ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

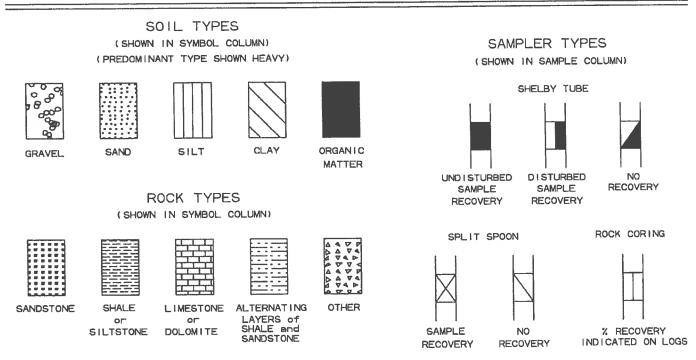


SUBSURFACE INVESTIGATION

| STATE JOB NO | | 070283 | |
|--------------------|-------|------------------------|--------|
| FEDERAL AID PROJEC | CT NO | NHPP-0007(18) | |
| | BANG | GS SLOUGH-HWY. 172 (S) | |
| STATE HIGHWAY | 167 | SECTION | 3 |
| IN | | CALHOUN | COUNTY |
| LETTING OF | | JUNE 22, 2016 | |

The information contained herein was obtained by the Department for design and estimating purposes only. It is being furnished with the express understanding that said information does not constitute a part of the Proposal or Contract and represents only the best knowledge of the Department as to the location, character and depth of the materials encountered. The information is only included and made available so that bidders may have access to subsurface information obtained by the Department and is not intended to be a substitute for personal investigation, interpretation and judgment of the bidder. The bidder should be cognizant of the possibility that conditions affecting the cost and/or quantities of work to be performed may differ from those indicated herein.

LEGEND



TERMS DESCRIBING CONSISTENCY OR CONDITION

| GRANU | LAR SOIL | | CLAY | CL. | AY-SHALE | | HALE |
|--|--|--|---|--|---|------------------------|-----------------------------------|
| 'N' Value | Density | 'N' Value | Consistency | 'N' Value | Consistency | 'N' Value | Consistency |
| 0-4 5-10 11-30 31-50 Over 50 | Very Loose Loose Medium Dense Dense Very Dense | 0-1 2-4 5-8 9-15 16-30 31-60 Over 60 | Very Soft Soft Medium Stiff Stiff Very Stiff Hard Very Hard | 0-1 2-4 5-8 9-15 16-30 31-60 Over 60 | Very Soft Soft Medium Stiff Stiff Very Stiff Hard Very Hard | More than Penetrati | on vs: Medium Hard 2' on |

- 1. Ground water elevations indicated on boring logs represent ground water elevations at date or time shown on boring log. Absence of water surface implies that no ground water data is available but does not necessarily mean that ground water will not be encountered at locations or within the vertical reaches of these borings.
- 2. Borings represent subsurface conditions at their respective locations for their respective depths. Variations in conditions between or adjacent to boring locations may be encountered.
- 3. Terms used for describing soils according to their texture or grain size distribution are in accordance with the Unified Soil Classification System.

Standard Penetration Test – Driving a 2.0" O.D., 1-3/8" I.D. sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30 inches. It is customary to drive the spoon 6.0 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and performing the test are recorded for each 6 inches of penetration on the drill log. The field "N" Value (N_f) can be obtained by

adding the bottom two numbers for example: $\frac{6}{8-9} \Rightarrow 8+9=17 blows/ft$. The "N" Value corrected to 60% efficiency (N₆₀) can be obtained by multiplying N_f by the hammer correction factor published on the boring log.

| | WY. & TRANS. DEPARTMENT DIVISION - GEOTECHNICAL SEC. | | BORIN PAGE | | | F 3 | | | | | |
|---------------------------|--|-------|------------------|----------|--------|------------|---------------|--------------|-----------|--------|--------|
| | 070283 Calhoun County | | DATE: | | Octo | ~ | 6 & | 21-2 | 2, 20 | 013 | |
| | Bangs Slough - Hwy. 172 Strs. & Apprs. | | TYPE O | F DR | ILLING | : | F | lotar | y Wa | ish | ı |
| | U.S. 167 | | | | | | | | | | |
| STATION: | 183+35 | | EQUIPM | IENT | : | | | /50 w | | | 1 |
| LOCATION: | 35' Left of Center Line of Construction | | | | | Au | toma | atic F | Iamı | ner | |
| LOGGED BY: T | roy Frazier | | HAMMI | ER CO | DRREC | TION | FAC | TOR: | | 1.23 | |
| COMPLETION | DEPTH: 100.8 | | _ | | | | | | _ | | |
| D S S | | | | | | | | | | | |
| | | | | | | _ | FT. | SA | | % | % |
| | DESCRIPTION OF MATERIAL | SOIL | | | | E | G. | 20 | | S | R |
| | | GROUI | ်ပြ | IST. | ۵ | VEI | ER (| F Bl | Ż | C R | Q D |
| PE | | | PLASTIC LIMIT | % MOIST. | LIQUID | DRY WEIGHT | LBS PER CU.FT | NO. OF BLOWS | PER 6-IN. | | |
| FT. S | SURFACE ELEVATION: 102.1 | | 불급 | % | 33 | ä | <u> </u> | ž | PE | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | 16 | | 39 | | | , | 9 | | |
| $\lceil 5 \rceil \rangle$ | Moist, Hard, Brown Clay with some Sand * | CL | | | | | | 16- | -23 | | |
| | | | | | | | | | | | |
| | | _ | | | | | | | | | |
| | | | | | | | | | | | |
| | | | NP | | | | | | 7 | | |
| 10 | | SM | ' '' | | | | | 16 | -17 | | |
| | | | | | | | | | | | |
| | Wet, Dense, Brown Silty Sand | | | | | | | | | | |
| | vvet, belise, blown only dand | - | | | | | | | | | |
| | | | | | 1 | | | | | | |
| 15 | | | | | | | | | | | |
| 13 | | SW-S | MP NP | | | | | | 7 | | |
| | | 344-3 | - | | | | | 9- | -13 | | |
| | Wet, Medium Dense, Light Gray Sand with Silt | | | | | | | | | | |
| | and Trace of Gravel | - | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 20 | | CNA | NP | | | | | | 1 | | |
| | | SM | _ | | | | | 5 | 5-3 | | |
| | Wet, Loose, Light Gray Silty Sand | | | | | | | | | | |
| | Wet, Loose, Light Gray Only Sand | - | | | | | | | | | |
| - | | | | | | | | | | | |
| 25 | | - | NP | | | | | | 1 | | |
| | | SW | _ | | | | | 2 | 2-7 | | |
| | Wat Loosa Rmun Sand | | | | | | | | | | |
| | Wet, Loose, Brown Sand | - | | | | | | | | | |
| | | | | | | | | | | | |
| 30 :::::: | | | NP | | | | | | 6 | | |
| <u> </u> | | SW | | | | | | 12 | 2-13 | | |
| - 8 | W. M. F D D D D D D D. | | | | | | | | | | |
| | Wet, Medium Dense, Brown Sand with Gravel | _ | | | | | | | | | |
| - 9 00 | | | | | | | | | | | |
| 35 00 0 | | 1 | | | | | | 1 | me :1 | 1 | 21 |
| REMARKS: | Hollow stem augers were utilized to a depth of 40.0 | J. "A | water s | strat | um W | as e | #FICC | unte | nea | al Ö. | J. |

| | | | HWY. & TRANS. DEPARTMENT | | BOR | | | | - 3 | | | | | |
|------------------|-------------|------------------|---|--------------|---------|-------|----------|--------|------------|----------------|-------------|------------|------------------|------------------|
| JOB N | | | DIVISION - GEOTECHNICAL SEC. 070283 Calhoun County | | PAG | _ | | Octol | _ | 6.8 | 21-2 | 2. 20 |)13 | \dashv |
| JOB N | _ | | Bangs Slough - Hwy. 172 Strs. & Apprs. | | | | | LLING | | | Rotary | | | |
| JOBIN | ATTAILS. | | U.S. 167 | | | | | | | | • | | | |
| STATI | ON: | | 183+35 | | EQUI | PME | NT: | | | | 750 w | | | |
| | | | 35' Left of Center Line of Construction | | | | | | Au | toma | atic H | lamr | ner | |
| LOGG | ED B | y: T | roy Frazier | | HAM | MEF | CC | RREC | TION | FAC | TOR: | | 1.23 | |
| COM | PLET | LION | N DEPTH: 100.8 | | | | | | | | | | | |
| D | s | s | | | | | | | | | | | | |
| E P T H | Y M B | A M P L | DESCRIPTION OF MATERIAL | SOIL GROU | P | | IST. | Ω. | DRY WEIGHT | LBS PER CU.FT. | NO OF BLOWS | -IN. | % S C R | % R Q D |
| FT. | O L | E | SURFACE ELEVATION: 102.1 | | PLASTIC | LIMIT | % MOIST. | LIQUID | DRY | LBS P | NO O | PER 6-IN. | | |
| | | X | | SW-S | N. | | | | | | 13 26- | | | |
| | | | Wet, Very Dense, Brown Sand with Silt and Gravel | - | | | | | | | | | | |
| 40 | | X | | CL | 1 | 5 | | 46 | | | 12- | | | |
| L - | | | | | - | | | | | | | | | |
| <u>_</u> - | | | Moist, Very Stiff, Gray Clay | - | | | | | | | | | | |
| 45 | | X | | CL | 1 | 4 | | 43 | | | 16- | 11000 | | |
| | | | Moist, Hard, Gray Clay with Sand Partings | - | | | | | | | | | | |
| 50 | | \times | | CL | 1 | 5 | | 38 | | | | 0 -28 | | |
| | | | Moist, Hard, Gray Sandy Clay | • | | | | | | | | | | |
| 55 | | X | | CH | - 2 | 28 | | 62 | | | | 3 -28 | | |
| | | | Moist, Hard, Gray Clay | | | | | | | | | | | |
| 60 | | X | | Ch | | 28 | | 68 | | | | 12 -28 | | |
| | | | | - | | | | | | | | | | |
| 65 | 1 | \downarrow | | Cł | 1 | 18 | | 50 | | | | 13)-28 | | |
| 70 | | | | _ | | | | | | | | | | |
| RE | MAR | KS: | Hollow stem augers were utilized to a depth of 40 |).0'. * A | wate | er s | trat | um w | as (| enco | ounte | red | at 8 | .3'. |

