Lockheed Martin Corporation 6560 Rock Spring Drive, Bethesda, MD 20817 Telephone 301-214-9971 Fax 301-214-9502



March 9, 2006

Re: Production Well Reconnaissance

Former American Beryllium Company Site

OGC #04-1328

Tallevast, Manatee County, Florida

Lockheed Martin Corporation is providing to you a copy of the report, *Production Well Reconnaissance*. This report was developed to summarize the work performed to date at the former American Beryllium Company Site to locate a former production well that may have been located on the property.

If you have any questions, please contact me at 301-214-9971, or <a href="mailto:tina.armstrong@lmco.com">tina.armstrong@lmco.com</a>.

Sincerely,

Tina Armstrong, Ph.D.

Tina armstrong

Senior Manager, Environmental Remediation

**Lockheed Martin Corporation** 

**BET 043** 

cc: Ms. Deborah Getzoff, FDEP

Ms. Nell Tyner, FDEP

Ms. Pamala Vazquez, FDEP

Mr. Derek Matory

Mrs. Laura Ward (11 copies)

Mrs. Wanda Washington

Dr. Tim Varney

Ms. Nancy Malaret

Mr. Randy Merchant

Ms. Karen Collins-Fleming Mr. Doug Koenig Mr. Henry Barbera Mr. Edwin Hunzeker

Mr. Dan Schlandt



Transmitted Via Hand Delivery

Tina N. Armstrong, Ph.D.
Senior Manager – Environmental Remediation
Lockheed Martin Corporation
6801 Rockledge Drive, MP CLE-610
Bethesda, MD 20817

Subject:

Production Well Reconnaissance WPI Facility, Tallevast, Florida

Dear Dr. Armstrong:

Blasland, Bouck & Lee, Inc. (BBL, now known as ARCADIS U.S., Inc. [ARCADIS BBL]), provides this summary of the work performed to date at the existing WPI facility to locate a former production well purportedly located on the property. Work included the review of historical site maps, plans, photographs, interview records, conducting ground penetrating radar and magnetometer geophysical surveys, and performing subsurface excavations to search for the purported well. These efforts did not result in the location of any production wells at the WPI facility.

### **Background Information**

Extensive environmental assessment work has been conducted in the Tallevast area associated with the former American Beryllium Company (ABC) site. The ABC facility was previously located on the same property where WPI operates today at 1600 Tallevast Road, Tallevast, Florida. The environmental work conducted in Tallevast has revealed the presence of groundwater impacts attributable to the operation of the ABC facility. These impacts include certain dissolved chlorinated compounds and 1,4-dioxane. Concerns over the migration of these impacts both vertically and horizontally have focused attention on potential pathways. These pathways included private use, irrigation, and production wells located in the area. To limit ongoing concerns, Lockheed Martin has invested considerable time and effort to identify, locate, and abandon wells which represent a potential pathway for the migration of contaminants.

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Industrial

Date

March 7, 2007

Contact:

Ben T. Foster, P.G.

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813.915.4712

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Our ref:

B0038055.0000.00005

Florida License Numbers

Engineering EB00007917

Geology GB310

Landscape Architecture LC26000269

Surveying LB7062

### ARCADIS BBI

Tina N. Armstrong, Ph.D. March 7, 2007

The process of identifying area wells has included the review of data bases maintained by Manatee County and the Southwest Florida Water Management District (District). This information was supplemented with door to door surveys, area mailings, and roadside reconnaissance. Interviews were then conducted with respective property owners, tenants, and business employees to obtain additional information concerning potential well locations. Interviews were also conducted with former employees of the ABC facility in an attempt to locate a production well purportedly located on that site. According to former employee reports, a production well was once located within or adjacent to Building #5. This well was believed to be 6-inches in diameter and approximately 400 feet deep. The well was said to have been in service up through the 1970s after which its location became unknown. Since that time, modifications have been made to Building # 5 making it very difficult to correlate the employee reports to potential well locations. Maps of the facility dating from the 1970s were then compared to long term stationary reference points such as the location of 17th St. Ct. East, property boundaries, and certain facility structures. This was performed in the attempt to match the current site appearance to the anecdotal information. These efforts resulted in the identification of a number of locations that where selected for further investigation.

#### **Geophysical Surveys and Excavations**

The first geophysical investigation associated with looking for the reported well was conducted in 2004 by Tetra Tech. SDII Global Corporation (SDII) was contracted to perform ground penetrating radar (GPR) and electromagnetic sensing. The results of this work did not provide any indication of the location of a well. The geophysical survey information is contained in the Site Assessment Report Addendum dated February 2005.

Following the earlier attempt to locate a well, site maps and historical aerials were again reviewed. The correlation of the site information with employee reports produced four general areas believed suitable for additional geophysical surveying. SDII was again contracted to perform this work. In March 2006, SDII performed GPR and time domain electromagnetic (EM-61) surveys. Their complete report dated March 30, 2006 is included as **Attachment 1**. **Figure 2** of this report shows the survey areas - three locations inside of buildings and one larger area located outside of the existing structures. Following the completion of the geophysical survey work, the data was evaluated by SDII and their report was then prepared. The results indicated that two subsurface anomalies were located at the areas designated as A and B on **Figure 2**.

### **ARCADIS** RRI

Tina N. Armstrong, Ph.D. March 7, 2007

To visually inspect the anomalous areas, equipment and personnel were mobilized to the site following the review of the SDII report. A concrete saw was used to cut the slab and a small front end loader removed the concrete from above each of the areas to expose the underlying soil. This same work was also performed for a slightly larger area located on the south side of the A/C unit shown on **Figure 2**. This was performed because the anecdotal information and historical site maps and photographs indicated that this area was the most likely location for a former well. The soil was then removed using hand shovels until an approximate 4 feet square by 4 feet deep excavation was made at each of the three areas. The soil was placed next to the excavations and covered with visqueen. Pipes, wire, and rebar were observed during the digging work but no indications of a former production well were noted. The metallic debris was likely the original cause of the detected geophysical anomalies.

