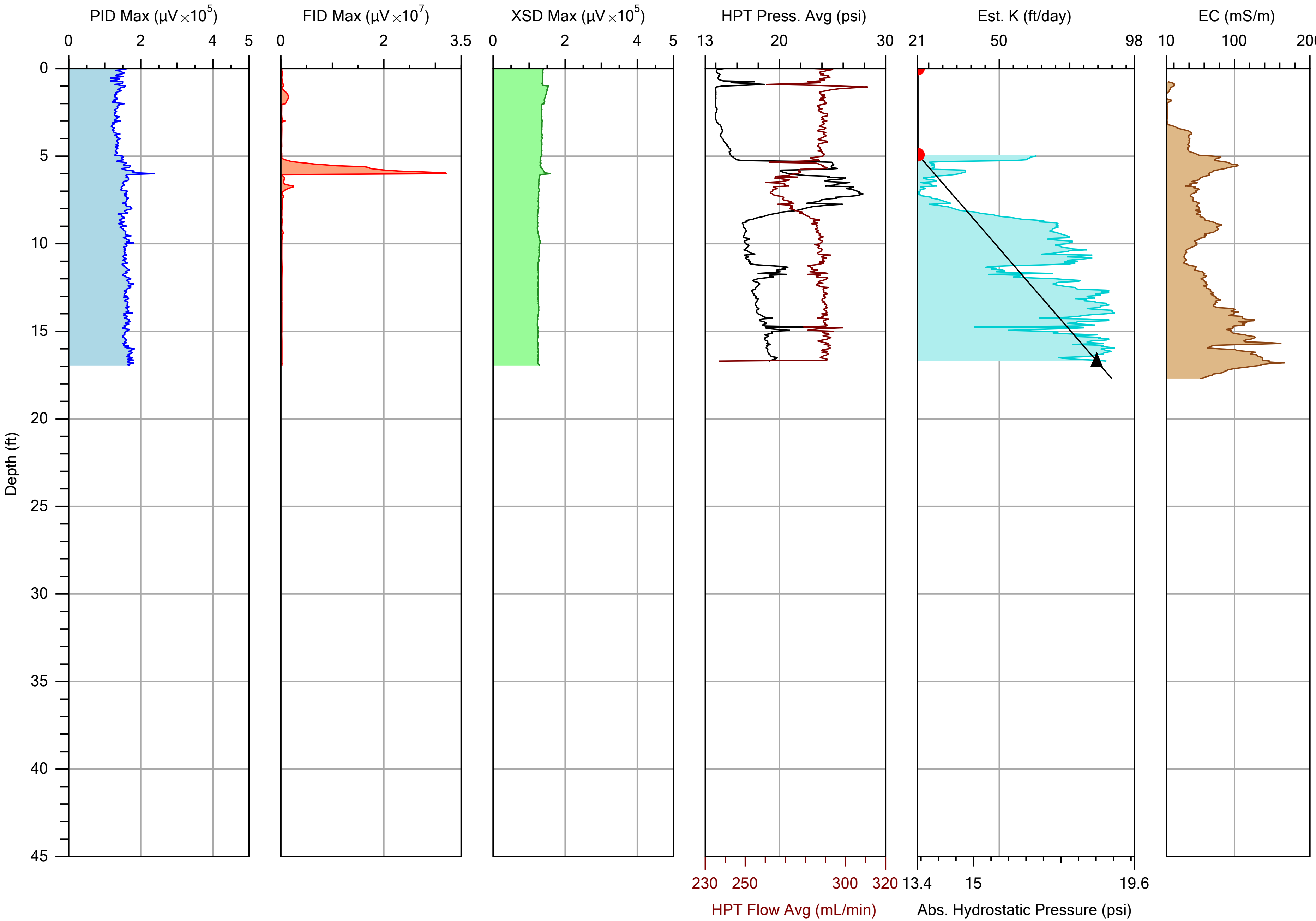
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

		File: MIP-43.MHP
Company: Columbia Technologies	Operator: MMA	Date: 11/25/2013
Project ID: Former Aerovox Facility	Client: URS	Location:

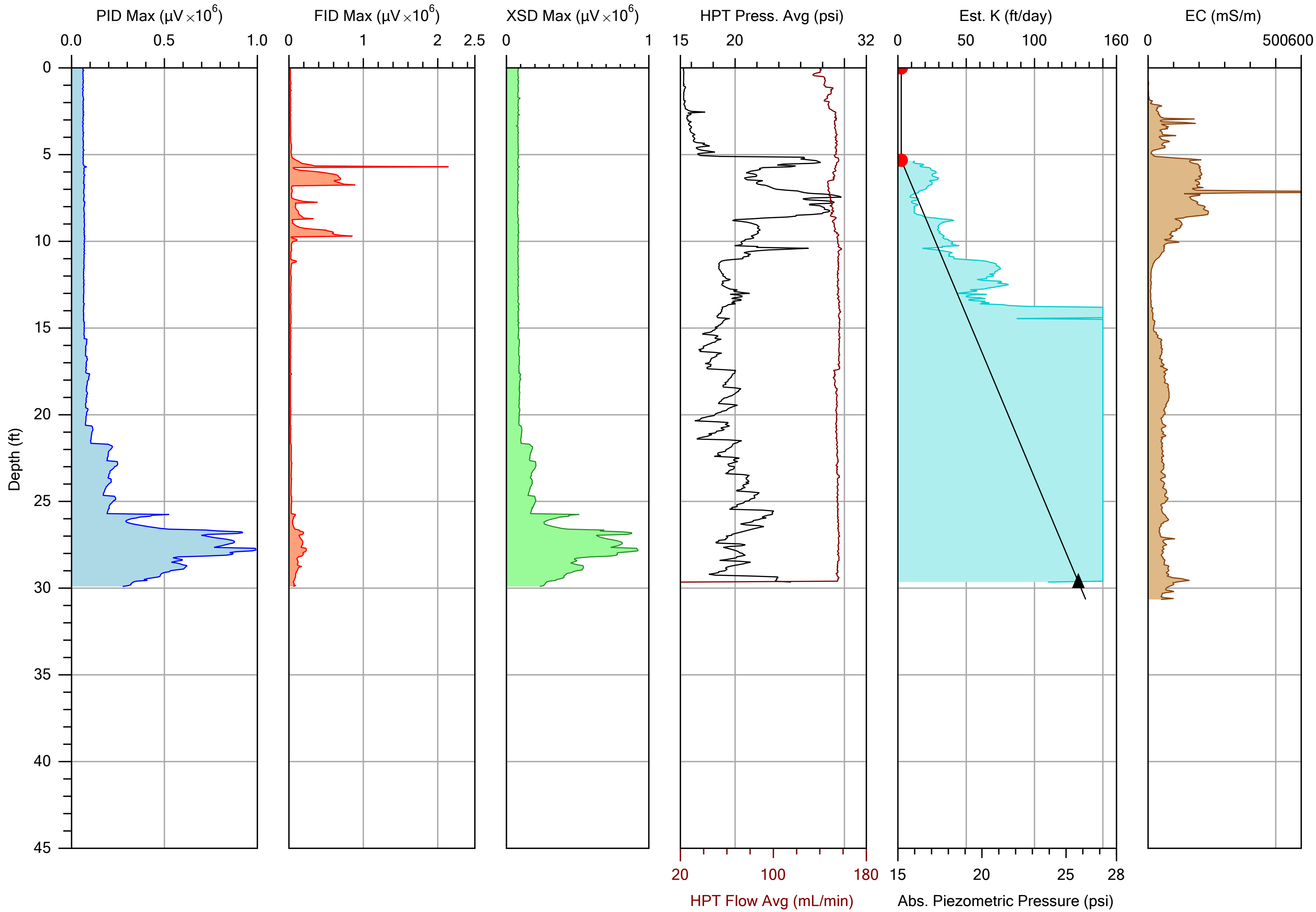


		File: MIP-44.MHP
Company: Columbia Technologies	Operator: MMA	Date: 11/25/2013
Project ID: Former Aerovox Facility	Client: URS	Location:

