

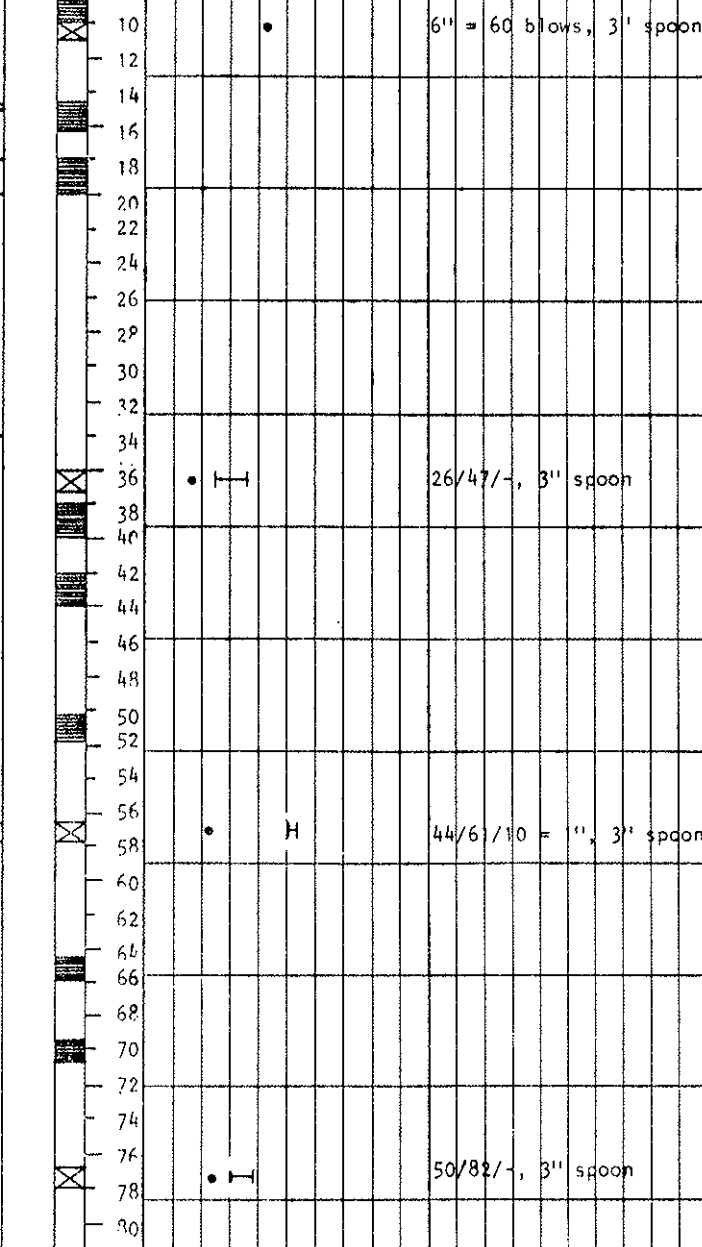









| PROJECT: Old Crow Water Supply | | HOLE NO.: WW 1 | | PROJECT NO.: 209-3546 | | | | | | | | | | |
|--|--|---|--------------------|---------------------------------|--------------------------------|--|-----|----------------------|---|---|---|---|---|---|
| LOCATION: Old Crow, Yukon | | SURFACE ELEVATION: | | | | | | | | | | | | |
| DRILL: Schramm Rotadrill | | | | | | | | | | | | | | |
| SAMPLE TYPE: <input type="checkbox"/> THIN WALLED TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> DISTURBED <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE <input type="checkbox"/> OTHER | | | | | | | | | | | | | | |
| DEPTH (m.) | SOIL DESCRIPTION | UNIFIED SOIL CLASS. | SAMPLE DEPTH (ft.) | WATER CONTENT-% | | | | COMPRESSIVE STRENGTH | | | | | | |
| | | | | PLASTIC LIMIT (W _p) | LIQUID LIMIT (W _L) | | TSF | | | | | | | |
| | | | | 20 | 40 | 60 | 80 | 1 | 2 | 3 | 4 | 5 | ▲ | △ |
| | | | | | | | | | | | | | | |
| 1 | SNOW | | | | | | | | | | | | | |
| | SILT (Nbe) - some clay, trace of wood chips, olive-brown | | 2 | | | | | | | | | | | |
| | CLAY (Nbe) - silty, trace of wood, gray | | 4 | | | | | | | | | | | |
| 2 | | | 6 | | | | | | | | | | | |
| | SILT (Vs, Vx, Vr 10%) - clayey, trace to some fine sand lenses, trace of wood | | 8 | | | | | | | | | | | |
| 3 | | | 10 | | | | | | | | | | | |
| | | | 12 | | | | | | | | | | | |
| | SAND - frozen, fine grained, brown | | 14 | | | | | | | | | | | |
| 5 | | | 16 | | | | | | | | | | | |
| | SILT - frozen, sandy, brown | | 18 | | | | | | | | | | | |
| 6 | | | 20 | | | | | | | | | | | |
| | GRAVEL - sandy, medium grained, moist to damp, olive brown, probably unfrozen | | 22 | | | | | | | | | | | |
| 7 | | | 24 | | | | | | | | | | | |
| | GRAVEL - possibly unfrozen, silty, medium grained, some fine grained sand, moist to wet, brown, very dirty | | 26 | | | | | | | | | | | |
| 8 | | | 28 | | | | | | | | | | | |
| 9 | | | 30 | | | | | | | | | | | |
| 10 | - frozen at 10 m | | 32 | | | | | | | | | | | |
| | | | 34 | | | | | | | | | | | |
| 11 | | | 36 | | | | | | | | | | | |
| | CLAY (Vs 15%) - silty, some silt and fine grained sand lenses, grey | | 38 | | | | | | | | | | | |
| 12 | | | 40 | | | | | | | | | | | |
| 13 | | | 42 | | | | | | | | | | | |
| 14 | | | 44 | | | | | | | | | | | |
| 15 | | | 46 | | | | | | | | | | | |
