APPENDICES



APPENDIX A BORING LOGS





 CLIENT
 FPL
 PROJECT NAME
 Turkey Point Units 6 and 7 Site

PROJECT NUMBER 13-5054 PROJECT LOCATION Homestead, Florida

LITHOLOGIC SYMBOLS

(CL)-S: Lean Clay with Sand

(ML)-S: Silt with Sand

(SM): Silty Sand

G(OL/OH): Gravelly

Organic Soil

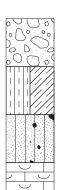
MUDSTONE: mudstone

PACKSTONE: Packstone

S(CL): Sandy Lean Clay

WACKESTONE: Crystaline

Limestone



(GW)-S: Well-graded Gravel with Sand

(OL/OH): Organic Soil

(SM)-G: Silty Sand with

Gravel

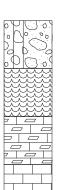
GRAINSTONE: Grainstone

NO RECOVERY: No

Recovery

ROADBASE: Roadbase

S(ML): Sandy Silt



16.16.11

(GW-GM)-S: Well-graded Gravel with Silt and Sand

(PT): Peat

BOUNDSTONE: Boundstone

LIMESTONE: Limestone

bedrock

NO SAMPLE: No Sample

Taken

ROCKFILL

TOPSOIL: Topsoil

Abbreviations and Acronyms

%REC Percent recovery of sample collected. %RQD Percent of Rock Quality Designation value.

(10Y 6/2) Pale Olive Munsell Color Chart Designations.

CPT Cone Penetration Testing.

in. Inches.

FD-1 Fracture Density.

ft. Feet.

HCI Hydrochloric acid.

N1/N2 (N) Value, represents the sum of blow counts over a specified interval during SPT sampling.

NWD4 Drill bit size (outside diameter of 2.980 inches) used for conventional coring.

PQ Drill bit size (outside diameter of 4.827 inches) used for wireline coring.

R.D. Relative Dip.

R-1 Core run identification number. S-1 SPT sample identification number.

SC-1 Special Care Sample identification number.

SPT Standard Penetration Testing.

ST-1 Shelby Tube sample identification number.

USCS Symbol Unified Soil Classification System Symbol as per ASTM D-2487:

lower case - Field description.

UPPER CASE - Result of Laboratory Analysis.

(W5) Moderately Weathered Weathering Descriptor.

WOR Weight of Rod.



| | | | | | | Boring R-6-1a PROJECT: | : Turk NO.: 1 | ey Point Units 6 and 7 Site 13-5054 |
|--|----------------------|----------------------|-------------------------------------|---------------------|--|--|------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 397115.74 ft E. 876594.72 ft GROUND SURFACE ELEVATION: -0.07 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -1.0 | 2.0 | | | | | 0.0-3.0 ft Road base layer. | | 0 - 3 ft. boring was destructively drilled with 5 inch mud rotary bit. Measured water level varied within one foot of ground surface. Core loss due to soft sandy loose zones. |
| -3.0 -4.0 | | D 1 | | | | 3.0-4.6 ft Sandy organic soil, dusky yellowish brown (10YR 2/2) and pale brown (5YR 5/2), organic odor, wet, Spongy consistency, with Plant material, (Peat/Muck) | ol/oh | 3.0 - 121.8 ft., PQ Wireline Coring. |
| -5.0 -6.0 | | R-1 | 74% (53%) | _ | | 4.6-11.8 ft GRAINSTONE, calcareous, hard to moderately soft, slightly to moderately weathered, fine sand to very coarse sand particles, vuggy to pitted, max size: 1 in., very pale orange (10YR 8/2) and light bluish gray (5B 7/1), massive bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, Zones of loose sandy | | |
| -7.0 -8.0 -9.0 -10.0 | 9.0 10.0 | R-2 | 35% (12%) | FD0 | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | limestone in competent hard sandy limestone. Some shells and shell fragments. [Miami Limestone] | | |
| -14.0 -15.0 | 13.0 14.0 15.0 | | 96% (8%) | | | 11.8-27.5 ft PACKSTONE, calcareous, hard to moderately soft, slightly to moderately weathered, clay to very coarse sand particles, vuggy to pitted, max size: 1.5 in., white (N9) and light bluish gray (5B 7/1), massive bedded, R.D. = 30°, strong reaction to HCl, moist, lower contact is conformable and gradational, Zones of loose sandy limestone in competent hard micrite packstone. gray (N4) angular micritic limestone clasts in wackestone matrix (breccia) from 18.3-18.7 ft. [Miami Limestone] | | Abundant voids allow for common breakage of brittle core to rubble and small segments. Possible fractures. |
| -17.0 -18.0 | 17.0 18.0 19.0 | R-4 | 88% (10%) | ED2 | | | | |
| DATE STARTED: 8/26/13 DATE FINISHED: 8/29/13 FIELD GEOLOGIST: Doug Raszewski CHECKED BY: Rolando Benitez DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | | | | | | · · | toward | S: Boring is angled 15 degrees I bearing 318. Depth on log is rred depth in boring. |
| APPROVED BY: EOT DRILLER: Anthony Hudson | | | | | | | | RIG: DR-5 IER ID: |



| | | | | | | Boring R-6-1a PROJECT PROJECT | | cey Point Units 6 and 7 Site 13-5054 |
|--|-----------------|----------------------|-------------------------------------|---------------------|---------|--|-------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 397115.74 ft E. 876594.72 ft GROUND SURFACE ELEVATION: -0.07 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -20.0 | 21.0 | | 88% (10%) | | 7//4 | 19.9-20.1 ft Joint, R.D. = 30°, very closely to widely spaced, slightly open; filling: not healed, fresh; surface: moderately rough, planar, fresh, hard. Fracture set #1. | S | |
| -22.0 -23.0 -24.0 | 23.0 | R-5 | 48% (0%) | | | 11.8-27.5 ft PACKSTONE, calcareous, hard to moderately soft, slightly to moderately weathered, clay to very coarse sand particles, vuggy to pitted, max size: 1.5 in., white (N9) and light bluish gray (5B 7/1), massive bedded, R.D. = 30°, strong reaction to HCl, moist, lower contact is conformable and gradational, Zones of loose sandy limestone in competent hard micrite packstone. gray (N4) angular micritic limestone clasts in wackestone matrix (breccia) from 18.3-18.7 ft. [Miami Limestone] 20.8-21 ft Joint, R.D. = 30°, very closely to widely spaced, slightly open; filling: not healed, fresh; surface: moderately rough, planar, fresh, hard. | | R-5 is mostly rubble. lost loose sand. Driller reports many soft sandy pockets. |
| -27.0 -28.0 -29.0 | 29.0 | R-6 | 94% (58%) | FD2 | | 27.3-27.7 ft Joint, R.D. = 60°, very closely to widely spaced, slightly open; filling: not healed, fresh; surface: moderately rough, planar, fresh, hard. Fracture set #1. 27.5-48.6 ft WACKESTONE, calcareous, interbedded, hard to moderately hard, fresh to moderately weathered, clay to fine sand particles, vuggy to cavities, max size: 4.0 in., white (N9) to light gray (N7), moderately to thickly bedded, closely to widely fractured, weak reaction to HCl, moist, lower contact is conformable and gradational, 1-4 inch voids present. Occasional shells/fossils and moldic porosity. Voids are coated with calcite crystal overgrowth below about 35 feet. | | Many vugs and vesicles 28.7-31.0 ft. |
| # | 33.0 | R-7 | 90% (38%) | | | Subvertical curved solution cavity. [Key Largo Limestone] interbedded with BOUNDSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, pitted to cavities, max size: 3.6 in., white (N9) to light gray (N7), thinly to moderately bedded, closely to widely fractured, R.D. = 30° to 45°, weak reaction to HCl, moist, lower contact is conformable and gradational, Calcite overgrowth filling fractures and voids below 42.0 ft. [Key Largo Limestone] 28.9-34.3 ft Abundant voids allows for much mechanical breakage of core. Possible fractures. 33.5-34.1 ft Joint, R.D. = 45°, very closely to widely spaced, moderately open; filling: not healed, slightly weathered; surface: rough, planar, slightly weathered, hard. | | SC-1: 33.0-33.7 ft. Calcite crystals coating void surfaces below ~35.0 ft. Lost circulation. |
| -36.0 -37.0 | 38.0 | R-8 | 98% (44%) | FD6 | | 37.7-38.1 ft Joint, R.D. = 35°, moderately to widely spaced, slightly open; filling: not healed, fresh; surface: rough, planar, fresh, hard. | | |
| DATE STARTED: 8/26/13 DATE FINISHED: 8/29/13 FIELD GEOLOGIST: Doug Raszewski DRILLING METHOD: Mud Rotary, PQ CHECKED BY: Rolando Benitez DRILLING CO. Huss Drilling | | | | | | • | toward | S: Boring is angled 15 degrees d bearing 318. Depth on log is ured depth in boring. |
| APPRO | OVED I | BY: EO | Γ | | | DRILLER: Anthony Hudson | | . RIG: DR-5 MER ID: |



| | | | | | | Boring R-6-1a PROJECT PROJECT | T: Turk T NO.: 1 | ey Point Units 6 and 7 Site 3-5054 |
|---------------------|----------------------|----------------------|-------------------------------------|---------------------|---------|--|---------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 397115.74 ft E. 876594.72 ft GROUND SURFACE ELEVATION: -0.07 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -39.0 -40.0 | 41.0 | R-8 | 98% (44%) | | | 39.7-40 ft Joint, R.D. = 45°, moderately to widely spaced, slightly open; filling: not healed, fresh; surface: rough, planar, fresh, hard. 27.5-48.6 ft WACKESTONE, calcareous, interbedded, hard to | | |
| -41.0 | 42.0 | - | | FD6 | 777777 | moderately hard, fresh to moderately weathered, clay to fine sand particles, vuggy to cavities, max size: 4.0 in., white (N9) to light gray (N7), moderately to thickly bedded, closely to widely fractured, weak reaction to HCl, moist, lower contact is conformable and gradational, 1-4 inch voids present. Occasional shells/fossils and moldic porosity. Voids are coated with calcite crystal overgrowth below about 35 feet. Subvertical curved solution cavity. [Key Largo Limestone] | | Abundant porosity and vugs in boundstone |
| -43.0 -44.0 | 44.0 45.0 46.0 | | 94% (32%) | | | interbedded with BOUNDSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, pitted to cavities, max size: 3.6 in., white (N9) to light gray (N7), thinly to moderately bedded, closely to widely fractured, R.D. = 30° to 45°, weak reaction to HCl, moist, lower contact is conformable and gradational, Calcite overgrowth filling fractures and voids below 42.0 ft. [Key Largo Limestone] 40.4-40.8 ft Joint, R.D. = 55°, moderately to widely spaced, slightly open; filling: not healed, fresh; surface: rough, planar, fresh, hard. | | (calcite coated voids). 44 - 48ft, abundant calcite coated voids. |
| -46.0 | 47.0 | | | FD0 | | 42.1-42.4 ft Joint, R.D. = 40°, closely to widely spaced, open; filling: moderately healed, moderately thick calcite, fresh, moderately hard; surface: rough, planar, fresh to slightly weathered, hard; In boundstone bed. 42.5-43 ft Joint, R.D. = 45°, closely to widely spaced, open; filling: partly healed, thin calcite, fresh, moderately hard; surface: rough, planar, | | SC-2: 47.0-47.6 ft. |
| -48.0 <u>±</u> | 49.0 | R-10 | 96% (46%) | | | fresh to slightly weathered, hard; In boundstone bed. 42.7-43.1 ft Joint, R.D. = 45°, closely to widely spaced, open; filling: partly healed, thin calcite, fresh, moderately hard; surface: rough, planar, fresh to slightly weathered, hard; In boundstone bed. | | SC-3: 50.0-50.6 ft. |
| -49.0 | 51.0 | _ | | FD7 | | 48.6-50.9 ft WACKESTONE, calcareous, hard to very hard, fresh to slightly weathered, clay to fine sand particles, vuggy to pitted, max size: 0.5 in., medium gray (N5) to light gray (N7), thickly bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, | | 3C-3. 30.0-30.0 It. |
| -51.0 - | 53.0 | R-11 | 100% (92%) | | | this layer is the transition to the Fort Thompson Formation. Larger voids coated with calcite. Common shell molds. [Key Largo Limestone] 49.4-49.5 ft Joint, R.D. = 10°; filling: not healed, hard (H3); surface: moderately rough, planar. 50.6-51.5 ft Fracture zone, R.D. = 30°, very closely spaced; filling: totally healed, moderately thin calcite, fresh to slightly weathered, moderately soft; surface: rough, planar, fresh to slightly weathered, hard. | | |
| -54.0 | 55.0 | | (0270) | FD0 | | 50.9-119.8 ft GRAINSTONE, calcareous, hard to very soft, fresh to moderately weathered, very coarse sand to silt particles, pitted to vuggy, max size: 1.0 in., white (N9) to very light gray (N8), massive, strong reaction to HCl, moist, shells and shell fragments. Most vugs are moldic porosity. From 51.9 - 52.5 ft, core broken with loose sand. From 54.7 - 59.4 ft, common shell molds. From 62.9 - 73.0, Abundant | | |
| 1 | 57.0 | R-12 | 100% (88%) | | | soft sandy zones (potentially unidentified fractures). Very soft pockets become present from approximately 64.0-80.0 ft. From 87.3 - 91.8 ft, abundant shell molds. Below 112.3 ft, small to medium (1/16 - 1/2") shell molds common in core recovered. [Fort Thompson Formation] with layers of PACKSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, clay to granule particles, cavities to pitted, max size: 2.0 in., white (N9) to very light gray (N8), very thickly to thickly bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, [Fort Thompson Formation] | | SC-4: 58.3-59.4 ft. |
| DATE FIELD | FINISH | | | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | toward | S: Boring is angled 15 degrees bearing 318. Depth on log is red depth in boring. |
| | | BY: EO1 | | | | DRILLER: Anthony Hudson | DRILL | RIG: DR-5 |



| | | | | | | Boring R-6-1a PROJECT PROJECT | T: Turk T NO.: ′ | key Point Units 6 and 7 Site 13-5054 |
|----------------------------------|----------------------|----------------------|-------------------------------------|----------|---------|---|---------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 397115.74 ft E. 876594.72 ft GROUND SURFACE ELEVATION: -0.07 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| | 61.0 | R-12 | 100% (88%) | | | 50.9-119.8 ft GRAINSTONE, calcareous, hard to very soft, fresh to moderately weathered, very coarse sand to silt particles, pitted to vuggy, max size: 1.0 in., white (N9) to very light gray (N8), massive, strong reaction to HCl, moist, shells and shell fragments. Most vugs are moldic porosity. From 51.9 - 52.5 ft, core broken with loose sand. | | |
| -61.0 | 64.0 | R-13 | 64% (36%) | FD0 | | From 54.7 - 59.4 ft, common shell molds. From 62.9 - 73.0, Abundant soft sandy zones (potentially unidentified fractures). Very soft pockets become present from approximately 64.0- 80.0 ft. From 87.3 - 91.8 ft, abundant shell molds. Below 112.3 ft, small to medium (1/16 - 1/2") shell molds common in core recovered. [Fort Thompson Formation] with layers of PACKSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, clay to granule particles, cavities to pitted, max size: 2.0 in., white (N9) to very light gray (N8), very thickly to thickly bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, [Fort Thompson Formation] | | Mechanical breakage of core at weak zones. |
| -65.0 -66.0 -67.0 | 68.0 69.0 70.0 | R-14 | 0% (0%) | | | | | Core Run R-14 yielded no recovery; Driller states that pressure gague never moved and felt like a void. Extremly low recovery from 66.5 - 111.8 ft due to problems with inner barrel. Could not get inner barrel down to depth due to loose material from R-14. sandy material on core catcher. air lifting and |
| -70.0 -71.0 -72.0 -73.0 | 73.0 74.0 75.0 | | 84% (16%) | FD3 | | 75.2-75.5 ft Joint, R.D. = 40°, very widely spaced, slightly open; filling: not healed, fresh; surface: rough, planar, fresh, hard. | | flush out could not get packed material loose below ~69 ft. 71.5 - 73.0 ft: unsampled. Ultimately had to drill out packed sand with 2 3/8" tricone. drilled to 73.0 ft. Drilling with only polymer in drilling mud. |
| -75.0 -76.0 | 78.0 79.0 | R-16 | 40% (0%) | FD3 | | | | Loose sand pocket |
| DATE | | HED: 8/ OGIST: | | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | toward | S: Boring is angled 15 degrees d bearing 318. Depth on log is ured depth in boring. |
| APPF | ROVEDI | BY: EO | Т | | | DRILLER: Anthony Hudson | | . RIG: DR-5 MER ID: |



