VANDEMARK
& LYNCH, INC.
ENGINEERS • PLANNERS • SURVEYORS

4305 MILLER RD./PO BOX 2047
WILMINGTON, DE 19899/(302) 764-7635

August 21, 1996

Mr. Lowell Babb
WARREN GEORGE, INC.
Foot of Jersey Avenue
P.O. Box 413
Jersey City, NJ 07303

RE: DRILL HOLES (CORE BORINGS)
DELAWARE RIVER, CLAYMONT, DE TO ESSINGTON, PA
AS-DRILLED LOCATIONS

Dear Mr. Babb:

The following list of core borings were field located between July 25, 1996 through August 14, 1996.

Horizontal positions are based on New Jersey State - Zone 2900 coordinate system and reduced depths are at river bottom, referenced to mean low water datum.

Boring Number	Plan Position *	Actual Position	Reduced Depth
269	N. 363337.470 E. 246305.640	N. 363336 E. 246301	-45.2
267	N. 362789.190 E. 245738.550	N. 362791 E. 245738	-41.6
266	N. 362407.910 E. 245243.340	N. 362410 E. 245240	-45.4
265	N. 361927.160 E. 244561.000	N. 361925 E. 244559	-45.5
271	N. 365943.810 E. 249591.390	N. 365947 E. 249592	-45.5
273	N. 366052.160 E. 250080.090	N. 366052 E. 250079	-44.6
272	N. 365829.72 E. 249963.95	N. 365829 E. 249963	-44.0

274	N. 366328.130 E. 250469.530	N. 366325 E. 250470	-43.2
277	N. 367907.380 E. 25248.640	N. 367909 E. 252249	-45.2
276	N. 367286.000 E. 252294.950	N. 367285 E. 252296	-44.0
275	N. 366805.280 E. 250816.090	N. 366807 E. 250817	-44.5
270	N. 364360.110 E. 248389.300	N. 364360 E. 248389	-44.8
278	N. 368023.090 E. 253293.450	N. 368025 E. 253295	-43.7
279	N. 368493.130 E. 253423.840	N. 368491 E. 253424	-43.7
280	N. 368698.340 E. 253335.080	N. 369694 E. 253334	-44.7
281	N. 369002.250 E. 253852.160	N. 369002 E. 253851	-44.2
282	N. 369842.750 E. 255526.410	N. 369843 E. 255528	-44.1
283	N. 370754.440 E. 257909.340	N. 370753 E. 257907	-44.4
284	N. 371295.56 E. 259166.62	N. 371297 E. 259167	-45.0
285	N. 370927.28 E. 259700.09	N. 370927 E. 259698	-46.2
286	N. 371302.34 E. 259967.87	N. 371303 E. 259967	-44.4
268	N. 362521.590 E. 246354.720	N. 362521 E. 246355	-43.6
264	N. 361406.130 E. 243780.520	N. 361406 E. 243780	-47.8
263	N. 361020.090 E. 243184.890	N. 361020 E. 243184	-47.3

262	N. 360060.940 E. 242995.480	N. 360060 E. 242994	-44.7
254	N. 348835.530 E. 224069.590	N. 348834 E. 224070	-43.4
256	N. 348938.880 E. 225062.090	N. 348939 E. 225062	-46.4
255	N. 349092.250 E. 224614.090	N. 349091 E. 224613	-41.6
261	N. 360544.060 E. 242420.410	N. 360544 E. 242420	-45.6
260	N. 359833.560 E. 242630.340	N. 359833 E. 242632	-44.7
259	N. 360124.880 E. 241902.360	N. 360126 E. 241902	-45.3
257	N. 352463.470 E. 229476.440	N. 352463 E. 229476	41.3
258	N. 359658.310 E. 241023.770	N. 359658 E. 241024	-47.1

* Plan positions supplied by the U.S. Army Corps of Engineers, Philadelphia District

If you have any questions or wish to discuss this further, please feel free to contact us.

Thank you for selecting VanDemark & Lynch, Inc. We enjoy your business and would appreciate any suggestions on how we could improve our service to you.

