

KINGDOM OF THAILAND

FEASIBILITY STUDY

ON

LAM TA KHONG PUMPED STORAGE

DEVELOPMENT PROJECT

FINAL REPORT

APPENDIX

NOVEMBER, 1991

JAPAN INTERNATIONAL COOPERATION AGENCY

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KINGDOM OF THAILAND

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ON
LAM TA KHONG PUMPED STORAGE
DEVELOPMENT PROJECT**

FINAL REPORT

APPENDIX

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NOVEMBER, 1991

JAPAN INTERNATIONAL COOPERATION AGENCY



APPENDIX

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APPENDIX — A

GEOLOGY AND CONSTRUCTION MATERIALS

APPENDIX-A GEOLOGY AND CONSTRUCTION MATERIALS

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A-1 LOGS OF DRILL HOLES

EGAT

LOG OF BORING

Project LAM TA KHONG Location Upper Pond Boring No. DUU-1 Log No. 1 of 4
 Co-ordinates 1638.046 N 775.411 E Elevation 632.141 m. MSL. Depth of Hole 100.00 M Commenced 14/8/90
 Angle from Horizontal 90° Total Depth Core Recovery 97.60 Depth of Overburden 13.30 M. Completed 21/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 97.60 M. Logged by A. PATTANA

| Date | Depth M | R.Q.D. % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drift | 50 Pressure kg | 100 Time min | Depth M | Elevation | |
|------------|------------|-------------|----------------------|-------------------|--------------------|---|-----------------------|----------------|------------|----------|---------------------------|---|--|-------------|-------|-------------------|-----------------|------------|-----------|--|
| 14/8/90 | 0 | | Overburden | | 100% | TUNGSTEN CARBIDE | CASING | red & brown | | | | 0.00-13.30 M; Overburden, 0.00-5.00 M; Stiff clay, red & brown, 5.00-6.10 M; Completely weathered rock, | 0.00-5.00 M. CONSTANT HEAD TEST k= 0.7×10 ⁻⁵ cm/sec | | | | | | | |
| | 1 | | | | | | | | | | | 6.10-6.30 M; Sandstone boulder | 5.00-10.00 M. CONSTANT HEAD TEST k= 8.3×10 ⁻⁶ cm/sec | | | | | | | |
| | 2 | | | | | | | | | | | 6.30-13.30 M; clay, hard & dense, pale gray | | | | | | | | |
| | 3 | | | | | | | | | | | 0.00- 0.40 M :Top soil, 0.40- 3.20 M :Residual soil, 3.20-13.30 M :Highly weathered claystone) | 10.00-15.00 M. VARIABLE HEAD TEST k= 2.3×10 ⁻⁴ cm/sec | | | | | | | |
| | 4 | 76 | | | | | | | | | | 13.30-49.05 M; Quartzitic Sandstone, very hard & dense, bedding 0°-10°, fine to coarse grained well cemented, irregular, vertical fracture at 15.00- 16.00 M; | 15.00-20.00 M. GWL 9.70 M | | | | | | | |
| 15/8/90 | 5 | | Overburden | | 100% | NMLC DIAMOND CORE BIT, Ø of core 54.7 mm. | CASING | brown gray | | | | 14.00 M. | | | | | | | | |
| | 6 | | | | | | | | | | | small cavity surface texture (pebble loose) at 19.90 M, 20.30 M, 24.25 M, 34.35-34.65 M, 35.20-35.40 M, 39.00 M, 39.15 M, 40.85 M, 44.60-46.30 M, 46.90- 47.20 M, 47.95-48.25 M, 48.95-49.00 M, | 20.00-25.00 M. GWL 13.85 | | | | | | | |
| | 7 | 55 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | |
| | 9 | 95 | | | | | | | | | | | | | | | | | | |
| 16/8/90 | 10 | | Quartzitic Sandstone | | 100% | NMLC DIAMOND CORE BIT, Ø of core 54.7 mm. | CASING | pale gray | | | | 0.00- 0.40 M :Top soil, 0.40- 3.20 M :Residual soil, 3.20-13.30 M :Highly weathered claystone) | 10.00-15.00 M. VARIABLE HEAD TEST k= 2.3×10 ⁻⁴ cm/sec | | | | | | | |
| | 1 | | | | | | | | | | | 13.30-49.05 M; Quartzitic Sandstone, very hard & dense, bedding 0°-10°, fine to coarse grained well cemented, irregular, vertical fracture at 15.00- 16.00 M; | 15.00-20.00 M. GWL 9.70 M | | | | | | | |
| | 2 | | | | | | | | | | | small cavity surface texture (pebble loose) at 19.90 M, 20.30 M, 24.25 M, 34.35-34.65 M, 35.20-35.40 M, 39.00 M, 39.15 M, 40.85 M, 44.60-46.30 M, 46.90- 47.20 M, 47.95-48.25 M, 48.95-49.00 M, | 20.00-25.00 M. GWL 13.85 | | | | | | | |
| | 3 | 76 | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | |
| 17-18/8/90 | 5 | | Quartzitic Sandstone | | 100% | NMLC DIAMOND CORE BIT, Ø of core 54.7 mm. | CASING | light gray | | | | 0.00- 0.40 M :Top soil, 0.40- 3.20 M :Residual soil, 3.20-13.30 M :Highly weathered claystone) | 10.00-15.00 M. VARIABLE HEAD TEST k= 2.3×10 ⁻⁴ cm/sec | | | | | | | |
| | 6 | | | | | | | | | | | 13.30-49.05 M; Quartzitic Sandstone, very hard & dense, bedding 0°-10°, fine to coarse grained well cemented, irregular, vertical fracture at 15.00- 16.00 M; | 15.00-20.00 M. GWL 9.70 M | | | | | | | |
| | 7 | | | | | | | | | | | small cavity surface texture (pebble loose) at 19.90 M, 20.30 M, 24.25 M, 34.35-34.65 M, 35.20-35.40 M, 39.00 M, 39.15 M, 40.85 M, 44.60-46.30 M, 46.90- 47.20 M, 47.95-48.25 M, 48.95-49.00 M, | 20.00-25.00 M. GWL 13.85 | | | | | | | |
| | 8 | 55 | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | |
| 20/8/90 | 10 | | Quartzitic Sandstone | | 100% | NMLC DIAMOND CORE BIT, Ø of core 54.7 mm. | CASING | light gray | | | | 0.00- 0.40 M :Top soil, 0.40- 3.20 M :Residual soil, 3.20-13.30 M :Highly weathered claystone) | 10.00-15.00 M. VARIABLE HEAD TEST k= 2.3×10 ⁻⁴ cm/sec | | | | | | | |
| | 1 | | | | | | | | | | | 13.30-49.05 M; Quartzitic Sandstone, very hard & dense, bedding 0°-10°, fine to coarse grained well cemented, irregular, vertical fracture at 15.00- 16.00 M; | 15.00-20.00 M. GWL 9.70 M | | | | | | | |
| | 2 | | | | | | | | | | | small cavity surface texture (pebble loose) at 19.90 M, 20.30 M, 24.25 M, 34.35-34.65 M, 35.20-35.40 M, 39.00 M, 39.15 M, 40.85 M, 44.60-46.30 M, 46.90- 47.20 M, 47.95-48.25 M, 48.95-49.00 M, | 20.00-25.00 M. GWL 13.85 | | | | | | | |
| | 3 | 76 | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | |
| 20/8/90 | 5 | | Quartzitic Sandstone | | 100% | NMLC DIAMOND CORE BIT, Ø of core 54.7 mm. | CASING | light gray | | | | 0.00- 0.40 M :Top soil, 0.40- 3.20 M :Residual soil, 3.20-13.30 M :Highly weathered claystone) | 10.00-15.00 M. VARIABLE HEAD TEST k= 2.3×10 ⁻⁴ cm/sec | | | | | | | |
| | 6 | | | | | | | | | | | 13.30-49.05 M; Quartzitic Sandstone, very hard & dense, bedding 0°-10°, fine to coarse grained well cemented, irregular, vertical fracture at 15.00- 16.00 M; | 15.00-20.00 M. GWL 9.70 M | | | | | | | |
| | 7 | | | | | | | | | | | small cavity surface texture (pebble loose) at 19.90 M, 20.30 M, 24.25 M, 34.35-34.65 M, 35.20-35.40 M, 39.00 M, 39.15 M, 40.85 M, 44.60-46.30 M, 46.90- 47.20 M, 47.95-48.25 M, 48.95-49.00 M, | 20.00-25.00 M. GWL 13.85 | | | | | | | |
| | 8 | 55 | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | |
| 20/8/90 | 10 | | Quartzitic Sandstone | | 100% | NMLC DIAMOND CORE BIT, Ø of core 54.7 mm. | CASING | light gray | | | | 0.00- 0.40 M :Top soil, 0.40- 3.20 M :Residual soil, 3.20-13.30 M :Highly weathered claystone) | 10.00-15.00 M. VARIABLE HEAD TEST k= 2.3×10 ⁻⁴ cm/sec | | | | | | | |
| | 1 | | | | | | | | | | | 13.30-49.05 M; Quartzitic Sandstone, very hard & dense, bedding 0°-10°, fine to coarse grained well cemented, irregular, vertical fracture at 15.00- 16.00 M; | 15.00-20.00 M. GWL 9.70 M | | | | | | | |
| | 2 | | | | | | | | | | | small cavity surface texture (pebble loose) at 19.90 M, 20.30 M, 24.25 M, 34.35-34.65 M, 35.20-35.40 M, 39.00 M, 39.15 M, 40.85 M, 44.60-46.30 M, 46.90- 47.20 M, 47.95-48.25 M, 48.95-49.00 M, | 20.00-25.00 M. GWL 13.85 | | | | | | | |
| | 3 | 76 | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | |

Core loss → Weathering (1(fresh)-5(decomposed)) Hardness (1(hard)-6(soft)) Average length of Core (more than 80cm), 2(80cm, 20cm), 3(20cm, 5cm), 4(less than 5cm, 2) (probe)

EGAT

LOG OF BORING

Project LAM TA KHONG Location Upper Pond Boring No. D11-1 Log No. 2 of 4
 Co-ordinates 1638,046 N 775,411 E Elevation 632.141 m.MSL Depth of Hole 100.00 M Commenced 14/8/90
 Angle from Horizontal 90° Total Depth Core Recovery 97.60 Depth of Overburden 13.30 M Completed 21/9/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 97.60 M Logged by A. PATTANA

| Date | Depth M | R.C.D % | Geology | Symbol of geology | Core recovery | Kind of Bit Φ of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drill 90 Pressure 100 Time | Depth M | Elevation |
|------------|------------|------------|----------------------------|-------------------|---------------|--|-----------------------|----------------------|------------|----------|---------------------------|---|-------------------------------------|--------------|----------------------------------|------------|-----------|
| 20/8/90 | 30 | | Quartzitic Sandstone | [Symbol] | 100% | NMCB DIAMOND CORE BIT Φ of Core 51.7 mm. | CEMENTATION | light gray | [Symbol] | [Symbol] | [Symbol] | Small cavity surface texture (pebble loose) at 34.35-34.65 M, 35.20-35.40 M, 39.00-39.15 M, 40.80 M, 44.60-46.30 M, 46.90-47.20 M, 47.95-48.25 M, 48.95-49.00 M, | 30.00-35.00 M. | [Symbol] | [Symbol] | [Symbol] | [Symbol] |
| | 1 | 93 | | | | | | | | | | | 1.1* | GWL 24.00 M. | | | |
| | 2 | 84 | | | | | | | | | | | 0.8 | GWL 32.10 M. | | | |
| | 3 | 71 | | | | | | | | | | | 43* | GWL 32.10 M. | | | |
| 22/3/90 | 4 | | Quartzitic Sandstone | [Symbol] | 100% | NMCB DIAMOND CORE BIT Φ of Core 51.7 mm. | CEMENTATION | yellowish brown | [Symbol] | [Symbol] | [Symbol] | poor cemented at 44.50-49.05 M. | 35.00-40.00 M. | [Symbol] | [Symbol] | [Symbol] | [Symbol] |
| | 5 | 84 | | | | | | | | | | | 1.5 | GWL 42.35 M. | | | |
| | 6 | 71 | | | | | | | | | | | 0.3 | GWL 36.75 M. | | | |
| | 7 | 60 | | | | | | | | | | | 0.9 | [Symbol] | | | |
| 23/8/90 | 8 | | clay | [Symbol] | 100% | NMCB DIAMOND CORE BIT Φ of Core 51.7 mm. | CEMENTATION | white | [Symbol] | [Symbol] | [Symbol] | 49.05-49.70 M; claystone, idense | 40.00-45.00 M. | [Symbol] | [Symbol] | [Symbol] | [Symbol] |
| | 9 | 91 | | | | | | | | | | | 0.3 | GWL 36.75 M. | | | |
| | 10 | 80 | | | | | | | | | | | 0.9 | [Symbol] | | | |
| | 11 | 70 | | | | | | | | | | | 0.3 | GWL 36.75 M. | | | |
| 24/8/90 | 12 | | Alternation of SS, & S.St. | [Symbol] | 100% | NMCB DIAMOND CORE BIT Φ of Core 51.7 mm. | CEMENTATION | various gray & brown | [Symbol] | [Symbol] | [Symbol] | 49.70-56.20 M; Alternation of sandstone and siltstone, some pebbles in ground mass at 50.60-50.80 M, highly to completely weathered at 52.30-55.50 M, core loss at 53.30-53.85 M. | 43.10-50.00 M. | [Symbol] | [Symbol] | [Symbol] | [Symbol] |
| | 13 | 89 | | | | | | | | | | | 0.3 | GWL 36.75 M. | | | |
| | 14 | 78 | | | | | | | | | | | 0.9 | [Symbol] | | | |
| | 15 | 68 | | | | | | | | | | | 0.9 | [Symbol] | | | |
| 27-28/8/90 | 16 | | Siltstone | [Symbol] | 100% | NMCB DIAMOND CORE BIT Φ of Core 51.7 mm. | CEMENTATION | reddish brown | [Symbol] | [Symbol] | [Symbol] | 56.20-59.20 M; Siltstone, dense, massive | 44.50-49.05 M. | [Symbol] | [Symbol] | [Symbol] | [Symbol] |
| | 17 | 89 | | | | | | | | | | | 0.3 | GWL 36.75 M. | | | |
| | 18 | 78 | | | | | | | | | | | 0.9 | [Symbol] | | | |
| | 19 | 68 | | | | | | | | | | | 0.9 | [Symbol] | | | |
| 60 | 20 | | SS. | [Symbol] | 100% | NMCB DIAMOND CORE BIT Φ of Core 51.7 mm. | CEMENTATION | [Symbol] | [Symbol] | [Symbol] | [Symbol] | 59.20-63.20 M; Sandstone | 50.00-55.00 M. | [Symbol] | [Symbol] | [Symbol] | [Symbol] |
| | 21 | 100 | | | | | | | | | | | 0.3 | GWL 36.75 M. | | | |

Core loss → [Symbol] Weathering (fresh) - 5 (decomposed) Hardness (hard) - 5 (soft) Average length of Core (more than 50cm.), 2 (50cm., 20cm.), 3 (20cm., 3cm.), 4 (less than 5cm.) 5 (crushed)

EGAT

LOG OF BORING

Project LAM TA KHONG Location Upper Pond Boring No. DIII-1 Log No. 3 of 4
 Co-ordinates 1638,046 N 775,411 E Elevation 632.141 m MSL Depth of Hole 100.00 M. Commenced 14/8/90
 Angle from Horizontal 90° Total Depth Core Recovery 97.60 Depth of Overburden 13.30 M. Completed 21/9/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 97.60 M. Logged by A. PATTANA

| Date | Depth m | R.Q.D. % | Geology | Symbol of geology | Core recovery % | Kind of Bit Ø of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core m | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drill 50 Pressure kg 100 Time min | Depth M | Elevation | |
|------------|------------|--|-----------|-------------------|--------------------|--|-----------------------|----------------------------------|------------|----------|--------------------------------|--|-------------------------------------|-------------|---|------------|-----------|--|
| 29-30/8/90 | 0 | | Sandstone | | 100% | NKC DIAMOND CORE BIT, Ø of core 54.7 mm. | CEMENTATION | reddish brown and grey | | | | bedding 0°-10°, hard & dense | 60.00-65.00 M. | 1.6 | | 0 | 10 | |
| | 1 | fine to medium grained, micaceous, well cemented, cross bed | | | | | | | | | | GWL 32.50 M. | | | | | | |
| | 2 | 63.20-70.30 M; Siltstone, muddy, slaking at | | | | | | | | | | | | | | | | |
| 1/9/90 | 3 | 96 | Siltstone | | 100% | NKC DIAMOND CORE BIT, Ø of core 54.7 mm. | CEMENTATION | various green & brown | | | | 65.00-69.50 M, core loss at | 65.00-70.00 M. | 0.3 | | 0 | 6 | |
| | 4 | 67.60-68.90 M. | | | | | | | | | | GWL 18.60 M. | | | | | | |
| | 5 | 70.30-70.95 M; Sandstone, fine grained, moderately well cemented | | | | | | | | | | 70.00-75.00 M. | 0.3 | | | | | |
| 5-6/9/90 | 6 | 100 | Siltstone | | 100% | NKC DIAMOND CORE BIT, Ø of core 54.7 mm. | CEMENTATION | grey | | | | 70.95-85.35 M; Siltstone, massive, dense, brittle, grade to sandstone, slaking at | 75.00-80.00 M. | 10.80 M | | 0 | 6 | |
| | 7 | 75.00-76.35 M, highly weathered at | | | | | | | | | | | | | | | | |
| | 8 | 71.00-71.50 M, 72.00-72.50 M, 76.35-76.50 M, 79.10-79.50 M, 80.00-82.30 M. | | | | | | | | | | 75.00-80.00 M. | 1.3 | | | | | |
| 15/9/90 | 9 | 95 | Siltstone | | 100% | NKC DIAMOND CORE BIT, Ø of core 54.7 mm. | CEMENTATION | various color, red, brown, green | | | | no joint | 80.00-85.00 M. | 1.4 | | 0 | 9 | |
| | 10 | | | | | | | | | | | GWL 22.50 M. | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | |
| 17/9/90 | 1 | 32 | Sandstone | | 100% | NKC DIAMOND CORE BIT, Ø of core 54.7 mm. | CEMENTATION | dark to light gray | | | | 85.35-95.30 M; Sandstone, moderately grade to well cemented horizontal lamination, some siltstone laminate | 85.00-90.00 M. | 0.6 | | 0 | 1 | |
| | 2 | | | | | | | | | | | GWL 23.50 M. | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | |
| 18/9/90 | 4 | 50 | Sandstone | | 100% | NKC DIAMOND CORE BIT, Ø of core 54.7 mm. | CEMENTATION | dark to light gray | | | | at 85.35-89.50 M, | | | | 0 | 4 | |
| | 5 | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | |
| 19/9/90 | 7 | 97 | Sandstone | | 100% | NKC DIAMOND CORE BIT, Ø of core 54.7 mm. | CEMENTATION | dark to light gray | | | | | | | | 0 | 7 | |
| | 8 | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | |

Core loss Weathering (fresh)-5 (decomposed) Average length of Core (more than 50cm.) 2 (50cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 5cm.) 5 (graded) Hardness (hard)-9 (soft)

EGAT

LOG OF BORING

Project LAN TA KHONG Location Upper Pond Boring No. DHU-1 Log No. 4 of 4
 Co-ordinates 1638,046 N 775,411 E Elevation 632.141 m. MSL Depth of Hole 100.00 M. Commenced 14/8/90
 Angle from Horizontal 90° Total Depth Core Recovery 97.60 % Depth of Overburden 13.30 M. Completed 21/9/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 97.60 M. Logged by A. PATTANA

| Date | Depth M | R.Q.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core m | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill log | 50 Pressure kg | 100 Time min | Depth M | Elevation | |
|------------|------------|------------|-----------|-------------------|--------------------|------------------------------|-----------------------|----------------------------|------------|----------|--------------------------------|---|-------------------------------------|-------------|--------------|-------------------|-----------------|------------|-----------|--|
| | | | | | | | | | | | | | WATER TABLE | WATER TABLE | | | | | | |
| 19/9/90 | 0 | | | | | | | | | | | | | | | | | 0 | | |
| | 1 | | | | | | | | | | | | | | | | | 1 | | |
| | 2 | | | | | | | | | | | | | | | | | 2 | | |
| | 3 | | | | | | | | | | | | | | | | | 3 | | |
| | 4 | | | | | | | | | | | | | | | | | 4 | | |
| 20-21/9/90 | 5 | 100 | Sandstone | | | | | dark to light grey | | | | small spotted calcareous at 88,00-88,30 M, hard & dense, no joint. | 90.00-95.00 M. | 4.9 | | | | | 5 | |
| | 6 | | | | | | | | | | | | | | | | | 6 | | |
| | 7 | | | | | | | | | | | | | | | | | 7 | | |
| | 8 | | Siltstone | | | | | reddish brown and brown | | | | 95.30-100.00 M; Mainly siltstone, with some fine sandstone intercalated, sub-horizontal bed, hard & dense, some slightly calcareous | 95.00-100.00 M. | 0.3 | | | | 8 | | |
| | 9 | | | | | | | | | | | | | | | | | 9 | | |
| | 10 | | | | | | | | | | | | | | | | | 10 | | |
| | 11 | | | | | | | | | | | | | | | | | 11 | | |
| | 12 | | | | | | | | | | | | | | | | | 12 | | |
| | 13 | | | | | | | | | | | | | | | | | 13 | | |
| | 14 | | | | | | | | | | | | | | | | | 14 | | |