| | | | | | | CT: Turk | sey Point Units 6 and 7 Site 13-5054 |
|---|----------------------|-------------------------------------|----------|---------|---|-------------|--|
| ELEVATION (Feet) DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 397115.74 ft E. 876594.72 ft GROUND SURFACE ELEVATION: -0.07 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -78.0 81.0 -79.0 | R-16 | 40% (0%) | | | 50.9-119.8 ft GRAINSTONE, calcareous, hard to very soft, fresh to moderately weathered, very coarse sand to silt particles, pitted to vuggy, max size: 1.0 in., white (N9) to very light gray (N8), massive, strong reaction to HCl, moist, shells and shell fragments. Most vugs are moldic porosity. From 51.9 - 52.5 ft, core broken with loose sand. | | ~79.5-81.5 ft. no recovery. |
| -81.0 84.0 -82.0 85.0 -83.0 86.0 -83.0 86.0 | R-17 | 26% (0%) | | | From 54.7 - 59.4 ft, common shell molds. From 62.9 - 73.0, Abundant soft sandy zones (potentially unidentified fractures). Very soft pockets become present from approximately 64.0- 80.0 ft. From 87.3 - 91.8 ft, abundant shell molds. Below 112.3 ft, small to medium (1/16 - 1/2") shell molds common in core recovered. [Fort Thompson Formation] with layers of PACKSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, clay to granule particles, cavities to pitted, max size: 2.0 in., white (N9) to very light gray (N8), very thickly to thickly bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, [Fort Thompson Formation] | | |
| -84.0 87.0 88.0 88.0 88.0 88.0 88.0 88.0 88 | R-18 | 34% (26%) | FD3 | | 87.3-91.8 ft Abundant shell molds. | | |
| -89.6 92.0 -90.6 93.0 -91.0 94.0 | | 0% (0%) | _ | | | | |
| -92.0 95.0 -93.0 -93.0 | R-20 | 0% (0%) | | | | | Barrel gets locked up. Begin adding quick-gel to drilling fluid to bring up loose material. |
| -94.0 -94.0 -95.0 -96.0 | R-21 | 0% (0%) | | | | | |
| DATE START DATE FINISH FIELD GEOL CHECKED B | HED: 8/ | /29/13 Doug Rasze | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | toward | S: Boring is angled 15 degrees dispersion of the series of |
| APPROVED I | BY: EO | Т | | | DRILLER: Anthony Hudson | | RIG: DR-5 MER ID: |



| | | | | | | Boring R-6-1a PROJECT PROJECT | : Turk NO.: 1 | ey Point Units 6 and 7 Site 13-5054 |
|----------------------------|-------------------------|----------------------|-------------------------------------|----------|---------|---|------------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 397115.74 ft E. 876594.72 ft GROUND SURFACE ELEVATION: -0.07 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -98.0 -99.0 | 101.0 | R-21 | 0% (0%) | - | | 50.9-119.8 ft GRAINSTONE, calcareous, hard to very soft, fresh to moderately weathered, very coarse sand to silt particles, pitted to vuggy, max size: 1.0 in., white (N9) to very light gray (N8), massive, strong reaction to HCl, moist, shells and shell fragments. Most vugs are moldic porosity. From 51.9 - 52.5 ft, core broken with loose sand. From 54.7 - 59.4 ft, common shell molds. From 62.9 - 73.0, Abundant soft sandy zones (potentially unidentified fractures). Very soft pockets | | Drilling only with polymer again. |
| -100.€ -101.€ -102.€ | 104.0 | R-22 | 6% (0%) | | | become present from approximately 64.0-80.0 ft. From 87.3 - 91.8 ft, abundant shell molds. Below 112.3 ft, small to medium (1/16 - 1/2") shell molds common in core recovered. [Fort Thompson Formation] with layers of PACKSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, clay to granule particles, cavities to pitted, max size: 2.0 in., white (N9) to very light gray (N8), very thickly to thickly bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, [Fort Thompson Formation] | | |
| -103.6 -104.6 | 107.0 | | | FD3 | | | | |
| -106.6 -107.6 -108.6 | 110.0 | R-23 | 2% (0%) | | | | | Core breakage due to soft sand zones. |
| -109.6 -110.6 | 113.0 114.0 | R-24 | 87% | _ | | | | 111.8 - 112.3 ft took SPT to sample lost material. Shows that material is rock and recovery problem is with core barrel. SC-5: 114.7-115.0 ft. |
| -112.6 | 115.0 116.0 117.0 | | (76%) | FD1 | | 114.7-115 ft Joint, R.D. = 50°, discontinuous, one end visible; filling: totally healed, moderately thin calcite, fresh, moderately soft; surface: smooth, planar, fresh, soft; Does not completely cross the core. | | |
| | 118.0 | R-25 | 100% (40%) | | | | | Bottom 1.0 ft. of Fort Thompson Formation is mostly soft sand. |
| DATE | | HED: 8/ | | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | toward | S: Boring is angled 15 degrees I bearing 318. Depth on log is ired depth in boring. |
| APPF | OVED I | BY: EO | Т | | | DRILLER: Anthony Hudson | | RIG: DR-5 IER ID: |



| | | | | | | Boring R-6-1a | PROJECT NO | ui ki).: 1 | ey Point Units 6 and 7 Site 3-5054 |
|-----------------------|-----------------------------------|-------------------------------|-------------------------------------|---------------------|---------|---|------------|----------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 397115.74 ft E. 876594.72 ft GROUND SURFACE ELEVATION: -0.07 ft DESCRIPTION | | JSCS SYMBOL | REMARKS |
| # | 121.0 | | BLOW! | FRAC | | | | NSCS S | Bottom of Fort Thompson Formation is at 119.8 ft. The bottom 2.0 ft of R-25 was extremley soft, indicating top of Upper Tamiami Formation. This material was not recovered. |
| DATE FIELD CHEC | START FINISH GEOL CKED B | TED: 8/ HED: 8/2 OGIST: | 29/13 Doug Rasze ando Benitez | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling DRILLER: Anthony Hudson | to | ward easur | 6: Boring is angled 15 degrees bearing 318. Depth on log is ed depth in boring. |



| | | | | | | Boring R-6-1a-A PROJECT PROJECT | : Turk NO.: 1 | ey Point Units 6 and 7 Site 3-5054 |
|--|-----------------|----------------------|-------------------------------------|---------------------|---------|--|------------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 397112.22 ft E. 876590.79 ft GROUND SURFACE ELEVATION: -0.09 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -1.0 | 2.0 | | | | | 0.0-3.0 ft Crushed stone (Road base Layer). Lost recovery of material from 1.7 - 3.0ft. | | Measured water level varied within one foot of ground surface. 0 - 1.7ft was destructively drilled with 5 inch mud rotary bit. 1.7 - 111.9 ft., PQ wireline coring. |
| -4.0 | 4.0 | R-1 | 62% (27%) | | | 3.0-5.0 ft Peat, blackish red (5R 2/2) to grayish red (10R 4/2), organic odor, moist, strong HCl reaction, Plastic to Spongy consistency, some celulose, (Peat/Muck) | ol/oh | |
| -0.0 | 6.0 | | | | | 5.0-11.9 ft GRAINSTONE, calcareous, hard to very soft (H7), slightly to moderately weathered, fine sand to very coarse sand particles, vuggy to pitted, max size: 1 in., very pale orange (10YR 8/2) and very light gray (N8), massive bedded, strong reaction to HCI, moist, lower contact | | |
| -8.0 -9.0 | 9.0 | R-2 | 94% (76%) | FD0 | | is conformable and gradational, Zones of loose sandy limestone in competent hard sandy limestone. Some shells and shell fragments. From 7.6 - 8.9 and 10.4 - 11.9ft, very soft and crumbley material. [Miami Limestone] | | |
| -12.0 -13.0 -14.0 -15.0 | 13.0 | | 98% (54%) | | | 11.9-29.5 ft PACKSTONE, calcareous, hard to moderately soft, slightly to moderately weathered, clay to very coarse sand particles, vuggy to pitted, max size: 1.5 in., white (N9) and light bluish gray (5B 7/1), massive bedded, strong reaction to HCI, moist, lower contact is conformable and gradational, Zones of loose sandy limestone in competent hard micrite packstone. gray (N4) angular micritic limestone clasts present in wackestone from 18.2-20.0 ft. From 22.0 - 25.0 ft, soft loose sandy zones. Zones of high void density break mechanically into rubble with ease. From 13.0 - 18.5 ft, very broken and brittle material due to abundant voids. [Miami Limestone] | | |
| -17.0 -18.0 | 18.0 | R-4 | 94% (86%) | FD4 | | 19.5- ft Random fracture, R.D. = 20°, slightly open; filling: not healed, | | |
| DATE STARTED: 8/29/13 DATE FINISHED: 9/3/13 FIELD GEOLOGIST: Doug Raszewski CHECKED BY: Rolando Benitez | | | | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | toward | 3: Boring is angled 15 degrees bearing 305. Depth is measured n boring. |
| APPRO | OVED E | BY: EO | Г | | | DRILLER: Anthony Hudson | DRILL | RIG: DR-5 ER ID: |



| | | | | | | | CT: To | | ey Point Units 6 and 7 Site 3-5054 |
|---|---|----------------------|-------------------------------|---------------------|---|--|--------|-------------|---|
| ELEVATION (Feet) DEPTH | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 397112.22 ft E. 876590.79 ft GROUND SURFACE ELEVATION: -0.09 ft DESCRIPTION | | USCS SYMBOL | REMARKS |
| -21.0 | 1.0 | R-4 | 94% (86%) | | 7/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0 | slightly weathered; surface: rough, undulating, slightly weathered, hard. | | | |
| -24.0 -24.0 -25.0 -25.0 -25.0 | 3.0 = = = = = = = = = = = = = = = = = = = | R-5 | 54% (22%) | | | 11.9-29.5 ft PACKSTONE, calcareous, hard to moderately soft, slightly to moderately weathered, clay to very coarse sand particles, vuggy to pitted, max size: 1.5 in., white (N9) and light bluish gray (5B 7/1), massive bedded, strong reaction to HCI, moist, lower contact is conformable and gradational, Zones of loose sandy limestone in competent hard micrite packstone. gray (N4) angular micritic limestone clasts present in wackestone from 18.2-20.0 ft. From 22.0 - 25.0 ft, soft loose sandy zones. Zones of high void density break mechanically into rubble with ease. From 13.0 - 18.5 ft, very broken and brittle material due to abundant voids. [Miami Limestone] | | | |
| -27.0 28 -27.0 28 -28.0 29 | 9.0 | R-6 | 88% (68%) | FD4 | | 20.1-20.2 ft Random fracture, R.D. = 20°, slightly open; filling: not healed slightly weathered; surface: rough, undulating, slightly weathered, hard. 23.4-24.4 ft R.D. = 60°, tight; filling: very thin; surface: rough, planar. 25.0-28.0 ft Multiple voids. | | | |
| -30.0 31 | 1.0 | | | | | 29.5-49.3 ft WACKESTONE, calcareous, interbedded, moderately hard to hard, fresh to moderately weathered, clay to fine sand particles, vuggy to cavities, typical diameter: 0.4 in., max size: 6.0 in., white (N9) to light gray (N7), moderately to thickly bedded, strong reaction to HCl, wet, lower contact is conformable and gradational, Wackstone to boundstone (coral). 1-4 inch voids present. Occasional shells/fossils and moldic porosity. Voids are coated with calcite crystals below about 35 feet. From 30 - 36, 39 - 41 and 45 - 47ft, high void density. Minor | | | |
| -32.0 33 -33.0 34 -34.0 35 | 4.0 | R-7 | 100% (100%) | | | clay coatings above 35.0ft. [Key Largo Limestone] interbedded with BOUNDSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, pitted to cavities, max size: 6.0 in., white (N9) to light gray (N7), thinly to moderately bedded, weak reaction to HCl, moist, lower contact is conformable and gradational, Calcite filling fractures and voids below 42.0 ft. Much mechanical breakage of core in zones of high void density. [Key Largo Limestone] 33.1-33.2 ft Joint, R.D. = 0°, moderately to widely spaced; filling: not healed, moderately thin recrystalized calcite, slightly weathered, moderately soft; surface: rough, undulating, slightly weathered. | | | |
| -30.0 1 -37.0 | 7.0 | R-8 | 94% (88%) | FD0 | | 34.2-34.3 ft Joint, R.D. = 0-10°, moderately spaced, slightly open; filling: not healed, calcite, fresh, moderately soft; surface: rough, planar, fresh, Recrystalized calcite coated. 34.5-35 ft Joint, R.D. = 45°, moderately spaced, slightly open; filling: not healed, moderately thin recrystalized calcite, fresh, moderately soft; surface: rough, planar, fresh. 35.5-35.6 ft Joint, tight; filling: partly healed, calcite; surface: moderately rough; curved. | | | |
| | INISH | ED: 9/ | | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | tov | ward | 5: Boring is angled 15 degrees bearing 305. Depth is measured n boring. |
| APPRO\ | VED E | BY: EO | Г | | | DRILLER: Anthony Hudson | | | RIG: DR-5 ER ID: |



| | | | | | Boring R-6-1a-A PROJE | CT: Tur | key Point Units 6 and 7 Site 13-5054 |
|---|----------------------|-------------------------------------|----------|---------|--|-------------|--|
| ELEVATION (Feet) DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 397112.22 ft E. 876590.79 ft GROUND SURFACE ELEVATION: -0.09 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -39.0 41.0 -40.0 | R-8 | 94% (88%) | | | 29.5-49.3 ft WACKESTONE, calcareous, interbedded, moderately hard to hard, fresh to moderately weathered, clay to fine sand particles, vuggy to cavities, typical diameter: 0.4 in., max size: 6.0 in., white (N9) to light gray (N7), moderately to thickly bedded, strong reaction to HCl, wet, lower contact is conformable and gradational, Wackstone to | | |
| 43.0 -41.0 43.0 -42.0 44.0 -43.0 45.0 -45.0 | R-9 | 96% (96%) | FD0 | | boundstone (coral). 1-4 inch voids present. Occasional shells/fossils and moldic porosity. Voids are coated with calcite crystals below about 35 feet. From 30 - 36, 39 - 41 and 45 - 47ft, high void density. Minor clay coatings above 35.0ft. [Key Largo Limestone] interbedded with BOUNDSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, pitted to cavities, max size: 6.0 in., white (N9) to light gray (N7), thinly to moderately bedded, weak reaction to HCI, moist, lower contact is conformable and gradational, Calcite filling fractures and voids below 42.0 ft. Much mechanical breakage of core in zones of high void density. [Key Largo Limestone] | | |
| -46.0 -47.0 -47.0 -49.0 -49.0 -49.0 -50.0 | R-10 | 86% (86%) | FD4 | | 48.4-48.7 ft R.D. = 50°, moderately spaced; filling: partly healed, calcite; surface: rough, planar, moderately hard. 49.1-49.3 ft R.D. = 45°, widely spaced, slightly open; filling: moderately healed, thin calcite, moderately soft; surface: rough, undulating. 49.3-52.9 ft GRAINSTONE, calcareous, moderately hard to moderately soft, fresh to moderately weathered, very coarse sand to silt particles, pitted to vuggy, max size: 1.0 in., white (N9) to very light gray (N8), massive, strong reaction to HCl, wet, Shells are mostly dissolved. Most vugs are moldic porosity. From 52.6 - 52.9, abundant shell molds. [Form.] | | |
| -51.0 -53.0 -52.0 54.0 -53.0 -54.0 -54.0 -55.0 -55.0 -55.0 -55.0 -57.0 | R-11 | 96% (96%) | FD0 | | Thompson Formation] 51.6- ft R.D. = 0°, moderately spaced; filling: not healed, very thin calcite, soft; surface: smooth, planar, moderately hard. 52.9-65.5 ft WACKESTONE, calcareous, moderately hard (H4), moderately to slightly weathered, silt to very fine sand particles, pitted, typical diameter: 0.2 in., max size: 1.0 in., white (N9) to very light gray (N8), massive, strong reaction to HCl, wet, Shells are mostly dissolved. Most vugs are moldic porosity. Lower contact is gradual. [Fort Thompson Formation] | | Mechanical breaks at soft zones in core. |
| -56.0 58.0 -57.0 59.0 | R-12 | 96% (78%) | | | | | ES: Boring is angled 15 degrees |
| | LOGIST: | 3/13 Doug Rasze ando Benitez | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | depth | rd bearing 305. Depth is measured in boring. |
| APPROVED | BY: EO | Т | | | DRILLER: Anthony Hudson | | L RIG: DR-5 MER ID: |