Following the excavation work, the three holes were left open so that SDII could return and conduct additional survey work to look for the possible buried well. This allowed for a deeper assessment of the anomalous areas. During May 2006, GPR surveys were conducted in the excavations as well as an expanded area located outside of Building # 5. The survey results are detailed in the SDII report dated May 12, 2006 which is included as **Attachment 2**. **Figure 2** of that report shows the larger area that was surveyed using GPR. Unfortunately, the results of the additional geophysical work did not detect any indications that might represent the location of a production well. Following the completion of the surveys, the excavated soil was then returned to the original excavation locations.

During October 2006, additional excavation work was conducted to the east of Building # 5. This is the same area (also known as the picnic area) shown on **Figure 2** of both the March and May SDII reports. A large portion of the concrete slab was removed from this area as part of a water line repair project. The excavation work was then extended to look for a production well. An excavator was used to dig down to about 4 feet over most of the area. Photographs of this extensive work are included as **Attachment 3**. Similar to the previous findings, various pipes, wire, and rebar were observed but no indications of a well were noted.

#### Well Abandonment

To date, Lockheed Martin has successfully abandoned over 40 wells located in the Tallevast area. This includes a former supply well located on the western portion of

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Tina N. Armstrong, Ph.D. March 7, 2007

the WPI property. This well appears to have extended to approximately 175 feet in depth.

The well abandonment process involves a number of steps including activities that are usually performed prior to the date that the actual abandonment is conducted. First, the property owner must agree to have their well(s) abandoned and then provide access to the property where the well is located. Once on site, the well must be positively identified. Various well-related components such as a pressure tank, pump, or sections of piping may be visible, but many times the exact location where the well itself is installed into the ground is not known. In these cases, excavation work can result in finding a well provided that its general location is known. However, when the aboveground portions of a well system has been removed or destroyed and its approximate location is no longer known, the well is rarely ever located. This is apparently the case for the well purportedly located near Building # 5.

When a well is located, the next step is to open the top of the well and confirm its diameter and total depth. This usually requires removing any piping and pumps that may be present prior to inserting a measuring device into the well. A licensed well driller is then contracted for the abandonment work which is required under the District rules. Abandonment permits are issued by Manatee County on behalf of the District. Once the permit has been properly issued, the abandonment can then be scheduled between the well driller and one of the County inspectors.

The actual abandonment work involves the licensed driller pumping cement or a cement/bentonite clay mixture into the well. The pumping is performed beginning from the bottom of the well and then progresses towards the top until the entire well and annulus space is filled with cement. This work is usually performed when the County inspector is present. If the well or boring hole collapses prior to the abandonment work being completed, sometimes it is necessary to over-drill the boring with a drill rig so that the hole can then be cemented from the bottom to the top. Most of the time over-drilling is not necessary. Once the abandonment is completed, the County records the information in their database and the well is listed as abandoned.

#### **Future Activities**

Additional excavation work, beyond that already conducted to look for a possible former production well, can not be performed in or near Building # 5 without

### ARCADIS BBL

Tina N. Armstrong, Ph.D. March 7, 2007

potentially destroying portions of the building. Because of the presence of underground utilities and debris and the location of both interior and exterior walls, additional geophysical surveys will likely not be productive. Unless more certain eyewitness accounts pertaining to the location of such a well are obtained, additional activities are not warranted at this time.

Should you have any questions or need additional information, please contact me at 813.915.4712.

Sincerely,

ARCADIS U.S., Inc.

Ben T. Foster, P.G.

Senior Geologist II/Associate Florida P.G. License No. 001872

Attachments

ARCADIS BBL

Attachment 1

SDII Geophysical Investigation

March 30, 2006





APR 0 1 2006

Blasland, Bouck & Lee, Inc. Tampa, Fi.

# FINAL REPORT GEOPHYSICAL INVESTIGATION TALLEVAST ROAD SITE SARASOTA, FLORDA

Prepared For:

BLASLAND, BOUCK, AND LEE TAMPA, FLORIDA

MARCH 2006



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7800 W. Oakland Park Blvd. Suite #B303 Sunrise, FL 33351 tel **954-653-0415** fax 954-653-0416 March 30, 2006

Mr. Ben Foster Blasland, Bouck, and Lee, Inc. 3350 Buschwood Park Drive Suite 100 Tampa, FL 33618

**Subject: Final Report – Geophysical Investigation** 

Tallevast Road Site - Sarasota, Florida

SDII Project No. 3014798

Dear Mr. Foster:

SDII Global Corporation (SDII) is pleased to submit the final report for the above referenced project. The purpose of the investigation was to utilize geophysical surveying techniques to help identify the location of an old production well within the area of investigation.

SDII appreciates the opportunity to have assisted your firm on this project. If you have any questions or comments about the report, please contact us.

Sincerely,

SDII GLOBAL CORPORATION

James Schneider, Ph.D. Senior Geophysicist

Sam Upehurch, Ph.D., P.G. Principal Geologist Florida License No. 4

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- 2 Site Plan showing Approximate Locations of GPR Transect Lines and Results
- 3 EM61 Contour Map Outside of Building
- 4 EM61 Contour Map Room G
- 5 GPR Transect C
- 6 GPR Transect E'

### 1.0 INTRODUCTION

### 1.1 Background

The project site is an industrial site located in Sarasota, FL (Figure 1). Site historical information acquired by Blasland, Bouck, and Lee, Inc. (BBL) indicate an abandoned production well was covered over by a concrete slab during when a building addition was constructed. Information regarding the exact location of the well casing at the site is required in order to excavate and seal off the well.