Core bits → Weathering (fresh - 5 (disintegrated)) Hardness (hard) - 5 (soft) Average length of Core (more than 30cm.) 2 (50cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 5cm.) 10 (grubed)

EGAT

LOG OF BORING

Project LAN TA KHONG Location UPPER POND Boring No. DIU-2 Log No. 1 of 2
 Co-ordinates 1,638,044 N, 775,706 E Elevation 632.078 m,MSL Depth of Hole 40.00 M. Commenced 11/7/90
 Angle from Horizontal 90° Total Depth Core recovery 90% Depth of Overburden 3.00 M. Completed 18/7/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 36.05 M. Logged by A.PATTANA

| Date | Depth # % | R.O.D | Geology | Symbol of geology | Core recovery | Kind of Bit of Core (max.) | Casing Cementation | Colour of rock | Weathering | Hardness Average length of core | Description | WATER PRESSURE TEST | | Drift | 90 Pressure | 100 Time | Depth | Elevation |
|---------|-----------------|-------|------------------------|-------------------|---------------|-------------------------------|-----------------------|----------------|------------|--|--|--|-------------|-------|-------------|----------|-------|-----------|
| | | | | | | | | | | | | LOGEON VALUE | WATER TABLE | | | | | |
| 11/7/90 | 0 | | OVERBURDEN | | 100% | | | reddish brown | | 0 | 0.00-3.00 M; OVERBURDEN, stiff clay, lateritic (Residual soil) | CONSTANT HEAD TEST 0.00-5.00 M. $k = 8.08 \times 10^{-4}$ cm/sec | | | | | 0 | |
| | 1 | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | |
| | 4 | 45 | | | | | | | | | | | | | | | | |
| 12/7/90 | 5 | | Quartzitic Sandstone | | | | grey & brown | | 3 | 3.00-16.10 M; Quartzitic Sandstone, medium to coarse grained, hard & dense, well cemented, poor cemented at 9.85-10.10 M, 12.00-12.10 M, 15.00-16.10 M, highly weathered at 4.22-4.55 M, 9.85-10.10 M, 10.75- 11.10 M, 12.00-12.10 M | 5.00-10.00 M. CONSTANT HEAD TEST 6.50-15.00 M. $k = 7.58 \times 10^{-4}$ cm/sec | | | | | 5 | | |
| | 6 | 53 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | |
| | 9 | 0 | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | |
| | 12 | 38 | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | |
| 13/7/90 | 15 | | Claystone | | | | various color | | 5 | 16.10-21.70 M; claystone/mudstone, dense, massive, soft. | 6.50-25.00 M. $k = 3.91 \times 10^{-4}$ cm/sec | | | | | 6 | | |
| | 16 | | | | | | | | | | | | | | | | | |
| | 17 | 85 | | | | | | | | | | | | | | | | |
| | 18 | | | | | | | | | | | | | | | | | |
| | 19 | 20 | | | | | | | | | | | | | | | | |
| | 20 | | | | | | | | | | | | | | | | | |
| | 21 | 1 | | | | | | | | | | | | | | | | |
| 14/7/90 | 22 | | claystone sandstone | | | | purple & white | | 2 | 21.70-24.65 M; Alternation of claystone and sandstone, well cemented, bedding 0°-20° | 25.00-30.00 M. | | | | | 7 | | |
| | 23 | 83 | | | | | | | | | | | | | | | | |
| | 24 | | | | | | | | | | | | | | | | | |
| | 25 | | | | | | | | | | | | | | | | | |
| | 26 | | | | | | | | | | | | | | | | | |
| 16/7/90 | 27 | | Quartzitic Sandstone | | | | white & grey | | 5 | 24.65-40.00 M; Quartzitic Sandstone, fine to coarse grained well cemented, hard, dense, sub-horizon bed, Alternation of fine and coarse grained at 24.65-32.20 M, | 25.00-30.00 M. | | | | | 5 | | |
| | 28 | 79 | | | | | | | | | | | | | | | | |
| | 29 | 83 | | | | | | | | | | | | | | | | |
| | 30 | | | | | | | | | | | | | | | | | |
| | 31 | | | | | | | | | | | | | | | | | |

Core loss → Weathering
 1 (fresh) - 5 (decomposed) Hardness (Mohr) - 5 (soft)
 Average length of Core (more than 80 cm), 2 (50 cm, 20 cm),
 3 (20 cm, 5 cm), 4 (less than 5 cm, 3) (graded)

EGAT

LOG OF BORING

Project LAN TA KIONG Location Uppor Pond Boring No. DHU-2 Log No. 2 of 2
 Co-ordinates 1638,044 N 775,706 E Elevation 632.078 m.MSL Depth of Hole 40.00 M. Commenced 11/7/90
 Angle from Horizontal 90° Total Depth CORE RECOVERY 90% Depth of Overburden 3.00 M. Completed 18/7/90
 Bearing of Angle Hole - Company EGAT Total length of core 36.05 M. Logged by A. PACTANA

| Date | Depth M | R. Q. D % | Geology | Symbol of geology | Core recovery 100% | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill log | Depth M | Elevation | | | | | | | | | |
|---------|------------|--------------|----------------------|-------------------|-----------------------|------------------------------|-----------------------|----------------|------------|----------|---------------------------|---|-------------------------------------|----------|--------------|------------|-----------|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | WATER TABLE | Pressure | | | | | | | | | | | | |
| 16/7/90 | 1 | 20 | Quartzitic Sandstone | | | NNMC DIAMOND CORE BIT | | white and gray | | | | bedding joints, 0°-10° at 25.50 M, 25.80 M, 26.40 M, 27.50 M, 28.80 M, 29.05 M, 29.40 M, some pebbles of claystone at 29.80-30.10 M, 31.90-32.20 M, | 30.00-35.00 M. | | | 0 | 40 | | | | | | | | | |
| 17/7/90 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18/7/90 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17/7/90 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 17 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 18 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 19 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 20 | | | | | | | | | | | | | | | | | | | | | | | | | |

Core lost → Weathering Hardness (Hard) - 0 (soft)

Average length of Core 1 (more than 80cm.), 2 (80cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 5cm.) 5 (grabbed)

EGAT

LOG OF BORING

Project LAM TA KHONG Location UPPER POND Boring No. DIRU-3 Log No. 1 of 2
 Co-ordinates 1637,744 N 775,700 E Elevation 660,927 m.MSL Depth of Hole 50.00 M. Commenced 25/6/90
 Angle from Horizontal 90° Total Depth Core Recovery 96% Depth of Overburden 8.20 M. Completed 3/7/90
 Bearing of Angle Hole - Company EGAT Total length of core 47.95 M. Logged by A.PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drift | 50 Pressure kg | 100 Time min | Depth M | Elevation | |
|---------|------------|------------|--------------|-------------------|--------------------|---|-----------------------|----------------|------------|----------|---------------------------|--|-------------------------------------|-------------|-------|-------------------|-----------------|------------|-----------|---|
| 25/6/90 | 1 | | OVERBURDEN | | 100% | TUNGSTEN CARBIDE | 2.60 M. | reddish brown | | - | - | 0.00-8.20 M; OVERBURDEN, 0.00-3.00 M; lateritic clay, (residual soil) stiff, high plastic, 3.00-7.70 M; decomposed rock, (claystone) core loss at 4.30-4.70 M, 5.00-5.40 M, 7.65-8.30 M. | 0.00-5.00 M. CONSTANT HEAD TEST | | - | - | - | - | - | - |
| | 2 | | | | | | | | | | | $k = 0.35 \times 10^{-4}$ cm/sec | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | 4.50-10.00 M. CONSTANT HEAD TEST | | | | | | | | |
| | 7 | | | | | | | | | | | $k = 1.61 \times 10^{-3}$ cm/sec. | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | |
| 26/6/90 | 9 | 61 | Sandstone | | 100% | NMLC DIAMOND CORE BIT . ϕ OF CORE 54.7 mm. | 7.50M | grey | | - | - | 8.20-30.45 M; Sandstone, hard & dense, fine to medium grained, well cemented, joint, 70°-80°, Fe O stained at 11.15-11.30 M, 12.40-12.55 M, bedding 10° at 16.00-17.00 M, 18.00-20.00 M, core loss at 14.20-14.25 M, | 10.00-15.00 M. | | - | - | - | - | - | |
| | 10 | | | | | | | | | | | | | | | | | | | |
| | 1 | 95 | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | 3.9° | | | | | | | | |
| | 3 | | | | | | | | | | | GWL 5.90 M. | | | | | | | | |
| | 4 | 88 | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | 15.00-20.00 M. | | | | | | | | |
| | 7 | 98 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | 0.3° | | | | | | | | |
| 9 | 100 | | GWL 4.80 M. | | | | | | | | | | | | | | | | | |
| 27/6/90 | 20 | | Sandstone | | 100% | NMLC DIAMOND CORE BIT . ϕ OF CORE 54.7 mm. | 7.50M | grey | | - | - | horizontal joint Fe O stained at 22.24, 22.25 M, joint, 45° (FeO) at 22.70, 22.75 M, limonite rich at 25.50-25.60 M, 26.85-26.95 M, 27.55-27.75 M. | 20.00-25.00 M. | | - | - | - | - | - | |
| | 1 | 83 | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | 1.4° | | | | | | | | |
| | 3 | | | | | | | | | | | GWL 4.90 M. | | | | | | | | |
| | 4 | 87 | | | | | | | | | | | | | | | | | | |
| 28/6/90 | 5 | | Sandstone | | 100% | NMLC DIAMOND CORE BIT . ϕ OF CORE 54.7 mm. | 7.50M | grey | | - | - | | 25.00-30.00 M. | | - | - | - | - | - | |
| | 6 | | | | | | | | | | | | | | | | | | | |
| | 7 | 80 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | 1.7° | | | | | | | | |
| 9 | 84 | | GWL 12.30 M. | | | | | | | | | | | | | | | | | |

Core lost Weathering (fresh) - 5 (decomposed) Average length of Core (more than 80cm.), 2 (50cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 6cm.) 5 (gravel)
 Hardness (hard) - 5 (soft)

EGAT

LOG OF BORING

Project LIAM TA KHONG Location Upper Pond Boring No. DIII-3 Log No. 2 of 2
 Co-ordinates 1637,744 N 775,700 E Elevation 660.927 m.MSL Depth of Hole 50.00 M. Commenced 25/6/90
 Angle from Horizontal 90° Total Depth Core Recovery 96% Depth of Overburden 8.20 M. Completed 3/7/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 47.95 M. Logged by A. PATTANA

| Date | Depth M | R.C.D % | Geology | Symbol of geology | Core recovery | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST | | Drill 50 Pressure—kg 100 Time—min | Depth M | Elevation | |
|---------|------------|------------|----------------------|-------------------|---------------|--|-----------------------|----------------|------------|----------|--|---|---------------------|-------------|---|------------|-----------|--|
| | | | | | | | | | | | | | LUGEON VALUE | WATER TABLE | | | | |
| 30/6/90 | 0 | 20 | Pebbly Sandstone | | 100% | NMLC DIAMOND CORE BIT Ø of core 54.7 mm. | | light grey | | | | 30.45-44.75 M; Pebbly sandstone, muddy, coarse grained, mudstone pebbles, 1 mm, up to 5 cm, size, cavernous surface (pebbles loose) | 30.00-35.00 M. | 1.7° | | | | |
| | 1 | 0 | | | | | | | | | | 35.00-40.00 M. | 1.2° | | | | | |
| | 2 | 0 | | | | | | | | | | 40.00-45.00 M. | 2.0° | | | | | |
| | 3 | 0 | | | | | | | | | | 45.00-50.00 M. | 100° | | | | | |
| | 4 | 20 | | | | | | | | | | | | | | | | |
| | 5 | 20 | | | | | | | | | | | | | | | | |
| | 6 | 58 | | | | | | | | | | | | | | | | |
| | 7 | 58 | | | | | | | | | | | | | | | | |
| | 8 | 0 | | | | | | | | | | | | | | | | |
| | 9 | 49 | | | | | | | | | | | | | | | | |
| 2/7/90 | 0 | 58 | Quartzitic Sandstone | | | | light grey | | | | 44.75-50.00 M; Quartzitic sandstone, medium grained, very well cemented, hard, dense, bedding 5° at 49.50-50.00 M, sub-vertical joint at 48.00-48.20 M. | 45.00-50.00 M. | 100° | | | | | |
| | 1 | 58 | | | | | | | | | | | | | | | | |
| | 2 | 0 | | | | | | | | | | | | | | | | |
| | 3 | 0 | | | | | | | | | | | | | | | | |
| | 4 | 0 | | | | | | | | | | | | | | | | |
| | 5 | 0 | | | | | | | | | | | | | | | | |
| | 6 | 0 | | | | | | | | | | | | | | | | |
| | 7 | 0 | | | | | | | | | | | | | | | | |
| | 8 | 0 | | | | | | | | | | | | | | | | |
| | 9 | 0 | | | | | | | | | | | | | | | | |
| 3/7/90 | 0 | 78 | | | | | | | | | BOTTOM OF HOLE 50.00 M. | | | | | | | |
| | 1 | 78 | | | | | | | | | | | | | | | | |
| | 2 | 78 | | | | | | | | | | | | | | | | |
| | 3 | 78 | | | | | | | | | | | | | | | | |
| | 4 | 78 | | | | | | | | | | | | | | | | |
| | 5 | 78 | | | | | | | | | | | | | | | | |
| | 6 | 78 | | | | | | | | | | | | | | | | |
| | 7 | 78 | | | | | | | | | | | | | | | | |
| | 8 | 78 | | | | | | | | | | | | | | | | |
| | 9 | 78 | | | | | | | | | | | | | | | | |

Core loss Weathering (fresh) - 5 (decomposed) Average length of Core (more than 50cm.) 2 (50cm, 20cm), 3 (20cm, 5cm.), 4 (less than 5cm.) 5 (gravel) Hardness (hard) - 5 (soft)

EGAT

LOG OF BORING

Project LAN TA KHONG Location UPPER POND Boring No. DHU - 4 Log No. 1 of 2
 Co-ordinates 1637,748 N 775,402 E Elevation 638,296 m.MSL. Depth of Hole 50.00 M. Commenced 20/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 100% Depth of Overburden 6.40 M. Completed 27/7/90
 Bearing of Angle Hole _____ Company EGAT Total length of core _____ Logged by A.PATTANA

| Date | Depth M | R. C. D % | Geology | Symbol of geology | Core recovery 100% | Kind of Bit Ø of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LOGEON VALUE | WATER TABLE | Drill | 90 Pressure | 100 Time | Depth M | Elevation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------|------------|--------------|------------|-------------------|-----------------------|--------------------------------|-----------------------|----------------|------------|----------|---------------------------|--|--|-------------|-------|-------------|----------|------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|--|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20/7/90 | 0 | | OVERBURDEN | | 100% | Tungsten Carbide | CASING | brown | | - | - | 0.00-6.40 M; OVERBURDEN, 0.00-5.00 M; Stiff clay, 5.00-6.40 M, Decomposed rock (0.00-0.20 M :Top soil, 0.20-3.50 M :Residual soil, 3.50-6.40 M :highly weathered claystone) | 0.00-5.00 M, VARIABLE HEAD TEST $k = 3.28 \times 10^{-6}$ cm/sec. | | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | 1 | | | | | | | | | | 6.50 M. | light grey | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6.40-38.95 M; Quartzitic Sandstone, $k = 1.04 \times 10^{-3}$ cm/sec medium to coarse grained, hard & dense, well cemented, high fracture, sub-horizon bed, decomposed rock at 7.10-7.20 M, sub-vertical fracture (clay coated) at 7.50-8.00 M, 11.60-12.00 M, 21.00-22.00 M, 24.50-25.00 M, 25.10-25.50 M, 25.60-26.00 M, 28.60-29.00 M, 29.30-30.40 M, fracture, 70° at 19.40 M, 19.45 M, 19.70 M, highly weathered at 10.20-10.90 M, 27.70-27.80 M, bedding joint (horizon, Feo strained) at 11.50 M, 32.25 M, high fractures at 24.00-26.00 M, some pebbles of claystone at 26.50-26.90 M, cavernous surface at 27.65 M, | 5.00-10.00 M, CONSTANT HEAD TEST | | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | |
| | 4 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | |
| | 5 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - |
| 6 | 6 | - | - | - | - | - | - | - | - | - | - | | | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 7 | | | | | | | | | | | - | - | | | | | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | |
| 10 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | |
| 11 | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - |
| 12 | 12 | - | - | - | - | - | - | - | - | - | - | | | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | 13 | | | | | | | | | | | - | - | | | | | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | |
| 16 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | |
| 17 | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - |
| 18 | 18 | - | - | - | - | - | - | - | - | - | - | | | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | 19 | | | | | | | | | | | - | - | | | | | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | |
| 22 | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | |
| 23 | 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - |
| 24 | 24 | - | - | - | - | - | - | - | - | - | - | | | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 25 | | | | | | | | | | | - | - | | | | | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | | | |
| 28 | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | |
| 29 | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | - | - | - | - |
| 30 | 30 | - | - | - | - | - | - | - | - | - | - | | | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Core lost Weighting (fresh) - 5 (decomposed) Hardness (hard) - 5 (soft) Average length of Core (more than 50 cm.), 2 (40 cm., 20 cm.), 3 (20 cm., 5 cm.), 4 (less than 5 cm.) 5 (grabbed)

EGAT

LOG OF BORING

Project IAH TA KHONG Location UPPER POND Boring No. DIU - 4 Log No. 2 of 2
 Co-ordinates 1637,748 N 775,402 E Elevation 638.296 m,MSL Depth of Hole 50.00 M. Commenced 20/7/90
 Angle from Horizontal 90° Total Depth Cora Recovery 100% Depth of Overburden 6.40 M. Completed 27/7/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 50.00 M. Logged by A. PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drill 50 Pressure—kg 100 Time—min | Depth M | Elevation |
|---------|------------|------------|----------------------|-------------------|--------------------|--|-----------------------|-----------------------|------------|----------|---------------------------|---|---|----------------|---|------------|-----------|
| 25/7/90 | 30 | | Quartzitic Sandstone | | 100% | M.T.C DIAMOND CORE BIT, Ø of core 54.7 mm. | | light gray | | | | sub-vertical fracture, clay coated, at 33.00-33.30 M, 33.80-34.00 M, fracture, 70°, at 30.90 M, 35.00 M, 38.50 M, cavernous surface at 35.10-35.30 M, 37.30-37.40 M, 37.85-38.90 M, iron rich (red) at 38.90-38.95 M. | 30.00-35.00 H. | | | 30 | |
| | 1 | 1.1' | | | | | | | | | | 16.00 M. | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
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| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| 26/7/90 | 37 | | Mudstone | | 100% | M.T.C DIAMOND CORE BIT, Ø of core 54.7 mm. | | white and purple | | | | | 38.95-41.75 M; Mudstone, various colors dense & massive | 40.00-45.00 M. | | | 40 |
| | 1 | 0.8 | | | | | | | | | | 29.90 M. | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
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| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| | 40 | | Siltstone | | 100% | M.T.C DIAMOND CORE BIT, Ø of core 54.7 mm. | | greenish gray & brown | | | | | 41.75-47.95 M; Siltstone, dense, brittle | 45.00-50.00 M. | | | 50 |
| | 1 | 12' | | | | | | | | | | moderate GWL | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| | 50 | | Silty Sandstone | | 100% | M.T.C DIAMOND CORE BIT, Ø of core 54.7 mm. | | brown | | | | | 47.95-50.00 M; Silty Sandstone, moderate well cemented, horizon bed, hard & dense | | | | 50 |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
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| | 9 | | | | | | | | | | | | | | | | |
| | 50 | | | | | | | | | | | | | | | | |
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| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |

Core loss Weathering (fresh) - 5 (decomposed) Hardness (hard) - 5 (soft) Average length of Core (more than 80cm.), 2 (50cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 5 cm.) (gross)

EGAT

LOG OF BORING

Project LAH TA KHONG Location UPPER POND Boring No. PHU-5 Log No. 1 of 1
 Co-ordinates 1637,895N,775,572E Elevation 646.383 m.MSL. Depth of Hole 30.00 m. Commenced 20/6/90
 Angle from Horizontal 90° Core Recovery 98 % Depth of Overburden 1.25 m. Completed 22/6/90
 Bearing of Angle Hole _____ Company EGAT. Total length of core 29.30 m. Logged by A. PATTANA.

| Date | Depth M | R.O.D. % | Geology | Symbol of geology | Core recovery 100 % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill SO Pressure — kg | 100 Time — min | Depth M | Elevation | |
|---------|------------|-------------|---------|-------------------|------------------------|------------------------------|-----------------------|----------------|-------------|----------|---------------------------|--|--|------|---------------------------|----------------|------------|-----------|--|
| | | | | | | | | | | | | | WATER TABLE | TEST | | | | | |
| 20/6/90 | 0 | | OB. | | | | | | | | | 0.00-1.25 m; OVERBURDEN Sandstone boulders at 0.00-0.65 m, 1.00-1.25 brown sand at 0.65-1.00 m. | 0.00-5.00 m, CONSTANT HEAD TEST $k=6.11 \times 10^{-3}$ cm/sec | | | | | | |
| | 1 | | | | | | | | | | | 1.25-10.10 m; Sandstone fine grained, hard & dense, well cemented, subhorizontal bed, core loss at 2.10-2.80 m, high weathered at 5.80-5.88 m, 7.55-7.70 7.90-8.10 m. | | | | | | | |
| | 2 | 26 | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | |
| | 4 | 75 | | | | | | | | | | | | | | | | | |
| | 5 | | | SANDSTONE | | | | | light brown | | | | | | | | | | |
| | 6 | | 68 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | |
| 21/6/90 | 10 | | | | | | | | | | | decomposed rock of sandstone at 8.10-9.00 m. | | | | | | | |
| | 1 | | | | | | | | | | | 10.10-25.00 m; Clay, decomposed rock | | | | | | | |
| | 2 | | | | | | | | | | | At 10.10-18.00 m. light brown (shale) | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | |
| 22/6/90 | 10 | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | |
| 22/6/90 | 10 | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | |
| 22/6/90 | 6 | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | | |

Core loss → [Symbol] Weathering (fresh) - 5 (decomposed) Average length of Core (more than 50cm.) 2 (50cm, 20cm), 3 (20cm, 5cm), 4 (less than 5cm), 6 (gravel) Hardness (hard) - 8 (soft)

EGAT

LOG OF BORING

Project LAH TA KIRONG Location WATER MAY Boring No. MMW - 1 Log No. 1 of 8
 Co-ordinates 1638,095 N, 755,200 E Elevation 631.049 m.MSL Depth of Hole 230.00 M. Commenced 16/7/90
 Angle from Horizontal 90° Total Depth 99.6 M Depth of Overburden 9.55 M. Completed 25/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 229.00 M. Logged by A. PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill m | 50 Pressure m | 100 Time min | Depth M | Elevation | | |
|------------|------------|------------|----------------------|-------------------|--------------------|------------------------------|-----------------------|----------------|------------|----------|---------------------------|---|---|--|------------|------------------|-----------------|------------|-----------|---|--|
| | | | | | | | | | | | | | WATER TABLE | WATER TABLE | | | | | | | |
| 16-17/7/90 | 0 | | OVERBURDEN | | | | | | | | | 0.00-9.55 M; OVERBURDEN | | | | | | | 0 | | |
| | 1 | | | | | | | | | | | 0.00-0.48 M; Top soil, brown, | | | | | | | 1 | | |
| | 2 | | | | | | | | | | | 0.48-1.10 M; Sandstone boulder, | | | | | | | 2 | | |
| | 3 | | | | | | | | | | | 1.10-4.90 M; Stiff clay, reddish brown, | | | | | | | 3 | | |
| | 4 | | | | | | | | | | | 4.90-9.55 M; decomposed rock/clay, brown. | 4.50-6.50 M. CONSTANT HEAD TEST k = 1.50x10 ⁻³ cm/sec. | | | | | | 4 | | |
| | 5 | | | | | | | | | | | | 4.50-9.50 M. CONSTANT HEAD TEST k = 6.44x10 ⁻⁴ cm/sec. | | | | | | 5 | | |
| | 6 | | | | | | | | | | | | (0.48-3.00 M: Residual soil; 3.00-12.10 M: highly weathered claystone ~ sandy siltstone) | | | | | | 6 | | |
| | 7 | | | | | | | | | | | | | 4.50-12.50 M. CONSTANT HEAD TEST k = 3.55x10 ⁻⁴ cm/sec. | | | | | | 7 | |
| | 8 | | | | | | | | | | | | 9.55-12.10 M; Sandstone, fine grained grade to siltstone, bedding 30° highly crack at 11.60- 11.80 M, 12.00-12.10 M. | | | | | | 8 | | |
| | 9 | | | | | | | | | | | | 12.10-35.70 M; Quartzitic Sandstone, medium to coarse grained, well cemented, bedding 0°-10° cross bedding at 13.50 M, siltstone at | 12.50-18.50 M. 0.7' GWL 15.50 M. | | | | | 9 | | |
| 18/7/90 | 10 | | Sandstone | | | | | white | | | | | 14.00-14.05 M, 14.85-14.90 M, 15.00-15.12 M, 15.75-15.78 M, 17.28-17.30 M, 17.40-17.44 M, 18.70-18.75 M, 18.90-19.05 M, 19.50-19.52 M, 21.60-21.62 M, 25.83-25.84 M, 26.50-26.52 M, siltstone alternated at | 18.50-24.50 M. 0.4' GWL 3.00 M. | | | | | 10 | | |
| | 11 | | | | | | | red | | | | | 20.50-20.90 M, 26.15-26.25 M, 26.45-26.50 M, sub-vertical fracture at 27.20-27.60 M, | 24.50-30.50 M. 15' GWL 11.70 M. | | | | | 11 | | |
| | 12 | | | | | | | brown | | | | | | | | | | | 12 | | |
| | 13 | | | | | | | | | | | | | | | | | | 13 | | |
| | 14 | | | | | | | | | | | | | | | | | | 14 | | |
| | 15 | | | | | | | | | | | | | | | | | | 15 | | |
| | 16 | | | | | | | | | | | | | | | | | | 16 | | |
| | 17 | | | | | | | | | | | | | | | | | | 17 | | |
| | 18 | | | | | | | | | | | | | | | | | | 18 | | |
| | 19 | | | | | | | | | | | | | | | | | | 19 | | |
| 19/7/90 | 20 | | Quartzitic Sandstone | | | | | | | | | | | | | | | | 20 | | |
| | 21 | | | | | | | | | | | | | | | | | | 21 | | |
| | 22 | | | | | | | | | | | | | | | | | | 22 | | |
| | 23 | | | | | | | | | | | | | | | | | | 23 | | |
| | 24 | | | | | | | | | | | | | | | | | | 24 | | |
| | 25 | | | | | | | | | | | | | | | | | | 25 | | |
| | 26 | | | | | | | | | | | | | | | | | | 26 | | |
| | 27 | | | | | | | | | | | | | | | | | | 27 | | |
| | 28 | | | | | | | | | | | | | | | | | | 28 | | |
| | 29 | | | | | | | | | | | | | | | | | | 29 | | |

Core loss → Weathering ((fresh)-5 (decomposed)) Hardness ((hard)-5 (soft)) Average length of Core ((more than 50cm.)-2 (30cm, 20cm), 3 (20cm, 5cm.), 4 (less than 5 cm.) 5 (gravel))

EGAT

LOG OF BORING

Project LAN TA KHONG Location Water Way Boring No. DHW - 1 Log No. 2 of 8
 Co-ordinates 1638,095 N 155,200 E Elevation 631.049 m.MSL Depth of Hole 230.00 M. Commenced 16/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 99.6 % Depth of Overburden 9.55 M. Completed 25/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 229.00 M. Logged by A.PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Core recovery 100 % | Kind of Bit Φ of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE ○ WATER TABLE — | Drill 50 Pressure — kg 100 Time — min | Depth M | Elevation |
|---------|------------|------------|-----------------------------|-------------------|------------------------|--------------------------------|-----------------------|---------------------|------------|----------|---------------------------|--|--|---|------------|-----------|
| 20/7/90 | 30 | 100 | Quartzitic Sandstone | | 100 % | 47.6 mm. | CEMENTATION & CASING | light gray | 1 | 1 | 1 | siltstone at 31.90-31.92 M, 32.89-32.90 M, 34.15-34.16 M, 34.70-34.72 M. | 30.50-36.50 M. 1.0° GWL 11.50 M. | | 30 | |
| | 1 | 87 | | | | | | | | | | 35.70-39.80 M; Pebble Sandstone, sub- horizon, cavernous surface (pebbles loose), pebble size 1 mm. up to 3 cm., siltstone at 38.00-38.40 M. | 36.50-42.50 M. 3.2° | | | |
| | 2 | 97 | | | | | | | | | | 39.80-42.40 M; Claystone, core loss at 40.00-40.60 M. | 40.00-40.60 M. GWL 13.00 M. | | | |
| | 3 | 35 | | | | | | | | | | 42.40-43.20 M; Pebble Sandstone, purple & gray color. | NO TEST | | | |
| | 4 | 80 | | | | | | | | | | 43.20-45.30 M; Sandstone, fine grained, well cemented, high weathered at 43.20-43.50 M, Vertical fracture at 44.10-44.80 M. | | | | |
| | 5 | 100 | | | | | | | | | | 45.30-52.30 M; Siltstone, some sandy, soft & brittle, spotted calcareous at 49.00- 50.50 M, core loss at 46.00-46.30 M, 51.70-51.30 M. | 47.50-53.50 M. 0.2 GWL 27.90 M. | | | |
| 21/7/90 | 3 | 25 | SS. | | 100 % | 47.6 mm. | CEMENTATION & CASING | purple | | | | | | 3 | | |
| | 4 | 0 | Sandstone | | 100 % | 47.6 mm. | CEMENTATION & CASING | gray | | | | | | 4 | | |
| | 5 | 80 | Siltstone | | 100 % | 47.6 mm. | CEMENTATION & CASING | greenish gray | | | | | | 5 | | |
| 23/7/90 | 1 | 83 | Siltstone | | 100 % | 47.6 mm. | CEMENTATION & CASING | reddish brown | 1 | 1 | 1 | 52.30-58.90 M; Mainly fine grained sandstone with siltstone alter- nated, sub-horizon bed, well cemented at 53.00-56.00 M, fracture, 70°, at 56.00-56.30 M, core loss at 56.80-57.00 M. | 53.10-59.10 M. 20° GWL 37.90 M. | | 6 | |
| | 2 | 100 | | | | | | | | | | 58.90-63.70 M; Siltstone, muddy | | | | |
| 27/7/90 | 3 | 100 | Mainly Sandstone, siltstone | | 100 % | 47.6 mm. | CEMENTATION & CASING | reddish gray & gray | 1 | 1 | 1 | | | | 7 | |
| | 4 | 80 | | | | | | | | | | | | | | |
| | 5 | 70 | | | | | | | | | | | | | | |
| | 6 | 70 | | | | | | | | | | | | | | |

Core loss → Weathering (fresh) - 5 (discolored) Average length of Core (more than 80 cm.) 2 (80 cm., 20 cm.), 3 (20 cm., 5 cm.), 4 (less than 8 cm.) 5 (gravel)
 Hardness (1 (hard) - 5 (soft))

EGAT

LOG OF BORING

Project LAN TA KHONG Location Water Way Boring No. DHW - 1 Log No. 3 of 8
 Co-ordinates 1638,095 N 755,200 E Elevation 631.049 m.MSL Depth of Hole 230.00 M. Commenced 16/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 59.6 M Depth of Overburden 9.35 M. Completed 25/9/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 229.00 M. Logged by A.PATTANA

| Date | Depth M | R.Q.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit Φ of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LOGGED VALUE | WATER TABLE | Drill C | 50 Pressure kg | 100 Time min | Depth M | Elevation | |
|---------|------------|------------|-----------|-------------------|--------------------|----------------------------------|-----------------------|------------------------|---------------|----------|---------------------------|---|--|--|--------------|-------------------|-----------------|------------|-----------|--|
| 28/7/90 | 60 | | Siltstone | | 100% | NO WIRELINE . Φ of core 47.6 mm. | | dark reddish brown | | | | Siltstone, muddy, soft & brittle, core loss at 61.00-51.30 M. | 59.00-65.00 M. 0.1 GWL 31.10 M. | | | | | 60 | | |
| | 1 | 17 | Siltstone | | | | | | | | | | | | | | | | 59 | |
| | 2 | | | | | | | | | | | | | | | | | | 58 | |
| | 3 | | | | | | | | | | | | | | | | | | 57 | |
| | 4 | 88 | | S.St | | | | | red gray | | | | 63.70-65.00 M; Sandy Siltstone, red & gray | | | | | | 56 | |
| | 5 | | | SS | | | | | gray | | | | | 63.80-69.80 M. | | | | | 55 | |
| | 6 | | | | | | | | | | | | | 65.00-65.70 M; Sandstone, very fine grained, well cemented | 0.2 | | | | 54 | |
| | 7 | 10 | | Siltstone | | | | | reddish brown | | | | | 65.70-69.00 M; Siltstone, sandy, cross lamination | GWL 25.00 M. | | | | 53 | |
| | 8 | | | | | | | | | | | | | | | | | | 52 | |
| | 9 | 47 | | | | | | | | | | | | | | | | | 51 | |
| 30/7/90 | 70 | | | | | | | | | | | 69.00-87.40 M; Siltstone, soft, spotted calcareous at 66.20-66.30 M, 69.20-69.60 M, 71.30-71.50 M, | 69.10-75.80 M. 0.1 GWL 20.80 M. | | | | | 70 | | |
| | 1 | 74 | | | | | | | | | | | | | | | | 69 | | |
| | 2 | | | | | | | | | | | | | | | | | 68 | | |
| | 3 | | | | | | | | | | | | | | | | | 67 | | |
| | 4 | 87 | | | | | | reddish brown | | | | sandy at 79.30-87.40 M, horizon lamination at 75.00-77.00 M, muddy at 69.00-73.00 M, | | | | | | 66 | | |
| | 5 | | | | | | | | | | | | 75.00-81.00 M. | | | | | 65 | | |
| | 6 | 88 | | | | | | | | | | | | | | | | 64 | | |
| | 7 | | | | | | | | | | | | | | | | | 63 | | |
| | 8 | 82 | | | | | | | | | | | very fine sandstone intercalated at 82.70-83.50 M, 84.15-84.20 M, 84.60-84.80 M, 85.00-85.30 M, 85.60-86.50 M, | 0.2 GWL 20.10 M. | | | | 62 | | |
| | 9 | | | | | | | | | | | | | | | | | 61 | | |
| 31/7/90 | 90 | | Siltstone | | | | | | | | | | | | | | | | 90 | |
| | 1 | | | | | | | | | | | | | | | | | | 89 | |
| | 2 | 70 | | | | | | | | | | | 81.00-87.50 M. 0.1 GWL 20.60 M. | | | | | 88 | | |
| | 3 | | | | | | | | | | | | | | | | | 87 | | |
| | 4 | | | | | | | reddish brown and gray | | | | | | | | | | 86 | | |
| | 5 | 90 | | | | | | | | | | | | | | | | 85 | | |
| | 6 | | | | | | | | | | | | | | | | | 84 | | |
| | 7 | 97 | | | | | | | | | | | | | | | | 83 | | |
| | 8 | | | | | | | | | | | | | | | | | 82 | | |
| | 9 | 63 | | SS, S.S. | | | | red brown and gray | | | | | 87.40-89.50 M; Alternation of sandstone and siltstone with thin lamination, moderately well cemented | 87.50-93.50 M. | | | | | 81 | |

Core lost → Weathering (fresh - 5 (days) to 10 (months)) Hardness (hard - 5 (soft)) Average length of Core (more than 60cm.), 2 (60cm., 30cm.), 3 (20cm., 30cm.), 4 (less than 20cm.) (packed)

EGAT

LOG OF BORING

Project LAM TA KIONG Location Water Way Boring No. DHW - 1 Log No. 4 of 8
 Co-ordinates 1638,095 N 755,200 E Elevation 631.049 m.MSL Depth of Hole 230.00 M. Commenced 16/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 99.6% Depth of Overburden 9.55 M. Completed 25/9/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 229.00 M. Logged by A. PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Core recovery 100 % | Kind of Bl. of Core (mm.) | Casing Diameter | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drift | Depth M | Elevation | | | | | | | | | | | |
|--------|------------|------------|-----------|-------------------|------------------------|---------------------------------|--------------------|----------------|------------|----------|---------------------------|--|-------------------------------------|--------------|-------|------------|-----------|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | | | | | WATER TABLE | Pressure | | | | | | | | | | | | | | |
| 1/8/90 | 0 | | Siltstone | | 100 | NO WIRELINE, φ of core 47.6 mm. | | reddish brown | | | 8 | 89.50-100.50 M; Siltstone, cross lamination, fine sandstone alternated | 0.2 | GWL 20.60 M. | | 0 | 90 | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 67 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2/8/90 | 7 | | Siltstone | | 100 | NO WIRELINE, φ of core 47.6 mm. | | reddish brown | | | 8 | 91.55-91.60 M, 92.50-93.00 M, 93.70-94.45 M, 94.90-94.85 M, 96.40-96.80 M, 98.80-99.15 M, 99.50-99.75 M, spotted calcareous at 91.60-92.00 M, turbidite bed at 96.55-96.70 M, 91.60-91.70 M, | 0.1 | GWL 24.60 M. | | 7 | 89 | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3/8/90 | 14 | | Sandstone | | 100 | NO WIRELINE, φ of core 47.6 mm. | | brown | | | 8 | 100.50-103.80 M; Sandstone, well cemented slightly, calcareous, hard & dense, cross bed, siltstone pebbles at 102.10-102.30 M, 102.80-102.85 M, (turbidite zone) | 2.5 | GWL 16.10 M. | | 14 | 87 | | | | | | | | | | | |
| | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 16 | 86 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 18 | 95 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 20 | 92 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4/8/90 | 21 | | Siltstone | | 100 | NO WIRELINE, φ of core 47.6 mm. | | reddish brown | | | 8 | 103.80-120.55 M; Siltstone, fine sandstone interbed at 104.60-104.70 M, 105.20-105.80 M, 110.05-111.00 M, 118.00-118.30 M, 118.50-118.90 M, 119.95-120.05 M, sandy at 117.30-120.55 M, spotted calcareous at 117.50-120.00 M. | 0.1 | GWL 22.50 M. | | 21 | 84 | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 23 | 84 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 25 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 27 | 96 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6/8/90 | 28 | | Siltstone | | 100 | NO WIRELINE, φ of core 47.6 mm. | | reddish brown | | | 8 | 111.50-117.50 M, 117.50-123.50 M. | 0.1 | GWL 25.60 M. | | 28 | 81 | | | | | | | | | | | |
| | 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 30 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |

Core loss → Weathering (fresh) - 5 (decomposed) Hardness (hard) - 0 (soft) Average length of Core (more than 50cm), 2 (50cm, 80cm), 3 (20cm, 30cm), 4 (less than 20cm, 15 (arched)

EGAT

LOG OF BORING

Project LAM TA KHONG Location Water Way Boring No. DHW - 1 Log No. 5 of 8
 Co-ordinates 1638,095 N 755,200 E Elevation 631,049 m.MSL Depth of Hole 230.00 M. Commenced 16/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 99.6% Depth of Overburden 9.55 M. Completed 25/9/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 229.00 M. Logged by A. PATTANA

| Date | Depth (M) | R.O.D (M) | Geology | Symbol of geology | Core recovery (%) | Kind of Bit Ø of Core (mm.) | Coarse Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drift | SO Pressure (kg) | LOG Time (min) | Depth (M) | Elevation | | |
|---------|-----------|-----------|--------------------------------------|---|---------------------------|--------------------------------|-----------------------|-------------------|------------------|--|---------------------------|--|---|---|------------------|------------------|----------------|-----------|-----------|--|--|
| 6/8/90 | 1 | 10 | Alternation of sandstone & siltstone | | 99.6 | 47.6 | | dark & light gray | | | | 120.55-125.55 M; Alternation of sandstone and siltstone, horizontal bed, moderately well cemented | 0.2 | GWL 22.60 M. | | | | | | | |
| | 2 | 100 | | | | | | 123.50-129.50 M. | | | | | | | | | | | | | |
| | 3 | 100 | | | | | | | | | | | | | | | | | | | |
| | 7/8/90 | 4 | 87 | Sandstone | | 99.6 | 47.6 | | light gray | | | | 125.55-129.80 M; Sandstone, fine grained, micaceous, hard & dense, horizon bed, turbidite bed at 126.00-126.10 M, siltstone intercalated at 129.10-129.25 M. | 1.1' | GWL 20.10 M. | | | | | | |
| | | 5 | 100 | | | | | | 129.50-135.50 M. | | | | | | | | | | | | |
| | | 7/8/90 | 6 | 100 | Sandy Siltstone | | 99.6 | 47.6 | | purplish gray | | | | 129.80-132.40 M; Sandy siltstone, moderately well cemented, good core | 0.1 | GWL 51.10 M. | | | | | |
| 7 | | | 100 | 132.40-136.88 M; Siltstone, horizontal lamination, sandstone intercalated at 133.80-134.30 M, 134.65-134.75 M. | | | | | | | | | | | | | | | | | |
| 7/8/90 | | | 8 | 84 | Siltstone | | 99.6 | 47.6 | | reddish brown | | | | 136.88-139.85 M; Alternation of sandstone and siltstone, sub-horizon bed. | 0.2' | GWL 17.60 M. | | | | | |
| | | | 9 | 100 | | | | | | 139.85-144.90 M; Sandstone, hard & dense, well cemented, medium grained, siltstone intercalated at 140.40-140.80 M, 141.80-142.20 M, lenticular texture at 140.80-140.90 M, 141.20-141.30 M, 144.10-144.15 M, 144.63-144.68 M, bedding 0°-10° | | | | | | | | | | | |
| | 14/8/90 | | 10 | 84 | Afternetion of SS. & S.St | | 99.6 | 47.6 | | light & dark gray | | | | 144.90-147.30 M; Pebbly sandstone, siltstone pebbles, lenticular texture, vertical fracture at 146.70-146.90 M. | 3.4 | GWL 51.30 M. | | | | | |
| | | | 11 | 93 | | | | | | 147.30-150.50 M; Sandstone, v. fine to fine grained, subhorizon lamination, moderately well | | | | | | | | | | | |
| | | 14/8/90 | 12 | 100 | Sandstone | | 99.6 | 47.6 | | light gray | | | | 147.30-150.50 M; Sandstone, v. fine to fine grained, subhorizon lamination, moderately well | 147.50-153.50 M. | | | | | | |
| | | | 13 | 100 | | | | | | | | | | | | | | | | | |
| 15/8/90 | | | 14 | 72 | Pebbly SS. | | 99.6 | 47.6 | | dark gray spotted in light gray | | | | | | | | | | | |
| | | | 15 | 100 | | | | | | | | | | | | | | | | | |
| | 15/8/90 | | 16 | 100 | Sandstone | | 99.6 | 47.6 | | dark gray | | | | | | | | | | | |
| | | | 17 | 100 | | | | | | | | | | | | | | | | | |
| | | 15/8/90 | 18 | 96 | Sandstone | | 99.6 | 47.6 | | dark gray | | | | | | | | | | | |
| | | | 19 | 100 | | | | | | | | | | | | | | | | | |
| 15/8/90 | | | 20 | 100 | Sandstone | | 99.6 | 47.6 | | dark gray | | | | | | | | | | | |
| | | | 21 | 100 | | | | | | | | | | | | | | | | | |

