

HOLE NO. STA. 162+00 OFFSET 31' RT
 DRILLER Green Mountain Boring
 LOG APPROVED BY WLR
 DATE: START 7-29-86 FINISH 7-29-86
 SURFACE ELEVATION 563.5 ±

| DEPTH | BLOWS ON CASING | STANDARD PENETRATION LIMIT | LIQUID PLASTICITY INDEX | MOISTURE | COLOR | CLASSIFICATION AND PROPERTIES OF SOIL AND ROCK |
|------------|-----------------|----------------------------|-------------------------|----------|-------|--|
| 7 | | | | | | Silty sand w/broken stone into silty sand w/sm. stone |
| 100 for 4" | | | | | | Drilled w/augers to 5 then S.S. sample w/refusal on rock @ 5.4' |
| 10 | | | | | | Drilled w/augers to 10' into rock then S.S. 10'-10.5' w/refusal on rock badly fractured - soft St. Catherine formation |
| 20 | | | | | | Drilled w/augers to 15' into rock (soft) then S.S. sample @ 15' w/refusal on spoon, 100/4" same rock material |
| 30 | | | | | | |

HOLE NO. STA. 163+08 OFFSET 2' LT
 DRILLER Green Mountain Boring
 LOG APPROVED BY WLR
 DATE: START 7/17/86 FINISH 7-17-86
 SURFACE ELEVATION 555.0 ±

| DEPTH | BLOWS ON CASING | STANDARD PENETRATION LIMIT | LIQUID PLASTICITY INDEX | MOISTURE | COLOR | CLASSIFICATION AND PROPERTIES OF SOIL AND ROCK |
|-------|-----------------|----------------------------|-------------------------|----------|-------|---|
| 7 | | | | | | Silt w/fine sand w/ fractured stone |
| 11 | | | | | | Silt, sand, cinders & stones |
| 10 | | | | | | Silt & fractured stone |
| 20 | | | | | | Refusal at 10.5' on spoon Cored w/diamond bit RUN #1 10.5'-13.5' Recovery 2" quartz stone other stone soft it wouldn't stay in core barrel |
| 30 | | | | | | Put down boulder buster and drove that to 13.5' Then installed 2 1/2" roller rock bit and drilled thru phyllite to 17.5' then tried diamond bit again |

RUN #2 17.5'-21.5' -- Recovery 2.5'
 Very badly shattered rock some quartz
 St. Catherine formation
 Gray, green slate & phyllite

HOLE NO. STA. 163+98 OFFSET 7' RT
 DRILLER Green Mountain Boring
 LOG APPROVED BY WLR
 DATE: START 7-23-86 FINISH 7-23-86
 SURFACE ELEVATION 559.5 ±

| DEPTH | BLOWS ON CASING | STANDARD PENETRATION LIMIT | LIQUID PLASTICITY INDEX | MOISTURE | COLOR | CLASSIFICATION AND PROPERTIES OF SOIL AND ROCK |
|-------|-----------------|----------------------------|-------------------------|----------|-------|---|
| 12 | | | | | | Silty sand w/small stones |
| 11 | | | | | | Silty sand w/small stones |
| 10 | | | | | | Gray silty sand with small particles |
| 20 | | | | | | Fractured stone REFUSAL ON SPOON AT 15.17' CORED WITH DIAMOND BIT Run #1 15.17'-20.17' Recovery 44" Badly fractured St. Catherine formation Purple and gray green slate & phyllite |
| 30 | | | | | | |

HOLE NO. STA. 164+92 OFFSET 5' LT
 DRILLER Green Mountain Boring
 LOG APPROVED BY WLR
 DATE: START 7-17-86 FINISH 7-17-86
 SURFACE ELEVATION 552.0 ±

| DEPTH | BLOWS ON CASING | STANDARD PENETRATION LIMIT | LIQUID PLASTICITY INDEX | MOISTURE | COLOR | CLASSIFICATION AND PROPERTIES OF SOIL AND ROCK |
|-------|-----------------|----------------------------|-------------------------|----------|-------|---|
| 11 | | | | | | Silty sand w/small stones |
| 8 | | | | | | Silty sand w/stones and old bricks, cinders, etc. |
| 10 | | | | | | Silt w/trace of fine sand & stone |
| 20 | | | | | | Hit rock w/auger at 12' Refusal on augers at 15' Recovery 2" - No sample sand & phyllite Refusal on spoon at 15.16' Cored w/diamond bit RUN #1 15.16'-18.16' Material very soft and fractured. Lost water at 18.16' and diamond bit cemented itself to stone and remained in hole 11 minutes per ft. to core rock Recovery 2.33' Gray carbonaceous phyllite |
| 30 | | | | | | |

