Phase II Site Assessment Report
December 1, 2021
WBS Element: 45786.1.1
State Project: B-5833
Yadkin County

At

Parcel #: 011
Add-On Venture Properties, LLC Property
5652 and 5704 US Hwy 21; Jonesville, NC, 28642
PIN #: 4869563147, 4869562417, 4869563091
Facility ID No.: 00-0-0000023364
Groundwater Incident #: 37795

Prepared For:

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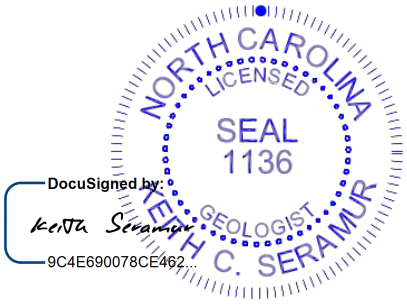

Keith C. Seramur, P.G.

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1.0 Introduction

1.1 General Site Background Information

Seramur & Associates, PC was contracted to complete a Phase II Environmental Site Assessment at:

Parcel #: 011
Add-On Venture Properties, LLC Property
5652 and 5704 US Hwy 21; Jonesville, NC, 28642
PIN #: 4869-56-3147, 4869-56-2417, 4869-56-3091
Facility ID No.: 00-0-0000023364
Groundwater Incident #: 37795

Parcel #011 is located along the northeastern side of US Hwy 21 between Benton Road and Interstate 77. The property is in the Sandyberry Creek stream valley approximately 1,500 feet southeast of the confluence of Sandyberry Creek and an unnamed tributary stream. Bedrock in the area is mapped as Granitic Rock of the Inner Piedmont belt, a gneissic muscovite-biotite quartz monzonite (Espenshade, G.H., Rankin, D.W., Shaw, K.W., and Neumann, R.B.. Geologic map of the east half of the Winston-Salem quadrangle, North Carolina-Virginia, U.S. Geologic Survey Misc. Inv. Series Map I-709-B, 1975).

A Notice to Proceed was obtained on September 24, 2021. Our area of investigation included the existing and proposed Right-of-Way (R/W), Control-of-Access (C/A) and Easements along the northeastern side of US Hwy 21 (Figure 2). The Phase II Site Assessment scope of work included completing a geophysical survey, soil sample collection and laboratory analysis. Geophysical investigations evaluate the potential for underground storage tanks and remnant UST system infrastructure. The purpose of laboratory analysis is to assess soil quality across the easement (Figure 3). Background research for this project included reviewing historic aerial photographs and NCDEQ databases.

2.0 Scope of Work

2.1 Background Research

According to the Yadkin County Tax Administration records, the property is owned by ASMC, LLC. Available historic aerial photographs from the USGS EarthExplorer website and Google Earth Pro were reviewed.

The following NCDEQ databases were queried for incidents at Parcel #011:

- Dry Cleaners
- Active USTs
- UST Incident Map
- UST Database
- Hazardous Waste Sites

2.2 Geophysical Surveys

Seramur & Associates used the Pythagorean Theorem to establish five grids within the existing and proposed Right-of-Way (R/W), Control-of-Access (C/A) and Easements across the parcel. The easements include Temporary Construction Easements (E), a Permanent Utility Easement (PUE), a Permanent Drainage Easement (PDE) and a Temporary Drainage Easement (TDE) (Figure 4). Geophysical grid data was collected along transects at a two-foot spacing. Additionally, areas where grid data could not be collected were surveyed by running GPR transects and using the Schonstedt Magnetic Locator

The magnetometer data was collected with a GEM Systems GSM-19W Walking Overhauser magnetometer. The data was compiled in Excel spreadsheets and hillshade maps of the magnetic data was drafted using Golden Software's Surfer® modeling program. The lighter shades are lower magnetic readings, and the darker colors are higher magnetic readings (Figure 5). Ferrous objects in the subsurface have a magnetic field distinct from the surrounding soil and produce magnetic anomalies on the hillshade maps.

A Ground Penetrating Radar (GPR) survey was completed across the grids and transects using Geophysical Survey Systems, Inc. UtilityScan GPR System with a 350 MHz hyperstacking antenna. The GPR data was downloaded and saved onto a computer. The GPR grid and transect data has been processed and modeled using GPR Slice® software. The GPR data processing included adjusting time zero, completing a background removal and adjusting the time variable gain to enhance deep reflections. Three-dimensional models of the GPR grid and transect data were produced with GPR Slice® software. Three time slices (or depth slices) were imaged in each 3D model at depths of 0.2 to 0.5 feet, 1.8 to 2.1 feet and 3.0 to 3.3 feet (Figures 6 through 8). Each depth slice is a horizontal slice or plan view of the reflections across a 0.3-foot thickness of the subsurface. For example, the deep GPR depth slices show reflections in the radar data between depths of 3.0 and 3.3 feet. The profiles of the GPR transects show the subsurface directly under the path of the antenna to a depth of approximately 8.5 feet (Figures 9a through 9h).

2.3 Soil Sampling and Analyses

On November 8th and 9th, 2021, Carolina Soil Investigations, LLC mobilized to the site to drill Geoprobe borings and collect soil samples. Our project design typically calls for collecting a shallow and deep soil sample from each boring (Figure 3). The purpose of collecting samples at a depth of ~3.0 feet is to test for petroleum releases related to surface spills and releases from product lines. The purpose of collecting samples at a depth of ~9.0 feet is to test for petroleum releases related to underground storage tanks. Soil borings were drilled within the proposed R/W, C/A and easements across the property.

A track-mounted Geoprobe rig was used to drill thirty soil borings. The texture and type of soil material in the Geoprobe cores was described and recorded. A new pair of Nitrile gloves was worn while collecting each soil sample. A representative portion of each soil sample was placed in a zip lock bag and allowed to rest for a period of time to allow volatile vapors to accumulate in the headspace of the bag. A calibrated PhoCheck Tiger Photoionization Detector (PID) was used to screen the headspace in each bag and the concentration of volatile petroleum vapors was

measured and recorded (Table 1). Table 1 lists the boring data including sample number, depth, PID reading, lithology, and type of soil material.

REDLab, LLC provided onsite laboratory analyses for the soil samples collected from the Geoprobe cores on November 8, 2021. Due to a scheduling conflict, REDLab could not be onsite on November 9, 2021 and the samples collected that were analyzed were shipped to REDLab's office in Charlotte, NC for analysis. REDLab analyzed the soil samples for petroleum constituents by Ultra-Violet Fluorescence using a QED HC-1 analyzer. The analytical results are reported as Gasoline Range Organics (GRO) and Diesel Range Organics (DRO) and Total Petroleum Hydrocarbons (TPH). REDLab provided a hydrocarbon spectrum with each of the sample results. This spectrum is used for a tentative identification of the type of hydrocarbon detected by the analytical method. The hydrocarbon fingerprint is interpreted by REDLab using a library search of spectra for known hydrocarbon types and concentrations. The laboratory reports and fingerprint spectra are included in Appendix B.

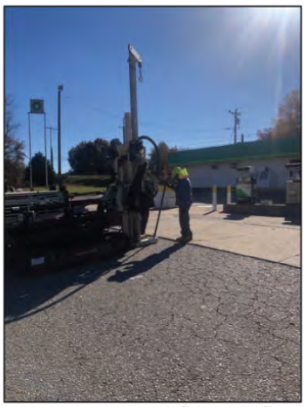
2.4 Plates 1 and 2 – Photographs of Parcel #011 (Dated November 6 and 8, 2021)

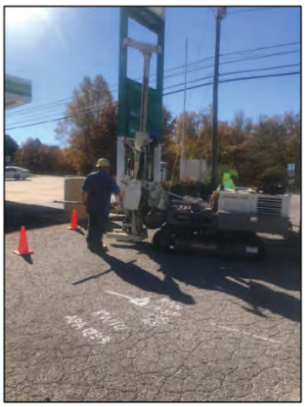
Plate 1

Photo 1. Collecting magnetometer grid data in the parking lot of the restaurant at Parcel #011.

Photo 2. Collecting GPR grid data east of the diesel pump island.

Photo 3. Using the Schonstedt to screen areas of uneven and vegetated terrain.





Photos 4 & 5. Carolina Soil Investigations collecting soil borings from the gas station at Parcel #011.

Plate 2

Photo 1. Abandoned car located along the northeastern side of the property just outside of the TDE.

Photos 2 and 3. Discarded 55 gallon drum and fuel hoses along the eastern side of the property.

3.0 Results of Investigation

Parcel #011 currently operates as a gas station and a restaurant. The gas station and associated UST system are located on the southern part of the parcel. The restaurant is in the central part of the parcel. The northern part of the parcel is primarily undeveloped and covered with underbrush. A 1966 aerial photograph shows the property as an undeveloped field. According to the Yadkin County Tax Administration, the gas station building was built in 1986 and the restaurant building was built in 1984. The NCDEQ UST Database indicates that tanks were installed at the property in May, 1985.

There is a groundwater incident associated with the property, but not in relation to the existing UST system. Just past midnight on April 23, 2011, a tractor-trailer entered the facility and knocked the diesel fuel dispenser off of its mount. The shear valve broke, and 536 gallons of diesel fuel was released. No one was contacted at the time the dispenser was broken, so fuel was released for about six hours. Fuel ran downgradient towards the creek along the northeast property boundary, but the creek was not impacted. The site was cleaned up by Spectrum Environmental in the days immediately following the spill. Soil sample analysis indicated that Diesel Range

Organics were still above the NCDEQ Action Levels in three of the seven soil samples collected along the spill area. However, risk-based sample analysis indicated that remaining petroleum constituents in the soil were below the NCDEQ MSCCs. A Notice of No Further Action was issued for the site on July 15, 2011. See Appendix C for pertinent documents related to this incident.

SAPC personnel made a pedestrian reconnaissance of the property during the initial site visit on October 21, 2021. The active UST system was observed on the property. There is a propane aboveground storage tank east of the restaurant building that appears to be used for heating the building. Many concrete risers were observed around the property, but these appear to be related to septic systems rather than water supply wells. This area of Jonesville appears to utilize city water.

3.1 Geophysical Surveys

Grids 1 and 2 were collected in the northwestern corner of the parcel along Highway 21. A few small magnetic anomalies were detected in Grid 1 which are most likely related to utilities along the edge of the highway. A larger magnetic anomaly was detected in Grid 2 near the end of a fence (Figure 5a). Grid 5 was collected across the paved parking lot in front of the restaurant. This grid shows numerous small point anomalies that could be related to changes in the lithology of the stone used as aggregate in the pavement (Figure 5a).

Grids 3 was collected northeast of the convenient store, the diesel pump island, and the UST tank pit (Figure 4). Numerous small magnetic anomalies were detected in the area of the grid over a reinforced concrete slab (Figure 5b). Grid 4 was in a grass lawn southeast of the convenience store (Figure 4). Abundant small magnetic anomalies are observed in the septic drain field and there are a higher density of these anomalies around the edge of the former excavation for the drain field.

Areas outside of the five grids were screened with the Schonstedt magnetic locator. This was not very useful in the area surrounding the building and USTs/dispensers as all of the concrete was reinforced with rebar. Two small magnetic anomalies were detected southeast of Grid 4. These anomalies are too localized to be buried USTs and are likely related to some type of buried utility.

The shallow GPR depth slices are shown in Figures 6a and 6b. The only apparent organized set of reflections is a linear high amplitude reflector in Grid 2 which could be related to a septic drain line. Otherwise, the shallow GPR depth slices only show disorganized random reflections unrelated to a UST system.

The intermediate depth GPR depth slices are shown of Figures 7a and 7b. Grids 2 and 4 show high amplitude linear reflections along drain lines for the septic fields for each business. Grid 3 shows the edge of the UST system as five reflection free areas. This is likely because of the reinforced concrete above the tanks. The intermediate GPR depth slices for Grids 1 and 5 only show disorganized random reflections unrelated to a UST system.

The deep GPR depth slices are shown of Figures 8a and 8b. The only organized set of reflections is a utility line along Highway 21 in Grid 4. The deep GPR depth slices for Grids 1, 2, 3, and 5 show random, disorganized reflections unrelated to a UST system.

Forty transects of GPR data were collected in areas of Parcel 11 where grid data could not be collected because of traffic patterns and infrastructure (Figure 4). These forty transects were reviewed for evidence of a UST system. The following anomalies of interest were identified:

- Large hyperbola on Transects 4, 5, and 6 are existing drainpipes along the northeast edge of the parcel;
- Some type of utility line was crossed on Transect 16;
- The five registered USTs were crossed on Transect 17;
- Half of a large hyperbola was imaged on both Transects 24 and 25 and this is most likely produced by the footing of the convenience store; and
- GPR anomalies on Transects 28, 29, and 30 are drain lines in the septic drain field.

The geophysical surveys did not image magnetic anomalies or GPR reflection patterns indicative an unknown UST system or a former UST excavation.

3.2 Soil Borings, Sampling and Laboratory Analysis

The soil at Parcel #011 consists of fill material over residuum (saprolite) and alluvium (Table 1). The fill material is primarily silt loam. The residuum is primarily a sandy silt with gravel and the alluvium is sand with gravel. Groundwater was not encountered at this site, although the cores within the TDE were saturated. A soil sample was collected from each core recovered from the Geoprobe cores. Two samples were collected from the deep core of boring B-9.

Thirty borings were drilled, and sixty soil samples were collected. Forty-two (42) of the samples collected were analyzed for TPH-GRO and DRO (Table B-3).

Soil borings B-1 through B-7 were drilled within the proposed and existing R/W, C/A and PUE in the area fronting the restaurant building. Borings B-8 through B-15 and Boring B-27 were drilled in the proposed C/A, E, PDE and TDE on the northeast side of the property. Borings B-16 through B-26 and B-28 and B-29 were drilled in the existing R/W and proposed C/A, E and PUE surrounding the gas station and UST system. Finally, Boring B-30 was drilled south of the gas station building near proposed drainage features in the septic drain field (Figure 3). Petroleum constituents were elevated (>10.0 ppm) in 10 of the 42 samples that were analyzed. Four of these samples (S-17, S-18, S-20, and S-22) were located in the area where the diesel fuel spill had puddled along the eastern side of the property. The remaining six samples with elevated petroleum constituents were located around the gas station. Two of these samples (S-45 and S-47) contained petroleum constituents detected above the NCDEQ UST Action Levels. These samples were collected from the shallow cores of borings B-22 and B-23 respectively (Table B-3 and Figure 4).

3.3 Volume and Extent of Soil Contamination

Contaminated soil defined as GRO concentrations above 50 ppm and DRO concentrations above 100 ppm was detected in two soil samples collected at Parcel #011. The source of this soil contamination appears to be from leaking product lines. Patched pavement indicates that an old set of product lines could have been replaced in the past.

An estimate of the volume of contaminated soil in the vicinity of borings B-22 and B-23 can be calculated using the thickness of the contaminated soil horizon and the horizontal extent (Figure 11). An estimated soil contamination thickness of four feet will be used in our calculations. The area of contaminated soil is approximately 1,700 square feet. This number was estimated using rectangles overlaid onto the area of contamination (Figure 11). The estimated volume of contaminated soil in the vicinity of borings B-22 and B-23 is calculated as follows:

$$\mathbf{4\ ft. \times 1{,}700\ ft^2 = 6{,}800\ ft^3}$$
$$\mathbf{6{,}800\ ft^3 / 27\ ft^3/yd^3 = 251.9\ yd^3}$$
$$\mathbf{251.9\ yd^3 \times 1.5\ tons/yd^3 = 377.8\ tons}$$

The total volume of contaminated soil detected at the Parcel #011 is estimated to be 251.9 yd^3 or 377.8 tons.

3.4 Conclusions

Parcel #011 currently operates as a gas station and a restaurant. The geophysical surveys did not image an unknown UST system. The CAD drawings for this property indicate that the gas station and associated UST system will be demolished and removed to make way for the adjusted roadway and a driveway to a nearby motel. A groundwater incident is associated with the property that is not in relation to the UST system. Petroleum constituents were detected above the UST Action Levels in two soil samples collected at Parcel #011. These samples were collected near the gasoline dispensers in front of the gas station. The total volume of contaminated soil detected around the fuel dispensers is estimated to be 251.9 yd^3 or 377.8 tons.

4.0 Recommendations

SAPC recommends that the UST system and associated dispensers be properly closed. Contaminated soil was detected in borings B-22 and B-23 in front of the gasoline dispensers. It is possible that additional contamination may be encountered under product lines, dispensers and the USTs that could not be tested during our investigation.

SAPC recommends that a licensed geologist or engineer supervise the excavation and removal of the UST system, associated product lines and dispensers and any contaminated soil encountered over the course of this work. Contaminated soil removed from Parcel #011 should be sent to a remediation facility.

Appendix A

Tables and Figures

Table 1. Soil Boring Data - Parcel #011 - Add-On Venture Properties, LLC Property						
Boring No.	**Depth (ft)**	**Lithology**	**Soil type**	**Soil Sample**	**PID ppm**	**Comments**
B-1	0.0 to 5.0	Silt loam	Fill	S-1	0.0	Sample at 3.0 feet.
B-1	5.0 to 6.5	Silt loam	Fill	N/A	N/A	
B-1	6.5 to 10.0	Sandy silt	Residuum	S-2	0.0	Sample at 8.0 feet.
B-2	0.0 to 3.5	Silt loam	Fill	S-3	0.0	Sample at 3.0 feet.
B-2	3.5 to 5.0	N/A	N/A	N/A	N/A	No recovery.
B-2	5.0 to 8.0	Sandy silt	Residuum	S-4	0.0	Sample at 8.0 feet.
B-2	8.0 to 10.0	N/A	N/A	N/A	N/A	No recovery.
B-3	0.0 to 1.25	Silt loam	Fill	N/A	N/A	
B-3	1.25 to 5.0	Silt loam w/ gravel	Residuum	S-5	0.0	Sample at 3.0 feet.
B-3	5.0 to 6.0	Silt loam w/ gravel	Residuum	N/A	N/A	
B-3	6.0 to 9.0	Sand	Residuum	S-6	0.0	Sample at 8.0 feet.
B-3	9.0 to 10.0	N/A	N/A	N/A	N/A	No recovery.
B-4	0.0 to 5.0	Silt loam	Fill	S-7	0.0	Sample at 3.0 feet.
B-4	5.0 to 8.0	Sandy silt w/ gravel	Residuum	S-8	0.0	Sample at 8.0 feet.
B-4	8.0 to 10.0	N/A	N/A	N/A	N/A	No recovery.
B-5	0.0 to 3.5	Silt loam	Fill	S-9	0.0	Sample at 3.0 feet.
B-5	3.5 to 5.0	Sandy silt	Residuum	N/A	N/A	Refusal at 5.0 feet.
B-6	0.0 to 2.75	Silt loam	Fill	N/A	N/A	
B-6	2.75 to 5.0	Sandy silt	Residuum	S-10	0.0	Sample at 3.0 feet.
B-6	5.0 to 10.0	Sandy silt	Residuum	S-11	0.0	Sample at 8.0 feet.
B-7	0.0 to 5.0	Silt loam	Fill	S-12	0.0	Sample at 3.0 feet.
B-7	5.0 to 8.5	Silt loam	Fill	S-13	0.0	Sample at 8.0 feet.
B-7	8.5 to 10.0	Sandy silt w/ gravel	Residuum	N/A	N/A	
B-8	0.0 to 5.0	Silt loam	Fill	S-14	0.0	Sample at 4.0 feet. Petroleum odor at 4.0 feet.
B-8	5.0 to 8.5	Silt loam	Fill	S-15	N/A	Sample at 8.5 feet.
B-8	8.5 to 10.0	Sandy silt w/ gravel	Residuum	N/A	N/A	
B-9	0.0 to 5.0	Silt loam	Fill	S-16	0.0	Sample at 3.0 feet. Organics throughout. Slight odor.
B-9	5.0 to 9.0	Silt loam	Fill	S-17	0.3	Sample at 7.5 feet. Organics throughout. Slight odor.
B-9	9.0 to 10.0	Sandy silt	Residuum	S-18	0.0	Sample at 9.5 feet. Organics throughout. Slight odor.
B-10	0.0 to 5.0	Silt loam	Fill	S-19	0.0	Sample at 3.0 feet.
B-10	5.0 to 10.0	Silt loam	Fill	S-20	0.0	Sample at 8.5 feet.
B-11	0.0 to 1.0	Silt loam	Fill	N/A	N/A	
B-11	1.0 to 2.5	Sandy silt w/ gravel	Residuum	S-21	0.0	Sample at 2.0 feet.
B-11	2.5 to 5.0	N/A	N/A	N/A	N/A	No recovery.
B-11	5.0 to 10.0	Sandy silt w/ gravel	Residuum	S-22	0.0	Six inches of recovery total. Sampled all recovery. Actual depth of soil not known.
B-12	0.0 to 5.0	Silt loam	Fill	S-23	0.0	Sample at 3.0 feet.
B-12	5.0 to 10.0	Silt loam	Fill	S-24	0.0	Sample at 8.0 feet.
B-13	0.0 to 5.0	Silt loam	Fill	S-25	0.0	Sample at 3.0 feet.
B-13	5.0 to 6.0	Silt loam	Fill	N/A	N/A	
B-13	6.0 to 8.0	Sand w/ gravel	Alluvium	S-26	0.0	Sample at 8.0 feet. Sewer odor. Saturated.
B-13	8.0 to 10.0	N/A	N/A	N/A	N/A	No recovery.
B-14	0.0 to 5.0	Silt loam	Fill	S-27	0.0	Sample at 3.0 feet.
B-14	5.0 to 6.5	Sand w/ gravel	Alluvium	S-28	0.0	Sample at 6.5 feet. Saturated.
B-14	6.5 to 10.0	N/A	N/A	N/A	N/A	No recovery.

Table 1 continued. Soil Boring Data - Parcel #011 - Add-On Venture Properties, LLC Property						
Boring No.	**Depth (ft)**	**Lithology**	**Soil type**	**Soil Sample**	**PID ppm**	**Comments**
B-15	0.0 to 5.0	Silt loam	Fill	S-29	0.0	Sample at 3.0 feet.
B-15	5.0 to 7.5	Sand w/ gravel	Alluvium	S-30	0.0	Sample at 7.5 feet. Saturated.
B-15	7.5 to 10.0	N/A	N/A	N/A	N/A	No recovery.
B-16	0.0 to 5.0	Silt loam	Fill	S-31	0.4	Sample at 3.0 feet.
B-16	5.0 to 8.5	Silt loam	Fill	S-32	1.0	Sample at 8.0 feet.
B-16	8.5 to 10.0	Sandy silt w/ gravel	Residuum	N/A	N/A	
B-17	0.0 to 5.0	Silt loam	Fill	S-33	1.5	Sample at 4.0 feet.
B-17	5.0 to 10.0	Silt loam	Fill	S-34	3.2	Sample at 7.5 feet.
B-17	10.0 to 11.0	Silt loam	Fill	S-35	4.8	Sample at 11.0 feet.
B-17	11.0 to 12.0	Sandy silt w/ gravel	Residuum	N/A	N/A	Refusal at 12.0 feet.
B-18	0.0 to 5.0	Silt loam	Fill	S-36	2.1	Sample at 4.0 feet.
B-18	5.0 to 10.0	Silt loam	Fill	S-37	0.6	Sample at 7.0 feet.
B-18	10.0 to 11.0	Silt loam	Fill	S-38	1.2	Sample at 11.0 feet.
B-18	11.0 to 15.0	Sandy silt w/ gravel	Residuum	N/A	N/A	
B-19	0.0 to 5.0	Silt loam	Fill	S-39	0.9	Sample at 2.5 feet.
B-19	5.0 to 6.0	Silt loam	Fill	N/A	N/A	
B-19	6.0 to 10.0	Sandy silt w/ gravel	Residuum	S-40	0.4	Sample at 7.0 feet.
B-20	0.0 to 5.0	Silt loam	Fill	S-41	0.7	Sample at 3.0 feet.
B-20	5.0 to 7.5	Silt loam	Fill	N/A	N/A	
B-20	7.5 to 10.0	Sandy silt	Residuum	S-42	0.8	Sample at 8.0 feet.
B-21	0.0 to 1.5	Silt loam	Fill	N/A	N/A	
B-21	1.5 to 5.0	Sandy silt	Residuum	S-43	3.1	Sample at 2.0 feet.
B-21	5.0 to 10.0	Sandy silt	Residuum	S-44	12.4	Sample at 7.0 feet.
B-22	0.0 to 4.0	Silt loam	Fill	S-45	432.5	Sample at 3.5 feet.
B-22	4.0 to 5.0	Sandy silt w/ gravel	Residuum	N/A	N/A	
B-22	5.0 to 10.0	Sandy silt w/ gravel	Residuum	S-46	4.5	Sample at 7.0 feet.
B-23	0.0 to 3.5	Silt loam	Fill	S-47	1.3	Sample at 2.5 feet.
B-23	3.5 to 5.0	Sandy silt w/ gravel	Residuum	N/A	N/A	Refusal at 5.0 feet.
B-24	0.0 to 5.0	Silt loam	Fill	S-48	0.0	Sample at 1.5 feet.
B-24	5.0 to 8.0	Silt loam	Fill	S-49	0.0	Sample at 7.5 feet.
B-24	8.0 to 10.0	Sandy silt w/ gravel	Residuum	N/A	N/A	
B-25	0.0 to 4.5	Silt loam	Fill	S-50	0.0	Sample at 2.5 feet.
B-25	4.5 to 5.0	Sandy silt	Residuum	N/A	N/A	Refusal at 5.0 feet.
B-26	0.0 to 2.5	Silt loam	Fill	S-51	0.0	Sample at 2.0 feet.
B-26	2.5 to 5.0	Sandy silt w/ gravel	Residuum	N/A	N/A	
B-26	5.0 to 10.0	Sandy silt w/ gravel	Residuum	S-52	0.0	Sample at 7.0 feet.
B-27	0.0 to 5.0	Silt loam	Fill	S-53	0.5	Sample at 3.5 feet.
B-27	5.0 to 10.0	Silt loam	Fill	S-54	0.4	Sample at 7.0 feet.
B-28	0.0 to 4.5	Silt loam	Fill	S-55	0.5	Sample at 2.0 feet.
B-28	4.5 to 5.0	Sandy silt w/ gravel	Residuum	N/A	N/A	
B-28	5.0 to 10.0	Sandy silt w/ gravel	Residuum	S-56	0.3	Sample at 8.0 feet.
B-29	0.0 to 1.5	Silt loam	Fill	S-57	0.2	Sample at 1.5 feet.
B-29	1.5 to 5.0	N/A	N/A	N/A	N/A	No recovery.
B-29	5.0 to 10.0	Sandy silt w/ gravel	Residuum	S-58	0.2	Sample at 7.0 feet.
B-30	0.0 to 5.0	Silt loam	Fill	S-59	0.3	Sample at 3.0 feet.
B-30	5.0 to 7.5	Silt loam	Fill	N/A	N/A	
B-30	7.5 to 10.0	Sandy silt w/ gravel	Residuum	S-60	0.3	Sample at 8.0 feet.