Core loss Weathering (fresh) - 3 (decomposed) Hardness (hard) - 5 (soft) Average length of Core (more than 80cm.) 1, 2 (80cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 5 cm.) 3 (probable)

EGAT

LOG OF BORING

Project LAM TA KHONG Location Water Way Boring No. DHW - 1 Log No. 6 of 8
 Co-ordinates 1638,095 N 755,200 E Elevation 631.049 m.HSL Depth of Hole 230.00 M. Commenced 16/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 99.6% Depth of Overburden 9.55 M. Completed 25/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 229.00 M. Logged by A. PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Coiling Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill | Depth M | Elevation |
|------------|--|--------------|----------------------|-------------------|--------------------|--------------------------------|------------------------|----------------|------------|----------|---------------------------|---|-------------------------------------|-----|-------|------------|-----------|
| | | | | | | | | | | | | | WATER TABLE | LOG | | | |
| 15/8/90 | 150 | | Quartzitic Sandstone | | 100% | NO MARKING, Ø of core 47.6 mm. | | light grey | | | | Remounted by the crystals at 149.95-150.00 M. | 0.6 | | | 150 | |
| | 150.50-166.90 M; | | | | | | | | | | | | 151 | | | | |
| | Quartzitic Sandstone, coarse to medium grained, well cemented, hard & dense, sub-horizontal bed, very good core, very fine grained sandstone interbedded at 152.15-152.40 M, high fracture at 161.25-161.90 M. | GWL 51.30 M. | | | | | | | | | | | 152 | | | | |
| | | | | | | | | | | | | | 153 | | | | |
| | | | | | | | | | | | | | 154 | | | | |
| | | | | | | | | | | | | | 155 | | | | |
| | | | | | | | | | | | | | 156 | | | | |
| | | | | | | | | | | | | | 157 | | | | |
| | | | | | | | | | | | | | 158 | | | | |
| | | | | | | | | | | | | | 159 | | | | |
| 16/8/90 | 160 | | Quartzitic Sandstone | | 100% | NO MARKING, Ø of core 47.6 mm. | light grey | | | | | 159.50-165.50 M. | (Cannot set pressure) | | 160 | | |
| | | 53 lpm. | | | | | | | | | | | 161 | | | | |
| | | 22' | | | | | | | | | | | 162 | | | | |
| | | | | | | | | | | | | | 163 | | | | |
| | | | | | | | | | | | | | 164 | | | | |
| 17/8/90 | 165 | 39 | Siltstone | | 100% | NO MARKING, Ø of core 47.6 mm. | reddish brown | | | | | 166.90-190.70 M; | CANNOT TEST | | 165 | | |
| | | | | | | | | | | | | | 166 | | | | |
| | | | | | | | | | | | | | 167 | | | | |
| | | | | | | | | | | | | | 168 | | | | |
| 18/8/90 | 169 | 80 | Siltstone | | 100% | NO MARKING, Ø of core 47.6 mm. | reddish brown | | | | | 169.70-176.70 M | 0.0 | | 169 | | |
| | | | | | | | | | | | | | 170 | | | | |
| | | | | | | | | | | | | | 171 | | | | |
| 22-23/8/90 | 172 | 87 | Siltstone | | 100% | NO MARKING, Ø of core 47.6 mm. | reddish brown | | | | | 173.00-176.00 M, | GWL 32.70' | | 172 | | |
| | | | | | | | | | | | | | 173 | | | | |
| | | | | | | | | | | | | | 174 | | | | |
| | | | | | | | | | | | | | 175 | | | | |
| | | | | | | | | | | | | | 176 | | | | |
| | | | | | | | | | | | | | 177 | | | | |
| 24/8/90 | 178 | 78 | Siltstone | | 100% | NO MARKING, Ø of core 47.6 mm. | reddish brown | | | | | 177.50-183.50 M. | | | 178 | | |
| | | | | | | | | | | | | | 179 | | | | |
| | | | | | | | | | | | | | 180 | | | | |

Core Size → Weathering: ((100%)-5 (Decomposed)) Hardness (Hard) - 6 (soft) Average length of Core (100cm.), 2 (80cm., 20cm.), 3 (50cm., 3cm.), 4 (100cm., 10cm.) (Graded)

EGAT

LOG OF BORING

Project LAH TA KHONG Location Water Way Boring No. DIIM - 1 Log No. 7 of 8
 Co-ordinates 1638,095 N, 255,200 E Elevation 631,049 m MSL Depth of Hole 210.00 M. Commenced 16/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 99.6% Depth of Overburden 9.55 M. Completed 25/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 229.00 M. Logged by A. PATTANA

| Date | Depth M R.C.D. % | Geology Symbol of geology | Core recovery 100% | Kind of BH of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill 50 Pressure—kg 100 Time—min | Depth M | Elevation | |
|---------|---------------------------|------------------------------|-----------------------|-----------------------------|-----------------------|-------------------------------|------------|----------|--|--|-------------------------------------|------------------|---|------------|-----------|-------------|
| | | | | | | | | | | | WATER TABLE | Value | | | | |
| 24/8/90 | 1 63 | Siltstone | 100% | 47.6 | | reddish brown | | | | Siltstone, brittle, very fine grained sandstone alternated at 180.50-181.20 M, spotted calcareous. | 0.3 | GWL 42.50 M. | 183.50-189.50 M. | 180 | | |
| | 2 78 | | | | | | | | | | 11' | | | | | |
| | 3 80 | | | | | | | | | | | | | | | |
| 25/8/90 | 4 80 | Siltstone | 100% | 47.6 | | reddish brown | | | 190.70-195.70 M; Alternation of siltstone and fine grained sandstone, brittle, sub-horizon bed, slaking siltstone, small scale cross bedding | 0.1 | GWL 41.60 M. | 189.50-195.50 M. | 190 | | | |
| | 5 80 | | | | | | | | | CANNOT TEST | | | | | | |
| | 6 70 | | | | | | | | | | | | | | | |
| 27/8/90 | 7 88 | Siltstone & Sandstone | 100% | 47.6 | | reddish brown & grayish brown | | | 195.70-208.30 M; Siltstone, massive & brittle, slip plane at 195.90 M calcareous mottling at 203.50-208.30 M. | CANNOT TEST | 200.00-209.00 M. | 190 | | | | |
| | 8 100 | | | | | | | | | | | | | | 8.5' | |
| | 9 100 | | | | | | | | | | | | | | | |
| 28/8/90 | 10 55 | Siltstone | 100% | 47.6 | | reddish brown | | | 208.80-215.05 M; Sandy Siltstone. | 8.5' | GWL 68.90 M. | | 200 | | | |
| | 1 55 | | | | | | | | | | | | | | | CANNOT TEST |
| | 2 65 | | | | | | | | | | | | | | | |
| 29/8/90 | 3 75 | Siltstone | 100% | 47.6 | | reddish brown | | | | CANNOT TEST | | | 210 | | | |
| | 4 75 | | | | | | | | | | | | | | | CANNOT TEST |
| | 5 32 | | | | | | | | | | | | | | | |
| 15/9/90 | 6 55 | Siltstone | 100% | 47.6 | | reddish brown | | | | CANNOT TEST | | | 210 | | | |
| | 7 32 | | | | | | | | | | | | | | | CANNOT TEST |
| | 8 55 | | | | | | | | | | | | | | | |
| 17/9/90 | 9 33 | Siltstone | 100% | 47.6 | | red brown | | | | CANNOT TEST | | | 210 | | | |
| | 1 34 | | | | | | | | | | | | | | | CANNOT TEST |
| | 2 63 | | | | | | | | | | | | | | | |

Core lost → Weathering (1) (fresh) - 5 (decomposed) Average length of Core (if more than 30cm.), 2 (80cm, 20cm), 3 (20cm, 50cm.), 4 (less than 8 cm. 15 (gravel) Hardness (1) (hard) - 6 (soft)

EGAT

LOG OF BORING

Project LAH TA KHONG Location Water Wa. Boring No. DHW - 1 Log No. 8 of 8
 Co-ordinates 1638,095 N, 755,200 E Elevation 631.049 m. MSL Depth of Hole 230.00 M. Commenced 16/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 99.6 % Depth of Overburden 9.55 M. Completed 25/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 229.00 M. Logged by A. PATTANA

| Date | Depth M | R.O.D. % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill 50 Pressure - kg 100 Time - min | Depth M | Elevation |
|------------|------------|-------------|-----------------|-------------------|--------------------|------------------------------|-----------------------|----------------|------------|----------|--|--|-------------------------------------|-----|---|------------|-----------|
| | | | | | | | | | | | | | WATER TABLE | | | | |
| 19/9/90 | 210 | | Sandy Siltstone | | 100 | 47.6 | | reddish brown | | | | Sandy Siltstone, sub-horizontal bed, slip plane at 212.70 M. | 209.00-218.00 M. | 0.1 | | 210 | 631.049 |
| | 193 | | | | | | | | | | | | | | | | |
| | 175 | | | | | | | | | | | | | | | | |
| | 164 | | | | | | | | | | | | | | | | |
| | 187 | | | | | | | | | | | | | | | | |
| 20-21/9/90 | 200 | | Siltstone | | 100 | 47.6 | reddish brown | | | | 215.05 M; Siltstone, brittle, spotted calcareous, spotted pyzite and carbonate assemblage at 216.80-217.00 M, fine grained sandstone interbedded at 217.10-217.70 M, 219.60-219.80 M, 220.50-220.70 M, slip plane at 224.70 M. | 215.50-226.50 M. | 0.03 | | 200 | 631.049 | |
| | 173 | | | | | | | | | | | | | | | | |
| | 122 | | | | | | | | | | | | | | | | |
| | 182 | | | | | | | | | | | | | | | | |
| | 175 | | | | | | | | | | | | | | | | |
| 22/9/90 | 161 | | Siltstone | | 100 | 47.6 | reddish brown | | | | 221.00-230.00 M. | 21 | | 161 | 631.049 | | |
| | 161 | | | | | | | | | | | | | | | | |
| | 183 | | | | | | | | | | | | | | | | |
| | 180 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| 24-25/9/90 | 160 | | Siltstone | | 100 | 47.6 | reddish brown | | | | BOTTOM OF HOLE 230.00 M. | | | 160 | 631.049 | | |
| | 160 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| | 160 | | | | | | | | | | | | | | | | |
| 160 | | | | | | | | | | | | | | | | | |

Core lost → Weathering: 1 (fresh) - 2 (decomposed) - 3 (hard) - 4 (soft) Average length of Core: 1 (more than 50cm.), 2 (30cm, 20cm), 3 (20cm, 15cm), 4 (less than 10cm.) 5 (gravel)

EGAT

LOG OF BORING

Project LAN TA KHONG Location Water Way Boring No. DHW - 2 Log No. 1 of 9
 Co-ordinates 163B 284 N 774 562 E Elevation 422.831 m.HSL Depth of Hole 250.00 M. Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Core Recovery 98.5% Depth of Overburden 19.00 M. Completed 24/11/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 246.45 M. Logged by A. PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit Φ of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST | | | Depth M | Elevation |
|----------|------------|------------|----------------|-------------------|--------------------|--------------------------------|-----------------------|-----------------------|------------|----------|---------------------------|--|---------------------|-------------|----------------------------------|------------|-----------|
| | | | | | | | | | | | | | LUGEON VALUE | WATER TABLE | Drill 50 Pressure 100 Time | | |
| 15/10/90 | 0 | | CLAY & SOIL | | 100 | Tungsten carbide | 4.00 in. | reddish brown & brown | - | - | - | 0.00-19.00 M; OVERBURDEN | | 0 | 0 | 0 | |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| 16/10/90 | 10 | | BOULDERY TALUS | | 100 | Tungsten carbide | 4.00 in. | reddish brown & brown | - | - | - | 3.90-19.00 M; Decomposed Rock, Sandstone boulders in clay, large boulder at 3.90-7.75 M; core loss at 4.40-4.80 M, 7.75-8.50 M, 12.20-12.45 M, 15.00-15.50 M. | | 0 | 0 | 0 | |
| | 11 | | | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | |
| | 15 | | | | | | | | | | | | | | | | |
| | 16 | | | | | | | | | | | | | | | | |
| | 17 | | | | | | | | | | | | | | | | |
| | 18 | | | | | | | | | | | | | | | | |
| | 19 | | | | | | | | | | | | | | | | |
| 17/10/90 | 20 | 60 | Siltstone | | 100 | Tungsten carbide | 4.00 in. | reddish brown & brown | - | - | - | 19.00-39.80 M; Siltstone, some slightly calcareous highly to completely weathered at 19.00-20.60 M, soft, brittle, some calcareous- mottling joint, 30°-45°, at 23.50 M, 24.80 M, 34.60 M. | | 0 | 0 | 0 | |
| | 21 | | | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | | | |
| | 23 | | | | | | | | | | | | | | | | |
| | 24 | | | | | | | | | | | | | | | | |
| | 25 | | | | | | | | | | | | | | | | |
| | 26 | | | | | | | | | | | | | | | | |
| | 27 | | | | | | | | | | | | | | | | |
| | 28 | | | | | | | | | | | | | | | | |
| | 29 | | | | | | | | | | | | | | | | |
| 18/10/90 | 30 | 72 | | | | | | | | | | 27.50-33.50 M. | | 0 | 0 | 0 | |
| | 31 | | | | | | | | | | | | | | | | |

Core loss → Weathering: 1 (fresh) - 5 (decomposed) Hardness: 1 (hard) - 5 (soft) Average length of Core: 1 (more than 60cm), 2 (50cm, 20cm), 3 (20cm, 3cm), 4 (less than 6cm), 5 (broken)

EGAT

LOG OF BORING

Project LANH TA KHONG Location Water Way Boring No. DHW - 2 Log No. 2 of 9
 Co-ordinates 1638,284 N 774,562 E Elevation 422.831 m.MSL Depth of Hole 250.00 M. Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Core Recovery 98.58 % Depth of Overburden 19.00 M. Completed 24/11/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 216.45 M. Logged by A.PATTANA

| Date | Depth M | R.Q.D % | Geology | Symbol of geology | Core recovery | Kind of Bit Ø of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drift | 50 Pressure - kg | 100 Time - min | Depth M | Elevation |
|----------|------------|------------|-----------------|-------------------|---------------|--------------------------------|-----------------------|-----------------------|------------|----------|---------------------------|--|-------------------------------------|-------------|-------|------------------|----------------|------------|-----------|
| 18/10/90 | 30 | | Siltstone | | 100% | Ø of Core 47.6 mm. | CASING | reddish brown & brown | | | | sub-horizontal calcite veinlets at 29.95 M, 33.30 M, (slickenside) | 1.5' | GWL 8.50 M. | | | | 30 | |
| | 1 | 95 | | | | | | | | | | soft, brittle some calcareous mottling | 33.50-39.50 M. | 0.1' | | | 31 | | |
| | 2 | 97 | | | | | | | | | | | | | | | 32 | | |
| | 3 | 98 | | | | | | | | | | | | | | | 33 | | |
| | 4 | 98 | | | | | | | | | | | | | | | 34 | | |
| | 5 | 98 | | | | | | | | | | | | | | | 35 | | |
| | 6 | 90 | | | | | | | | | | | | | | | 36 | | |
| | 7 | 90 | | | | | | | | | | | | | | | 37 | | |
| | 8 | 92 | | | | | | | | | | | | | | | 38 | | |
| | 9 | 92 | | | | | | | | | | | | | | | 39 | | |
| 19/10/90 | 10 | | Sandy Siltstone | | 100% | Ø of Core 47.6 mm. | CASING | reddish brown | | | | 39.80-42.50 M; Sandy Siltstone, brittle, sub-horizon lamination, small scale cross bed | 39.50-45.50 M. | 1.0' | | | 40 | | |
| | 1 | 90 | | | | | | | | | | | | | | | 41 | | |
| | 2 | 90 | | | | | | | | | | | | | | | 42 | | |
| | 3 | 90 | | | | | | | | | | | | | | | 43 | | |
| | 4 | 95 | | | | | | | | | | | | | | | 44 | | |
| | 5 | 95 | | | | | | | | | | | | | | | 45 | | |
| | 6 | 80 | | | | | | | | | | | | | | | 46 | | |
| | 7 | 80 | | | | | | | | | | | | | | | 47 | | |
| | 8 | 100 | | | | | | | | | | | | | | | 48 | | |
| | 9 | 100 | | | | | | | | | | | | | | | 49 | | |
| 20/10/90 | 10 | | Siltstone | | 100% | Ø of Core 47.6 mm. | CASING | reddish brown & brown | | | | slip plane, 10°-15°, at 56.30 M, 95.05 M, 96.35 M, 102.85 M. | 51.50-57.50 M. | 0.01' | | | | 50 | |
| | 1 | 93 | | | | | | | | | | | | | | | 51 | | |
| | 2 | 92 | | | | | | | | | | | | | | | 52 | | |
| | 3 | 92 | | | | | | | | | | | | | | | 53 | | |
| | 4 | 80 | | | | | | | | | | | | | | | 54 | | |
| | 5 | 80 | | | | | | | | | | | | | | | 55 | | |
| | 6 | 80 | | | | | | | | | | | | | | | 56 | | |
| | 7 | 80 | | | | | | | | | | | | | | | 57 | | |
| | 8 | 100 | | | | | | | | | | | | | | | 58 | | |
| | 9 | 100 | | | | | | | | | | | | | | | 59 | | |
| 23/10/90 | 10 | | | | | | | | | | | | | | | | | | |
| | 60 | | | | | | | | | | | | | | | | | 60 | |

Core loss → Weathering: 1 (fresh) - 5 (decomposed) Hardness: 1 (hard) - 5 (soft) Average length of Core: 1 (more than 50cm), 2 (30cm, 50cm), 3 (20cm, 30cm), 4 (less than 20cm), 5 (gravel)

EGAT

LOG OF BORING

Project LAH TA KIONG Location Water Way Boring No. DHW - 2 Log No. 3 of 9
 Co-ordinates 1638,284 N 774,562 E Elevation 422.831 m. MSL Depth of Hole 250.00 M. Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Coco Recovery 98.58 % Depth of Overburden 19.00 M. Completed 24/11/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 246.45 M. Logged by A. PATTANA

| Date | Depth M | R. Q. D % | Geology | Symbol of geology | Core recovery | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill D | 50 Pressure kg | 100 Time min | Depth M | Elevation | |
|----------|------------|--------------|-----------|-------------------|---------------|---------------------------------|-----------------------|-----------------------|------------|----------|---------------------------|--|-------------------------------------|--|------------|-------------------|-----------------|------------|-----------|---|
| | | | | | | | | | | | | | WATER TABLE | | | | | | | |
| 23/10/90 | 0 | | Siltstone | | 100 % | NQ WIRELINE, Ø of core 47.6 mm. | | reddish brown & brown | | | | Sandy at 62.50-65.75 M core loss at 65.75-66.30 M, 71.70-72.20 M, 81.00-81.50 M, | 0.1° | | - | - | - | - | - | - |
| | 1 | | | | | | | | | | | GWL 9.00 M. | | | | | | | | |
| | 2 | 90 | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | |
| 24/10/90 | 4 | | Siltstone | | 100 % | NQ WIRELINE, Ø of core 47.6 mm. | | reddish brown & brown | | | | Muddy at 69.00-70.30 M 80.00-85.00 M, irregular fracture, 60°(polish) at 73.10-73.20 M, | 0.4 | | - | - | - | - | - | - |
| | 5 | 100 | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | |
| | 8 | 82 | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | |
| | 10 | 60 | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | |
| | 2 | 57 | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | |
| 25/10/90 | 4 | 98 | Siltstone | | 100 % | NQ WIRELINE, Ø of core 47.6 mm. | | reddish brown & brown | | | | slaking at 75.00-75.20 M, joint, gypsum & CO ₃ coated, 10°, at 51.30 M, 84.50 M, 85.30 M, 85.75 M, 87.40 M, 80.50 M, 82.00 M, 82.55 M, | 0° | | - | - | - | - | - | - |
| | 5 | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | |
| | 7 | 87 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | |
| | 10 | 72 | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | |
| | 26/10/90 | 3 | | | | | | | | | | 60 | Siltstone | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
| 5 | | 80 | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | |
| 7 | | 87 | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | |
| 9 | | 90 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Core loss → Weathering: (fresh)-5 (decomposed) Hardness: (hard)-6 (soft) Average length of Core (more than 60cm.): 2 (50cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 5cm.), 5 (crushed)