| | | | | | | Boring R-6-1a-A PROJECT PROJECT | | ey Point Units 6 and 7 Site l3-5054 | | | | |
|-------------------------|----------------------|----------------------|-------------------------------------|----------|---------|--|-------------|--|--|--|--|------------------------|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 397112.22 ft E. 876590.79 ft GROUND SURFACE ELEVATION: -0.09 ft DESCRIPTION | USCS SYMBOL | REMARKS | | | | |
| | 61.0 | | 96% (78%) | | | 52.9-65.5 ft WACKESTONE, calcareous, moderately hard (H4), moderately to slightly weathered, silt to very fine sand particles, pitted, typical diameter: 0.2 in., max size: 1.0 in., white (N9) to very light gray (N8), massive, strong reaction to HCl, wet, Shells are mostly dissolved. Most vugs are moldic porosity. Lower contact is gradual. | | | | | | |
| -61.0 | | | | | | [Fort Thompson Formation] 60.7-61.1 ft Joint. | | | | | | |
| -62.0 -63.0 | 64.0 | R-13 | 100% (90%) | | | | | | | | | |
| -64.0 -65.0 | 66.0 | | | | | | | | | 65.5-111.9 ft GRAINSTONE, calcareous, hard to soft, fresh to slightly weathered, very coarse sand to silt particles, pitted to cavities, max size: 5.0 in., white (N9) to very light gray (N8), massive bedded, strong reaction to HCI, wet, lower contact is gradational, Shells are mostly | | R-14: Low recovery due |
| -67.0 -68.0 | 69.0 70.0 71.0 | R-14 | 14% (0%) | FD1 | | dissolved. Most vugs are moldic porosity. Voids up to 2 inches big from 91.9-94.0 ft. with remnants of sand filling. Pits and vugs aid in mechanical breakage of core. From 81.9 - 83.1, high void density, broken. From 85.8 - 87.9 and 96.0 - 103.0ft, abundant shell molds. [Fort Thompson Formation] with layers of PACKSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, clay to granule particles, vuggy to pitted, max size: 2.0 in., white (N9) to very light gray (N8), very thickly to thickly bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, [Fort Thompson Formation] | | to loose sand from ~67-71.5 ft. run only took ~2 minutes. Zero resistance from 66.9 - 71.9 ft. | | | | |
| -70.0 -71.0 -72.0 | 73.0 74.0 75.0 | R-15 | 86% (58%) | | | 75.0 ft Soft sandy pockets from 75 - 77ft (likely fractured). 75.2-75.5 ft Joint, R.D. = 40°, moderately open; filling: not healed; | | SC-1: 72.6-73.5 ft. | | | | |
| -74.0 -75.0 | 77.0 | | | _ | | surface: rough, planar, slightly weathered, moderately hard to hard; Core mechanically broken within interpreted fractured interval. | | | | | | |
| -76.0 -77.0 | 79.0 | R-16 | 90% (70%) | | | 78.0 ft Very broken, loose sand present from 78.0 - 79.4 ft | | | | | | |
| DATE FIELD | FINISH GEOL | | | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | toward | S: Boring is angled 15 degrees I bearing 305. Depth is measured in boring. | | | | |
| APPR | OVED I | BY: EO | Т | | | DRILLER: Anthony Hudson | | RIG: DR-5 IER ID: | | | | |



| | | | | | | Boring R-6-1a-A PROJECT | | ey Point Units 6 and 7 Site 13-5054 |
|---|----------------------------------|----------------------|-------------------------------------|----------|---------|--|-------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 397112.22 ft E. 876590.79 ft GROUND SURFACE ELEVATION: -0.09 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -79.0 | 81.0 | R-16 | 90% (70%) | | | 65.5-111.9 ft GRAINSTONE, calcareous, hard to soft, fresh to slightly weathered, very coarse sand to silt particles, pitted to cavities, max size: 5.0 in., white (N9) to very light gray (N8), massive bedded, strong reaction to HCl, wet, lower contact is gradational, Shells are mostly dissolved. Most vugs are moldic porosity. Voids up to 2 inches big | | |
| -81.0 -82.0 | 83.0 = 84.0 = 85.0 = 86.0 = 86.0 | R-17 | 96% (78%) | FD1 | | from 91.9-94.0 ft. with remnants of sand filling. Pits and vugs aid in mechanical breakage of core. From 81.9 - 83.1, high void density, broken. From 85.8 - 87.9 and 96.0 - 103.0ft, abundant shell molds. [Fort Thompson Formation] with layers of PACKSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, clay to granule particles, vuggy to pitted, max size: 2.0 in., white (N9) to very light gray (N8), very thickly to thickly bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, [Fort Thompson Formation] 80.5-80.7 ft Joint, R.D. = 25°, moderately open; filling: not healed; surface: rough, planar, slightly weathered, moderately hard to hard; Core mechanically broken within interpreted fractured interval. 83.1-83.3 ft Joint, R.D. = 40°, slightly open; filling: partly healed, moderately thin sandy mud, slightly weathered, soft; surface: rough, planar, slightly to slightly weathered, moderately hard to hard; Core | | |
| -85.0 -86.0 -87.0 | 88.0 | R-18 | 90% (50%) | FD5 | | mechanically broken within interpreted fractured interval. 87.9-88.2 ft Joint, R.D. = 40°, slightly open; filling: partly healed, moderately thin sandy mud, slightly weathered, soft; surface: rough, planar, slightly to slightly weathered, moderately hard to hard; Core mechanically broken within interpreted fractured interval. 88.7- ft Joint, R.D. = 35°, moderately open; filling: not healed; surface: rough, planar, slightly weathered, moderately hard to hard; Core mechanically broken within interpreted fractured interval. 89- ft Joint, R.D. = 35°, moderately open; filling: not healed; surface: rough, planar, slightly weathered, moderately hard to hard; Core mechanically broken within interpreted fractured interval. | | From 87.9 - 90.0 ft, Core very broken (mechanically) due to fractures and soft zones. |
| -90.0 -91.0 | 93.0 | | 94% (82%) | FD0 | | 90.0 ft Abundant large vugs (1 - 2 inches) with remnant sand coating, often broken from 90.0 - 96.0 ft. | | |
| -93.0 | 96.0 | | | FD4 | | 94.9-95.2 ft Joint, R.D. = 30°, slightly open; filling: not healed; surface: rough, undulating, slightly weathered, moderately hard to hard; Core mechanically broken within interpreted fractured interval. 95.6-95.8 ft Joint, R.D. = 30°, slightly open; filling: not healed; surface: rough, undulating, slightly weathered, moderately hard to hard; Core mechanically broken within interpreted fractured interval. | | SC-2: 95.7-96.5 ft. |
| -95.0 | 98.0 | R-20 | 100% (100%) | FD0 | | 97.7-97.9 ft Joint, R.D. = 45°, one end visible, slightly open; filling: not healed; surface: rough, planar, slightly weathered, moderately hard to hard; terminates at large shell mold. | | |
| DATE STARTED: 8/29/13 DATE FINISHED: 9/3/13 FIELD GEOLOGIST: Doug Raszewski CHECKED BY: Rolando Benitez DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | | | | | | | toward | S: Boring is angled 15 degrees I bearing 305. Depth is measured in boring. |
| APPRO | OVED I | BY: EO | Т | | | DRILLER: Anthony Hudson | | RIG: DR-5 IER ID: |



| | | | | | | Boring R-6-1a-A PROJECT: | Turk | ey Point Units 6 and 7 Site 13-5054 |
|---------------------|-------------------------|-----------------------------|-------------------------------------|----------|---------|--|-------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 397112.22 ft E. 876590.79 ft GROUND SURFACE ELEVATION: -0.09 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -98.0 | 101.0 102.0 | | 100% (100%) | _ | | 65.5-111.9 ft GRAINSTONE, calcareous, hard to soft, fresh to slightly weathered, very coarse sand to silt particles, pitted to cavities, max size: 5.0 in., white (N9) to very light gray (N8), massive bedded, strong reaction to HCl, wet, lower contact is gradational, Shells are mostly dissolved. Most vugs are moldic porosity. Voids up to 2 inches big from 91.9-94.0 ft. with remnants of sand filling. Pits and vugs aid in | | |
| -100.6 -101.6 | 103.0 104.0 105.0 | R-21 | 90% (90%) | FD0 | | mechanical breakage of core. From 81.9 - 83.1, high void density, broken. From 85.8 - 87.9 and 96.0 - 103.0ft, abundant shell molds. [Fort Thompson Formation] with layers of PACKSTONE, calcareous, moderately soft to hard, fresh to slightly weathered, clay to granule particles, vuggy to pitted, max size: 2.0 in., white (N9) to very light gray (N8), very thickly to thickly bedded, strong reaction to HCl, moist, lower contact is conformable and gradational, [Fort Thompson Formation] | | Large shell (up to 4") moldic porosity from 103.3 - 105.0ft. |
| -103.6 -104.6 | 107.0 108.0 | | | _ | | | | From 106.5 - 111.9ft, Abundant small-med moldic porosity. SC-3: 108.6-109.7 ft. |
| -107 Ē | 110.0 | R-22 | 100% (100%) | | | | | |
| | 111.0 | | | | | Bottom of Boring at 111.90 ft | | |
| DATE | START FINISH GEOL | TED: 8 HED: 9/ OGIST: | | ewski | | DRILLING METHOD: Mud Rotary, PQ DRILLING CO. Huss Drilling | toward | S: Boring is angled 15 degrees I bearing 305. Depth is measured in boring. |
| APPR | ROVED I | BY: EO | Т | | | DRILLER: Anthony Hudson | | RIG: DR-5 IER ID: |



| | | | | | | Boring R-6-1b PROJECT PROJECT | | ey Point Units 6 and 7 Site 3-5054 |
|---------------------|----------------------|----------------------|--|----------|---------|---|-------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -1.0 | | | | | | 0.0-2.5 ft Road base layer. | | 0 - 2.5 ft, boring was destructively drilled using 5 inch mud rotary bit. 2.5 - 14.5 ft SPT sampling. Measured water level varied within one foot |
| -3.0 -4.0 | | S-1 | 0 | | | 2.5-5.3 ft Gravelly organic soil, 60% fines, low plasticity; 40% gravel, fine to coarse, subrounded, medium hardness; maximum grain size = 2.5 in., wet, strong HCl reaction, Spongy consistency, weak cementation, with organics, with Wood, (Peat/Muck layer). | ol/oh | of ground surface. S-1: No blow counts, reached two ft interval by weight of rods (WOR) only. |
| -5.0 -6.0 | | S-2 | 7-10-18-17 N1(28) N2(35) 70% | | | 5.3-12.5 ft LIMESTONE, calcareous, soft to moderately hard, moderately (W5) weathered to intensely (W7) weathered, clay to fine sand particles, very light gray (N8) to white (N9), strong reaction to HCI, | | |
| -7.0 -8.0 | | S-3 | 3-8-10-7 N1(18) N2(17) 60% | _ | | Limestone with weakly cemented silt matrix, mostly washed out during drilling. [Miami Limestone] | | |
| -9.0 -10.0 | 9.0 | S-4 | 3-5-1-7 N1(6) N2(8) 30% | - | | | | |
| | 11.0 | S-5 | 2-7-5-5 N1(12) N2(10) 50% | _ | | | | |
| | 13.0 | S-6 | 25-24-27-21 N1(51) N2(48) 70% | FD0 | | 12.5-26.6 ft GRAINSTONE, calcareous, moderately soft to moderately hard, moderately (W5) weathered to intensely (W7) weathered, clay to fine sand particles, pitted to vuggy, max size: 1.5 in., very light gray (N8) to white (N9), strong reaction to HCl, lower contact is gradational, From 25.0 - 26.5ft, high intensity of voids. [Miami Limestone] | | 44.5. 400.6. DO wireling |
| | 15.0 16.0 | R-1 | 100% (85%) | _ | | | | 14.5 - 120 ft. PQ wireline coring. |
| -18.0 | 17.0 18.0 19.0 | R-2 | 37% (31%) | | | | | |
| DATE | | HED: 1 OGIST | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES | |
| APPF | ROVEDI | BY: EC | Т | | | DRILLER: Eddie Palmer | DRILL | RIG: DR-16 ER ID: |



| | | | | | Boring R-6-1b PROJ | ECT: Tur ECT NO.: | key Point Units 6 and 7 Site 13-5054 |
|--|----------------------|---|----------|---------|---|----------------------|---|
| ELEVATION (Feet) DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -21.0 21.0 -22.0 22.0 -23.0 23.0 -24.0 24.0 25.0 -25.0 25.0 -26.0 26.0 | R-4 | 35% (0%) 100% (0%) 100% (100%) | | | 12.5-26.6 ft GRAINSTONE, calcareous, moderately soft to moderately hard, moderately (W5) weathered to intensely (W7) weathered, clay to fine sand particles, pitted to vuggy, max size: 1.5 in., very light gray (N8) to white (N9), strong reaction to HCl, lower contact is gradational, From 25.0 - 26.5ft, high intensity of voids. [Miami Limestone] | | SC-1a: 23.7-24.3ft. SC-1b: 24.3-25.2ft. |
| -27.0 27.0 -28.0 28.0 -29.0 29.0 | R-6 | 94% (86%) | FD0 | | 26.6-47.6 ft PACKSTONE, calcareous, moderately hard, slightly weathered, silt to fine sand particles, pitted to cavities, max size: 2.0 in., light gray (N7) with very light gray (N8), weak reaction to HCl, lower contact is gradational, Grades from Miami Limestone to Key Largo Limestone, 26.3-26.9ft. Cavity: 37.0 - 37.5ft. [Key Largo Limestone] | | SC-2: 28.15-29.2ft. Lost circulation at 29ft. Drilled from 30.0-35.0ft |
| -31.0 31.0 32.0 -32.0 33.0 -34.0 34.0 34.0 -35.0 35.0 | R-7 | 54% (26%) | | | | | with NWD4 conventional core barrel. Followed by pressuremeter testing in this interval, and then overdrilled with PQ core barrel. |
| -36.0 36.0 -37.0 37.0 -38.0 38.0 | R-8 | 84% (76%) | | | | | |
| | SHED: 1 DLOGIST | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | |
| APPROVE | | | | | DRILLER: Eddie Palmer | | L RIG: DR-16 MER ID: |



| | | | | | Во | oring R-6-1b | OJECT: T OJECT NO | urke).: 13 | ey Point Units 6 and 7 Site 3-5054 |
|-------------------------|----------------------|----------------------|-------------------------------------|----------|--|---|----------------------|----------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | | COORDINATES 96966.10 ft E. 876609.04 ft ND SURFACE ELEVATION: -0.03 ft DESCRIPTION | | USCS SYMBOL | REMARKS |
| -42.0 -43.0 | 43.0 | R-9 | 36% (28%) | | weathered, silt to fine in., light gray (N7) wit contact is gradational Limestone, 26.3-26.9 | NE, calcareous, moderately hard, slightly sand particles, pitted to cavities, max size: 2.0 h very light gray (N8), weak reaction to HCl, lov l, Grades from Miami Limestone to Key Largo ft. Cavity: 37.0 - 37.5ft. [Key Largo Limestone |) wer | | From 40.0-45.0ft, NWD4 conventional coring used for pressuremeter testing interval. Overdrilled with PQ barrel. Lost circulation at 43.0 ft. |
| -46.0 -47.0 -48.0 | 46.0 47.0 48.0 | R-10 | 96% (62%) | | hard, slightly weather 0.5 in., light gray (N7) | NE, calcareous, moderately soft to moderately ed, clay to fine sand particles, vuggy, max size), weak reaction to HCl, Grades to Fort Thomps t. [Fort Thompson Formation] |): | | SC-3: 47.2 - 48.6ft. |
| -51.0 | 51.0 | | 100% (100%) | FD0 | 49.1-58.6 ft PACKSTOI weathered, clay to ve very light gray (N8) to void density. [Fort Th | NE, calcareous, moderately soft, slightly ry fine sand particles, vuggy, max size: 0.5 in., white (N9), From 49.1 - 51.0ft, interval of high ompson Formation] | | | |
| -53.0 -54.0 | 53.0 | R-12 | 100% (100%) | | | | | | |
| -56.0 -57.0 | 56.0 57.0 58.0 | R-13 | 92% (92%) | | | | | | |
| DATE | | HED: 10 | | | DRILLING METHOD: Mud F | Rotary, PQ, SPT, ST, NWD4 | No | OTES | : |
| APPF | OVED I | BY: EO | Т | | DRILLER: Eddie Palmer | | | RILL F | RIG: DR-16 |



| | | | | | | Boring R-6-1b PRO. | JECT: Tu JECT NO.: | rkey Point Units 6 and 7 Site : 13-5054 |
|--|--------|----------------------|-------------------------------------|---------------------|---------|--|-----------------------|--|
| ELEVATION (Feet) DEPTH | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | Camya | REMARKS |
| -61.0 61 -62.0 62 -63.0 63 -64.0 64 | 3.0 | R-14 | 86% (44%) | FD0 | | 58.6-63.0 ft GRAINSTONE, calcareous, moderately soft, slightly (W3) weathered, very fine sand to fine sand particles, pitted, very light gray (N8), [Fort Thompson Formation] with layers of PACKSTONE, moderately soft, slightly to moderately weathered, very fine sand to fine sand particles, [Fort Thompson Formation] 63.0-98.1 ft GRAINSTONE, calcareous, moderately soft, slightly to moderately weathered, silt to medium sand particles, vuggy to pitted, max size: 3.0 in., very light gray (N8), weak reaction to HCI, lower contact is gradational, Contains intervals of loose sand, 85-87ft. Sections of core recovered as gravel fragments. From 83.2 - 83.8ft, | | |
| -66.0 66 -67.0 67 -68.0 68 -69.0 69 | 7.0 | R-15 | 54% (32%) | FD1 | | void spaces contain calcite overgrowth. Moldic porosity. [Fort Thompson Formation] 66-68 ft Joint, R.D. = 90°; filling: totally healed, thick calcite, slightly weathered, moderately soft; surface: slightly rough, planar, slightly weathered; Near vertical. | | Soft zone, 66 - 66.7ft. Soft zone, 68 - 70ft. |
| -70.0 70 -71.0 71 -72.0 72 | 1.0 | R-16 | 70% (0%) | _ | | | | |
| -73.0 73 -74.0 74 | = | R-17 | 100% (60%) | FD0 | | | | |
| 75.0 75 76.0 76 | 5.0 | R-18 | 100% (0%) | - | | | | |
| -77.0 77 -78.0 78 -79.0 79 | 7.0 | R-19 | 57% (24%) | | | | | Tool drop: 77.0 - 78.0ft. |
| | INISHE | ED: 10 OGIST: | | ' | , , | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOT | res: |
| APPROV | VED B | Y: E0 | Т | | | DRILLER: Eddie Palmer | | LL RIG: DR-16 MMER ID: |