| | | | WY. & TRANS. DEPARTMENT DIVISION - GEOTECHNICAL SEC. | | BORIN PAGE | G NO | | F 3 | | | | | |
|------------|--------|-------------|---|--------|--------------------------|----------|---------|----------|----------------|--------------|------------|--------|--------|
| JOB N | - | | 70283 Calhoun County | | DATE: | | Octo | ber 1 | 6& | 21-2 | 2, 20 |)13 | |
| JOB N | | | Bangs Slough - Hwy. 172 Strs. & Apprs. | | TYPE O | FDR | ILLING | : | R | Cotar | y Wa | ısh | |
| | | | J.S. 167 | | | | | | | | | | 1 |
| STATI | ON: | 1 | 83+35 | | EQUIPM | IENT | : | | | 750 v | | | |
| LOCA' | | : 3 | 35' Left of Center Line of Construction | | | | | Au | toma | atic I | Jami | ner | - 1 |
| | | | roy Frazier | | HAMMI | ER CO | ORREC | TION | FAC | TOR: | | 1.23 | |
| | | | DEPTH: 100.8 | | | | | | | | | | |
| D | | s | | | | | | | | | | | |
| Ē | S | A | | | | | | | ان | 10 | | | |
| Р | Y M | М | DESCRIPTION OF MATERIAL | SOIL | | | Ì | 토 | J. | W | | % S | % R |
| Т | В | Р | | GROU | P | <u> </u> | | DIE | 2 | BL(| ÷ | С | Q |
| H | O | 닐 | | | ES L | OIS | E E | X | PE | OF. | U-9 | R | D |
| FT. | L | E S | OUDEACE ELEVATIONS 102.1 | | PLASTIC LIMIT | % MOIST. | LIQUID |)RY | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | | |
| F1. | - | 3 | SURFACE ELEVATION: 102.1 Moist, Hard, Gray Clay with Sand Partings | | 19 | 0, | 50 | | | | 7 | | |
| | // | IXI | Wolst, Flaid, Gray Clay With Gand Fartings | CH | 19 | | 30 | | | 24 | | | |
| | | | | | | | | | | | - | | |
| | | | | | | | | | | | | | |
| | | | | • | | | | | | | | | |
| 75 | | | | | | | | | | | - | | |
| | | \bigvee | | СН | 18 | | 58 | | | 1 | 7 -35 | | |
| — – | | | | | | | | | | 23 | -33 | | |
| | |] | | | | | | | | | | | |
| <u> </u> | // |] | | - | | | | | | | | | |
| <u></u> | | | | | | | | | | | | | |
| 80 | / | | | | − ₂₀ | | 57 | | | | 13 | | |
| | // | 1XI | Mariah Hand Cook Clay | СН | | | | | | 21 | -28 | | |
| <u> </u> | // | | Moist, Hard, Gray Clay | | | | | | | | | | |
| | | | | _ | | | | | | 1 | | | |
| | | | Moist, Very Dense, Gray Silty Sand | | | | | 1 | | | | | |
| 85 | | | | | NP | | | | | ١, | 32 | | |
| L | 繅 | \times | | SM | I | | | | | | 50 | | |
| | 關 | 9492 | | | | | | | | (| 4") | | |
| | | 9 | Moist, Very Dense, Gray Silty Sand with Lignite | | | | | | | | | | |
| | | 1101 | | - | | | | | | | | | |
| 90 | | 1 | | | | | | | | | | | |
| 30 | | | | SM | NP | ' | | | | | 45 | | 1 |
| - | - | <u> </u> | | - 314 | | | | | | 1 7 | 60 5") | | 1 |
| <u> </u> | - | | | ļ | | | | | | ` | - / | | |
| - | - | | | - | | | | | | | | | |
| | - | | | | | | | | | | | | |
| 95 | - | | Moist, Very Dense, Gray Silty Sand | | . NF | | | | | | 45 | | |
| | - | | | SN | 1 | | | | | | 60 | | |
| L - | | | | | 19 | | | | | (| (3") | | |
| L . | 41111 | | | | 100 | | | | | | | | |
| L . | | | | - | | | | | | | | | |
| 100 | | | | | | | | | | | 25 | | |
| | | \times | Moist, Very Dense, Gray Silty Sand with Trace of | SN | / NF | 4 | | + | | | 35 60 | - | - |
| | | | Lignite Paring Terminated | 1 | | | - | | | | 60 (3") | | |
| 一. | | | Boring Terminated | | | | | | | | | | |
| | 7 | | | | | | | | | | | | |
| 100 | - | | , | | | | | | | | | | |
| 105 | AAD | | Hollow stem augers were utilized to a depth of 40.0 |)' * A | water | stra | tum v | 125 4 | encc | unte | ered | at 8 | .3'. |
| KE | VIAK | NO : | mollow stern augers were utilized to a depth of 40.0 | ,. A | Marci | Jud | COTTE V | , 45 (| J. 100 | - 601 154 | Ju | | |

| | WY. & TRANS. DEPARTMENT | | BORIN | | | - 0 | | | | | |
|---------------|---|--------------|------------------|----------|--------|----------|----------------|--------------|-----------|------------------|------------------|
| | DIVISION - GEOTECHNICAL SEC. | | PAGE | 1 | - | F 3 | 1.5 | 1.6 | 0013 | | |
| | 070283 Calhoun County | | DATE: | | | | | -16, | | | |
| | Bangs Slough - Hwy. 172 Strs. & Apprs. | | TYPE O | FDR | ILLING | : | ŀ | Cotar | y Wa | sh | |
| | U.S. 167 | | | | | | | | . ~ | | |
| | 183+73 | | EQUIPM | IENT | : | | | 750 v | | | |
| | 34' Left of Center Line of Construction | | | | | | | atic I | | | |
| LOGGED BY: S | | | HAMME | R CO | DRREC | TION | FAC | ror: | | 1.23 | |
| COMPLETION | DEPTH: 101.3 | | | | | 1 | | | - | | |
| D S A P M P L | DESCRIPTION OF MATERIAL | SOIL GROU | TIC TIC | IST. | LIQUID | VEIGHT | LBS PER CU.FT. | NO. OF BLOWS | Z. | % S C R | % R Q D |
| FT. O E | SURFACE ELEVATION: 101.2 | | PLASTIC LIMIT | % MOIST. | LIQUI | DRY | LBS P | NO. 0 | PER 6-IN. | | |
| XX | | | | | | | | | | | |
| 5 | Moist, Very Stiff, Reddish Brown and Gray Clay with Sand | | | | | | | 8 | 4 -9 | | |
| 10 | Wet, Medium Dense, Reddish Brown and Gray Sand * | | | | | | | 10 | 6 -11 | | |
| 15 | Wet, Loose, Gray Sand | | | | | | | | 1-4 | | |
| 25 | Wet, Medium Dense, Gray Sand | | | | | | | 1 | 1-8 | | |
| | Wet, Medium Dense, Reddish Brown Sand with Gravel | | | | | | | 6 | 6 -15 | | |
| 35 | Wet, Medium Dense, Brown Sand with Gravel | | | | | | | | 5 5-8 | | |
| | Hollow stem augers were utilized to a depth of 13.5 | 5'. * A | water s | trat | um w | as e | enco | unte | red | at 8. | 5'. |

| | | | HWY. & TRANS. DEPARTMENT | | BORIN | | | | | | | | |
|----------|------------|--------------|--|---------|------------------|---------|-----------------|------|----------------|----------------|-----------|--------|----------|
| | | | DIVISION - GEOTECHNICAL SEC. | | PAGE | - 2 | | F 3 | nr 1.5 | 5-16, | 2017 | 1 | \dashv |
| JOB N | | | 070283 Calhoun County Bangs Slough - Hwy. 172 Strs. & Apprs. | | DATE: TYPE O | E 170 | | | | lotar | | | |
| JOB N | (Alvie: | | U.S. 167 | | lireo | r DR | ILLING | 1. | 1 | Cotat | y *** | 1311 | |
| STAT | ION: | | 183+73 | | EQUIPN | IFNT | ٠. | CN | ME 3 | 750 w | / CN | Æ | |
| | | | 34' Left of Center Line of Construction | | 200 | | | | | atic F | | | |
| 1 | | | Stanley Bates | | HAMM | ER CO | ORREC | TION | FAC | TOR: | | 1.23 | |
| | | | N DEPTH: 101.3 | | | | | | | | | | |
| D | | s | | | | | | | | | | | |
| E | S | Α | | | | | | | ı. | co. | | | 0/ |
| Р | м | M | DESCRIPTION OF MATERIAL | SOIL | | | | 臣 | U.F | M _O | | % S | % R |
| T H | В | P | | GROU | P | T. | | EIG | RC | BL | z | | Q |
| " | 0 | L | | | STI | % MOIST | 昌旨 | × | LBS PER CU.FT. | NO. OF BLOWS | I-9 | R | D |
| FT. | L | | SURFACE ELEVATION: 101.2 | | PLASTIC LIMIT | % Jv | LIQUID LIMIT | DR | LBS | S. | PER 6-IN. | | |
| | | \bigvee | | | | | | | - | 5 | j | | |
| | | \triangle | | | | | | | | 5- | 7 | | |
| <u> </u> | | | Wet, Stiff, Brown and Gray Sandy Clay | | | | | | | | | | |
| | | | • • | | | | | | | | | | |
| 40 | | | | | | | | | | | | | |
| | 1 | ∇ | | 1 | | | | | | 10- | | | |
| | | | | | | | | | | 10. | -10 | | ' |
| | | | Moist, Very Stiff, Gray Clay with Sand Partings | | | | | | | | | | |
| | 1/ | 1 | | | | | | | | | | | |
| 45 | | | | | | | | | | | | | |
| | | \bigvee | | 1 | | | | | | | 3 | | |
| _ | | | | | | | | | | 16 | -23 | | |
| | | | Moist, Hard, Gray Clay with Sand Seams | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | |
| | 1 | | | | | | | | | - | 4 | | |
| | | \swarrow | | | | | | | | 22 | -28 | | |
| | 1/ | | | | | | 1 | | | | | | |
| | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | |
| | | ∇ | Moist, Hard, Gray Clay with Sand Partings | | | | | | | 1 | 3 | | |
| | | u | | | | | | | | 19 | -25 | | |
| - | 1/ | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | |
| 60 | 1/ | | | | | | | | | | | | |
| | K | 1 | | 7 | | | | | | 1 | 15 | | |
| | | Y | 7 | | | | | | | 21 | -30 | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 65 | // | 1 | | | | | | | | | | | |
| | \ \ | abla | | | | | | | | | 15 | | |
| | // | \checkmark | | | | | | | | 25 | -35 | | |
| - | 1/ | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 70 | T/\ | 1 | Moist, Hard, Gray Clay | | | | | | | | | | |
| | MARK | S: | Hollow stem augers were utilized to a depth of 13. | 5'. * A | water s | trat | um w | as e | enco | unte | red | at 8. | 5'. |
| 1 | 41 48 | | | - | | | | | | | | | |