EGAT

LOG OF BORING

Project LAH TA KHONG Location Water Way Boring No. DHW - 2 Log No. 4 of 9
 Co-ordinates 1638,284 N 774,562 E Elevation 422.831 m. MSL Depth of Hole 250.00 M. Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Cora Recovery 98.58 % Depth of Overburden 19.00 M. Completed 24/11/90
 Bearing of Angle Hole - Company EGAT Total length of core 246.45 M. Logged by A. PATTANA

| Date | Depth m | R. Q. D % | Geology | Symbol of geology | Core recovery % | Kind of Bit Ø of Core (mm.) | Casing Concentration | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill Time | Depth m | Elevation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------|----------------|-----------|-------------------|--------------------|---------------------------------|-------------------------|-----------------------|------------|----------|---------------------------|--------------------|-------------------------------------|------------------|---------------|------------|--------------|---|---|---|------------------|-----|----|--------------|--------------|---|--------------|---|------------------|-----|--------------------------|---|--------------|---|--------------|---|------------------|-----|------------------|-------|----|--|--------------|---|---|--|
| | | | | | | | | | | | | | WATER TABLE | 50 Pressure - kg | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26/10/90 | 30 | | Siltstone | | 100% | NQ WIRELINE, Ø of Cora 47.5 mm. | | reddish brown & brown | | | | siltstone, brittle | 0.1" | | 50 Pressure | 100 Time | 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | GWL 14.55 M. | | | | | | | | | | | 0 | | | | | | M | E | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 93.50-99.50 M. | | | | | | | | | | | | | | | | | | | 0.1 | 87 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | GWL 38.40 M. | 88 | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | 99.50-105.50 | 0 | 85 | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | joint, 15°, at 110.40 M. | 0 | 100 | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | GWL 15.80 M. | 0 | 1 | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 105.50-111.50 M. | 0.02" | 50 | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | GWL 20.30 M. | 0 | 2 | |
| | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | GWL 17.50 M. | | 0 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | 111.50-117.50 M. | 0.1 | 73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | GWL 17.50 M. | | | | | | | | 0 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | 117.50-123.50 M. | 0.1 | 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | GWL 17.50 M. | 0 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | 117.50-123.50 M. | 0.1 | 63 | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | GWL 17.50 M. | 0 | 7 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 117.50-123.50 M. | 0.1 | 67 | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | GWL 17.50 M. | 0 | 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 117.50-123.50 M. | 0.1 | 63 | | | | | | | |
| 10 | GWL 17.50 M. | | 0 | 67 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Core loss → Weathering Average length of Cora 1 (more than 50 cm.), 2 (50 cm., 20 cm.), 3 (20 cm., 5 cm.), 4 (less than 5 cm.) 5 (crushed)
 1 (fresh) - 5 (decomposed) Hardness 1 (hard) - 5 (soft)

EGAT

LOG OF BORING

Project LAN TA KHONG Location Water Way Boring No. DHW - 2 Log No. 5 of 9
 Co-ordinates 1638,284 N 771,562 E Elevation 122.831 m.MSL Depth of Hole 250.00 M. Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Core Recovery 98.58 % Depth of Overburden 19.00 M. Completed 24/11/90
 Bearing of Angle Hole - Company EGAT Total length of core 246.45 M. Logged by A. PATIYANA

| Date | Depth M | R. Q. D. % | Geology | Symbol of geology | Core recovery | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE \bigcirc | WATER TABLE \sim | Drill 50 Pressure $\frac{kg}{min}$ | Depth M | Elevation | | | | | | | |
|----------|------------|---------------|-----------|-------------------|---------------|--------------------------------------|-----------------------|----------------|------------|----------|---------------------------|---|--|---------------------|---------------------------------------|------------|-----------|--|--|--|--|--|--|--|
| 29/10/90 | 120 | | Siltstone | | 100 % | NQ WIRELINE, ϕ of core 47.6 mm. | | reddish brown | | | | Sandy at 121.10-123.50 M, 135.50-135.70 M, 129.00-133.50 M, | 0.01 | GWL \sim 30.85 M. | | 120 | | | | | | | | |
| | 1 | | | | | | | | | | | joint, 10°, gypsum and CO ₂ coated, at | | | | | | | | | | | | |
| | 2 | 85 | | | | | | | | | | 123.50-129.50 M. | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | 126.90 M, 137.60 M, 138.90 M, 140.05 M, 142.00 M, 142.65 M, 112.85 M, 144.50 M. | 0.1 | GWL \sim 39.30 M. | | | | | | | | | | |
| | 4 | | | | | | | | | | | gypsum and calcite vein, horizontal, (2 mm. thick), | | | | | | | | | | | | |
| | 5 | 47 | | | | | | | | | | at 122.55 M, 123.30 M, 131.20 M, 131.55 M, 131.90 M, 132.35 M, 133.10 M, 136.50 M, 144.25 M, 145.35 M, 145.70 M, 146.25 M, 146.55 M, 148.45 M, 149.20 M. | 0° | GWL \sim 29.90 M. | | | | | | | | | | |
| | 6 | | | | | | | | | | | calcite vein, 45° dip, at 133.20-133.40 M, 133.65-133.70 M. | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | 129.50-135.50 M. | | | | | | | | | | | | |
| | 8 | 85 | | | | | | | | | | | | | | | | | | | | | | |
| | 30/10/90 | 9 | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | 88 | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | 70 | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | 75 | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 30/10/90 | 9 | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | 88 | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | 73 | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | 58 | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 95 | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | |

Core loss \rightarrow Weathering (fresh) - 0 (decomposed) Hardness (hard) - 0 (soft) Average length of Core (more than 80cm.), 2 (80cm, 20cm), 3 (20cm, 5cm.), 4 (less than 5cm.) 0 (gravel)

EGAT

LOG OF BORING

Project LAH TA KHONG Location Water Way Boring No. DHW - 2 Log No. 6 of 9
 Co-ordinates 1638,284 N 774,562 E Elevation 422.831 m.MSL Depth of Hole 250.00 M. Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Core Recovery 98.58 % Depth of Overburden 19.00 M. Completed 24/11/90
 Bearing of Angle Hole - Company EGATE Total length of core 246.45 M. Logged by A.PATTANA

| Date | Depth M | R. Q. D. % | Geology | Symbol of geology | Core recovery -100 % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill log | Depth M | Elevation | |
|----------|------------|---------------|-----------|-------------------|-------------------------|---------------------------------|-----------------------|----------------|------------|----------|---------------------------|---|-------------------------------------|------------------|--------------|------------|-----------|-------------|
| | | | | | | | | | | | | | WATER TABLE | SO Pressure | | | | |
| 15/11/90 | 150 | | Siltstone | | | NO WIRELINE, Ø of core 17.6 mm. | | reddish brown | | | | horizon gypsum vein at 151.10 M, 151.53 M, | | | | 150 | | |
| | 1 | 78 | | | | | | | | | | some spotted calcareous | 152.00-158.00 M. | | | | | |
| | 2 | | | | | | | | | | | at 150.00-155.00 M, | | | | | | |
| | 3 | 77 | | | | | | | | | | 167.50-170.05 M, | | | | | | |
| | 4 | | | | | | | | | | | gypsum veins, 10° | | 0.2° | | | | |
| | 5 | | | | | | | | | | | at 158.30 M, 161.75 M, | | | | | | |
| | 6 | | | | | | | | | | | 162.55 M, | | GWL 4.00 M. | | | | |
| | 7 | 87 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | gypsum veins, 45° | 158.00-164.00 M. | | | | | |
| | 9 | 0 | | | | | | | | | | at 161.25 M, 169.60 M, | | 0.4° | | | | |
| 16/11/90 | 150 | | Siltstone | | | NO WIRELINE, Ø of core 17.6 mm. | reddish brown | | | | | slip plane, 10° | | | | 160 | | |
| | 1 | | | | | | | | | | | at 163.95 M, | | | | | | |
| | 2 | 88 | | | | | | | | | | | | GWL 12.70 M. | | | | |
| | 3 | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | 164.00-170.00 M. | | | | | |
| | 5 | | | | | | | | | | | | | 0.04° | | | | |
| | 6 | | | | | | | | | | | | | | | | | |
| | 7 | 00 | | | | | | | | | | | | GWL 6.70 M. | | | | |
| | 8 | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | lenticular bed at | 170.00-176.00 M. | | | | |
| 16/11/90 | 170 | | Siltstone | | | NO WIRELINE, Ø of core 17.6 mm. | reddish brown | | | | | at 172.30-172.85 M, | | | | 170 | | |
| | 1 | | | | | | | | | | | | | | | | | |
| | 2 | 33 | | | | | | | | | | | | 0.04° | | | | |
| | 3 | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | small scale cross bed | | | | | |
| | 5 | 00 | | | | | | | | | | | at 175.95 M, | | | | | GWL 6.70 M. |
| | 6 | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | |
| | 8 | 87 | | | | | | | | | | | | | | | | |
| | 9 | 83 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

Core test → Weathering (fresh) - 5 (decomposed) Hardness (hard) - 5 (soft) Average length of Core (more than 30 cm), 2 (50 cm, 30 cm), 3 (20 cm, 30 cm), 4 (less than 6 cm, 18 (graded)

EGAT

LOG OF BORING

Project LAM TA KHONG Location Water Way Boring No. DHW - 2A Log No. 7 of 9
 Co-ordinates 1638.284 N 774.362 E Elevation 422.831 m.HSL Depth of Hole 230.00 M Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Core Recovery 98.58 M Depth of Overburden 19.00 M Completed 24/11/90
 Bearing of Angle Hole - Company EGAT Total length of core 216.45 M Logged by A. PATTANA

| Date | Depth M | R. Q. D. % | Geology | Symbol of geology | Core recovery % | Kind of Bit Ø of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill 50 Pressure 100 Time | Depth M | Elevation |
|----------|------------|---------------|---------|-------------------|--------------------|--------------------------------|-----------------------|----------------|------------|---------------------------------------|--|-------------------------------------|---|----------------------------------|------------|-----------|
| | | | | | | | | | | | | WATER TABLE | Ø | | | |
| 16/11/90 | 10.00 | 33 | SS. | | 100% | | | brown | | | horizon lamination, no joint. | | | | 18.00 | |
| | 11.00 | | | | | | | | | | 181.05-196.35 M; Siltstone, brittle, spotted calcareous, sharp contact, 20° at 181.05 M, (with gypsum vein) | 0.02° | | | 19.00 | |
| | 12.00 | | | | | | | | | | fine sandstone interbedded at 191.20-192.00 M, horizon gypsum veins at 189.40 M, 191.60 M, 191.80 M, slip planes, 10°, at 190.22 M, 190.30 M, 190.35 M, 190.50 M, gypsum veins, 10° at 192.20 M, 192.95 M, 193.62 M, slip planes, 15°-20° at 193.18 M, 193.26 M. | 0.01° | | | 20.00 | |
| | 13.00 | | | | | | | | | | 196.35-197.30 M; Silt Sandstone, hard & dense moderately well cemented. | 0° | | | 21.00 | |
| | 14.00 | | | | | | | | | | 197.30-206.40 M; Siltstone, slip planes, 0°-10° at 197.90 M, 198.25 M, 198.35 M, 199.15 M, 199.70 M, 201.15 M, 201.25 M, 201.30 M, 204.80 M, 205.95 M, 205.70 M, gypsum veinlet at 201.35 M, 201.80 M, 202.30 M, | 0° | | | 22.00 | |
| | 15.00 | | | | | | | | | | 206.40-215.75 M; Silty Sandstone, moderately cemented, some spotted calcareous | | | | 23.00 | |
| | 16.00 | | | | | | | | | | | | | | 24.00 | |
| | 17.00 | | | | | | | | | | | | | | 25.00 | |
| | 18.00 | | | | | | | | | | | | | | 26.00 | |
| | 19.00 | | | | | | | | | | | | | | 27.00 | |
| 17/11/90 | 20.00 | | | | | | | | | | | | | | 28.00 | |
| | 21.00 | | | | | | | | | | | | | | 29.00 | |
| | 22.00 | | | | | | | | | | | | | | 30.00 | |
| | 23.00 | | | | | | | | | | | | | | 31.00 | |
| | 24.00 | | | | | | | | | | | | | | 32.00 | |
| | 25.00 | | | | | | | | | | | | | | 33.00 | |
| | 26.00 | | | | | | | | | | | | | | 34.00 | |
| | 27.00 | | | | | | | | | | | | | | 35.00 | |
| | 28.00 | | | | | | | | | | | | | | 36.00 | |
| | 29.00 | | | | | | | | | | | | | | 37.00 | |
| 18/11/90 | 30.00 | | | | | | | | | | | | | | 38.00 | |
| | 31.00 | | | | | | | | | | | | | | 39.00 | |
| | 32.00 | | | | | | | | | | | | | | 40.00 | |
| | 33.00 | | | | | | | | | | | | | | 41.00 | |
| | 34.00 | | | | | | | | | | | | | | 42.00 | |
| | 35.00 | | | | | | | | | | | | | | 43.00 | |
| | 36.00 | | | | | | | | | | | | | | 44.00 | |
| | 37.00 | | | | | | | | | | | | | | 45.00 | |
| | 38.00 | | | | | | | | | | | | | | 46.00 | |
| | 39.00 | | | | | | | | | | | | | | 47.00 | |

Core loss → Weathering: 1 (fresh) - 5 (decomposed) Hardness: 1 (hard) - 6 (soft) Average length of Core: 1 (more than 80cm), 2 (50cm, 20cm), 3 (20cm, 5cm), 4 (less than 5cm) (practical)

EGAT

LOG OF BORING

Project LAN TA KHONG Location Water Way Boring No. DHW - 2A Log No. 8 of 9
 Co-ordinates 1638,284 N 774,562 E Elevation 422.831 m.HSL Depth of Hole 250.00 M. Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Cora Recovery 98.38 % Depth of Overburden 19.00 M. Completed 24/11/90
 Bearing of Angle Hole - Company EGAT Total length of cora 246.45 M. Logged by A. PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Cora recovery 100 % | Kind of BH of Cora (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of cora | Description | WATER PRESSURE TEST LUGEON VALUE | | | Drift | Depth M | Elevation |
|----------|------------|----------------------------------|----------------------|-------------------|------------------------|-----------------------------|-----------------------|----------------|------------|----------|--|---|-------------------------------------|-------------|----------|-------|------------|-----------|
| | | | | | | | | | | | | | WATER TABLE | 50 Pressure | 100 Time | | | |
| 18/11/90 | 210 | | Silty Sandstone | | 100 % | 47.6 mm. | | brown | | | | Silty Sandstone, good core, horizon lamination at 221.00-215.75 M, slip plane at 208.10 M, fracture, 75°, at 215.00-215.20 M. | 200.00-215.00 M. | | | 210 | | |
| | 100 | 59.2 lpm | | | | | | | | | | | | 208 | | | | |
| | 93 | (cannot set pressure) | | | | | | | | | | | | 193 | | | | |
| | 50 | 30k* | | | | | | | | | | | | 150 | | | | |
| | | | | | | | | | | | | | | | | | | |
| 19/11/90 | 220 | | Quartzitic Sandstone | | 100 % | 47.6 mm. | light gray | | | | 215.75-230.82 M; Quartzitic Sandstone, massive, hard & dense, micaceous, medium grained, well cemented good core, joint, 75°, at 224.45-224.60 M, some layers of siltstone pebbles at 223.33-223.34 M, 221.18-221.20 M, | 216.00-224.00 M. | | | 220 | | | |
| | 100 | 116 lpm | | | | | | | | | | | 210 | | | | | |
| | | (cannot set pressure) | | | | | | | | | | | | | | | | |
| | | 2k* | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | |
| 23/11/90 | 230 | | Siltstone | | 100 % | 47.6 mm. | reddish brown | | | | 230.82-249.30 M; Siltstone, brittle, slaking, slip plane at 231.00 M, some spotted calcareous at 231.00 M, 232.50 M, 236.00-236.30 M, 248.00-249.40 M, Muddy at 232.00-233.00 M, joint, 10°, at 232.42 M, slip planes, 10°, at 236.95 M, 238.00 M, 238.05 M, | 64.50-250.00 M. | | | 230 | | | |
| | 100 | | | | | | | | | | | | 220 | | | | | |
| | | CONSTANT HEAD TEST | | | | | | | | | | | | | | | | |
| | | k = 3.22x10 ⁻⁵ cm/sec | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
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Core box Weathering (fresh) - 0 (decomposed) Average length of Cora (more than 60 cm.) 2 (60 cm, 20 cm.) 3 (20 cm, 20 cm.) 4 (less than 6 cm.) 5 (grained) (hardness) (hard) - 0 (soft)

EGAT

LOG OF BORING

Project LAM TA KHONG Location Water Way Boring No. DUK -2A Log No. 2 of 2
 Co-ordinates 1638,284 N 774,562 E Elevation 422.831 m. MSL Depth of Hole 230.00 M. Commenced 15/10/90
 Angle from Horizontal 90° Total Depth Coke Recovery 98.38 % Depth of Overburden 19.00 M. Completed 24/11/90
 Bearing of Angle Hole - Company EGAT Total length of core 246.45 Logged by A. PATRANA

| Date | Depth M F.C.D | Geology | Symbol of geology | Core recovery | Kind of Bit Ø of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill | 50 Pressure <u>kg</u> | 100 Time <u>min</u> | Depth M | Elevation | |
|----------|---------------------|-----------|-------------------|---------------|---------------------------------|-----------------------|----------------|------------|----------|---------------------------|--|-------------------------------------|---|-------|-----------------------|---------------------|------------|-----------|--|
| | | | | | | | | | | | | ○ | ⚡ | | | | | | |
| 23/11/90 | 0-65 | Siltstone | [Symbol] | 100% | NQ WIRELINE, Ø of core 47.6 mm. | | reddish brown | | | | slip plane, 15° at 238.35 M, slip planes, 30°-40° at 244.60 M, 243.50 M, 243.80 M, 242.25 M. | k = 3.22 x 10 ⁻⁵ gm/sec. | | | | 0-65 | | | |
| 24/11/90 | 65-95 | SS. | [Symbol] | | | | brown | | | | Sandy at 248.00-249.30 M, 249.30-3250.00 M; Silty Sandstone, carbonate pebble at 249.88 M, good core | | | | | | 65-95 | | |
| | 95-250 | | | | | | | | | | BOTTOM OF HOLE 250.00 M. | | | | | | | 95-250 | |
| | 1 | | | | | | | | | | | | | | | | | 1 | |
| | 2 | | | | | | | | | | | | | | | | | 2 | |
| | 3 | | | | | | | | | | | | | | | | | 3 | |
| | 4 | | | | | | | | | | | | | | | | | 4 | |
| | 5 | | | | | | | | | | | | | | | | | 5 | |
| | 6 | | | | | | | | | | | | | | | | | 6 | |
| | 7 | | | | | | | | | | | | | | | | | 7 | |
| | 8 | | | | | | | | | | | | | | | | 8 | | |
| | 9 | | | | | | | | | | | | | | | | 9 | | |
| | 0 | | | | | | | | | | | | | | | | 0 | | |

Core loss → [Symbol]
 Weathering (fresh) - B (decomposed)
 Hardness (hard) - B (soft)
 Average length of Core (more than 60 cm.) 2 (60 cm., 20 cm.)
 3 (20 cm., 5 cm.), 4 (less than 5 cm.) 5 (grabbed)

EGAT

LOG OF BORING

Project IAM TA KHONG Location Tailrace Boring No. DIT-1 Log No. 1 of 6
 Co-ordinates 1638 489N 773 826E Elevation 316.077 m.MSL Depth of Hole 180.00 M. Commenced 11/8/90
 Angle from Horizontal 90° Total Depth Core Recovery 98% Depth of Overburden 31.50 M. Completed 21/9/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 176.40 M. Logged by A.PATTANA

| Date | Depth M | R.Q.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit φ of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | | Drill O | Depth M | Elevation | |
|---------|------------|------------|---------|-------------------|--------------------|--------------------------------|-----------------------|----------------|------------|----------|---------------------------|---|-------------------------------------|-------------------|-----------------|------------|------------|-----------|--|
| | | | | | | | | | | | | | WATER TABLE | 50 Pressure kg | 100 Time min | | | | |
| 11/8/90 | 0 | | | | | | | | | | | 0.00-31.50 M: OVERBURDEN, 0.00-0.90 M; Decomposed rock, brown, 0.90-2.30 M; sandstone boulder, grey 2.30-2.50 M; core loss, 2.50-3.50 M; sandstone boulder, grey, 3.50-4.20 M; core loss 4.20-4.40 M; sandstone boulder, grey, 4.40-4.80 M; core loss, 4.80-8.00 M; decomposed rock of sandstone, brown 8.00-17.40 M; decomposed rock of sandstone and siltstone brown, 17.40-20.20 M; sandstone rock fragments in clay matrix, brown 20.20-21.75 M, 24.00- 24.70 M; sandstone boulder, medium grained, well cemented, light grey, 21.75-24.00 M; decomposed rock of sandstone, brown, 22.00-22.60 M } core loss 23.30-23.70 M } 24.70-27.05 M; sandstone boulder, grey, 27.05-31.50 M; decomposed rock of siltstone | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | |
| 14/8/90 | 10 | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | | |
| | 15 | | | | | | | | | | | | | | | | | | |
| | 16 | | | | | | | | | | | | | | | | | | |
| | 17 | | | | | | | | | | | | | | | | | | |
| | 18 | | | | | | | | | | | | | | | | | | |
| | 19 | | | | | | | | | | | | | | | | | | |
| 15/8/90 | 20 | | | | | | | | | | | | | | | | | | |
| | 21 | | | | | | | | | | | | | | | | | | |
| | 22 | | | | | | | | | | | | | | | | | | |
| | 23 | | | | | | | | | | | | | | | | | | |
| | 24 | | | | | | | | | | | | | | | | | | |
| | 25 | | | | | | | | | | | | | | | | | | |
| | 26 | | | | | | | | | | | | | | | | | | |
| | 27 | | | | | | | | | | | | | | | | | | |
| | 28 | | | | | | | | | | | | | | | | | | |
| | 29 | | | | | | | | | | | | | | | | | | |
| 16/8/90 | 30 | | | | | | | | | | | | | | | | | | |
| | 31 | | | | | | | | | | | | | | | | | | |
| | 32 | | | | | | | | | | | | | | | | | | |
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| | 34 | | | | | | | | | | | | | | | | | | |
| | 35 | | | | | | | | | | | | | | | | | | |
| | 36 | | | | | | | | | | | | | | | | | | |
| | 37 | | | | | | | | | | | | | | | | | | |
| | 38 | | | | | | | | | | | | | | | | | | |
| | 39 | | | | | | | | | | | | | | | | | | |