| 16 | | | 48 | | | | | | | | | | | |
| 17 | | | 50 | | | | | | | | | | | |
| 18 | | | 52 | | | | | | | | | | | |
| | SILT (Vr, Vs, 15%) - clayey, occasional ice lenses to 10 mm thick, grey | | 54 | | | | | | | | | | | |
| 18 | | | 56 | | | | | | | | | | | |
| | | | 58 | | | | | | | | | | | |
| 19 | | | 60 | | | | | | | | | | | |
| 20 | | | 62 | | | | | | | | | | | |
| 21 | | | 64 | | | | | | | | | | | |
| | SILT - (Vr, Vx, Vs, 20%) - clayey, brown, horizontal and vertical ice lenses with crystalline ice to 10 mm thick, some lenses at 45° also with crystalline ice | | 66 | | | | | | | | | | | |
| 21 | | | 68 | | | | | | | | | | | |
| 22 | | | 70 | | | | | | | | | | | |
| 23 | | | 72 | | | | | | | | | | | |
| 24 | | | 74 | | | | | | | | | | | |
| | | | 76 | | | | | | | | | | | |
| 24 | | | 78 | | | | | | | | | | | |
| 25 | | | 80 | | | | | | | | | | | |
|  DEPTH TO WATER:  DEPTH TO SLOUGH: — | | WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 | | | | STANDARD PENETRATION: N- <input checked="" type="checkbox"/> | | | | | | | | |
| | | WEIGHT-O P.C.F. 100 110 120 130 140 150 | | | | | | | | | | | | |
| | | COMPLETION DEPTH: 79.3 m | | | | DATE DRILLED: 1982 02 17 | | | | | | | | |
| | | LOGGED BY: PKG | | | | DRAWING NO.: | | | | | | | | |



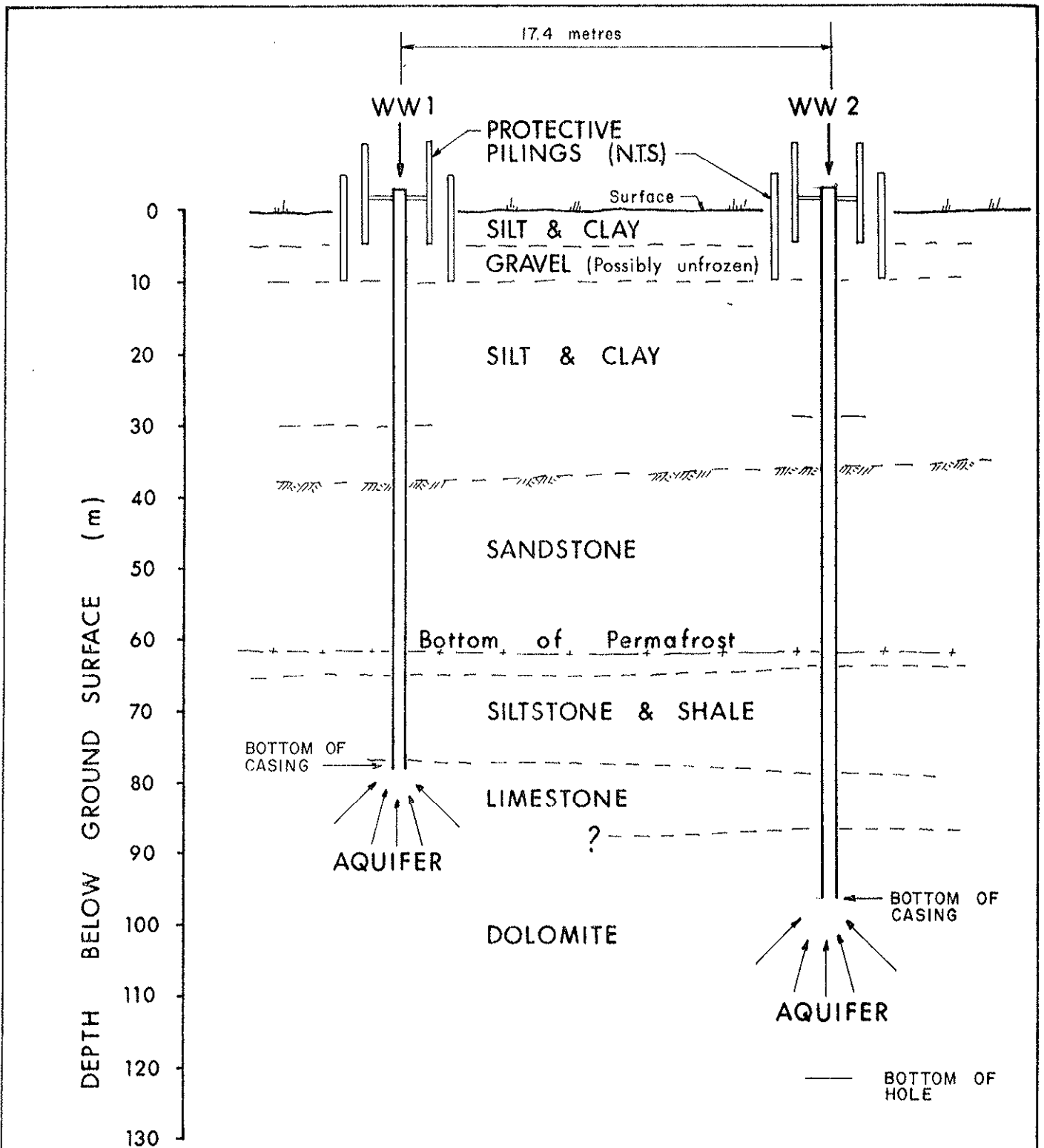
| PROJECT: Old Crow Water Supply | | HOLE NO.: WW 1 | | PROJECT NO.: 209-3546 | | | | | | | | | | |
|--|--|---|--------------------|--|--------------------------------|----|-----|--|---|---|---|---|---|---|
| LOCATION: Old Crow, Yukon | | SURFACE ELEVATION: | | | | | | | | | | | | |
| DRILL: Schramm Rotadrill | | | | | | | | | | | | | | |
| SAMPLE TYPE: <input type="checkbox"/> THIN WALLED TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> DISTURBED <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE <input type="checkbox"/> OTHER | | | | | | | | | | | | | | |
| DEPTH (m.) | SOIL DESCRIPTION | UNIFIED SOIL CLASS. | SAMPLE DEPTH (ft.) | WATER CONTENT-% | | | | COMPRESSIVE STRENGTH | | | | | | |
| | | | | PLASTIC LIMIT (W _p) | LIQUID LIMIT (W _L) | | TSP | | | | | | | |
| | | | | 20 | 40 | 60 | 80 | 1 | 2 | 3 | 4 | 5 | ▲ | ▲ |
| 24 | SILT - as above, frozen | | 80 | | | | | | | | | | | |
| 25 | | | 82 | | | | | | | | | | | |
| 26 | | | 84 | | | | | | | | | | | |
| 27 | CLAY - silty to some silt, grey | | 86 | | | | | | | | | | | |
| 28 | | | 88 | | | | | | | | | | | |