APPENDIX C

MiHpt Logs, 2014 Visit

COLUMBIA TECHNOLOGIES
www.columbiadata.com



COLUMBIA TECHNOLOGIES

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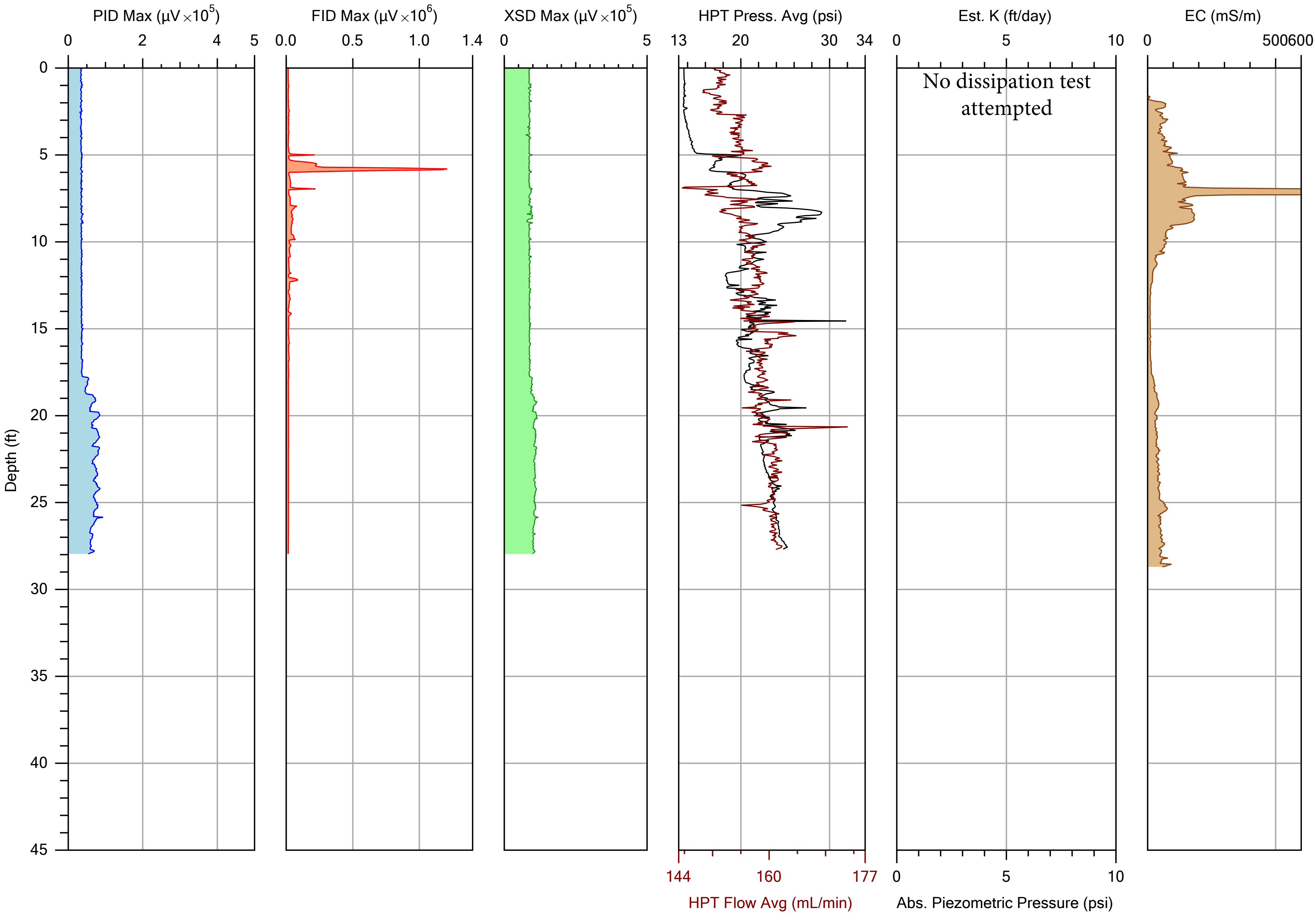
Company: COLUMBIA Technologies	Operator: DJM	Date: 7/15/2014
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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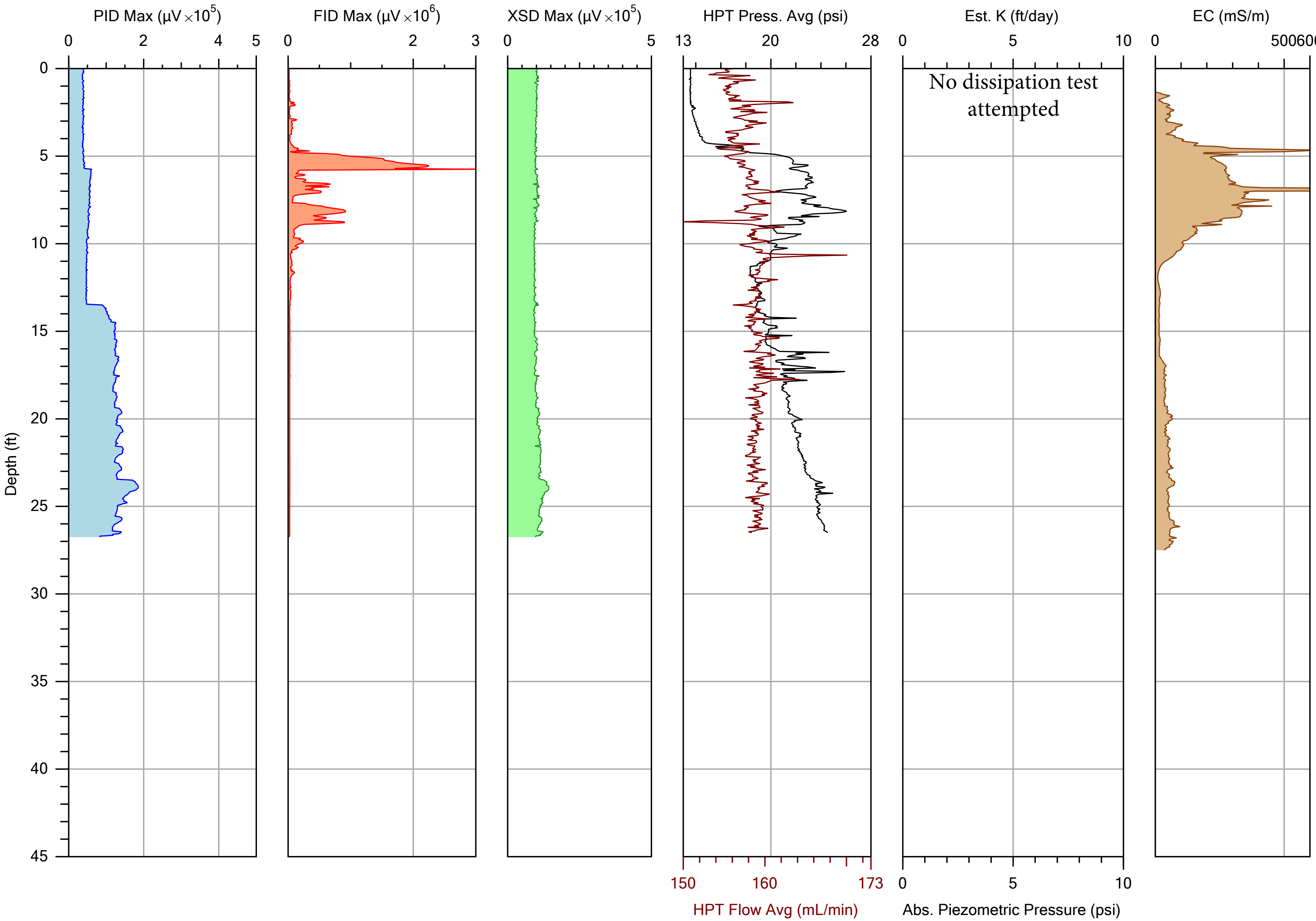