| | | | | | | Boring R-6-1b PROJECT | Γ: Turk Γ NO.: ′ | ey Point Units 6 and 7 Site 13-5054 |
|---------------------|----------------------|----------------------|-------------------------------------|---------------------|---------|--|---------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -82.0 | 81.0 | | 100% ₁₁ (60%) | Г | | 63.0-98.1 ft GRAINSTONE, calcareous, moderately soft, slightly to moderately weathered, silt to medium sand particles, vuggy to pitted, max size: 3.0 in., very light gray (N8), weak reaction to HCI, lower contact is gradational, Contains intervals of loose sand, 85-87ft. Sections of core recovered as gravel fragments. From 83.2 - 83.8ft, void spaces contain calcite overgrowth. Moldic porosity. [Fort Thompson Formation] | | SC-4a: 81.0 - 81.7ft. SC-4b: 81.7 - 82.3ft. |
| -84.0 | 83.0 | | 100% (100%) | | | | | |
| -86.0 | 85.0 86.0 | | | | | | | Soft zone from 85 - 87ft depth. Grab sample collected. |
| -88.0 | 88.0 | R-22 | 82% (32%) | | | | | |
| | 90.0 | R-23 | 100% 100% | FD0 | | | | |
| | 92.0 | R-24 | 80% (20%) | - | | | | |
| -95.0 | 94.0 | R-25 | 100% (100%) | | | | | |
| -97.0 | 96.0 97.0 98.0 | R-26 | 100% | | | | | |
| -99.0 | 99.0 | | (100%) | | 7/ /· | | 1 | |
| DATE | | HED: 10 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | S: |
| APPF | ROVEDI | BY: EO | Т | | | DRILLER: Eddie Palmer | | RIG: DR-16 IER ID: |



| | | | | | | Boring R-6-1b PROJECT PROJECT | : Turk | key Point Units 6 and 7 Site 13-5054 |
|--|--|--|-------------------------------------|----------|---------|--|-------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -102.6 -103.6 -104.6 -105.6 -106.6 -107.6 | 1101.0= 1102.0= 1104.0= 1105.0= 1106.0= 1109.0= | R-26 | 100% (100%) 84% (84%) | - | | 98.1-100.8 ft PACKSTONE, calcareous, moderately soft (H5), moderately (W5) weathered, silt to medium sand particles, pitted to vuggy, light gray (N7) to very light gray (N8), weak reaction to HCl, Sections of core recovered as gravel sized fragments. Moldic Porosity. [Fort Thompson Formation] 100.8-111.0 ft GRAINSTONE, calcareous, moderately soft (H5), moderately (W5) weathered, silt to medium sand particles, pitted to vuggy, light gray (N7) to very light gray (N8), weak reaction to HCl, Moldic Porosity. [Fort Thompson Formation] | | |
| -112.6 -113.6 -114.6 -115.6 -116.6 | 110.0 111.0 1112.0 1115.0 1115.0 | R-29 | 78% (70%) 58% (40%) | | | 111.0-120.5 ft PACKSTONE, calcareous, moderately soft (H5), moderately (W5) weathered to intensely (W7) weathered, silt to medium sand particles, pitted to vuggy, light gray (N7) to white (N9), weak reaction to HCI, Moldic Porosity. Grades to Upper Tamiami Formation from 116.5 to 117.5ft depth. [Fort Thompson Formation] | | Softer material at 117.5 ft, contact with Upper |
| DATE DATE FIELD CHEC | | ΓED: 9 HED: 10 OGIST: Y: Rola | 0/4/13 Jason Lee ando Benitez | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling DRILLER: Eddie Palmer | | Tamiami Formation. |



| | | | | | | Boring R-6-1b PROJECT PROJECT | T: Turkey T NO.: 13- | Point Units 6 and 7 Site 5054 |
|---------------------|-------------------------|----------------------|---|----------|---------|---|---|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| | 121.0 | S-7 | 19-18-33-35 N1(51) N2(68) 85% | IFD0 | 7/ 1/2 | 120.5-122.5 ft Silty sand, 70% sand, fine, subrounded; 25% fines, low plasticity, slow dilatancy, low toughness; 5% gravel, fine to medium, subangular, flat and elongated, medium hardness; very light gray (N8) with light gray (N7), moist, weak HCl reaction, weak cementation, [Upper Tamiami Formation] | From 120 ft. to total depth, a combination of ST and SPT sampling, and destructive over-drilling using a 5 inch mud | depth, a combination of ST and SPT sampling, and destructive over-drilling using a 5 inch mud rotary bit were used to |
| -124.6 | 123.0 | | 9-10-9-14 N1(19) N2(23) 95% 7-9-19-13 | - | | 122.5-128.0 ft Silty sand, 50% sand, fine, subrounded; 45% fines, low plasticity, slow dilatancy, low toughness; 5% gravel, fine to medium, subangular, flat and elongated, medium hardness; very light gray (N8), moist, weak HCl reaction, weak cementation, [Upper Tamiami Formation] | | advance the boring. Intervals sampled by SPT were destructively over-drilled, with 5 inch mud rotary bit, to ream out the boring in preparation for ST |
| -126.6 | 125.0 | | N1(28) N2(32) 70% | - | | Formation] | sm | sampling. At 121 ft, (N) values may be affected by the presence of coarse gravel in the samples collected by SPT sampling. |
| -128.0 | 127.0 | | N2(16) 93% | - | | 128.0-140.0 ft Sandy silt, 60% fines, medium plasticity, slow dilatancy, low toughness; 40% sand, fine, subrounded; pale olive (10Y 6/2), | | Sampling. |
| | 130.0 | | N2(22) 93% 4-5-10-15 N1(15) N2(25) | - | | peices of organic material seen in sample., soft consistency, weak cementation, [Upper Tamiami Formation] | | |
| | 132.0 | | 95% | - | | | | |
| 1 | 134.0 | | 85% | - | | | ml | |
| | 136.0 | | 74% | - | | | | A 3-inch split spoon was used to create pockets |
| | 138.0 138.0 139.0 | -1(3inc | 55% | - | | | | for Pressuremeter testing at various intervals as noted. |
| DATE | | HED: 1 OGIST | 9/11/13 | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES: | |
| APPR | OVED I | BY: EO | Т | | | DRILLER: Eddie Palmer | DRILL RIC | |



| | | | | | Boring R-6-1b PROJE | CT: Tu CT NO. | rkey Point Units 6 and 7 Site : 13-5054 |
|--|-------------------------|--|---------------------|---------|---|------------------|---|
| ELEVATION (Feet) DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | SSSSXMBOI | REMARKS |
| -141.0141.0 -142.0142.0 -143.0143.0 -144.0144.0 -145.0145.0 -146.0146.0 -147.0147.0 -148.0148.0 -151.0151.0151.0 - | S-14 ST-2 ST-3 | 71% 71% 71% 71% 70% 05% | | | 140.0-156.0 ft SILTY SAND, 60% sand, fine, subrounded; 30% fines, low plasticity, slow dilatancy, medium toughness; 10% gravel, fine to medium, subrounded, medium hardness; pale olive (10Y 6/2), moist, strong HCI reaction, weak cementation, with shells, Shell fragments and gravel throughout. [Upper Tamiami Formation] with layers of silt with sand, 80% fines, medium plasticity, slow dilatancy, low toughness; 15% sand, fine, subrounded; 5% gravel; pale olive (10Y 6/2), moist, strong HCI reaction, weak cementation, shells, Sandy silt. [Upper Tamiami Formation] | Si | From 151.8 -157.8 ft, a 3-inch diameter split spoon was used to create a pocket for pressure meter testing. |
| -156.9156.0 -157.9157.0 -158.9158.0 -159.9159.0 | -6(3ind S-16 ST-4 | 8-14-24-47 N1(38) N2(71) 100% | - | | 156.0-218.3 ft SANDY SILT, 70% fines, medium plasticity, slow dilatancy, medium toughness; 30% sand, fine, subrounded; pale olive (10Y 6/2), moist, strong HCI reaction, medium stiff to stiff consistency, weak cementation, trace shells, Sand/silt ratio varies from 10/90 to 30/70 throughout. At 200 - 218.3ft depth, sand/silt ratio is 30/70. [Lower Tamiami Formation] | M | /IL TES: |
| DATE FINISH | HED: 1 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | | |
| APPROVED | BY: EC | T | | | DRILLER: Eddie Palmer | | ILL RIG: DR-16 MMER ID: |



| | | | | | | Boring R-6-1b PROJI | ECT: Tur ECT NO.: | key Point Units 6 and 7 Site 13-5054 |
|--------------------------|---------------|----------------------|--|---------------------|---------|--|----------------------|--------------------------------------|
| (Feet) | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -161. 0 161. | 3 | ST-4 | 85% | | | 156.0-218.3 ft SANDY SILT, 70% fines, medium plasticity, slow dilatancy, medium toughness; 30% sand, fine, subrounded; pale olive (10Y 6/2), moist, strong HCI reaction, medium stiff to stiff consistency, weak cementation, trace shells, Sand/silt ratio varies from 10/90 to 30/70 throughout. At 200 - 218.3ft depth, sand/silt ratio is 30/70. [Lower Tamiami Formation] | | |
| -163.0163. -164.0164. | 1.0 | ST-5 | 89% | | | | | |
| -166. 0 166. | ₫ | S-17 | 5-9-17-38 N1(26) N2(55) 100% | - | | | | |
| -168.0168. -169.0169. | 9.0 | ST-6 | 93% | | | | м | |
| -171.0 ₁₇₁ | 1.0 | ST-7 | 56% | | | | IVII | |
| -173.0173. | 1.0 | S-18 | 8-12-21-44 N1(33) N2(65) 100% | | | | | |
| -176. 9 176. | 3.0 S | ST-8 | 96% | - | | | | |
| -178. 0 178. | = = s | ST-9 | 96% | | | | | |
| | NISHE EOLO | D: 10 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOT | |
| APPROVE | ED BY | /: EO | Г | | | DRILLER: Eddie Palmer | | L RIG: DR-16 IMER ID: |



| | | | | | | Boring R-6-1b PROJECT | T: Turk | ey Point Units 6 and 7 Site 13-5054 |
|----------------------------------|-------------------------|----------------------|--|---------------------|---------|--|-------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -181. 0 -182. 0 | 1 | S-19 | 2-5-15-37 N1(20) N2(52) 100% | | | 156.0-218.3 ft SANDY SILT, 70% fines, medium plasticity, slow dilatancy, medium toughness; 30% sand, fine, subrounded; pale olive (10Y 6/2), moist, strong HCI reaction, medium stiff to stiff consistency, weak cementation, trace shells, Sand/silt ratio varies from 10/90 to 30/70 throughout. At 200 - 218.3ft depth, sand/silt ratio is 30/70. [Lower Tamiami Formation] | | |
| -183. 0 | ∃ | ST-10 | 78% | | | | | |
| 1 | 185.0 186.0 187.0 | | 100% | | | | | |
| -188.0 | 188.0 | S-20 | 2-9-19-45 N1(28) N2(64) 100% | - | | | | |
| -191.0 | 191.0 | ST-12 | 81% | | | | ML | |
| -193.0 | 193.0 | ST-13 | 100% | - | | | | |
| -195.0 | 195.0 | | 4-13-32-50 N1(45) N2(82) 100% | - | | | | |
| ‡ | 197.0 | | 96% | _ | | | | |
| | | ST-15 | | - | | | | |
| DATE | | HED: 10 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | 5: |
| APPR | OVED E | BY: EO | Т | | | DRILLER: Eddie Palmer | DRILL | RIG: DR-16 IER ID: |



| | | | | | | Boring R-6-1b PROJE | CT: Turl | key Point Units 6 and 7 Site 13-5054 |
|---------------------|-------------------------|----------------------|--|---------------------|---------|--|-------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| | 201.0 | | | | | 156.0-218.3 ft SANDY SILT, 70% fines, medium plasticity, slow dilatancy, medium toughness; 30% sand, fine, subrounded; pale olive (10Y 6/2), moist, strong HCl reaction, medium stiff to stiff consistency, weak cementation, trace shells, Sand/silt ratio varies from 10/90 to 30/70 throughout. At 200 - 218.3ft depth, sand/silt ratio is 30/70. [Lower Tamiami Formation] | | |
| | 203.0 | | 3-6-20-49 N1(26) N2(69) 100% | - | | [Lower Familianii Formation] | | |
| -206.0 | 205.0 | ST-16 | 100% | | | | | |
| -208.0 | 208.0 | ST-17 | 100% | | | | ML | |
| | 210.0 | S-23 | 6-13-31-50 N1(44) N2(81) 100% | - | | | | |
| -213.6 | 212.0 | ST-18 | 85% | | | | | |
| -216.0 | 215.0 216.0 217.0 | ST-19 | 96% | | | | | |
| -218.6 | 218.0 | S-24 | 6-11-33-50/4 N1(44) N2(50/4) 100% | - | | | | |
| DATE | START FINISH | IED: 10 | 78% 9/11/13 | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | |
| APPR | OVED E | BY: EO | Т | | | DRILLER: Eddie Palmer | | L RIG: DR-16 MER ID: |



| | | | | | | Boring R-6-1b PROJE | CT: Turl | key Point Units 6 and 7 Site 13-5054 |
|----------------------|--------------------------|----------------------------|---|----------|---------|---|-------------|---|
| ELEVATION (Feet) | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -221.022 | 21.0 | ST-20 | 78% | - | | 218.3-243.7 ft SILTY SAND, fine to medium, soft hardness; 60% sand, fine, subrounded; 40% fines, low plasticity, medium toughness; maximum grain size = 0.2 in., pale olive (10Y 6/2), dry, strong HCl reaction, medium dense to dense consistency, moderate cementation, | | |
| -223.622 -223.622 | 23.0 | ST-21 | 81% | - | | trace shells, Trace gravel clasts (shell fragments). Material from 224 - 232.7ft is more dense than the surrounding layers. [Peace River Formation] with layers of poorly graded sand, 90% sand, fine to medium, subrounded; 10% gravel, fine, subangular, flat and elongated; maximum grain size = 0.3 in., moist, strong HCl reaction, loose to medium dense consistency, weak cementation, trace shells, [Peace River Formation] | | |
| -225. 0 22 | = | ST-22 | 76% | | | | | |
| -227. 6 22 | ₫ | S-25 | 8-11-23-50/5 N1(34) N2(50/5) 100% | - | | | | |
| -229. 6 22 | = | ST-23 | 78% | | | | SM | |
| -231.0 ₂₃ | | ST-24 | 94% | - | | | | |
| 233.023 | = | | | - | | | | |
| 234.023 | = | ST-25 | 89% | - | | | | |
| 236. 0 23 | = | S-26 | 18-22-29-50/: N1(51) N2(50/5) 100% | 5 | | | | |
| -238. 6 23 | 39.0 | ST-26 ST-27 | 68% | - | | | | |
| | START FINISH GEOLO | ED: 9 IED: 10 OGIST: | | - | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | ······································ |
| APPRO | OVED E | BY: EO | Т | | | DRILLER: Eddie Palmer | | . RIG: DR-16 MER ID: |



| | | CT: Turkey Po CT NO.: 13-505 | int Units 6 and 7 Site 4 |
|--|---|---------------------------------|-----------------------------|
| SAMPLE OR RUN NO. BLOW/6in & (N) OR C (%RQD) FRACTURE DENSITY PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| 241.9241.0 ST-27 80% | 218.3-243.7 ft SILTY SAND, fine to medium, soft hardness; 60% sand, fine, subrounded; 40% fines, low plasticity, medium toughness; maximum grain size = 0.2 in., pale olive (10Y 6/2), dry, strong HCl reaction, medium dense to dense consistency, moderate cementation, trace shells, Trace gravel clasts (shell fragments). Material from 224 - 232.7ft is more dense than the surrounding layers. [Peace River Formation] | SM | |
| 243.6243.0 ST-28 244.6244.0 96% | with layers of poorly graded sand, 90% sand, fine to medium, subrounded; 10% gravel, fine, subangular, flat and elongated; maximum grain size = 0.3 in., moist, strong HCl reaction, loose to medium dense consistency, weak cementation, trace shells, [Peace River Formation] | | |
| 12-20-27-28 N1(47) N2(55) 100% | 243.7-248.0 ft Silty sand, 70% sand, fine to medium, subangular, flat and elongated; 30% fines, non plastic, low toughness; maximum grain size = 0.2 in., light gray (N7) with very light gray (N8), moist, medium dense consistency, weak cementation, trace shells, [Peace River Formation] | sm | |
| 48.9248.0 ST-29 89% 49.9249.0 | 248.0-272.5 ft SILTY SAND, 70% sand, fine, subrounded; 20% fines, low plasticity, medium toughness; 10% gravel, fine to medium, soft | | |
| 50.0250.0 ST-30 70% 51.0251.0 | hardness; maximum grain size = 0.2 in., pale olive (10Y 6/2), dry, strong HCl reaction, medium dense to dense consistency, moderate cementation, with shells, Gravel clasts are shells. [Peace River Formation] with layers of poorly graded sand, 90% sand, fine to medium, subrounded; 10% gravel, fine, subangular, flat and elongated; | | |
| 52.6252.0 ST-31 67% | maximum grain size = 0.3 in., moist, strong HCl reaction, loose to medium dense consistency, weak cementation, some shells, [Peace River Formation] | | |
| 54.6254.0 S-28 13-16-29-50/4 N1(45) N2(50/4) 100% | | SM | |
| 56.0256.0 ST-32 93% 57.0257.0 | | | |
| 58.6258.0 59.6259.0 85% | | | |
| DATE STARTED: 9/11/13 DATE FINISHED: 10/4/13 FIELD GEOLOGIST: Jason Lee | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 | NOTES: | |
| CHECKED BY: Rolando Benitez APPROVED BY: EOT | DRILLING CO. Huss Drilling DRILLER: Eddie Palmer | DRILL RIG: DF | ₹-16 |