| 29 | SAND - frozen, clayey, trace of gravel and cobbles, quartz-rich, fine grained, brown, ice lenses | | 90 | | | | | | | | | | | |
| 30 | | | 92 | | | | | | | | | | | |
| 31 | SILT AND SAND - frozen, trace of clay, brown | | 94 | | | | | | | | | | | |
| 32 | | | 96 | | | | | | | | | | | |
| 33 | SILT AND SAND - frozen, trace of clay, medium grained sand, brown, ice crystals | | 98 | | | | | | | | | | | |
| 34 | SAND - frozen, fine grained, uniform, grey | | 100 | | | | | | | | | | | |
| 35 | | | 102 | | | | | | | | | | | |
| 36 | SAND - frozen, fine grained, uniform, golden brown, ice crystals | | 104 | | | | | | | | | | | |
| 37 | | | 106 | | | | | | | | | | | |
| 38 | SANDSTONE - small quartz/quartzite pebbles, fine grained, uniform, dense, well indurated, brown | | 108 | | | | | | | | | | | |
| 39 | | | 110 | | | | | | | | | | | |
| 40 | - possibly siltstone | | 112 | | | | | | | | | | | |
| 41 | | | 114 | | | | | | | | | | | |
| 42 | | | 116 | | | | | | | | | | | |
| 43 | | | 118 | | | | | | | | | | | |
| 44 | | | 120 | | | | | | | | | | | |
| 45 | | | 122 | | | | | | | | | | | |
| 46 | | | 124 | | | | | | | | | | | |
| 47 | | | 126 | | | | | | | | | | | |
| 48 | - dark brown, trace of mafic minerals | | 128 | | | | | | | | | | | |
| 49 | | | 130 | | | | | | | | | | | |
| | | | 132 | | | | | | | | | | | |
| | | | 134 | | | | | | | | | | | |
| | | | 136 | | | | | | | | | | | |
| | | | 138 | | | | | | | | | | | |
| | | | 140 | | | | | | | | | | | |
| | | | 142 | | | | | | | | | | | |
| | | | 144 | | | | | | | | | | | |
| | | | 146 | | | | | | | | | | | |
| | | | 148 | | | | | | | | | | | |
| | | | 150 | | | | | | | | | | | |
| | | | 152 | | | | | | | | | | | |
| | | | 154 | | | | | | | | | | | |
| | | | 156 | | | | | | | | | | | |
| | | | 158 | | | | | | | | | | | |
| | | | 160 | | | | | | | | | | | |
|  | | DEPTH TO WATER:  DEPTH TO SLOUGH:  | | WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150 | | | | STANDARD PENETRATION: N- <input checked="" type="checkbox"/> | | | | | | |
| COMPLETION DEPTH: 79.3 m | | | | DATE DRILLED: 1982 02 17, 18 | | | | | | | | | | |
| LOGGED BY: PKG | | | | DRAWING NO.: | | | | | | | | | | |

-----Casing Originally Set To This Depth-----
 Reset to 78 m (256 feet) on March 24, 1982

| PROJECT: Old Crow Water Supply | | HOLE NO.: WW 1 | | PROJECT NO.: 209-3546 | | | | | | | | | | | | | | | | |
