

PRELIMINARY GEOTECHNICAL EXPLORATION SERVICES REPORT

CONDUCTED FOR:

Pepperland Ranch Due Diligence
Off Corkscrew Road
Estero, Lee County, Florida

PREPARED FOR:

Mr. Ray Blacksmith
Manager
TPL-Land-Sub, LLC
4954 Royal Gulf Circle
Fort Myers, Florida 33966

20 March 2019
YPC Project No. 19GY143



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20 March 2019

Subject: Preliminary Geotechnical Exploration Services Report
Pepperland Ranch Due Diligence
Off Corkscrew Road
Estero, Lee County, Florida

YPC Project No. 19GY143

Dear Mr. Blacksmith:

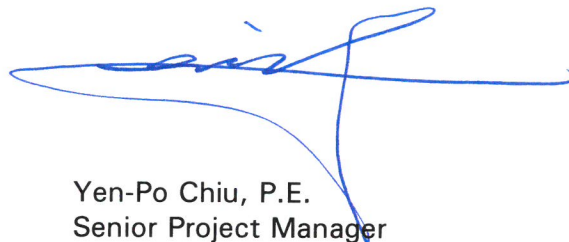
YPC Consulting Group, P.L. is pleased to submit the *Preliminary Geotechnical Exploration Services Report* for the project referenced above.

It has been a pleasure to work for you on this project. Please contact us should you have any questions or if you require additional information.

Sincerely,

YPC Consulting Group, P.L.

Nicholas Araica / YPC
Nicholas Araica, E.I.
Project Engineer



Yen-Po Chiu, P.E.
Senior Project Manager

Copies to: 2, Addressee

-
- **Geotechnical Engineering**
 - **Construction Materials Testing**
 - **Pile Monitoring Services**
 - **Pre-Condition Surveys**
 - **Threshold Inspection Services**
 - **Vibration Monitoring Services**

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1.0 INTRODUCTION

1.1 Terms of Reference

YPC Consulting Group, P.L. (YPC) was retained by the Client to provide preliminary geotechnical exploration services for the Pepperland Ranch Due Diligence project located off Corkscrew Road in Estero, Lee County, Florida (hereafter referred to as the "project site"). Please refer to **Figure 1** for a Project Site Location and Vicinity Map. These services were performed in general accordance with the revised YPC Proposal No. 19059YFM-2nd Revision dated 25 February 2019, and subsequent written authorization by the Client.

1.2 Project Description

The geotechnical scope of services for the proposed project at this time included drilling test borings to determine the depths to the rock strata and the general subsurface soil conditions. A total of six (6), 25-ft deep Standard Penetration Test (SPT) borings and the approximate locations of the test borings were planned and selected in coordination with the Client. It is understood that the information compiled from the field exploration program by YPC will be utilized by the Client for general planning purposes.

1.3 Purpose and Scope of Work

The purpose of the geotechnical exploration services completed by YPC for the project was to describe, in general terms, soil and groundwater conditions encountered at the project site. To achieve this purpose, the scope of services has included the elements listed below.

- ▶ exploring subsurface soil and groundwater conditions by advancing six (6) SPT borings to depths of approximately 25-ft below the existing ground surface (egs) at the selected locations;
- ▶ recording groundwater levels in the test borings;
- ▶ grouting the borings in general accordance with regulatory requirements;
- ▶ evaluating generalized boring data as well as groundwater conditions;
- ▶ performing visual inspection of all soil samples and laboratory tests on selected samples for soil classification purposes;
- ▶ providing observations and comments for use by the Client in planning for the project;

- compiling the field exploration data, laboratory test data, and observations and comments in this report of findings.

2.0 FIELD EXPLORATION AND LABORATORY TESTING & INSPECTION PROGRAMS

2.1 Field Exploration Program

The field exploration program, consisting of the elements described in Section 1.3 above, was performed in general accordance with relevant portions of applicable testing procedures on 12 and 13 March 2019.