Table B-3: Summary of Soil Sampling Results
Revision Date: 11/16/21 Incident Name: Parcel #011

Analytical Method (e.g., VOC by EPA 8260) →					UVF	UVF
Contaminant of Concern →					TPH GRO (mg/kg)	TPH DRO (mg/kg)
Sample ID	**Date Collected** (mm/dd/yy)	**Source Area**	**Sample Depth** (ft BGS)	**Incident Phase**		
S-1	11/08/21	B-1	3.0	Phase II	<0.5	<0.22
S-3	11/08/21	B-2	3.0	Phase II	<0.6	<0.24
S-5	11/08/21	B-3	3.0	Phase II	<0.3	<0.13
S-7	11/08/21	B-4	3.0	Phase II	<0.25	0.11
S-9	11/08/21	B-5	3.0	Phase II	<0.27	<0.11
S-10	11/08/21	B-6	3.0	Phase II	<0.25	6.6
S-12	11/08/21	B-7	3.0	Phase II	<0.3	1.7
S-14	11/08/21	B-8	4.0	Phase II	<0.27	9.7
S-15	11/08/21	B-8	8.5	Phase II	<0.3	2.2
S-17	11/08/21	B-9	7.5	Phase II	<0.5	18.5
S-18	11/08/21	B-9	9.5	Phase II	<0.5	20.3
S-20	11/08/21	B-10	8.5	Phase II	<0.5	18.7
S-22	11/08/21	B-11	5.0 – 10.0	Phase II	<0.5	45.9
S-23	11/08/21	B-12	3.0	Phase II	<0.5	0.2
S-29	11/08/21	B-15	3.0	Phase II	<0.5	0.5
S-31	11/08/21	B-16	3.0	Phase II	<0.6	0.3
S-32	11/08/21	B-16	8.0	Phase II	<0.6	0.5
S-33	11/08/21	B-17	4.0	Phase II	<0.5	0.07
S-34	11/08/21	B-17	7.5	Phase II	<0.5	0.4
S-36	11/08/21	B-18	4.0	Phase II	<0.6	0.8
S-37	11/08/21	B-18	7.0	Phase II	<0.5	20.1
S-39	11/08/21	B-19	2.5	Phase II	<0.5	0.3
S-40	11/08/21	B-19	7.0	Phase II	<0.5	0.5
S-41	11/08/21	B-20	3.0	Phase II	<0.3	11.5
S-42	11/08/21	B-20	8.0	Phase II	<0.27	0.04
S-43	11/08/21	B-21	2.0	Phase II	<0.5	2.1
S-44	11/08/21	B-21	7.0	Phase II	<0.6	<0.25
S-45	11/08/21	B-22	3.5	Phase II	**65.3**	**143.9**
S-46	11/08/21	B-22	7.0	Phase II	<0.5	<0.21
S-47	11/08/21	B-23	2.5	Phase II	**71.9**	9.7
S-48	11/08/21	B-24	1.5	Phase II	<0.22	8.0
S-49	11/08/21	B-24	7.5	Phase II	<0.3	<0.12
S-50	11/08/21	B-25	2.5	Phase II	32.7	8.8
S-51	11/08/21	B-26	2.0	Phase II	<0.27	10.0
S-52	11/08/21	B-26	7.0	Phase II	<0.3	<0.12
S-53	11/09/21	B-27	3.5	Phase II	<0.52	8.6
S-54	11/09/21	B-27	7.0	Phase II	<0.97	4.9
S-55	11/09/21	B-28	2.0	Phase II	<0.57	1.58
S-56	11/09/21	B-28	8.0	Phase II	<0.52	1.16
S-57	11/09/21	B-29	1.5	Phase II	<0.45	2.2
S-58	11/09/21	B-29	7.0	Phase II	<0.3	<0.12
S-59	11/09/21	B-30	3.0	Phase II	<0.2	<0.08
NC DEQ Action Level (mg/kg)					50	100

ft. BGS = feet below ground surface mg/kg =milligrams per kilogram

Figure 1 Site Location Map Source: U.S.G.S. The National Map	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC	0 300 600 Feet N

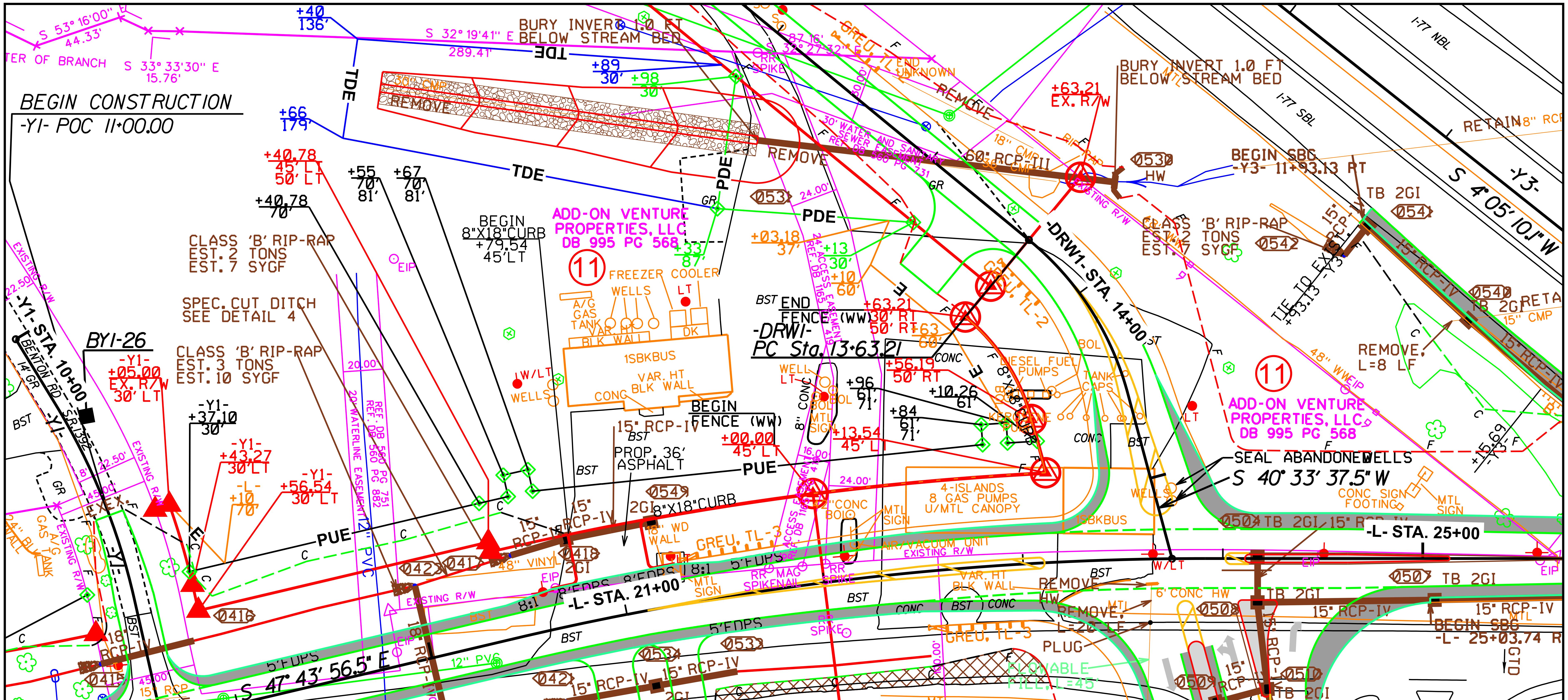


Figure 2 Site Plan	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC	0 30 60 Feet; N

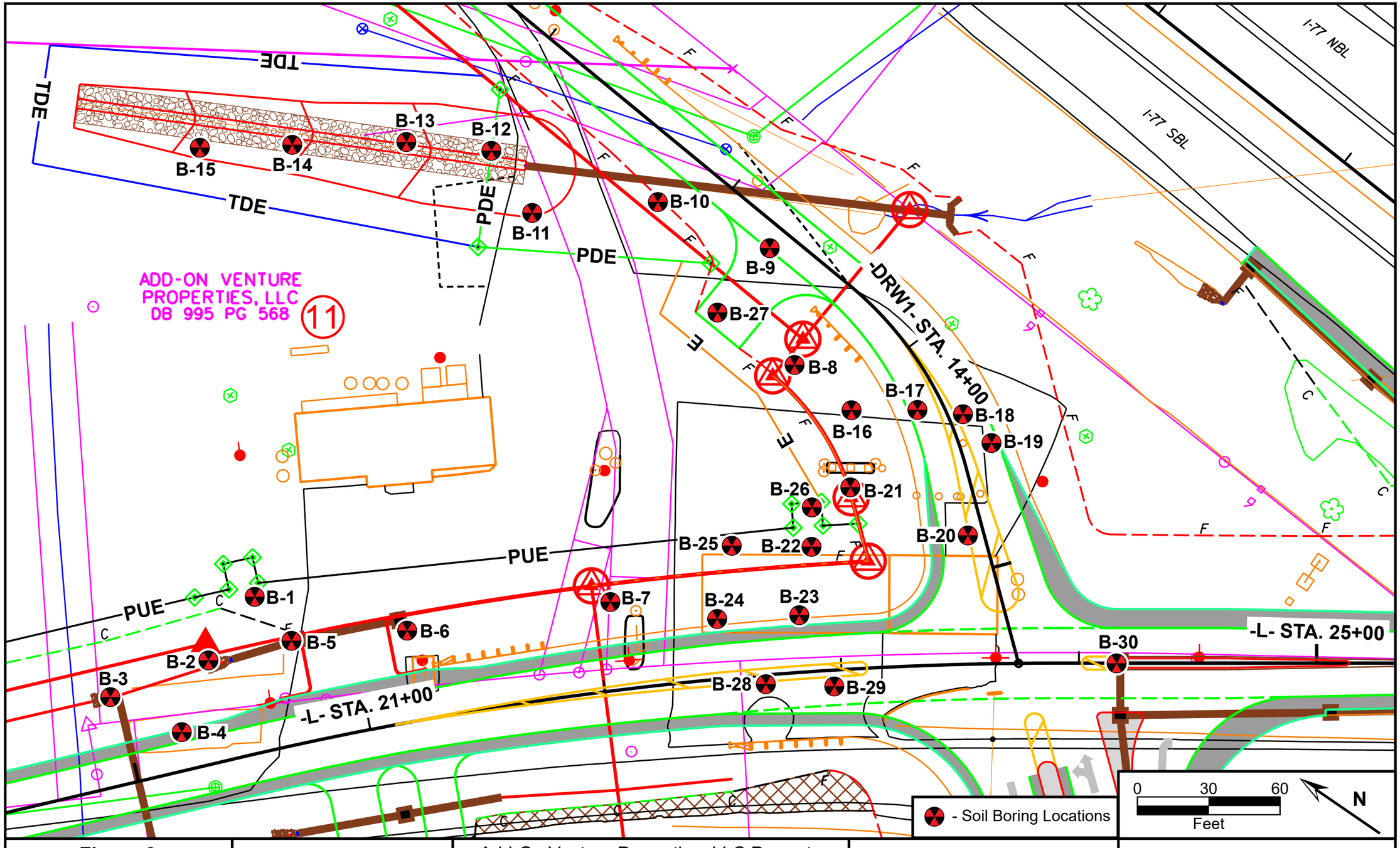


Figure 3 Site Plan with Soil Boring Locations	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

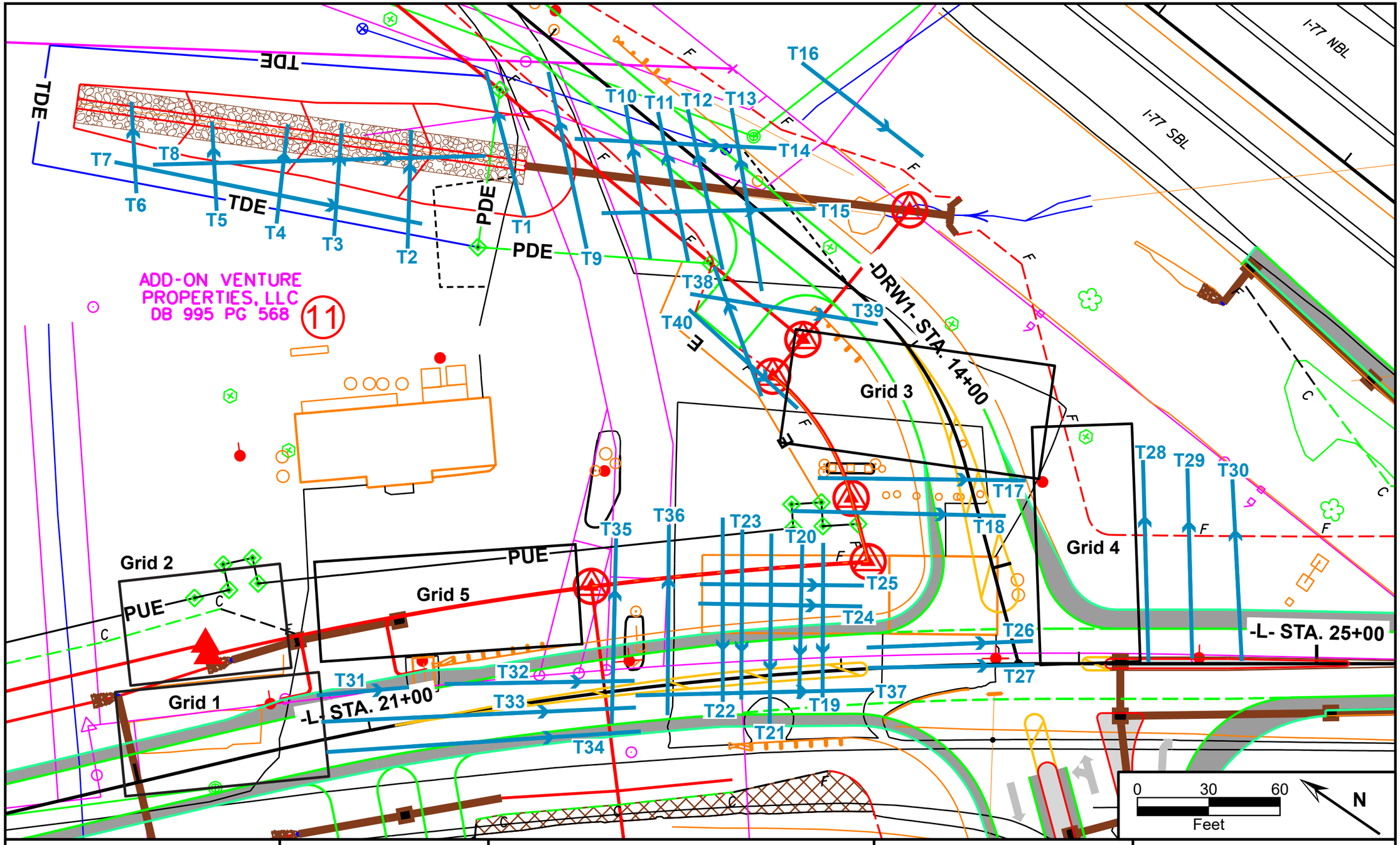


Figure 4 Site Plan with Geophysical Grid and Transect Locations	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

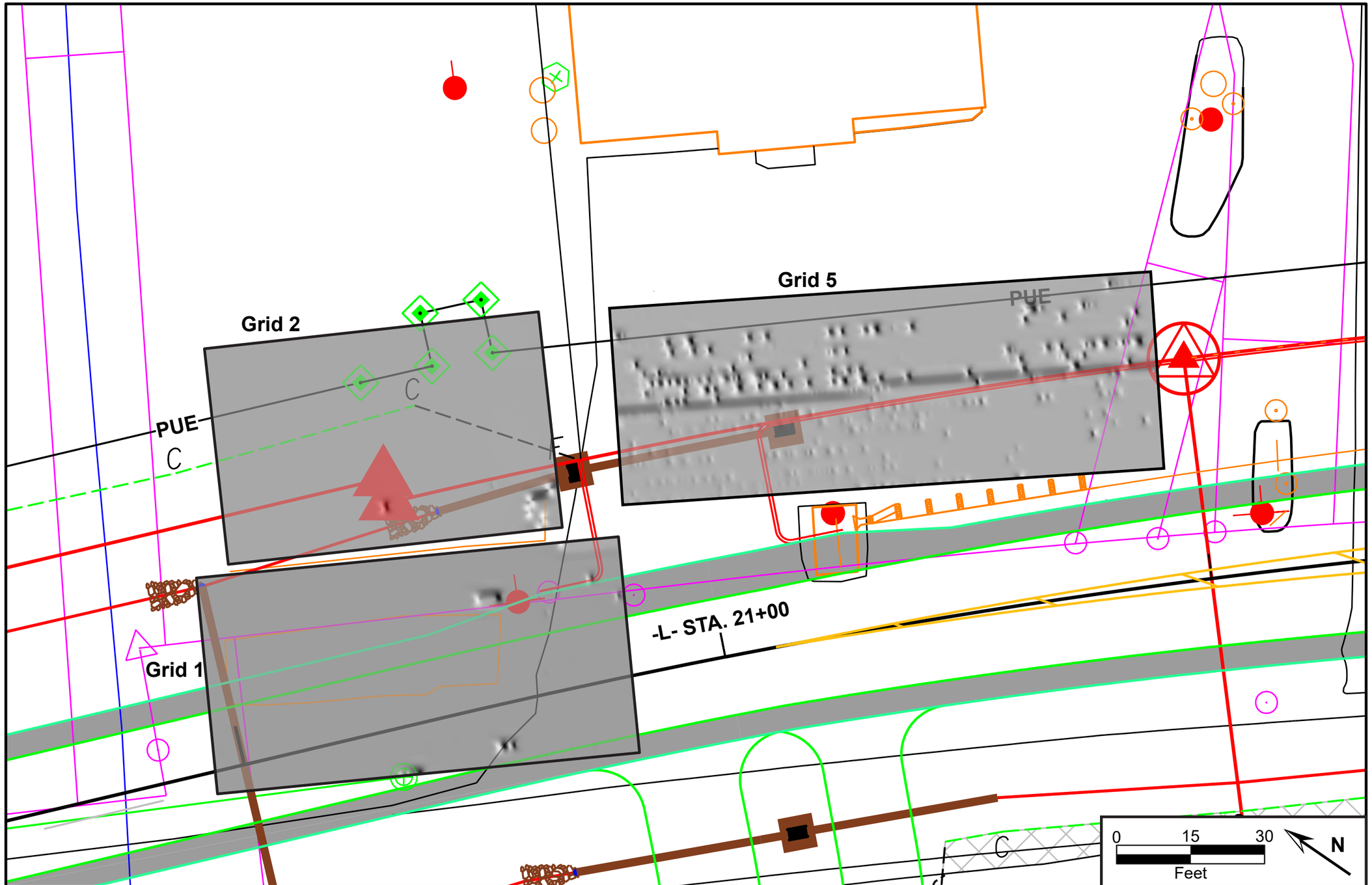


Figure 5a Magnetometer Survey Hillshade Map	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

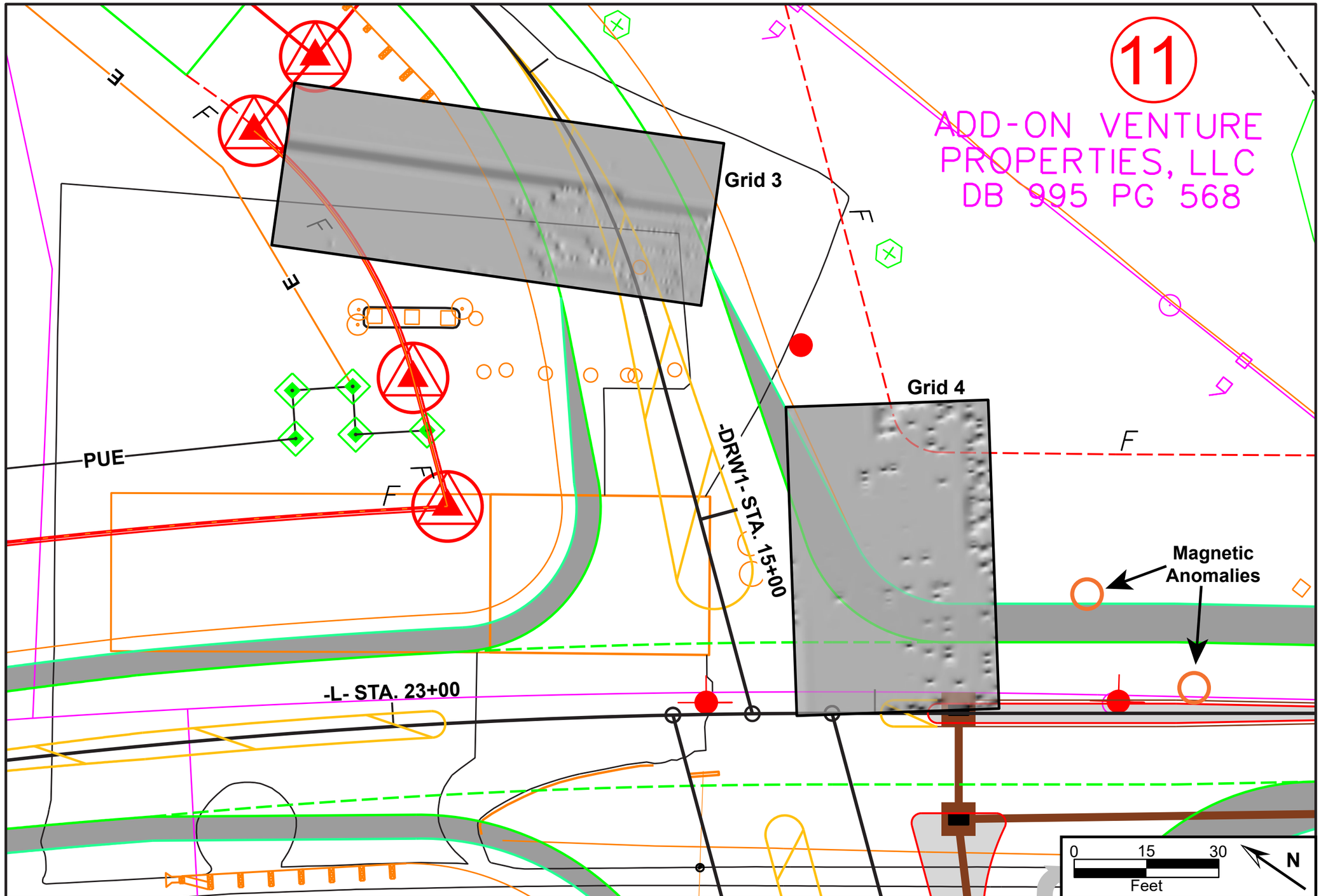


Figure 5b Magnetometer Survey Hillshade Map	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

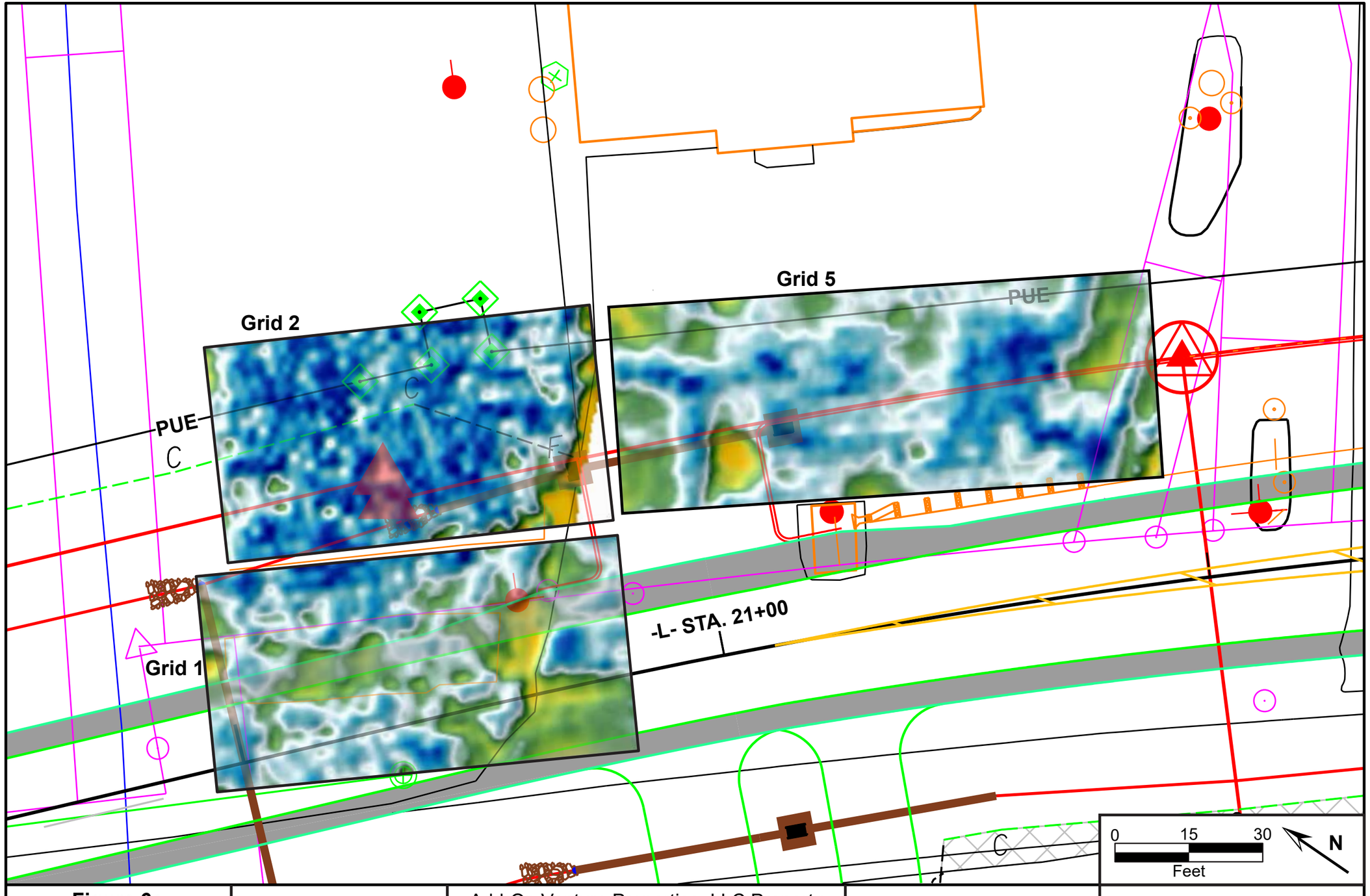


Figure 6a Shallow GPR Depth Slices (0.2 - 0.5 feet)	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