### 1.2 Purpose

The purpose of the investigation was to utilize ground penetrating radar surveying techniques (GPR) and time-domain electromagnetics (EM-61) to help identify the location of the well casing beneath the concrete slab at the project site.

### 1.3 Scope of Work

SDII Global Corporation (SDII) implemented the following scope of work to complete this investigation:

- Mobilize to the project site and perform GPR and time domain electromagnetic (EM-61) surveys throughout accessible areas of the project site as specified by BBL personnel;
- Demobilize from the site, perform final analysis of GPR and EM-61 data, and prepare a final report that summarizes the geophysical methodology, field procedures, and results of the investigation.

### 1.4 Site Description

The area of the project site surveyed by SDII personnel is approximately 1600 square feet. The eastern portion of the surveyed area is within several rooms of an industrial building. The western portion of the surveyed area is outside of the building. The entire surveyed area is covered by concrete slab.

### 2.0 METHODOLOGIES

### 2.1 Equipment and Principles

### 2.1.1 Ground Penetrating Radar (GPR)

GPR is an electromagnetic geophysical method that detects interfaces between subsurface materials with differing dielectric constants. The GPR system consists of an antenna that houses the transmitter and receiver and a profiling recorder that processes the received signal and produces a graphic display of the data.

The transmitter radiates repetitive short-duration electromagnetic (EM) waves into the earth from an antenna moving across the ground surface. These radar waves are reflected back to the receiver by interfaces between materials with different dielectric constants. The intensity of the reflected signal is a function of the contrast in the dielectric constant between the materials, the conductivity of the material that the wave is traveling through, and the frequency of the signal. Subsurface features which commonly cause such reflections are: 1) natural geologic conditions such as changes in sediment composition, bedding and cementation horizons, voids, and water content; or 2) unnatural changes to the subsurface such as disturbed soils, soil backfill, buried debris, tanks, pipelines, and utilities. The profiling recorder processes the signal from the receiver and produces a continuous cross section of the subsurface interface reflections, referred to as reflectors.

GPR data are output from the recorder as strip charts, which present the data as a continuous profile. A GPR survey is conducted along transects which are measured paths along which the GPR antenna is moved. During a survey, marks are placed in the data by the operator at designated points along the GPR transects. These marks allow for a correlation between the GPR data on the strip charts and the position of the GPR antenna on the ground.

Features, such as a buried well casing, are characterized by: (1) a relatively high-amplitude reflection of the GPR signal, and (2) a hyperbolic shape to the GPR signal when the GPR antenna is crossed immediately over or very near to the well casing. Discrete buried items, such as a well casing, are usually distinguished from other features such as buried USTs or underground utilities by the absence of the GPR reflector associated with the buried object on successive parallel transect lines. The absence of the

GPR reflection on adjacent, parallel transects typically indicates that the buried object is not laterally extensive.

Depth of investigation of the GPR signal is highly site-specific and is limited by signal attenuation (absorption) in the subsurface materials. Signal attenuation is dependent upon the electrical conductivity of the subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities such as clays and brackish groundwater, and lowest in relatively low-conductivity materials such as dry sand or rock.

Depth of investigation is also dependent on the antenna transmitting frequency. Depth of investigation generally increases as transmitting frequency decreases; however, the ability to resolve smaller subsurface features is diminished as frequency is decreased.

### 2.1.2 Time Domain Electromagnetics (EM-61)

The EM-61 technique can relatively rapidly assess the location and lateral extent of buried metallic objects. In addition, the EM-61 technique can also determine relative size and depth of a metal target. The EM-61 method simply evaluates the magnitude of an induced (secondary) electromagnetic (EM) field caused by a primary EM field after that primary field is suddenly shut off.

During an EM-61 sounding, an electrical current is caused to flow in a horizontal transmitter coil located near the ground. The current is maintained until a static magnetic field is established. The current in that coil is then rapidly terminated. This produces a strong electromotive force, which induces eddy (secondary) currents in the ground. The eddy currents are caused by the presence of subsurface conductors. With increasing time, the strength of the eddy currents decays. The eddy currents, when they are still present, induce a voltage in the receiver coil that is proportional to eddy current strength. The eddy current strength also depends on the amount of metal in the subsurface. The more metal present, the longer the eddy currents persist.

Field measurement consists of reading the output voltage from the receiver coil registered at a particular time after field shut-off. If no metal is present near the coil, then there are no eddy currents at a late time, and the reading is near zero. If metal is present near the coil, then the eddy currents persist for a longer time, and the reading is some positive number. By sensing only the response from the buried metal, the method is capable of

detecting targets in highly conductive environments. SDII employed the Geonics Ltd. Model EM-61 metal detection system.

The EM-61 survey is performed along predetermined transect lines. The transect lines are typically uni-directional and oriented parallel to the long axis of the site. The spacing between the transects is typically around 2 to 5 feet. Data samples were acquired on a 7-inch (approximately) interval along each transect. The EM-61 instrument response is recorded on field-portable, computerized data logger (Polycorder Digital Data Recorder) for subsequent data processing and contouring.

### 2.2 Field Procedures

### 2.2.1 Establishment of Transects

The GPR portion of the geophysical investigation was conducted along the set of survey transect lines as shown on Figure 2. Outside of the building, GPR data were collected along a series of perpendicular transects at 5-foot intervals. Inside of the building large areas were partially or totally inaccessible for surveying. Here GPR transects were established that allowed for maximum coverage of the accessible areas. The EM-61 data were acquired along and between grid lines A, B, C, and D (Figure 3) for a 2.5 foot spacing between transects. A small area within Room G was also surveyed with the EM-61. Here, three transects approximately 10 feet long and spaced 2 feet apart were completed (Figure 4). Due to the large size of the instrument, all other areas within the building were inaccessible to the EM-61.