| | | _ | HWY. & TRANS. DEPARTMENT DIVISION - GEOTECHNICAL SEC. | | BORIN PAGE | | | F 3 | | | | | |
|------------|--------|---|---|---------|------------------|---------|------------|------------|---------------|--------------|--------------|-------------|--------|
| JOB N | | | 070283 Calhoun County | | DATE: | | | | er 15 | -16, | 2013 | | |
| JOB N | | | Bangs Slough - Hwy. 172 Strs. & Apprs. | | ТҮРЕ С | F DR | | | | | y Wa | | |
| | | ! | U.S. 167 | | | | | | | | | | |
| STAT | ION: | | 183+73 | | EQUIP | MENT | ` : | | | | v/ CN | | |
| LOCA | | | 34' Left of Center Line of Construction | | ** | rn ~ | 000=== | | | | lamr | ner 1.23 | |
| | | | Stanley Bates J DEPTH: 101.3 | | HAMM | ER C | JKREC | HUN | rac" | IOK: | | 1.23 | |
| | | | DEFID: IVI.3 | | T | Π | T | | | | | | |
| D E | S | S A | | | | | | | , . | | | | |
| Р | Y M | М | DESCRIPTION OF MATERIAL | SOIL | | | | 臣 | J.FT | 3WS | | % S | % R |
| T | В | P | | GROU | PU | F. | | EIG | R CI | BL(| z | C | Q |
| Н | 0 | E | | | ITS | % MOIST | LIQUID | DRY WEIGHT | LBS PER CU.FT | NO. OF BLOWS | PER 6-IN. | R | D |
| FT. | L | I _ I | SURFACE ELEVATION: 101.2 | | PLASTIC LIMIT | % 1 | 101 | DR | LBS | 0 N | PEF | | |
| | | V | | | | | | | | | 7 | | |
| | | | | | - | | | | | 23 | -30 | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 75 | | . , | | | | | | | | 1 | 2 | | |
| <u> </u> | | X | | | | | | | | | -25 | | |
| <u> </u> | | | | | | | | | | | | | |
| <u> </u> | // | | | | | | | | | | | | |
| <u> </u> - | | 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | | | | | | | | | |
| 80 | | > | | | | | | | | 3 | 30 | | |
| | | | Mat Van Dance Cres Sills Sand | | | | | | | 14 | 30 4") | | |
| | | | Wet, Very Dense, Gray Silty Sand | | | | | | | ` | , | | |
| | | | | | | | | | | | | | |
| 85 | | | | | | | | | | | | | |
| | | X | | 1 | | | | | | | 35 30 | | |
| | | | NACE NO. 10 Property Control of the | | | | | | | (| 5") | | |
| | | | Wet, Very Dense, Gray Silty Sand with Trace of Lignite | | | | | | | | | | |
| L. | | | Liginio | | | | | | | | | | |
| 90 | | | | 1 | | | | | | . | 35 | | |
| <u> </u> | | X | | | | | | | | | 60 | | |
| | -11111 | | Moist, Very Dense, Gray Silty Sand with Trace o | f | | | | | | (| 5") | | |
| ļ | - | | Gravel | | | | | | | | | | |
| - | - | | | | | | | | | | | | |
| 95 | | | | - | | | | | | | 28 | | |
| | - | | | | | | | | | , | 60 5") | | |
| | - | | Moist, Very Dense, Gray Silty Sand | | | | | | | ` | ~ , | | |
| | 1 | | | | | | | | | | | | |
| 100 | | | | | | | | | | | | | |
| 1 | X | | Moist, Very Hard, Gray Clay with Sand Seams | | | | | | | | 19 | | |
| | _X::X | | Boring Terminated | | | + | 1 | + | | تـا | 5-60 (4") | | +- |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 105 | | | | | | | | | | | | | |
| RE | //ARI | S: | Hollow stem augers were utilized to a depth of 13.5 | 5'. * A | water | strat | um w | as e | enco | unte | red | at 8. | 5'. |

| | S HWY. & TRANS. DEPARTMENT | | BORIN | | | - 2 | | | | | |
|------------|--|---------------|------------------|----------|-----------------|----------|----------------|---------------|-----------|------------------|------------------|
| | S DIVISION - GEOTECHNICAL SEC. | | PAGE | 1 | | F 3 | 0.0 | 1 / 1 | 5 0 | 112 | - |
| JOB NO. | 070283 Calhoun County Bangs Slough - Hwy. 172 Strs. & Apprs. | | DATE: TYPE OF | n Day | Octo | | | 14-1 Rotar | | | |
| JOB NAME: | U.S. 167 | | IYPEU | r DK | ILLING | r: | Г | COLAI | y vva | 1211 | |
| CT A TION. | 184+23 | | EQUIPM | IENIT | | CI | AB 7 | 750 w | // C'N | Æ | |
| STATION: | 32' Left of Center Line of Construction | | EQUIFM | IENI | • | | | atic I | | | |
| | Frazier & Bates | | HAMME | R C | ORREC | | | | | 1.23 | |
| | ON DEPTH: 101.5 | | TIPOVIIVII | , CC | Jidabo | 11011 | 1710 | 20111 | | 1120 | |
| | | T | T | | | | | | | | |
| E P M B O | DESCRIPTION OF MATERIAL | SOIL GROUI | PLASTIC LIMIT | % MOIST. | LIQUID LIMIT | Y WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| | S SURFACE ELEVATION: 99.7 | | 김도 | 8 | EE | DR | LB | 8 | PE | | |
| 5 | Moist, Medium Dense, Gray Silty, Clayey Sand | | | | | | | | 1)-7 | | |
| 15 | Wet, Medium Dense, Gray Sand with Clay | | | | | | | 8- | 13 | | |
| | Wet, Loose, Brown Sand * | | | | | | | 3 | -3 | | |
| 20 | Wet, Very Loose, Brown Sand | | | | | | | 0 | 0 | | |
| 30 \$500 | Wet, Medium Dense, Brown Sand with Gravel | | | | | | | 7 | 4 7-6 | | |
| 35 | Wet, Medium Dense, Gravel with Brown Sand | | | | | | | • | 6 6-7 | | |
| REMARK | S: Hollow stem augers were utilized to a depth of 19. | 5'. * A | water s | trat | um w | as e | nco | unte | red | at 14 | 4.5'. |

| | | | HWY. & TRANS. DEPARTMENT DIVISION - GEOTECHNICAL SEC. | | BOR | UNG E | | | F 3 | | | | - | |
|--------------|-------------------|--------------|---|---------|------|------------|----------|--------|------------|---------------|--------------|-----------|--------|--------|
| JOB N | | | 070283 Calhoun County | | DAT | | | Octo | | 0 & | 14-1 | 5, 20 |)13 | |
| JOB N | | | Bangs Slough - Hwy. 172 Strs. & Apprs. | | TYP | E OF | | LLING | | | | y Wa | | |
| | | | U.S. 167 | | | | | | | | | | | |
| STATI | ION: | | 184+23 | | EQU | ІРМЕ | NT | : | CN | ME 7 | 750 v | / CN | Œ | 100.5 |
| LOCA | TION | : ; | 32' Left of Center Line of Construction | | | | | | Au | tom | atic I | lamr | ner | |
| LOGG | ED B | y: F | razier & Bates | | HAM | MER | CC | RREC | TION | FAC | TOR: | | 1.23 | |
| COM | PLET | ΓΙΟΝ | V DEPTH: 101.5 | | | | | | | | | | | |
| D | S | S | | | | | | | | | | | | |
| E | Y | Α | | | | | | | | Ţ. | Ś | | % | % |
| P | М | М | DESCRIPTION OF MATERIAL | SOIL | | | | | Ħ | U.F | № | | S | R |
| T H | В | P | | GROU | ஈ ்ப | | ST. | | E | R.C | BI | z | C R | Q D |
| '' | 0 | ΕÌ | | | ST | 盲 | % MOIST. | 55 | DRY WEIGHT | LBS PER CU.FT | NO. OF BLOWS | PER 6-IN. | K | ט |
| FT. | L | | SURFACE ELEVATION: 99.7 | | | LIMIT | % | LIQUID | DR | LB | | LEI | | |
| ╚ | | X | | | | | | | | | | 12 | | |
| | // | | | | | | | | | | | _ | | |
| | 1 | | Moist, Very Stiff, Gray Clay with Trace of Gravel | | | | | | | | | | | |
| | // | | | | | | | | | | | | | |
| 40 | 7 | | | | | | | | | | | 3 | | |
| L' | | \times | | | | | | | | | | -18 | | |
| L _ | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | 1 | | | | | | | | | | |
| 45 | // | | | | | | | | | | | | | |
| 10 | // | abla | Moist, Hard, Gray Clay | | | | | 1 | | | 100 | 9 | | |
| - | | abla | | | | | | | | | 14 | -19 | | |
| | | 1 | | | - 1 | | | | | | | | | |
| <u> </u> | | | | | |] | | | | | | | | |
| <u> </u> | // | 1 | | | | | | | | | | | | |
| 50 | \sim | ├ | | - | | | | | | | ' | 10 | | |
| <u> </u> | \mathcal{N} | łХ | | | | | | | | | 14 | -18 | | |
| <u> </u> | 1 | 1 | | | | | | 1 | | | | | | |
| <u> </u> | N | | Moist, Hard, Gray Clay with Trace of Lignite | | | | | | | | | | | |
| L | \mathcal{N} | 1 | | | | | | | | | | | | |
| 55 | 1 | 1_ | | _ | | | | | | | | 0 | | |
| | | \mathbb{Y} | | | | | | | | | | 9 5-20 | | |
| | \mathbb{N} | Ψ | | | | | | | | | " | , 20 | | |
| | 1/ | | Moist, Hard, Gray Clay | | | | | | | | | | | |
| — | | | | | | | | | | | | | | |
| 60 | 1/ | | | | - | | | | | | | | | |
| | 1 | | | | | | | | | | - | 9 | | |
| - - | 1 | | | | | | | | | | 13 | 2-16 | | |
| - | // | 1 | | | | | | | | | | | | |
| - | 1/ | J | | | | | | | | | | | | |
| | +/ | | | | | | | | | | | | | |
| 65 | / / | 1 | Moist, Very Stiff to Hard, Gray Clay with Sand | | | | | | | | | 9 | | |
| <u> </u> - | // | 1X | Partings | | | | | | | | 1 | 4-20 | | |
| <u> </u> | 1/ | \downarrow | | | | | | | | | | | | |
| L. | 1 | 1 | | | | | | | | | | | | |
| | $^{\prime\prime}$ | | | | | | | | | | | | | |
| 70 | 11 | 1 | | | | | | | | | | | | |
| DEN | MARI | KS: | Hollow stem augers were utilized to a depth of 19.5 | 5'. * A | wate | er st | rat | um w | as e | enco | unte | ered | at 14 | 4.5'. |