Sincerely,

John S. Bianco

John S. Bianco, P.L.S.
Hydrographic Survey Department

jbk9/warren.let

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-254
LINE & STA.
OFFSET

DEPTH _____ FT. _____ FT. CASING OUT DATE: _____
DEPTH _____ FT. ALL CASING OUT DATE: _____

DATE, START: 8-8-96
DATE, FINISH: 8-8-96

GROUND ELEVATION _____
GROUND WATER ELEVATION _____

CASING O.D. 5"-4" I.D. _____
SAMPLER O.D. _____ I.D. _____
DIAMOND BIT SIZE _____

WEIGHT OF HAMMER _____ LBS.
INSIDE LENGTH OF SAMPLER _____ IN.

HAMMER FALL
CASING _____ SAMPLER _____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0											
40										0'-44'	WATER
			NO SAMPLES								
											ROCK, GNEISS, QUARTZ
50		R1	44'-49.2'	86%	REC						
10											
		R2	49.2'-52.9'	100	%	REC				52.9'	
											END OF HOLE 52.9'
60											
20											
70											
30											
80											
40											

Soil Engineer: _____ Driller: MIKE MCCARTHY

Drilling Inspector: _____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-255
LINE & STA.
OFFSET

DEPTH _____ FT. ____ FT. CASING OUT DATE: _____
DEPTH _____ FT. ALL CASING OUT DATE: _____

DATE, START: 8-9-96
DATE, FINISH: 5"-4"

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. _____ I.D. _____
SAMPLER O.D. _____ I.D. _____
DIAMOND BIT SIZE

WEIGHT OF HAMMER _____ LBS.
INSIDE LENGTH OF SAMPLER _____ IN.

HAMMER FALL
CASING _____ SAMPLER _____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-41.6'	WATER
										44.3'	OVERBURDEN SAND, GRAVEL
50											ROCK, GNEISS, QUARTZ
		R1	44.3'-54.8'	88%	REC					54.8'	
60											END OF HOLE 54.8'
70											
80											

Soil Engineer: _____ Driller: MIKE MCCARTHY

Drilling Inspector: _____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-256
LINE & STA.
OFFSET

DEPTH _____ FT. ____ FT. CASING OUT DATE: _____
DEPTH _____ FT. ALL CASING OUT DATE: _____

DATE, START: 8-8-96
DATE, FINISH: 8-8-96

GROUND ELEVATION _____
GROUND WATER ELEVATION _____

CASING O.D. 5" I.D. _____
SAMPLER O.D. _____ I.D. _____
DIAMOND BIT SIZE _____

WEIGHT OF HAMMER _____ LBS.
INSIDE LENGTH OF SAMPLER _____ IN.

HAMMER FALL
CASING _____ SAMPLER _____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0										0'-	
40											WATER
										47.2'	
50											47.2' DEEPER THAN DREDGE ELEV. PROBE TO 47.2'
10											
60											
20											
70											
30											
80											
40											

Soil Engineer: _____ Driller: MIKE MCCARTHY

Drilling Inspector: _____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1

LOCATION DELAWARE

HOLE NO. CB-257

LINE & STA.

OFFSET

DEPTH _____ FT. ____ FT. CASING OUT DATE: _____

DEPTH _____ FT. ALL CASING OUT DATE: _____

DATE, START: 8-14-96

DATE, FINISH: 8-14-96

GROUND ELEVATION

GROUND WATER ELEVATION

CASING O.D. 5"-4" I.D.

SAMPLER O.D. I.D.

DIAMOND BIT SIZE

WEIGHT OF HAMMER LBS.

INSIDE LENGTH OF SAMPLER IN.

HAMMER FALL

CASING SAMPLER

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'- 41.3'	WATER
											BROWN MEDIUM FINE SAND AND GRAVEL
50										49.4'	
10											END OF HOLE 49.4'
20											
70											
30											
80											
40											

Soil Engineer:

Driller: MIKE MCCARTHY

Drilling Inspector:

Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1

LOCATION DELAWARE

HOLE NO. CB-258

LINE & STA.

OFFSET

DEPTH _____ FT. ____ FT. CASING OUT DATE: _____

DEPTH _____ FT. ALL CASING OUT DATE: _____

DATE, START: 8-14-96

DATE, FINISH: 8-14-96

GROUND ELEVATION

GROUND WATER ELEVATION

CASING O.D. 5" I.D.

SAMPLER O.D. I.D.

DIAMOND BIT SIZE

WEIGHT OF HAMMER _____ LBS.