### 2.2.2 Ground Penetrating Radar

A Geophysical Survey Systems, Inc. (GSSI) SIR 2000 GPR recorder system was utilized during the investigation. Initial GPR survey tests determined that a 60 nano-second (ns) time range and a 500 mega-Hertz (MHz) antenna provided the optimum depth of investigation and resolution of the data to determine the presence of buried metal objects.

The GPR data were printed on a continuous computer screen display during the investigation. The GPR data were also saved to the hard drive of the unit and transferred to a PC for further data reduction.

### 2.2.3 Time-Domain Electromagnetics

The EM-61 survey was performed by the field geophysicist pulling the equipment throughout the accessible areas of the project site along

previously established parallel transect lines. The data were collected at 7-inch intervals along each of the transect lines.

### 3.0 RESULTS

Figure 3 shows the contoured response of the EM-61 survey over the surveyed area outside of the building. Buried or surficial metal masses are designated by high (red) values of EM-61 response. The EM-61 response in this area appears to be dominated by the high metal response of laterally or linearly extensive buried metals, such as reinforcing metals in the concrete or buried pipes. No discrete anomalies, such as would be expected for a buried well casing, are observed in this area.

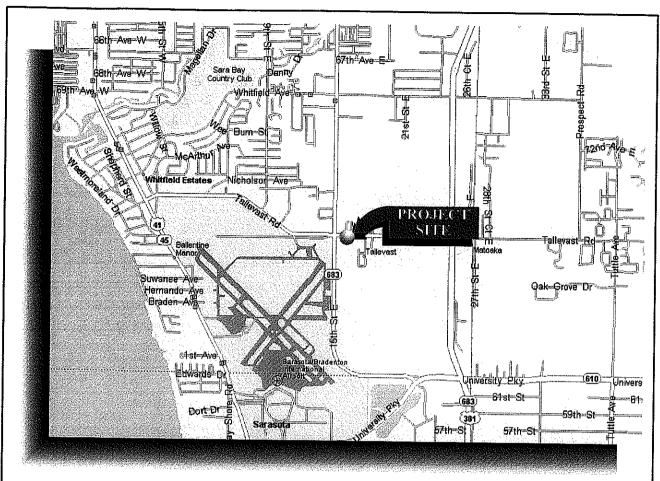
Figure 4 shows the contoured response of the EM-61 survey over the surveyed area within Room G. One discrete anomaly area, located near the northwestern corner of the survey grid, is observed along the western wall of the room just north of the door located on that wall. It is unclear whether this anomaly is the result of surface metals located in the room or due to some buried metal, such as the well casing. The GPR data collected over this anomalous area (Lines D' and F', Figure 2) do not indicate a subsurface feature in this area.

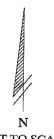
In our review of the GPR lines, we did find several features that appear to indicate the presence of discrete buried objects. Figure 5 shows GPR transect D, which depicts a discrete feature several feet below the surface (Anomaly A). This characteristic diffraction pattern was not observed on any adjacent GPR transect lines. Figure 6 shows GPR transect E', which depicts a discrete feature which appears to originate just below the surface and extend downward through the profile. This anomaly was also encountered on transect F', near the location where the two transects cross. This feature appears to be located several feet to the north-northwest of a floor drain located in the center of the room. Neither of these GPR anomalies has an associated EM-61 elevated response. Several shallow features were also detected within Room H, however, these appear to be associated with pipes and water supply lines located therein.

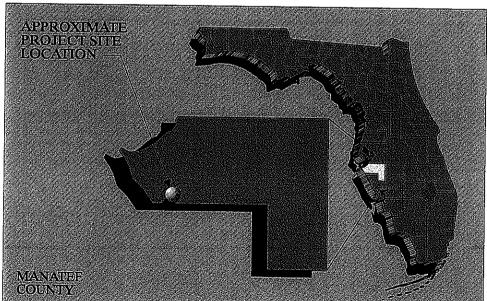
### 4.0 LIMITATIONS

The geophysical assessment of this site is based on our professional evaluation of the geophysical data gathered and our experience with the properties of GPR and EM-61 in the geological setting of the site area. The geophysical evaluation rendered in this report meets the standards of care of our profession. No other warranty or representation, expressed or implied, is included or intended.