| | HWY. & TRANS. DEPARTMENT DIVISION - GEOTECHNICAL SEC. | - t | BORIN PAGE | | o. 3 Oi | F 3 | | | | | |
|-------------------|--|---------------|------------------|----------|------------|------------|----------------|--------------|--------------------------|------------------|------------------|
| OB NO. | 070283 Calhoun County | | DATE: | | Octo | | 0 & | 14-1 | 5, 20 | 013 | |
| OB NAME: | Bangs Slough - Hwy. 172 Strs. & Apprs. | | TYPE O | F DR | ILLING | i: | F | Rotar | y Wa | ish | |
| | U.S. 167 | | | | | | | | | | |
| | 184+23 | | EQUIPM | TENT | : | | | 750 w | | | |
| | 32' Left of Center Line of Construction | | | | | | | atic I | | | |
| | Frazier & Bates | | HAMMI | ER CO | DRREC | TION | FAC | TOR: | | 1.23 | |
| | N DEPTH: 101.5 | | 1 | | | | | | - | | |
| D S A A M P H O E | DESCRIPTION OF MATERIAL | SOIL GROUI | PLASTIC LIMIT | % MOIST. | LIQUID | DRY WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| FT. L S | | | E E | % | 35 | DR | LB | 0 Z | PEI | | |
| | | | | | | | | 45- (5 | -60 | | |
| 75 80 | Moist, Very Dense, Gray Sand with Clay | | | | | | | 46 | -50 | | |
| 85 | Wet, Very Dense, Gray Silty Sand | | | | | | | 48 (2 | -60 2") | | |
| 90 | Moist, Very Hard, Gray Clay with Sand | | | | | | | 48 | 28 -60 5") | | |
| \ \ \ | Moist, Very Hard, Gray Clay with Sand and some Lignite | = | | | | | | 34 | 20 1-60 5") | | |
| 95 | Moist, Very Hard, Gray Sandy Clay | | | | | | | | 20 2-60 5") | | |
| 100 | Moist, Very Dense, Gray Silty, Clayey Sand with Lignite Boring Terminated | + | | | | | | 60 | 26 0-60 3") | _ | |
| 105 | Hollow stem augers were utilized to a depth of 19.5 | | | | | | | | | | |

| · · | HWY. & TRANS. DEPARTMENT | | BORING | | | | | | | | |
|---------------|---|---------------|---------------------|--|-----------------|--|----------------|--------------|-----------|------------------|--|
| | DIVISION - GEOTECHNICAL SEC. 070283 Calhoun County | | PAGE DATE: | 1 | | F 3 | er 0 | -9, 2 | Ω13 | | |
| | Bangs Slough - Hwy. 172 Strs. & Apprs. | | DA I I:: TYPE OI | ו מרו | | | | cotar | | sh | |
| | U.S. 167 | | I I FE OI | · DK | LLING | , | L | cotar | y *** | 1311 | |
| | 184+61 | - 1. | EQUIPM | ENT | | CN | /TE 7 | /50 w | / CN | Æ | |
| | 35' Left of Center Line of Construction | | EQUII W | 15141 | • | | | atic I | | | |
| LOGGED BY: T | | | НАММЕ | R CO | RRFC | | | | | 1.23 | |
| | V DEPTH: 101.5 | | | | MALLO | 11011 | 1110 | . 011. | | 1100 | |
| | DEFTII. 101.5 | | 1 | | | | | | 1 | | |
| D S A M P L E | DESCRIPTION OF MATERIAL | SOIL GROUP | PLASTIC LIMIT | % MOIST. | LIQUID LIMIT | DRY WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| | SURFACE ELEVATION: 100.5 | | PL/ LIN | % | | DR | LB | NO | PEI | | |
| 5 | Moist, Medium Dense, Light Gray and Brown Silty Sand with Clay | | | | | | , | 7- | 1 14 | | Management of the control of the con |
| 10 | Wet, Medium Dense, Light Gray and Brown Sand | | | | | | | 5 | -8 | | |
| 20 | Wet, Medium Dense, Brown Sand | | | The second secon | | The state of the s | | 8. | 3 -15 | | |
| 30 | Wet, Medium Dense, Brown Sand with Gravel | | | | | | | * /* | 6 | | |
| 35 | Wet, Dense, Brown Sand with Gravel | | | | | | | 18 | 3-13 | | |

| JOB NO. 070283 Calhoun County | PAGE DATE: | | . 0 | rJ | | | | | |
|---|------------------|----------|-----------------|--------|----------------|--------------|----------------------|------------------|------------------|
| JOB NAME: Bangs Slough - Hwy. 172 Strs. & Apprs. | DATE: | | - | | har S | 3-9, 2 | 013 | | |
| | TYPE O | ם ב | | | | Rotar | | ıch | |
| | TIPEU | r DK | ILLING | 1. | 1 | Cotar | y *** | 1311 | |
| STATION: 184+61 | EQUIPN | /FNT | ٠. | CN | MR.1 | 750 w | / CN | Æ | |
| LOCATION: 35' Left of Center Line of Construction | LQUIII | | • | | | atic I | | | |
| LOGGED BY: Troy Frazier | HAMM | ER C | ORREC | TION | FAC | TOR: | | 1.23 | |
| COMPLETION DEPTH: 101.5 | | | | | | | | | |
| D C | | | | | | | | | |
| E S A P M M P DESCRIPTION OF MATERIAL SOIL GROUP | PLASTIC LIMIT | % MOIST. | LIQUID LIMIT | WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| FT. L S SURFACE ELEVATION: 100.5 | PLA LIM | W W | | DRY | LBS | NO. | PER | | İ |
| OBIT ASE ELEVITIST. 188.8 | +== | 1 | | 1 | | 4 | | | |
| Moist, Stiff, Brown and Gray Clay | | | | | | 6- | .9 | | |
| | | | | | | 1 . | 7 | | |
| | | | 1 | | | 10- | -15 | | |
| Moist, Very Stiff, Gray Clay | | | | | | | | | |
| | | | | | | | | | |
| 45 | | | | | | | | | |
| 50 | | | | | | 15 | 9 -21 7 -21 | | |
| Moist, Hard, Gray Clay 55 60 | | | | | | 14 | 9 I-18 | | |
| Moist, Hard, Gray Clay with Sand Partings | | | | | | | 1-20 | | |
| Moist, Hard, Gray Clay | | | | | | 1; | 8 3-19 | | |
| / | | - | | | | | | | |