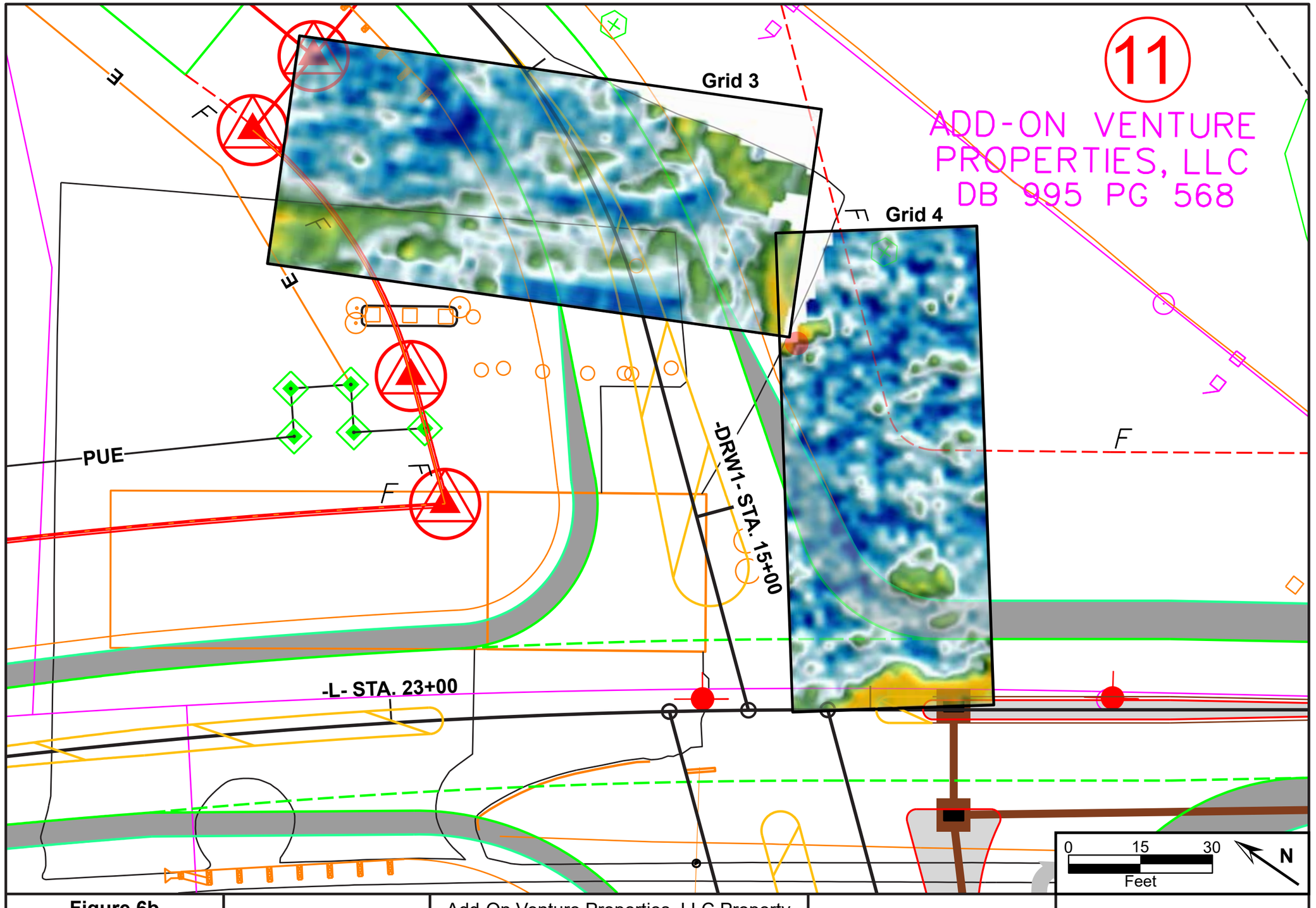


Figure 6b Shallow GPR Depth Slices (0.2 - 0.5 feet)	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

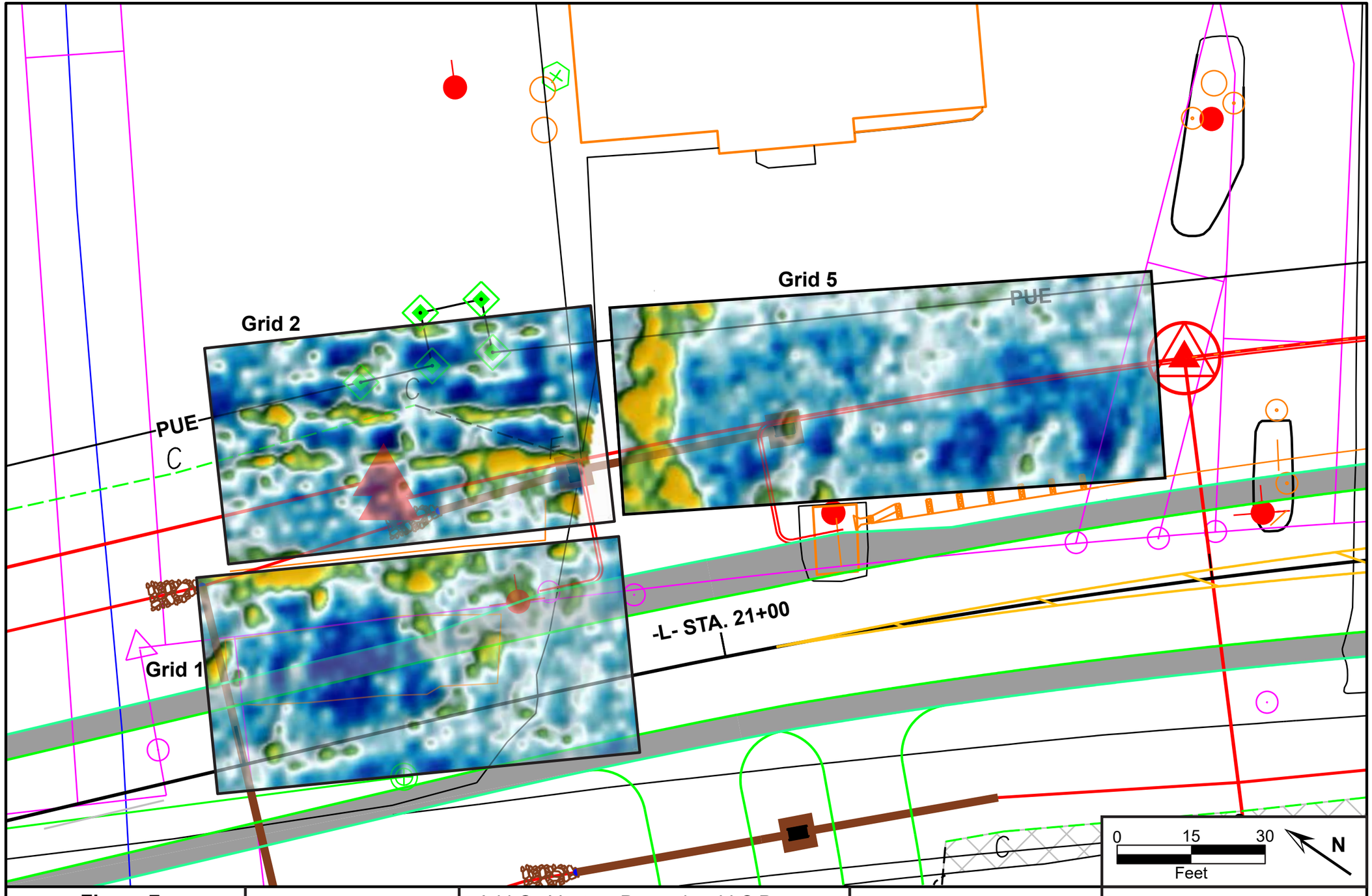


Figure 7a Intermediate GPR Depth Slices (1.8 - 2.1 feet)	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

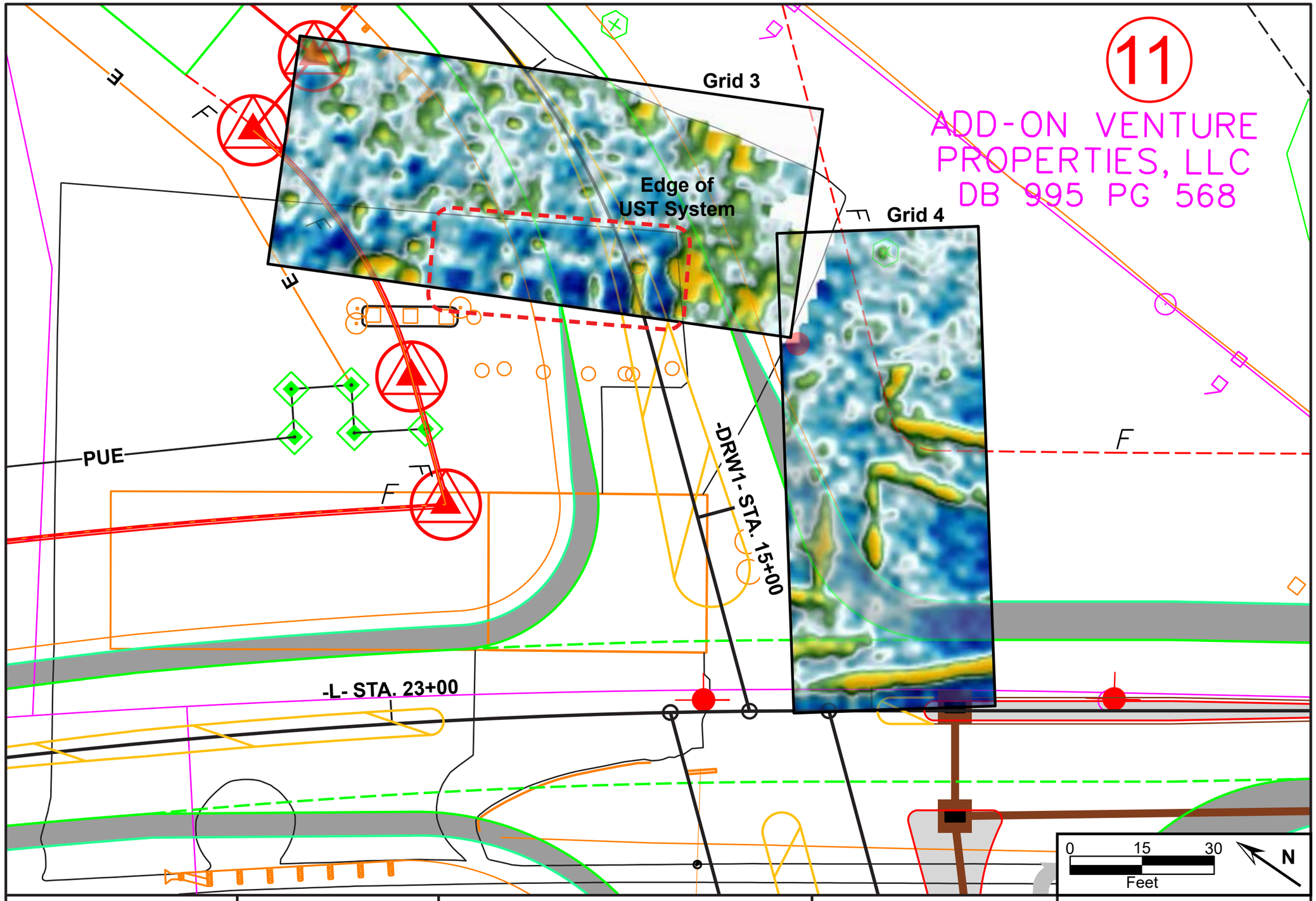


Figure 7b Intermediate GPR Depth Slices (1.8 - 2.1 feet)	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

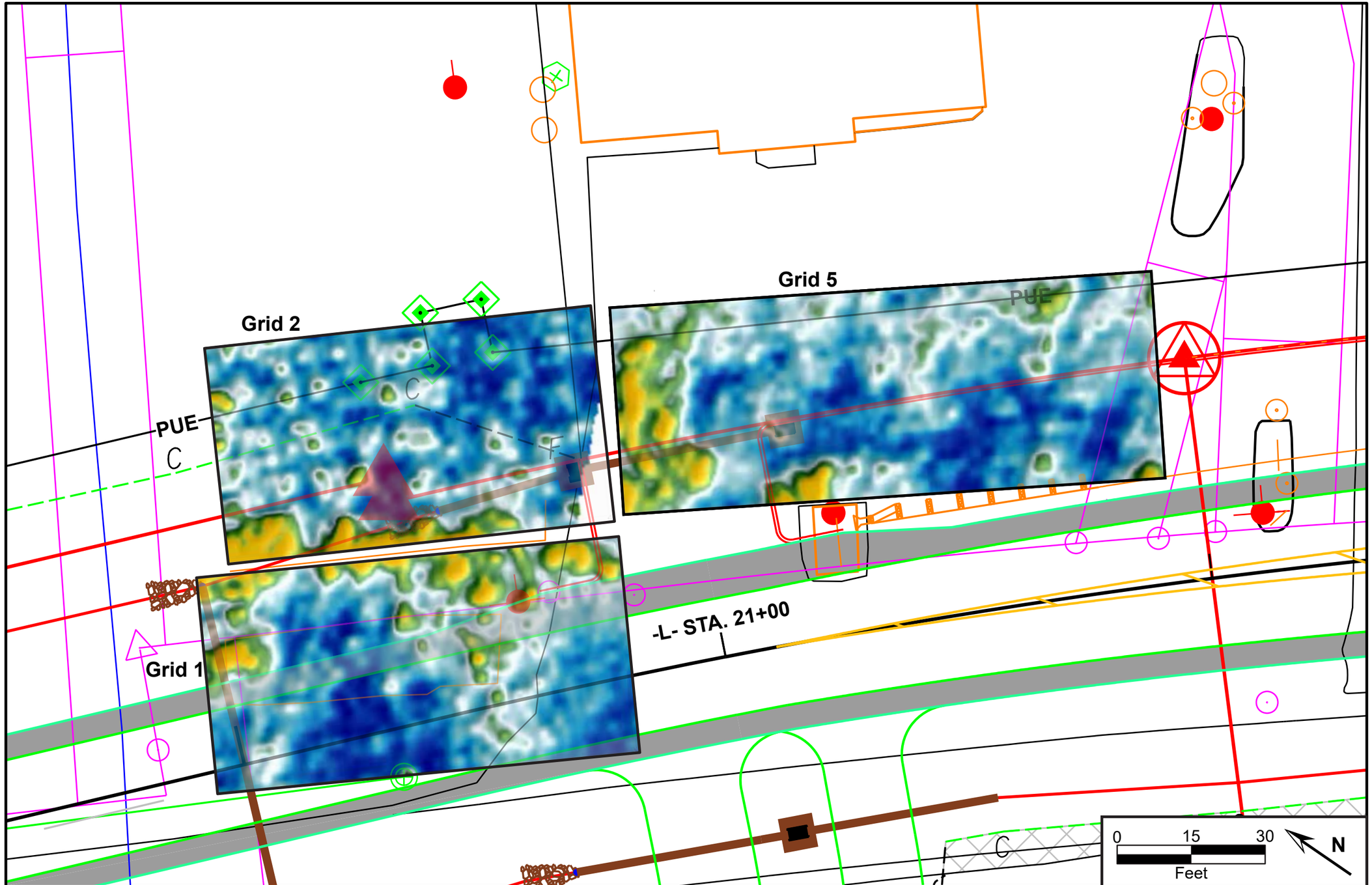


Figure 8a Deep GPR Depth Slices (3.0 - 3.3 feet)	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

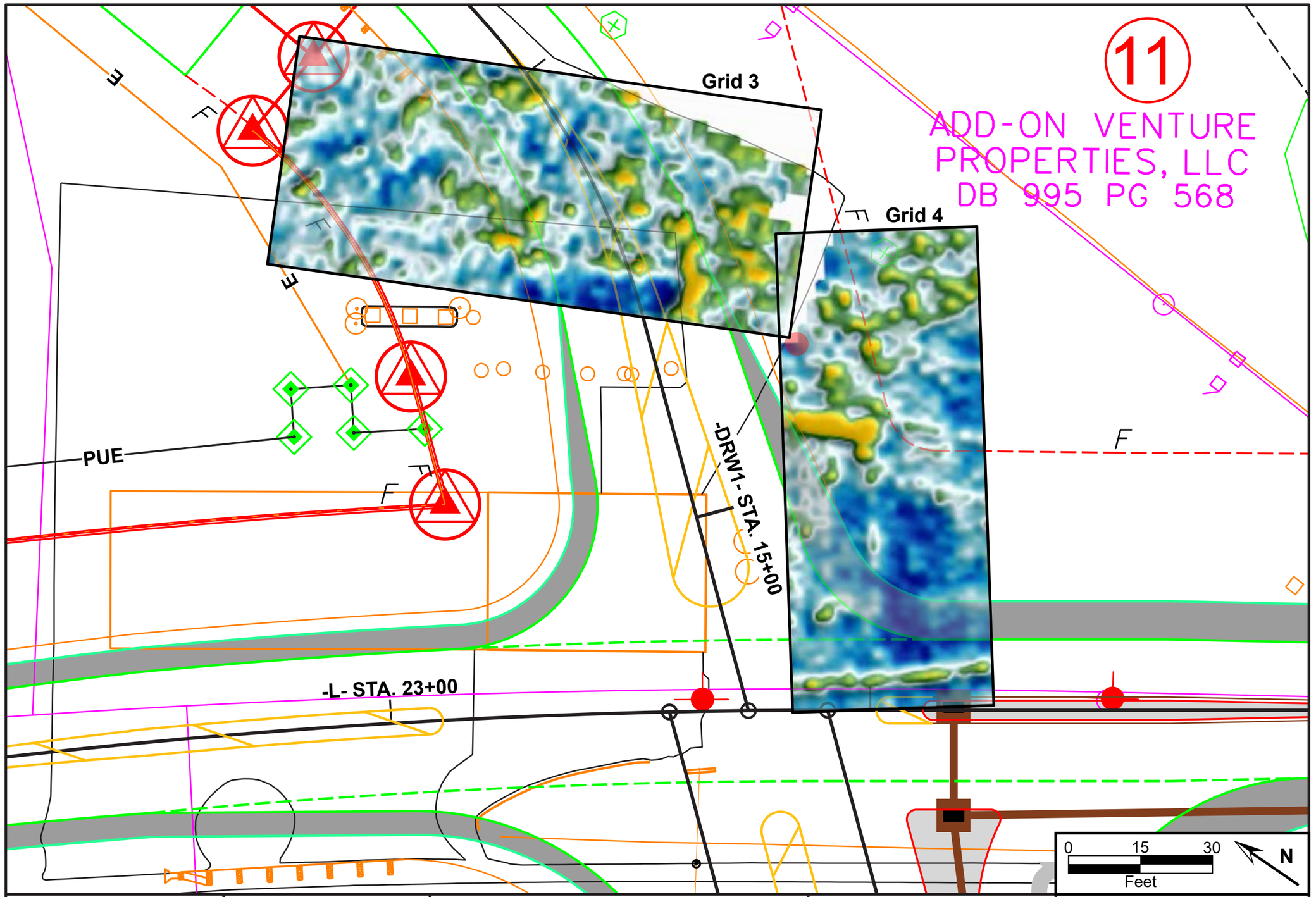
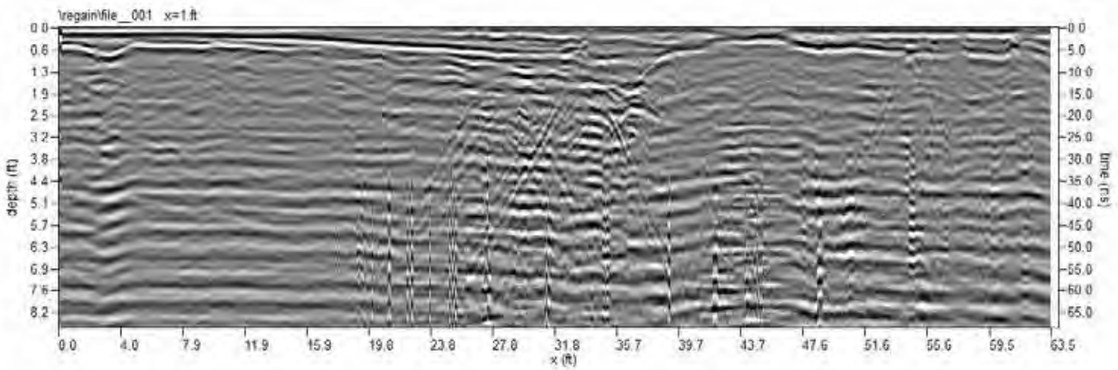
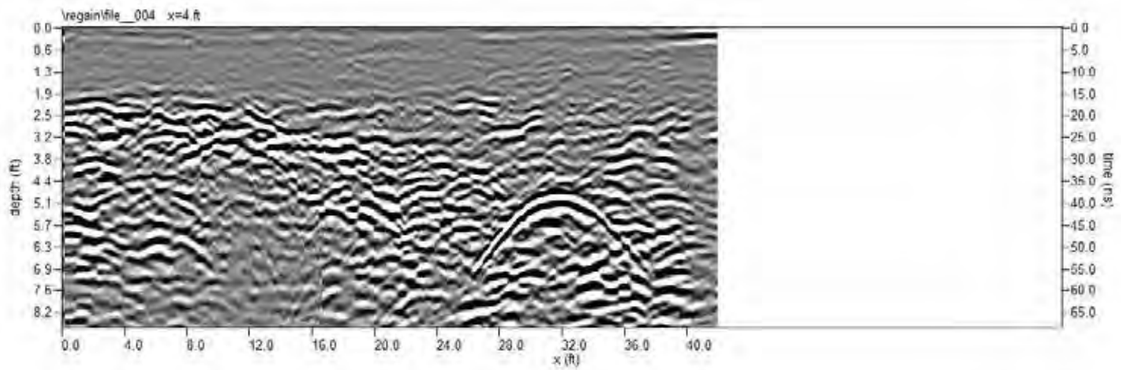
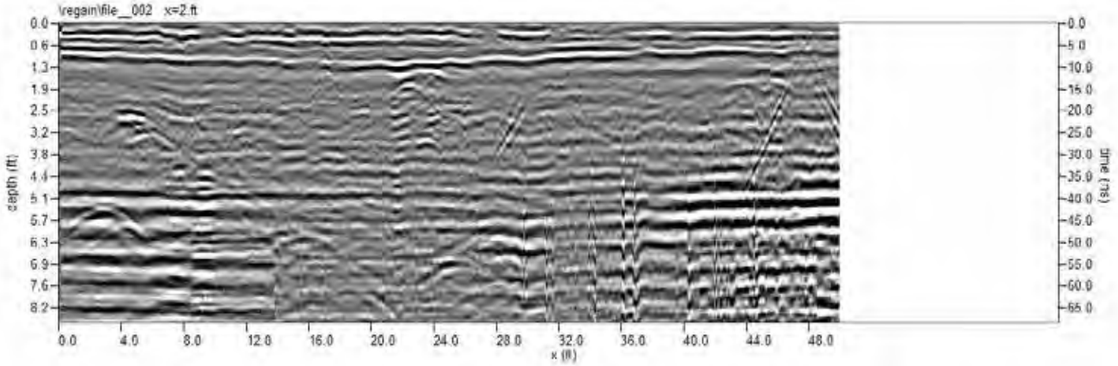
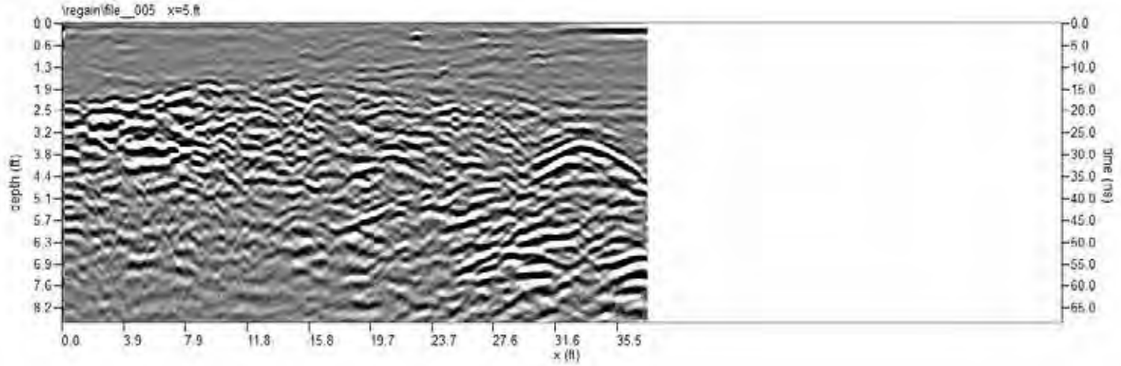


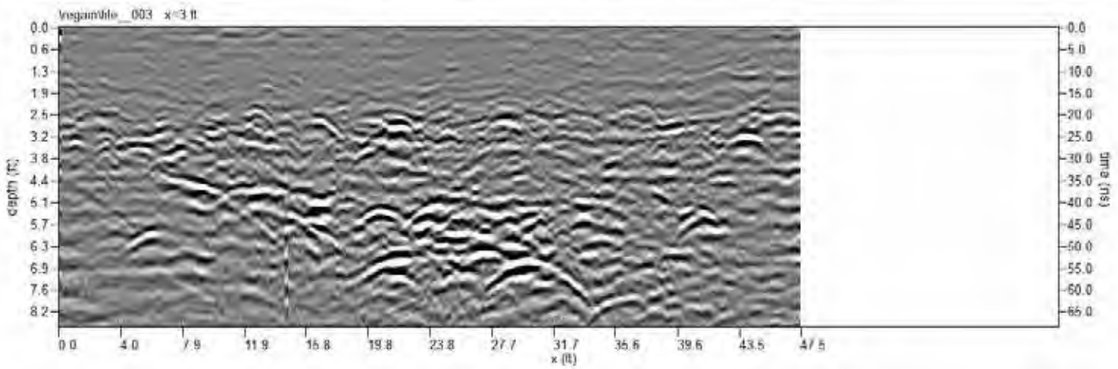
Figure 8b Deep GPR Depth Slices (3.0 - 3.3 feet)	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC











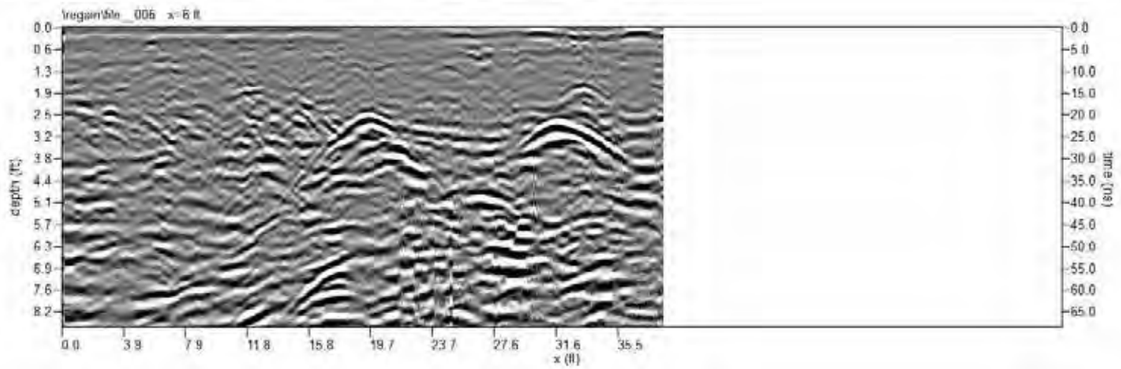


Figure 9a Profiles of GPR Transects 1 - 6	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