INSIDE LENGTH OF SAMPLER _____ IN.

HAMMER FALL

CASING _____ SAMPLER _____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0 / 40										0'-	WATER
										47.1'	
50 / 10											PROBE TO 47.1' 47.1' BELOW DREDGE LINE.
60 / 20											
70 / 30											
80 / 40											

Soil Engineer:

Driller: MIKE MCCARTHY

Drilling Inspector:

Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-259
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-12-96
DATE, FINISH: 8-12-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-45.3'	WATER
											SOILS, SAND AND GRAVELS
										48'	
50											END OF HOLE 48'
10											
60											
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-260
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-12-96
DATE, FINISH: 8-12-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0										0'-	
40											WATER
										44.7'	
											SOILS, SAND AND GRAVEL
										46.2'	
50											
10											
		R1	46.2'-52.4'	16%	REC						
		R2	52.4'-53.7'	69%	REC						ROCK, GNEISS, QUARTZ
		R3	53.7'-55'	84%	REC					55'	
60											END OF HOLE 55'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION: DELAWARE RIVER L.96247	WGI Warren George Inc. SUBSURFACE EXPLORATION FOR: US ARMY CORP. OF ENGINEERS	SHEET 1 OF 1 LOCATION DELAWARE HOLE NO. CB-261 LINE & STA. OFFSET

DEPTH _____ FT. ____ FT. CASING OUT DATE: _____
DEPTH _____ FT. ALL CASING OUT DATE: _____

DATE, START: 8-9-96
DATE, FINISH: 8-9-96

GROUND ELEVATION _____
GROUND WATER ELEVATION _____

CASING O.D. 5"-4" I.D. _____
SAMPLER O.D. _____ I.D. _____
DIAMOND BIT SIZE _____

WEIGHT OF HAMMER _____ LBS.
INSIDE LENGTH OF SAMPLER _____ IN.

HAMMER FALL
CASING ____ SAMPLER _____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40 / 0										0' - 45.6'	WATER
50 / 10										50.3'	SOILS, SAND AND GRAVEL
60 / 20											END OF HOLE 50.3'
70 / 30											
80 / 40											

Soil Engineer: _____ Driller: MIKE MCCARTHY

Drilling Inspector: _____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-262
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-7-96
DATE, FINISH: 8-7-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	WATER
										44.7'	
50											ROCK, GNEISS, QUARTZ
10		R1	44.7'-51'	90%	REC						
		R2	51'-54'	96%	REC					54'	
60											END OF HOLE 54'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-263
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-7-96
DATE, FINISH: 8-7-96

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 5"-4" I.D.
SAMPLER O.D. I.D.
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										47.3'	
50											
10											
											ROCK, GNIESS, QUARTZ
		R1	47.3'-55'	19%	REC					55'	
60											END OF HOLE 55'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-264
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-6-96
DATE, FINISH: 8-6-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40 (0)										0'-	
											WATER
										47.8'	
50 (10)											OVERBURDEN SAND AND GRAVEL
										52.2'	
		R1	52.2'-54.8'	100	%	REC				54.8'	ROCK, GNEISS, QUARTZ
											END OF HOLE 54.8'
60 (20)											
70 (30)											
80 (40)											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-265
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-25-96
DATE, FINISH: 7-25-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 6"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										45.5'	
											SOILS OVERBURDEN
										47.5'	
50											
10											
											ROCK, GNEISS, QUARTZ
		R1	47.5'-57.5'	30%	REC					57.5'	
60											
20											END OF HOLE 57.5'
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-266
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-25-96
DATE, FINISH: 7-25-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 6"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0 / 40										0'-	
											WATER
										45.4'	
											SOILS, SAND AND GRAVEL
50 / 10										50'	
											ROCK, GNEISS, QUARTZ
		R1	50'-57.5'	23%	REC					57.5'	
60 / 20											END OF HOLE 57.5'
70 / 30											
80 / 40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-267
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-25-96
DATE, FINISH: 7-25-96

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 6"-4" I.D.
SAMPLER O.D. I.D.
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40 (0)									0'—	
										WATER
									45.9'	
50 (10)										SOILS, OVERBURDEN SAND AND GRAVEL
									54.9'	
									56.9'	ROCK, GNEISS QUARTZ
	R1	54.9'-56.9'	72%	REC						
60 (20)										END OF HOLE 56.9'
70 (30)										
80 (40)										

