

APPENDIX E

Results for Kleinfelder Specimen ID K2-13-004

- *Specimen Preparation Notes*

SPECIMEN PREPARATION NOTES

Specimen No.: K2-13-004

Project No : 136473

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Boring No.: R-7-1

Date of Preparation..: 10/12/13

Sample No.: SC-3

Depth..: 40.5 - 41.0 feet

Disposition of Rock Core Sample
 No Apparent Disturbance
 Apparent Disturbance
 Apparent Slaking Due to Coring

 Other (Describe)
 Sample consisted of a Limestone of the Key Largo Formation with Large Vugs Along Its Length

Specimen Preparation Notes

Trimming Method :	Rotary coring with water lubricant, 1.5-inch OD diameter core barrel		Affixation to Platens :	n/a	
Ave. Length (in.) :	n/a	Ave. Diameter (in.):	n/a	L/D	n/a
Total Unit Weight . (pcf) :	n/a	Moisture Content (%)	n/a	% Saturation (Assume SG = 2.70)	n/a

Specimen Testing Comments

- 1) Sample R-7-1 SC-3 was predominately a medium strong rock with large vugs along its length (see Photo E.1 to E.4). Due to the rock hardness, the sample could not be trimmed by hand and it was decided to core the nominally 3-inch diameter sample with a 1.5-inch outside diameter (OD), thin-walled diamond-impregnated core barrel.
- 2) Sample was trimmed to an approximate 6-inch length and grouted into an CMU block on 10/12/13. See Photos E.5 through E.6.
- 3) Sample was cored on 10/13/13. See Photo E.7. Two fragments of rock, each too small for an acceptable RCTS specimen length, resulted from the coring (See Photo E.7).
- 4) According to the Rizzo Work Plan for Laboratory Testing (Rizzo, 2013), only two of the three Key Largo Limestone Samples sent to Kleinfelder were to be tested using the RCTS Method. Since no viable test specimen was obtained for K2-13-004, the other two Key Largo Formation specimens (K2-13-001 and K2-13-002) were tested instead.

 See Attached Photographs

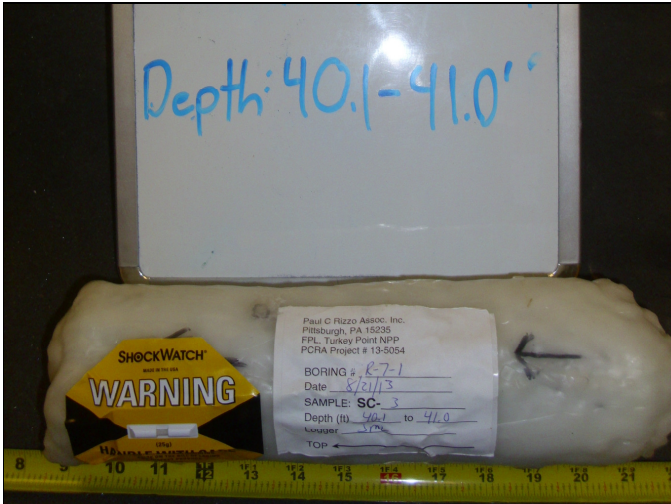


Photo E.1

Sample R-7-1 SC-3 after removal from the protective transport container.



Photo E.2

Sample after removal from the wax casing and aluminum foil. Note large vugs along length of the sample.



Photo E.3

Sample bottom after removal from the wax casing and aluminum foil.



Photo E.4

Sample top after removal from the wax casing and aluminum foil.



Photo D.5

Trimming the sample to an approximate 6-inch length as preparation for grouting in a CMU block. Note the modeling clay used to seal off natural vugs in sample to prevent grout infiltration.



Photo E.6

Grouting sample in a CMU block as preparation for down coring the sample. Note the specimen number written on the side of the CMU block to maintain sample control.



Photo E.7

Rotary coring of specimen using the 1.5-inch OD core barrel.