| JOB NO. 070283 Calhoun County Date October 8-9, 2013 Type of Dritt. July Str. 8 Apprs. U.S. 167 STATION: 184461 SUCCATION: 35 Left of Center Line of Construction DATE CME 750 w/ CMB Automatic Hammer HAMMER CORRECTION FACTOR: 1, 23 Type of Dritt. July DESCRIPTION OF MATERIAL SOIL GROUP STATE SURFACE ELEVATION: 100.5 SURFACE ELEVATION: 100.5 SURFACE ELEVATION: 100.5 SURFACE ELEVATION: 100.5 SOIL GROUP SURFACE ELEVATION: 100.5 SOIL GROUP SOIL G | | | | HWY. & TRANS. DEPARTMENT DIVISION - GEOTECHNICAL SEC. | | BORIN PAGE | G NO | | F 3 | | | | | |
|--|------------|--|--------------|---|------|---------------|--------|-------------|---------|------|----------------|-----------------|--------|-----|
| Most, Very Dense, Gray Silty Sand Sang Slough - Hwy. 172 Strs. & Apprs. U.S. 167 STATION: 184-61 EQUIPMENT: CME 750 w/ CME Automatic Hammer Location STATION: 35 Left of Center Line of Construction STATION: 35 Left of Center Line of Construction STATION: 184-61 EQUIPMENT: CME 750 w/ CME Automatic Hammer Location | | | | | | | | | | er 8 | -9, 2 | 013 | | |
| U.S. 167 184+61 LOCATION: 35 Left of Center Line of Construction LOGGED BY: Troy Frazier COMPLETION DEPTH: 101.5 DESCRIPTION OF MATERIAL T B P M D DESCRIPTION OF MATERIAL T B P M D L FT. L S SURFACE ELEVATION: 100.5 S S S WARP DESCRIPTION OF MATERIAL T B P M D L FT. L S SURFACE ELEVATION: 100.5 Moist, Very Dense, Gray Silty Sand Wet, Very Dense, Gray Silty Sand Wet, Very Dense, Gray Silty Sand Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | 1 | | | • | - 1 | | F DR | | | | | | ish | |
| STATION: 184-61 COMPTION: 38 Left of Center Line of Construction STATION: 184-61 COMPTION: 184-61 | | | | | | | | | | | | - | | |
| LOCATION: 35 Left of Center Line of Construction Automatic Hammer LOGGED BY: Troy Fraziler LOG | STAT | ION: | | | | EQUIPM | 1ENT | : | CN | Æ 7 | /50 w | // CN | Æ | |
| DOMPLETION DEPTH: 101.5 S S A DESCRIPTION OF MATERIAL SOIL GROUP SOIL | 1 | | : | 35' Left of Center Line of Construction | | | | | Au | toma | atic l | Iamu | ner | |
| D S N M DESCRIPTION OF MATERIAL SOIL GROUP SOIL GROUP SOIL GROUP SOIL GROUP SOIL GROUP SOIL GROUP SOIL HINT SOIL GROUP SOIL GROUP SOIL GROUP SOIL HINT SOIL GROUP S | LOGO | ED B | Y : T | roy Frazier | | НАММ | ER C | ORREC | TION | FAC | гок: | | 1.23 | |
| E P Y M DESCRIPTION OF MATERIAL SOIL GROUP STAN SOIL GROUP SOIL G | COM | PLE | CION | V DEPTH: 101.5 | | | | | | | | | | |
| DESCRIPTION OF MATERIAL SOIL GROUP SOI | | 0 | | | | | | | | | | | |] |
| P | | | | | | | | | İ | Li. | S | | 0/ | 0/. |
| Moist, Very Dense, Gray Silty Sand 35 53-60 (4") | | | | DESCRIPTION OF MATERIAL | SOIL | | | | Ħ | U.F | 0₩ | | S | |
| Moist, Very Dense, Gray Silty Sand 20 56-80 (6") 80 28 60 (6") Wet, Very Dense, Gray Silty Sand 85 | | В | | | | ပ | T. | | EIG | RC | BL | ż | С | |
| Moist, Very Dense, Gray Silty Sand 20 56-80 (6") 80 28 60 (6") Wet, Very Dense, Gray Silty Sand 85 | | | | | | ESH | | 18 = | | PE. | OF | I-9 | R | D |
| Moist, Very Dense, Gray Silty Sand 35 53-80 (4") | FT. | L | | SURFACE ELEVATION: 100.5 | | F.F. | % % | 181 | DR | LBS | NO. | PER | | |
| Moist, Very Dense, Gray Silty Sand 20 56-60 (6°) 85 Wet, Very Dense, Gray Silty Sand 85 | | | \bigvee | | | | | | | | 3 | 5 | | |
| Moist, Very Dense, Gray Silty Sand 20 56-60 (8") 80 85 85 90 90 95 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 20 56-60 (8") 20 68-60 (8") 28 60 (6") 8 51-60 (2") 30 45-60 (4") 10 25-58 | - | | \triangle | | | | | | | | 53- | 60 | | |
| 20 | - | | | Moist Very Dense Gray Silty Sand | | | | | | | (4 | 7 | | |
| 20 56-60 (5") | <u> </u> | | | wolst, very belise, Glay Silty Salid | | | | | | | | | | |
| Section Sect | <u>-</u> - | | | | | | | | | | | | | |
| 80 | 75 | | | | - | | | | | | 2 | 0 | | |
| 80 | <u> </u> | | X | | | | | | | | 56 | -60 | | |
| 85 Wet, Very Dense, Gray Silty Sand 16 40-50 (4") 8 8 51-60 (2") 30 45-60 (4") Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | | | | | | | | | | | (5 |)"} | | |
| 85 Wet, Very Dense, Gray Silty Sand 16 40-50 (4") 8 8 51-60 (2") 30 45-60 (4") Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | <u> </u> | | | | | | | | | | | | | |
| 85 Wet, Very Dense, Gray Silty Sand 16 40-50 (4") 8 8 51-60 (2") 30 45-60 (4") Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | L - | | | | | | | | | | | | | |
| 85 | 80 | | | | | | | | | | | | | |
| 85 ———————————————————————————————————— | | | \boxtimes | | | | | | | | | | | |
| 16 40-60 (4") | | | | | | | | | | | (5 | 5") | | |
| Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated Barbara Boring Terminated Barbara Barbara Boring Terminated Barbara B | _ | | | | | | | | | | , | • | | |
| Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated Barbara Boring Terminated Barbara Barbara Boring Terminated Barbara B | <u> </u> - | 1 | | | | | | | | | | | | |
| Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated Barbara Boring Terminated Barbara Barbara Boring Terminated Barbara B | | - | | | | | | | 1 | | | | | |
| Wet, Very Dense, Gray Silty Sand (4") | 00 | - | 1 | | | | | | | | 1 | 6 | | |
| Wet, Very Dense, Gray Silty Sand 8 51-60 (2") 95 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | <u> </u> | - | X | | | | | | | | 40 | -60 | | |
| 90 8 51-60 (2") 95 30 45-60 (4") 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | | - | | | | | | | | | (4 | 1 ") | | |
| 95 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 8 51-60 (2") 100 45-60 (4") 10 25-58 | <u> </u> | _ | | Wet, Very Dense, Gray Silty Sand | | | | | | | | | | |
| 95 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 8 51-60 (2") 100 45-60 (4") 10 25-58 | L - | | | | | | | | | | | | | |
| 95 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 51-60 (2") 30 45-60 (4") 10 25-58 | 90 | | | | | | | | | | | ^ | | |
| 95 | | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | \times | | | 1 | | | | | 4 | | | |
| 95 | | | | | | | | | | | (2 | -00 2") | | |
| 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 30 45-60 (4") 10 25-58 | | 1 | | | | | | | | | ' | · | | |
| 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 30 45-60 (4") 10 25-58 | - | | | | İ | | | | | | | | | |
| 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 30 45-60 (4") 10 25-58 | 05 | 1 | | | | | | | | | | | | |
| 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 10 25-58 | 35 | | | , | | | | | | | | | | |
| 100 Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated 10 25-58 | - | - | | | | | | | | | 45 | -60 | | |
| Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | | - | | | | | | | | | 1 (| +) | | |
| Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | | - | | | | | | | | | | | | |
| Moist, Very Hard, Gray Clay with Sand Seams and some Lignite Boring Terminated | - | - | | | | | | | | | | | | |
| and some Lignite Boring Terminated 105 | 100 | | | Maint Vandilant Committee | - | | | | | | . | 10 | | |
| Boring Terminated 105 | <u> </u> | 1/ | \times | | | | | | | | | | | |
| 105 | L. | النجر | * | | + | + | + | + | + | | - | | \top | |
| | | | | Bonny reminated | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | 105 | 1 | | | | | | | | | | | | |
| and the control of th | | | S: | Hollow stem augers were utilized to a depth of 9.0' | | | | | | | | | | |

| | WY. & TRANS. DEPARTMENT | | BORIN | | | | | | | | |
|---------------|--|---------------|------------------|----------|-----------------|----------|----------------|--------------|-----------|------------------|------------------|
| | DIVISION - GEOTECHNICAL SEC. | | PAGE | 1 | | F 3 | . 2 2 | 0. 0 | 201 | 2 | |
| | 070283 Calhoun County | - 1 | DATE: | | | | | & 8, | | | |
| | Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 | | TYPE O | ' DK | ILLING | : | Т | lotar | 7 44 5 | ISII | |
| | 0.5. 167 186+61 | | EQUIPM | CENT | | CI | ATE O | 750 w | / CN | /UE | |
| | 28' Left of Center Line of Construction | | EQUIFIN | IENI | • | | | atic F | | | |
| LOGGED BY: T | | | HAMME | R CO |)RRFC | | | | | 1.23 | |
| | DEPTH: 101.5 | | TE GVIIVE | | MILLO | 110/ | 1710 | . 011. | | 1120 | |
| | DEI III. 101.5 | | | | | | | | | | |
| D S A M P L E | DESCRIPTION OF MATERIAL | SOIL GROUI | PLASTIC LIMIT | % MOIST. | LIQUID LIMIT | Y WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| | SURFACE ELEVATION: 101.5 | | PLA | % | LIN | DR | LBS | NO. | PER | | |
| 5 | Dry, Dense, Light Gray Sand | | | | | | | 10 22- | 22 | | |
| 10 | Wet, Medium Dense, Light Gray Sand | | | | | | | 7- | 10 | | |
| 20 | Wet, Loose, Light Gray and Brown Sand | | | | | | | 5 | -5 | | |
| 25 | Wet, Medium Dense, Light Gray and Brown Sand | | | | | | | 4 | 3 -7 | | |
| 30 | | | | | | | | | 6 -7 | | |
| | Wet, Medium Dense, Brown Sand with Gravel | | | | | | | | 8 0-9 | | |
| 35 50 g. | wet, Mediani Dense, Drown Sand With Stavel | | | | | | | | | | \perp |

| | IWY. & TRANS. DEPARTMENT | | BORIN | | | | | | | | |
|---------------|---|---------------|------------------|----------|---|------------|----------------|--------------|------------|------------------|------------------|
| | DIVISION - GEOTECHNICAL SEC. | | PAGE | 2 | 0 | | <u> </u> | 0 0 | 001 | 2 | _ |
| | 070283 Calhoun County | | DATE: | | | | | & 8, | | | |
| | Bangs Slough - Hwy. 172 Strs. & Apprs. | İ | TYPE O | DR | ILLING | : | К | lotar | y wa | sn | |
| | U.S. 167 | | | | | C) | 402 S | ′50 w | J CN | /E | |
| STATION: | | | EQUIPM | ENT | : | | | ou watic F | | | |
| | 28' Left of Center Line of Construction | | 77 1 3 43 47 | . D. C. | nnec. | | | | | 1.23 | |
| LOGGED BY: T | | | HAMME | er Cu | JRREC | HON | FAC | IOK: | · | 1.23 | |
| | N DEPTH: 101.5 | | | | | 1 | | | | | |
| D S A M P L E | DESCRIPTION OF MATERIAL | SOIL GROUI | PLASTIC LIMIT | % MOIST. | LIQUID | DRY WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| FT. S | SURFACE ELEVATION: 101.5 | | 7.17 | % | H | DR | LB | ž | PE | | |
| | | | | | | | | 8- | | | |
| 45 | Wet, Very Stiff, Gray Clay | | | | | , | | 10- | | | |
| 50 | Wet, Hard, Gray Clay with some Lignite | | | | | | | 25 | 3-24 | | |
| 55 | Wet, Hard, Gray Clay with Sand | | | | | | | 14 | 7 -18 | | |
| | Moist, Hard, Gray Clay with Silt Seams | | | | | | | | 13 | | |
| 60 | Moist, Hard, Gray Clay | | | | A CALLED TO THE | | | | 9 7-22 | | |
| 65 | | | | | | | | | 12 9-24 | | |
| 70 REMARKS: | Hollow stem augers were utilized to a depth of 8.8' | | | | | | | | | | |