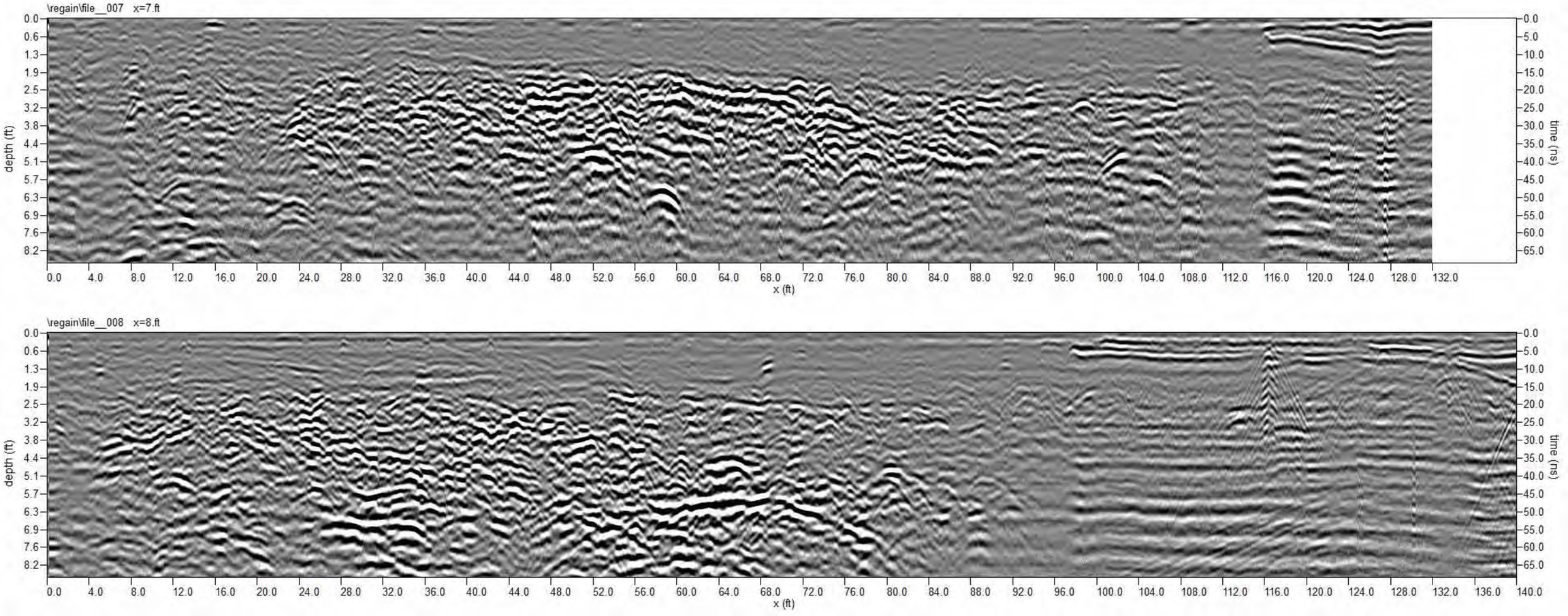
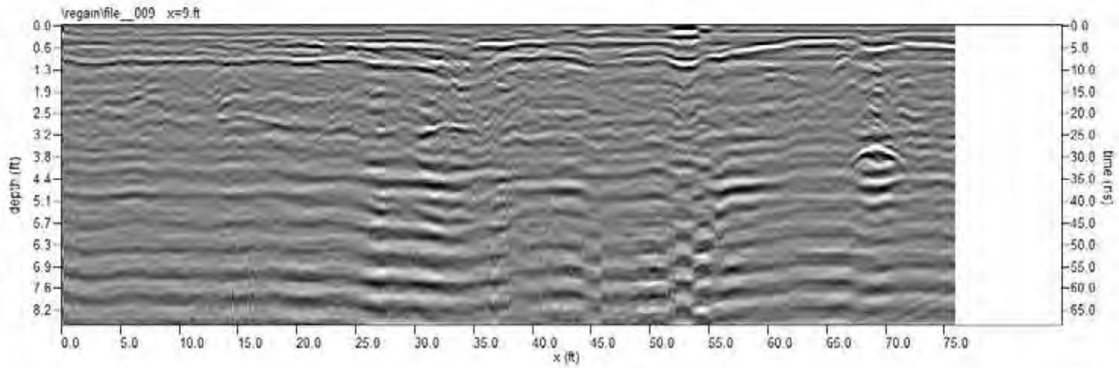
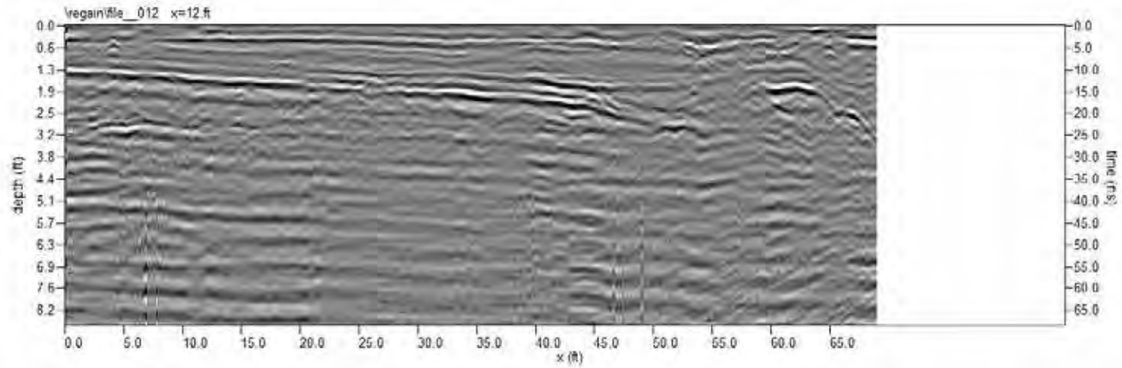
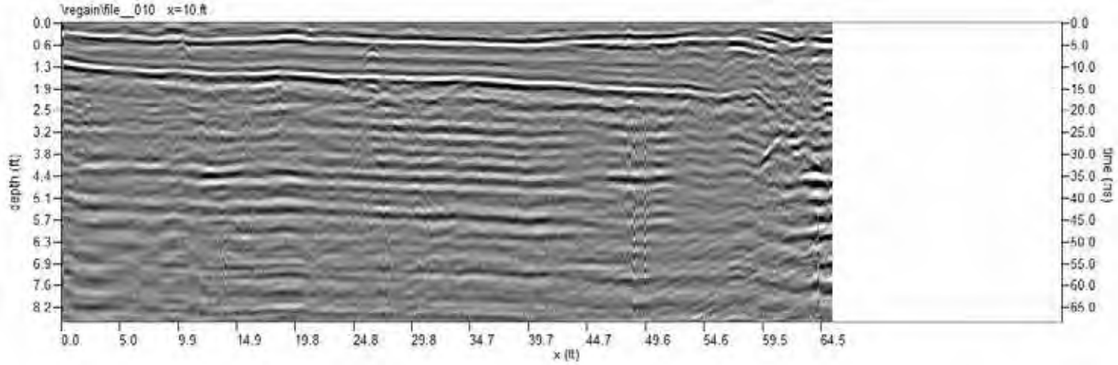
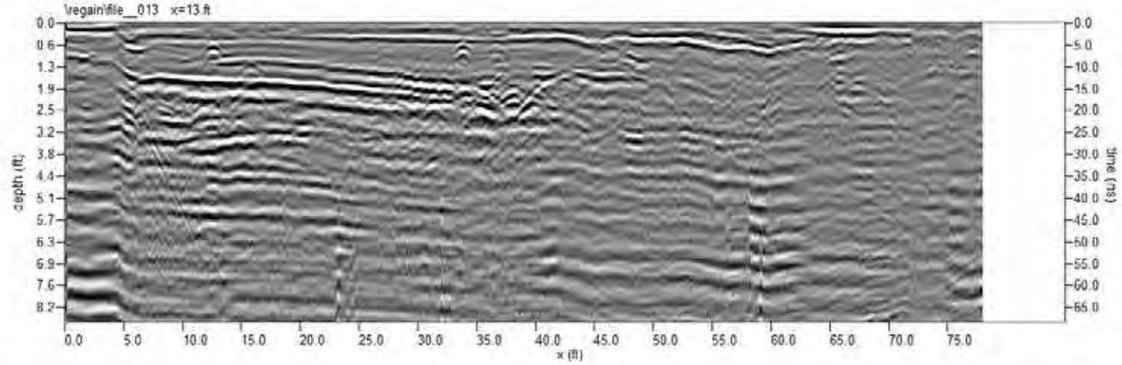


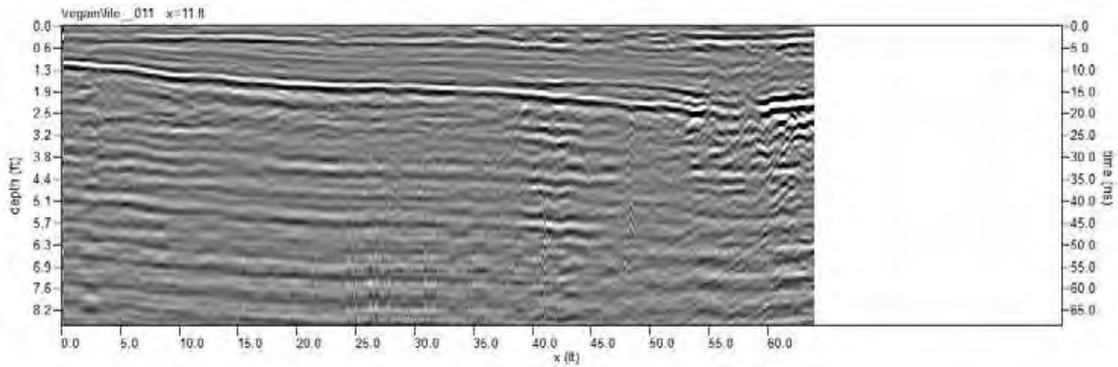
Figure 9b Profiles of GPR Transects 7 - 8	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC











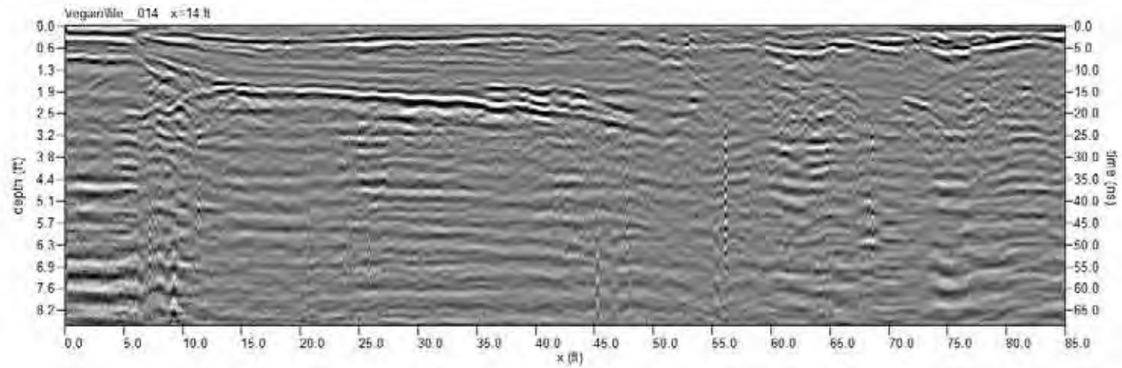
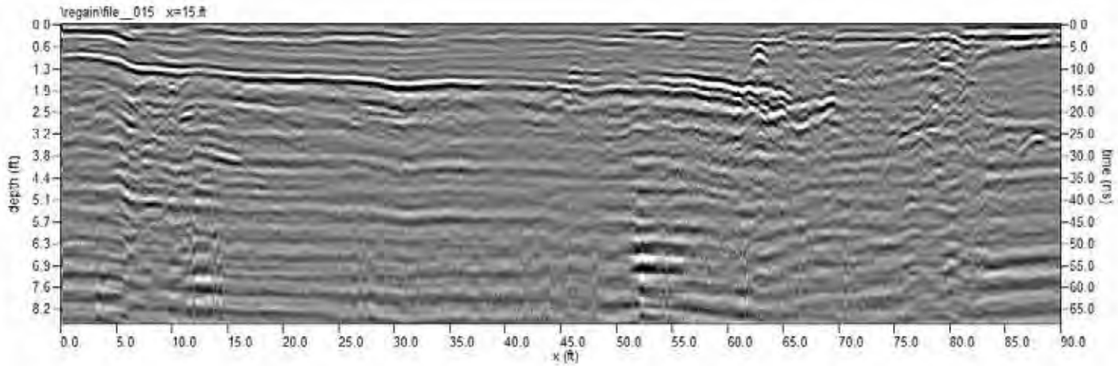
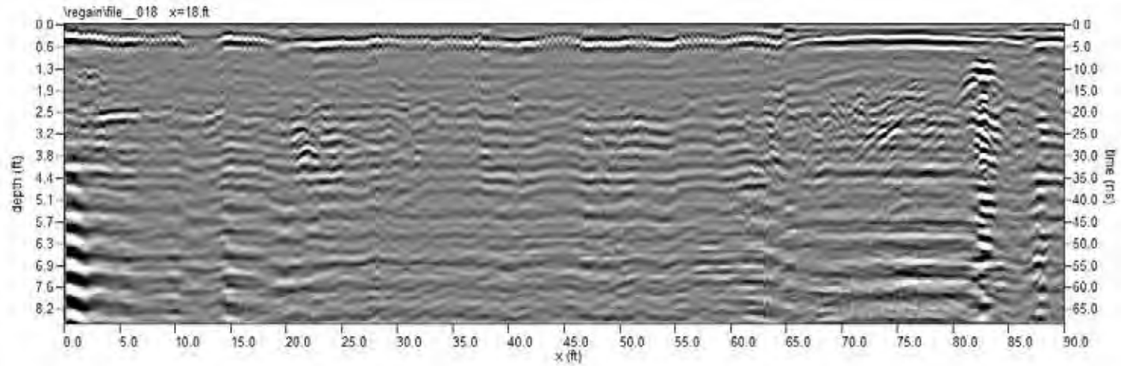
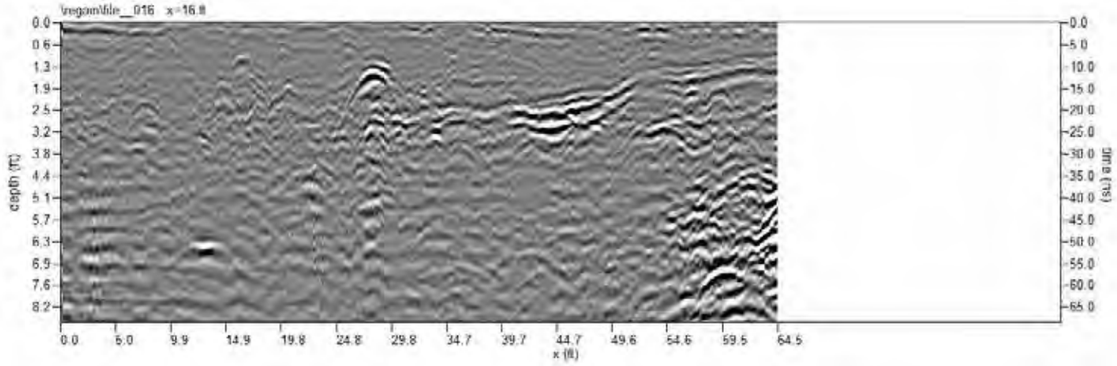
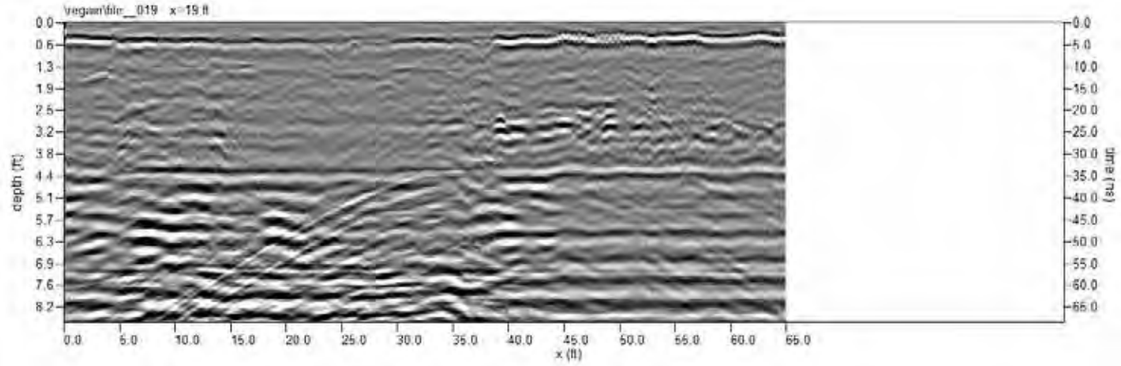


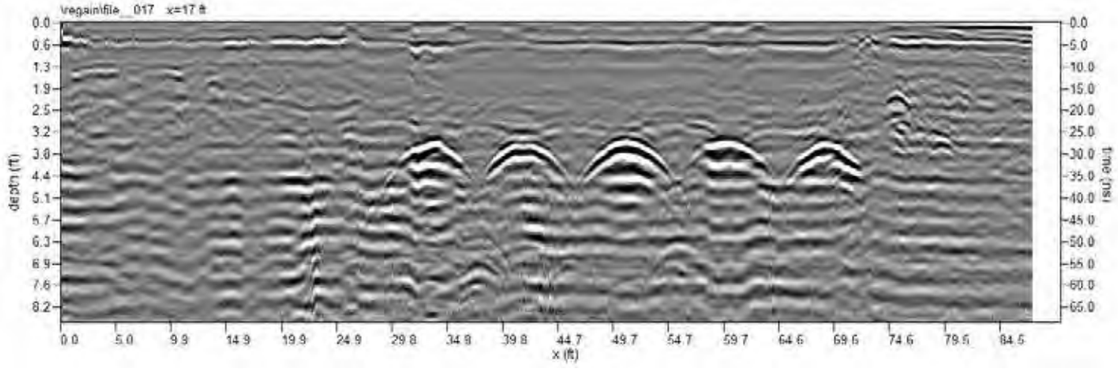
Figure 9c Profiles of GPR Transects 9 - 14	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC











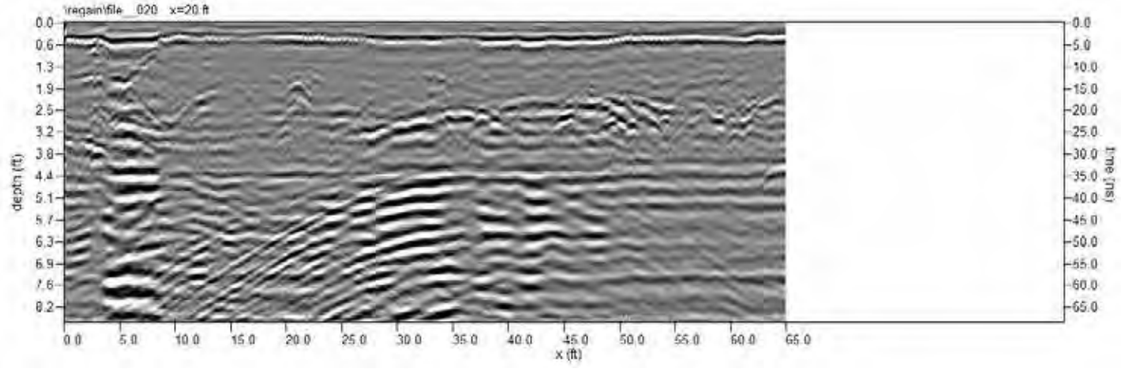


Figure 9d Profiles of GPR Transects 15 - 20	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

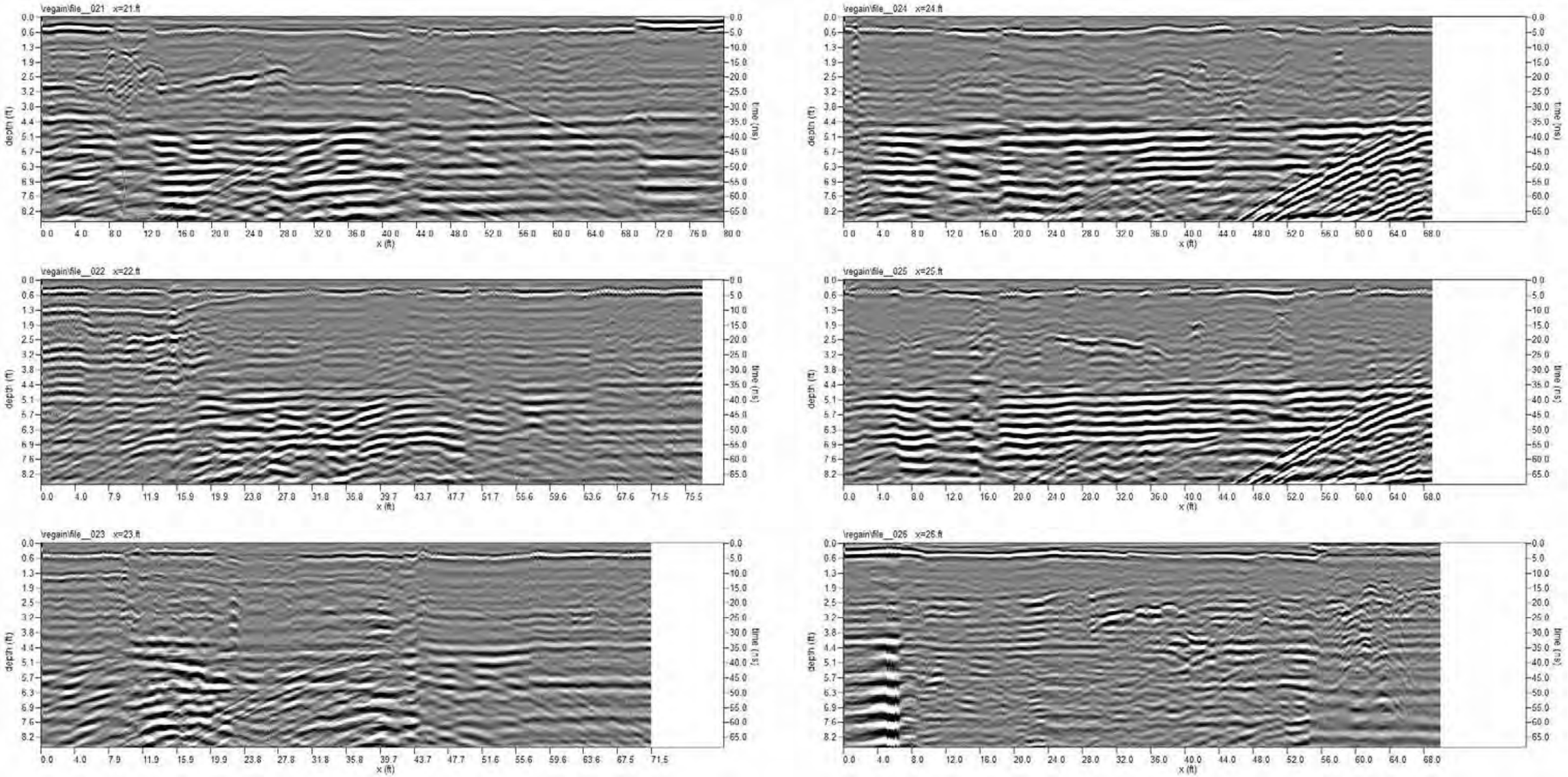
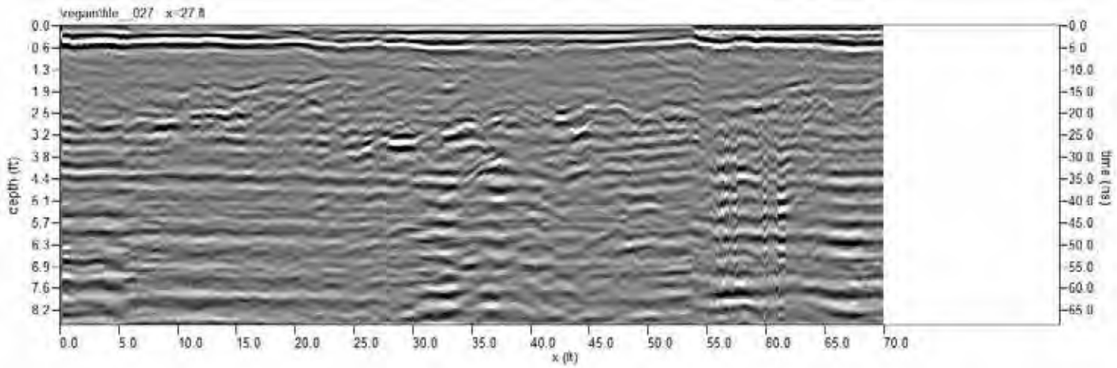
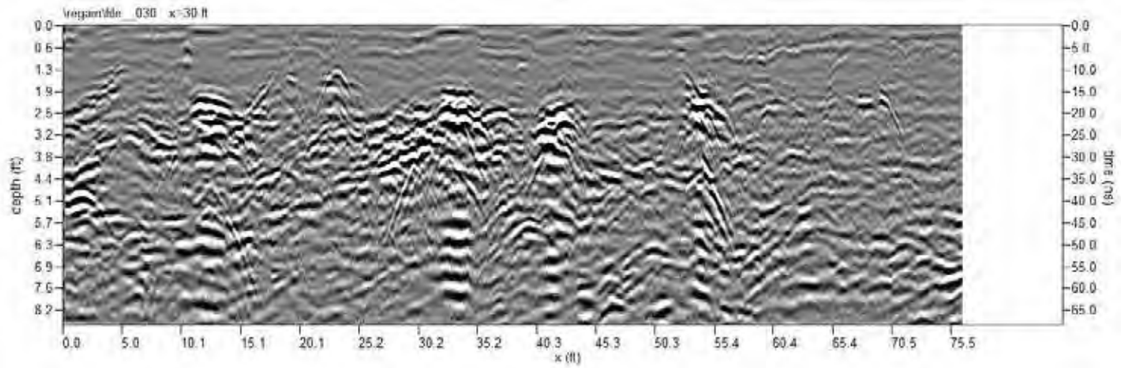
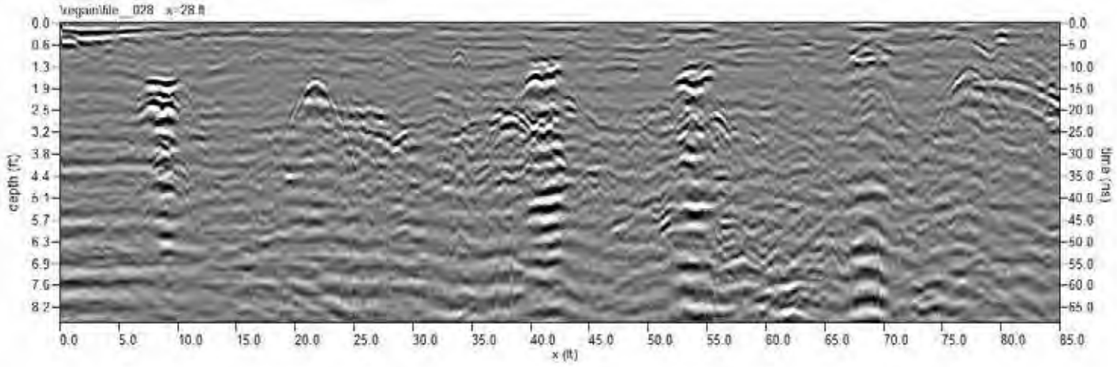
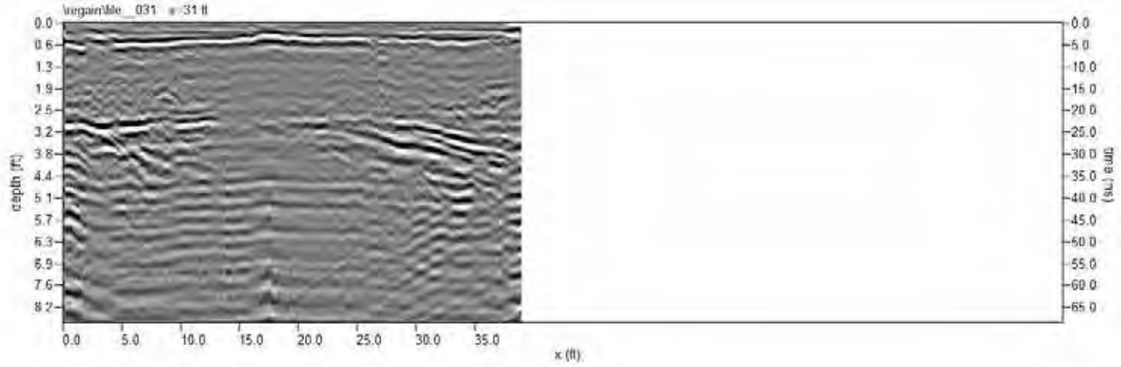