| | Boring R-6-1b PROJECT: Turkey Point Units 6 and 7 Site PROJECT NO.: 13-5054 | | | | | | | | | | |
|---------------------|---|---------------------------|---|---------------------|---------|--|-------------|-----------------------|--|--|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS | | | |
| -262.0 | 261.0 | ST-34 | 79% | - | | 248.0-272.5 ft SILTY SAND, 70% sand, fine, subrounded; 20% fines, low plasticity, medium toughness; 10% gravel, fine to medium, soft hardness; maximum grain size = 0.2 in., pale olive (10Y 6/2), dry, strong HCI reaction, medium dense to dense consistency, moderate cementation, with shells, Gravel clasts are shells. [Peace River Formation] with layers of poorly graded sand, 90% sand, fine to medium, subrounded; 10% gravel, fine, subangular, flat and elongated; maximum grain size = 0.3 in., moist, strong HCI reaction, loose to | | | | | |
| | 264.0 265.0 | S-29 | 21-23-38-50/5 N1(61) N2(50/5) 100% | | | medium dense consistency, weak cementation, some shells, [Peace River Formation] | | | | | |
| -266.0 | 266.0 - 267.0- | ST-35 | 68% | | | | SM | | | | |
| -269.0 | 268.0 269.0 270.0 | ST-36 | 88% | | | | | | | | |
| -271.0 | 271.0 | | 78% | | | | | | | | |
| | 273.0 274.0 | S-30 | 11-25-40-50/5 N1(65) N2(50/5) 100% | 5 | | 272.5-291.0 ft Silt with sand, 80% fines, low plasticity; 20% sand, fine; pale olive (10Y 6/2), strong HCl reaction, medium dense to dense consistency, [Peace River Formation] | | | | | |
| -276.0 | 275.0 276.0 277.0 | ST-38 | 100% | | | | ml | | | | |
| | 279.0 | ST-39 ST-40 | 100% | - | | | | | | | |
| DATE | START FINISH GEOL | TED: 9 HED: 1 OGIST | 9/11/13 | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES | S: | | | |
| APPR | OVED I | BY: EO | Т | | | DRILLER: Eddie Palmer | | RIG: DR-16 IER ID: | | | |



| | | | | | | Boring R-6-1b PROJ PROJ | IECT: Turk IECT NO.: 1 | ey Point Units 6 and 7 Site 3-5054 |
|--------------------------------------|-------------------------|-------------------------|---|---------------------|---------|---|---------------------------|---------------------------------------|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -281. 6 2 | 282.0 | | 100% | | | 272.5-291.0 ft Silt with sand, 80% fines, low plasticity; 20% sand, fine; pale olive (10Y 6/2), strong HCl reaction, medium dense to dense consistency, [Peace River Formation] | sc | |
| -283. 9 2 | 284.0 | S-31 | 5-16-41-50/4 N1(57) N2(50/4) 100% | | | | | |
| -285. 6 2 | 286.0 | ST-41 | 93% | | | | ml | |
| -287. 9 2 | 288.0 | ST-42 | 96% | | | | | |
| -290. 0 2 | Ī | | | | | | | |
| -291. 0 2 | ∄ | | 85% | | | 291.0-313.0 ft Silty sand, 70% sand, fine; 30% fines, low plasticity; pale olive (10Y 6/2), strong HCl reaction, medium dense to dense consistency, [Peace River Formation] | | |
| -293. 0 2 -294. 0 2 | ∃ | S-32 | 16-27-47-50/4 N1(74) N2(50/4) 100% | • | | | | |
| -295. 6 2 -296. 6 2 | 295.0 | ST-44 | 74% | | | | sm | |
| -298. 6 2 -298. 6 2 | 298.0 | | 81% | | | | | |
| | START FINISH GEOL | ED: 9 ED: 1 OGIST | 0/11/13 | 1 | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | S: |
| APPRO | | | | | | DRILLER: Eddie Palmer | | RIG: DR-16 IER ID: |



| Boring R-6-1b PROJECT: Turkey Point Units 6 PROJECT NO.: 13-5054 | | | | | | | | | | |
|--|----------------|----------------------|---|---------------------|---------|--|-------------|-------------------------|--|--|
| ELEVATION (Feet) | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS | | |
| -301.03(| ∄ | ST-46 | 74% | | | 291.0-313.0 ft Silty sand, 70% sand, fine; 30% fines, low plasticity; pale olive (10Y 6/2), strong HCl reaction, medium dense to dense consistency, [Peace River Formation] | SW | | | |
| -303. 0 3(| ∄ | S-33 | 24-25-38-50/4 N1(63) N2(50/4) 100% | 1 | | | | | | |
| -305.03 -306.03 -307.03 | 06.0 | ST-47 | 78% | - | | | sm | | | |
| -308.03(| 0.80 | ST-48 | 70% | | | | | | | |
| -310. 6 3 | = | ST-49 | 84% | - | | | | | | |
| -312.03 | | S-34 | 21-27-33-50/5 N1(60) N2(50/5) 100% | 5 | | | | | | |
| -314. 0 3 | 1 | ST-50 | 75% | | | 313.0-346.0 ft Silty sand, 70% sand, fine to medium; 30% fines, low plasticity, medium toughness; pale olive (10Y 6/2) with light gray (N7), strong HCl reaction, Sand/silt ratio varies from 70/30 to 60/40. [Peace River Formation] with layers of lean clay with sand/silt with sand, 90% fines, medium plasticity, slow dilatancy, low toughness; 10% sand, fine; strong HCl reaction, medium stiff to stiff consistency, Exist as lenses, average | | | | |
| -316. 0 3 | 17.0 | ST-51 | 71% | | | thickness is 1 inch. [Peace River Formation] | sm | | | |
| -319.93 | = | ST-52 | 81% | - | | | SP SM | | | |
| | FINISH GEOL | IED: 10 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTI | ES: | | |
| APPRO | OVED E | BY: EO | Т | | | DRILLER: Eddie Palmer | | L RIG: DR-16 MER ID: | | |



| | | | | | | Boring R-6-1b PROJE | CT: Turke | y Point Units 6 and 7 Site -5054 |
|---------------------|--|-----------------------|-------------------------------------|----------|---------|--|-------------|-------------------------------------|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| 1 | 321.0 | S-35 S-35 ST-53 | 40-50/5 N1(50/5) 100% | - | | 313.0-346.0 ft Silty sand, 70% sand, fine to medium; 30% fines, low plasticity, medium toughness; pale olive (10Y 6/2) with light gray (N7), strong HCl reaction, Sand/silt ratio varies from 70/30 to 60/40. [Peace River Formation] with layers of lean clay with sand/silt with sand, 90% fines, medium plasticity, slow dilatancy, low toughness; 10% sand, fine; strong HCl | | |
| ‡ | 323.0 - 324.0 - | | | _ | | reaction, medium stiff to stiff consistency, Exist as lenses, average thickness is 1 inch. [Peace River Formation] | | |
| 1 | 325.0= 326.0= | ST-54 | 59% | _ | | | | |
| Ī | 327.0 | | 81% | | | | SM | |
| 1 | 328.0 | , | 50/5 N1(50/5) 0% | | | | | |
| -330.0 | 330.0 | ST-56 | 67% | _ | | | sm | |
| -332.0 | 332.0 | ST-57 | 68% | _ | | | | |
| ‡ | 334.0 | | 85% | | | | | |
| -336.0 | | S-37 | 36-50/2 N1(50/2) 100% | T | | | | |
| -338. 0 | 338.0 | ST-59 | 44% | | | | | |
| -339. | 339.0 | ST-60 | 70% | | | | | |
| DATE FIELD | | IED: 10 OGIST: | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES: | |
| APPR | OVED I | BY: EO | Т | | | DRILLER: Eddie Palmer | DRILL R | IG: DR-16 R ID: |



| | | | | | Boring R-6-1b PROJECT: | Turk | ey Point Units 6 and 7 Site l3-5054 |
|--|----------------------|--|---------------------|---------|---|-----------------|--|
| ELEVATION (Feet) DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -341.6341.0= -342.6342.0= -343.6343.0= -344.6344.0= -345.6345.0= | ST-61 S-38 | 70% 67% 50/5 N1(50/5) 100% | - | | 313.0-346.0 ft Silty sand, 70% sand, fine to medium; 30% fines, low plasticity, medium toughness; pale olive (10Y 6/2) with light gray (N7), strong HCl reaction, Sand/silt ratio varies from 70/30 to 60/40. [Peace River Formation] with layers of lean clay with sand/silt with sand, 90% fines, medium plasticity, slow dilatancy, low toughness; 10% sand, fine; strong HCl reaction, medium stiff to stiff consistency, Exist as lenses, average thickness is 1 inch. [Peace River Formation] | SP- SM sm | |
| -346.0346.0= -347.0347.0= -348.0348.0= -349.0349.0= | ST-63 | 63% | - | | 346.0-348.8 ft Sandy lean clay, 70% fines, medium plasticity, low toughness; 30% sand, fine; pale olive (10Y 6/2) with light gray (N7), moist, strong HCl reaction, stiff consistency, [Peace River Formation] | cl | Layer change based on |
| -352.0352.0 -353.0353.0 | ST-64 S-39 | 56% 50/5 | - | | 348.8-377.0 ft Silty sand, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, low toughness; pale olive (10Y 6/2) with very light gray (N8), moist, strong HCl reaction, weak cementation, [Peace River Formation] with layers of lean clay with sand/silt with sand, 80% fines, medium plasticity; 20% sand, fine; 0% gravel; medium stiff to stiff consistency, Clay layers exist as lenses. [Peace River Formation] | | recovery seen in bottom of shelby tube samples ST-62 and ST-63, top and bottom depths of this layer are estimated to be at the midpoint of both samples. |
| -354.9354.0 -355.9355.0 -356.9356.0 | ST-65 | 56% | - | | | sm | |
| -358.0358.0 -359.0359.0 | S1-66 | 70% | | | | SM | |
| | HED: 1 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | SM | S: |
| APPROVED | BY: EO | T | | | DRILLER: Eddie Palmer | DRILL HAMM | RIG: DR-16 IER ID: |



| | Boring R-6-1b PROJECT: Turkey Point Units 6 at PROJECT NO.: 13-5054 | | | | | | | | | | |
|--|---|---------|---|---------------|---------|--|--|--|--|--|--|
| ELEVATION (Feet) DEPTH (Feet) SAMPLE OR RUN NO. BLOW/Gin & (N) | %REC (%RQD) | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS | | | | | | |
| -361.0361.0 ST-67 59 50 N1(6 100) -362.0362.0 ST-68 59 -364.0364.0 | /5 60/5) 0% | | 348.8-377.0 ft Silty sand, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, low toughness; pale olive (10Y 6/2) with very light gray (N8), moist, strong HCl reaction, weak cementation, [Peace River Formation] with layers of lean clay with sand/silt with sand, 80% fines, medium plasticity; 20% sand, fine; 0% gravel; medium stiff to stiff consistency, Clay layers exist as lenses. [Peace River Formation] | SP- SM | | | | | | | |
| -365.0365.0 ST-69 -366.0366.0 ST-69 -367.0367.0 ST-69 | % | | | | | | | | | | |
| -368.0368.0 ST-70 78 | | | | sm | | | | | | | |
| -370.9371.0 S-41 ST-71 | 50/5))% | | | | | | | | | | |
| -372. 6 372.0 56 | % | | | | | | | | | | |
| -374.0374.0 ST-72 ST-72 63 | % | | | | | | | | | | |
| -376.9376.0 -377.9377.0 ST-73 | % | | 277.0.415.5.ft Silty aged 709/ aged fine to medicine authorized 200/ | | | | | | | | |
| -378.6378.0 S-42 S-42 S-79.6379.0 ST-74 | 0/5) 0% | | 377.0-415.5 ft Silty sand, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, low toughness; pale olive (10Y 6/2) and very light gray (N8), moist, strong HCl reaction, weak cementation, Sand/silt ratio varies from 80/20 to 60/40. [Peace River Formation] with layers of lean clay with sand/silt with sand, 80% fines, medium plasticity; 20% sand, fine; 0% gravel; medium stiff to stiff consistency, Clay layers exist as lenses. [Peace River Formation] | sm | | | | | | | |
| DATE STARTED: 9/11/13 DATE FINISHED: 10/4/13 FIELD GEOLOGIST: Jason CHECKED BY: Rolando Be | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES: | | | | | | | |
| APPROVED BY: EOT | | | DRILLER: Eddie Palmer | DRILL RIG: DR | 3-16 | | | | | | |



| | Boring R-6-1b PROJECT: Turkey Point Units 6 and 7 Site PROJECT NO.: 13-5054 | | | | | | | | | | |
|--------------------------------------|---|----------------------|-------------------------------------|---------------------|---------|--|-----------|-------------|-----------|--|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | 0000 | USCS SYMBOL | REMARKS | | |
| -381. 0 | 381.0 | ST-74 | 63% | | | 377.0-415.5 ft Silty sand, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, low toughness; pale olive (10Y 6/2) and very light gray (N8), moist, strong HCl reaction, weak cementation, Sand/silt ra varies from 80/20 to 60/40. [Peace River Formation] with layers of lean clay with sand/silt with sand, 80% fines, medium plasticity; 20% sand, fine; 0% gravel; medium stiff to stiff consistency | t atio | | | | |
| -383. 0 | 383.0 | ST-75 | 81% | | | Clay layers exist as lenses. [Peace River Formation] | S | SP- SM | | | |
| -385.0x -386.0x | 7 | ST-76 | 56% | | | | | | | | |
| -387. 0 | 387.0 | S-43 | 45-50/2 N1(50/2) 100% | | | | | | | | |
| 1 | 389.0 | | 63% | | | | | | | | |
| -391. 0 ; -392. 0 ; | 391.0 | ST-78 | 56% | _ | | | S | sm | | | |
| -394. 0 : | 393.0 394.0 395.0 | ST-79 | 89% | | | | | | | | |
| 1 | 396.0 397.0 | S-44 | 25-50/5 N1(50/5) 89% | _ | | | | | | | |
| Ī | 399.0 | | 81% | _ | | | | | | | |
| DATE | START FINISH | HED: 10 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NO | OTES: | | | |
| APPR | OVED E | BY: EO | Т | | | DRILLER: Eddie Palmer | | RILL RI | IG: DR-16 | | |



| | | | | Boring R-6-1b PRO | JECT: Tur JECT NO.: | key Point Units 6 and 7 Site 13-5054 |
|--|-------------------------------|---------------------|---------|--|------------------------|---|
| ELEVATION (Feet) DEPTH (Feet) SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -401.0401.0 ST-81 | 52% | - | | 377.0-415.5 ft Silty sand, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, low toughness; pale olive (10Y 6/2) and very ligh gray (N8), moist, strong HCl reaction, weak cementation, Sand/silt ra varies from 80/20 to 60/40. [Peace River Formation] with layers of lean clay with sand/silt with sand, 80% fines, medium plasticity; 20% sand, fine; 0% gravel; medium stiff to stiff consistency | ttio | |
| -403.0403.00 ST-82 | 70% | | | Clay layers exist as lenses. [Peace River Formation] | SM | 1 |
| -405.6405.0 S-45 N | 50/5 1(50/5) 100% | - | | | | |
| -407.0407.0 -408.9408.0 | 74% | - | | | sm | 1 |
| -410.0410.0 | 85% | - | | | | |
| -411.0411.0 -412.0412.0 -413.0413.0 | 78% | | | | | |
| S-46 N | 21-50/5 1(50/5) 100% | - | | | | |
| -416.9416.0 -417.9417.0 -418.9418.0 -ST-87 | 93% | - | | 415.5-458.0 ft Silty sand, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, low toughness; light olive gray (5Y 5/2) and very light gray (N8), moist, strong HCI reaction, weak cementation, Sand/s ratio varies from 80/20 to 70/30. [Peace River Formation] with layers of lean clay with sand/silt with sand, 80% fines, medium plasticity; 20% sand, fine; 0% gravel; medium stiff to stiff consistency Clay layers exist as lenses. [Peace River Formation] | silt | |
| -419.9419.0 | 85% | - | | Siay isyoto exist as follows: [1 case (tive) officially) | | |
| DATE STARTED: 9/11/ DATE FINISHED: 10/4/1 FIELD GEOLOGIST: Ja CHECKED BY: Rolando | 3 son Lee | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOT | ES: |
| APPROVED BY: EOT | | | | DRILLER: Eddie Palmer | | L RIG: DR-16 MER ID: |