HOLE NO. STA. 165+02 OFFSET 32' RT
 DRILLER Green Mountain Boring
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 SURFACE ELEVATION 558.0 ±

| DEPTH | BLOWS ON CASING | STANDARD PENETRATION LIMIT | LIQUID PLASTICITY INDEX | MOISTURE | COLOR | CLASSIFICATION AND PROPERTIES OF SOIL AND ROCK |
|-------|-----------------|----------------------------|-------------------------|----------|-------|--|
| 11 | | | | | | Silty sand w/broken stone |
| 14 | | | | | | Silt w/trace of fine sand and sm. stone |
| 10 | | | | | | Silt w/trace of fine sand & sm. stone into soft rock @ approx. 11' |
| 20 | | | | | | |
| 30 | | | | | | |

HOLE NO. STA. 166+00 OFFSET 33' RT
 DRILLER Green Mountain Boring
 LOG APPROVED BY WLR
 DATE: START 7-16-86 FINISH 7-16-86
 SURFACE ELEVATION 557.0 ±

| DEPTH | BLOWS ON CASING | STANDARD PENETRATION LIMIT | LIQUID PLASTICITY INDEX | MOISTURE | COLOR | CLASSIFICATION AND PROPERTIES OF SOIL AND ROCK |
|-------|-----------------|----------------------------|-------------------------|----------|-------|--|
| 18 | | | | | | Silty sand w/stone |
| 23 | | | | | | Silt w/stone |
| 10 | | | | | | Refusal on spoon at 11' Cored w/Diamond bit RUN #1 13'-14' Recovery 6" fractured rock bit plugged RUN #2 14'-16' Recovery 2" - phyllite RUN #3 16'-18' Recovery 18" Hortonville formation gray carbonaceous phyllite badly fractured |
| 20 | | | | | | |
| 30 | | | | | | |

HOLE NO. STA. 168+12 OFFSET 23' RT
 DRILLER Green Mountain Boring
 LOG APPROVED BY WLR
 DATE: START 7-30-86 FINISH 7-30-86
 SURFACE ELEVATION 543.5 ±

| DEPTH | BLOWS ON CASING | STANDARD PENETRATION LIMIT | LIQUID PLASTICITY INDEX | MOISTURE | COLOR | CLASSIFICATION AND PROPERTIES OF SOIL AND ROCK |
|-------|-----------------|----------------------------|-------------------------|----------|-------|---|
| 6 | | | | | | Silty sand w/stone |
| 12 | | | | | | Clean brown silt |
| 10 | | | | | | Silt into silt w/stone |
| 20 | | | | | | Very soft rock (St. Catherine fm.) REFUSAL ON AUGERS & SPOON AT 17.5' Cored with diamond bit from 17.5'-22.5' total rec. 1 Pt. of St. Catherine fm. (AN core) soft rock - phyllite, slate w/ quartz. Drilled w/roller bit to 22.5' (NK) Cored w/diamond bit (NK) 22.5'-27.5' Total rec. 5' of St. Catherine fm. (mod. hard-phyllite, slate w/Qtz.) |
| 30 | | | | | | |

HOLE NO. STA. 167+00 OFFSET 13' RT
 DRILLER Green Mountain Boring
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|------------|-----------------|----------------------------|-------------------------|----------|-------|---|
| 140 for 6" | | | | | | Silty sand w/stone |
| 12 | | | | | | Clean silt w/trace of clay |
| 10 | | | | | | Silt w/trace of clay into silty till |
| 20 | | | | | | Qtz. with stone Drilled w/diamond bit (NK) from 15.5'-20.5' w/60" recovery of moderately hard St. Catherine fm. (phyllite, slate w/Qtz.) |
| 30 | | | | | | |

| | | |
|---------------------------------|-----------|--------------------------|
| STATE OF VERMONT | | |
| AGENCY OF TRANSPORTATION | | |
| Town Of | POWNA | Bridge No. |
| Highway No. | ROUTE 346 | Log Sta. |
| | | Surv. Sta. |
| BORING INFORMATION SHEET | | |
| Designed By | J.S.J. | Drawn By |
| Checked By | Date | Bridge Design Supervisor |
| | | Date |
| PROJECT | POWNA | PROJECT NO. |
| | | RS0107 (7) |
| L.C. Info. | | |
| Bridge Sheet No. | | Sheet 169 of 319 |

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