The test borings were advanced by a drilling subcontractor, under the supervision of an YPC engineer, using a wet-rotary procedure. Representative soil samples were obtained using split-barrel sampling procedures. In this procedure, a 2-in. outer-diameter, split-barrel sampler is driven into the soil by a 140-lb hammer with a free-fall of 30-in. The number of blows required to drive the sampler through a 12-in. interval is termed the Standard Penetration Resistance, or "N", value, and is indicated for each sample on the boring logs. The "N" value is an indication of the relative density of granular soils in-situ.

Soil samples obtained during the field exploration program were sealed immediately in the field and brought to YPC's laboratory for further examination and testing. Test boring locations were selected in coordination with the Client and staked in the field by project surveyor. The test borings were advanced at the approximate locations illustrated in the Project Layout and Test Location Plan presented in **Figure 2**.

2.2 Laboratory Inspection Programs

Laboratory inspection of soil samples is generally performed to assist in the classification of soils based on their mechanical and physical behavior. It is noted that the indicated boundaries between soil types are approximate, and that actual transition between soil types may be gradual. All soil samples were visually inspected by a geotechnical engineer and classified in general accordance with the Unified Soil Classification System (USCS), modified as necessary to describe typical southwest Florida conditions. Laboratory test results are indicated on the individual boring log profiles presented in **Figures 3A** and **3B**.

3.0 SITE, GROUNDWATER, AND SOIL CONDITIONS

3.1 Site Features

The project site is located off Corkscrew Road in Estero, Lee County, Florida. The project site is currently being utilized for agricultural purpose. The project site is generally level. Test boring locations were staked at the accessible locations.

3.2 Groundwater Conditions

At the time of the field exploration program, groundwater levels were recorded at approximately at 3.0-ft below the eggs in the test borings. It is noted that any groundwater table will be subject to fluctuation due to seasonal climatic changes, construction and development activities, rainfall variations, surface-water runoff, the extent of artificial drainage, tidal influences, and other site-specific factors. Since groundwater level variations are anticipated, design drawings and specification should incorporate such possibilities and provide for dewatering, as required, during construction.

3.3 Subsurface Soils

General subsurface soil conditions at the boring locations are described in the table below (please refer to **Figure 2** for the Project Layout and Test Location Plan and **Figures 3A and 3B** for boring log profiles).

TEST BORING	APPROXIMATE DEPTHS TO BOTTOM OF STRATUM (ft)	SOIL DESCRIPTIONS
SB-1 ~ SB-6	20.0 ~ 22.0	poorly-graded sand (SP)
	25.0	Limestone (LS)

4.0 OBSERVATIONS AND COMMENTS

Based on current conditions and data obtained during the field exploration and visual inspection of soil samples for this project, observations and comments are presented below:

- ▶ Subsurface soils generally consist of poorly-graded sand (SP) and limestone (LS) to the boring termination depths 25.0-ft below the eggs.
- ▶ Poorly-graded sand (SP) can be used as embankment fill or fill beneath structures. Weathered/fractured limestone (WLS), or Crushed limestone (LS) if encountered, should be crushed and processed to provide a well-graded mixture with maximum particle sizes of 3-in. in order to be utilized as

structural fill.

- Excavation of sandy soils can generally be achieved with normal, heavy duty earthwork equipment. **Excavation and removal of the very hard limestone (LS) encountered in all test borings will likely require the use of specialized rock excavation equipment or blasting.** The presence of hard limestone at various depths and other locations cannot be ruled out.

5.0 LIMITATIONS

This preliminary geotechnical services report has been prepared for the exclusive use of the Client. No other warranty is expressed nor implied. It is noted that the information presented in this report address only soils and deposits that would normally be influenced by the proposed construction. The scope of services does not include an evaluation of deep soil or rock conditions where limestone cavities may exist due to sinkhole activity. Deep borings/ soundings, geophysical exploration, and/or resistivity surveys would be required in order to evaluate the structural condition and stability of deep soil and rock formations, and is beyond the scope of services for this project.