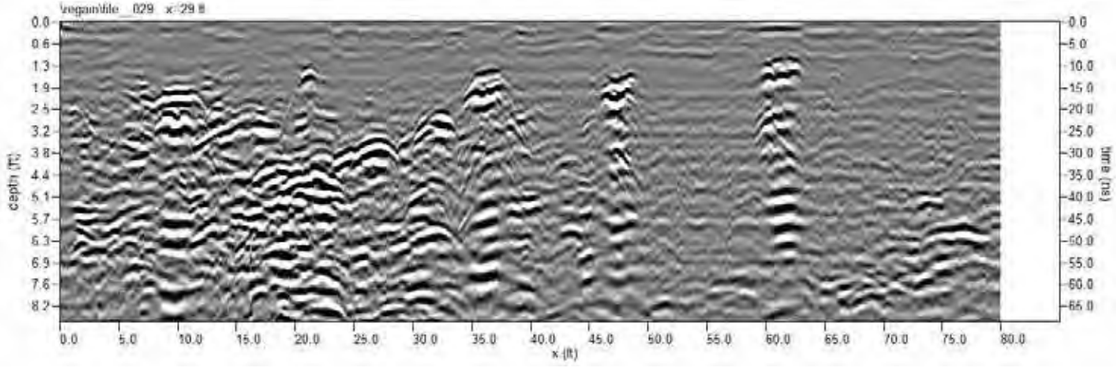
Figure 9e Profiles of GPR Transects 21 - 26	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC











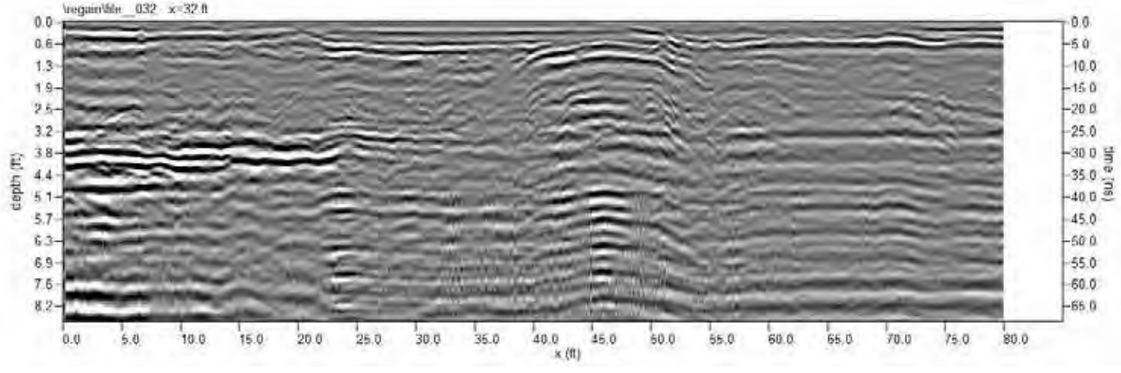


Figure 9f Profiles of GPR Transects 27 - 32	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

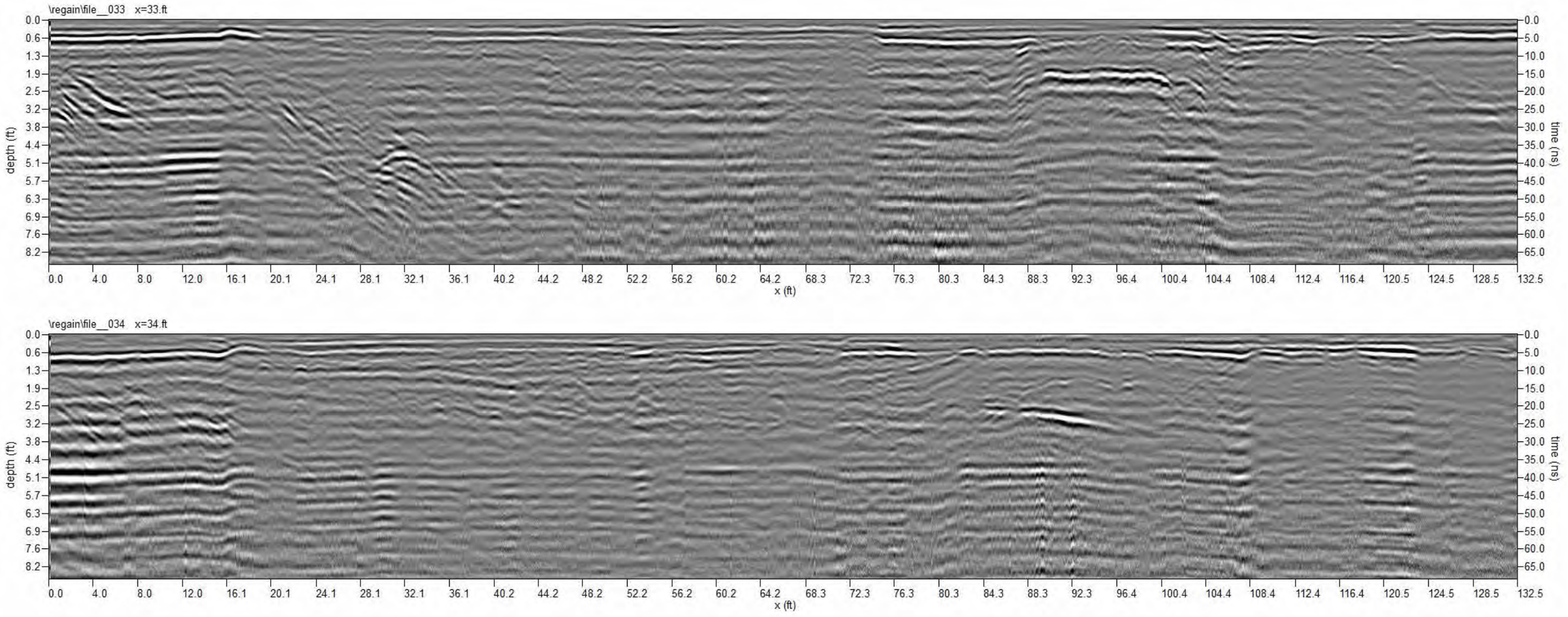


Figure 9g Profiles of GPR Transects 33 - 34	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

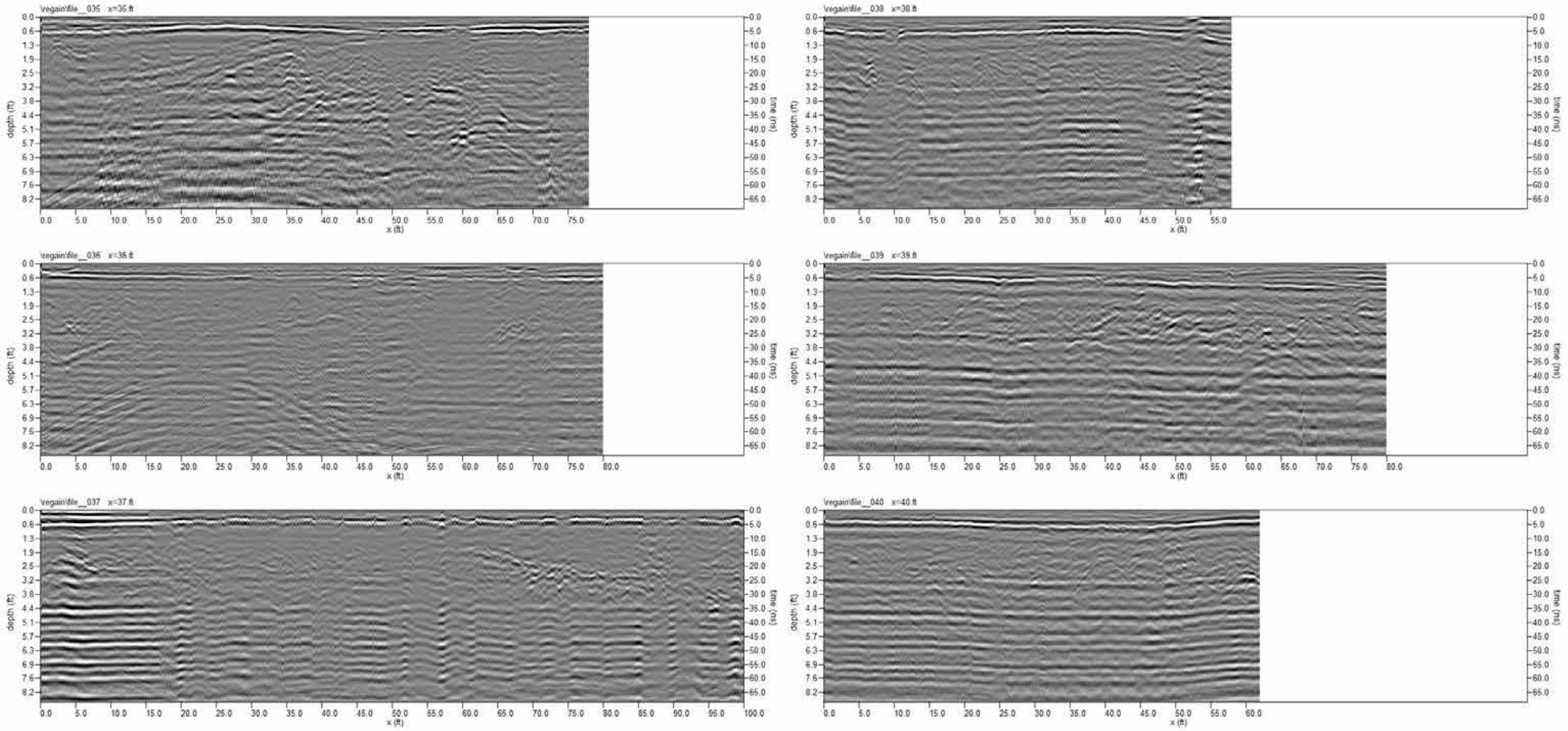


Figure 9h Profiles of GPR Transects 35 - 40	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

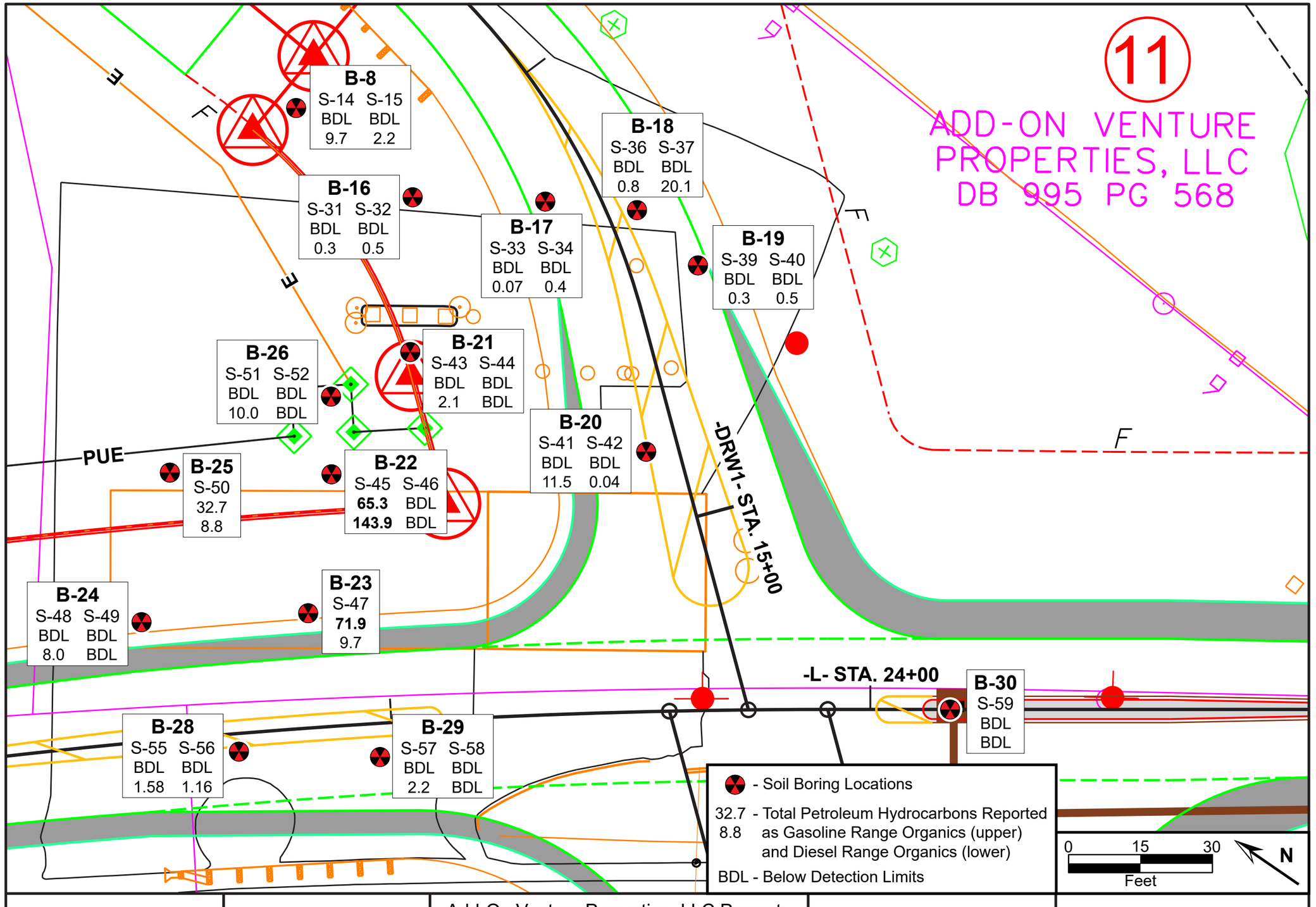


Figure 10a Soil Analytical Results	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

- Soil Boring Locations

BDL 6.6 - Total Petroleum Hydrocarbons Reported as Gasoline Range Organics (upper) and Diesel Range Organics (lower)

BDL - Below Detection Limits

B-1
S-1
BDL
BDL

B-2
S-3
BDL
BDL

B-3
S-5
BDL
BDL

B-4
S-7
BDL
0.11

B-5
S-9
BDL
BDL

B-6
S-10
BDL
6.6

B-7
S-12
BDL
1.7

PUE

PUE

-L- STA. 21+00

0 15 30
Feet

N

Figure 10b Soil Analytical Results	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

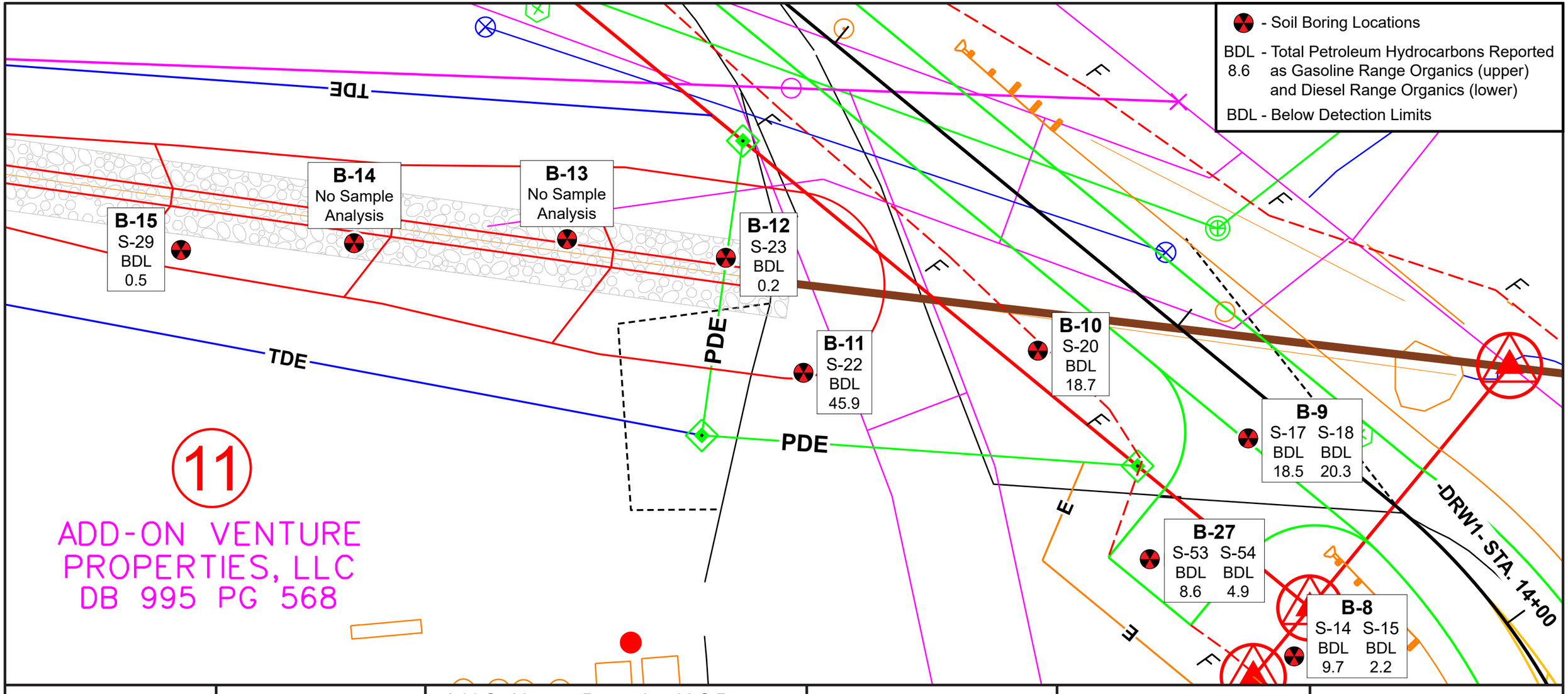


Figure 10c Soil Analytical Results	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC	

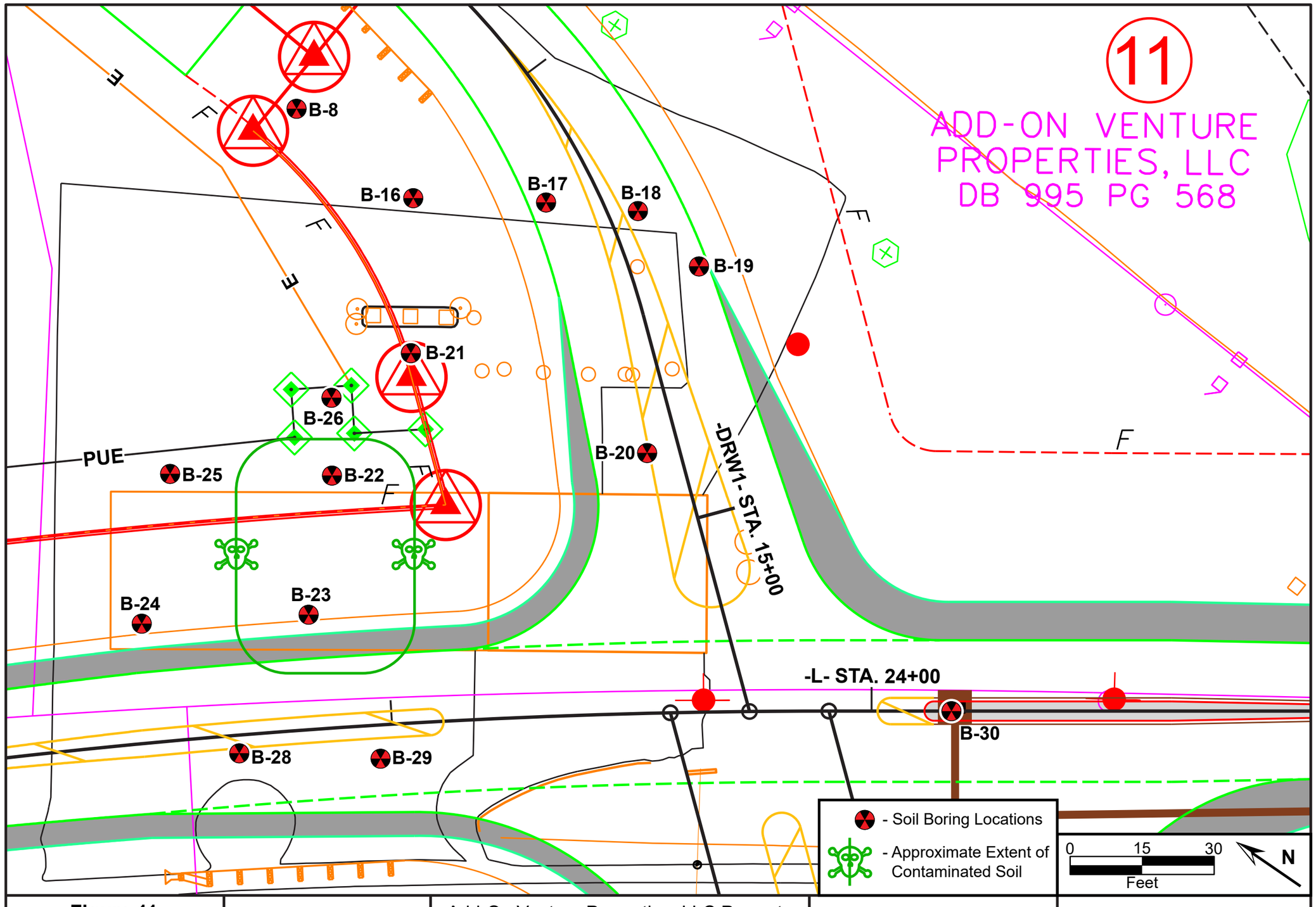


Figure 11 Approximate Extent of Contaminated Soil	TIP Number: B-5833 Yadkin County, NC	Add-On Venture Properties, LLC Property 5652 / 5704 U.S. Hwy. 21 Jonesville, NC	Parcel I.D. #: 011 Facility I.D. #: 00-0-23364	Seramur & Associates, PC Boone, NC

Appendix B

Laboratory Reports

Hydrocarbon Analysis Results

Client: SERAMUR
Address:

Contact: KEITH SERAMUR ; JOEY ANDERSON

Project: B-5833 ; PARCEL 11

Samples taken Monday, November 8, 2021
Samples extracted Monday, November 8, 2021
Samples analysed Monday, November 8, 2021

Operator MAX MOYER

H09382

Matrix	Sample ID	Dilution used	BTEX C6-C9	GRO C5-C10	DRO C10-C35	TPH C5-C35	Total Aromatics C10-C35	16 EPA PAHs	BaP	% Ratios C5:10	% Ratios C10:C18	% Ratios C18+	HC Fingerprint Match
Soil	S-1	22.0	<0.5	<0.5	<0.22	<0.5	<0.011	<0.011	<0.007	0	0	0	PHC ND,(FCM)
Soil	S-3	24.0	<0.6	<0.6	<0.24	<0.6	<0.012	<0.012	<0.007	0	0	0	PHC ND,(FCM)
Soil	S-5	13.0	<0.3	<0.3	<0.13	<0.3	<0.007	<0.007	<0.004	0	0	100	Residual HC
Soil	S-7	10.0	<0.25	<0.25	0.11	0.11	0.05	0.003	<0.001	0	85.8	14.2	Residual HC
Soil	S-9	11.0	<0.27	<0.27	<0.11	<0.27	<0.006	<0.006	<0.003	0	0	0	PHC ND,(FCM)
Soil	S-10	10.0	<0.25	<0.25	6.6	6.6	3.2	0.09	<0.001	0	88.2	11.8	V.Deg.PHC 78.3%,(FCM)
Soil	S-12	13.0	<0.3	<0.3	1.7	1.7	0.7	0.026	<0.001	0	89.2	10.8	V.Deg.PHC 93.9%,(FCM),(TD)
Soil	S-14	11.0	<0.27	<0.27	9.7	9.7	0.5	0.032	<0.004	0	93.8	6.2	Deg.Fuel 95.8%,(FCM),(TD)
Soil	S-15	13.0	<0.3	<0.3	2.2	2.2	1.2	0.05	0.001	0	89.8	10.2	V.Deg.PHC 89.5%,(FCM),(BO),(TD)
Soil	S-17	21.0	<0.5	<0.5	18.5	18.5	0.4	0.03	0.001	0	91.6	8.4	Deg Fuel 87.6%,(FCM),(TD)

Initial Calibrator QC check OK Final FCM QC Check OK 99.7%

Analysis by QED HC-1 Analyser

Concentration values in mg/kg for soil and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only : % Ratios estimated carbon number proportions : (OCR)/(Q) = Outside cal range, values and HC match estimates : ND = Not Detected

(B) = Blank Drift : (M) = Adjusted value : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : SB = sample selected as site background

Hydrocarbon Analysis Results

Client: SERAMUR
Address:

Contact: KEITH SERAMUR ; JOEY ANDERSON

Project: B-5833 ; PARCEL 11

Samples taken Monday, November 8, 2021
Samples extracted Monday, November 8, 2021
Samples analysed Monday, November 8, 2021

Operator MAX MOYER

H09382

Matrix	Sample ID	Dilution used	BTEX C6-C9	GRO C5-C10	DRO C10-C35	TPH C5-C35	Total Aromatics C10-C35	16 EPA PAHs	BaP	% Ratios			HC Fingerprint Match
										C5:10	C10:C 18	C18+	
Soil	S-18	23.0	<0.5	<0.5	20.3	20.3	0.5	0.03	0.001	0	93.7	6.3	Deg Fuel 84.6%,(FCM),(BO)
Soil	S-20	21.0	<0.5	<0.5	18.7	18.7	0.3	0.025	<0.0	0	89	11	Deg Fuel 46.6%,(FCM),(PFM),(BO)
Soil	S-22	21.0	<0.5	<0.5	45.9	45.9	22.5	1.1	0.005	0	95	5	Deg.Light Fuel 83.6%,(FCM)
Soil	S-23	20.0	<0.5	<0.5	0.2	0.2	0.04	0.003	<0.006	0	100	0	Deg Fuel 70.9%,(FCM)
Soil	S-29	20.0	<0.5	<0.5	0.5	0.5	0.4	0.05	<0.004	0	96.4	3.6	Residual PHC

Initial Calibrator QC check OK

Final FCM QC Check OK 102.3%

Analysis by QED HC-1 Analyser

Concentration values in mg/kg for soil and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only : % Ratios estimated carbon number proportions : (OCR)/(Q) = Outside cal range, values and HC match estimates : ND = Not Detected

(B) = Blank Drift : (M) = Adjusted value : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : SB = sample selected as site background

Hydrocarbon Analysis Results

Client: SERAMUR
Address:

Samples taken Monday, November 8, 2021
Samples extracted Monday, November 8, 2021
Samples analysed Monday, November 8, 2021

Contact: KEITH SERAMUR ; JOEY ANDERSON

Operator MAX MOYER

Project: B-5833 ; PARCEL 11

H09382

Matrix	Sample ID	Dilution used	BTEX C6-C9	GRO C5-C10	DRO C10-C35	TPH C5-C35	Total Aromatics C10-C35	16 EPA PAHs	BaP	% Ratios C5:10	% Ratios C10:C 18	% Ratios C18+	HC Fingerprint Match
Soil	S-31	26.0	<0.6	<0.6	0.3	0.3	0.3	0.013	<0.008	0	100	0	Residual PHC
Soil	S-32	24.0	<0.6	<0.6	0.5	0.5	0.27	0.009	<0.007	0	89	11	V.Deg.PHC 97.4%,(FCM)
Soil	S-33	21.0	<0.5	<0.5	0.07	0.07	0.06	0.006	<0.006	0	100	0	Residual HC
Soil	S-34	22.0	<0.5	<0.5	0.4	0.4	0.19	0.009	<0.0	0	79.1	20.9	V.Deg.PHC 62.7%,(FCM)
Soil	S-36	26.0	<0.6	<0.6	0.8	0.8	0.7	0.08	<0.008	0	96.8	3.2	Residual PHC
Soil	S-37	22.0	<0.5	<0.5	20.1	20.1	0.4	0.022	0.001	0	88.4	11.6	V.Deg.Light Fuel 95.8%,(FCM)
Soil	S-39	22.0	<0.5	<0.5	0.3	0.3	0.16	0.009	<0.001	0	87.2	12.8	V.Deg.PHC 97.3%,(FCM)
Soil	S-40	20.0	<0.5	<0.5	0.5	0.5	0.23	0.01	0.001	0	80.4	19.6	V.Deg.PHC 82.8%,(FCM)
Soil	S-41	13.0	<0.3	<0.3	11.5	11.5	0.28	0.017	0.001	0	84.4	15.6	Deg Fuel 64.1%,(FCM),(PFM)
Soil	S-42	11.0	<0.27	<0.27	0.04	0.04	0.04	0.005	<0.003	0	84.9	15.1	Residual HC

Initial Calibrator QC check OK Final FCM QC Check OK 96.2%

Analysis by QED HC-1 Analyser

Concentration values in mg/kg for soil and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only : % Ratios estimated carbon number proportions : (OCR)/(Q) = Outside cal range, values and HC match estimates : ND = Not Detected

(B) = Blank Drift : (M) = Adjusted value : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : SB = sample selected as site background

Hydrocarbon Analysis Results

Client: SERAMUR
Address:

Contact: KEITH SERAMUR ; JOEY ANDERSON

Project: B-5833 ; PARCEL 11

Samples taken Monday, November 8, 2021
Samples extracted Monday, November 8, 2021
Samples analysed Monday, November 8, 2021

Operator MAX MOYER

H09382

Matrix	Sample ID	Dilution used	BTEX C6-C9	GRO C5-C10	DRO C10-C35	TPH C5-C35	Total Aromatics C10-C35	16 EPA PAHs	BaP	% Ratios C5:10	% Ratios C10:C 18	% Ratios C18+	HC Fingerprint Match
Soil	S-43	20.0	<0.5	<0.5	2.1	2.1	1.1	0.04	<0.001	0	91.1	8.9	V.Deg.PHC 96.3%,(FCM)
Soil	S-44	25.0	<0.6	<0.6	<0.25	<0.6	<0.013	<0.013	<0.008	0	0	0	PHC ND,(FCM)
Soil	S-45	20.0	<0.5	65.3	143.9	209.2	47.9	1.8	<0.001	62.2	37.7	0.1	Deg.Gas 79.4%,(FCM)
Soil	S-46	21.0	<0.5	<0.5	<0.21	<0.5	<0.011	<0.011	<0.006	0	0	100	Residual HC
Soil	S-47	11.0	35.9	71.9	9.7	81.6	0.6	0.04	<0.001	99.2	0.7	0.1	Deg.Fuel 81.9%,(FCM),(PFM)
Soil	S-48	9.0	<0.22	<0.22	8	8	0.7	0.05	<0.001	0	90.3	9.7	Deg Fuel 90.4%,(FCM),(PFM),(BO)
Soil	S-49	12.0	<0.3	<0.3	<0.12	<0.3	<0.006	<0.006	<0.004	0	0	0	PHC ND,(FCM)
Soil	S-50	10.0	<0.25	32.7	8.8	41.5	0.29	0.017	<0.004	99.3	0.7	0	Deg.Light Fuel 95.2%,(FCM)
Soil	S-51	11.0	<0.27	<0.27	10	10	0.25	0.015	<0.0	0	86.7	13.3	V.Deg.Light Fuel 90.1%,(FCM)
Soil	S-52	12.0	<0.3	<0.3	<0.12	<0.3	<0.006	<0.006	<0.004	0	0	100	PHC ND,(FCM)

Initial Calibrator QC check OK Final FCM QC Check OK 102.2%

Analysis by QED HC-1 Analyser

Concentration values in mg/kg for soil and mg/L for water samples. Soil values uncorrected for moisture or stone content. Fingerprints provide a tentative hydrocarbon identification.