**FIGURES** 







NOT TO SCALE

BLASLAND, BOUCK, AND LEE, INC TAMPA, FLORIDA



### PROJECT SITE LOCATION MAP

### TALLEVAST ROAD PROJECT SARASOTA, FLORIDA

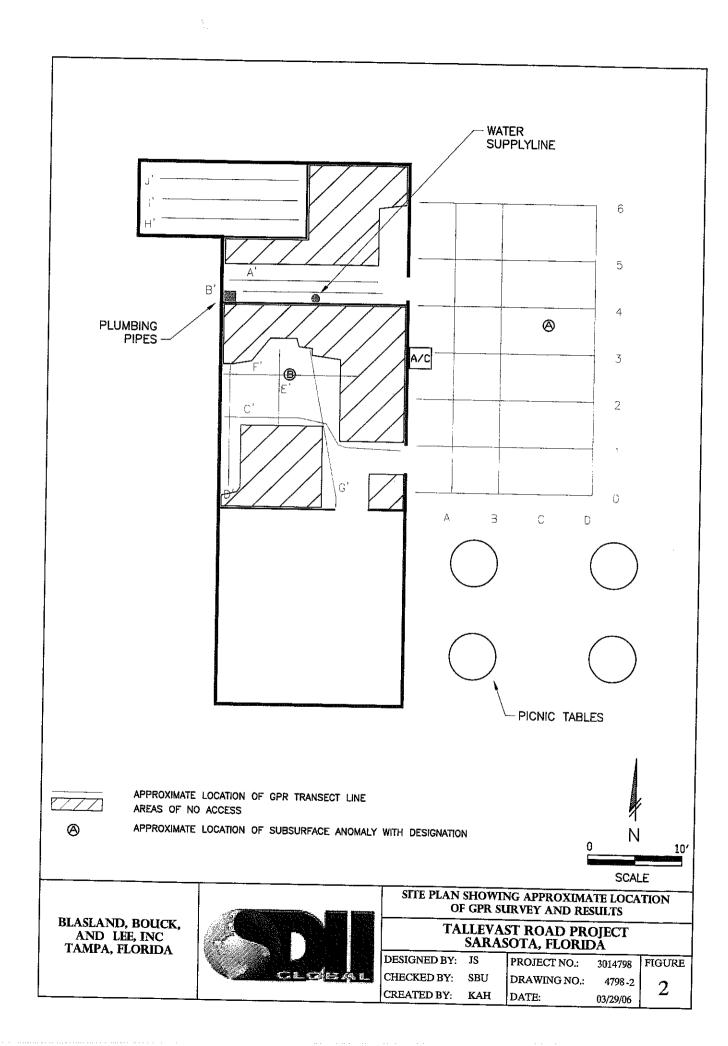
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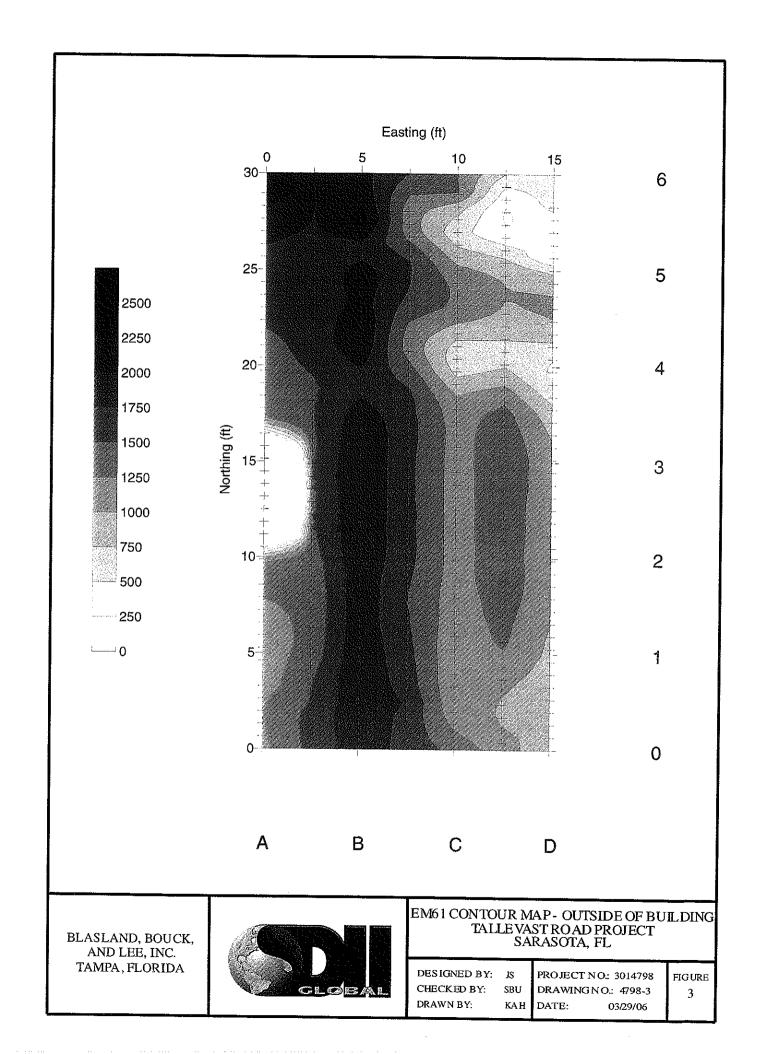
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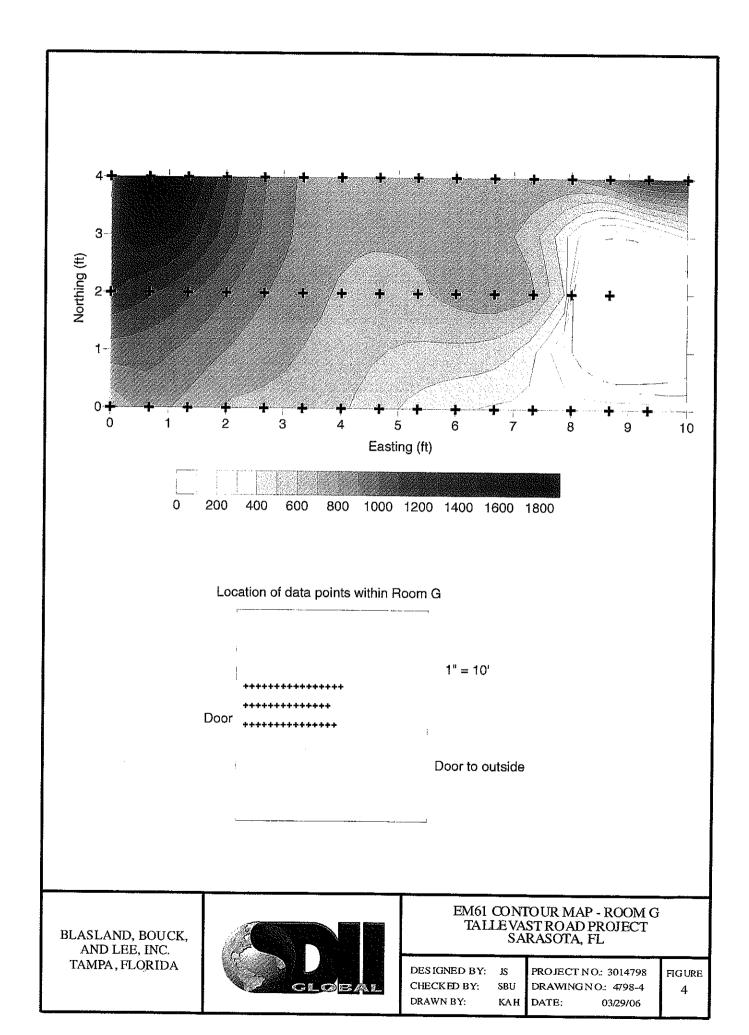
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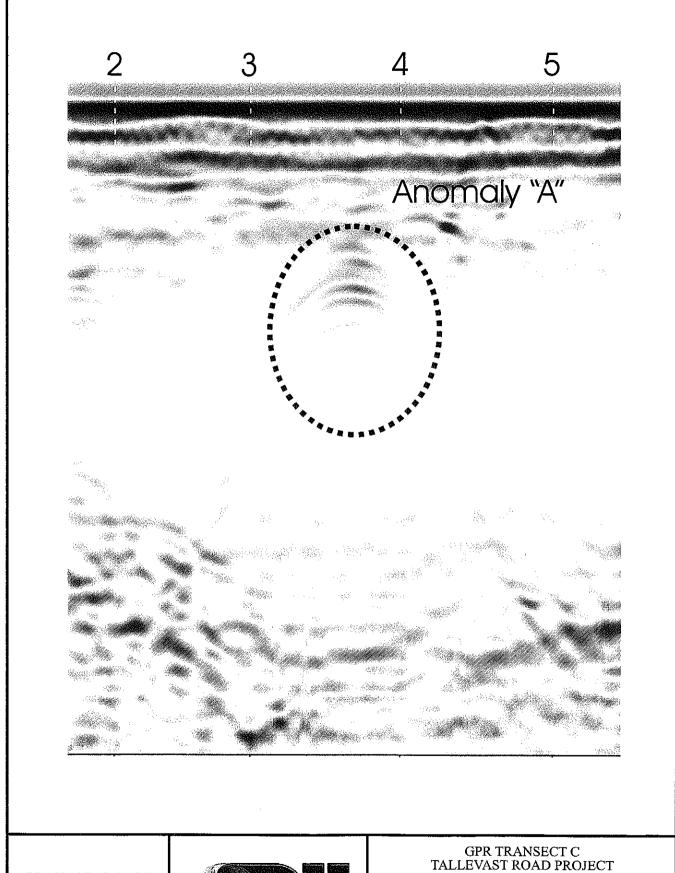
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BLASLAND, BOUCK, AND LEE, INC. TAMPA, FLORIDA