Core loss → [Symbol] Weathering: (fresh) - 5 (decomposed) Hardness: (hard) - 5 (soft) Average length of Core (more than 50 cm.), 2 (50 cm., 20 cm.), 3 (20 cm., 3 cm.), 4 (less than 6 cm.), 5 (gravel)

EGAT

LOG OF BORING

Project IAM TA KHONG Location Tailrace Boring No. DIT-1 Log No. 2 of 6
 Co-ordinates 1638,489 N, 773,826 E Elevation 316,077 m. MSL. Depth of Hole 180.00 M. Commenced 11/8/90
 Angle from Horizontal 90° Total Depth Core Recovery & Depth of Overburden 31.50 M. Completed 21/8/90
 Bearing of Angle Hole - Company EGAT Total length of core 176.40 M. Logged by A. PATTANA
















| Date | Depth M | R.Q.D % | Geology | Symbol of geology | Core recovery | Kind of Bit Φ of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drill 30 Pressure 100 Time | Depth M | Elevation | | |
|---------|------------|------------|-----------------|-------------------|---------------|---|-----------------------------|----------------|------------|---|--|--------------------|-------------------------------------|----------------|----------------------------------|------------|-----------|----|----|
| 16/8/90 | 0 | 0 | Siltstone | | 100% | NQ (WIRELINE) DIAMOND BIT, A-OF CORE 47.6 mm. | | reddish brown | | S | 31.50-37.60 M; muddy, calcareous, brittle, highly to completely weathered. | 19° GWL 27.10 M | | 30.00-35.00 M. | 1 | 30 | | | |
| | 1 | 0 | | | | | | | | | | | | | | | | 2 | 29 |
| | 2 | 0 | | | | | | | | | | | | | | | | 3 | 28 |
| | 3 | 0 | | | | | | | | | | | | | | | | 4 | 27 |
| | 4 | 0 | | | | | | | | | | | | | | | | 5 | 26 |
| 17/8/90 | 5 | 0 | Siltstone | | 100% | | reddish brown | | S | 36.00-37.30 M, core loss | 19° GWL 23.00 M | | 35.00-40.00 M. | 6 | 26 | | | | |
| | 6 | 0 | | | | | | | | | | | | | | | 7 | 25 | |
| | 7 | 0 | | | | | | | | | | | | | | | 8 | 24 | |
| | 8 | 0 | | | | | | | | | | | | | | | 9 | 23 | |
| | 9 | 0 | | | | | | | | | | | | | | | 10 | 22 | |
| 20/8/90 | 10 | 50 | Sandy Siltstone | | 100% | | reddish brown/brownish grey | | S | 37.60-45.00 M; Sandy Siltstone, calcareous mottling, sub-vertical fracture at 38.30-38.50 M, 39.20-39.40 M, 40.30-40.40 M, | 0.4° GWL 31.10 M | | 40.00-45.00 M. | 1 | 22 | | | | |
| | 11 | 50 | | | | | | | | | | | | | | | 2 | 21 | |
| | 12 | 50 | | | | | | | | | | | | | | | 3 | 20 | |
| | 13 | 50 | | | | | | | | | | | | | | | 4 | 19 | |
| | 14 | 50 | | | | | | | | | | | | | | | 5 | 18 | |
| 21/8/90 | 15 | 85 | Siltstone | | 100% | | greyish brown & brown | | S | 45.00-52.50 M; Siltstone, muddy, slightly calcareous, fine sandstone intercalated at 49.30-49.60 M, sandy at 51.50-52.50 M, sub-horizontal bed, small scale cross bedding, | 0.5° GWL 15.20 M | | 45.00-50.00 M. | 6 | 18 | | | | |
| | 16 | 85 | | | | | | | | | | | | | | | 7 | 17 | |
| | 17 | 85 | | | | | | | | | | | | | | | 8 | 16 | |
| | 18 | 85 | | | | | | | | | | | | | | | 9 | 15 | |
| | 19 | 85 | | | | | | | | | | | | | | | 10 | 14 | |
| 21/8/90 | 20 | 85 | Silty Sandstone | | 100% | | greyish brown | | S | 52.50-67.35 M; Silty Sandstone grade to medium sandstone, hard & dense, siltstone alternated at 52.50-54.70 M, vertical calcite veinlets at 59.65-60.15 M, good core | 0.2° GWL 15.80 M | | 50.00-55.00 M. | 1 | 14 | | | | |
| | 21 | 85 | | | | | | | | | | | | | | | 2 | 13 | |
| | 22 | 85 | | | | | | | | | | | | | | | 3 | 12 | |
| | 23 | 85 | | | | | | | | | | | | | | | 4 | 11 | |
| | 24 | 85 | | | | | | | | | | | | | | | 5 | 10 | |
| 21/8/90 | 25 | 85 | Silty Sandstone | | 100% | | greyish brown | | S | 55.00-60.00 M, vertical calcite veinlets at 59.65-60.15 M, good core | 0.7° GWL 12.60 M | | 55.00-60.00 M. | 6 | 10 | | | | |
| | 26 | 85 | | | | | | | | | | | | | | | 7 | 9 | |
| | 27 | 85 | | | | | | | | | | | | | | | 8 | 8 | |
| | 28 | 85 | | | | | | | | | | | | | | | 9 | 7 | |
| | 29 | 85 | | | | | | | | | | | | | | | 10 | 6 | |


Core loss → Weathering: 1 (fresh) - 5 (decomposed) Hardness: 1 (hard) - 5 (soft) Average length of Core: 1 (more than 50 cm.), 2 (30 cm., 20 cm.), 3 (20 cm., 5 cm.), 4 (less than 5 cm.), 5 (grubbed)

EGAT

LOG OF BORING

Project LAN TA KHONG Location Taifrace Boring No. DIT-1 Log No. 3 of 6
 Co-ordinates 1638,489 N, 773,826 E Elevation 316,077 m. MSL. Depth of Hole 180.00 M. Commenced 11/8/90
 Angle from Horizontal 90° Total Depth Core recovery 98.1 Depth of Overburden 31.50 M. Completed 21/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 176.40 M. Logged by A. PATTANA

| Date | Depth K M | R. O. D % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core m | Description | WATER PRESSURE TEST LUGEON VALUE - ○ | WATER TABLE -  | Drift | 50 Pressure - kg | LOG Time - min | Depth M | Elevation | | | | |
|------------|-----------------|--------------|-----------------|---|--------------------|--|------------------------|----------------|------------|----------|--------------------------------|---|---|---|---|------------------|----------------|--|--|--|---|---|---|
| 22/9/90 | 0 | | Silty Sandstone |  | 100 | NQ WIRELINE DIAMOND BIT : Ø of core 47.6 mm. | | brown | | | | calcite veinlets, 70° at 61.60-61.85 m, | 60.00-65.00 M. | ○ 7.8 |  | | | | 60 | | | | |
| | 1 | | | | | | | | | | | bedding 0° at 60.00-66.00 m. | 65.00-70.00 M. | ○ 0.4 | | | | | GWL  38.10 M. | | | | 1 |
| | 2 | | | | | | | | | | | | | | | | | | | | | | |
| 23/8/90 | 3 | 93 | Siltstone |  | 100 | | grey and reddish brown | | | | | 67.35-70.00 m; spotted calcareous, sub-horizontal bed, calcite vein | 70.00-76.00 M. | ○ 0.8 |  | | | 3 | | | | | |
| | 4 | | | | | | | | | | | | | | | | | GWL  36.60 M. | | | | 4 | |
| | 5 | | | | | | | | | | | | | | | | | | | | | | |
| 24-25/8/90 | 6 | 75 | Siltstone |  | 100 | | reddish brown & brown | | | | | 70.00-88.00 M; Siltstone, dense & massive, slightly calcareous, | 76.00-82.00 M. | ○ 0.5 |  | | | 6 | | | | | |
| | 7 | | | | | | | | | | | | | | | | | GWL  44.10 M. | | | | 7 | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | |
| 27/8/90 | 9 | 74 | Sandy Siltstone |  | 100 | | reddish brown & brown | | | | | 82.00-83.00 m, spotted calcareous | 82.00-88.00 M. | ○ 0.5 |  | | | 9 | | | | | |
| | 1 | | | | | | | | | | | 84.80-88.00 m, Muddy at | | | | | | GWL  44.80 M. | | | | 1 | |
| | 2 | | | | | | | | | | | 81.90-83.80 m, 85.00-86.10 m, | | | | | | | | | | | |
| 27/8/90 | 3 | 100 | Siltstone |  | 100 | | | | | | | 88.00-90.00 M; Sandy Siltstone, grade to sandstone, calcareous, sub-horizontal bed, fracture, 60° at 89.80 m. | 88.00-94.00 M. | |  | | | 3 | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | 4 | | |
| | 5 | | | | | | | | | | | | | | | | | | | | | 5 | |

Core loss  Weathering (1)(2)(3)-5 (2)(3)(4)-5 (soft) Average length of Core (more than 80cm.), 2 (50cm., 10cm.), 3 (20cm., 5cm.), 4 (less than 8 cm. 15 (grabbed))

EGAT

LOG OF BORING

Project LAM TA KHONG Location Tailrasa Boring No. DIT - 1 Log No. 4 of 6
 Co-ordinates 1638,489 N 773,826 E Elevation 316.077 m.MSL Depth of Hole 180.00 M. Commenced 11/8/90
 Angle from Horizontal 90° Total Depth Core Recovery 98.8 Depth of Overburden 31.50 M. Completed 21/9/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 176.40 M. Logged by A. PATTANA

| Date | Depth M | R.Q.D. % | Geology | Symbol of geology | Core recovery | Kind of Bit Φ of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | | Drill 50 Pressure kg | 100 Time min | Depth M | Elevation | | | | | |
|---------|------------|-------------|---|-------------------|---------------|--------------------------------|-----------------------|----------------|------------|----------|---------------------------|--|-------------------------------------|---|-------------------------|--------------|------------|-----------|--|---------|--|----|--|
| | | | | | | | | | | | | | WATER TABLE | ○ | | | | | | | | | |
| 27/8/90 | 90 | | S-St silty Sandstone | | 100% | 47.6 mm | | brownish grey | | | | 90.00-91.70 M; Silty Sandstone, with siltstone alternated, spotted calcareous (lenticular texture) | 0.3 | ○ | 57.70 M | | | 90 | | | | | |
| | 91 | | | | | | | | | | | 91.70-92.80 M; Sandy Siltstone, spotted calcareous, vertical fractures at 91.70-91.80 M, 92.10-92.25 M, 92.50-92.80 M, calcite veinlet at 91.80-92.00 M. | 14* | ○ | | | | | | 50.00 M | | 91 | |
| | 92 | | | | | | | | | | | 92.80-107.00 M; Quartzitic Sandstone, hard & dense, sub-horizontal bed, very well cemented, siltstone pebbles at 97.35-97.40 M, 98.24-98.26 M, fracture, 70°, at 99.80 M, gypsum vein (5 cm thick) dip 50°, polish, translucent, at 103.80 M, and 106.20-106.80 (70° dip), muddy at 100.80-103.00 M. | 11* | ○ | | | | | | | | | |
| | 93 | | 107.00-108.00 M; Silty Sandstone grade to siltstone, vertical fracture at 107.30-108.00 M. | 1.9 | ○ | 51.20 M | | 93 | | | | | | | | | | | | | | | |
| | 100 | | 108.00-129.05 M; Siltstone, dense, brittle, slightly calcareous fracture, 70°, at 115.50-115.65 M, calcareous mottling at 108.50-109.00 M, 110.00-115.30 M, spotted calcareous at 122.30-123.00 M, 126.50-127.80 M. | 1.0 | ○ | | | | | 48.60 M | | 100 | | | | | | | | | | | |
| | 101 | | 112.00-118.00 M. | | ○ | 48.60 M | | 101 | | | | | | | | | | | | | | | |
| | 102 | | 118.00-124.00 M. | | ○ | | | | | 48.60 M | | 102 | | | | | | | | | | | |
| | 103 | | | | | 48.60 M | | 103 | | | | | | | | | | | | | | | |
| | 104 | | | | | | | | | 48.60 M | | 104 | | | | | | | | | | | |
| 105 | | | | | 48.60 M | | 105 | | | | | | | | | | | | | | | | |
| 106 | | | | | | | | | 48.60 M | | 106 | | | | | | | | | | | | |
| 107 | | | | | 48.60 M | | 107 | | | | | | | | | | | | | | | | |
| 108 | | | | | | | | | 48.60 M | | 108 | | | | | | | | | | | | |
| 109 | | | | | 48.60 M | | 109 | | | | | | | | | | | | | | | | |
| 110 | | | | | | | | | 48.60 M | | 110 | | | | | | | | | | | | |
| 111 | | | | | 48.60 M | | 111 | | | | | | | | | | | | | | | | |
| 112 | | | | | | | | | 48.60 M | | 112 | | | | | | | | | | | | |
| 113 | | | | | 48.60 M | | 113 | | | | | | | | | | | | | | | | |
| 114 | | | | | | | | | 48.60 M | | 114 | | | | | | | | | | | | |
| 115 | | | | | 48.60 M | | 115 | | | | | | | | | | | | | | | | |
| 116 | | | | | | | | | 48.60 M | | 116 | | | | | | | | | | | | |
| 117 | | | | | 48.60 M | | 117 | | | | | | | | | | | | | | | | |
| 118 | | | | | | | | | 48.60 M | | 118 | | | | | | | | | | | | |
| 119 | | | | | 48.60 M | | 119 | | | | | | | | | | | | | | | | |
| 120 | | | | | | | | | 48.60 M | | 120 | | | | | | | | | | | | |

Core loss → Weathering (fresh) - 5 (decomposed) Average length of Core (more than 50cm.) 2 (60cm, 20cm), 2 (20cm, 5cm), 4 (less than 5cm.) (graded) Hardness (hard) - 5 (soft)

EGAT

LOG OF BORING

Project LAN PA KIUNG Location Tailrace Boring No. DHT - 1 Log No. 5 of 6
 Co-ordinates 1638,489 N 773,826 E Elevation 316.077 m.MSL Depth of Hole 180.00 M. Commenced 11/8/90
 Angle from Horizontal 90° Total Depth Core Recovery 98 % Depth of Overburden 31.50 M. Completed 21/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 176.40 M. Logged by A.PATTANA

| Date | Depth M | R.O.D % | Geology | Symbol of geology | Core recovery % | Kind of Bit φ of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drill 50 Pressure 100 Time | Depth M | Elevation | |
|---------|------------|------------|---|-------------------|--------------------|--------------------------------|-----------------------|----------------|---------------|---------------------------------------|---|--|--------------|----------------------------------|------------|-----------|---|
| | | | | | | | | | | | | | | | | | 0 |
| 5/9/90 | 120 | 70 | Siltstone | | 100% | 47.6 mm. | | reddish brown | | Average length of core | spotted calcareous at 122.30-123.00 M, 126.50-127.80 M. | 0.4 | GWL 50.60 M. | | 120 | | |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| 7/9/90 | 130 | 85 | Silty Sandstone | | 100% | 47.6 mm. | | brown | | Average length of core | 129.65-131.20 M; Silty Sandstone, slightly calcareous, moderately cemented. | 0.5 | GWL 48.80 M. | | 130 | | |
| | 1 | | | | | | | | | | | | | | | | |
| | 8/9/90 | 140 | 100 | Siltstone | | 100% | 47.6 mm. | | reddish brown | | Average length of core | 131.20-137.30 M; Siltstone, spotted calcareous dense & brittle | 0.6 | GWL 42.40 M. | | 140 | |
| | | 1 | | | | | | | | | | | | | | | |
| | | 2 | | | | | | | | | | | | | | | |
| | | 3 | | | | | | | | | | | | | | | |
| | | 4 | | | | | | | | | | | | | | | |
| | | 5 | | | | | | | | | | | | | | | |
| | | 6 | | | | | | | | | | | | | | | |
| | | 7 | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 17/9/90 | 150 | 100 | Sandstone, Siltstone alternated SS & S.St | | 100% | 47.6 mm. | | brown & grey | | Average length of core | 137.30-145.30 M; Mainly Sandstone, with siltstone alternated, (silty sandstone), calcareous, turbidite bed at 137.30-137.50 M, spotted calcareous at 137.90-138.00 M, mainly siltstone at 140.60-142.00 M, fracture, 70°, at 143.60-144.00 M. | 0.5 | GWL 48.80 M. | | 150 | | |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| 17/9/90 | 150 | 100 | alternation of SS & S.St | | 100% | 47.6 mm. | | brown & grey | | Average length of core | 145.30-149.05 M; Alternation of sandstone and siltstone, sub-horizon bed, small scale x-bedding, joint, 75°, CaSO4 coat at 145.85-146.00 M, 148.30-148.55 M, 149.05-152.20 M, Sandstone. | 0.4 | GWL 48.55 M. | | 150 | | |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |

Core size → Weathering: 1 (fresh) - 5 (disintegrated) Average length of Core: 1 (more than 50cm), 2 (50cm, 20cm), 3 (20cm, 5cm), 4 (less than 5cm), 5 (ground)

EGAT

LOG OF BORING

Project LA' TA XI'ONG Location Tailrace Boring No. DHT - 1 Log No. 6 of 6
 Co-ordinates 1638,489 N 773,826 E Elevation 316.077 m.MSL Depth of Hole 180.00 M. Commenced 11/8/90
 Angle from Horizontal 90° Total Depth Core Recovery 98% Depth of Overburden 31.50 M. Completed 21/9/90
 Bearing of Angle Hole - Company EGAT Total length of core 176.40 M. Logged by A. PATTANA

| Date | Depth M | R. Q. D % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Coating Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE ○ WATER TABLE ~ | Drill 50 Pressure 100 Time | Depth M | Elevation |
|---------|------------|--------------|-----------|---------------------------|--------------------|------------------------------|------------------------|----------------|------------|----------|---------------------------|--|--|----------------------------------|------------|-----------|
| 17/9/90 | 1 | 85 | Sandstone | [Symbol] | 100% | | | grey | | | | fine grained, well cemented, sub-horizontal bed, joint, 80°, calcite coat, at 149.60-150.10 M. joint, 70°, at 151.70-151.95 M, | 0.4 GWL 51.00 M. | | 150 | |
| | 2 | | | | | | | | | | | | | | 1 | |
| | 3 | | | | | | | | | | | | | | 2 | |
| | 4 | | | Siltstone SS alternate | [Symbol] | | | brown | | | | | | | 3 | |
| 12/9/90 | 5 | 65 | | | | | | | | | | 152.20-154.50 M; Mainly Siltstone, with sandstone alternated, spotted calcareous, dense & brittle | 0.3 GWL 40.00 M. | | 4 | |
| | 6 | 67 | | | | | | | | | | | | | 5 | |
| | 7 | | | | | | | | | | | | | | 6 | |
| | 8 | 87 | | | | | | | | | | 154.50-180.00 M; Siltstone, massive, dense & brittle, calcareous mottling, vertical fracture at 156.65-157.00 M, | 0.6 GWL 40.50 M. | | 7 | |
| | 9 | | | | | | | | | | | | | | 8 | |
| 19/9/90 | 10 | 60 | | | | | | | | | | | | | 9 | |
| | 1 | | | | | | | | | | | | | | 10 | |
| | 2 | 75 | | | | | | | | | | 160.00-166.00 M, dense & brittle, calcareous mottling, vertical fracture at 156.65-157.00 M, | 0.6 GWL 40.50 M. | | 11 | |
| | 3 | | | | | | | | | | | | | | 12 | |
| | 4 | 83 | | | | | | | | | | | | | 13 | |
| | 5 | | | Siltstone | [Symbol] | | | | | | | | | | 14 | |
| 20/9/90 | 6 | | | | | | | | | | | | | | 15 | |
| | 7 | | | | | | | | | | | | | | 16 | |
| | 8 | 87 | | | | | | | | | | slip plane, polish, at 170.10 M, 171.00 M, 176.00 M. | 0.2 GWL 58.30 M. | | 17 | |
| | 9 | | | | | | | | | | | | | | 18 | |
| | 10 | 70 | | | | | | | | | | | | | 19 | |
| 21/9/90 | 1 | 85 | | | | | | | | | | | | | 20 | |
| | 2 | | | | | | | | | | | | | | 21 | |
| | 3 | | | | | | | | | | | | | | 22 | |
| | 4 | 88 | | | | | | | | | | 172.00-178.00 M. | 0.2 GWL 46.50 M. | | 23 | |
| 21/9/90 | 5 | | | | | | | | | | | | | | 24 | |
| | 6 | | | | | | | | | | | | | | 25 | |
| | 7 | 90 | | | | | | | | | | | | | 26 | |
| | 8 | | | | | | | | | | | | | | 27 | |
| 21/9/90 | 9 | 90 | | | | | | | | | | | | | 28 | |
| | 10 | | | | | | | | | | | | | | 29 | |
| | 180 | | | | | | | | | | | | | | 30 | |

Core loss → [Symbol]
 Weathering (fresh) - 5 (decomposed)
 Hardness (hard) - 5 (soft)
 Average length of Core (more than 80 cm.), 2 (50 cm., 20 cm.), 3 (20 cm., 5 cm.), 4 (less than 8 cm.) 5 (pieces)