Company: COLUMBIA Technologies	Operator: DJM	Date: 7/14/2014
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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Company: COLUMBIA Technologies	Operator: DJM	Date: 7/14/2014
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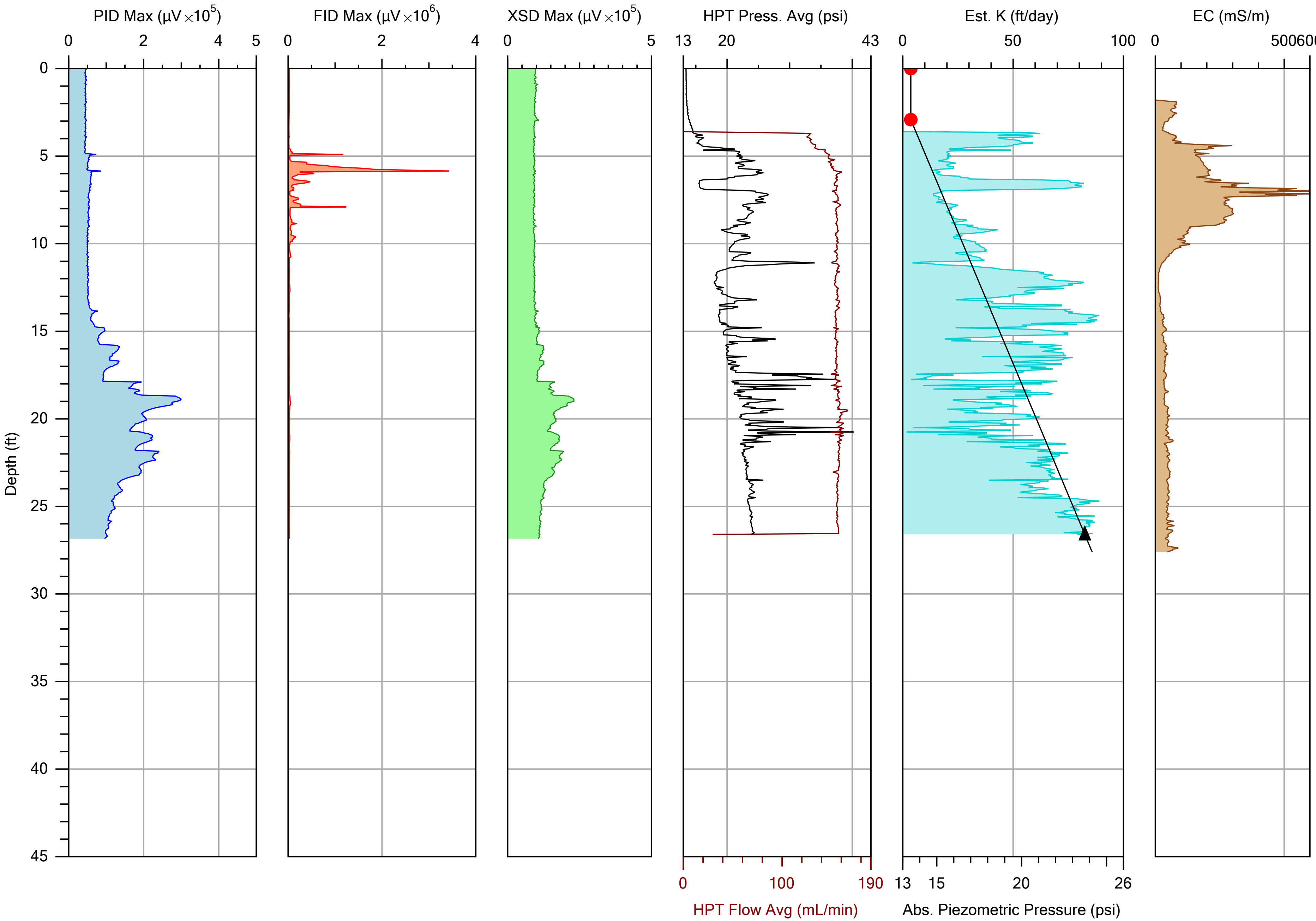