| | HWY. & TRANS. DEPARTMENT | | BORIN | | | - 0 | | | | | |
|-----------------|--|--------------|------------------|----------|-----------------|--------|----------------|-----------------|------------|------------------|------------------|
| | DIVISION - GEOTECHNICAL SEC. | | PAGE | | | | 0.5 | 0.0 | 001 | 2 | |
| JOB NO. | 070283 Calhoun County | | DATE: | | | | | & 8, | | | |
| JOB NAME: | Bangs Slough - Hwy. 172 Strs. & Apprs. | | TYPE O | FDR | ILLING | : | ŀ | Rotar | y wa | sn | |
| | U.S. 167 | | | | | 01 | <i></i> | | | (T) | |
| STATION: | | | EQUIPM | IENT | : | | | 750 w atic I | | | |
| | 28' Left of Center Line of Construction | | | | | | | | | | |
| LOGGED BY: | | | HAMME | ER CO | DRREC | TION | FAC | ror: | | 1.23 | |
| COMPLETIO | N DEPTH: 101.5 | | | | | | | | | ĭ | |
| D S A M P H B C | DESCRIPTION OF MATERIAL | SOIL GROU | 12 | % MOIST. | LIQUID LIMIT | WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| " C E | | | PLASTIC LIMIT | ₩ 9 | 15 H | 7 | SS P | 0.0 | R 6 | | |
| FT. S | SURFACE ELEVATION: 101.5 | | 무급 | % | 33 | D | T. | | | | |
| | Moist, Hard, Gray Clay with Silt Partings | | | | | | | _1 | | | |
| | | | | | | | | 21- | 28 | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 75 | | | 1 | | | | | ĺ | | | |
| 13 | | | | | | | | _1 | 2 | | |
| — -\\\X | | | | | | | | 21 | -29 | | |
| \\ | | | | | | | | | | | |
| _ // | Moist, Hard, Gray Clay with Sand Partings | | | | | | | | | | |
| _ // | | | | | | | | | | | |
| 80 | | | | | | | | 4 | | | |
| | | | | | | | | | 4 -35 | | |
| | | | | | | | | " | -00 | | |
| | Moist, Hard, Gray Clay | | | | | | | | | | |
| | indica, riand, cray cray | | | | | | | | | | |
| H | | | | | | | | | | | |
| 85 | | | | | | | | | 4 -22 | | |
| 90 | | | | | | | | | 14)-24 | | |
| 95 | Moist, Hard, Gray Clay with Silt Partings | | | | | | | | 14 | | |
| | | | | | | | | | 5-21 | | |
| 100 | | | | | | | | | 13)-23 | | |
| | Boring Terminated | | | | | | | | | | Γ |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 105 | | | | | | | | | | | |
| | Hollow stem augers were utilized to a depth of 8.8'. | | | | | | | | | • | |
| MEINIMIKNO. | Tollow stell adders were dulized to a deput of 0.0. | | | | | | | | | | |

| HWY. & TRANS. DEPARTMENT | 1 | BORIN | | | n 2 | | | | | |
|--|---|---|--|--|---|---|--|--|---|--|
| | | | 1 | | | .b | 1 20 | 12 | | |
| | | | r nn | | | | | | nch | |
| | | TYPEO | r DK | ILLING | 1; | Г | COtar | y *** | 1211 | |
| | | EOHIDA | IENT | | CN | /TE 7 | 750 u | / CN | Æ | |
| | | LQUIII | ILITI | • | | | | | | |
| | | HAMME | R CO | DRREC | TION | FAC' | TOR: | | 1.23 | |
| | | TIS GVIIVE | | 714450 | 11011 | | | | | |
| | | | | | | | | | | |
| DESCRIPTION OF MATERIAL | SOIL GROUI | 12 | OIST. | UID TI | WEIGHT | PER CU.FT. | OF BLOWS | 6-IN. | % S C R | % R Q D |
| | | PLA | W % | LIN | DRY | LBS | NO. | PER | | |
| Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter | | | And the state of t | | | | 9- | 11 | | |
| Moist, Stiff, Light Gray Clay with Sand and some Organic Matter | | | | | | | 4 | -5 | | |
| Moist, Medium Dense, Light Gray Sand | | | | | | | 9- | -11 | | |
| Wet, Soft, Light Gray Clay | | | | | | | | | | |
| Wet, Medium Dense, Reddish Brown Sand | | | | | | | | | | |
| Wet, Medium Dense, Reddish Brown Sand with Gravel | | | | | | | 1, | | | The state of the s |
| Wet, Dense, Brown Sand with Gravel | | | | | | | 14 | 8 1-21 | | |
| | Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Medium Dense, Light Gray Sand Wet, Soft, Light Gray Clay Wet, Medium Dense, Reddish Brown Sand Wet, Medium Dense, Reddish Brown Sand with Gravel | O70283 Calhoun County Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 186+99 18' Left of Center Line of Construction Paul Christenberry DN DEPTH: 101.5 A DESCRIPTION OF MATERIAL SOIL GROUI Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Medium Dense, Light Gray Sand Wet, Soft, Light Gray Clay Wet, Medium Dense, Reddish Brown Sand Wet, Medium Dense, Reddish Brown Sand with Gravel | DATE TYPE OF Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 186+99 18' Left of Center Line of Construction Paul Christenberry DN DEPTH: 101.5 A DESCRIPTION OF MATERIAL SOIL GROUP SURFACE ELEVATION: 100.1 Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Medium Dense, Light Gray Sand Wet, Medium Dense, Reddish Brown Sand Wet, Medium Dense, Reddish Brown Sand with Gravel | DATE: TYPE OF DRI Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 186+99 18' Left of Center Line of Construction Paul Christenberry DN DEPTH: 101.5 DESCRIPTION OF MATERIAL SOIL GROUP SURFACE ELEVATION: 100.1 Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Medium Dense, Light Gray Sand Wet, Medium Dense, Reddish Brown Sand Wet, Medium Dense, Reddish Brown Sand with Gravel | O70283 Calhoun County Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 186+99 18' Left of Center Line of Construction Paul Christenberry ON DEPTH: 101.5 DESCRIPTION OF MATERIAL SOIL GROUP SURFACE ELEVATION: 100.1 Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Medium Dense, Light Gray Sand Wet, Medium Dense, Reddish Brown Sand Wet, Medium Dense, Reddish Brown Sand with Gravel | DATE: Octor Type of Date: | DATE: October TYPE OF DATE: TY | DATE: October 1, 20 Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 186-99 18' Left of Center Line of Construction Paul Christenberry DESCRIPTION OF MATERIAL DESCRIPTION OF MATERIAL SOIL GROUP SURFACE ELEVATION: 100.1 Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Medium Dense, Light Gray Sand Wet, Soft, Light Gray Clay Wet, Medium Dense, Reddish Brown Sand with Gravel DATE: October 1, 20 TYPE OF DRILLING: Rotar TYPE OF DRILLING: Rotar TYPE OF DRILLING: Rotar TYPE OF DRILLING: Rotar TYPE OF DRILLING: Rotar TOME 1, 20 TYPE OF DRILLING: Rotar TOME 1, 20 TYPE OF DRILLING: Rotar TOME 1, 20 TYPE OF DRILLING: Rotar TOME 1, 20 TYPE OF DRILLING: Rotar TOME 1, 20 TYPE OF DRILLING: Rotar TOME 1, 20 TYPE OF DRILLING: Rotar TOME 1, 20 TYPE OF DRILLING: Rotar Automatic F EQUIPMENT: C.ME 750 w A | DATE: October 1, 2013 Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 186-99 18' Left of Center Line of Construction Paul Christenberry DN DEPTH: 101.5 DESCRIPTION OF MATERIAL SOIL GROUP SURFACE ELEVATION: 100.1 Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Medium Dense, Light Gray Sand Wet, Medium Dense, Reddish Brown Sand with Gravel Wet, Medium Dense, Reddish Brown Sand with Gravel | DATE: October 1, 2013 Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 186-99 18' Left of Center Line of Construction Paul Christenberry DN DEPTH: 101.5 DESCRIPTION OF MATERIAL SOIL GROUP SURFACE ELEVATION: 100.1 Moist, Very Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Stiff, Light Gray Clay with Sand and some Organic Matter Moist, Medium Dense, Light Gray Sand Wet, Medium Dense, Reddish Brown Sand Wet, Medium Dense, Reddish Brown Sand with Gravel |

| | | | HWY. & TRANS. DEPARTMENT | | BORIN | | | - 0 | | | | | |
|------------|-------|-----------|---|------|------------------|----------|---------|------------|---------------|----------------|-----------|---------|----------|
| | | | DIVISION - GEOTECHNICAL SEC. | | PAGE | 2 | | F 3 | .l | 1, 20 | 12 | | - |
| JOB N | | | 070283 Calhoun County | | DATE: | C DD | | | | 1, 20 Rotar | | ah | 1 |
| JOR V | IAME: | | Bangs Slough - Hwy. 172 Strs. & Apprs. U.S. 167 | | TYPE C | r DK | ILLLING | 1: | Т | COLAL | y wa | 1211 | |
| | TONE | | 186+99 | | FOLUM | AT'N I'T | | C | nc - | 750 w | / CN | /CC | |
| 1 | ION: | | 18' Left of Center Line of Construction | | EQUIPN | AEN I | : | | | atic F | | | - 1 |
| | | | Paul Christenberry | | НАММ | en e | SEREC | | | | | 1.23 | |
| | | | | | HAMM | ERC | JRREC | HON | FAC | TOK: | | 1.23 | \dashv |
| | IPLE! | | N DEPTH: 101.5 | | 1 | Г | 1 | T | | | Т | | - |
| D E | S | S A | | | | | | | | | | | ļ |
| P | Υ | м | | | | | | _ | FT. | ΝS | | % | % |
| + | M | Р | DESCRIPTION OF MATERIAL | SOIL | _ | | | HE | ÖÜ. | 0 | | S | R |
| H | В | L | | GROU | 12 | ST. | | Ä | SR (| BI | Z | C R | Q D |
| | 0 | Ε | | | PLASTIC LIMIT | "MOIST | 15,4 | DRY WEIGHT | LBS PER CU.FT | NO. OF BLOWS | PER 6-IN. | `` | |
| FT. | L | S | SURFACE ELEVATION: 100.1 | | 77.1 | %] | LIQUID | DR | LB | g | PE | | |
| | erces | \bigvee | | | | | | | | 6 | | | |
| | 8 | | Wet, Medium Dense, Light Gray Sand with | | | | | | | 7- | 9 | | |
| | 2000 | | Gravel | | | | | | | | | | |
| <u> </u> | 6 gr | | 0,0,0 | | | | | | | | | | |
| - | 30:00 | | | - | 1 | | | | | | | | |
| 40 | | | | | | | | | | 9 | | | |
| <u> </u> | | X | | | | | | | | 11- | 14 | | |
| | 18/9 | | | | | | | | | | | | |
| | M) | | | | | | | | | | | | |
| <u> </u> | 800 | | | | | | | | | | | | |
| 45 | 3 | | Wet, Very Stiff, Gray Clay with Gravel | | | | | | | | | | |
| | 18 | | | | | | | | | | | | |
| | 186 | | | | | | | | | | | | |
| | | | | | | | | | | 1 | | | |
| - | 1/6 | | | | | | | | | | | | |
| <u> </u> | - 3 | | | | | | | | | | | | |
| 50 | 163 | | | - | | | | | | | 5 | | |
| <u> </u> - | // | ľX | | | | | | | | 1 | -13 | | |
| L - | | | | | | | | | | | | | |
| L . | | | Wet, Very Stiff, Gray Clay with Sand Partings | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 55 | | | | | | | | | | | | | |
| | 1 | | | 7 | | | | | | | 9 | | |
| <u> </u> | | | | | | | | | | 12 | -20 | | |
| - | | | | | | | | | | | | | |
| - | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | |
| 60 | - | | , | | | | | | | 1 | 0 | | |
| | 1/ | JX | | | | | | | | | -22 | | |
| L . | // | Y | Malas I land One Olavership C. J. B. divers | | | 1 | | | | | | | |
| | 1 | | Moist, Hard, Gray Clay with Sand Partings | | | | | | | | | | |
| | |] | | | | | | 1 | | | | | |
| 65 | 1/ | J | | | | | | | | | | | |
| | 1/ | | | | | | | | | | 13 | | |
| H - | 1/ | X | | | | | | | | 18 | 3-24 | | |
| | 1 | | | | | | | | | | | | 1 |
| <u> </u> | 11 | | | | | | | | | | | | |
| - | 1 | | | | | | | | | | | | |
| 70 | | <u> </u> | Cemented Silt (69.4' to 69.8') | | | | | | | | | <u></u> | L |
| REN | MARK | S: | Hollow stem augers were utilized to a depth of 9.2' | • | | | | | | | | | |
| | | | | | | | | | | | | | |