|---|--|---|--------------------|---|--------------------------------|------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| LOCATION: Old Crow, Yukon | | SURFACE ELEVATION: | | | | | | | | | | | | | | | | | | |
| DRILL: Schramm Rotadrill | | | | | | | | | | | | | | | | | | | | |
| SAMPLE TYPE: <input checked="" type="checkbox"/> THIN WALLED TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> DISTURBED <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE <input type="checkbox"/> OTHER | | | | | | | | | | | | | | | | | | | | |
| DEPTH (m.) | SOIL DESCRIPTION | UNIFIED SOIL CLASS. | SAMPLE DEPTH (ft.) | WATER CONTENT-% : ● | | | | COMPRESSIVE STRENGTH | | | | | | | | | | | | |
| | | | | PLASTIC LIMIT (W _p) | LIQUID LIMIT (W _L) | | Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400 | | | | | | | | | | | | | |
| 48 | SANDSTONE-as above, frozen | | 158 | | | | | | | | | | | | | | | | | |
| 49 | | | 160 | | | | | | | | | | | | | | | | | |
| 50 | | | 162 | | | | | | | | | | | | | | | | | |
| 51 | | | 164 | | | | | | | | | | | | | | | | | |
| 52 | | | 166 | | | | | | | | | | | | | | | | | |
| 53 | | | 168 | | | | | | | | | | | | | | | | | |
| 54 | | | 170 | | | | | | | | | | | | | | | | | |
| 55 | - finer grained, light golden brown | | 172 | | | | | | | | | | | | | | | | | |
| 56 | - ice lenses up to approximately 250 mm thick from 56.4m to 57.9 m | | 174 | | | | | | | | | | | | | | | | | |
| 57 | | | 176 | | | | | | | | | | | | | | | | | |
| 58 | | | 178 | | | | | | | | | | | | | | | | | |
| 59 | - possible unfrozen zones | | 180 | | | | | | | | | | | | | | | | | |
| 60 | | | 182 | | | | | | | | | | | | | | | | | |
| 61 | - more pebbles to 8 mm diameter, frozen from 61.0 m to 64.0 m, darker brown colour | | 184 | | | | | | | | | | | | | | | | | |
| 62 | | | 186 | | | | | | | | | | | | | | | | | |
| 63 | - medium grained quartzitic sandstone | | 188 | | | | | | | | | | | | | | | | | |
| 64 | | | 190 | | | | | | | | | | | | | | | | | |
| 65 | SHALE - appears unfrozen, some sandstone lenses, friable, platy, grey, graphitic | | 192 | | | | | | | | | | | | | | | | | |
| 66 | | | 194 | | | | | | | | | | | | | | | | | |
| 67 | SILTSTONE AND SHALE - unfrozen, uniform, dry to damp, feels "talc", grey | | 196 | | | | | | | | | | | | | | | | | |
| 68 | - interbeds of fine, brown, uniform sand and some graphite (?) from 67.1m to 71.6m | | 198 | | | | | | | | | | | | | | | | | |
