



August 11, 2016

Mr. Dan Kowalski
Project Manager
Guardian Environmental Services, Inc.
70 Albe Drive
Newark, DE 19702

RE: Results of Borehole Geophysical Logging: ERT-44-I
Site: Crown Cleaners Superfund Site, Village of Herrings, NY

Dear Mr. Kowalski,

In response to your request, Earth Data Northeast, Inc. ("EDN") is pleased to provide Guardian Environmental Services, Inc. ("GES") with the following summary of borehole geophysical logging services performed July 25, 2016 at the Crown Cleaners Superfund Site, located in Village of Herrings, New York.

Borehole Geophysical Logging

The following suite of geophysical logs was performed (as indicated by the "X") in well ERT-44-I.

- ☐ Color Borehole Video Survey
- ☐ Fluid Temperature / Fluid Conductivity
- ☒ 3-Arm Caliper
- ☐ Electrical Resistivity Suite
 - ☐ Spontaneous Potential ("SP")
 - ☐ Single Point Resistance ("SPR")
 - ☐ Short (16") & Long (64") Normal Resistivity
- ☒ Natural Gamma
- ☐ Acoustic Televierer ("ATV")
- ☒ Optical Televierer ("OTV")
- ☐ Heat Pulse Flowmeter
 - ☐ Ambient conditions
 - ☐ Pumping conditions; Depth of pump: _____; Rate: _____
- ☐ Additional Tooling: _____

Results of Borehole Geophysical Logging

The results of the borehole geophysical logging conducted in ERT-44-I are summarized below. A geophysical composite graph containing the logs performed in ERT-44-I is included as an attachment.

Features identified with the OTV are presented in both tabular and graphical format, referenced to True North, and are also attached. A qualitative classification of each feature, with respect to its potential aperture, was assigned according to the following criteria:

Fracture/Feature – obvious, dark sinusoidal line across the entire acoustic image; usually supported by the response of the 3-arm caliper.

Hairline Fracture/Feature – as above, though not as evident; generally minimal aperture noted

Discontinuous Fracture (Hairline or otherwise)/Feature – shape of sinusoidal line is intact; does not span across entire acoustic image.

Bedding/Change in Lithology – shape of sinusoidal line is intact, usually supported by natural gamma log and/or response of acoustic return; generally minimal aperture noted

More features may exist than could be identified. Characterization of features was aided by software provided by the geophysical tool manufacturer.

All geophysical logs presented in this report are referenced from below top of casing (“toc”).

ERT-44-I

Well diameter: nominal 6"

Total depth: 50'

Casing depth: 34'

Casing stick-up (above grade): 1.9'

Static water level: 50'

Field observations / Remarks:

Rock characteristics:

- No major fractures identified
- Relative changes in lithology between 45'-49' (higher natural gamma)

OTV features: 14 (see attached summary table and graphical presentation)

Apparent strike: East-Northeast – West-Southwest (primary) & Northwest – Southeast (secondary)

Apparent dip: South-Southeast & Northeast

The findings and conclusions presented in this report are the result of fieldwork, data analysis, and interpretations completed by EDN personnel as of this date. This report was prepared in response to a request from GES, using generally accepted geophysical practices, for the exclusive use of GES. No other warranty, express or implied, is made.

Additional copies of the geophysical logs are available upon request.

If you should have any further questions or comments, please feel free to contact me at (610) 524-9466 or via email at eonuskanych@earthdatane.com.

Sincerely,



Evan Onuskanych
Staff Geoscientist
Earth Data Northeast, Inc.