Abbreviations :- FCM = Results calculated using Fundamental Calibration Mode : % = confidence for hydrocarbon identification : (PFM) = Poor Fingerprint Match : (T) = Turbid : (P) = Particulate detected

HC = Hydrocarbon : PHC = Petroleum HC : FP = Fingerprint only : % Ratios estimated carbon number proportions : (OCR)/(Q) = Outside cal range, values and HC match estimates : ND = Not Detected

(B) = Blank Drift : (M) = Adjusted value : (SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : SB = sample selected as site background

Petroleum Hydrocarbon Analysis Results

Client: SERAMUR & ASSOCIATES
Address: 165 KNOLL DRIVE
BOONE NC 28607

Contact: KEITH SERAMUR

Project: NCDOT-5833 P011

Samples Taken: Tuesday, November 9, 2021
Samples Extracted: Tuesday, November 9, 2021
Samples Analysed: Tuesday, November 9, 2021

Analyst: MAX MOYER

U00904

Matrix	Sample ID	Dilution Used	BTEX	GRO C5 - C9	DRO C10 - C40	TPH C5 - C40	Total Aromatics C10 - C35	16 EPA PAHs	BaP	Carbon Band Ratio % C5:10	Carbon Band Ratio % C10:C18	Carbon Band Ratio % C18+	HC Identification
Soil	S-53	21	<0.52	<0.52	8.6	8.6	5.4	0.24	<0.001	0.9	96.9	2.2	Deg.Diesel 80.8%,(FCM)
Soil	S-54	39	<0.97	<0.97	4.9	4.9	3.1	0.13	<0.002	0	94.3	5.7	Deg.Fuel 81.4%,(FCM)
Soil	S-55	23	<0.57	<0.57	1.58	1.58	0.93	0.1	<0.007	0	94.7	5.3	Residual PHC
Soil	S-56	21	<0.52	<0.52	1.16	1.16	0.68	0.074	<0.006	0	98.2	1.8	Residual PHC
Soil	S-57	18	<0.45	<0.45	2.2	2.2	0.97	0.051	<0.001	0	83.6	16	V.Deg.Fuel 92.9%,(FCM)
Soil	S-58	12	<0.3	<0.3	<0.12	<0.3	<0.001	<0.006	<0.004	0	0	0	Residual PHC
Soil	S-59	8	<0.2	<0.2	<0.08	<0.2	<0.001	<0.004	<0.002	0	0	0	Residual PHC

Initial Calibrator QC check OK

Final FCM QC Check OK 1.1 % Drift

Results generated by QED HC-1 analyser

Concentration values : mg/kg for soil : mg/L for water. Soil values uncorrected for moisture or stone content. HC identification shows % confidence in match.

FCM = Results calculated using Fundamental Calibration Mode : (PFM) = Poor Fingerprint Match : HC = Hydrocarbon : PHC = Petroleum HC : Deg = Degraded : FP = Fingerprint only

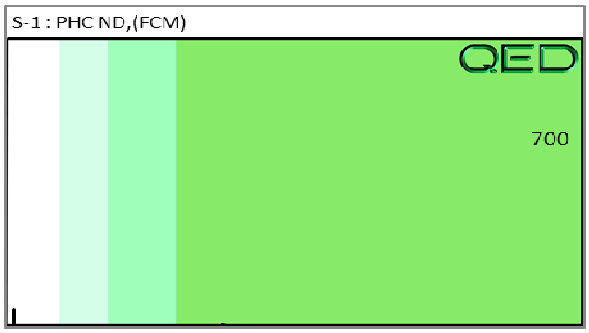
(OCR)/(Q) = Outside cal range, values and HC match estimates : ND = Not Detected : (TD) = Cal temp drift: (T) = Turbid : (P) = Particulate detected : (B) = Blank Drift : (M) = Adjusted value

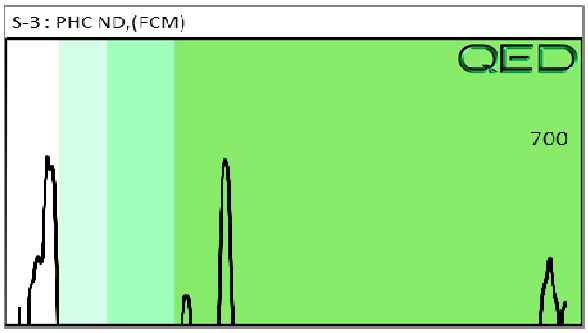
(SBS)/(LBS) = Site Specific or Library Background Subtraction applied to result : (BO) = Background Organics detected : SB = sample selected as site background

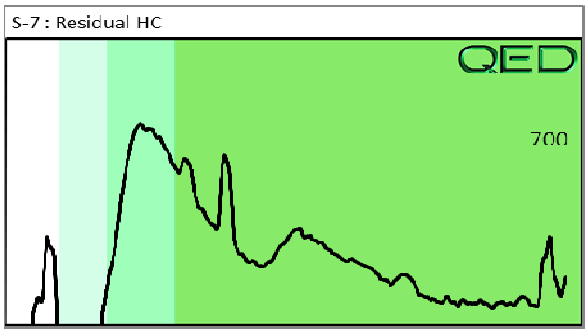
QED Hydrocarbon Fingerprints

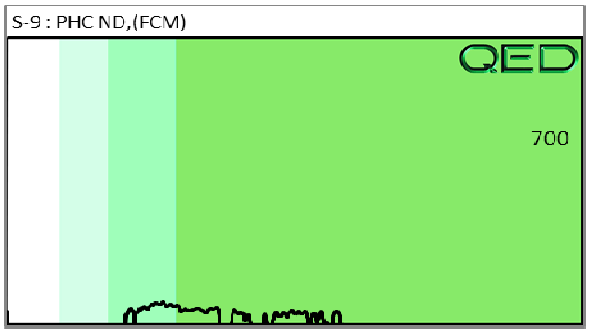
Project: B-5833 ; PARCEL 11

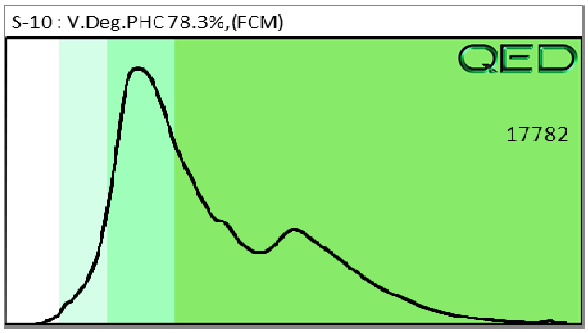
Monday, November 8, 2021

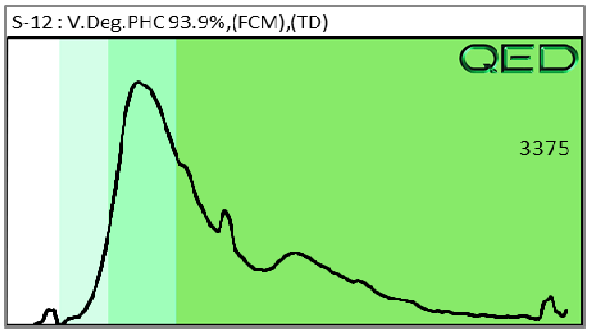


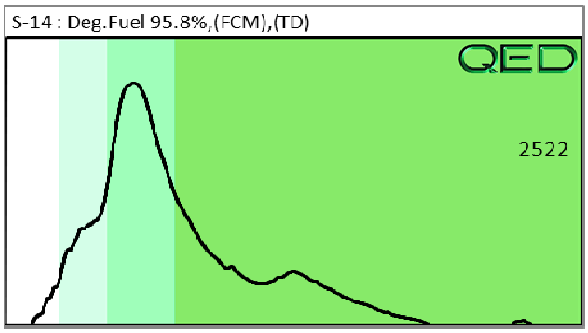


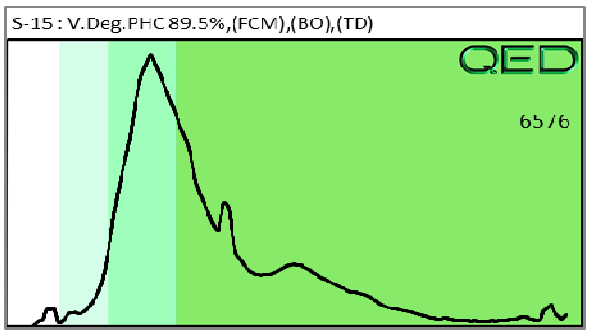


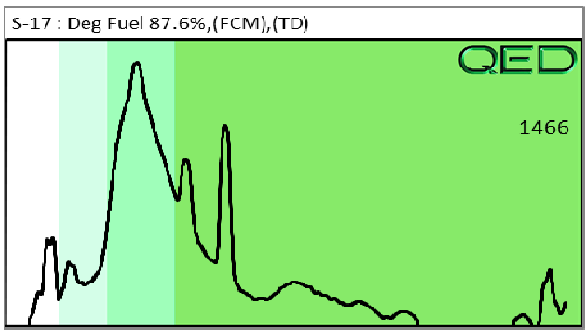








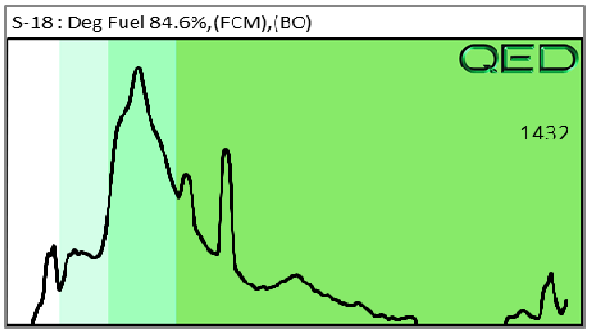


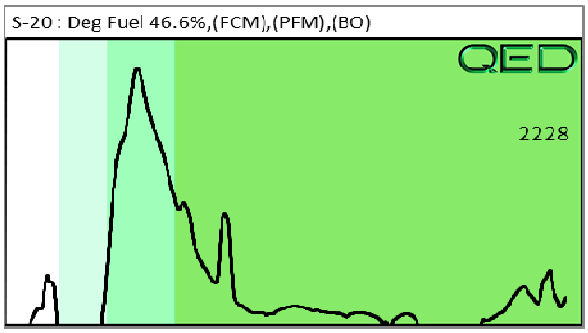


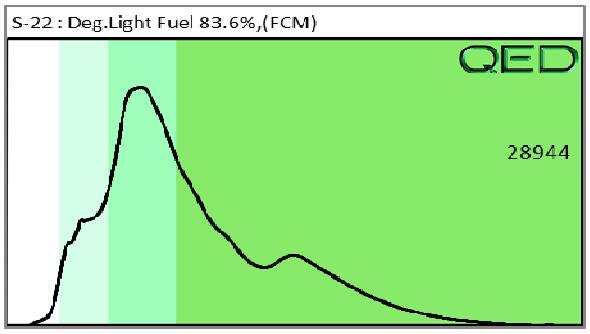
QED Hydrocarbon Fingerprints

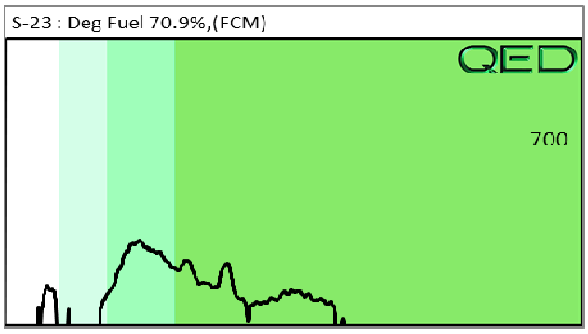
Project: B-5833 ; PARCEL 11

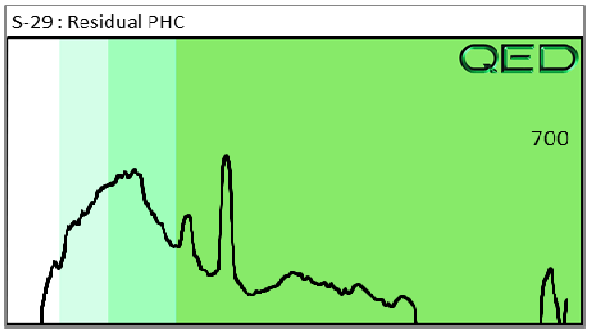
Monday, November 8, 2021





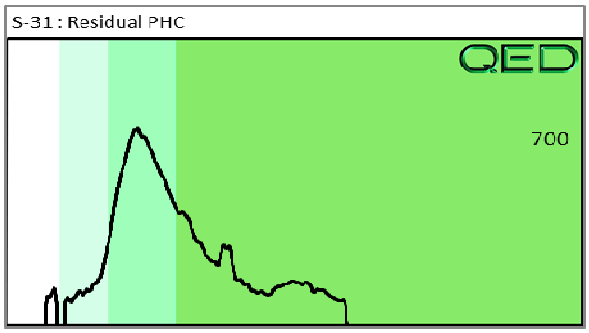


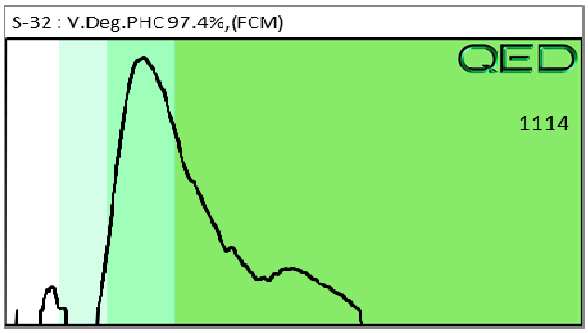


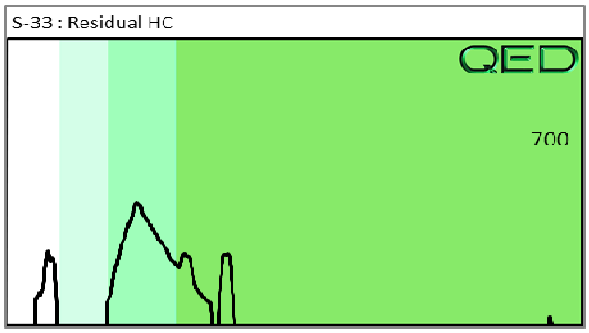


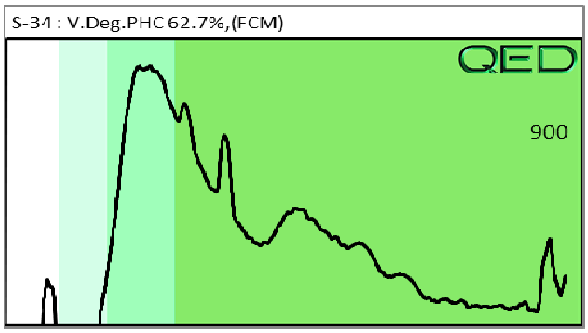
QED Hydrocarbon Fingerprints

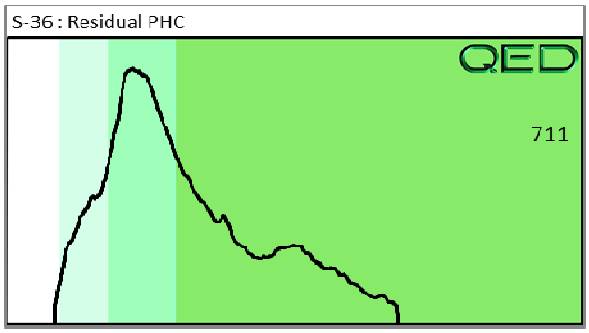
Project: B-5833 ; PARCEL 11 Monday, November 8, 2021