COLUMBIA TECHNOLOGIES

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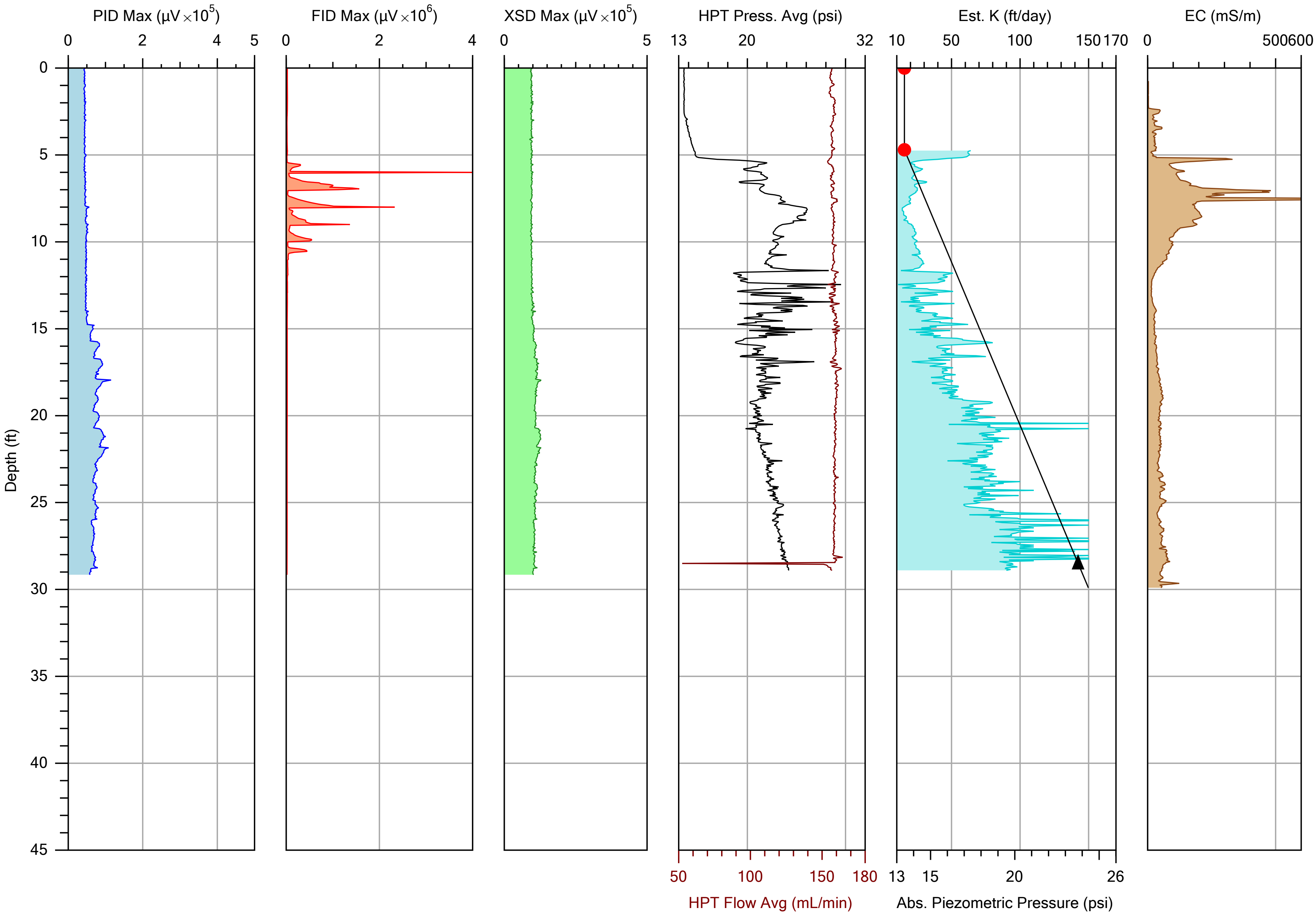
Company: COLUMBIA Technologies	Operator: DJM	Date: 7/14/2014
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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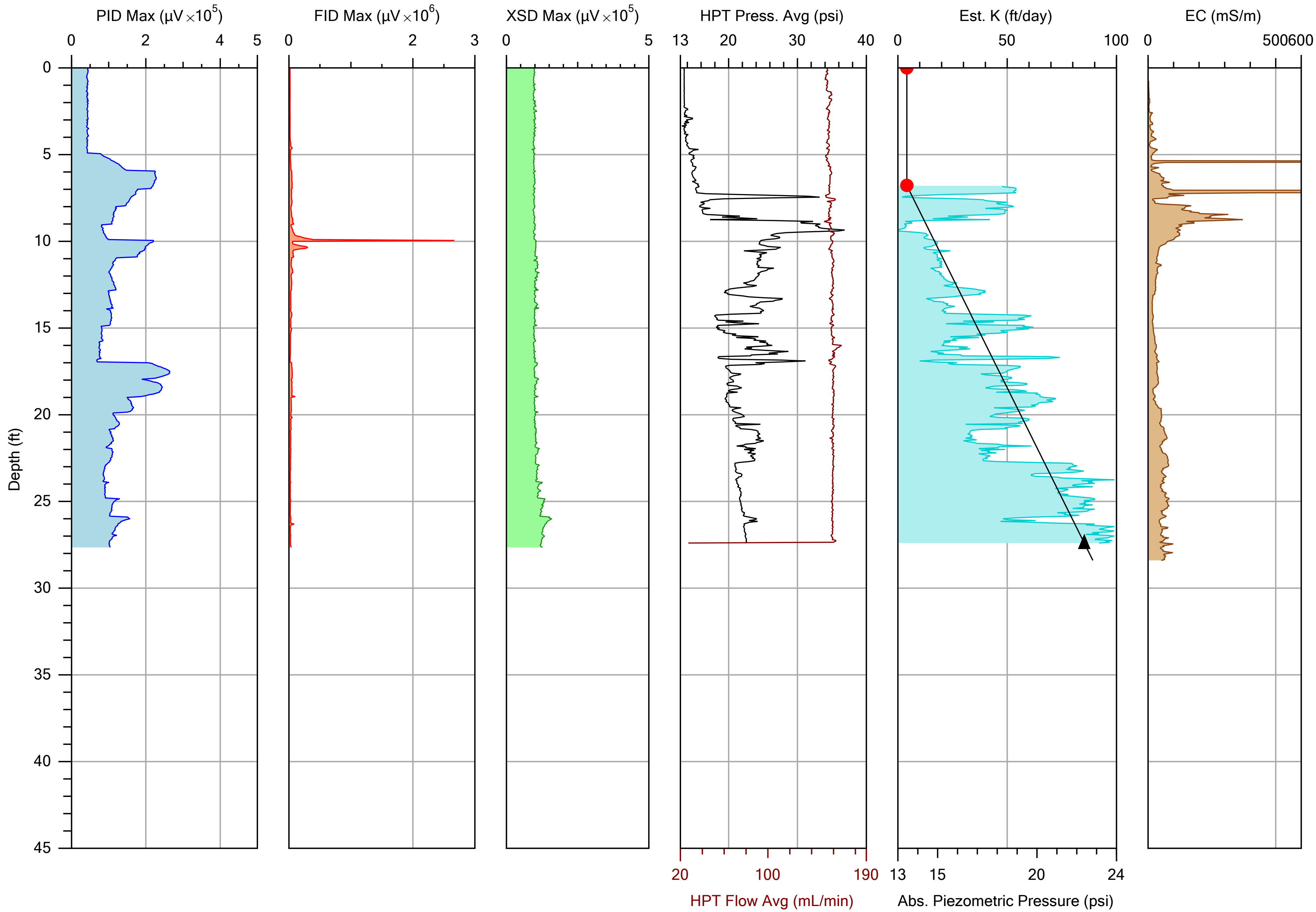
Project ID: Former Aerovox Facility	Client: URS	Date: 7/14/2014
		Location:



COLUMBIA TECHNOLOGIES

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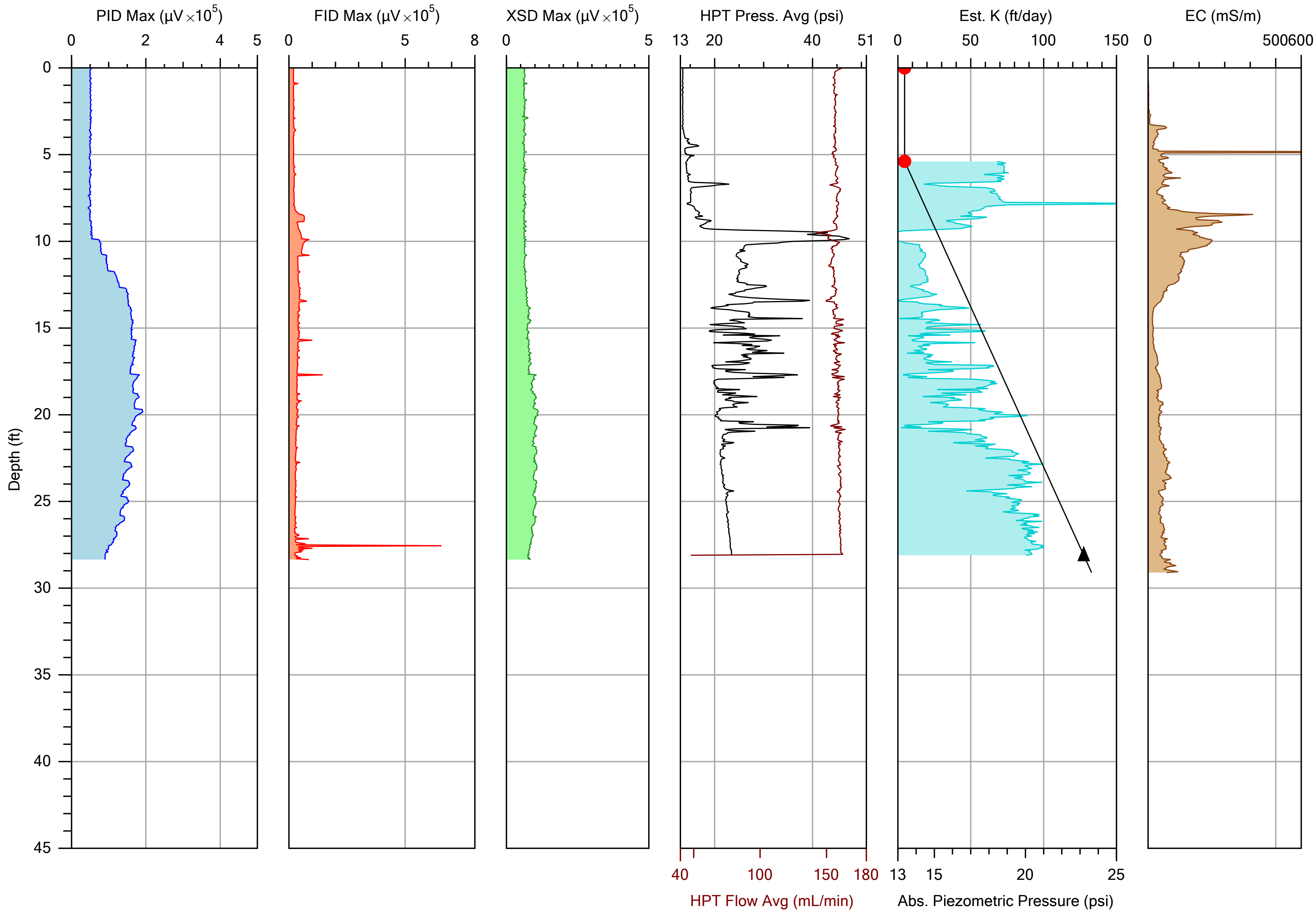
Company: COLUMBIA Technologies	Operator: DJM	Date: 7/14/2014
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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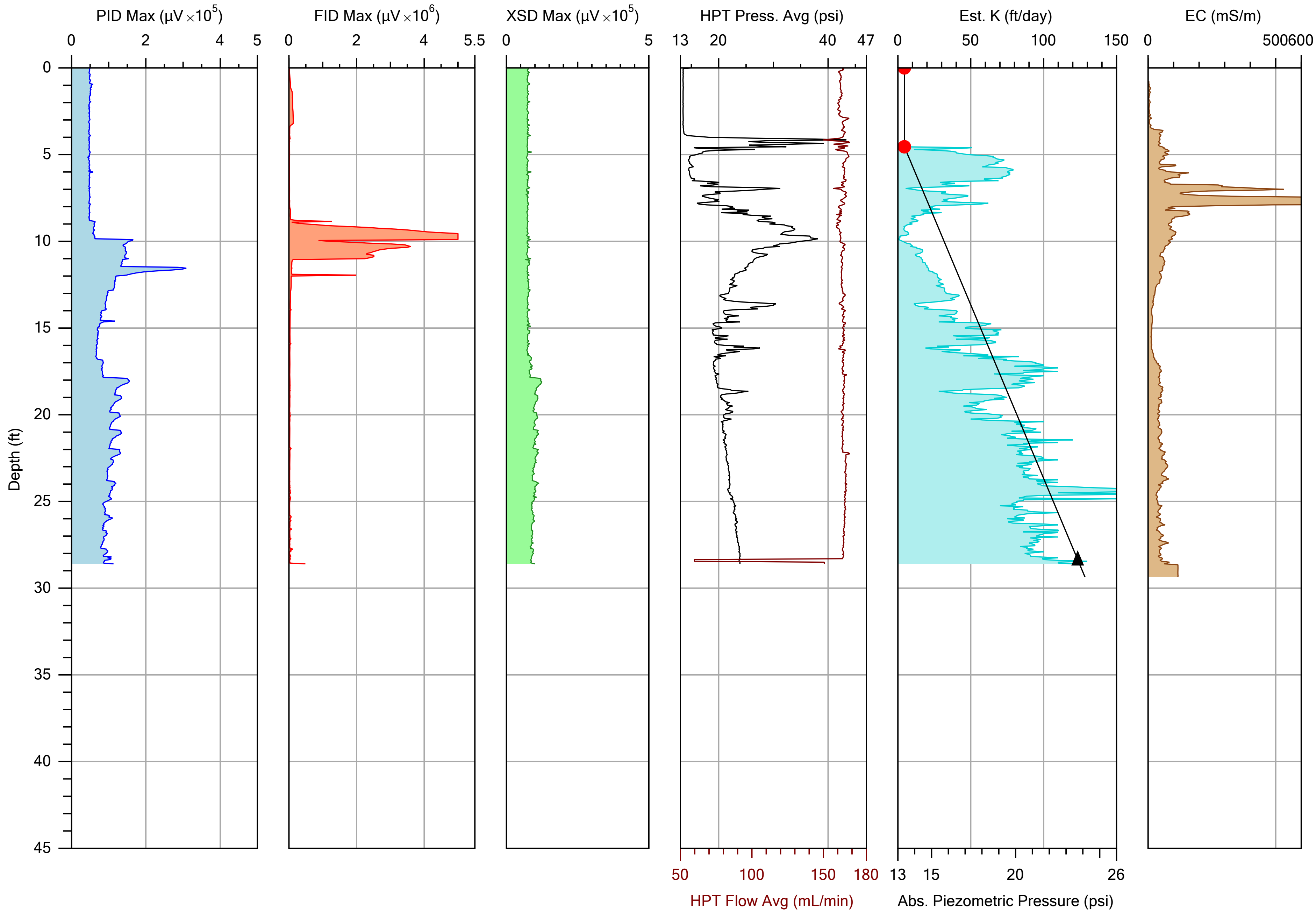
Company: COLUMBIA Technologies	Operator: DJM	Date: 7/15/2014