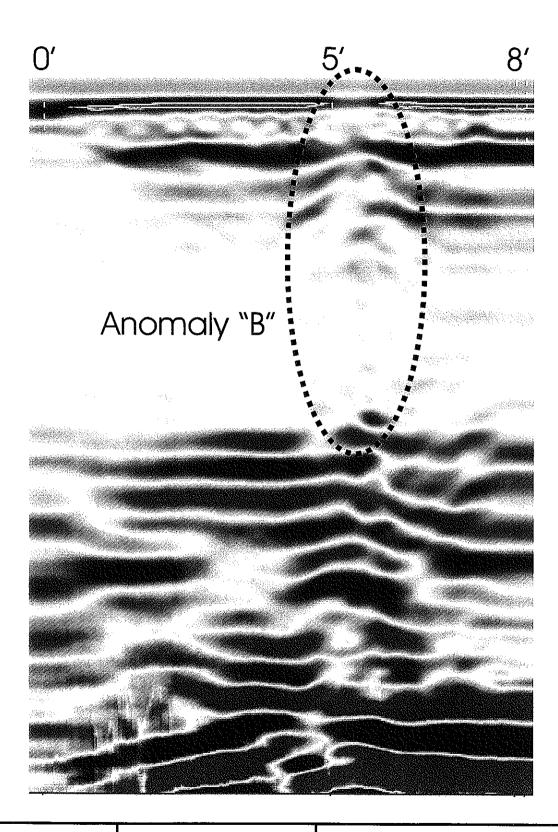


## SARASOTA, FL

DESIGNED BY: JS CHECKED BY: SBU DRAWN BY: KAH

PROJECT NO.: 3014798 DRAWING NO.: 4798-5 DATE: 03/29/06

FIGURE 5



BLASLAND, BOUCK, AND LEE, INC. TAMPA, FLORIDA



## GPR TRANSECT E' TALLEVAST ROAD PROJECT SARASOTA, FL

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DRAWN BY: KAH

JS PROJECT NO.: 3014798 SBU DRAWING NO.: 4798-6 KAH DATE: 03/29/06 figure 6

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ARCADIS BBL

Attachment 2

SDII Geophysical Investigation

May 12, 2006



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# FINAL REPORT GEOPHYSICAL INVESTIGATION TALLEVAST ROAD SITE SARASOTA, FLORDA

Prepared For:

BLASLAND, BOUCK, AND LEE TAMPA, FLORIDA

MAY 2006



SDII Global Corporation www.sdii-global.com

May 12, 2006

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Fort Lauderdale 7800 W. Oakland Park Blvd. Suite #B303 Sunrise, FL 33351 tel **954-653-0415** fax 954-653-0416 Mr. Ben Foster Blasland, Bouck, and Lee, Inc. 3350 Buschwood Park Drive Suite 100 Tampa, FL 33618

Subject: Final Report – Geophysical Investigation

Tallevast Road Site - Sarasota, Florida

SDII Project No. 3014798A

Dear Mr. Foster:

SDII Global Corporation (SDII) is pleased to submit the final report for the above referenced project. The purpose of the investigation was to utilize ground penetrating radar to help identify the location of an old production well within the area of investigation.