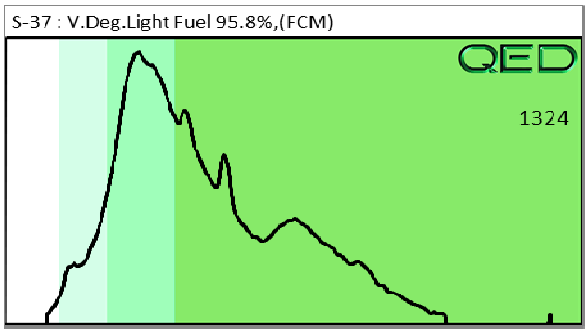


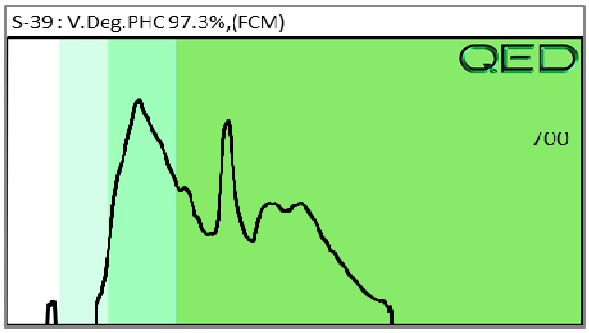


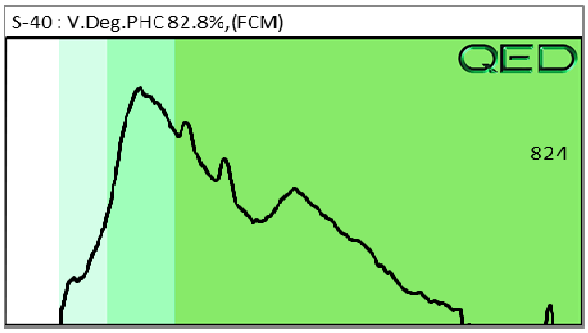


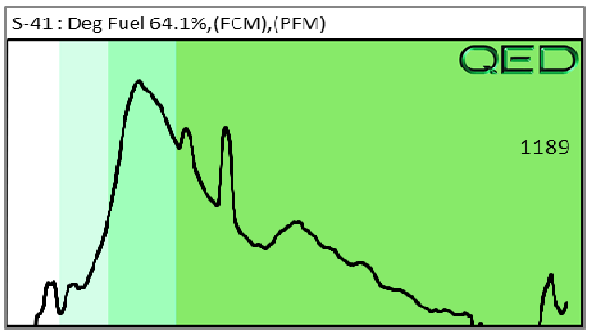


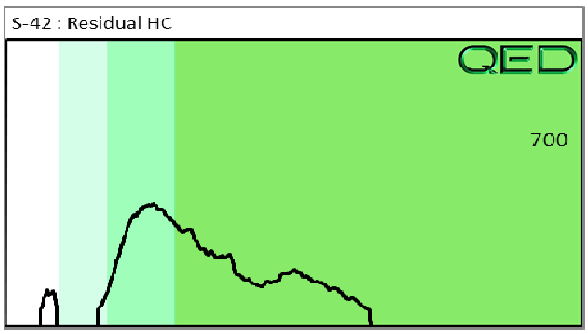








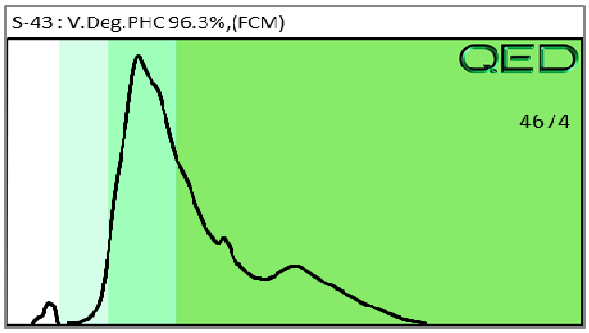


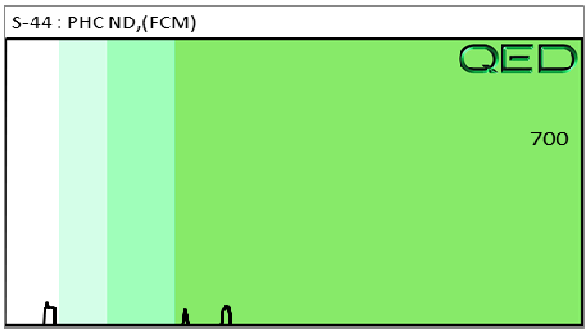


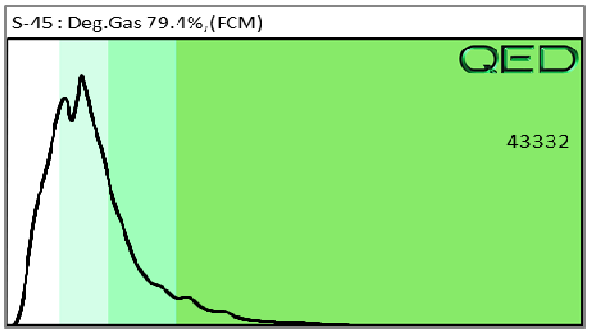
QED Hydrocarbon Fingerprints

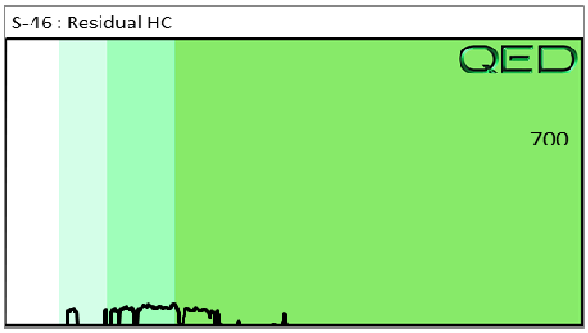
Project: B-5833 ; PARCEL 11

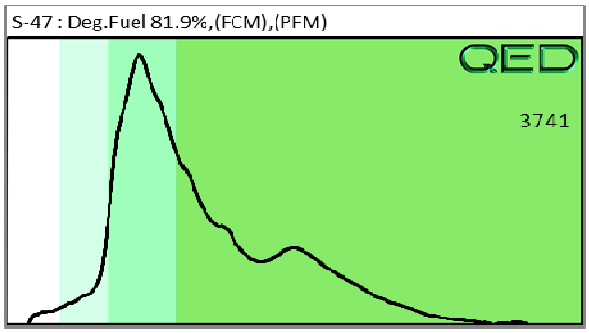
Monday, November 8, 2021

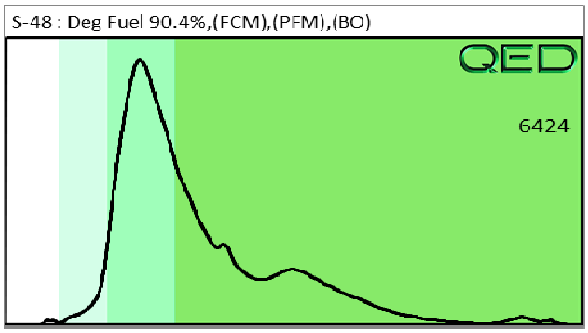


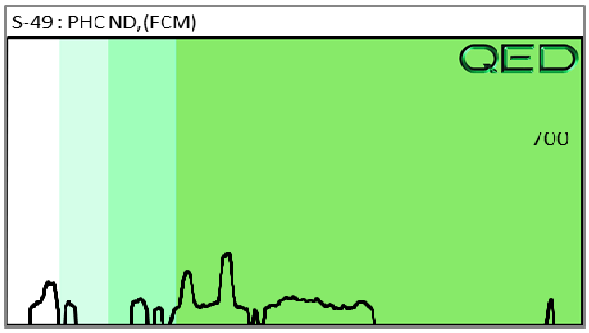


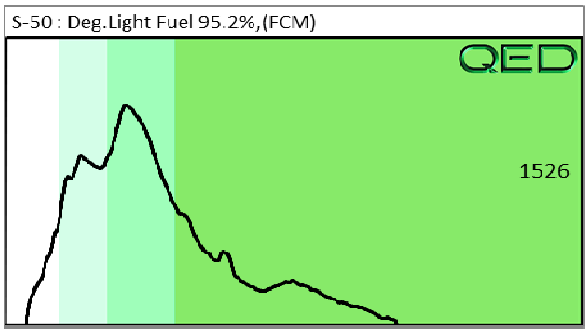


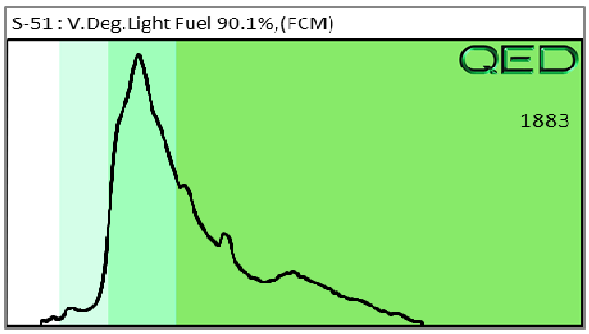


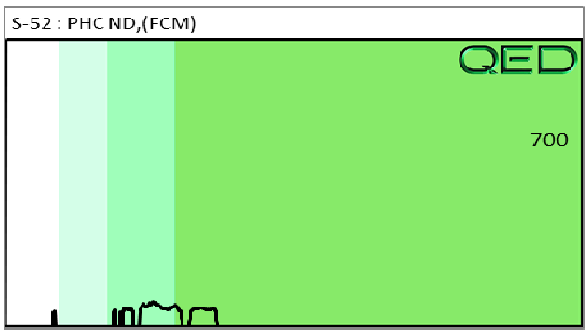








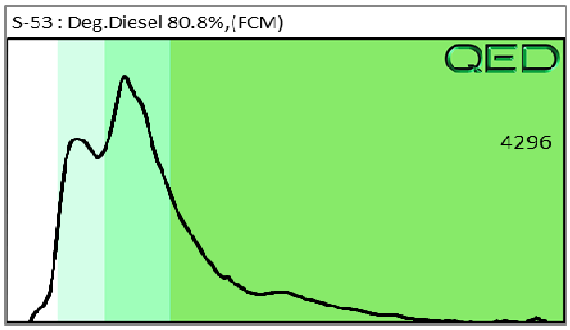


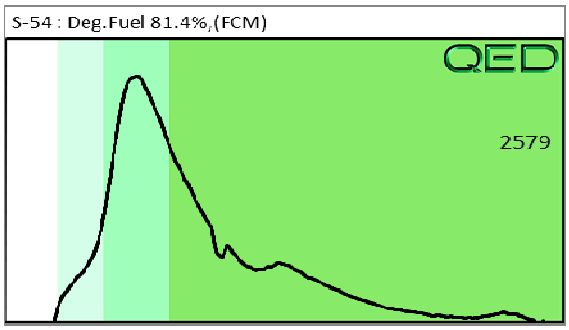


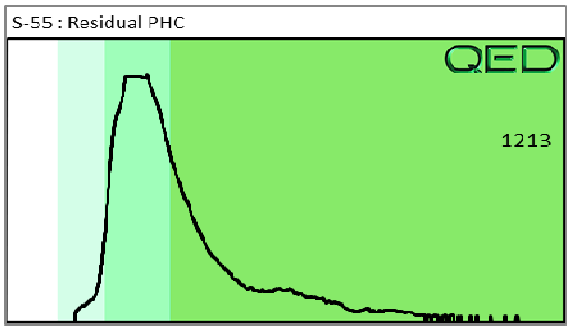
QED Hydrocarbon Fingerprints

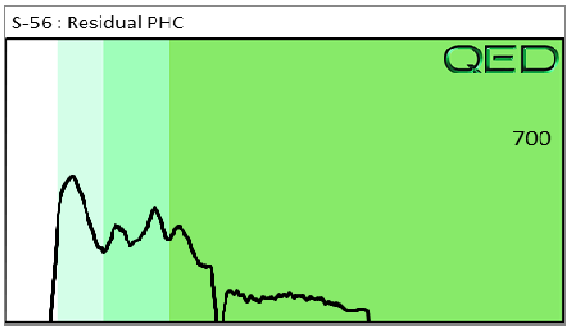
Project: NCDOT-5833 P011

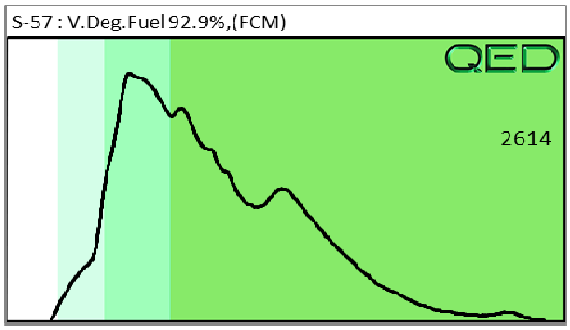
Tuesday, November 9, 2021

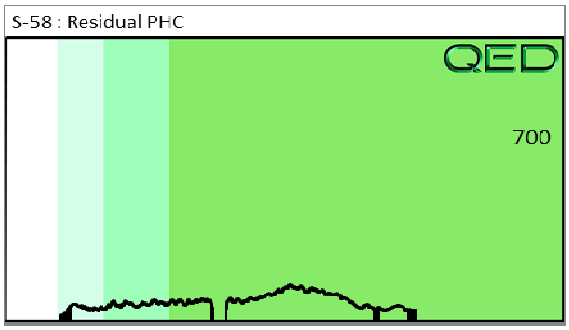


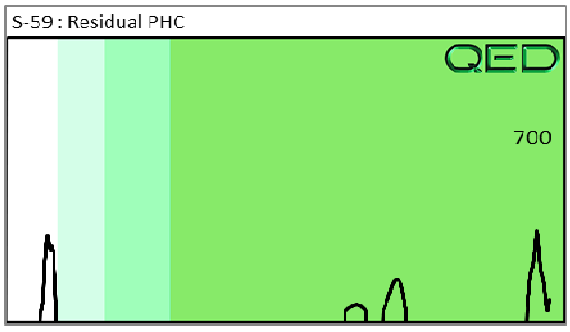












Client Name:	Seramur + Associates
Address:	165 Knoll Dr. Boone, NC 28607
Contact:	Keith Seramur
Project Ref.:	NCDOT B-5833 Poll
Email:	seramur@icloud.com
Phone #:	(828)-773-0499
Collected by:	Joey Anderson Brooke Steenwyk

REDLAB™
RAPID ENVIRONMENTAL DIAGNOSTICS

CHAIN OF CUSTODY AND ANALYTICAL REQUEST FORM

RED Lab, LLC
5598 Marvin K Moss Lane
MARBIONC Bldg, Suite 2003
Wilmington, NC 28409

Each UVF sample will be analyzed for total BTEX, GRO, DRO, TPH, PAH total aromatics and BaP. Standard GC Analyses are for BTEX and Chlorinated Solvents: VC, 1,1 DCE, 1,2 cis DCE, 1,2 trans DCE, TCE, and PCE. Specify target analytes in the space provided below.

Sample Collection	TAT Requested		Analysis Type		Initials	Sample ID	Total Wt.	Tare Wt.	Sample Wt.
Date/Time	24 Hour	48 Hour	UVF	GC					
11/9/21 1754		X	X		BS	S-53	53.0	40.4	12.6
11/9/21 1757		X	X		BS	S-54	51.3	40.5	10.8
11/9/21 1803		X	X		BS	S-55	51.7	40.6	11.1
11/9/21 1804		X	X		BS	S-56	52.7	40.6	12.1
11/9/21 1806		X	X		BS	S-57	52.6	40.5	12.1
11/9/21 1807		X	X		BS	S-58	52.2	40.4	11.8
11/9/21 1809		X	X		BS	S-59	52.8	40.5	12.3
11/9/21						S-60			

COMMENTS/REQUESTS:

TARGET GC/UVF ANALYTES:

Relinquished by	11/10/21	Accepted by	Date/Time
	10:30	MM 11/15/21	1250
Relinquished by		Accepted by	Date/Time

RED Lab Use Only

25

Appendix C

NCDEQ Incident Files

Spectrum Environmental
Charlotte, NC
704-334-2164

RECEIVED
N.C. Dept. of ENR
MAY 18 2011
Winston-Salem
Regional Office

Initial Assessment Report *as per*

North Carolina Department of Environment and Natural Resources
Division of Waste Management

for

J. T. Alexander and Son, Inc.
PO Box 88
Mooresville, NC 28115

site

Thruway Food Mart 37795
5652 Hwy 21 (at exit 79, I-77)
Jonesville, NC 28642
Yadkin County
Facility I. D. number 0-023364

Prepared by

Spectrum Nationwide Environmental, Inc.

May 2011

SBW
5/20/11

INENCO, INC.

132 W. Statesville Ave.
Mooresville, NC 28115
(704) 662-8192
Fax: (704) 662-8194

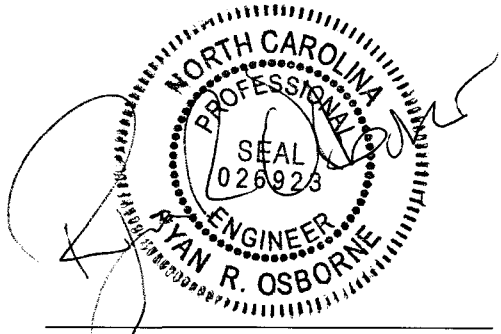
Professional Engineer's Statement

Site: Thruway Food Mart
5652 Highway 21@ i-77 Exit 79
Jonesville, NC
Yadkin County

Remediation of a surface spill as described in the Initial Assessment Report attached .was conducted at this site from April 23, 2011 to April 25, 2011. Spectrum Nationwide Environmental, Inc. (Spectrum) was contacted to perform initial abatement activities for the fuel tank owner. As described in the Initial Assessment Report, the spill response commenced within hours of the initial release and continued for several days.

The initial cleanup activities on April 23rd performed by Spectrum consisted of controlling the release, starting cleanup activities, and stabilizing the site. These activities commenced prior to my presence at the site, but were evident when I first inspected the release area on the morning of April 24th. Starting on the morning of the 24th, the soil and gravel impacted by the release was excavated for disposal. These areas were determined by visual and olfactory clues and supplemented utilizing a Photoionzation Detector (PID). Soil was removed in the ditch area below the site utilizing a mini-excavator. The ditch was in a wooded area with established groundcover and trees. An attempt was made to keep these areas in tact by systematically removing only the affected soil. It should be noted that all of the site stormwater runs this ditch line and that any past release at the site would have affected this area.

After soil removal, samples were taken at just less than 20 foot intervals along the ditch line. Field screening was completed utilizing the PID meter. The samples were collected in a manner that meets the requirements of the December 2008 version of the *Guidelines for Assessment and Corrective Action for UST Releases*. I collected the samples and immediately placed them in the field preparations provided by the laboratory. Based on the results of the sampling, it appears that residual contamination above NC DENR "action levels" is present in the ditch line in three of the seven soil samples. Based on these results additional remedial efforts may be deemed appropriate by the NC DENR; however, we are requesting that the site be subject to "no further action".



Ryan R. Osborne, PE

Spectrum Environmental
Charlotte, NC
704-334-2164

Initial Assessment Report (for Diesel Fuel Spill)

A. Site Information

1. *Site Identification*

Date of Report May 17, 2011
Facility ID # 0-023364
Site Name Thruway Food Mart
5652 Hwy 21 @ I-77 exit 79
Jonesville, NC Yadkin County
Description of Geographical Data Point: parking lot and ditch on the property
Location Method: GPS
Latitude: 36 degrees 11' 57.59" N Longitude 080 degrees 48" 44.88" W

2. *Information about contacts*

Truck Owner: unknown semi/tractor trailer
UST System Owner: J.T. Alexander and Son, Inc.
PO Box 88, Mooresville, NC 28115
Attn: Tom Laws 704-664-1566
Consultant/Contractor: Spectrum Nationwide Environmental, Inc.
PO Box 7351, Charlotte, NC 28241, 704-334-2164
Engineering Consultant: INENCO,Inc.
132 W. Statesville, NC 28115
Contact: Ryan Osborne 704-662-8192
Analytical Laboratory: Test America, Inc.
I-85 South Bldg. 2838 Suite B
Charlotte, NC 28208
704-392-1164 State Certification: 387

3. *Information about Release*

Date Discovered: April 23, 2011
Estimated Quantity of Release: 536 gallons of diesel fuel
Cause of Release: tractor trailer hit diesel pump and broke of shear valve
Source of Release: #12 Diesel Pump

4. *Certification:* N/A

B. Site History and Characteristics

1. *UST Petroleum Releases*: N/A
2. *List, describe and indicate locations of AST systems*: N/A
3. *Provide information about UST systems*: N/A
4. *List, describe and indicate locations of all other non-UST releases*: N/A

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5. *Provide comprehensive description of release*:
At approximately 12:30 AM, Saturday, April 23, 2011 an unidentified semi/tractor trailer went through the parking lot and hit the #12 Diesel Fuel Pump. The pump was struck hard enough to knock the pump off the mount and break the shear valve. The shear valve did not function properly allowing 536 gallons of diesel fuel to leak from the valve. The owner of the site contacted JT Alexander and Son, Inc (JTA) at 6:28 AM when they arrived to open the store. The Fire Dept, Yadkin County Emergency Management, Spectrum Environmental and JTA personnel were dispatched immediately.

Upon arrival the fuel had spread over the parking lot 70 feet by 90 feet, went 80 feet down a driveway and migrated 120 feet into a drainage ditch stopping approximately 30 feet from a small creek. The creek was not impacted. (See Figure 1).

The Fire Dept stabilized the spill and placed a boom station in the creek as a precautionary measure. Spectrum Environmental arrived at 9:30 AM to begin clean up operations. Spectrum personnel spread thirty-two bags of oil dry material over the parking lot and driveway. A pumper truck was brought in to pump up the numerous fuel puddles throughout the parking lot and drainage ditch. Absorbent pads were placed in the ditch and the boom station was reinforced with larger booms.

6. *Provide a brief description of the site characteristics*:
The site in question is located immediately off interstate I-77 exit 79 at Hwy 21, Jonesville, NC. The site is rolling hills with farms and residential homes in the vicinity. Municipal water is supplied to the area but there are wells in the area. The local topography is rolling hills with surface drainage flowing to the North West from the site. Neither groundwater nor bedrock was encountered during site excavation. There is a small creek in the immediate area of the spill site but neither the creek nor the groundwater was impacted. The site is located in the Sauratown Mountains Anticlinorium of North Carolina. According to the North Carolina Geologic Survey, Geologic Map (1985) the site is made up of metamorphic rock, Metagraywacke containing quartz and microcline porphyroblasts. Soils observed at the site ranged from orange to red clay silt.

7. *Summarize initial abatement actions, assessment activities and corrective actions.*
Approximately 536 gallons of diesel fuel were released due to an accident. A pumper truck was brought in to pump up the numerous fuel puddles throughout the parking lot and drainage ditch,100 gallons of diesel/water were collected for disposal (see manifest appendix A). Spectrum personnel spread thirty-two bags of oil dry material over the parking lot and driveway. The oil dry material was worked into the oil and swept up off the pavement. Additional material was left in

place for two days. On 4/25/11, the material was swept up off the pavement. A total of one and one quarter 55-gallon drums of material were removed for disposal. A light coating of oil dry material was left in place to affect a passive clean up effort on the pavement. The stain should dissipate over the next three months. Absorbent pads were placed in the ditch and the boom station was reinforced with larger booms.

The excavation and hauling of contaminated soil out of the drainage ditch, to a permitted disposal site was conducted on 4/25 and 4/26/11. A Photoionization Detector (PID) was used to determine the location and extent of the contamination. Soil was removed until PID results below 10.0 PPM (parts per million) were achieved. Soil was removed in the heavily wooded area. Excavation in this area was extremely difficult and there was a concern of removing additional trees, roots, shrubbery and the destruction of drainage area versus removing additional contaminated soil. The final laboratory results indicate that samples 5, 6, and 7 had diesel soil contamination present above the NCDENR action levels at the sample locations. These three samples were located in the heavily wooded area described above. A total of 4 truck loads (63.97 tons) of contaminated material, for disposal, were taken to Environmental Soils, Inc. in Lattimore, NC. The incident was reported to NCDENR by telephone and a 24 Hour Notice was faxed on 4/24/11.

C. Free Product Investigation and Recovery Report (if applicable)

N/A surface spill; Therefore, no additional investigations were commenced.

D. Groundwater and Surface Water Investigation (if applicable)

N/A surface spill: Groundwater was not encountered during the site investigation. Therefore, no additional investigations were commenced.

E. Initial Response and Abatement Action

In the early morning of 4/23/11, due to a tractor-trailer hitting a diesel pump, approximately 536 gallons of diesel fuel were spilled, from the pump onto the parking lot and into a storm water ditch, running approximately 350 feet. The Fire Dept, Yadkin County Emergency Management, Spectrum Environmental and JTA personnel were dispatched immediately. The Fire Dept stabilized the spill and placed a boom station in the creek as a precautionary measure.

Spectrum Environmental arrived at 9:30 AM to begin clean up operations. Spectrum personnel spread thirty-two bags of oil dry material over the parking lot and driveway. A pumper truck was brought in to pump up the numerous fuel puddles throughout the parking lot and drainage ditch. 100 gallons of diesel/water were collected for disposal (see manifest appendix A). Absorbent pads were placed in the ditch and the boom station was reinforced with larger booms. The

oil dry material was worked into the oil and swept up off the pavement. Additional material was left in place for two days.

On 4/25/11, the material was swept up off the pavement. A total of one and one quarter 55-gallon drums of material were removed for disposal. A light coating of oil dry material was left in place to affect a passive clean up effort on the pavement. The stain should dissipate over the next three months.

The excavation and hauling of contaminated soil out of the drainage ditch, to a permitted disposal site was conducted on 4/25 and 4/26/11. Spectrum brought in a skid steer and a mini excavator to dig out the contaminated soil for disposal from the drainage ditch. The ditch was in a wooded area with established groundcover and trees. An attempt was made to keep these areas in tact by systematically removing only the affected soil. A Photoionization Detector (PID) was used to determine the location and extent of the contamination. Soil was removed until PID results below 10.0 PPM (parts per million) were achieved. The excavated area was approximately 2-10 feet wide by 120 feet long by 6-18 inches deep. A total of 4 truck loads (63.97 tons) of contaminated material, for disposal, were taken to Environmental Soils, Inc. in Lattimore, NC (see manifests Appendix A).

The final laboratory results indicate that samples 5, 6, and 7 had diesel soil contamination present above the NCDENR action levels at the sample locations.

F. Excavation of Contaminated Soil

1. Describe excavation process

The excavation and hauling of contaminated soil out of the drainage ditch, to a permitted disposal site was conducted on 4/25 and 4/26/11. Spectrum brought in a skid steer and a mini excavator to dig out the contaminated soil for disposal from the drainage ditch. The ditch was in a wooded area with established groundcover and trees. An attempt was made to keep these areas in tact by systematically removing only the affected soil. A Photoionization Detector (PID) was used to determine the location and extent of the contamination. Soil was removed until PID results below 10.0 PPM (parts per million) were achieved. The excavated area was approximately 2-10 feet wide by 120 feet long by 6-18 inches deep.

The removed contaminated soil was placed directly into trucks for disposal except for the final load which was stored on and covered by plastic sheeting overnight. The excavation was sampled after the soil was removed with samples being taken along the path of the excavation of the shallow excavation areas. A Photoionization Detector (PID) was used to determine the location and extent of the contamination during the excavation. A Rae Systems MiniRAE 2000 photo-ionization detector was used. The MiniRAE 2000 was calibrated to display concentration in units equal to parts per million. The field screening was done by

holding the PID next to the soil that had been recently removed and observing the meter to determine if contaminated soil was present. In addition, soil samples were placed in plastic bags and allowed to warm and then were read with the PID. All samples checked had readings that were less than 10 part per million (PPM).

A total of 4 truck loads (63.97 tons) of contaminated material, for disposal, were taken to Environmental Soils, Inc. in Lattimore, NC. The area was then backfilled with fresh gravel and soil with seed/straw. Additionally, a roll of erosion control mat was put in place on the spill area.

Each soil sample was checked for the presence of constituents found by EPA Method 8015 DRO & GRO. The location of each sample is illustrated in Figure 2. Neither groundwater nor bedrock was encountered during the excavation activities.

Disposal of the contaminated soil took place on 4/25 and 26/ 2011. A total of four covered dump truck loads of soil were transported to Environmental Soils, Inc. in Lattimore, NC. The Disposal Manifests are included as Appendix A. Soil was removed in the heavily wooded area. Excavation in this area was extremely difficult and there was a concern of removing additional trees, roots, shrubbery and the destruction of drainage area versus removing additional contaminated soil. The final laboratory results indicate that samples 5, 6, and 7 had diesel soil contamination present above the NCDENR action levels at the sample locations. These three samples were located in the heavily wooded area described above.

2. *Describe post-excavation soil sampling*

Spectrum Environmental instructed the laboratory to analyze the soil samples for Total Petroleum Hydrocarbons (TPH) by EPA DRO/GRO Method. The NCDENR requires sample preparation Method GRO when analyzing for low to medium boiling point fuels which include gasoline and gasohol. Sample preparation method DRO is required when analyzing for high boiling point fuels such as jet fuels, home heating oil, kerosene, fuel oil #2 and diesel fuel. The laboratory findings are reported as parts per million (PPM) TPH.

	Diesel	**Gasoline**	**PID**
Stockpile/Confirming	470	38.9	41 PPM
Sample # 1	ND	ND	0.0 PPM
Sample # 2	29.3	ND	0.0 PPM
Sample # 3	ND	ND	0.0 PPM
Sample # 4	17.8	ND	6.2 PPM
Sample # 5	253	ND	4.1 PPM
Sample # 6	508	ND	8.2 PPM
Sample # 7	1090	13	9.1 PPM

ND: not detected (see attached laboratory data Appendix B)

Spectrum Environmental
Charlotte, NC
704-334-2164

Excavation Sample Conclusions:
Field analysis did not indicate that the sample locations were impacted over 10 PPM once the contaminated soil was removed. The final laboratory results indicate that samples 5, 6, and 7 had diesel soil contamination present above the NCDENR action levels at the sample locations. The sampling indicated results greater than the NC DENR action levels of 10 mg/kg for GRO and 40 mg/kg for DRO from a non-UST release.

G. Conclusions and Recommendations

The primary source (spilled fuel) of the contamination and the majority of the secondary source (affected soil) of contamination have been removed from the site. Four of the seven soil samples indicated that the contaminated soil has been removed below NC DENR action levels. Based on these results additional remedial efforts may be deemed appropriate by the NC DENR; however, we are requesting that the site be subject to "no further action".

Respectfully submitted,

Stephen M. Hamilton
President

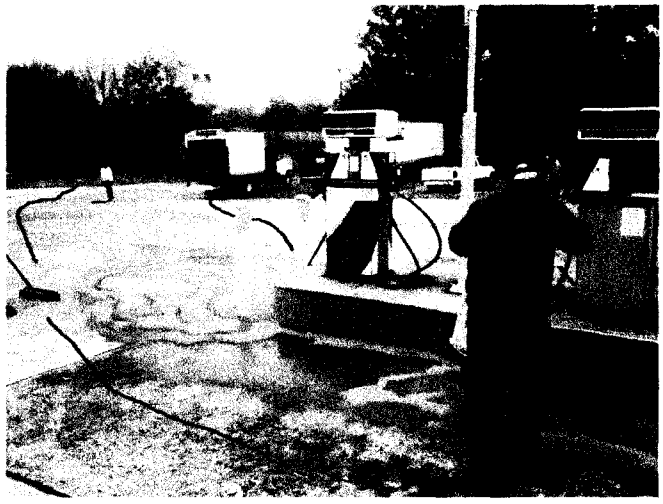
Cc: Tom Laws, J.T. Alexander and Son, Inc., PO Box 88, Mooresville, NC 28115, 800-760-2399

Dale Trivette, Yadkin County Emergency Management, PO Box 998, Yadkinvile,NC 27055, 336-679-4232

Stephen Williams, Winston-Salem Regional Office, 585 Waughtown Street, Winston-Salem, NC 27107 336-771-5000

Spectrum Environmental
Charlotte, NC
704-334-2164

Damaged #12 Diesel Pump- source of spill.

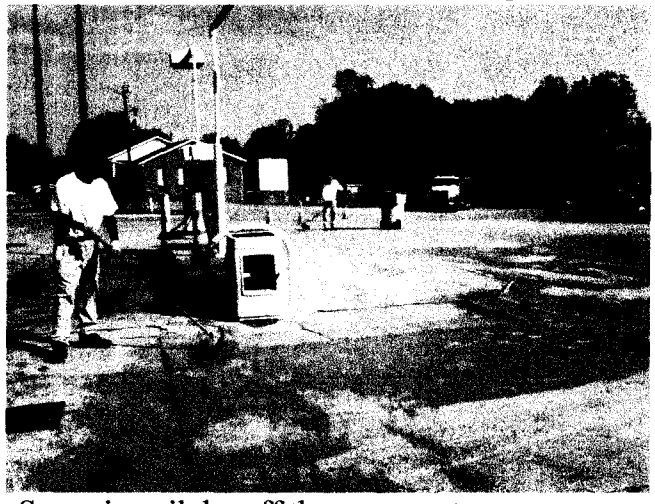


Spreading oil dry over parking lot

Pumping up puddles of fuel.

Boom station in creek, near outfall pipe.

Placing pads along the ditch in the wooded area.



Sweeping oil dry off the pavement.

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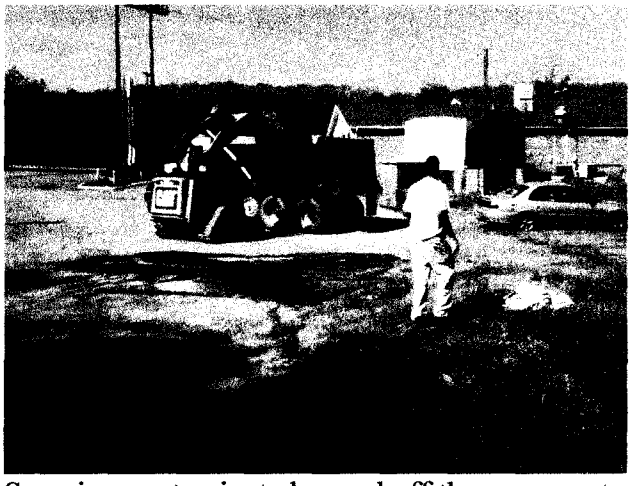

Scraping contaminated gravel off the pavement.

Trenching contaminated soil in wooded area.

Excavated area at the start of the drainage ditch.

Loading contaminated soil.

Soil sampling in drainage ditch.

Restoring area with fresh backfill, seed/ straw and erosion control mat.