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:	WGI Warren George Inc. SUBSURFACE EXPLORATION	SHEET 1 OF 1
DELAWARE RIVER		LOCATION DELAWARE
		HOLE NO. CB-268
		LINE & STA.
L.96247	FOR: US ARMY CORP. OF ENGINEERS	OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____	DATE, START: 8-6-96	GROUND ELEVATION ____
DEPTH ____ FT. ALL CASING OUT DATE: ____	DATE, FINISH: 8-6-96	GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____	WEIGHT OF HAMMER ____ LBS.	HAMMER FALL
SAMPLER O.D. ____ I.D. ____	INSIDE LENGTH OF SAMPLER ____ IN.	CASING ____ SAMPLER ____
DIAMOND BIT SIZE 1 7/8"		

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0										0'-	
40										43.6'	WATER
											ROCK, GNEISS, QUARTZ
50											
10											
		R1	43.6'-55'	60%	REC					55'	
60											END OF HOLE 55'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-269
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-25-96
DATE, FINISH: 7-25-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 6"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE ____

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										45.2'	
50											
											OVERBURDEN SAND (ROLLER BTI 10')
10											
										55.2'	
											END OF HOLE 55.2'
60											
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS.

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-270
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-30-96
DATE, FINISH: 7-30-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 6"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	WATER
										44.4'	
50											ROCK, GNEISS, QUARTZ
10											
		R1	44.4'-53.1'	13%	REC					53.1'	
60											END OF HOLE 53.1'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGNIEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-271
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-26-96
DATE, FINISH: 7-26-96

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 6"-4" I.D.
SAMPLER O.D. I.D.
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										45.5'	
50											
10											ROCK, GNEISS, QUARTZ
		R1	45.5'-57.5'	12%	REC					57.5'	
60											
20											END OF HOLE 57.5'
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-272
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-27-96
DATE, FINISH: 7-27-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 6"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0										0'-	WATER
40										44'	
										46'	ROLLER BIT
50											
10											GNEISS AND QUARTZ
		R1	46'-56'	98%	REC					56'	
60											END OF HOLE 56'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: JOHN KLINGLER

Drilling Inspector: ____ Helper: GUS SURI

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-273
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-26-96
DATE, FINISH: 7-26-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 6"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	WATER
										44.6'	
50											ROCK, GNEISS, QUARTZ
10											
		R1	44.6'-54.8'	43.	7%	REC				54.8'	
60											END OF HOLE 54.8'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-274
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-27-96
DATE, FINISH: 7-27-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 6"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'- 43.2'	WATER
50											
60		R1	54.6'-59.6'	5'	REC						GNEISS
		R2	59.6'-66.6'	84%	REC					~~66.6'~~ should be 55.2'	
70											END OF HOLE 66.6'
80											

Soil Engineer: ____ Driller: JOHN KLINGLER

Drilling Inspector: ____ Helper: GUS SURI

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-275
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-30-96
DATE, FINISH: 7-30-96

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 6"-4" I.D.
SAMPLER O.D. I.D.
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0 / 40										0'-	WATER
										44.5'	
50 / 10											ROCK, GNEISS,
		R1	44.5'-55'	71%	REC					55'	
60 / 20											END OF HOLE 55'
70 / 30											
80 / 40											

Soil Engineer:
Driller: MIKE MCCARTHY
Drilling Inspector:
Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-276
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE:
DEPTH ____ FT. ALL CASING OUT DATE:

DATE, START: 7-29-96
DATE, FINISH: 7-29-96

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 6"-4" I.D.
SAMPLER O.D. I.D.
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0 / 40										0'-	
										44'	WATER
		R1	44'-46.8'	74%	REC						
50 / 10											ROCK, GNEISS, QUARTZ
		R2	46.8'-53.9'	100 %	REC					53.9'	
											END OF HOLE 53.9'
60 / 20											
70 / 30											
80 / 40											

Soil Engineer:
Driller: MIKE MCCARTHY
Drilling Inspector:
Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-277
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 7-29-96
DATE, FINISH: 7-29-96