| | | | | | Boring | R-6-1b | PROJECT: Turkey PROJECT NO.: 13- | Point Units 6 and 7 Site 5054 |
|---------------------|-------------------------|----------------------|-------------------------------------|---------------------|---|---|----------------------------------|-------------------------------|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | N. 396966.10 GROUND SUR | OORDINATES Oft E. 876609.04 ft FACE ELEVATION: -0.03 ft ESCRIPTION | USCS SYMBOL | REMARKS |
| -422.0 | 421.0 422.0 423.0 | | 93% 44-50/4 N1(50/4) 88% | - | fines, low plasticity, low tough light gray (N8), moist, strong l ratio varies from 80/20 to 70/3 with layers of lean clay with sa | nd/silt with sand, 80% fines, media gravel; medium stiff to stiff consis | very SP- Sand/silt SM | |
| 1 | 424.0 425.0 | ST-89 | 89% | | | | | |
| -427.0 | 426.0 427.0 428.0 | | 96% | | | | | |
| -430.6 | 430.0 = | ST-91 | 96% | | | | sm | |
| 1 | 431.0 432.0 | S-48 | 32-50/4 N1(50/4) 88% | - | | | | |
| = | 433.0 434.0 | | 63% | | | | | |
| -436.0 | 435.0 436.0 437.0 | | 85% | | | | | |
| | 438.0 439.0 | ST-94 | 89% | | | | | |
| DATE | | HED: 10 | | | DRILLING METHOD: Mud Rotary, PQ, | SPT, ST, NWD4 | NOTES: | |
| APPR | OVED I | BY: EO | Т | | DRILLER: Eddie Palmer | | DRILL RIC | |



| | | | | | Boring R-6-1b PROJECT PROJECT | T: Turkey T NO.: 13-5 | Point Units 6 and 7 Site 054 |
|---|--------|----------------------|--|---------------------|--|----------------------------|---------------------------------|
| ELEVATION (Feet) DEPTH | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -441. 0 44 -442. 0 44; | 11.0 | S-49 ST-95 | 50 100% | - | 415.5-458.0 ft Silty sand, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, low toughness; light olive gray (5Y 5/2) and very light gray (N8), moist, strong HCl reaction, weak cementation, Sand/silt ratio varies from 80/20 to 70/30. [Peace River Formation] with layers of lean clay with sand/silt with sand, 80% fines, medium plasticity; 20% sand, fine; 0% gravel; medium stiff to stiff consistency, Clay layers exist as lenses. [Peace River Formation] | | |
| -444. 9 44. | 15.0 | ST-96 | 81% | - | | | |
| -447. 6 44: | ∄ | ST-97 | 78% | | | SM | |
| -449. 9 44! | = = : | S-50 | 16-40-50/5 N1(50/5) 100% | - | | sm | |
| -451. 9 45 | 52.0 | ST-98 | 52% | - | | | |
| -453.045 -454.045 -455.045 | 54.0 | ST-99 | 89% | | | | |
| -456.045 -457.045 | 57.0 | T-100 | 70% | | 457.0-458.0 ft Grades to Dolomitic starting at approximately 457.0ft depth. | | |
| -459.645 | 59.0 | | 20-32-44-50/5 N1(76) N2(50/5) 89% | 5 | | sm | |
| | INISHI | ED: 10 OGIST: | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES: | |
| APPROV | VED B | Y: E0 | Т | | DRILLER: Eddie Palmer | DRILL RIG | |



| | | | | Boring R-6-1b | ROJECT: ROJECT N | Turk 0.: 1 | ey Point Units 6 and 7 Site 3-5054 |
|--|-------------------------------------|---------------------|---------|---|---------------------|----------------|---------------------------------------|
| (Feet) DEPTH (Feet) SAMPLE OR | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396966.10 ft E. 876609.04 ft GROUND SURFACE ELEVATION: -0.03 ft DESCRIPTION | | USCS SYMBOL | REMARKS |
| 61.6461.0 ST-101 62.6462.0 | 52% | | | 458.0-461.3 ft Silty sand, 70% sand, fine to medium, subrounded; 30 fines, low plasticity, low toughness; pale olive (10Y 6/2) with very lig gray (N8), moist, weak HCl reaction, weak cementation, Dolomitic. [Arcadia Formation] with layers of lean clay with sand/silt with sand, 80% fines, medium plasticity; 20% sand, fine; 0% gravel; medium stiff to stiff consisten Clay layers exist as lenses. | ght | sm | |
| 463.9463.0= ST-102 464.9464.0= 464.9464.0 | 93% | | | 461.3-463.4 ft Silty sand with gravel, 60% sand, fine to coarse; 30% fines, low plasticity; 10% gravel, fine, subrounded, hard hardness; greenish black (5GY 2/1), weak HCl reaction, weak cementation, [Arcadia Formation] 463.4-464.1 ft GRAINSTONE, dolomitic, moderately hard (H4) to moderately soft (H5), moderately (W5) weathered, clay to very fine sand particles, brownish gray (5YR 4/1), weak reaction to HCl, HCl reaction is delayed. Moldic porosity. Layer contains clay lenses/nodules with medium plasticity, low toughness, dry. Color is light olive gray (5Y 5/2). Contains trace amount of fine grained san [Arcadia Formation] | - S | | |
| DATE STARTED: 9/ DATE FINISHED: 10/ FIELD GEOLOGIST: CHECKED BY: Rola | 4/13 Jason Lee | | ' | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | | NOTE | |
| APPROVED BY: EOT | | | | DRILLER: Eddie Palmer | | | RIG: DR-16 ER ID: |



| | | | | | | Boring R-6-2 PROJECT | Γ: Turke Γ NO.: 13 | y Point Units 6 and 7 Site -5054 |
|---------------------|-----------------|----------------------|-------------------------------------|----------|----------|--|-----------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396967.24 ft E. 876648.22 ft GROUND SURFACE ELEVATION: -0.06 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -1.0 | | | | | | 0.0-2.17 ft Road base layer. | | 0 - 2.17 ft, destructively drilled using (2 7/8 inch and 2 15/16 inch) mud rotary bits. Measured water level varied within one foot of ground surface. 2.17 - 8.17 ft., SPT |
| -3.0 | 4.0 | | 1-1-0-1 N1(1) N2(1) 0% | _ | | 2.17-4.17 ft Very soft consistency, (MUCK) Sample not recovered. | | sampling. |
| -5.0 -6.0 | | S-1 | 1-1-2-4 N1(3) N2(6) 55% | | | 4.17-5.8 ft Silty sand with gravel, 60% sand, fine to coarse, angular, spherical, soft; 25% fines, non plastic, low dry strength; 15% gravel, fine, angular, spherical, soft hardness; maximum grain size = 0.75 in., very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), no odor, wet, strong HCl reaction, very loose consistency, trace roots | sm | |
| -7.0 -8.0 | = | S-2 | 7-7-8-7 N1(15) N2(15) 75% | | | 5.8-6.17 ft Organic soil, 95% fines, medium plasticity; 5% sand, fine; grayish brown (5YR 3/2) to very dusky red (10R 2/2), organic odor, wet, strong HCl reaction, plasic consistency, peat is more spongy than fibrous, trace amount of very fine sand. | sm | |
| -9.0 -10.0 | | | | | | 6.17-7.17 ft Silty sand with gravel, 50% sand, fine to coarse, angular, spherical, medium; 25% gravel, fine to medium, angular, spherical, medium hardness; 25% fines, non plastic, no dry strength; maximum grain size = 1.0 in., very pale orange (10YR 8/2) to yellowish gray (5Y 7/2), no odor, wet, strong HCl reaction, medium dense consistency, trace roots, [Miami Limestone] | | 8.17 - 46.0 ft, destructively drilled using (2 7/8 inch and 2 15/16 inch) mud rotary bits. |
| -11.0 -12.0 | 12.0 | | | | | 7.17-8.17 ft Silty sand with gravel, 45% sand, fine to coarse, angular, spherical, medium; 30% gravel, fine to medium, angular, spherical, soft hardness; 25% fines, non plastic; maximum grain size = 1.25 in., very pale orange (10YR 8/2), no odor, wet, strong HCl reaction, medium dense consistency, trace roots, [Miami Limestone] | | |
| -14.0 | 13.0 | | | | | 8.17-46.0 ft No Sample Recovered. | | |
| -15.0 -16.0 | 15.0 | | | | | | | |
| -17.0 -18.0 | | | | | | | | |
| -19.0 | 19.0 | | | | | | | |
| DATE | | HED: 9/ OGIST: | | nitez | <u> </u> | DRILLING METHOD: Mud Rotary, PQ, SPT, NWD4 DRILLING CO. Huss Drilling | NOTES: | |
| APPR | OVED E | BY: EO | Г | | | DRILLER: Eddie Palmer | DRILL R | IG: DR-18 R ID: |



| | | | | | Boring R-6-2 | PROJECT: PROJECT N | Turk O.: 1 | ey Point Units 6 and 7 Site 3-5054 |
|--|----------------------|-------------------------------------|---------------------|---------|---|--------------------|---------------|---|
| ELEVATION (Feet) DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396967.24 ft E. 876648.22 ft GROUND SURFACE ELEVATION: -0.06 ft DESCRIPTION | | USCS SYMBOL | REMARKS |
| -21.0 21.0 -22.0 22.0 -23.0 23.0 | | | | | 8.17-46.0 ft No Sample Recovered. | | | |
| -24.0 24.0 -25.0 25.0 -26.0 26.0 -27.0 27.0 | | | | | | | | From 25.0 - 27.0 ft, loss of circulation. |
| -28.0 28.0 -29.0 29.0 -30.0 30.0 | | | | | | | | |
| -31.0 31.0 -32.0 32.0 -33.0 33.0 | | | | | | | | |
| -35.0 35.0 -36.0 36.0 -37.0 37.0 | | | | | | | | |
| -39.0 39.0 DATE STAI DATE FINIS | RTED: 8 | | nitez | | DRILLING METHOD: Mud Rotary, PQ, SPT, NWD4 | | NOTES | S: |
| | BY: Ro | lando Benitez | inteZ | | DRILLING CO. Huss Drilling DRILLER: Eddie Palmer | | | RIG: DR-18 IER ID: |



| | | PROJECT: Turkey Point Units 6 and 7 Site PROJECT NO.: 13-5054 |
|--|---|--|
| ELEVATION (Feet) DEPTH (Feet) SAMPLE OR RUN NO. BLOW/Gin & (N) OR %REC (%RQD) FRACTURE DENSITY | COORDINATES N. 396967.24 ft E. 876648.22 ft GROUND SURFACE ELEVATION: -0.06 ft DESCRIPTION | REMARKS SON OF THE PROPERTY OF |
| -41.0 41.0 -42.0 42.0 | 8.17-46.0 ft No Sample Recovered. | |
| -44.0 44.0 -45.0 45.0 -45.0 45.0 | | |
| -46.0 46.0 | 46.0-48.0 ft BOUNDSTONE, clastic, moderately hard, moderately weathered, very fine sand to silt particles, vuggy to pitted, typical diameter 0.25 in may size: 1.0 in year light gray (NR) to light or | 46.0 - 112.0 ft., A combination of destructive drilling |
| -48.0 48.0 R-1 76% (66%) | diameter: 0.25 in., max size: 1.0 in., very light gray (N8) to light gr (N7), strong reaction to HCl, wet, Calcareous. [Key Largo Limeston 48.0-51.0 ft GRAINSTONE, fossiliferous, moderately hard to hard, moderately weathered, fine sand to silt particles, pitted, typical diameter: 0.20 in., max size: 0.5 in., very light gray (N8) to light gr (N7), very widely fractured, R.D. = 0° to 45°, strong reaction to HC wet, Calcareous, abundant moldic porosity. Fractures are healed Thompson Formation] | one] 15/16 inch) mud rotary bits and NWD4 conventional coring were used to create pockets for pressuremeter testing. |
| -51.0 51.0 - | 51.0-61.5 ft GRAINSTONE, fossiliferous, moderately soft to modera hard, moderately to intensely weathered, fine sand to silt particles pitted, typical diameter: 0.20 in., max size: 0.4 in., white (N9) to ve light gray (N8), strong reaction to HCl, wet, Calcareous, abundant moldic porosity. [Fort Thompson Formation] | s, sery |
| -56.0 56.0 | | Tool drop from 56.5 to 57.0 ft. |
| DATE STARTED: 8/13/13 DATE FINISHED: 9/10/13 FIELD GEOLOGIST: Rolando Benitez CHECKED BY: Rolando Benitez | DRILLING METHOD: Mud Rotary, PQ, SPT, NWD4 DRILLING CO. Huss Drilling | NOTES: |
| APPROVED BY: EOT | DRILLER: Eddie Palmer | DRILL RIG: DR-18 HAMMER ID: |



| | | | | | | Boring R-6-2 PROJECT PROJECT | : Turk : NO.: 1 | ey Point Units 6 and 7 Site 13-5054 |
|--|--|----------------------|-------------------------------------|---------------------|---------|---|--------------------|---|
| (Feet) DEPTH | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396967.24 ft E. 876648.22 ft GROUND SURFACE ELEVATION: -0.06 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| 61.0 61 62.0 62 63.0 63 64.0 64 65.0 65 66.0 66 67.0 67 68.0 68 | 1.0 11.0 11.0 11.0 11.0 11.0 11.0 11.0 | R-3 - | 38% (0%) | | | 61.5-66.0 ft GRAINSTONE, fossiliferous, moderately soft, moderately to intensely weathered, fine sand to silt particles, pitted, typical diameter: 0.1 in., max size: 0.5 in., white (N9) to very light gray (N8), strong reaction to HCl, wet, Calcareous, abundant moldic porosity. Softer than upper layer; recovered mostly as loose medium gravel fragments. [Fort Thompson Formation] | | Softer material throughout core run R-4 (61 - 66 ft). |
| 71.0 71 71.0 71 72.0 72 73.0 73 74.0 74 | 2.0 | R-5 | 30% (14%) | | | 70.0-75.0 ft GRAINSTONE, fossiliferous, moderately soft, moderately to intensely weathered, fine sand to silt particles, pitted, typical diameter: 0.2 in., max size: 0.5 in., white (N9) to very light gray (N8), strong reaction to HCl, wet, Calcareous, abundant moldic porosity. Recovered mostly as short pieces of core and loose medium gravel fragments [Fort Thompson Formation] | | |
| 76.0 76 77.0 77 78.0 78 79.0 79 | 3.0 ==================================== | ED: 9/1 | 10/13 | | | 75.0-80.0 ft No Sample Recovered. | NOTE | S: |
| | ED BY | : Rola | Rolando Berindo Benitez | nitez | | DRILLING METHOD: Mud Rotary, PQ, SPT, NWD4 DRILLING CO. Huss Drilling DRILLER: Eddie Palmer | | RIG: DR-18 |



| | | | | | | Boring R-6-2 PROJE | CT: Tu | Furkey Point Units 6 and 7 Site D.: 13-5054 |
|---------------------|-----------------|----------------------|-------------------------------------|----------|------------|--|--------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396967.24 ft E. 876648.22 ft GROUND SURFACE ELEVATION: -0.06 ft DESCRIPTION | | OS SYMBOL REMARKS |
| -81.0 | 81.0 | | | _ |) | 80.0-85.0 ft GRAINSTONE, fossiliferous, moderately soft, moderately to intensely weathered, medium sand to very fine sand particles, pitted, | | <u>sn</u> |
| -82.0 | 82.0 | R-6 | 8% | | | typical diameter: 0.1 in., max size: 0.4 in., white (N9) to very light gray (N8), strong reaction to HCl, wet, Calcareous, abundant moldic porosity. Recovered mostly as medium gravel fragments [Fort Thompson Formation] | | |
| | 83.0 | | (0%) | | | | | |
| | 85.0 | | | _ | , <u>†</u> | 85.0-100.0 ft No Sample Recovered. | | |
| | 86.0 87.0 | | | | | | | |
| | 88.0 89.0 | | | | | | | |
| | 90.0 | | | | | | | |
| 1 | 91.0 | | | | | | | |
| -93.0 | 93.0 | | | | | | | |
| -94.0 | 94.0 | | | | | | | |
| | 96.0 97.0 | | | | | | | |
| -98.0 | | | | | | | | |
| -99.0 | 99.0 | | | | | | | |
| DATE | | HED: 9/ OGIST: | | nitez | | DRILLING METHOD: Mud Rotary, PQ, SPT, NWD4 DRILLING CO. Huss Drilling | NO | OTES: |
| APPF | ROVED E | BY: EO | Т | | | DRILLER: Eddie Palmer | | RILL RIG: DR-18 IAMMER ID: |