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Figures

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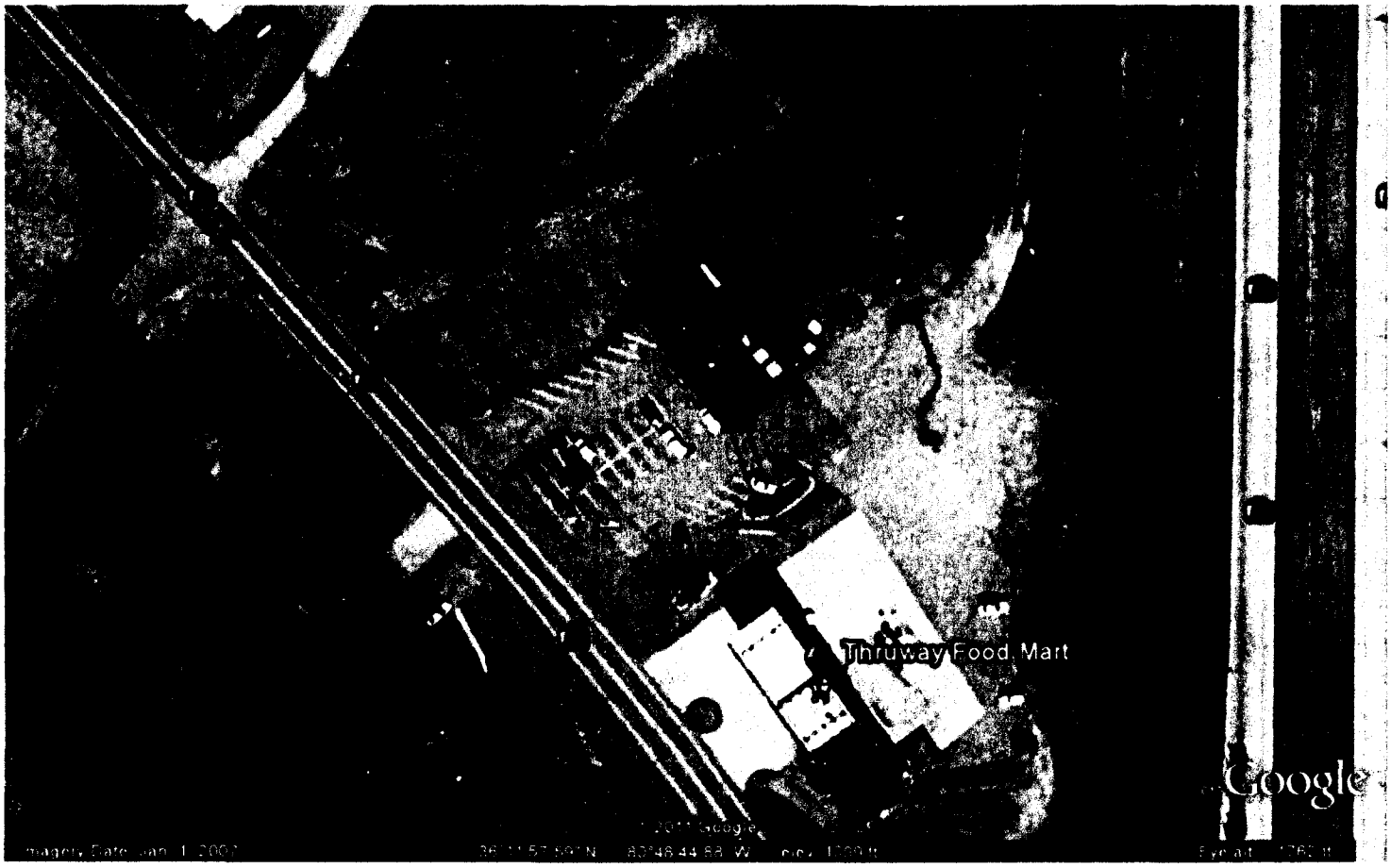
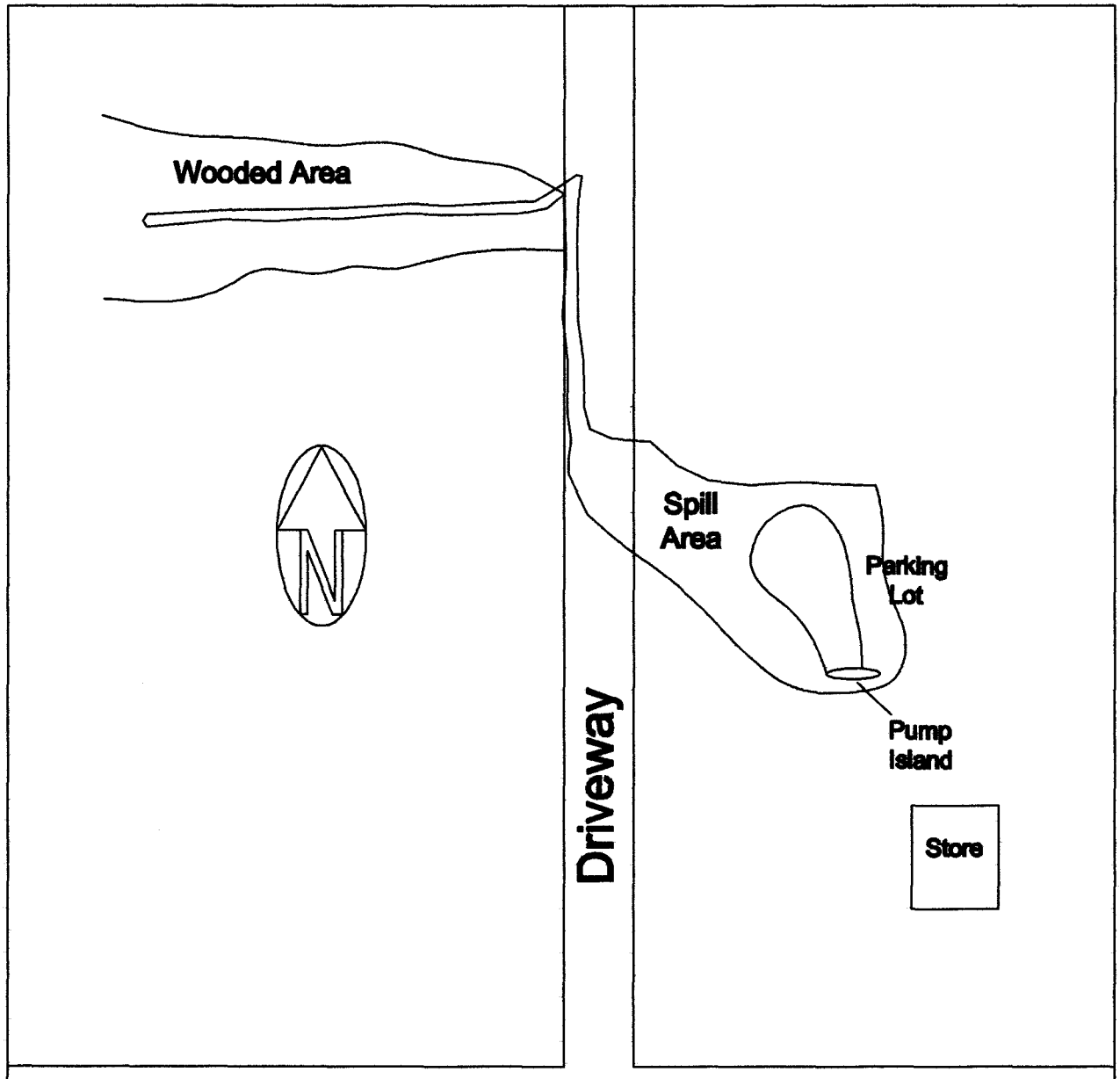
Charlotte, NC
704-334-2164

Aerial Site Location Photograph

Diesel Spill on 4/23/11

Thruway Food Mart
Hwy 21, at Exit 79, I-77
Jonesville, NC

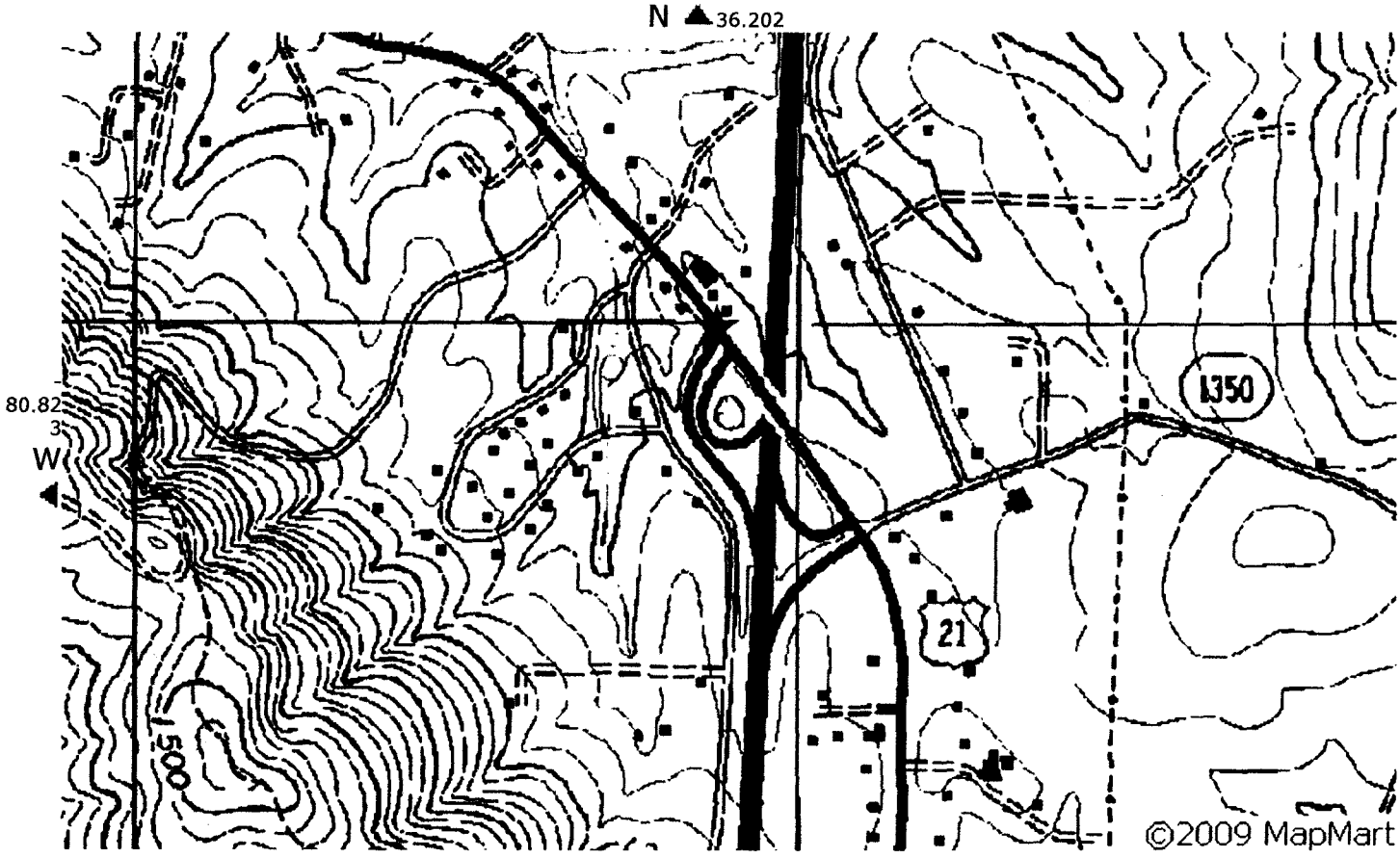


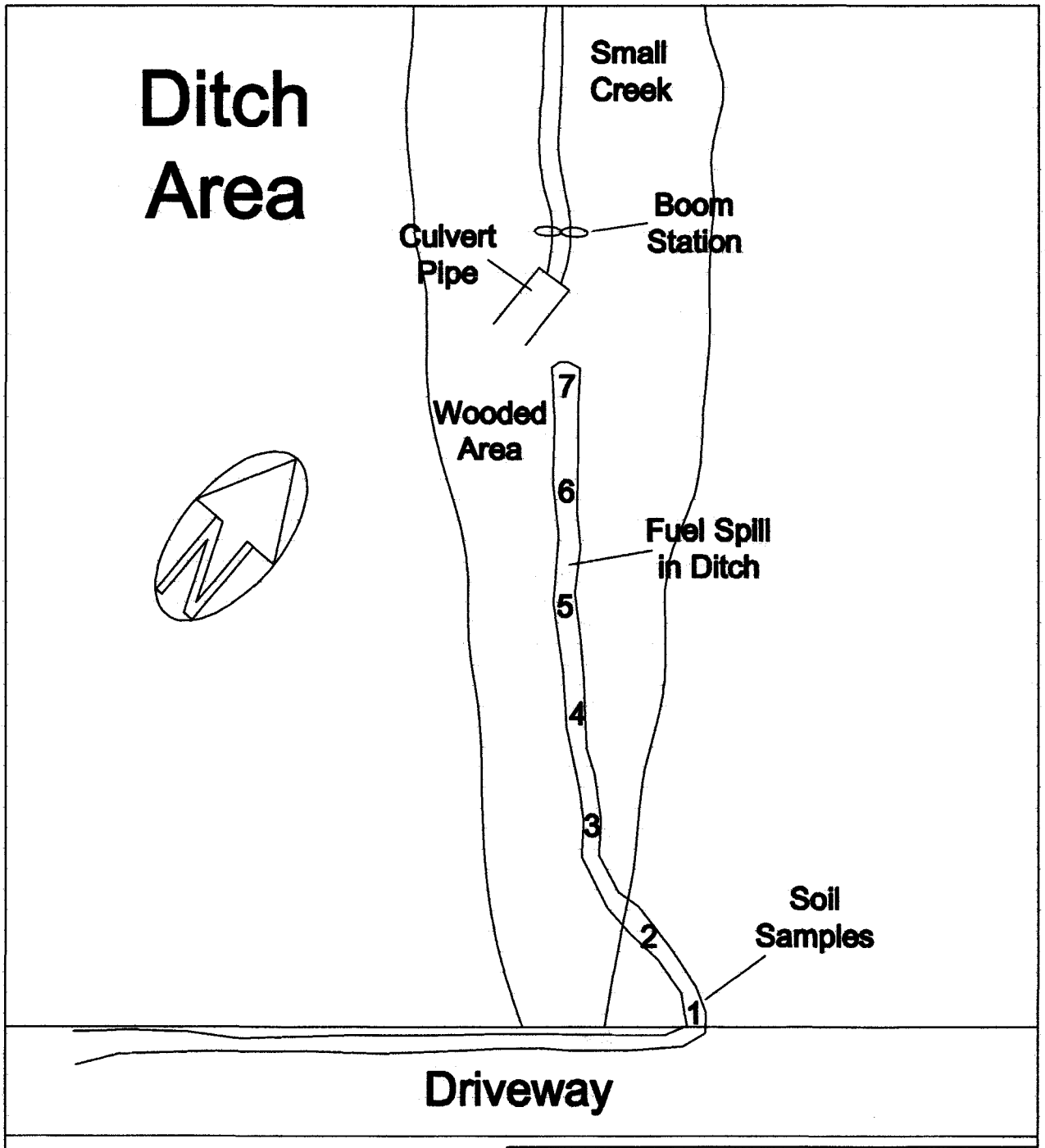


Spectrum Environmental	
Thruway Food Mart	Figure 1
Scale 1":40'	5/4/11

Spectrum Environmental
Charlotte, NC
704-334-2164

Topography Site location Map
Thruway Food Mart
Hwy 21, at Exit 79, I-77
Jonesville, NC





Spectrum Environmental	
Thruway Food Mart	Figure 2
Scale 1":25'	5/4/11

Spectrum Environmental
Charlotte, NC
704-334-2164

Appendix C

24-Hour Release Reporting Form

UST-61 | 24-Hour Release and UST Leak Reporting Form

For Releases in NC

This form should be completed and submitted to the UST Section's regional office following a known or suspected release from an underground storage tank (UST) system. This form is required to be submitted within 24 hours of discovery of a known or suspected release

(DWM USE ONLY)
Incident # _____ Risk (H,I,L,U)_____
Received On _____ Received By _____
Reported by (*circle one*): Phone, Fax or Report
Region _____

Suspected Contamination? (Y/N) Y
Confirmed GW Contamination? (Y/N) Y
Confirmed Soil Contamination ?(Y/N) Y
Samples Taken?(Y/N) _____
Free Product? (Y/N) _____ If Yes, State Greatest Thickness _____

Facility ID Number _____
Date Leak Discovered 4/23/11
Comm/Non-Commercial? _____
Reg/Non-regulated? _____

INCIDENT DESCRIPTION

Incident Name: Thruway Food Mart

Address: 5652 Hwy 21 @ I-77 exit 79 | County: Yadkin

City/Town: Jonesville | Zip Code: 28642 | Regional Office (*circle one*): Asheville, Mooresville, Fayetteville, Raleigh, Washington, Wilmington, Winston-Salem

Latitude (decimal degrees): | Longitude (decimal degrees) :

Obtained by:
- ☐ GPS
- ☐ Topographic map
- ☐ GIS Address matching
- ☐ Other
- ☐ Unknown

Describe location:

Briefly describe suspected or confirmed release: *(including but not limited to: nature of release, date of release, amount of release, amount of free product present and recovery efforts, initial responses conducted, impacts to receptors)*

A Semi/Tractor Trailer hit the #1/2 Diesel pump. The shear valve was broken off allowing 536 gallons of diesel to flow across the parking lot to drainage ditch. The product did not reach nearby creek. The fire dept, Yadkin County Emergency Mgt, Spectrum and owner were notified at 6:30 Am. Spill is stabilized, clean up will begin ASAP.

4/23/11 **HOW RELEASE WAS DISCOVERED (Release Code)**
(Check one)

- ☐ Release Detection Equipment or Methods
- ☐ During UST Closure/Removal
- ☐ Property Transfer
- ☒ Visual/Odor
- ☐ Water in Tank
- ☐ Water Supply Well Contamination
- ☐ Groundwater Contamination
- ☐ Surface Water Contamination
- ☐ Other (specify) _____

SOURCE OF CONTAMINATION

Source of Release *(Check one to indicate primary source)*
- ☐ Tank
- ☐ Piping
- ☒ Dispenser
- ☐ Submersible Turbine Pump
- ☐ Delivery Problem
- ☐ Other
- ☐ Unknown

Definitions presented on reverse

Cause of Release *(Check one to indicate primary cause)*
- ☒ Spill
- ☐ Overfill
- ☐ Corrosion
- ☐ Physical or Mechanical Damage
- ☐ Install Problem
- ☐ Other
- ☐ Unknown

Definitions presented on reverse

Type of Release *(Check one)*
- ☒ Petroleum
- ☐ Non-Petroleum
- ☐ Both

Location *(Check one)*
- ☒ Facility
- ☐ Residence
- ☐ Other

Product Type Released *(Check one to indicate primary product type released)*
- ☒ Gasoline/Diesel/Kerosene
- ☐ Heating Oil
- ☐ Other Petroleum Products
- ☐ Metals
- ☐ Other Inorganics
- ☐ Other Organics
- ☐ Diesel/Veg. Oil Blend
- ☐ Vegetable Oil 100%
- ☐ E10 – E20
- ☐ E21 – E84
- ☐ E85 – E99
- ☐ Ethanol 100%
- ☐ E01 – E09

Ownership
1. Municipal 2. Military 3. Unknown 4. Private 5. Federal 6. County 7. State

Operation Type
1. Public Service 2. Agricultural 3. Residential 4. Education/Relig. 5. Industrial 6. Commercial 7. Mining

IMPACT ON DRINKING WATER SUPPLIES

Water Supply Wells Affected? 1. Yes 2. No 3. Unknown (circled)

Number of Water Supply Wells Affected ______________

Water Supply Wells Contaminated: *(Include Users Names, Addresses and Phone Numbers. Attach additional sheet if necessary)*

1.
2.
3.

UST SYSTEM OWNER

UST Owner/Company	J.T. Alexander and Son, Inc		
Point of Contact: Tommy Laws		Address: PO Box 88	
City: Mooresville	State: NC	Zip Code: 28115	Telephone Number: 704.664.1566

UST SYSTEM OPERATOR

UST Operator/Company		Address	
City	State	Zip Code	Telephone Number

LANDOWNER AT LOCATION OF UST INCIDENT

Landowner		Address	
City	State	Zip Code	Telephone Number

Draw Sketch of Area (showing two major road intersections) or Attach Map

BP
I-77 exit 79
Hwy 21

Person Reporting Incident: Stephen Hamilton	Company: Spectrum Nationwide ENV.	Telephone Number: 704.309.4262
Title: President	Address: PO Box 7351, Charlotte, NC 28241	Date: 4/24/11 9:30 am

UST Form 61 (02/08)

Definitions of Sources

Tank: means the tank that stores the product and is part of the underground storage tank system

Piping: means the piping and connectors running from the tank or submersible turbine pump to the dispenser or other end-use equipment (Vent, vapor recovery, or fill lines are excluded.)

Dispenser: includes the dispenser and the equipment used to connect the dispenser to the piping (e.g., a release from a suction pump or from components located above the shear valve)

Submersible Turbine Pump (STP) Area includes the submersible turbine pump head (typically located in the tank sump), the line leak detector, and the piping that connects the submersible turbine pump to the tank

Delivery Problem: identifies releases that occurred during product delivery to the tank. (Typical causes associated with this source are spills and overfills.)

Other: serves as the option to use when the release source is known but does not fit into one of the preceding categories (e.g., for releases from vent lines, vapor recovery lines, and fill lines)

Unknown: identifies releases for which the source has not been determined

Definitions of Causes

Spill: use this cause when a spill occurs (e.g., when the delivery hose is disconnected from the tank fill pipe or when the nozzle is removed from the dispenser)

Overfill: use when an overfill occurs (e.g., overfills may occur from the fill pipe at the tank or when the nozzle fails to shut off at the dispenser)

Physical or Mechanical Damage: use for all types of physical or mechanical damage, except corrosion (e.g., puncture of tank or piping, loose fittings, broken components, and components that have changed dimension)

Corrosion: use when a metal tank, piping, or other component has a release due to corrosion (e.g., for steel, corrosion takes the form of rust)

Installation Problem: use when the problem is determined to have occurred specifically because the UST system was not installed properly

Other: use this option when the cause is known but does not fit into one of the preceding categories (e.g., putting regulated substances into monitoring wells)

Unknown: use when the cause has not been determined

INENCO, INC.

132 W. Statesville Ave.
Mooresville, NC 28115
(704) 662-8192
Fax: (704) 662-8194

June 13, 2011

Mr. Stephen Williams
UST Section
NC DENR- Winston-Salem Regional Office
585 Waughtown Street
Winston Salem, NC 27107

Re: Thruway Food Mart
5652 Highway 21@ i-77 Exit 79
Jonesville, NC
Yadkin County

Mr. Williams;

As per your conversation with Stephen Hamilton of Spectrum-Nationwide Environmental, the above mentioned site was revisited for additional soil sampling. On 5/23/2011 Steve Hamilton and I returned to the site to collect a soil sample at or near the same location as Sample 7 as identified in the May, 2011 Initial Abatement Action report. The sample was collected by hand auger at the approximate depth of two feet below the original grade. I have included a copy of the site map for reference. The laboratory results indicate contamination levels under the NCDENR standards for all of the risk-based constituents. Based on these results, we are requesting that this incident be subject to "no further action".

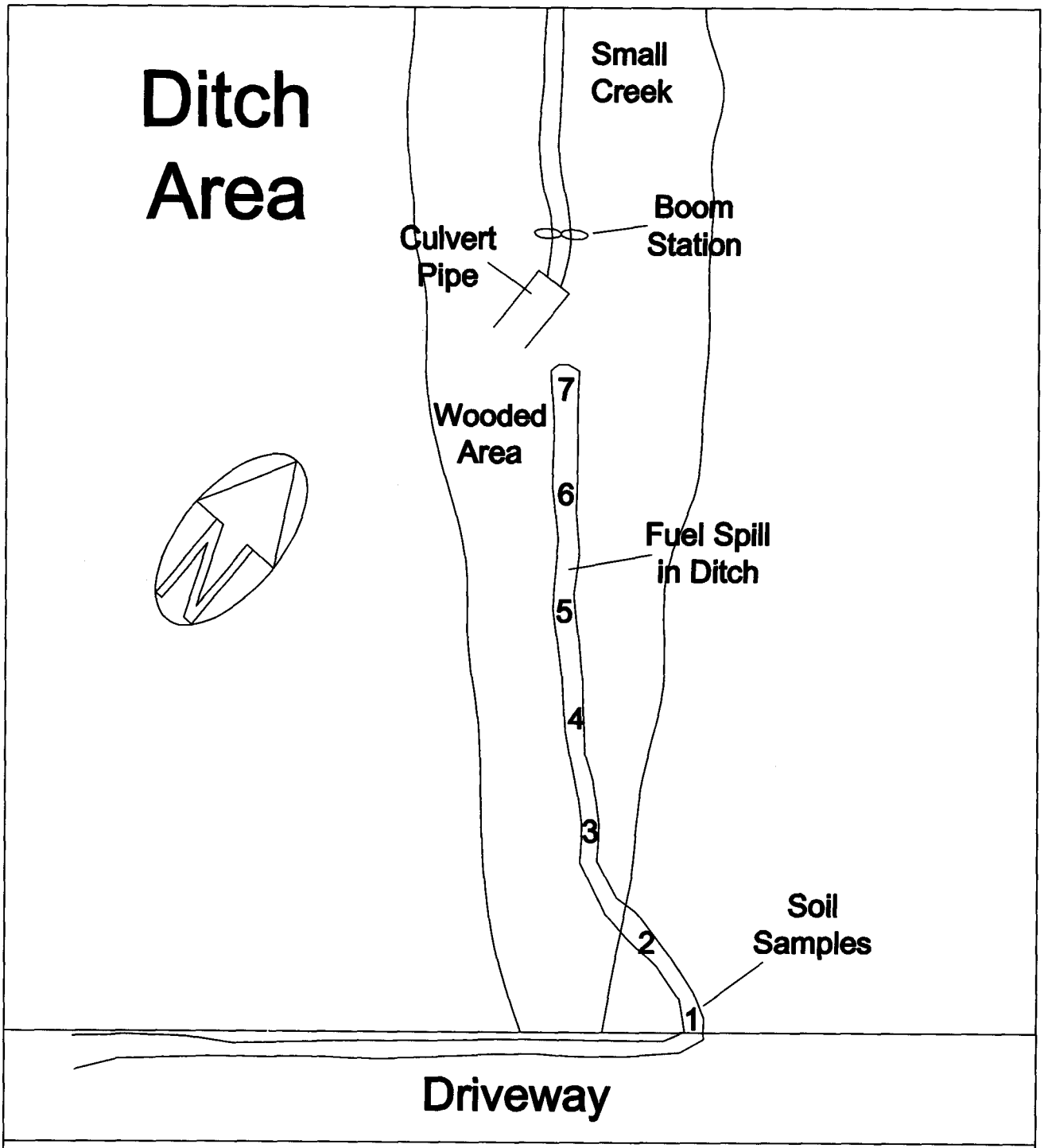
Sincerely,

NORTH CAROLINA PROFESSIONAL SEAL 026923 ENGINEER RYAN R. OSBORNE

Ryan R. Osborne, PE

Attachments: Sample Location Map
Sample Results

SBW
7/15/11



Spectrum Environmental	
Thruway Food Mart	Figure 2
Scale 1":25'	5/4/11

NCDENR

North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor

Division of Waste Management
UST Section

Dee Freeman, Secretary
Dexter R. Matthews, Director

July 15, 2011

WS-8530

Tommy Laws
J.T. Alexander & Sons, Inc.
P.O. Box 88
Mooresville, NC 28115

Re: Notice of No Further Action, 15A NCAC 2L .0407(d), Risk-Based Assessment and Corrective Action for Petroleum Underground Storage Tanks, Thruway Food Mart, 5652 Highway 21, Jonesville, Yadkin County, Risk Classification: Low

Dear Mr. Laws:

The *Initial Assessment Report* and the additional soil sample results that were submitted to the UST Section, Winston-Salem Regional Office have been reviewed. The review indicates that after soil excavation, soil contamination does not exceed the lower of the soil-to-groundwater or residential maximum soil contaminant concentrations (MSCCs), established in Title 15A NCAC 2L .0411.

The UST Section determines that no further action is warranted. This determination shall apply unless the UST Section later finds that contamination at the site poses an unacceptable risk or a potentially unacceptable risk to human health or the environment. Pursuant to Title 15A NCAC 2L .0407(a) you have a continuing obligation to notify the Department of any changes that might affect the risk.

This No Further Action determination applies only to the current investigation; for any other incidents at the subject site, the responsible party must continue to address contamination as required.

If you have any questions regarding this notice, please contact me at the address or telephone number listed below.

Sincerely,

Stephen Williams

Stephen Williams
Hydrogeologist
Winston-Salem Regional Office

cc: WSRO files
Stephen Hamilton, Spectrum Environmental

UST Regional Office
Winston-Salem (WS) – 585 Waughtown Street, Winston-Salem, NC 27107 (336) 771-5348