SDII appreciates the opportunity to have assisted your firm on this project. If you have any questions or comments about the report, please contact us.

Sincerely,

SDII GLOBAL CORPORATION

Jámes Schneider, Ph.D. Senior Geophysicist

Principal Geologist Florida License No. 4

Sam Upchurch, Ph.D., P.G.

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### Figure

- 1 Project Site Location Map
- 2 Site Plan showing Approximate Locations of GPR Transect Lines and Results

### 2.0 METHODOLOGIES

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### 2.1.1 Ground Penetrating Radar (GPR)

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GPR data are output from the recorder as strip charts, which present the data as a continuous profile. A GPR survey is conducted along transects which are measured paths along which the GPR antenna is moved. During a survey, marks are placed in the data by the operator at designated points along the GPR transects. These marks allow for a correlation between the GPR data on the strip charts and the position of the GPR antenna on the ground.

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### 1.0 INTRODUCTION

### 1.1 Background

The project site is an industrial site located in Sarasota, FL (Figure 1). Site historical information acquired by Blasland, Bouck, and Lee, Inc. (BBL) indicate an abandoned production well was covered over by a concrete slab during when a building addition was constructed. Information regarding the exact location of the well casing at the site is required in order to excavate and seal off the well.

SDII Global Corporation (SDII) performed a geophysical survey at the project site in March 2006 (SDII project # 3014798). Ground penetrating radar surveying techniques (GPR) and time-domain electromagnetics (EM-61) were utilized to help identify the location of the well casing. Since then, BBL has dug through the concrete slab in several locations without finding the well.

### 1.2 Purpose

The purpose of this investigation was to utilize GPR to survey in and around holes in the concrete slab to help identify the location of the well casing at the project site.

### 1.3 Scope of Work

SDII implemented the following scope of work to complete this investigation:

- Mobilize to the project site and perform a GPR survey throughout accessible areas of the project site as specified by BBL personnel;
- Demobilize from the site, perform final analysis of GPR data, and prepare a final report that summarizes the geophysical methodology, field procedures, and results of the investigation.

### 1.4 Site Description

The area of the project site surveyed by SDII personnel is approximately 1600 square feet. The eastern portion of the surveyed area is within several rooms of an industrial building. The western portion of the surveyed area is outside of the building. The entire surveyed area is covered by concrete slab, with the exception of several holes recently cut through the slab by BBL.

GPR reflection on adjacent, parallel transects typically indicates that the buried object is not laterally extensive.

Depth of investigation of the GPR signal is highly site-specific and is limited by signal attenuation (absorption) in the subsurface materials. Signal attenuation is dependent upon the electrical conductivity of the subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities such as clays and brackish groundwater, and lowest in relatively low-conductivity materials such as dry sand or rock.

Depth of investigation is also dependent on the antenna transmitting frequency. Depth of investigation generally increases as transmitting frequency decreases; however, the ability to resolve smaller subsurface features is diminished as frequency is decreased.

### 2.2 Field Procedures

### 2.2.1 Establishment of Transects

The GPR portion of the geophysical investigation was conducted along the set of survey transect lines as shown on Figure 2. The location of transects was determined by BBL personnel present at the site during the geophysical survey.

### 2.2.2 Ground Penetrating Radar

A Geophysical Survey Systems, Inc. (GSSI) SIR 2000 GPR recorder system was utilized during the investigation. The previous GPR survey determined that a 60 nano-second (ns) time range and a 500 mega-Hertz (MHz) antenna provided the optimum depth of investigation and resolution of the data to determine the presence of buried metal objects.

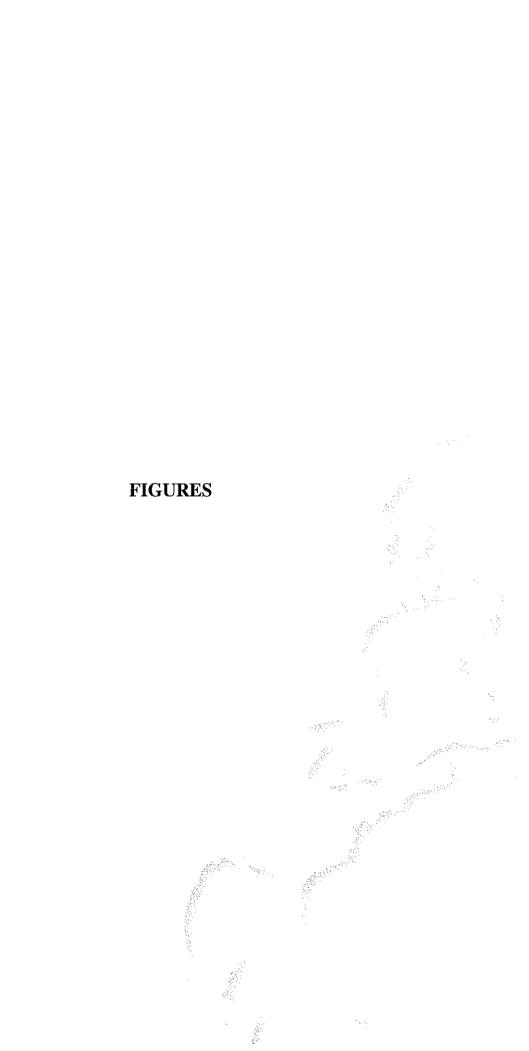
The GPR data were printed on a continuous computer screen display during the investigation. The GPR data were also saved to the hard drive of the unit and transferred to a PC for further data reduction.