| 69 | | | 200 | | | | | | | | | | | | | | | | | |
| 70 | | | 202 | | | | | | | | | | | | | | | | | |
| 71 | - poorly lithified | | 204 | | | | | | | | | | | | | | | | | |
| 72 | SANDSTONE - trace shale, fine grained, uniform, damp to moist, brown, thin shale interbeds | | 206 | | | | | | | | | | | | | | | | | |
| 73 | | | 208 | | | | | | | | | | | | | | | | | |
| | | | 210 | | | | | | | | | | | | | | | | | |
| | | | 212 | | | | | | | | | | | | | | | | | |
| | | | 214 | | | | | | | | | | | | | | | | | |
| | | | 216 | | | | | | | | | | | | | | | | | |
| | | | 218 | | | | | | | | | | | | | | | | | |
| | | | 220 | | | | | | | | | | | | | | | | | |
| | | | 222 | | | | | | | | | | | | | | | | | |
| | | | 224 | | | | | | | | | | | | | | | | | |
| | | | 226 | | | | | | | | | | | | | | | | | |
| | | | 228 | | | | | | | | | | | | | | | | | |
| | | | 230 | | | | | | | | | | | | | | | | | |
| | | | 232 | | | | | | | | | | | | | | | | | |
| | | | 234 | | | | | | | | | | | | | | | | | |
| | | | 236 | | | | | | | | | | | | | | | | | |
| | | | 238 | | | | | | | | | | | | | | | | | |
|  | | DEPTH TO WATER:  | | WET UNIT $\frac{KN}{m^3}$ 16 18 20 22 20 40 60 80 | | | | STANDARD PENETRATION: N-  | | | | | | | | | | | | |
| DEPTH TO SLOUGH:  | | COMPLETION DEPTH: 79.3 m | | | | DATE DRILLED: 1982 02 17, 18 | | | | | | | | | | | | | | |
| | | LOGGED BY: PKG | | | | DRAWING NO.: | | | | | | | | | | | | | | |



| PROJECT: Old Crow Water Supply | | HOLE NO.: WW 1 | | PROJECT NO.: 209-3546 | | | | | | | | |
|--|---|-------------------------------|--------------------|---|--------------------------------|----|------------------------------|--|--|--|--|--|
| LOCATION: Old Crow, Yukon | | SURFACE ELEVATION: | | | | | | | | | | |
| DRILL: Schramm Rotadrill | | | | | | | | | | | | |
| SAMPLE TYPE: <input checked="" type="checkbox"/> THIN WALLED TUBE <input checked="" type="checkbox"/> SPLIT SPOON <input type="checkbox"/> DISTURBED <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> CORE <input type="checkbox"/> OTHER | | | | | | | | | | | | |
| DEPTH (m.) | SOIL DESCRIPTION | UNIFIED SOIL CLASS. | SAMPLE DEPTH (ft.) | WATER CONTENT-% | | | | COMPRESSIVE STRENGTH | | | | |
| | | | | PLASTIC LIMIT (W _p) | LIQUID LIMIT (W _L) | | Pocket Penetrometer | | | | | |
| | | | | 20 | 40 | 60 | 80 | TSF 1 2 3 4 5 | | | | |