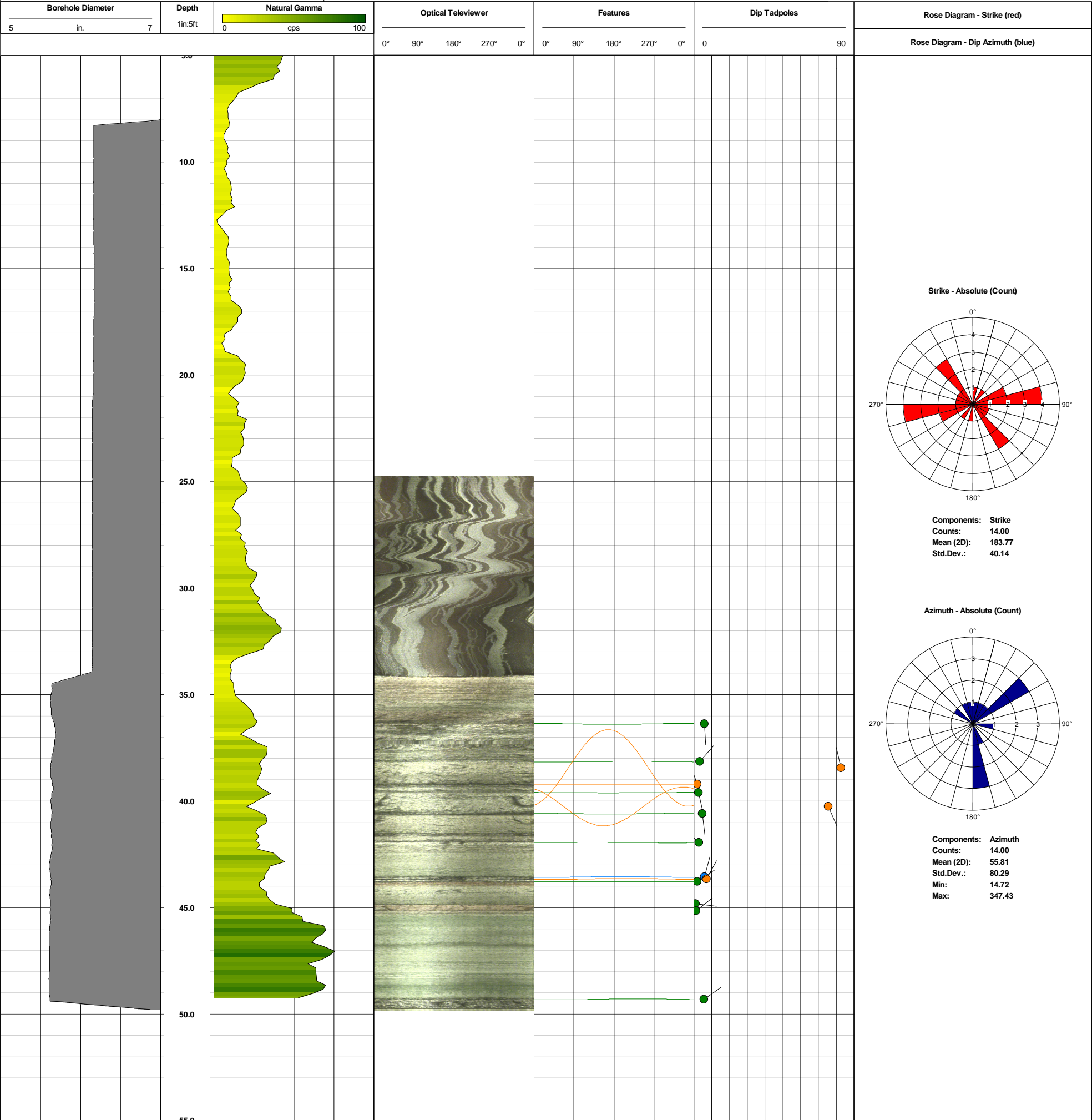
Client: **Guardian Environmental**
Location: **Crown Cleaners Site**
Well Name: **ERT-44-I**
Date: **07/25/16**
Depth Reference: **Top of Casing**
Magnetic Declination: **-12.97 deg**
North reference: **True North**

Borehole Diameter: **6" nominal**
Static Water Level: **50'**
Casing Depth: **34'**
Total Depth: **50'**

- Hairline Fracture/Feature

Discontinuous Hairline Fracture/Feature

Bedding/Change in Lithology



ERT-44-I OTV Feature Summary Table
Crown Cleaners Superfund Site; Village of Herrings, NY

Avg. Depth of Feature (ft)	Dip Azimuth (deg from North)	Dip Angle (deg)	Strike (deg from North)	Feature Description
36.4	176	6	86	Bedding/Change in Lithology
38.2	41	3	311	Bedding/Change in Lithology
38.4	347	83	257	Discontinuous Hairline Fracture/Feature
39.2	341	2	251	Discontinuous Hairline Fracture/Feature
39.6	167	3	77	Bedding/Change in Lithology
40.3	157	76	67	Discontinuous Hairline Fracture/Feature
40.6	173	5	83	Bedding/Change in Lithology
41.9	312	3	222	Bedding/Change in Lithology
43.6	15	6	285	Hairline Fracture/Feature
43.7	28	7	298	Discontinuous Hairline Fracture/Feature
43.8	56	2	326	Bedding/Change in Lithology
44.8	96	1	6	Bedding/Change in Lithology
45.2	52	1	322	Bedding/Change in Lithology
49.3	55	6	325	Bedding/Change in Lithology