| MATEDIAL | HWY. & TRANS. DEPARTMENT B DIVISION - GEOTECHNICAL SEC. | | BORIN PAGE | |). U O] | R 3 | | | | | |
|-------------------|--|---------------|----------------|--|--------------|------------|----------------|--------------|-------------------|------------------|------------------|
| · | | | | | | | hor | 1, 20 | 112 | | _ |
| JOB NO. | 070283 Calhoun County | - 1 | DATE: | 2 00 | | | | | | nch. | |
| JOB NAME: | Bangs Slough - Hwy. 172 Strs. & Apprs. | l l | TYPE OI | · DK | ILLING | : | Г | Rotar | y vv a | 1511 | |
| | U.S. 167 | | | | | CI | ATC 5 | 750 w | ./ CI | /CC | |
| STATION: | | | EQUIPM | IEN I | : | | | atic F | | | |
| | 18' Left of Center Line of Construction | | | | | | | | | | |
| | Paul Christenberry | | HAMME | RCC | JRREC | HON | FAC. | I UK: | | 1.23 | |
| | N DEPTH: 101.5 | | TT | | | | | | | | |
| D S A M P H H D E | DESCRIPTION OF MATERIAL | SOIL GROUP | 1 🖺 1 | % MOIST. | JD T | DRY WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| FT. | | | PLAST LIMIT | W % | LIQUID | DRY | LBS | | | | |
| 75 | Moist, Hard, Gray Clay with Sand Seams | | | | | | | 23- | 6 -30 | | |
| 85 | Moist, Hard, Gray Clay with Sand Partings | | | | | | | 19 | 2 -25 | | |
| 90 | Moist, Hard, Gray Sandy Clay | | | And the second s | | | | 1 23 | -32 3 -32 | | |
| | Moist, Hard, Gray Clay with Brown Siltstone Seams | | | | | | | | 23 6") 10 | | |
| // | Moist, Hard, Gray Clay with Silt Partings and | | | | | | | | 5-23 | | |
| - | Trace of Lignite | | + | + | | +- | | 1 10 | <i>y</i> -23 | - | + |
| - $+$ $+$ | Boring Terminated | | | | | | | | | | |
| 105 | | | | | | | | | | | |

| | | | HWY. & TRANS. DEPARTMENT DIVISION - GEOTECHNICAL SEC. | | - 1 | ORING AGE | 1 | | F 3 | | | | | |
|----------------|-----------------------------|------------|---|-----|-----|------------------|----------|--------|------------|----------------|--------------|-----------|--------|---|
| JOB N | 10. | - | 070283 Calhoun County | | D | ATE: | | Se | epter | nbei | 25, | 2013 | | _ |
| JOB N | IAME: | | Bangs Slough - Hwy. 172 Strs. & Apprs. | | Т | YPE OF | DRI | LLING | : | F | Rotar | y Wa | ish | |
| | | | U.S. 167 | | | | | | | | | | | |
| STAT | ION: | | 187+43 | | Е | QUIPM | ENT | : | CN | ME 7 | 750 v | v/ CN | Æ | |
| LOCA | ATION | : | 19' Left of Center Line of Construction | | | | | | Au | tom | atic I | lamı | ner | |
| LOGO | GED B | Y: F | Paul Christenberry | | H | LAMME | R CC | ORREC' | TION | FAC | TOR: | | 1.23 | , |
| COM | PLE1 | (OI) | N DEPTH: 101.5 | | | | | | | | | | | |
| D | | S | | | | | | | | | | | - | Ī |
| E | S | Ā | | | | | | | | r i | | | | |
| Р | M | М | DESCRIPTION OF MATERIAL | SOI | , ' | | | | Ħ | E. | × | | % S | ١ |
| Т | B | Р | DESCRIPTION OF WATERWAY | GRO | | . | ن. | | ΙΞ | 2 | 12 | | C | |
| Н | O | L | | | | | ISI | இட | WE | ER | F | Z. | R | |
| | L | E | | | | PLASTIC LIMIT | % MOIST. | LIQUID | DRY WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | | |
| FT. | | S | SURFACE ELEVATION: 100.8 | | | 교교 | % | 133 | Ω | 7 | Z | <u>a</u> | | ļ |
| | $\langle \cdot \rangle$ | | | | | | | | | | | | | |
| | $\langle \chi \chi \rangle$ | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | 7 | Moist, Very Stiff, Reddish Brown Sandy Clay wi | th | | | | | | | | 6 | | |
| | $\langle \chi \rangle$ | X | some Organic Matter | | | | | | | | 9- | 13 | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | 1/ | | | | | | | | | | | | | ı |
| | | | | | | | | | | | | _ | | |
| 10 | | \bigvee | | | | | | | | | | 6 | | |
| | | | | | | | | | | | 5 | -5 | | |
| | 1999 | | | | | | | | | | 1 | | | |
| | | | Wet, Loose, Reddish Brown Sand with Clay | | | | | | l | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| 15 | 17.77 | | | - | | | | | | | | 0 | | |
| | 77 |]X | Wet, Very Soft, Gray Clay | _ | | | | | | | | -2 | | |
| | J | 1 | | | | | | | | | | | | |
| | | 1 | Wet, Very Loose, Gray Sand with some Organi | c | | | | | | | | | | |
| | | | Matter | | | | 1 | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| 20 | | | | - | | | | | | | | 2 | | |
| | - :::: | !X | | | | | | | | | 9 | 8-(| 1 | |
| | - | | | 1 | | | | | | | | | | |
| | -[| | Wet, Medium Dense, Light Brown Sand | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | |
| 25 | | _ | | | | | | | | | | - | | |
| | | ∇ | Wet, Medium Dense, Brown Sand with Trace o | f | | | | | | | - | 5 | | |
| - | | 1/ | Gravel | _ | | | | | | | 1 | 2-9 | | |
| | -[.88° | | | | | | | | | | | | | |
| - | - 86 | 8 | | | | | | | | | | | | |
| | - G- 6: | d | | | | | | | | | | | | |
| 30 | | 1 — | 1 | | | | | | | | | 5 | | |
| | 9000 | | | | | | | | | | 1 | 2-7 | | |
| | , . G | 9 | | | | | | | | | ' | - ' | | |
| | | No. | | | | | | | | | | | | |
| - - | - 6.6. | | Wet, Medium Dense, Brown Sand with Gravel | | | | | | | | | | | |
| | -[: | 25 | | | | | | | | | | | | |
| 35 | 0.9 | 39 | Hollow stem augers were utilized to a depth of 9. | | | | | Ш. | | | | | | _ |

| 1 | HWY. & TRANS. DEPARTMENT | | BORIN | | | | | | | | |
|---------------|---|--------------|------------------|----------|----------|------------|----------------|--------------|---------------|-------------|-------------|
| | DIVISION - GEOTECHNICAL SEC. | | PAGE | 2 | | F 3 | | | | | |
| JOB NO. | 070283 Calhoun County | | DATE: | | | _ | | 25, 2 | | | |
| JOB NAME: | | | TYPE O | F DR | ILLING | i: | F | Rotar | y Wa | ish | |
| | U.S. 167 | | | | | | | | | | |
| STATION: | | | EQUIPN | 1ENT | : | | | /50 w | | | |
| | 19' Left of Center Line of Construction | | | | | | | atic I | | | |
| | Paul Christenberry | | HAMMI | ER C | ORREC | TION | FAC | TOR: | | 1.23 | |
| COMPLETIC | N DEPTH: 101.5 | | | , | | | | | | | |
| D S A A P T B | DESCRIPTION OF MATERIAL | SOIL GROU | D | | | IGHT | CU.FT. | TOWS | | % S C | % R Q |
| H O E | 1 | GROO | PLASTIC LIMIT | % MOIST. | LIQUID | DRY WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | R | Ď |
| | SURFACE ELEVATION: 100.8 | | | % | | | Ţ | | $\overline{}$ | | |
| 40 | | | | | | | | 9- | 13 | | |
| 45 | Wet, Medium Dense, Brown Sand with Gravel and Gray Clay | | | | | | | | -15 | | |
| 50 | Moist, Very Stiff, Dark Brown Clay | | | | | | | | 12 | | |
| 55 | Moist, Very Hard, Gray Clay with Trace of Gravel | | | | | | | 1 | -24 | | |
| | Moist, Hard, Gray Clay with Sand and Silt Partings | | | | | | | | 8 | | |
| 60 | | | | | | | | | 10)-25 | | |
| 65 | | | | | | | | | 11 7-23 | | |
| 70 REMARKS: | Hollow stem augers were utilized to a depth of 9.1'. | * A wa | ater str | atur | n was | s end | cour | ntere | d at | 8.6' | |