| 72 | SANDSTONE (as above) | | 238 | | | | | | | | | |
| 73 | SILTSTONE - uniform, light brown to white, sandstone interbeds, quartzitic | | 240 | | | | | | | | | |
| | | | 242 | | | | | | | | | |
| 74 | | | 244 | | | | | | | | | |
| 75 | | | 246 | | | | | | | | | |
| 76 | | | 248 | | | | | | | | | |
| 77 | | | 250 | | | | | | | | | |
| | | | 252 | | | | | | | | | |
| 78 | LIMESTONE - dark grey, crystalline, fractured, water-bearing | | 254 | | | | | | | | | |
| | | | 256 | BOTTOM OF CASING | | | | | | | | |
| 79 | | | 258 | (Reset on March 24, 1982) | | | | | | | | |
| | | | 260 | | | | | | | | | |
| 80 | END OF HOLE (79.3 m) | | 262 | | | | | | | | | |
| | | | 264 | | | | | | | | | |
| 81 | Note: Artesian water conditions encountered at 78.0 m. Initial flow from top of casing at approximately 6.1 L/s. Could not drill further. | | 266 | | | | | | | | | |
| 82 | | | 268 | | | | | | | | | |
| | | | 270 | | | | | | | | | |
| 83 | | | 272 | | | | | | | | | |
| | | | 274 | | | | | | | | | |
| 84 | | | 276 | | | | | | | | | |
| | | | 278 | | | | | | | | | |
| 85 | | | 280 | | | | | | | | | |
| | | | 282 | | | | | | | | | |
| 86 | | | 284 | | | | | | | | | |
| | | 286 | | | | | | | | | | |
| 87 | | 288 | | | | | | | | | | |
| | | 290 | | | | | | | | | | |
| 88 | | 292 | | | | | | | | | | |
| | | 294 | | | | | | | | | | |
| 89 | | 296 | | | | | | | | | | |
| | | 298 | | | | | | | | | | |
| 90 | | 300 | | | | | | | | | | |
| | | 302 | | | | | | | | | | |
| 91 | | 304 | | | | | | | | | | |
| | | 306 | | | | | | | | | | |
| 92 | | 308 | | | | | | | | | | |
| | | 310 | | | | | | | | | | |
| 93 | | 312 | | | | | | | | | | |
| | | 314 | | | | | | | | | | |
| 94 | | 316 | | | | | | | | | | |
| | | DEPTH TO WATER: $\frac{y}{y}$ | | WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 | | | | STANDARD PENETRATION: N- <input checked="" type="checkbox"/> | | | | |
| | | DEPTH TO SLOUGH: — | | WEIGHT-O P.C.F. 100 110 120 130 140 150 | | | | | | | | |
| | | | | COMPLETION DEPTH: 79.3 m | | | DATE DRILLED: 1982 02 17, 18 | | | | | |
| | | | | LOGGED BY: PKG | | | DRAWING NO.: | | | | | |





GENERALIZED SUBSURFACE CONDITIONS
WATER WELL SITE
OLD CROW, YUKON

NOTE
 HORIZONTALLY N.T.S.

| | |
|--|------------------|
| EBA Engineering Consultants Ltd.  | |
| JOB NO.: 209-3546 | DATE: 1982-06-07 |
| DRAWN BY: MW | DRAWING NO.: |
| REVIEWED BY:  | 3546 - A - 2 |