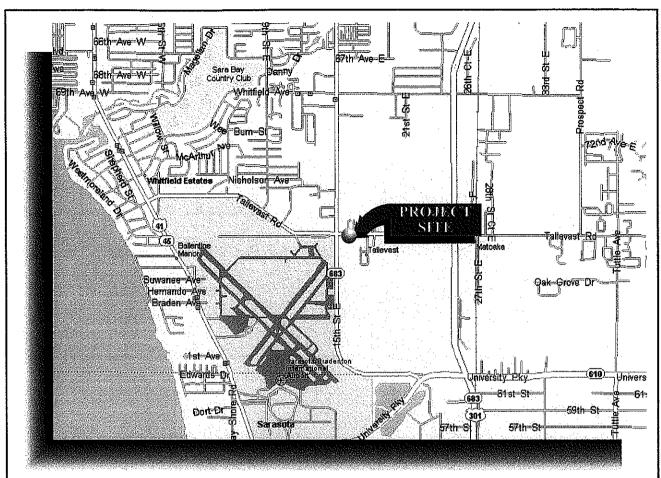
### 3.0 RESULTS

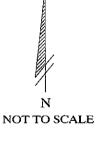
The GPR survey did not detect any features, either within or around the existing holes, that might represent the location of the production well. The location of Anomaly A from the previous survey was pinpointed in the field to assist BBL personnel with excavation of this feature.

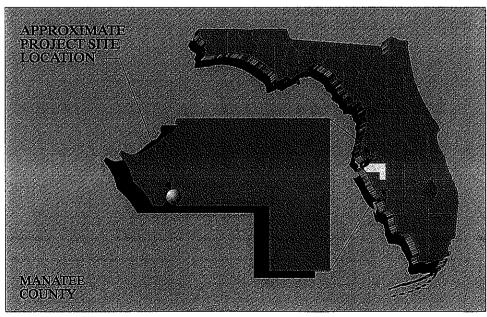
### 4.0 LIMITATIONS

The geophysical assessment of this site is based on our professional evaluation of the geophysical data gathered and our experience with the properties of GPR in the geological setting of the site area. The geophysical evaluation rendered in this report meets the standards of care of our profession. No other warranty or representation, expressed or implied, is included or intended.









DRAWN BY:

BLASLAND, BOUCK, AND LEE, INC TAMPA, FLORIDA



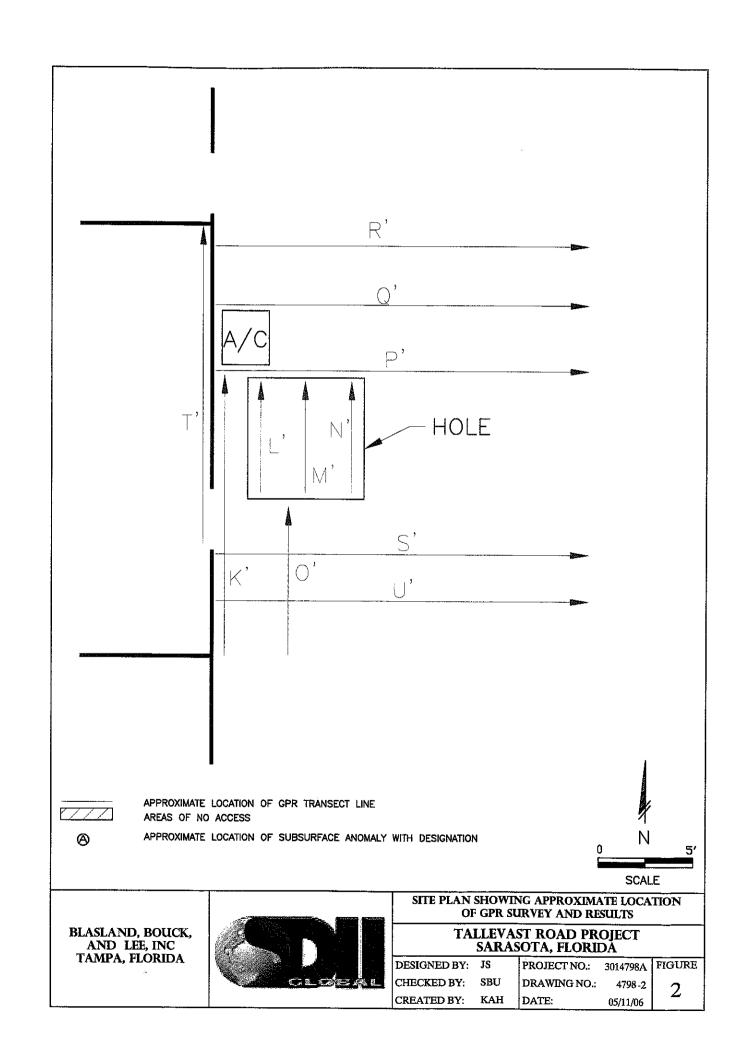
### PROJECT SITE LOCATION MAP

#### TALLEVAST ROAD PROJECT SARASOTA, FLORIDA

DESIGNED BY: JS PROJECT NO.: CHECKED BY: SBU DRAWING NO.:

KAH

PROJECT NO.: 3014798A FIGURE DRAWING NO.: 4798-1 DATE: 05/11/06



ARCADIS BBL

### Attachment 3

Well Reconnaissance Excavation Work 2006 Photographs

### WPI Property Well Reconnaissance Excavation Work 2006