This report has been prepared to aid in the evaluation of the property and to assist the owner and/or engineer in planning and design of this project. The scope of services is limited to the specific project and locations described herein, and the description of the project as described herein represents YPC's understanding of significant project aspects related to soil characteristics. In the event that any changes in the design or location of the structures as outlined in the report are planned, YPC must be informed so that the changes can be reviewed and the conclusions of this report modified or approved in writing. **Any conclusions or recommendations made by others based on the data contained herein are not the responsibility of YPC, unless we are advised of the same in writing and given the opportunity to review those conclusions and recommendations.**

The analyses and recommendations submitted in this report are based upon the data obtained from field exploration program at locations indicated in the Project Layout and Test Location Plan presented in **Figure 2**, as well as any other information discussed in this report. In the performance of a subsurface exploration, specific information is obtained at specific locations at specific times. However, it is known that site and subsurface conditions can change over time. Additionally, variations in soil and rock exist on most sites between test locations. The nature and extent of such variations may not become evident until after the start of construction. If variations appear, it will be necessary to re-evaluate the recommendations of this report after performing on-site observations during the construction period and/or performing supplemental tests.

Mr. Ray Blacksmith
TPL-Land-Sub, LLC
Preliminary Geotechnical Exploration Service Report
Pepperland Ranch Due Diligence
Off Corkscrew Road
Estero, Lee County, Florida
YPC Project No. 19G143

YPC Consulting Group, P.L.
20 March 2019

It is the responsibility of the Client to see that the recommendations in this report are brought to the attention of all concerned parties. Because of the possibility of unanticipated subsurface conditions occurring, it is recommended that a "changed condition" clause be provided in contracts with the general contractor and with subcontractors involved in foundations or earthwork construction. Furthermore, it is necessary that YPC be retained to review the site preparations and foundation phases of construction. Otherwise, no responsibility for construction compliance with the design concepts, plans, specifications, and recommendations presented herein can be assumed.

The reproduction of any portion of this report in plans or other engineering documents supplied to parties other than the Client or assigned parties must bear the language indicating that the information contained in the report is for general information only, and that neither the Client nor YPC are liable to such parties.