EGAT

LOG OF BORING

Project LAM TA XIONG Location Tailrace Boring No. DIT-2 Log No. 1 of 3
 Co-ordinates 1638,536 N, 773,629 E Elevation 290,004 m,MSL Depth of Hole 70.00 M. Commenced 17/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 93% Depth of Overburden 8.00 M. Completed 23/7/90
 Bearing of Angle Hole - Company EGAT Total length of core 65.30 M. Logged by A. PATANA

| Date | Depth M | R.Q.D. % | Geology | Symbol of geology | Core recovery | Kind of Bit of Core (mm.) | Casing | Consolidation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drill | 50 Pressure kg | 100 Time min | Depth M | Elevation | | | | |
|---------|------------|-------------|----------------------|-------------------|---------------|------------------------------|--------|---------------------------------|-------------------------|------------|----------|---|----------------------------------|-------------------------------------|-------------|-------|-------------------|-----------------|------------|-----------|-----|-----------|-----|------|
| 17/7/90 | 0 | | Talus | | 100% | 47.6 | 16.50 | NO WIRELINE, φ of core 47.6 mm. | GREY & BROWN | MOLLIFIED | 1 | 0.00-8.00 M; OVERBURDEN, 0.00-0.40 M; brown clay, boulder of quartzitic sandstone at 0.40-0.70 M, 0.85-1.00 M, 1.80-2.00 M, 2.80-3.80 M, core loss at 0.70-0.85 M, 1.00-1.80 M, 2.00-2.80 M, 4.50-10.00 M, 3.80-4.50 M, 6.25-6.45 M, CONSTANT HEAD 6.75-7.35 M, decomposed siltstone at 4.50-6.25 M, 6.45- 6.75 M, 7.35-8.00 M, | k = 0.47x10 ⁻⁴ cm/sec | ○ | --- | 0 | --- | --- | 0 | --- | | | | |
| | 1 | 1 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 2 | 2 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 3 | 3 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 4 | 4 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 5 | 5 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 6 | 6 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 7 | 7 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 8 | 8 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 18/7/90 | 9 | | | | | | | | | | | | | | | | | | | 45 | Siltstone | | 100% |
| 10 | | 10 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 11 | | 11 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 12 | | 12 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 13 | | 13 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 14 | | 14 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 15 | | 15 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 16 | | 16 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 17 | | 17 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 18 | | 18 | --- | --- | --- | --- | | | | | | | | | | | | | | | | | | |
| 19/7/90 | 19 | 100 | SS | | 100% | 47.6 | 16.50 | NO WIRELINE, φ of core 47.6 mm. | GREY | 1 | 1 | 10.50-14.50 M, 10.70-11.85 M, 11.85-12.35 M; Quartzitic sandstone 12.35-18.80 M; 12.35 M : Surface of bedrock. | k = 0.45x10 ⁻⁴ cm/sec | ○ | --- | 0 | --- | --- | 19 | --- | | | | |
| | 20 | 20 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 21 | 21 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 22 | 22 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 23 | 23 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 24 | 24 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 25 | 25 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 26 | 26 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 27 | 27 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 28 | 28 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| 20/7/90 | 29 | 19 | Siltstone | | 100% | 47.6 | 16.50 | NO WIRELINE, φ of core 47.6 mm. | REDDISH & GREENISH GREY | 1 | 1 | 14.50-15.00 M, spotted calcareous at 12.00-13.00 M, 16.30-16.35 M, | CANNOT TEST | ○ | --- | 0 | --- | --- | 29 | --- | | | | |
| | 30 | 30 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 31 | 31 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 32 | 32 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 33 | 33 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 34 | 34 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 35 | 35 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 36 | 36 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 37 | 37 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 38 | 38 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| 20/7/90 | 39 | 40 | Siltstone alternated | | 100% | 47.6 | 16.50 | NO WIRELINE, φ of core 47.6 mm. | REDDISH BROWN & GREY | 1 | 1 | 18.80-28.40 M; Mainly Siltstone with fine sandstone alternated, sub-horizontal lamination, calcite veinlets at 27.15 M, 27.20 M, 27.7 M, spotted calcareous at 20.00-21.00 M, fine sandstone interbedded at 22.30-22.65 M, small scale cross bed, vertical fracture at 19.60-19.90 M. | 3.5° | ○ | --- | 0 | --- | --- | 39 | --- | | | | |
| | 40 | 40 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 41 | 41 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 42 | 42 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 43 | 43 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 44 | 44 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 45 | 45 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 46 | 46 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 47 | 47 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 48 | 48 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| 20/7/90 | 49 | 90 | SS | | 100% | 47.6 | 16.50 | NO WIRELINE, φ of core 47.6 mm. | GREY | 1 | 1 | 20.00-25.00 M. 25.00-30.00 M. | 3.5° | ○ | --- | 0 | --- | --- | 49 | --- | | | | |
| | 50 | 50 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 51 | 51 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 52 | 52 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 53 | 53 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 54 | 54 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 55 | 55 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 56 | 56 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 57 | 57 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |
| | 58 | 58 | | | | | | | | | | | | | | | | | | | --- | --- | --- | --- |

Core size → Weathering (fresh) - 0 (decomposed) Hardness (hard) - 0 (soft) Average length of Core (more than 60cm), 2 (60cm, 20cm), 3 (20cm, 5cm), 4 (less than 5cm, 3 (gravel))

EGAT

LOG OF BORING

Project LAH TA, KHONG Location Tailrao Boring No. DHT - 2 Log No. 2 of 3
 Co-ordinates 1638,536 N 773,629 E Elevation 290,004 m.MSL Depth of Hole 70.00 M. Commenced 17/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 93% Depth of Overburden 8.00 M. Completed 25/7/90
 Bearing of Angle Hole - Company EGAT Total length of core 65.30 M. Logged by A. PATIANA

| Date | Depth (M) | R.Q.D. (%) | Symbol of geology | Core recovery (%) | Kind of Bit (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST (LUSEON VALUE) | WATER TABLE | Drill | 50 Pressure (kg) | 100 Time (min) | Depth (M) | Elevation |
|---------|-----------|------------|---------------------------------|-------------------|-------------------|--------------------|----------------|------------|----------|------------------------|--|------------------------------------|-------------|-------|------------------|----------------|-----------|-----------|
| 20/7/90 | 0.5 | 96 | Sandstone S.Sf alternat geology | 100 | | | grey and brown | | | | sub-horizontal laminat on, 30.00-35.00 M. fracture, 80°, at 30.50-30.80 M, 32.15-38.60 M; | 0.1 | | | | | 1 | |
| | 2 | | | | | | | | | | | | | | | | 2 | |
| | 3 | 75 | Sandstone | | | | light grey | | | | Sandstone, fine grained, micaceous, well cemented, lentionlar texture at 37.70-37.75 M, sharp horizontal bed, at 33.85 M, joint, 45°, at 34.10 M, 36.75 M, joint 0°-10° at 35.60 M, 35.85 M, | GWL 11.45 M | | | | | 3 | |
| | 4 | | | | | | | | | | | | | | | | 4 | |
| | 5 | | | | | | | | | | | | | | | | 5 | |
| | 6 | | | | | | | | | | | | | | | | 6 | |
| | 7 | 60 | | | | | | | | | | | | | | | 7 | |
| | 8 | | | | | | | | | | | | | | | | 8 | |
| 23/7/90 | 9 | 90 | | | | | | | | | 35.90 M, 35.95 M, 38.60-57.30 M; | GWL 14.00 M | | | | | 9 | |
| | 10 | | | | | | | | | | Siltstone, brittle, convolute bed at 39.50-39.70 M, | | | | | | 10 | |
| | 1 | 80 | | | | | reddish brown | | | | spotted calcareous at 43.65-43.75 M, 44.50-44.80 M, | GWL 14.70 M | | | | | 1 | |
| | 2 | | | | | | | | | | | | | | | | 2 | |
| | 3 | | | | | | | | | | | | | | | | 3 | |
| | 4 | 80 | | | | | | | | | | | | | | | 4 | |
| | 5 | | | | | | | | | | | | | | | | 5 | |
| | 6 | 58 | | | | | | | | | | | | | | | 6 | |
| 25/7/90 | 7 | | Siltstone | | | | | | | | | | | | | | 7 | |
| | 8 | | | | | | | | | | | | | | | | 8 | |
| | 9 | 85 | | | | | | | | | | | | | | | 9 | |
| | 10 | | | | | | | | | | | | | | | | 10 | |
| | 1 | 80 | | | | | greenish brown | | | | core loss at 51.00-51.30 M, fine sandstone interbedded at 53.17-53.47 M, spotted calcareous at 55.80-57.00 M, | GWL 11.85 M | | | | | 1 | |
| | 2 | | | | | | | | | | | | | | | | 2 | |
| | 3 | | | | | | reddish brown | | | | | | | | | | 3 | |
| | 4 | 70 | | | | | | | | | | | | | | | 4 | |
| 24/7/90 | 5 | | | | | | green brown | | | | sharp contact (sub-horizontal) at 57.30 M, | GWL 12.15 M | | | | | 5 | |
| | 6 | 80 | | | | | purpl | | | | | | | | | | 6 | |
| | 7 | | | | | | | | | | | | | | | | 7 | |
| | 8 | | | | | | reddish brown | | | | 57.30-59.15 M; Mainly siltstone with sandstone alternated, spotted calcareous vertical fracture 58.95-59.15 M, 59.15-65.85 M; Mainly fine sandstone with | GWL 10.80 M | | | | | 8 | |
| | 9 | 100 | | | | | | | | | | | | | | | 9 | |
| | 10 | | | | | | | | | | | | | | | | 10 | |
| | 11 | | | | | | | | | | | | | | | | 11 | |
| | 12 | 100 | | | | | | | | | | | | | | | 12 | |

NO WIRELINE, Ø of core 47,6 mm.

Core loss → [Symbol] Weathering 1(fresh)-5(decomposed) Average length of Core (more than 80cm), 2 (50cm, 20cm), 3(20cm., 5cm.), 4 (less than 8cm.) 5 (grabbed) Hardness 1(hard) - 5 (soft)

EGAT

LOG OF BORING

Project LAM TA KHONG Location Tailrace Boring No. DHT-2 Log No. 3 of 3
 Co-ordinates 1638,536 N 773,629 E Elevation 290.004 m.MSL Depth of Hole 70.00 M. Commenced 17/7/90
 Angle from Horizontal 90° Total Depth Core Recovery 93% Depth of Overburden 8.00 M. Completed 25/7/90
 Bearing of Angle Hole _____ Company EGAT Total length of core 65.30 M. Logged by A. PATTANA

| Date | Depth M | R.G.D. % | Geology | Symbol of geology | Core recovery % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core m | Description | WATER PRESSURE TEST LUGEON VALUE | | Drift | lg | min | Depth M | Elevation | |
|---------|------------|-------------|-----------------------------|-------------------|--------------------|---------------------------------|-----------------------|-------------------|------------|----------|--|--|-------------------------------------|-----|-------|----|-----|------------|-----------|--|
| | | | | | | | | | | | | | WATER TABLE | | | | | | | |
| 24/7/90 | 0 | | Sandstone, S, St alternated | | 100 | NC WIRELINE, Ø of core 47.6 mm. | | light & dark grey | | | | siltstone alternated, spotted calcareous, siltstone at 63.75-63.80 M, 64.50-64.55 M, small scale cross bed, bedding fracture at 65.00-65.85 M. | 60.00-65.00 M. | 0.9 | | | | | | |
| | 1 | 93 | | | | | | | | | | | GWL 10.75 M. | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | |
| | 4 | 100 | | | | | | | | | | | | | | | | | | |
| | 5 | 62 | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | |
| 25/7/90 | 7 | 62 | Sandstone | | 100 | NC WIRELINE, Ø of core 47.6 mm. | | grey | | | 65.85-70.00 M; Sandstone, fine grained, hard & dense, well cemented, sub-hor bed, fracture, 70°, at 66.70-66.80 M, 67.10-67.25 M, 67.70-68.00 M, siltstone interbedded at 68.38-68.54 M. | 65.00-70.00 M. | 2.0 | | | | | | | |
| | 8 | 45 | | | | | | | | | | GWL 14.20 M. | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | | | |
| | 15 | | | | | | | | | | | | | | | | | | | |
| | 16 | | | | | | | | | | | | | | | | | | | |
| | 17 | | | | | | | | | | | | | | | | | | | |
| | 18 | | | | | | | | | | | | | | | | | | | |
| | 19 | | | | | | | | | | | | | | | | | | | |
| | 20 | | | | | | | | | | | | | | | | | | | |

Core loss → Weathering (fresh) - 0 (decomposed) Average length of Core (more than 80cm), 2 (50cm, 20cm), 3 (20cm, 5cm), 4 (less than 5 cm), 5 (refused) Hardness 1 (hard) - 0 (soft)

EGAT

LOG OF BORING

Project LAM TA KHONG Location TAILRACE Boring No. DHT-3 Log No. 1 of 2
 Co-ordinates 1638,553N,773,562E Elevation 276.844 m.MSL. Depth of Hole 50.00 m. Commenced 23/6/90
 Angle from Horizontal 90 Core Recovery 97% Depth of Overburden 10.10 m. Completed 28/6/90
 Bearing of Angle Hole - Company EGAT. Total length of core 48.60 m. Logged by A. PATTANA.

| Date | Depth M | R.Q.D % | Geology | Symbol of geology | Core recovery | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUCEON VALUE | | | Depth M | Elevation |
|------------|------------|--|----------------------|-------------------|---------------|------------------------------|-----------------------|----------------|------------|----------|--|--|-------------------------------------|-------|-------------|------------|-----------|
| | | | | | | | | | | | | | WATER TABLE | Drift | 50 Pressure | | |
| 23-25/6/90 | 0 | | OVERBURDEN | | - | - | - | brown | | | | 0.00-10.10 m; OB. | 4.3° | - | - | - | |
| | 1 | 0.00-0.60 m; Top soil | | | | | | | | | | | | | | | |
| | 2 | 0.60-6.70 m; Mudritic sandstone boulder, moderately well cemented. | | | | | | | | | | | | | | | |
| | 3 | occasionally high | | | | | | | | | | | | | | | |
| | 4 | weathered, core loss at 1.45-1.60 m, 2.40-2.55 m, | | | | | | | | | | | | | | | |
| | 5 | 5.50-5.70 m, sign of water circulation at | | | | | | | | | | | | | | | |
| | 6 | 2.70, 2.70-3.62-3.70, 3.90-4.00, 4.70, 4.90 m. | | | | | | | | | | | | | | | |
| | 7 | 6.70-10.10 m; | | | | | | | | | | | | | | | |
| | 8 | Decomposed rock of sandy siltstone, core loss at 8.80-9.45 m. | | | | | | | | | | | | | | | |
| | 9 | 10.00-10.25 m. | | | | | | | | | | | | | | | |
| 26/6/90 | 10 | 50 | SILTY SANDSTONE | | - | - | reddish brown | | | | | 10.10-14.20 m; Silty sandstone, subhorizontal bed, joint 40° at 13.80 m. | 2.0° | - | - | - | |
| | 1 | siltstone at 11.10-12.00 m. | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| 27/6/90 | 10 | 100 | SANDSTONE | | - | - | grey | | | | | 14.20-23.40 m; Sandstone, fine grained, hard & dense, well cemented subhorizontal bed, good core | 2.2° | - | - | - | |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| 27/6/90 | 10 | 90 | CALCAREOUS SILTSTONE | | - | - | reddish brown | | | | | At 23.00-23.40 m; brecciated sandstone grade to siltstone. | 0.7° | - | - | - | |
| | 1 | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | |
| 10 | 75 | | | | | | | | | | 23.90-42.00 m; Calcareous siltstone, some sandy, some calcareous mottling decomposed at 24.30-24.80 m, 28.20-28.55 m, 29.00-29.60 m. | 1.1° | | | | | |

Core loss Weathering (fresh - 5 (decomposed)) Average length of Core (more than 50cm.), 2 (50cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 5cm.) 5 (ground)

EGAT

LOG OF BORING

Project LAM TA KIONG Location TAI LRACE Boring No. DHT-3 Log No. 2 of 2
 Co-ordinates 1638,553N,773,562E Elevation 276,844 M,MSL. Depth of Hole 50.00 m. Commenced 23/6/90
 Angle from Horizontal 90° Core Recovery 97 % Depth of Overburden 10.10 m. Completed 28/6/90
 Bearing of Angle Hole _____ Company EGAT. Total length of core 48.60 m. Logged by A. PATTANA.

| Date | Depth M | R.Q.D. % | Geology | Symbol of geology | Core recovery 100 % | Kind of Bit of Core (mm.) | Casing Cementation | Colour of rock | Weathering | Hardness | Average length of core | Description | WATER PRESSURE TEST LUGEON VALUE | WATER TABLE | Drift | 50 Pressure kg | 100 Time min | Depth M | Elevation | | |
|---------|------------|-----------------|----------------------|-------------------|------------------------|------------------------------|-----------------------|----------------|------------|----------|---|----------------------|-------------------------------------|-------------|-------|-------------------|-----------------|------------|-----------|---------|---------|
| 27/6/90 | 0 | | CALCAREOUS SILTSTONE | | 100 % | NNMC, DIAMOND CORE BIT | | reddish brown | | | 6 | Calcareous siltstone | 0.5' | | | | | | 30 | | |
| | 1 | 75 | | | | | | | | | | Calcareous mottling | | | | | | | | | 7.55 m. |
| | 2 | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | |
| | 4 | 100 | | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | | |
| | 6 | 75 | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | |
| | 9 | 57 | | | | | | | | | | | | | | | | | | | |
| 40 | | SILTY SANDSTONE | | 100 % | NNMC, DIAMOND CORE BIT | | greenish brown | | | 6 | 42.00-50.00 m; Silty sandstone, calcareous, very fine grained, hard & dense, moderately well cemented, subhorizontal bed, At 42.00-42.50 m; calcareous mottling. Vertical fracture at 46.00-47.30 m, 47.60-48.10 m. | 0.5' | | | | | | | | | |
| 1 | 87 | | | | | | | | | | | | | | | | | | | 8.70 m. | |
| 2 | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | |
| 4 | 100 | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | |
| 6 | 60 | | | | | | | | | | | | | | | | | | | | |
| 7 | 0 | | | | | | | | | | | | | | | | | | | | |
| 8 | 20 | | | | | | | | | | | | | | | | | | | | |
| 9 | 90 | | | | | | | | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | | | | | | | | | |
| 28/6/90 | 0 | | | | | | | | | | | | | | | | | | | | |
| | 1 | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | | |
| 0 | | | | | | | | | | | | | | | | | | | | | |

Core loss → Weathering (fresh) - 5 (compressed) Average length of Core (1 more than 50cm.), 2 (40cm., 20cm.), 3 (20cm., 5cm.), 4 (less than 5cm.) 5 (grained) Hardness (hard) - 5 (soft)

A-2 LIST OF FAULTS AND JOINTS IN MAIN DRILL HOLES

List of Faults and Joints in Main Drill Holes (1-11)

(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|--------------|---------|--|----------------|--------------------|---------|--|
| DHU-1 | 5.4 | 50 | | DHU-1 | 32.8 | 10 | |
| | 9.4 | 70 | | | 35.8 | 5 | |
| | 9.55 | 10 - 20 | | | 40.2 | 15 | |
| | 9.7 | 10 - 20 | | | 40.3 | 5 | |
| | 10.3 | 10 - 20 | | | 43.05 | 0 - 15 | |
| | 10.4 | 50 | | | 43.6 | 0 - 15 | |
| | 12.25 | 35 | | | 43.7 | 0 - 15 | |
| | 13.6 | 0 | | | 51.2 | 15 | cl = 0.5 |
| | 13.6 | 45 | | | 51.5 | 20 | |
| | 15.0 - 15.25 | 80 | | | 51.6 | 20 | |
| | 15.25 - 16.0 | 90 - 85 | | | 51.7 | 35 | sh = 1 |
| | 17.6 | 70 | | | 51.75 | 20 | sh = 0.5 |
| | 17.7 | 40 | | | 52.4 | —* | sh + cl = 5 |
| | 17.9 - 18.5 | 80 | | | 52.6 | 10 | |
| | 20.63 | 10 | | | 52.9 | 35 | cl + sh = 220 |
| | 20.5 | 0 | | | 55.1 | 35 | |
| | 21.95 | 0 | | | 57.3 | 5 | cl = 0.1 |
| | 22.3 | 10 | | | 57.9 | 30 | |
| | 22.7 | 0 - 10 | | | 59.15 | 10 | cl + sh = 0.2 |
| | 22.8 | 0 - 10 | | | 60.7 | 10 | |
| | 22.95 | 0 - 10 | | | 62.8 | 0 | |
| | 24.05 | 0 - 10 | | | 63.5 | 10 | cl + sh = 0.2 |
| | 24.2 | 0 - 10 | | | 65.0 - 69.4 | —* | sh = 440 |
| | 24.3 | 0 - 10 | | | 70.9 - 71.4 | 20 - 35 | |
| | 24.9 | 5 | | | 71.1 | 35 | cl + sh = 1 |
| | 24.93 | 5 | | | 74.8 | 30 | |
| 25.2 | 5 | | 74.9 | 35 | | | |
| 26.15 | 10 | | 79.05 | 40 | | | |
| 26.5 | 10 | | 79.1 | 20 | sh = 40 (cemented) | | |
| 26.8 - 27.2 | 80 | | 80.5 | 25 | sh = 0.5 | | |
| 28.6 | 10 | | 80.7 | 30 | | | |
| 29.23 | 5 | | 80.9 | 10 | | | |
| 29.9 | 10 | | 80.95 | 10 | | | |
| 31.7 | 10 | | 81.5 | 20 | | | |
| 32.5 | 5 | | 81.7 | 40 | | | |

* unknown dip

List of Faults and Joints in Main Drill Holes (2-11)