| DATE STARTED: 8/13/13 DATE STARTED: 8/13/13 DATE FINISHED: 9/10/13 FIELD GEOLOGIST: Rolando Benitez CHECKED BY: Rolando Benitez CHECKED BY: Rolando Benitez DRILLING METHOD: Mud Rotary, PQ, SPT, NWD4 CHECKED BY: Rolando Benitez DRILLING CO. Huss Drilling | | Boring R-6-2 PROJECT: Turkey Point Units 6 and 7 Site PROJECT NO.: 13-5054 | | | | | | | | | |
|--|--|--|----------------------|-------------------------------------|----------|---------|---|-------------|--|--|--|
| 103.010.0 G R. 7 17% (195) 110.0 G R. 8 190.0 G R. 7 17% (195) 110.0 G R. 8 190.0 G R. 7 17% (195) 110.0 G R. 8 190.0 G R. 7 17% (195) 110.0 G R. 8 190.0 G R. 7 17% (195) 110.0 G R. 8 190.0 G R. 7 17% (195) 110.0 G R. 8 190.0 G R. 7 17% (195) 110.0 G R. 8 190.0 G R. 7 190.0 G R. 8 190.0 G R. 7 190.0 G R. 8 190.0 G R | ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | N. 396967.24 ft E. 876648.22 ft GROUND SURFACE ELEVATION: -0.06 ft | USCS SYMBOL | REMARKS | | |
| FIELD GEOLOGIST: Rolando Benitez DRILLING METHOD: Mud Rotary, PQ, SPT, NWD4 CHECKED BY: Rolando Benitez DRILLING CO. Huss Drilling | -102.6 -103.6 -104.6 -106.6 -107.6 -109.6 -111.6 -111.6 | 102.0 103.0 104.0 105.0 106.0 109.0 1112.0 | R-7 | 0% (0%) | | | to intensely weathered, medium sand to very fine sand particles, pitted, typical diameter: 0.1 in., max size: 0.4 in., white (N9) to very light gray (N8), strong reaction to HCl, wet, Calcareous, abundant moldic porosity. [Fort Thompson Formation] | NOTE | 112.0ft. Boring continues to 360.0ft, and was destructively drilled alternating between (2 7/8 inch and 2 15/16 inch) mud rotary bits to accomodate pressuremeter testing pocket drilling. | | |
| APPROVED BY: EOT DRILLER: Eddie Palmer | CHE | D GEOL | OGIST Y: Ro | : Rolando Be lando Benitez | nitez | | | DRILL | RIG: DR-18 | | |



| | | | | | | Boring R-7-1 PROJECT PROJECT | Τ: Turk Γ NO.: 1 | ey Point Units 6 and 7 Site 3-5054 |
|----------------------|-----------------|----------------------|-------------------------------------|---------------------|---------|--|---------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -1.0 -2.0 -3.0 | 2.0 | | | | | 0.0-1.5 ft Road base layer. 1.5-6.0 ft Muck (Soft zone to 6ft depth). | | Measured water level varied within one foot of ground surface. Boring was destructively drilled using a 5 inch mud rotary bit from 0 - 5 ft. |
| -4.0 -5.0 -6.0 | 5.0 | | | _ | | 6.0-30.5 ft PACKSTONE, sandy, moderately soft to soft, moderately | | 5.0 - 120.2 ft., PQ wireline coring. |
| -7.0 -8.0 | 8.0 | R-1 | 75% (39%) | | | weathered, fine sand to cobble particles, pitted to vuggy, max size: 1 in., yellowish gray (5Y 8/1) with medium gray (N5), weak reaction to HCI, lower contact is gradational, Interval from 17.0 - 18.5ft contains higher void density. Grades to Key Largo Limestone from 25.7 to 30.5ft. Grain supported. Intervals with pockets of sand. [Miami Limestone] | | |
| -9.0 -10.0 | 10.0 | R-2 | 100% (43%) | _ | | | | |
| -12.0 -13.0 | 13.0 | R-3 | 59% (0%) | - | 7/1 | | | Lost circulation at 13.0 ft, increased |
| -14.0 -15.0 | 16.0 | | 100% (100%) | _ | | | | approximately 70% return after drilling a few more feet. (Special care sample) SC-1: 13.7-14.3ft. |
| -17.0 -18.0 | 17.0 | R-5 | 88% (66%) | | | | | |
| DATE | | HED: 9/ | | | (2) | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES | 5: |
| APPR | OVED I | BY: EO | Г | | | DRILLER: Eddie Palmer | DRILL | RIG: DR-16 ER ID: |



| | | | | | | Boring R-7-1 PROJECT PROJECT | Γ: Turk Γ NO.: 1 | ey Point Units 6 and 7 Site 13-5054 |
|----------------------------------|----------------------|----------------------|--|----------|---------|--|---------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -22.0 -23.0 -24.0 | 22.0 | R-6 | 0% (0%) | FD0 | | 6.0-30.5 ft PACKSTONE, sandy, moderately soft to soft, moderately weathered, fine sand to cobble particles, pitted to vuggy, max size: 1 in., yellowish gray (5Y 8/1) with medium gray (N5), weak reaction to HCI, lower contact is gradational, Interval from 17.0 - 18.5ft contains higher void density. Grades to Key Largo Limestone from 25.7 to 30.5ft. Grain supported. Intervals with pockets of sand. [Miami Limestone] | | |
| -25.0 -26.0 -27.0 | 26.0 | | 100% (0%) 60% (0%) | т | | | | Lost circulation 25.5 - 28ft. |
| -28.0 -29.0 | 28.0 | R-9 | 100% (40%) | FD1 | | 28.2-29.2 ft Joint, R.D. = 90°; filling: totally healed, slightly weathered, moderately soft; surface: moderately rough, undulating, slightly weathered. | | |
| -31.0 -32.0 -33.0 | 31.0 32.0 33.0 | R-11 | 95% (20%) ———————————————————————————————————— | | | 30.5-37.9 ft BOUNDSTONE, moderately hard, moderately weathered, pitted to vuggy, max size: 2 in., yellowish gray (5Y 8/1) with medium dark gray (N4), strong reaction to HCl, Coral clasts, upper contact is gradational, void surfaces covered by recrystallized calcite. [Key Largo Limestone] | | |
| -35.0 -36.0 -37.0 -38.0 | 36.0 37.0 38.0 | R-12 | 90% (50%) | | | | | SC-2: 37.5-37.9ft. |
| DATE | | HED: 9/ | | - | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | |
| APPF | ROVEDI | BY: EO | Т | | | DRILLER: Eddie Palmer | | RIG: DR-16 IER ID: |



| | | | | | | Boring R-7-1 PROJECT PROJECT | Γ: Turk Γ NO.: ′ | sey Point Units 6 and 7 Site 13-5054 |
|--|--------------------------|------------------|-------------------------------------|---------------------|---------|---|----------------------|---|
| (Feet) DEPTH | (Feet) | RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| 41.0 41.0 42.0 42.0 43.0 44.0 44.0 44.0 45.0 | 0 III R. | -13 | 100% (98%) | | | 37.9-47.7 ft PACKSTONE, calcareous, moderately hard to hard, slightly (W3) weathered to moderately (W5) weathered, pitted to vuggy, typical diameter: 0.4 in., yellowish gray (5Y 8/1) with moderate yellow (5Y 7/6), strong reaction to HCI, Void surfaces covered by recrystallized calcite. Sandy,soft interval from 47.4 to 49.0ft, core mostly recovered as gravel fragments due to mechanical breakage during drilling. [Key Largo Limestone] | | SC-3: 40.1 - 41.0ft. |
| 46.0 47.0 47.0 48.0 | 0 III R | -14 | 97% (80%) | | | 47.7-57.7 ft PACKSTONE, calcareous, moderately hard, slightly | | SC-4: 46.9 to 47.7ft. Softer material, 47.4-47.9ft. |
| 49.0 49.0 50.0 | R. | -15 | 100% (60%) | | | weathered, pitted to vuggy, max size: 0.7 in., white (N9) to light gray (N7), weak reaction to HCl, At 56ft, oolitic fossils seen in core. Interval from 50.5 - 51.6ft is Grainstone. [Fort Thompson Formation] | | |
| 51.0 51.0 52.0 53.0 54.0 | 0 III R | -16 | 100% (100%) | | | | | SC-5: 53.7-55.0ft. |
| 55.0 56.0 56.0 57.0 57.0 58.0 59.0 | 0 IIIIIII | -17 | 100% (100%) | | | | | |
| | ARTEI IISHEI EOLOG | D: 9/6/ BIST: | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | <u> </u> S: |
| APPROVE | | | | | | DRILLER: Eddie Palmer | | RIG: DR-16 |

Rev. 0; January 22, 2014 BORING NO. R-7-1 SHEET 3 OF 24



| | | | | | | Boring R-7-1 PROJECT PROJECT | : Turk NO.: 1 | ey Point Units 6 and 7 Site 13-5054 |
|---------------------|-----------------|----------------------|-------------------------------------|----------|---------|---|------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -60.0 -61.0 | 61.0 | R-18 | 100% (96%) | - | | 57.7-66.5 ft GRAINSTONE, calcareous, moderately hard to hard, slightly weathered, very fine sand particles, vuggy, light gray (N7), weak reaction to HCI, Angular quartz grains present, approximately 40% [Fort Thompson Formation] interbedded with GRAINSTONE, calcareous, moderately hard to | | |
| -62.0 -63.0 | 63.0 | R-19 | 97% (97%) | | | moderately soft, moderately weathered, light gray (N7), weak reaction to HCl, [Fort Thompson Formation] | | |
| -65.0 -66.0 | 66.0 | | | _ | | | | |
| -67.0 -68.0 | 68.0 | R-20 | 52% (30%) | | | 66.5-79.0 ft PACKSTONE, calcareous, moderately soft, slightly to moderately weathered, fine sand particles, pitted to vuggy, white (N9), strong reaction to HCI, [Fort Thompson Formation] interbedded with GRAINSTONE, calcareous, soft, moderately weathered, white (N9), weak reaction to HCI, Some core intervals are recovered as gravel sized fragments from mechanical breakage during drilling. [Fort Thompson Formation] | | |
| -70.0 -71.0 | 70.0 | R-21 | 70% (45%) | FD0 | | dining. [For monpoor Formation] | | |
| -72.0 -73.0 | 72.0 | R-22 R-23 | 100% 1 (90%) | - | | | | |
| -74.0 -75.0 | 74.0 75.0 | R-24 | 100% (63%) 100% (92%) | | | | | SC-6: 74.3-75.0ft. |
| -76.0 -77.0 | 77.0 78.0 | R-25 | 100% (100%) | | | | | |
| -78.0 -79.0 | 79.0 | R-26 | 100% | - | | | Note | |
| DATE | | HED: 9 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES | |
| APPF | ROVEDI | BY: EO | Т | | | DRILLER: Eddie Palmer | DRILL | RIG: DR-16 IER ID: |



| | | | | | | Boring R-7-1 PROJECT PROJECT | : Turk NO.: 1 | ey Point Units 6 and 7 Site 13-5054 |
|-------------------------|----------------------|----------------------|-------------------------------------|---------------------|----------------|--|------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -80.0 -81.0 | 81.0 | R-26 | (87%) 100% (87%) | | | 79.0-83.3 ft GRAINSTONE, calcareous, moderately soft, moderately weathered, very fine sand to fine sand particles, pitted to vuggy, light gray (N7) to very light gray (N8), strong reaction to HCl, Average shell clast size decreases compared to above layers [Fort Thompson Formation] | | |
| -83.0 -84.0 | 83.0 | R-27 | 87% (73%) | | | 83.3-93.0 ft PACKSTONE, calcareous, moderately soft to moderately hard, slightly to moderately weathered, very fine sand to fine sand particles, vuggy, light gray (N7) to very light gray (N8), strong reaction | | SC-7: 84.1-85.0ft. |
| -85.0 -86.0 -87.0 | 86.0 87.0 88.0 | R-28 | 88% (64%) | | | to HCI, [Fort Thompson Formation] with layers of GRAINSTONE, calcareous, moderately soft to soft, moderately weathered, very fine sand to fine sand particles, light gray (N7) to very light gray (N8), strong reaction to HCI, [Fort Thompson Formation] | | |
| -90.0 -91.0 | 91.0 | R-29 | 93% (93%) | | | | | |
| | 94.0 | R-30 | 50% (0%) | _ | | 93.0-101.0 ft GRAINSTONE, calcareous, soft (H6) to moderately soft (H5), moderately (W5) weathered, fine sand to medium sand particles, vuggy, very light gray (N8), strong reaction to HCl, Zones of unconsolidated fine sand infilling of voids [Fort Thompson Formation] | | |
| -95.0 -96.0 | 96.0 | R-31 | 87% (0%) | _ | | | | |
| -97.0 -98.0 | 98.0 | R-32 | 69% (31%) | | | | | |
| DATE | | HED: 9/ | | 1 | , T | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | S: |
| APPF | ROVED | BY: EO | Г | | | DRILLER: Eddie Palmer | | RIG: DR-16 IER ID: |



| | | | | | | Boring R-7-1 PROJECT PROJECT | Turl | cey Point Units 6 and 7 Site 13-5054 |
|---------------------|-------------------------|----------------------|-------------------------------------|---------------------|---------|---|-------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| | 101.0 | | 80% (35%) | | | 101.0-115.0 ft GRAINSTONE, calcareous, moderately soft (H5), slightly (W3) weathered to moderately (W5) weathered, fine sand to medium sand particles, pitted to vuggy, max size: 1.5 in., light gray (N7) to very | _ | |
| -103.6 | 103.0 | R-34 | 80% (80%) | _ | | light gray (N8), strong reaction to HCl, [Fort Thompson Formation] | | SC-8: 102.5-103.5ft. |
| -106 | 106.0 | | 90% ₁₁ (90%) | т | | | | |
| -108.6 | 108.0 | R-36 | 98% (98%) | | | | | |
| -110. | | | | FD0 | | | | |
| -112.(| 113.0 | R-37 | 100% (76%) | _ | | | | SC-9: 111.5-112.2ft. |
| -114.6 -115.6 | 113.0 114.0 115.0 | 11 00 | 95% (76%) | | | | | |
| -117.6 | 117.0 118.0 | R-39 | 38% (28%) | | | 115.0-118.7 ft WACKESTONE, calcareous, moderately soft (H5), slightly (W3) weathered to moderately (W5) weathered, fine sand particles, pitted to vuggy, max size: 1 in., strong reaction to HCl, [Fort Thompson Formation] | | |
| DATE | 119.0 STAR | TED: 8 | | | | | sm | |
| | | | : Jason Lee ando Benitez | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | DE | DIO DD 40 |
| APPF | ROVED | BY: EO | Т | | | DRILLER: Eddie Palmer | | . RIG: DR-16 /IER ID: |



| | | | | Boring R-7-1 PROJE | CT: Turke | ey Point Units 6 and 7 Site 3-5054 |
|--|----------------------|--|---------------------|--|-------------|---|
| ELEVATION (Feet) DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -120.0 -121.0 -121.0 -122.0 -122.0 -123.0 -123.0 -124.0 -124.0 -125.0 -126.0 -126.0 -127.0 -127.0 -128.0 -128.0 -129.0 -129.0 | ST-1a | 21-17-6-7 N1(23) N2(13) 100% | | 118.7-131.0 ft Silty sand, 80% sand, fine to medium, subrounded, flat and elongated; 20% fines, low plasticity; yellowish gray (5Y 7/2), wet, strong HCl reaction, medium dense consistency, weak cementation, trace rock fragments, may be caved in material that fell in boring while tripping in/out of boring. [Upper Tamiami Formation] | sm | From 120.2 ft. to total depth, a combination of ST and SPT sampling, and destructive over-drilling with a 5 inch mud rotary bit were used. Intervals not sampled were drilled destructively using a 5 inch mud rotary bit. ST-1a: 125 - 127.7ft, no recovery |
| -131.0 -132.0 -132.0 -132.0 -132.0 -133.0 -134.0 -134.0 -135.0 -136.0 -136.0 -136.0 -136.0 -136.0 -136.0 -137.0 -138.0 -138.0 | S-2 | 8-6-9-14 N1(15) N2(23) 90% 63% 9-15-18-25 N1(33) N2(43) | | 131.0-161.0 ft SILTY SAND, fine to medium, subrounded; 70% sand, fine, rounded, flat and elongated; 30% fines, low plasticity, low toughness; light olive gray (5Y 5/2), moist, weak HCI reaction, dense consistency, weak cementation, trace shells, delayed very weak HCI reaction, Sand/Fines ratio varies from 80/20 to 60/40. [Upper Tamiami Formation] | SM | |
| DATE STAR DATE FINISI FIELD GEOL CHECKED B | HED: 9/ | /6/13 : Jason Lee | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES | : |
| APPROVED | | | | DRILLER: Eddie Palmer | DRILL F | RIG: DR-16 ER ID: |



| | | | | | | Boring R-7-1 PROJECT PROJECT | T: Turke | y Point Units 6 and 7 Site -5054 |
|--|---|----------------------|--|----------|---------|--|-------------|---|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -143.6144.6145.6146.6147.6149.6150.6151.6152.6153.6154.6158.6. | 141.0 142.0 143.0 144.0 145.0 147.0 149.0 151.0 151.0 151.0 152.0 153.0 154.0 155.0 156.0 | S-4 ST-2a | 90% 8-14-22-34 N1(36) N2(56) 100% 7-8-17-21 N1(25) N2(38) 100% | | | 131.0-161.0 ft SILTY SAND, fine to medium, subrounded; 70% sand, fine, rounded, flat and elongated; 30% fines, low plasticity, low toughness; light olive gray (5Y 5/2), moist, weak HCl reaction, dense consistency, weak cementation, trace shells, delayed very weak HCl reaction, Sand/Fines ratio varies from 80/20 to 60/40. [Upper Tamiami Formation] | SM | Trouble cleaning boring between 150-160ft. Material is caving in at the bottom of installed casing, at approximately 120ft. |
| DATE | START FINISH D GEOL | ΓED: 8 HED: 9/ | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES: | |
| | ROVED | | | | | DRILLER: Eddie Palmer | DRILL R | IG: DR-16 R ID: |