6.0 ACKNOWLEDGMENT

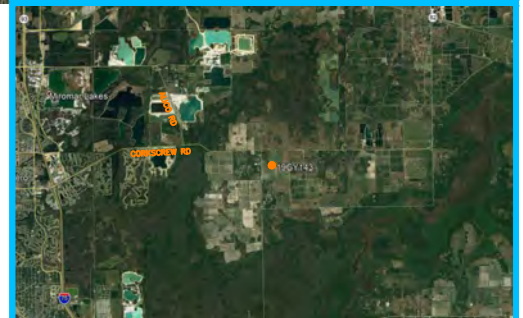
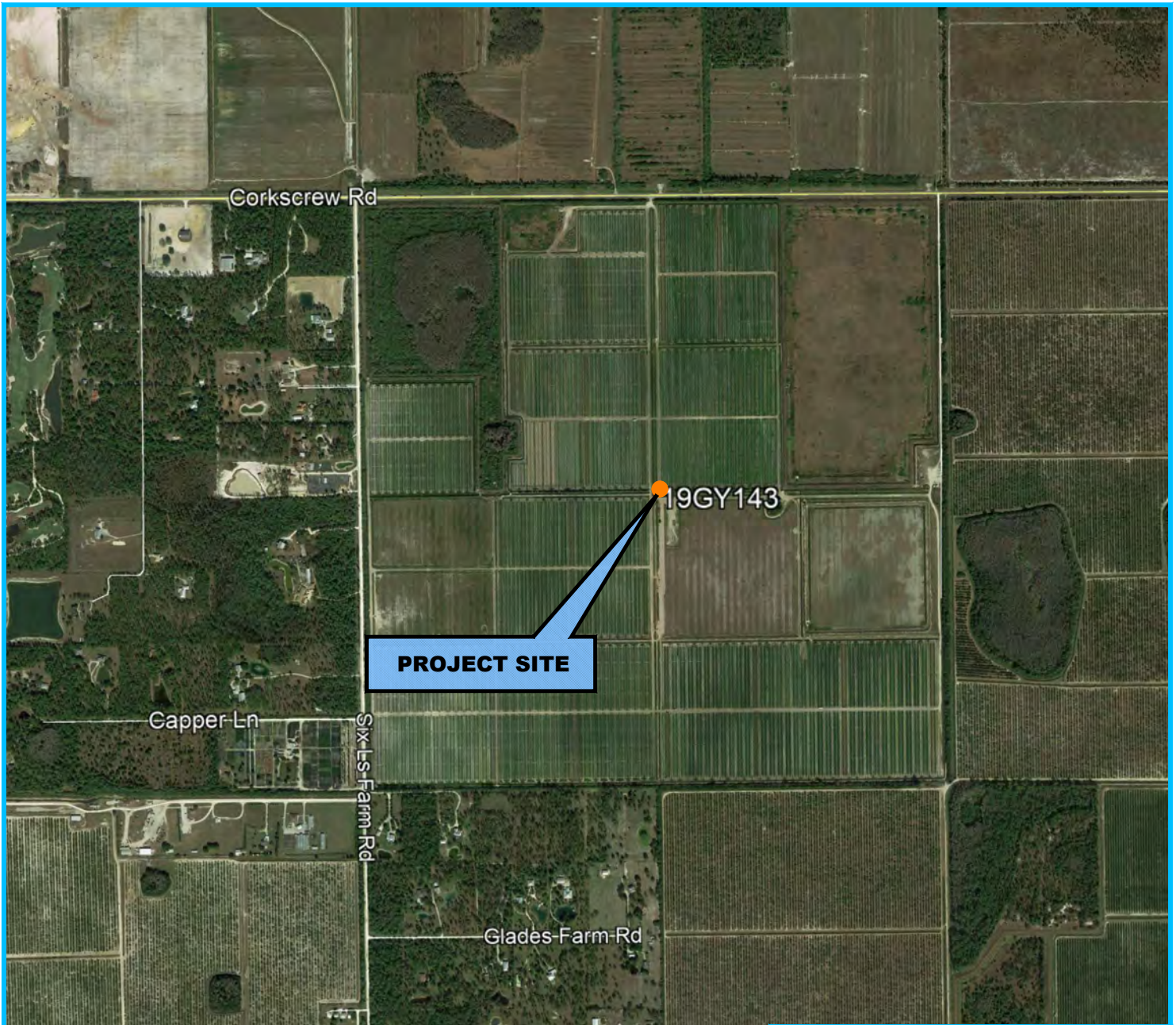
YPC appreciates the opportunity to work with you on this project. Please contact us should you have any questions concerning this report or if you require additional information.

Sincerely,

YPC Consulting Group, P.L.

Nicholas Araica / YPC
Nicholas Araica, E.I.
Project Engineer

3-20-19
[Signature]
YEN-PO CHIU
LICENSE
No 62391
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
Yen-Po Chiu, P.E.
Senior Project Manager
Florida Registration No. 62391

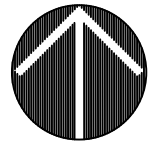


WGS84
 LAT: 26.443182° N
 LONG: 81.651530° W
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TITLE			SOURCE		FIGURE NO.
Project Site Location and Vicinity Map			Google Earth		1
	DATE	17th March 2019	Preliminary Geotechnical Exploration Services Report Pepperland Ranch Due Diligence Off Corkscrew Road Estero, Lee County, Florida for: Mr. Ray Blacksmith TPL-Land-Sub, LLC Fort Myers, Florida		
	DRAWN BY	JBC			
	CHECKED BY	YPC			
	SCALE	nts			
	PROJECT NO.	19GY143			