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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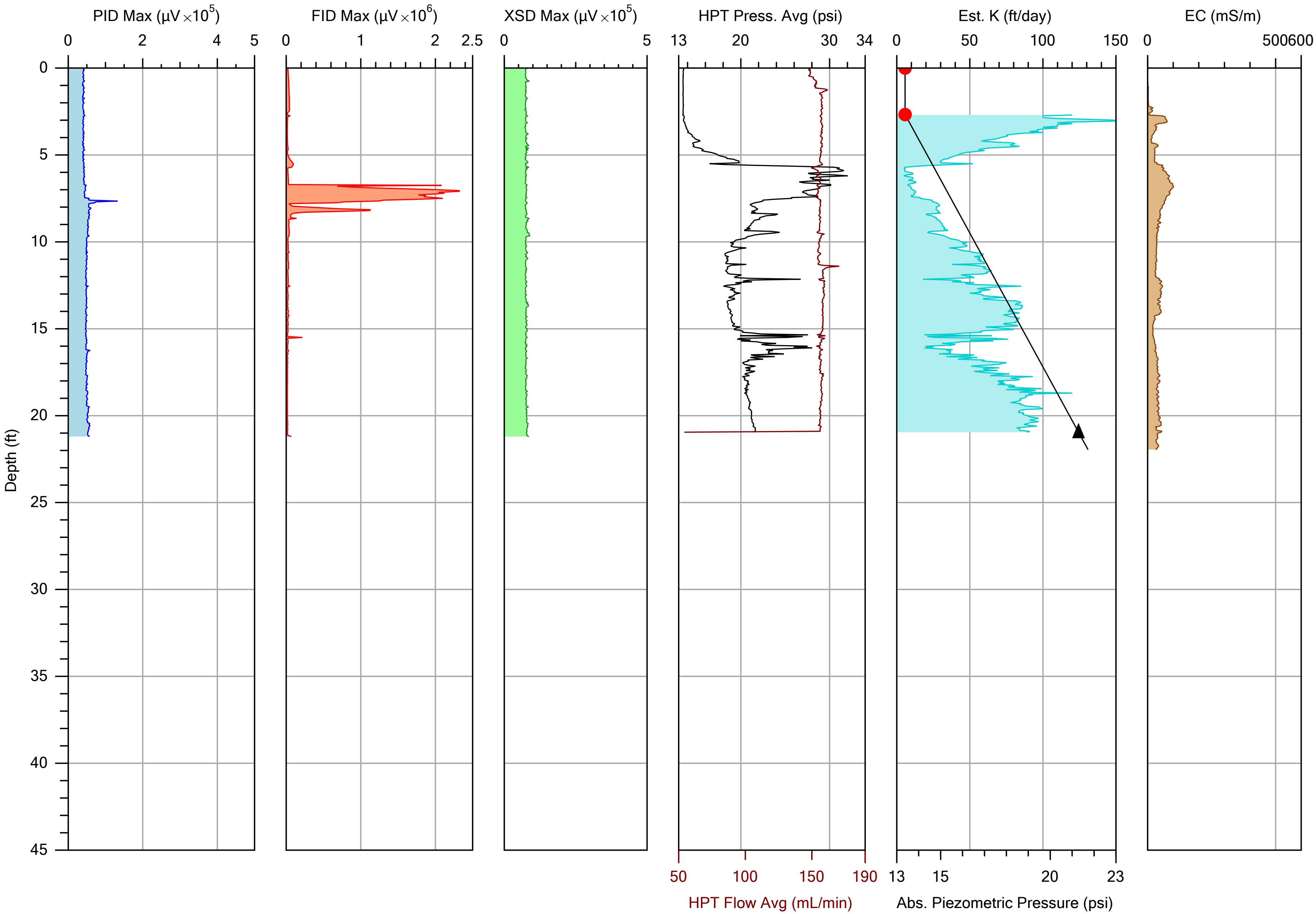
Company: COLUMBIA Technologies	Operator: DJM	Date: 7/15/2014
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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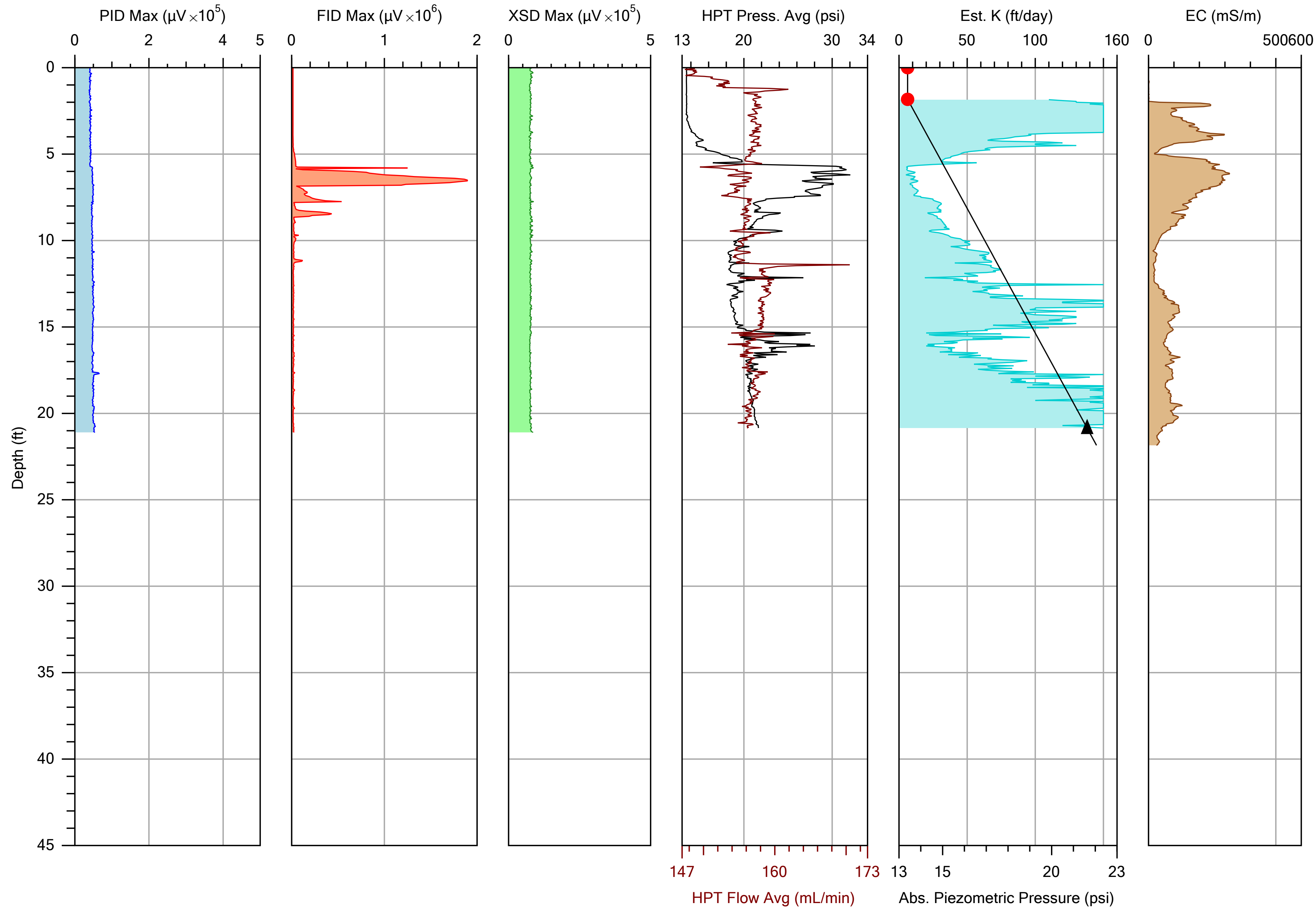
Company: COLUMBIA Technologies	Operator: DJM	Date: 7/15/2014
Project ID: Former Aerovox Facility	Client: URS	Location:



COLUMBIA TECHNOLOGIES

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Company: COLUMBIA Technologies	Operator: DJM	Date: 7/15/2014
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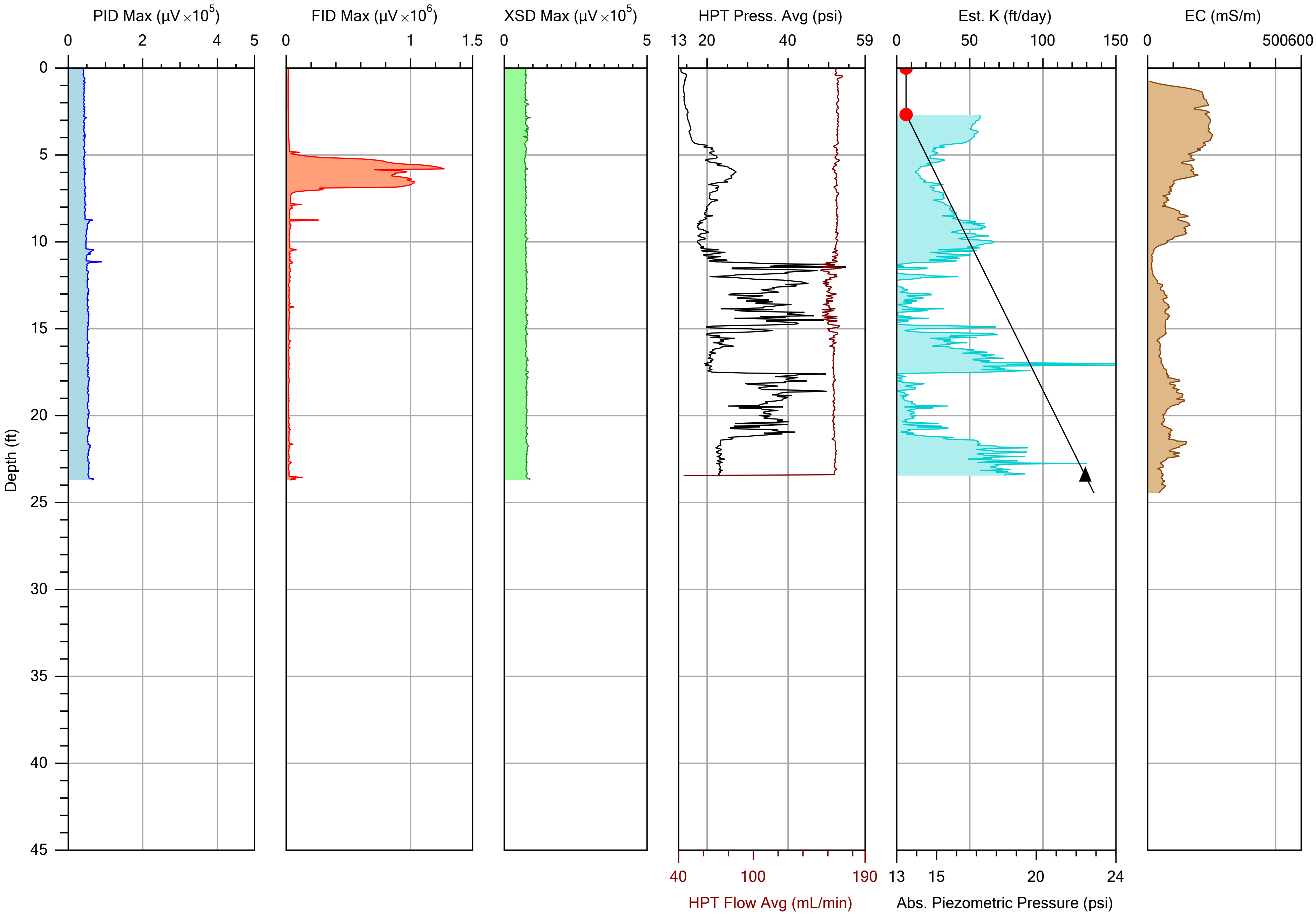

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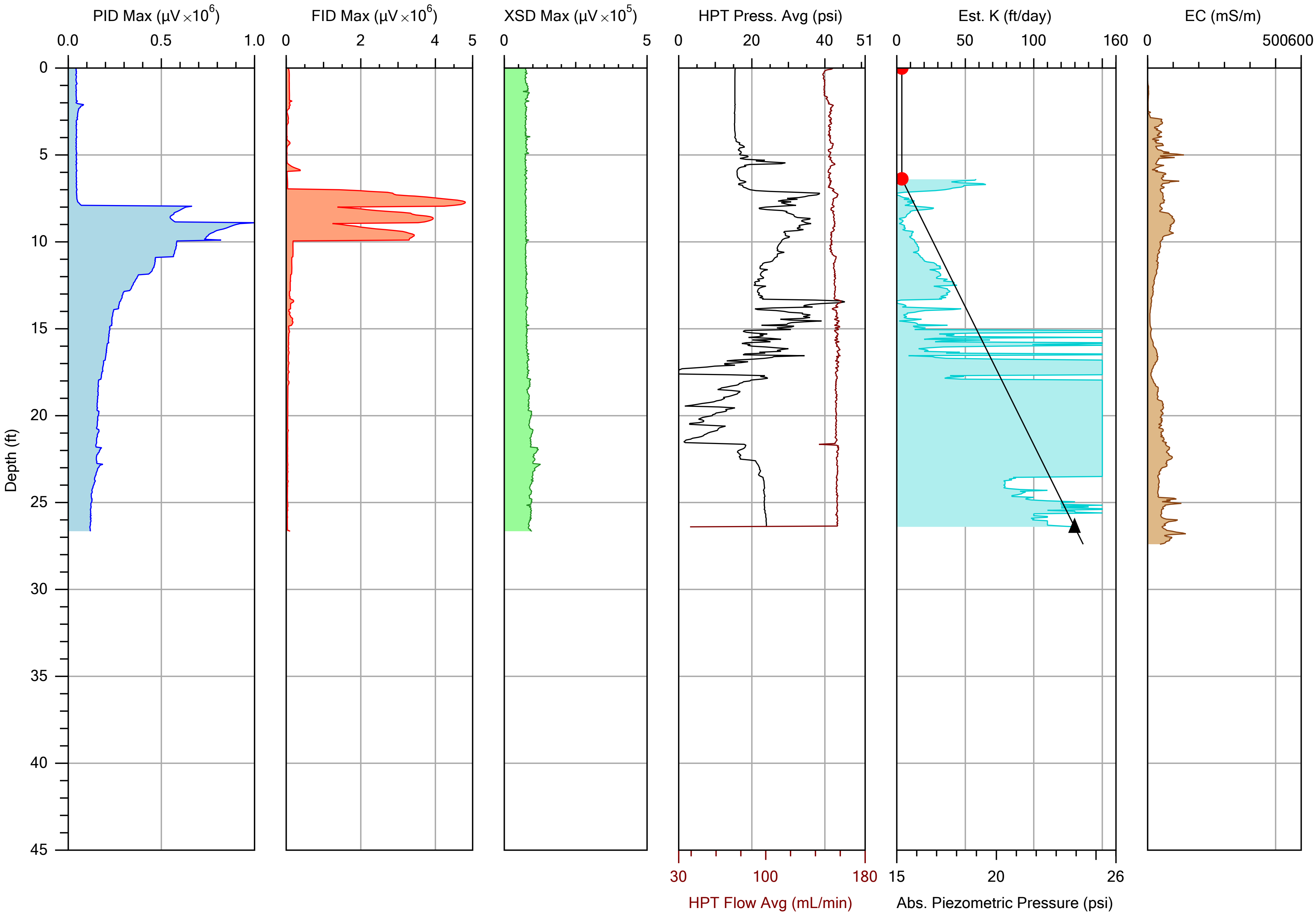
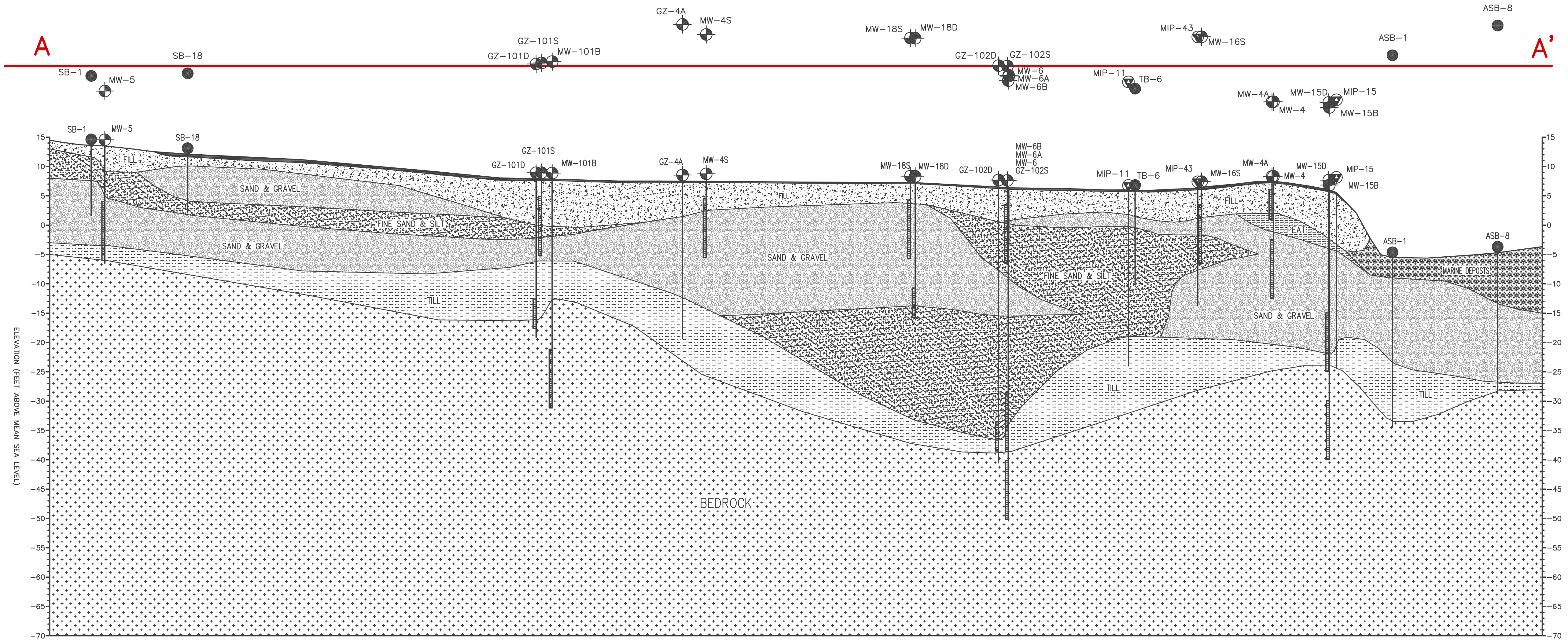