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 6"-4" I.D.
SAMPLER O.D. I.D.
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										45.2'	
50											
10											ROCK, GNEISS, QUARTZ
		R1	45.2'-55.2'	18%	REC					55.2'	
60											END OF HOLE 55.2'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-278
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-1-96
DATE, FINISH: 8-1-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 6"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										43.7'	
		R1	43.7'-46.3'	92%	REC						
											ROCK, GNEISS, QUARTZ
50											
10											
		R2	46.3'-53.7'	100	%	REC				53.7'	
											END OF HOLE 53.7'
60											
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-279
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-1-96
DATE, FINISH: 8-1-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										43.7'	
		R1	43.7'-46.7'	6%	REC						
50											
10											ROCK, GNEISS, QUARTZ
		R2	46.7'-55'	100	%	REC				55'	
60											END OF HOLE 55'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-280
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-2-96
DATE, FINISH: 8-2-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0 / 40										0'-	
											WATER
										44.7'	
50 / 10											ROCK, GNEISS, QUARTZ
		R1	44.7'-55'	80%	REC					55'	
60 / 20											END OF HOLE 55'
70 / 30											
80 / 40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-281
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-2-96
DATE, FINISH: 8-2-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40 (0)										0'-	WATER
										44.2'	
50 (10)											ROCK, GNEISS, QUARTZ
		R1	44.2'-55'	38%	REC					55'	
60 (20)											END OF HOLE 55'
70 (30)											
80 (40)											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-282
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-2-96
DATE, FINISH: 8-2-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40 (0)										0'-	WATER
										44.1'	
50 (10)											ROCK, GNEISS, QUARTZ
		R1	44.1'-51.9'	79%	REC						
		R2	51.9'-53.4'	100	%	REC				53.4'	
											END OF HOLE 53.4'
60 (20)											
70 (30)											
80 (40)											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-283
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-3-96
DATE, FINISH: 8-3-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										44.4'	
50											
10											ROCK
		R1	44.4'-54.4'	94.	6%	REC				54.4'	
60											END OF HOLE 54.4'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: JOHN KLINGLER

Drilling Inspector: ____ Helper: GUS SURI

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-284
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-3-96
DATE, FINISH: 8-3-96

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 5"-4" I.D.
SAMPLER O.D. I.D.
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 - 12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
0										0'-	
40											WATER
										45'	
50											ROCK
10											
		R1	45'-55'	.4%	REC					55'	
60											END OF HOLE 55'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: JOHN KLINGLER

Drilling Inspector: ____ Helper: GUS SURI

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-285
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 8-5-96
DATE, FINISH: 8-5-96

GROUND ELEVATION ____
GROUND WATER ELEVATION ____

CASING O.D. 5"-4" I.D. ____
SAMPLER O.D. ____ I.D. ____
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER ____ LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										45.9'	
50											
10											ROCK, GNEISS, QUARTZ
		R1	45.9'-55'	53%	REC					55'	
60											END OF HOLE 55'
20											
70											
30											
80											
40											

Soil Engineer: ____ Driller: MIKE MCCARTHY

Drilling Inspector: ____ Helper: JOHN KLINGLER

JOB LOCATION:

DELAWARE RIVER

L.96247

WGI Warren George Inc.

SUBSURFACE EXPLORATION

FOR: US ARMY CORP. OF ENGINEERS

SHEET 1 OF 1
LOCATION DELAWARE
HOLE NO. CB-286
LINE & STA.
OFFSET

DEPTH _____ FT. ____ FT. CASING OUT DATE: _____
DEPTH _____ FT. ALL CASING OUT DATE: _____

DATE, START: 8-5-96
DATE, FINISH: 8-5-96

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 5"-4" I.D.
SAMPLER O.D. I.D.
DIAMOND BIT SIZE 1 7/8"

WEIGHT OF HAMMER _____ LBS.
INSIDE LENGTH OF SAMPLER _____ IN.

HAMMER FALL
CASING _____ SAMPLER _____

	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0 - 6	6 -12	12 - 18	18 - 24	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOIL
40										0'-	
											WATER
										44.4'	
50											
10											ROCK, GNEISS QUARTZ
		R1	44.4'-54.6'	82%	REC					54.6'	
											END OF HOLE 54.6'
60											
20											
70											
30											
80											
40											

Soil Engineer: _____ Driller: MIKE MCCARTHY

Drilling Inspector: _____ Helper: JOHN KLINGLER