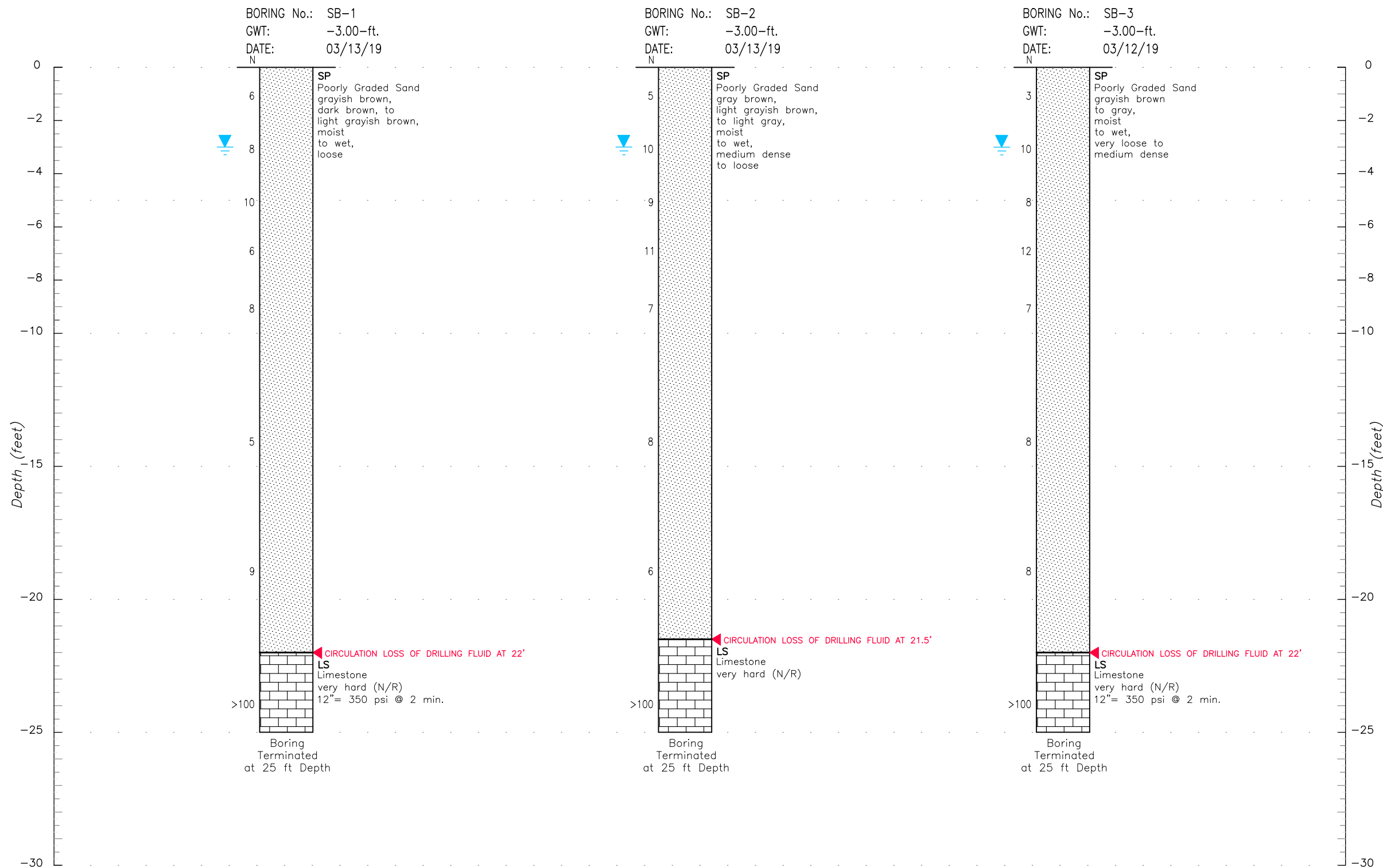
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LEGEND

SB-1
 Standard Penetration Boring(s)
Location and Identification.

NO.		REVISIONS	DATE	BY	NAME	DATE		SEAL	PROJECT NAME Preliminary Geotechnical Exploration Services Report Pepperland Ranch Due Diligence Off Corkscrew Road Estero, Lee County, Florida	CLIENT Mr. Ray Blacksmith TPL-Land-Sub, LLC Fort Myers, Florida	SHEET TITLE		Figure No.
					DESIGNED						Project Layout and Test Location Plan		2
					DRAWN	JBC 03/17/19							
					CHECKED	YPC 03/17/19					SOURCE Base Plan Acquired from:		PROJECT NO.
					APPROVED	YPC 03/17/19					Client		19GY143