		File: MIP-55.MHP
Company: COLUMBIA Technologies	Operator: DJM	Date: 7/15/2014
Project ID: Former Aerovox Facility	Client: URS	Location:

APPENDIX B

Preliminary Cross Section



LEGEND

- BEDROCK –
- GLACIAL TILL –
- SAND & GRAVEL –
- FINE SAND & SILT (SL) –
- PEAT (PT) –
- MARINE DEPOSITS –
- FILL –
- ASPHALT
- MONITORING WELL
- SOIL BORING
- MIP BORING
- WELL SCREEN INTERVAL
- (XXX) GROUNDWATER ELEVATION
- 950 GROUNDWATER EQUIPOTENTIAL CONTOUR (DASHED WHERE INFERRED)
- INFERRED DIRECTION OF GROUNDWATER FLOW

CROSS-SECTION LOCATION MAP
SOURCE: GOOGLE EARTH PRO, DATED 4-27-13
NOT TO SCALE

DRAFT

URS

URS Corporation
477 Congress Street, Suite 900
Portland, ME 04101-3453
Tel: 207.879.7686
Fax: 207.879.7685
www.urscorp.com

0 100 200
SCALE IN FEET

PROJECT NO:	39744051		
DESIGN:	FS	SCALE:	AS SHOWN
APPROVED:	––	DATE:	JULY 2014
DRAWN:	CAM	FILE NO:	AXV-XSECTION A-A

CLIENT: AVX CORPORATION

PROJECT: PHASE II COMPREHENSIVE SITE ASSESSMENT
740 BELLEVILLE AVENUE
NEW BEDFORD, MA

TITLE: GEOLOGIC CROSS-SECTION A-A'

FIGURE NO.: ––

APPENDIX C

IDW Disposal Documentation

TRUCK # 5181

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) RI 14012941 1300 SC PPW 5/22/2014 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: MAD062319777
2. Page 1 of 1
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 006070288 FLE

5. Generator's Name and Mailing Address:
New Bedford City of
133 William Street Room 304
New Bedford, MA 02740
Generator's Phone: 508-990-1603

Generator's Site Address (if different than mailing address):
Aerovox Facility 21E/MCP 740 Belleville Avenue
New Bedford,MA 02745

6. Transporter 1 Company Name: Clean Harbors Environmental Services Inc — U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
Clean Harbors of Braintree Inc
1 Hill Avenue
Braintree, MA 02184
Facility's Phone: (781) 380-7100
U.S. EPA ID Number: MAD053452637

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON DOT REGULATED MATERIAL, (SOIL)	15	DM	5454	K	MA01
	2. NON DOT REGULATED MATERIAL, (WATER AND DRILLING FLUIDS)	16	DM	800	G	MA99
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. CH769671 15X55
2. CH769696 16X55
OUT OF SERVICE DATE: 7/21/14

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: # Ray Hellberger for the City of New Bedford — Signature: [signature] — Month 07 Day 21 Year 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jim DeNolf #1215 — Signature: Jim DeNolf #1215 — Month 07 Day 21 Year 14
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Line 9b1; Items 11+12 should read: 3446 K (DAC) Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141 2. H141 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Keith I. Dary [signature] — Signature: [signature] — Month 07 Day 21 Year 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO GENERATOR**

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

TSCA MANIFEST CONTINUATION FORM

MANIFEST NUMBER: 006070288FLE GENERATOR NAME: New Bedford City OF

ADDRESS: 133 William Street Room 304

New Bedford, Mass 02740

EPA ID NUMBER: MAD062319777

ITEM	NUMBER	Type/ Description	Serial No. or Other ID No.	Date of Removal From Service For Disposal	Volume (gallons) or Weight (kilograms)
9A1	1	Drum WITH cuttings/Debris	070288 - 1	7-26-14	170 K
9A	1	↓	-2	↓	330 K
9A	1		-3		254 K
9A	1		-4		285 K
9A	1		-5		368 K
9A	1		-6		298 K
9A	1		-7		338 K
9A	1		-8		355 K
9A	1		-9		36 K
9A	1		-10		90 K
9A	1		-11		363 K
9A	1		-12		240 K
9A	1		-13		65 K
9A	1		-14		204 K
9A	1		-15		150 K

NOTES

1. **Type/Description:** Brief description of the unit such as:
   (i) **Transformer** (> 500 ppm or < 500 ppm) **(ii) Capacitor** **(iii) Bulk Liquid/Solid** (tanker or rolloff)
   (iv) **PCB Container** - A container in direct contact w/ PCBs, such as a drum containing PCB spill debris
   (v) **PCB Article Container** - A container not in direct contact w/ PCBs, such as a drum containing one or more non-leaking motors, light ballasts, etc.
2. **Serial No. or Other ID No.:** Serial Number must be reported if one is present; if not, assign a unique number.
3. **Date Removed From Service For Disposal:** The date when the item was taken out of service <u>for disposal</u>. If more than one item (batch) is present in the container (tank), the reported date for the entire container (tank) must be the first (i.e., the earliest) date.
4. **Weight:** Volume may be reported in gallons; however, the weight in kilograms is preferred.