| | HWY. & TRANS. DEPARTMENT | - 1 | BORIN | | | - 0 | | | | | |
|----------------------|--|---------------|-----------------|----------|-----------------|----------|----------------|--------------------|------------|------------------|--|
| | 6 DIVISION - GEOTECHNICAL SEC. | | PAGE | 3 | | F 3 | nh - | . 25 1 | 2012 | | |
| JOB NO. JOB NAME: | 070283 Calhoun County Bangs Slough - Hwy. 172 Strs. & Apprs. | | DATE: TYPE O | E DD | | _ | | : 25, 2 Rotar | | | |
| JOB NAME. | U.S. 167 | | THEO | r DR. | LLING | | 1 | cotat _. | y *** LI | 311 | |
| STATION: | | | EQUIPM | IENT | : | CN | Æ 7 | 750 w | / CN | ΊE | |
| | 19' Left of Center Line of Construction | | | | | Au | tom | atic I | lamn | ner | |
| | Paul Christenberry | | HAMME | ER CO | DRREC | TION | FAC | TOR: | | 1.23 | |
| | N DEPTH: 101.5 | | | | 1 | | | | | | |
| D S A M P H B O L | DESCRIPTION OF MATERIAL | SOIL GROUF | 1≌ | % MOIST. | LIQUID LIMIT | Y WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| FT. S | | | PLAST | % % | 101 | DR | LBS | NO. | PER | | |
| | Moist, Hard, Gray Clay with Sand Partings | | | | | | | 15- | 1 | | |
| 75 | | | | | | | | 1 24- | 4 -29 | | |
| 80 | | | | | | | | 1 21 | 4 -30 | | |
| 85 | Moist, Very Hard, Gray Clay with Sand Seams | | | | | | | | 8-41 | | The state of the s |
| 90 | | | | | | | | | -22 | | |
| 95 | Moist, Hard, Gray Clay with Sand Partings | | | | | | | | 1 -21 | | |
| 100 | Moist, Hard, Gray Clay with Sand Seams | | | | | | | | 14 5-25 | | |
| | Boring Terminated | | | | | | | | | | |
| 105 | Hollow stem augers were utilized to a depth of 9.1 | | | | | | | | | 1 | \perp |

| | HWY. & TRANS. DEPARTMENT | | BORIN | | | | | | | | |
|-------------------|---|---------------|------------------|----------|--------|------------|----------------|-----------------|------------|------------------|------------------|
| | DIVISION - GEOTECHNICAL SEC. | | PAGE | 1 | | F 3 | | | | | |
| | 070283 Calhoun County | | DATE: | | - | | | 24-25 | | | |
| | Bangs Slough - Hwy. 172 Strs. & Apprs. | | TYPE OI | FDR | ILLING | ì: | ŀ | Rotar | y Wa | ash | |
| | U.S. 167 | | | | | C) | | 150 | | (T) | |
| | 187+87 | | EQUIPM | IENT | ; | | | 750 v atic I | | | |
| | 32' Left of Center Line of Construction | | | | | | | | | | |
| | Paul Christenberry | | HAMME | ER CO | DRREC | TION | FAC | TOR: | | 1.23 | |
| | N DEPTH: 101.5 | | | _ | | | | | | | |
| D S A M P L E | DESCRIPTION OF MATERIAL | SOIL GROUI | PLASTIC LIMIT | % MOIST. | LIQUID | DRY WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D |
| FT. S | SURFACE ELEVATION: 99.5 | | LIN CIN | % | HE | DR | LB | 8 | PE | | |
| 5 | Moist, Hard, Brown Sandy, Silty Clay and some Organic Matter | CL-MI | 13 | | 19 | | | | 6 -37 | - COMPANI | |
| 10 | Moist, Medium Stiff, Brown Sandy, Silty Clay and Organic Matter | CL-Mi | 13 | | 17 | | | | 4 | | |
| | Moist, Medium Dense, Brown Sand | _ | | | | | | | | | |
| 15 ::::: | Wet, Very Loose, Gray Silty, Clayey Sand | SC-SI | 13 | | 18 | | | | 0 | | |
| 20 | Wet, Dense, Light Brown Silty Sand | SM - | NP | | | | | 1 | 8-21 | | |
| 25 | | SW-S | M NP | | | | | 1 | 7 1-11 | | |
| 30 | Wet, Medium Dense, Brown Sand with Silt | - | | | | | | | | | |
| | Wet, Dense, Brown Sand with Silt and Gravel | SW-S | M NP | | | | | | 13 0-16 | | |
| 35 媒體 REMARKS: | Hollow stem augers were utilized to a depth of 8.6'. | | | | | | | | | | |

| | | | BORING NO. 8 PAGE 2 OF 3 | | | | | | | | | | |
|---|--|---------------|--|----------|-----------------|----------|----------------|--------------|---------------------|------------------|---|--|--|
| JOB NO. 070283 Calhoun County | | | DATE: September 24-25, 2013 | | | | | | | | | | |
| JOB NAME: | 0 0 7 | | TYPE OF DRILLING: Rotary Wa | | | | | | | | | | |
| U.S. 167 STATION: 187+87 | | | FOLUDA | res er | | C) | m: | 75A | ,/ (~N | VUE. | | | |
| LOCATION: 32' Left of Center Line of Construction | | | EQUIPMENT: CME 750 w/ CME Automatic Hammer | | | | | | | | | | |
| | Paul Christenberry | | HAMME | R CO | DRREC | | | | | 1.23 | į | | |
| | N DEPTH: 101.5 | | | | | | | | | | - | | |
| D c S | | | | | | | | | | | Γ | | |
| S Y M P L E | DESCRIPTION OF MATERIAL | SOIL GROUP | PLASTIC LIMIT | % MOIST. | LIQUID LIMIT | Y WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | 1 | | |
| FT. S | SURFACE ELEVATION: 99.5 | | | % | 35 | D.R. | LB | <u>2</u> | PE | | L | | |
| | | SW-SN | NP | | | | | 8- | | | | | |
| | Wet, Medium Dense, Gray Gravel with Sand with Silt | - | | | | | | 8- | · | | | | |
| 90 9 | | SM | NP | | | | | I | 3 | | | | |
| | | Olvi | | | | | | 12- | -15 | | | | |
| 45 | Wet, Medium Dense, Gray Silty Sand with Grave | - | | | | | | | _ | | | | |
| \X | | СН | 16 | | 55 | | | 1 | 3 -18 | | | | |
| 50 | Moist, Very Stiff, Gray Clay | • | | | | | | | , 0 | | | | |
| | | СН | 18 | | 53 | | | | 8 -18 | | | | |
| 55 | Moist, Very Stiff, Dark Brown Clay with Trace of Lignite | ga. | | | | | | 300 | | | | | |
| | | CL | 16 | | 47 | | | 1 | 9 -17 | | | | |
| | Moist, Very Stiff, Gray Clay | - | | | | | | | - 1 7 | | | | |
| 60 | | CL | 17 | | 47 | | | | 10 '-20 | | | | |
| 65 | Moist, Hard, Gray Clay with Silt Partings | 40 | | | | | | | | | | | |
| | | CL | 18 | | 27 | | | | 18 I -2 6 | | | | |
| 70 | Moist, Hard, Gray Sandy Clay with Silt Partings and Trace of Lignite | - | | | | | | | | | | | |

| ARKANSAS HWY. & TRANS. DEPARTMENT MATERIALS DIVISION - GEOTECHNICAL SEC. | | | BORING NO. 8 PAGE 3 OF 3 | | | | | | | | | |
|--|--|---------------|--|----------|--------|------------|----------------|--------------|-------------------|------------------|------------------|--|
| JOB NO. 070283 Calhoun County | | | DATE: September 24-25, 2013 | | | | | | | | | |
| JOB NAME: | Bangs Slough - Hwy. 172 Strs. & Apprs. | | TYPE O | F DR | _ | | | Rotar | | | | |
| | U.S. 167 | | | | | | | | | | | |
| STATION: 187+87 | | | EQUIPMENT: CME 750 w/ CME Automatic Hammer | | | | | | | | | |
| | 32' Left of Center Line of Construction | 1 | | | | | | | | | | |
| | Paul Christenberry | | HAMMI | R C | DRREC | TION | FAC | TOR: | | 1.23 | | |
| 71 71 | ON DEPTH: 101.5 | T | 1 | | | | | | | | | |
| D S Y M F H D L | DESCRIPTION OF MATERIAL | SOIL GROUP | 12 | % MOIST. | LIQUID | DRY WEIGHT | LBS PER CU.FT. | NO. OF BLOWS | PER 6-IN. | % S C R | % R Q D | |
| FT. | | | PLAST LIMIT | % } | E E | DR | LB | 0 Z | PEF | | L | |
| | | CL | 16 | | 34 | | | | 2 -25 | | | |
| 75 | Moist, Hard to Very Hard, Gray Clay with Silty | - | | | | | | | | | | |
| | Sand Partings | CL | 16 | | 27 | | | 29 28-34 | | | | |
| | | - | | | | | | | | | | |
| 80 | | SM | NP | | | | | | 26 -62 | | | |
| | Moist, Very Dense, Gray Silty Sand | - | | | | | | | | | | |
| 85 | | CL-ML | 18 | | 24 | | | | 36 -45 | | | |
| | Moist, Very Hard, Gray Silty Clay with Sand | - | | | | | | | | | | |
| 90 | | СН | 17 | | 60 | | | 1 | 11 2-26 | | | |
| 95 | Moist, Hard, Gray Clay | - | | | | | | | | | | |
| | | SC-SN | NP | | | | | 48 | 22 3-52 5") | | | |
| — – 100 | Moist, Very Dense, Gray Silty, Clayey Sand | - | | | | | | | | | | |
| | Moist, Hard, Gray Clay with Sand Partings | CL | 14 | | 44 | | | _ | 11 | | | |
| _] } | Boring Terminated | + | | + | + | | | 13 | | | + | |
| 105 | | | | | | | | | | | | |
| 105 | Hollow stem augers were utilized to a depth of 8.6 | | | | | | | | - | | | |