LEGEND

	SP SAND		ML SILT		MH ELASTIC SILT
	SM SILTY SAND		CL LEAN CLAY		CH FAT CLAY
	SC CLAYEY SAND		SH SHELL		PT MUCK/PEAT
	LS HARD LIMESTONE		-- SHELLY-GRAVEL		-- CONCRETE
	WLS WEATHERED OR SOFT LIMESTONE		-- SHELLY-SAND		AS ASPHALT
	SP-SC		-- SHELLY-CLAY		LB LIMEROCK BASE
	SP-SM		-- SOIL/CEMENT		-- DEBRIS
	WD WOOD		OL ORGANIC SILTS		OH ORGANIC CLAY
	GM SILTY-GRAVEL		GC GRAVELLY-CLAY		GP GRAVEL

SOIL PROPERTIES	
GRANULAR SOILS (COHESIONLESS)	
DESCRIPTIVE TERM FOR RELATIVE DENSITY	SPT N-VALUE (blows per ft)
very loose	0 - 4
loose	5 - 10
medium dense	11 - 30
dense	31 - 50
very dense	over 50

FINE GRAINED SOILS (COHESIVE)	
DESCRIPTIVE TERM FOR CONSISTENCY	SPT N-VALUE (blows per ft)
very soft	0 - 2
soft	3 - 4
firm	5 - 8
stiff	9 - 15
very stiff	16 - 30
hard	31-50
very hard	over 50

MOISTURE DESCRIPTION

dry	- absence of moisture, dusty, dry to the touch
moist	- damp, but no visible water
wet	- visible free water, usually soil is below water table

GNE	GROUND WATER NOT ENCOUNTERED
GNM	GROUND WATER NOT MEASURED
LL	LIQUID LIMIT
PL	PLASTIC LIMIT
PI	PLASTICITY INDEX
-200	PERCENT PASSING NO. 200 U.S. STANDARD SIEVE (%)
MC	NATURAL MOISTURE CONTENT (%)
WR	WEIGHT OF ROD
WOH	WEIGHT OF HAMMER
N	STANDARD PENETRATION RESISTANCE IN BLOWS PER 1ft (2ft SPOON - ASTM D-1586)

>100	REFUSAL CRITERIA
HA	HAND AUGERED
OC	ORGANIC CONTENT
TOD	TIME OF DRILLING
GSE	GROUND SURFACE ELEVATION
	CASING USED
SP	USCS SOIL CLASSIFICATION
N/R	LOSS OF CIRCULATION
	NO RECOVERY

 GWT or GROUND WATER TABLE LEVEL (OBSERVED)
 SHWL or SEASONAL HIGH WATER LEVEL (ESTIMATED)
 TYPE OF RIG: SIMCO-2800 (Automatic Hammer)

NOTES:

1. THE BORINGS SHOWN REPRESENT SUBSURFACE CONDITIONS WITHIN THE BOREHOLE AT THE TIME OF DRILLING, NO WARRANTY AS TO THE SUBSURFACE CONDITIONS, STRATA DEPTH OR SOIL CONSISTENCY BETWEEN OR OUTSIDE THE BORING LOCATIONS IS EXPRESSED OR IMPLIED BY THIS DRAWING. DO NOT ASSUME THIS DATA IS A GUARANTEE OF THE DEPTH, EXTENT, OR CHARACTER OF THE MATERIAL PRESENT.
2. REFER TO PROJECT LAYOUT AND TEST LOCATION PLAN FOR TEST LOCATIONS.

NO.	REVISIONS	DATE	BY		NAME	
				DESIGNED		
				DRAWN	JBC	03/17/19
				CHECKED	YPC	03/17/19
				APPROVED	YPC	03/17/19



	SFAI
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PROJECT NAME	
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Preliminary Geotechnical Exploration Services Report
Pepperland Ranch Due Diligence
Off Corkscrew Road
Estero, Lee County, Florida

	CLIENT
--	--------

Mr. Ray Blacksmith
TPL-Land-Sub, LLC
Fort Myers, Florida

	SHEET TITLE
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Boring Log Profiles

Figure No.

3A

	SOURCE
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Standard Penetration Test Boring Logs

PROJECT NO.	
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19GY143