Photo E.8

Specimen after down coring to an approximate 1.45-inch diameter. Note the break in the middle of the core leaving two pieces, each less than the minimum required testing length of about 4-inches

APPENDIX F

Results for Kleinfelder Specimen ID K2-13-005

- *Specimen Preparation Notes*
- *RCTS Testing Results*

SPECIMEN PREPARATION NOTES
Specimen No.: K2-13-005

Project No.: 136473

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Boring No.: R-6-1b

Date of Preparation.: 10/12/13

Sample No.: SC-3

Depth.: 47.6 - 48.1 feet

Disposition of Rock Core Sample
 No Apparent Disturbance
 Apparent Disturbance
 Apparent Slaking Due to Coring

 Other (Describe)
 Sample consisted of a Limestone of the Fort Thompson Formation with Small to Large Sized Vugs

Specimen Preparation Notes

Trimming Method :	Rotary coring with water lubricant, 1.5-inch OD diameter core barrel		Affixation to Platens :	Epoxed to 2.8-inch diameter steel top cap and base pedestal	
Ave. Length (in.) :	4.0597	Ave. Diameter (in.):	1.451	L/D	2.8
Total Unit Weight (pcf) :	151.8	Moisture Content (%)	3.6	% Saturation (Assume SG = 2.70)	64.6

Specimen Testing Comments

- 1) Sample R-6-1b was predominately a medium strong rock with small to large sized vugs (see Photo F.1 to F.2). Due to the rock hardness, the sample could not be trimmed by hand and it was decided to core the nominally 3-inch diameter sample with a 1.5-inch outside diameter (OD), thin-walled diamond-impregnated core barrel.
- 2) Sample was trimmed to an approximate 6-inch length and grouted into an CMU block on 10/12/13 (See Photos F.3 through F.4).
- 3) Sample was cored on 10/13/13 (See Photo F.5). One approximately 1.45-inch diameter specimen resulted from the rotary coring. The specimen was of sufficient length for RCTS Testing and the sample ends were trimmed to the final length of about 4.1-inches.
- 4) Specimen was epoxied to the 2.8-inch diameter steel top cap and base pedestal on 12/13/13.
- 5) Testing commenced on 12/14/13 and was completed on 12/16/13. The full test sequence was completed, with confining pressures ranging from 4 psi to 64 psi.

 See Attached Photographs

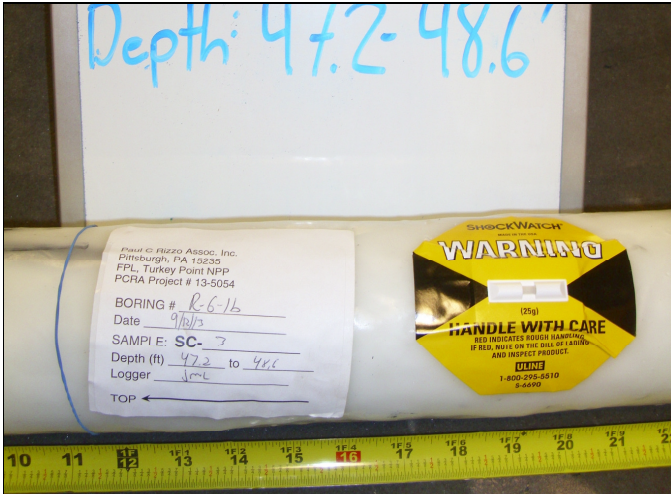


Photo F.1

Sample R-6-1b SC-3 after removal from the protective transport container. Note the shock indicator is untripped.



Photo F.2

Sample after removal from the wax casing and aluminum foil.



Photo F.3

Trimming the sample to an approximate 6-inch length as preparation for grouting in a CMU block. Note the modeling clay used to seal off natural vugs in sample to prevent grout infiltration.



Photo F.4

Grouting sample in a CMU block as preparation for down coring the sample. Note the specimen number written on the side of the CMU block to maintain sample control.



Photo F.5

Rotary coring of specimen using the 1.5-inch OD core barrel.



Photo F.6

Specimen after down coring to an approximate 1.45-inch diameter.