| 160.0 ST.20 S.6 163.0 ST.2 S.6 163.0 ST.2 S.6 163.0 S.6 163.0 ST.2 ST.2 ST.2 ST.2 ST.2 ST.2 ST.2 ST.2 | | | | | | | Boring R-7-1 PROJECT PROJECT | : Turk | key Point Units 6 and 7 Site 13-5054 |
|--|---------------------|-----------------|----------------------|-------------------------------------|---------------------|---------|--|-------------|---|
| 161 | ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft | USCS SYMBOL | REMARKS |
| 162 | -160.0 | | ST-2 | | | | | | |
| 162 | -161. | 61.0 | | 0.044.00 | | | 4C4 0 245 0 # CILT MITH CAND 200/ fines reading placing also | | |
| Tamiami Formation] | -162. 0 | 62.0 | S-6 | N1(22) N2(47) 100% | | | toughness; 20% sand, fine, subrounded; grayish olive (10Y 4/2), moist, weak HCl reaction, medium stiff to stiff consistency, weak cementation, | | |
| 168 d | -163. 0 | 63.0 | , | | - | | Tamiami Formation | | |
| 166 0 66 0 66 0 66 0 66 0 66 0 66 0 66 | -164. 0 | 64.0 | | | | | | | |
| 166 0 66 0 66 0 66 0 66 0 66 0 66 0 66 | -165.0 | 65.0 | | | | | | | |
| 170.0 ST-3b | -166. 0 | 66.0 | | | - | | | | |
| 170.0 ST-3b | -167.0 | 67.0 | ST-3a | 0% | | | | | |
| 171.0 | -168. 0 | 68.0 | , | | - | | | | |
| 170.0 | -169. 0 | 69.0 | | | - | | | | |
| 171.0 | -170. 0 | 70.0 | ST-3b | 0% | | | | ML | |
| 173.0 S-7 174.0 175.0 17 | -171. 0 | 71.0 | , | | - | | | | |
| 173.0 S-7 N2(43) 100% 174.0 175.0 175.0 176.0 177.0 1 | -172. | 72.0 | , | 4-4-10-33 | - | | | | |
| 177.0 | -173. 0 | 73.0 | S-7 | N2(43) | | | | | |
| 177.0 177.0 178.0 179.0 | -174. 0 | 74.0 | | | - | | | | |
| DATE STARTED: 8/20/13 DATE FINISHED: 9/6/13 FIELD GEOLOGIST: Jason Lee CHECKED BY: Rolando Benitez APPROVED BY: EOT DRILLER: Eddie Palmer NOTES: NOTES: NOTES: PRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling DRILL RIG: DR-16 | -175. 0 | 75.0 | | | | | | | |
| DATE STARTED: 8/20/13 DATE FINISHED: 9/6/13 FIELD GEOLOGIST: Jason Lee CHECKED BY: Rolando Benitez APPROVED BY: EOT DRILLIRG WETHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLIRG: DRILLIRG WETHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLIRG: DRILLIRG: DRILLIRG: DRILLIRG: DRILLIRG: DRILLIRG: DRILLIRG: DRILLIRG: DR-16 | -176. 0 | 76.0 | | | | | | | |
| DATE STARTED: 8/20/13 DATE FINISHED: 9/6/13 FIELD GEOLOGIST: Jason Lee CHECKED BY: Rolando Benitez DRILLING CO. Huss Drilling APPROVED BY: EOT DRILLER: Eddie Palmer NOTES: DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling DRILLER: Eddie Palmer DRILL RIG: DR-16 | -177.0 | 77.0 | | | | | | | |
| DATE STARTED: 8/20/13 DATE FINISHED: 9/6/13 FIELD GEOLOGIST: Jason Lee CHECKED BY: Rolando Benitez DRILLING CO. Huss Drilling DRILLER: Eddie Palmer DRILLER: Eddie Palmer DRILL RIG: DR-16 | -178. 0 | 78.0 | | | | | | | |
| DATE FINISHED: 9/6/13 FIELD GEOLOGIST: Jason Lee CHECKED BY: Rolando Benitez DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling DRILLER: Eddie Palmer DRILL RIG: DR-16 | -179.0 | 79.0 | | | | | | | |
| FIELD GEOLOGIST: Jason Lee CHECKED BY: Rolando Benitez DRILLING CO. Huss Drilling DRILLER: Eddie Palmer DRILLER: Eddie Palmer DRILLER: Eddie Palmer | | | | | | 11111 | | NOTE | I.S: |
| APPROVED 61: EOI DRILLER: Equie Paimer | FIELD (| GEOL | OGIST: | Jason Lee | | | | | |
| I DAWNER III | APPRO | OVED E | BY: EO | Γ | | | DRILLER: Eddie Palmer | | |



| | Boring R-7-1 | PROJECT: Turkey Po PROJECT NO.: 13-50 | oint Units 6 and 7 Site 54 |
|--|---|--|-------------------------------|
| ELEVATION (Feet) DEPTH (Feet) SAMPLE OR RUN NO. OR %REC (%RQD) OR %REC (%RQD) PRACTURE DENSITY PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| 181.0 S-8 N1(21) N2(45) 100% | 161.0-215.0 ft SILT WITH SAND, 80% fines, medium plasticity, low toughness; 20% sand, fine, subrounded; grayish olive (10Y 4/2), weak HCl reaction, medium stiff to stiff consistency, weak cemen little shells, Placticity and silt content increases with depth. [Lowe Tamiami Formation] | moist, Itation, | |
| -184.0 -184.0 -185.0 -185.0 | | | |
| -186.0 ST-3 40% | | | |
| 188.0 188.0 189.0 189.0 189.0 ST-4 | | | |
| 190.0 190.0 191.0 191.0 2-5-10-34 N1(15) | | ML | |
| 192.0 | | | |
| 194.0= 194.0= 195.0= 195.0= 195.0= | | | |
| 196.0 196.0 196.0 197.0 197.0 | | | |
| 198.0 198.0 199.0 199.0 S-10 N1(20) N2(51) | | | |
| DATE STARTED: 8/20/13 DATE FINISHED: 9/6/13 FIELD GEOLOGIST: Jason Lee CHECKED BY: Rolando Benitez | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES: | |
| APPROVED BY: EOT | DRILLER: Eddie Palmer | DRILL RIG: D |)R-16 |



| | | | | Boring R-7-1 | OJECT NO.: 13 | Point Units 6 and 7 Site |
|--|--------------------------------------|---|---------------------|---|---------------|---|
| ELEVATION (Feet) DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -200.0 -201.0 -201.0 -201.0 -202.0 -202.0 -203.0 -203.0 -204.0 -204.0 -205.0 -206.0 -206.0 -206.0 -207.0 -208.0 -208.0 -209.0 -210.0 -211.0 -211.0 -212.0 -213.0 -214.0 -214.0 | ST-5a | 100% 100% 100% 5-6-14-49 N1(20) N2(63) 100% | | 161.0-215.0 ft SILT WITH SAND, 80% fines, medium plasticity, low toughness; 20% sand, fine, subrounded; grayish olive (10Y 4/2), moweak HCl reaction, medium stiff to stiff consistency, weak cemental little shells, Placticity and silt content increases with depth. [Lower Tamiami Formation] | pist, tion, | ST-5a: 203.0 - 205.7ft, Shelby tube was damaged during sampling. Tube had to be retrieved with a screw wedge. No recovery in tube, boring was cleaned prior to attempting another sample. |
| 215.0 2216.0 -216.0 -217.0 -217.0 -218.0 -218.0 -219.0 DATE STAR DATE FINIS FIELD GEOL CHECKED E | S-12 S-12 SHED: 8, SHED: 9/ | 6/13 Jason Lee | | 215.0-223.7 ft SILTY SAND, 80% sand, fine to medium, subrounded, and elongated; 20% fines, low plasticity, medium toughness; light o gray (5Y 5/2), moist, weak HCl reaction, dense consistency, moderacementation, [Peace River Formation] DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | live | |
| APPROVED | BY: EO | Т | | DRILLER: Eddie Palmer | DRILL RI | G: DR-16 |



| | | | | | | Boring R-7-1 | ROJECT: 1 | Turk O.: 1 | ey Point Units 6 and 7 Site 3-5054 |
|--------------------------------------|-----------------|----------------------|---|---------------------|---------|--|-----------|---------------|---------------------------------------|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | | USCS SYMBOL | REMARKS |
| -220.0 -221.0 -222.0 -222.0 | 221.0 | ST-6 | 93% | - | 2 | 215.0-223.7 ft SILTY SAND, 80% sand, fine to medium, subrounded, and elongated; 20% fines, low plasticity, medium toughness; light o gray (5Y 5/2), moist, weak HCl reaction, dense consistency, modera cementation, [Peace River Formation] | live | SM | |
| -224.0 -225.0 -226.0 | 224.0 | S-13 | 28-28-27-50 N1(55) N2(77) 100% | _ | 2 | 223.7-246.5 ft Sandy silt, 60% fines, low plasticity, no dilatancy, low toughness; 40% sand, fine to medium, subrounded; maximum grair size = 0.1 in., dusky yellow green (5GY 5/2), weak HCl reaction, deconsistency, weak cementation, trace gravel, [Peace River Formation] | nse | | |
| -227.0 -228.0 | 227.0 | | | | | | | | |
| -229.0 -230.0 | 230.0 | | | | | | | | |
| -231.0 -232.0 -233.0 | 232.0 | ST-7 | | - | | | | ml | |
| -234.0 -235.0 | 234.0 | | 10-13-21-48 | - | | | | SM | |
| -236.0 -237.0 | 236.0 | S-14 | N1(34) N2(69) 100% | - | | | | | |
| -238. 0 | 238.0 | | | | | | | | |
| DATE FIELD | | IED: 9 OGIST | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | | NOTES | |
| APPRO | OVED E | BY: EO | т | | | DRILLER: Eddie Palmer | | | RIG: DR-16 ER ID: |



| | | | | | | | ECT: Tur ECT NO.: | key Point Units 6 and 7 Site 13-5054 |
|---------------------|-----------------|----------------------|--|---------------------|---------|---|----------------------|--|
| ELEVATION (Feet) | DEPTH (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -240.6 -241.6 | 241.0 | | | | | 223.7-246.5 ft Sandy silt, 60% fines, low plasticity, no dilatancy, low toughness; 40% sand, fine to medium, subrounded; maximum grain size = 0.1 in., dusky yellow green (5GY 5/2), weak HCl reaction, dense consistency, weak cementation, trace gravel, [Peace River Formation] | | |
| -243.ē | 244.0 | ST-8a | 53% | - | | | ml | Shelby tube was damaged during sampling. Sample is |
| -245.G | 246.0 | ST-8 | 80% | _ | | | SM | not able to be preserved. Soil will be collected from inside tube and used for index properties testing if required. |
| -247.€ -248.€ | 248.0 | S-15 | 18-18-27-50/ N1(45) N2(50/5) 105% | 5 | | 246.5-267.25 ft SILTY SAND, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, no dilatancy, low toughness; maximum grain size = 0.1 in., dusky yellow green (5GY 5/2), weak HCl reaction, dense consistency, weak cementation, trace gravel, [Peace River Formation] | | |
| -249.6 -250.6 | 250.0 | | | | | | | |
| -251.c | 252.0 | | | | | | | |
| -253.¢ | 254.0 | | | | | | SM | 1 |
| -255.6 -256.6 | 256.0 | ST-9 | | - | | | CNA | |
| -257.6 | 257.0 | | 11-14-20-48 | - | | | SM | |
| -258.6 -259.6 | 259.0 | S-16 | N1(34) N2(68) 100% | - | | | | |
| DATE | | IED: 9 | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTE | ES: |
| APPF | ROVED I | BY: EO | Т | | | DRILLER: Eddie Palmer | | L RIG: DR-16 MER ID: |



| | | | | | | Boring R-7-1 PROJECT PROJECT | T: Turk T NO.: 1 | ey Point Units 6 and 7 Site 13-5054 |
|--|-----------------|----------------------|--|---------------------|---------|--|---------------------|--|
| ELEVATION (Feet) DEPTH | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| -261.0 -262.0 -262.0 -263.0 -263.0 -264.0 -265.0 -265.0 -266.0 | 55.0 | | | | | 246.5-267.25 ft SILTY SAND, 70% sand, fine to medium, subrounded; 30% fines, low plasticity, no dilatancy, low toughness; maximum grain size = 0.1 in., dusky yellow green (5GY 5/2), weak HCl reaction, dense consistency, weak cementation, trace gravel, [Peace River Formation] | SM | |
| -268.0 -268.0 -269.0 | 68.0 | ST-10 S-17 | 9-16-28-50 N1(44) N2(78) 100% | - | | 267.25-289.0 ft SANDY SILT, 60% fines, low plasticity, medium toughness; 40% sand, fine to medium, subrounded; dusky yellow green (5GY 5/2), dry, weak HCl reaction, medium dense consistency, weak cementation, [Peace River Formation] interbedded with sandy lean clay, 70% fines, medium plasticity; 30% sand, fine; pale olive (10Y 6/2), moist, weak HCl reaction, medium stiff consistency, weak cementation, [Peace River Formation] | SM | |
| -272.0 -272.0 -273.0 -274.0 -275.0 | 73.0 | | | | | | ML | |
| -276.0 -276.0 -277.0 -277.0 -278.0 -279.0 | 9.0 | ST-11 S-18 | 100% | - | | | | |
| | INISHI BEOLC | ED: 9/ | | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | NOTES | |
| APPROV | VED B | Y: E0 | Т | | | DRILLER: Eddie Palmer | | RIG: DR-16 IER ID: |



| | | | | | | Boring R-7-1 PROJECT PROJECT | PROJECT: Turkey Point Units 6 and 7 Site PROJECT NO.: 13-5054 | | |
|--|----------------------------|--------------------------------------|--|---------------------|---------|--|---|-----------------------|--|
| ELEVATION (Feet) DEPTH | (Feet) | SAMPLE OR RUN NO. | BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY | PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS | |
| -281.0 -282.0 -283.0 -283.0 -284.0 -284.0 -285.0 | 3.00 | 5-18 | 10-23-35-50/4 N1(58) N2(50/4) 100% | | | 267.25-289.0 ft SANDY SILT, 60% fines, low plasticity, medium toughness; 40% sand, fine to medium, subrounded; dusky yellow green (5GY 5/2), dry, weak HCl reaction, medium dense consistency, weak cementation, [Peace River Formation] interbedded with sandy lean clay, 70% fines, medium plasticity; 30% sand, fine; pale olive (10Y 6/2), moist, weak HCl reaction, medium stiff consistency, weak cementation, [Peace River Formation] | ML | | |
| -291.0 -2 | 3.0 | - | 86% 14-29-48-50/3 N1(77) N2(50/3) 100% | 3 | | 289.0-310.1 ft SILTY SAND, 60% sand, fine to medium, subrounded; 40% fines, low plasticity, medium toughness; dusky yellow green (5GY 5/2), dry, weak HCl reaction, medium dense consistency, weak cementation, [Peace River Formation] interbedded with sandy lean clay, 70% fines, medium plasticity; 30% sand, fine; pale olive (10Y 6/2), moist, weak HCl reaction, medium stiff consistency, weak cementation, [Peace River Formation] | SM | | |
| DATE ST | INISHE GEOLOG ED BY: | ED: 8, ED: 9/l GIST: : Rola | 6/13 Jason Lee ando Benitez | | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling DRILLER: Eddie Palmer | | RIG: DR-16 IER ID: | |



| | | Boring R-7-1 | OJECT: Turk OJECT NO.: 1 | ey Point Units 6 and 7 Site 3-5054 |
|---|--------------------------------|---|-----------------------------|---------------------------------------|
| Feet) DEPTH (Feet) SAMPLE OR RUN NO. BLOW/6in & (N) OR %REC (%RQD) | FRACTURE DENSITY PROFILE | COORDINATES N. 396976.23 ft E. 875797.30 ft GROUND SURFACE ELEVATION: 0.22 ft DESCRIPTION | USCS SYMBOL | REMARKS |
| 301.0 ST-13 301.0 | - | 289.0-310.1 ft SILTY SAND, 60% sand, fine to medium, subrounded; 40% fines, low plasticity, medium toughness; dusky yellow green (5 5/2), dry, weak HCl reaction, medium dense consistency, weak cementation, [Peace River Formation] interbedded with sandy lean clay, 70% fines, medium plasticity; 30% sand, fine; pale olive (10Y 6/2), moist, weak HCl reaction, medium s consistency, weak cementation, [Peace River Formation] | | |
| 310.0 ST-14 95% 311.0 ST-14 95% 311.0 ST-14 95% 23-41-50/4 N1(50/4) 96% 313.0 ST-15 ST-15 ST-15 ST-16 | - | 310.1-320.95 ft SILTY SAND, 70% sand, fine to medium, subrounded 30% fines, low plasticity, medium toughness; dusky yellow green (5 5/2), dry, weak HCl reaction, medium dense consistency, weak cementation, [Peace River Formation] interbedded with sandy lean clay, 70% fines, medium plasticity; 30% sand, fine; pale olive (10Y 6/2), moist, weak HCl reaction, medium s consistency, weak cementation, [Peace River Formation] | GY stiff | ST-15, less than 20in. recovery. |
| DATE STARTED: 8/20/13 DATE FINISHED: 9/6/13 FIELD GEOLOGIST: Jason Lee CHECKED BY: Rolando Benitez | | DRILLING METHOD: Mud Rotary, PQ, SPT, ST, NWD4 DRILLING CO. Huss Drilling | | |
| APPROVED BY: EOT | | DRILLER: Eddie Palmer | DRILL | RIG: DR-16 |