(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|-------------|---------|--|-----------------|-------------|-------------|--|
| DHU-1 | 81.8 | 20 | | DHW-1 | 68.1 ~ 68.2 | 20 | |
| | 81.8 | 40 | | | 68.1 ~ 68.2 | 20 | |
| | 82.1 | 20 | | | 69.6 | 45 | sh = 10 |
| | 82.1 | 40 | | | 69.7 ~ 71.0 | 30 ~ 45 | similar joint : 9 |
| | 90.4 | 60 | | | 72.0 | 25 | |
| | 94.8 | 60 | | | 72.2 | 30 | |
| | | | | | 72.4 | 15 | |
| DHW-1 | 8.4 ~ 8.95 | 30 | | | 73.5 | 30 | |
| | 13.5 | 10 | | | 75.4 | 45 | |
| | 27.35 | 80 | | | 76.7 | 20 | |
| | 27.55 | 70 | | | 78.2 | 25 | |
| | 38.8 | 30 | | | 78.5 | 35 | |
| | 39.5 | 55 | | | 81.25 | 15 | cl + sh = 10 |
| | 39.7 | 35 | | | 89.3 | 45 | |
| | 41.85 | 15 | | | 89.35 | 45 | |
| | 43.3 | 25 | | | 89.6 | 30 | |
| | 43.2 | 25 | sh = 45 | | 89.7 | 30 | sh = 70 |
| | 44.3 ~ 44.8 | 90 | | 89.8 | 30 | | |
| | 44.8 | 50 | | 89.95 | 15 | | |
| | 48.8 | 30 | | 93.03 | 15 | cl + sh = 1 | |
| | 48.85 | 30 | | 103.9 | 10 | | |
| | 51.3 | 30 | sh = 130 | 105.0 | 20 | | |
| | 51.60 | 35 | | 106.2 | 35 | | |
| | 51.70 | 15 | | 107.7 | 35 | | |
| | 51.75 | 15 | | 108.4 | 30 | | |
| | 56.1 | 80 | | 108.8 | 30 | | |
| | 58.45 | 40 | | 109.1 | 30 | | |
| | 59.55 | 40 | | 110.1 | 45 | | |
| | 60.55 | 35 | | 111.05 ~ 111.30 | 15 ~ 40 | | |
| | 60.65 | 35 | | 111.6 | 40 | | |
| | 61.7 | 35 | | 111.6 | 5 | | |
| | 62.0 | 40 | | 113.6 | 30 | | |
| | 62.7 | 40 | | 114.5 | 30 | | |
| | 68.1 ~ 68.2 | 40 | | 116.0 | 45 | | |
| | | | | 116.4 | 45 | | |

List of Faults and Joints in Main Drill Holes (3-11)

(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|---------------|---------|--|----------------|---------------|---------|--|
| DHW-1 | 117.4 | 30 | | DHW-1 | 180.9 | 23 | |
| | 117.6 | 35 | | | 181.2 | 20 | |
| | 124.0 | 15 | | | 182.5 | 25 | |
| | 124.3 | 30 | | | 183.3 | 35 | |
| | 124.5 | 20 | | | 183.6 | 25 | |
| | 124.7 | 55 | | | 183.8 | 5 | |
| | 125.1 | 20 | | | 188.6 | 25 | |
| | 144.1 | 45 | | | 192.5 | 30 | |
| | 145.5 | 25 | | | 194.1 | 75 | |
| | 146.4 | 30 | | | 194.5 | 55 | |
| | 146.7 - 146.9 | 90 | | | 195.4 | 25 | |
| | 147.3 - 147.5 | 90 | | | 195.8 | 20 | |
| | 150.4 | 35 | | | 195.8 | 30 | |
| | 160.55 | 10 | | | 196.0 | 20 | |
| | 161.4 | 80 | | | 196.3 | 20 | cl = 1 sh = 180 |
| | 161.5 - 161.9 | 85 | | | 196.8 - 196.9 | 20 - 30 | |
| | 165.98 | 35 | | | 197.95 | 25 | |
| | 166.1 | 25 | | | 197.95 | 30 | |
| | 166.3 | 30 | | | 198.05 | 25 | |
| | 166.55 | 25 | | | 198.2 | 20 | |
| | 167.2 | 10 | | | 198.2 | 30 | |
| | 169.5 | 15 | | | 198.3 | 25 | |
| | 169.2 | 0 - 15 | | | 198.5 | 20 | |
| | 170.5 | 20 | | | 198.6 | 30 | |
| | 170.8 | 40 | | | 198.6 | 25 | |
| | 170.8 | 40 | | | 199.1 | 40 | |
| | 171.6 | 45 | | | 200.2 | 30 | sh = 50 |
| | 171.7 | 45 | | | 200.7 | 30 | |
| | 174.0 | 10 | | | 200.9 | 30 | |
| | 177.2 | 50 | | | 202.0 | 40 | |
| 178.3 | 35 | | 202.3 | 30 | | | |
| 179.7 | 25 | | 204.4 | 35 | | | |
| 179.95 | 45 | | 204.7 | 40 | | | |
| 180.5 | 20 | | 208.5 | 55 | | | |
| 180.6 | 10 | | 210.9 | 80 | | | |

List of Faults and Joints in Main Drill Holes (4-11)

(DHW-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|---------------|---------|--|----------------|-------------|---------|--|
| DHW-1 | 211.0 | 60 | | DHW-2 | 20.8 | 40 | |
| | 212.2 | 75 | | | 20.9 | 40 | |
| | 212.2 | 45 | | | 21.3 | 40 | |
| | 212.7 | 50 | | | 21.4 | 35 | |
| | 213.9 | 25 | | | 21.5 | 35 | |
| | 214.8 | 25 | | | 21.8 | 35 | sh = 130 |
| | 215.4 | 20 | | | 22.1 | 30 | |
| | 215.5 | 25 | | | 23.1 | 90 - 75 | |
| | 216.8 | 5 | | | 23.3 | 45 | |
| | 218.1 | 40 | | | 23.4 | 40 | |
| | 218.8 | 35 | | | 23.5 - 23.6 | 45 | similar joint : 3 |
| | 218.8 | 30 | | | 24.1 | 30 | |
| | 219.0 | 40 | | | 24.15 | 30 | |
| | 219.1 | 40 | | | 24.5 | —* | sh = 20 |
| | 219.2 | 40 | | | 24.7 | 45 | |
| | 220.8 | 35 | | | 24.8 | 70 | |
| | 220.8 | 40 | | | 24.9 | 15 | |
| | 221.3 | 35 | | | 25.0 | 65 | |
| | 221.7 | 25 | | | 25.3 | 30 | |
| | 221.8 - 222.2 | 25 | similar joint : 5 | | 25.9 | 40 | |
| | 222.5 | 40 | | | 27.3 | 25 | |
| | 222.6 | 30 | | | 28.3 | 80 - 90 | |
| | 224.6 | 30 | | | 28.7 | 20 | similar joint : 2 |
| | 224.7 | 55 | | | 29.4 | 25 | |
| | 224.7 | 30 | | | 29.5 | 30 | |
| | 224.9 | 30 | | | 29.9 | 20 | |
| | 225.0 | 30 | | | 30.3 | 30 | |
| | 225.3 | 30 | | | 30.4 | 30 | |
| | 225.5 | 40 | | | 31.0 | 65 | |
| | 226.5 | 35 | | | 31.4 | 45 | |
| 226.5 | 40 | | 32.5 | 50 | | | |
| 226.8 | 35 | | 32.8 | 50 | | | |
| 228.6 | 30 | | 33.1 | 35 | | | |
| 228.4 | 25 | | 33.3 | 35 | | | |
| 228.5 | 30 | | 33.6 | 20 | | | |

* unknown dip

List of Faults and Joints in Main Drill Holes (5-11)
(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|-----------|---------|--|----------------|-------------|---------|--|
| DHW-2 | 33.7 | 70 | | DHW-2 | 50.1 | 40 | |
| | 34.0 | 80 | | | 50.6 | 35 | |
| | 34.6 | 70 | | | 50.7 | 55 | |
| | 34.7 | 40 | | | 50.8 | 30 | |
| | 35.1 | 60 | | | 51.4 | 25 | |
| | 35.4 | 30 | sh = 10 | | 51.9 | 25 | |
| | 35.45 | 55 | | | 52.8 | 25 | |
| | 35.5 | 30 | | | 53.15 | 20 | |
| | 36.2 | 55 | | | 53.8 | 15 | |
| | 36.4 | 30 | sh = 10 | | 54.7 | 24 | |
| | 36.5 | 30 | | | 56.2 | 50 | |
| | 36.7 | 50 | | | 56.2 | 25 | |
| | 36.8 | 40 | | | 57.2 | 25 | |
| | 39.1 | 20 | | | 57.2 | 35 | |
| | 41.4 | 10 | | | 58.5 | 25 | |
| | 41.6 | 45 | | | 60.5 | 25 | |
| | 42.2 | 25 | | | 65.6 | 90 | |
| | 42.4 | 50 | | | 65.7 | 75 | |
| | 43.1 | 50 | | | 66.4 | 75 | |
| | 43.3 | 30 | | | 66.5 | 35 | |
| | 44.1 | 25 | | | 69.7 | 10 | |
| | 44.2 | 25 | | | 70.0 | 25 | |
| | 44.4 | 25 | | | 70.1 | 15 | |
| | 44.5 | 25 | | | 70.3 | 45 | |
| | 44.8 | 30 | | | 71.2 ~ 72.2 | 15 | Shear zone sh = 100 (dip mainly 25°) |
| | 44.9 | 30 | | | 71.2 ~ 72.2 | 30 | |
| 45.3 | 30 | | 71.2 ~ 72.2 | 40 | | | |
| 45.7 | 40 | | 71.2 ~ 72.2 | 35 | | | |
| 45.9 | 20 | | 71.2 ~ 72.2 | 22 | | | |
| 46.4 | 20 | | 71.2 ~ 72.2 | 34 | | | |
| 46.6 | 28 | | 71.2 ~ 72.2 | 10 | | | |
| 47.6 | 30 | | 71.2 ~ 72.2 | 25 | | | |
| 49.05 | 24 | | 71.2 ~ 72.2 | 25 | | | |
| 49.2 | 20 | | 73.0 | 10 | | | |
| 49.25 | 35 | | 73.05 | 20 | | | |

List of Faults and Joints in Main Drill Holes (6-11)

(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|-----------|---------|--|----------------|-------------|---------|--|
| DHW-2 | 73.2 | 74 | | DHW-2 | 92.45 | 15 | |
| | 76.7 | 75 | | | 92.5 | 45 | |
| | 77.0 | 75 | | | 92.8 - 92.9 | 35 | sh = 5 |
| | 79.4 | 10 | | | 92.9 | 15 | |
| | 81.9 | 20 - 30 | similar joint : 3 | | 92.9 | 10 | |
| | 81.95 | 38 | | | 93.85 | 15 | |
| | 82.0 | 40 | | | 94.6 | 25 | |
| | 82.9 | 40 | | | 96.1 | 20 | |
| | 83.8 | 40 | | | 96.2 | 25 | |
| | 84.1 | 30 | | | 96.4 | 30 | |
| | 84.2 | 30 | | | 96.85 | 30 | |
| | 84.3 | 30 | | | 97.2 | 20 | |
| | 84.4 | 30 | | | 97.3 | 20 | |
| | 84.5 | 30 | | | 98.05 | 20 | |
| | 84.6 | 40 | | | 98.15 | 35 | |
| | 84.62 | 35 | | | 98.3 | 30 | |
| | 84.8 | 25 | | | 99.05 | 30 | |
| | 85.3 | 40 | | | 99.10 | 30 | |
| | 85.5 | 40 | | | 99.8 | 45 | |
| | 85.8 | 40 | | | 100.6 | 20 | |
| | 86.1 | 30 | | | 100.7 | 30 | |
| | 87.4 | 25 | | | 101.8 | 20 | |
| | 87.4 | 35 | | | 101.8 | 15 | |
| | 87.5 | 35 | | | 102.1 | 10 | |
| | 87.5 | 40 | | | 102.3 | 23 | |
| | 87.8 | 30 | | | 102.5 | 30 | |
| 87.8 | 15 | | 102.8 | 58 | | | |
| 88.4 | 30 | | 103.8 | 38 | | | |
| 88.5 | 30 | | 104.7 | 30 | | | |
| 89.05 | 30 | | 104.85 | 30 | | | |
| 89.3 | 35 | | 105.9 | 35 | | | |
| 91.1 | 20 | | 110.4 | 40 | | | |
| 91.4 | 25 | | 113.2 | 10 | | | |
| 92.1 | 30 | | 115.7 | 20 | | | |
| 92.4 | 20 | | 115.8 | 20 | | | |

List of Faults and Joints in Main Drill Holes (7-11)

(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|---------------|---------|--|----------------|---------------|---------|--|
| DHW-2 | 117.9 | 15 | | DHW-2 | 145.7 | 15 | |
| | 118.4 | 50 | | | 146.3 | 15 | |
| | 118.6 | 20 | | | 146.5 | 20 | |
| | 123.4 | 20 | | | 146.7 | 15 | |
| | 126.9 | 13 | | | 146.8 | 35 | |
| | 128.3 | 5 | | | 146.9 | 25 | |
| | 129.6 | 18 | | | 147.1 | 32 | |
| | 133.8 - 133.9 | 20 | similar joint : 3 | | 147.6 | 10 | |
| | 134.1 | 33 | | | 147.6 | 45 | |
| | 134.15 | 30 | | | 148.0 | 42 | |
| | 134.4 | 20 | | | 148.8 | 42 | |
| | 134.6 | 30 | | | 149.2 | 25 | |
| | 134.7 | 25 | | | 149.4 | 15 | |
| | 134.9 | 20 | | | 150.0 | 10 | |
| | 135.2 | 20 | | | 151.1 | 5 | |
| | 135.4 | 20 | | | 151.5 | 10 | |
| | 136.1 | 33 | | | 152.3 | 20 | |
| | 136.2 | 30 | | | 152.6 | 40 | |
| | 136.3 | 24 | | | 152.7 - 152.8 | 20 | |
| | 136.5 | 15 | | | 152.7 - 152.8 | 25 | similar joint : 2 |
| | 136.9 | 20 | | | 153.1 | 30 | |
| | 137.4 | 20 | | | 153.2 | 30 | |
| | 137.6 | 30 | | | 153.4 | 25 | |
| | 137.9 | 30 | | | 153.4 | 35 | |
| | 138.7 | 28 | | | 153.7 | 24 | |
| | 138.9 | 20 | | | 154.0 | 37 | |
| | 139.6 | 18 | | | 154.3 | 70 | |
| 140.3 | 30 | | 155.7 - 155.9 | 25 | | | |
| 141.1 | 75 | | 155.7 - 155.9 | 25 | | | |
| 141.2 | 45 | | 155.7 - 155.9 | 20 | | | |
| 141.6 | 20 | | 156.6 | 35 | | | |
| 142.4 | 10 | | 157.2 | 25 | | | |
| 142.5 | 15 | | 157.6 | 25 | | | |
| 145.4 | 15 | | 157.8 | 10 - 15 | | | |
| 145.5 | 15 | | 157.9 | 23 | | | |

List of Faults and Joints in Main Drill Holes (8-11)

(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|---------------|---------|--|----------------|---------------|---------|--|
| DHW-2 | 158.3 | 23 | | DHW-2 | 197.8 ~ 198.0 | 45 | |
| | 159.4 | 35 | sh = 170 | | 198.1 | 30 | |
| | 159.6 | 30 | | | 198.8 | 27 | |
| | 160.4 | 35 | | | 200.1 | 15 | |
| | 161.2 | 55 | | | 201.05 | 25 | |
| | 161.7 | 25 | | | 201.15 | 30 | |
| | 162.5 | 20 | | | 201.3 | 20 | |
| | 163.7 | 40 | | | 201.4 | 70 | |
| | 163.9 | 25 | | | 201.5 | 20 | |
| | 165.1 | 28 | | | 201.8 | 20 | similar joint : 2 |
| | 165.7 | 10 | | | 202.0 | 20 | |
| | 169.6 | 70 | | | 202.3 | 35 | |
| | 181.1 | 35 | | | 203.2 | 23 | |
| | 181.2 | 25 | | | 203.5 | 28 | |
| | 181.3 | 22 | | | 203.7 | 32 | |
| | 183.0 | 30 | | | 204.0 | 25 | |
| | 183.1 | 35 | | | 204.4 | 32 | |
| | 185.3 | 22 | | | 204.8 | 22 | |
| | 186.1 | 30 | | | 205.5 | 10 | sh = 5 |
| | 186.4 | 20 | | | 205.7 | 25 | |
| | 187.5 | 15 | | | 206.2 ~ 206.3 | 10 ~ 15 | sh = 5 |
| | 187.5 | 20 | | | 208.1 | 18 | |
| | 189.8 | 30 | | | 215.1 | 78 | |
| | 190.5 | 22 | | | 224.5 | 75 | |
| | 190.2 ~ 190.4 | 30 | | | 231.0 | 27 | |
| | 190.2 ~ 190.4 | 35 | | | 232.4 | 26 | |
| 190.2 ~ 190.4 | 30 | | 233.2 | 25 | | | |
| 191.6 | 5 | | 234.9 | 30 | | | |
| 191.8 | 5 | | 235.1 | 25 | | | |
| 192.2 | 45 | | 235.4 | 15 | | | |
| 192.6 | 25 | | 236.7 | 15 | | | |
| 192.9 | 28 | | 236.9 | 25 | | | |
| 193.3 | 33 | | 237.1 | 10 | | | |
| 193.6 | 20 | | 237.6 | 25 | | | |
| 197.8 ~ 198.0 | 35 | | 238.0 | 20 | | | |

List of Faults and Joints in Main Drill Holes (9-11)

(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|-------------|---------|--|----------------|-------------|-------------------|--|
| DHW-2 | 238.1 | 20 | | DHT-1 | 38.9 | 30 | |
| | 238.1 | 20 | | | 39.0 ~ 40.0 | 30 | similar joint : 4 |
| | 238.4 | 50 | | | 39.0 ~ 40.0 | 70 | |
| | 239.6 | 15 | | | 39.0 ~ 40.0 | 70 | |
| | 241.7 | 22 | | | 40.1 | 80 | |
| | 242.2 | 36 | | | 40.3 | 40 | |
| | 243.0 | 34 | | | 40.5 | 80 | |
| | 243.1 | 10 | | | 40.7 | 50 | similar joint : 2 |
| | 243.2 | 35 | | | 40.8 | 30 | sh = 2 |
| | 243.5 | 30 | | | 41.0 ~ 45.0 | 20 ~ 30 | similar joint : 20 |
| | 243.8 | 35 | | | 41.0 ~ 45.0 | 50 | similar joint : 3 |
| | 244.6 | 35 | | | 41.0 ~ 45.0 | 80 | similar joint : 2 |
| | 245.3 | 28 | | | 45.0 ~ 54.0 | 10 | similar joint : 11 |
| | 245.4 | 28 | | | 45.0 ~ 54.0 | 20 ~ 30 | similar joint : 9 |
| | 245.8 | 28 | | | 45.0 ~ 54.8 | 50 | similar joint : 2 |
| | 246.7 | 30 | | | 45.0 ~ 54.0 | 80 | similar joint : 4 |
| | 247.8 | 40 | | | 46.5 | 10 | |
| | | | 52.9 | 10 | | | |
| | | | 54.5 ~ 54.8 | 60 ~ 90 | | | |
| DHT-1 | 32.5 | 30 | | 59.7 ~ 60.1 | 85 | | |
| | 32.7 | 75 | | 59.7 ~ 60.1 | 85 | | |
| | 33.8 | 20 | | 61.7 | 82 | | |
| | 33.4 | 70 | | 66.8 ~ 66.9 | 30 | similar joint : 3 | |
| | 34.4 | 20 | | 67.1 | 80 | | |
| | 34.7 | 20 | | 67.4 | 30 | | |
| | 34.8 | 80 | | 67.8 | 30 | | |
| | 34.8 ~ 35.0 | 20 | cl + sh = 20 | 67.9 | 30 | | |
| | 35.0 ~ 38.0 | —* | sh = 320 | 68.85 | 30 | | |
| | 37.3 ~ 37.6 | 25 ~ 30 | similar joint : 5 | 68.95 | 30 | | |
| | 37.7 | 60 | | 69.10 | 30 | | |
| | 38.3 ~ 38.4 | 30 | | 70.0 | 30 | | |
| | 38.3 ~ 38.4 | 30 | | 71.4 | 30 | | |
| | 38.4 | 75 | | 75.1 | 20 ~ 30 | | |
| | 38.7 | 75 | | 76.2 | 20 ~ 30 | | |
| | 38.9 | 25 | | 76.8 | 20 ~ 30 | | |

* unknown dip

List of Faults and Joints in Main Drill Holes (10-11)

(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|---------------|---------|--|----------------|-------------------|---------|--|
| DHT-1 | 76.9 | 20 - 30 | | DHT-1 | 108.7 | 20 - 35 | |
| | 77.9 | 20 - 30 | | | 108.8 | 20 - 35 | |
| | 78.6 | 20 - 30 | | | 109.2 | 20 - 35 | |
| | 81.1 | 20 - 30 | | | 109.8 | 20 - 35 | |
| | 81.3 | 20 - 30 | | | 115.7 | 70 | |
| | 81.5 | 20 - 30 | | | 118.2 | 30 | |
| | 82.0 | 20 | | | 118.2 | 40 | |
| | 83.2 | 35 | | | 118.5 | 45 | |
| | 83.8 | 10 | | | 118.6 | 65 | |
| | 84.0 | 30 | | | 118.8 | 25 | |
| | 84.1 | 35 | | | 120.5 | 35 | |
| | 85.6 | 30 | | | 120.9 | 35 | |
| | 85.7 | 30 | | | 121.1 | 25 - 30 | |
| | 85.8 | 30 | | | 121.2 | 25 - 30 | |
| | 89.8 | 75 | similar joint : 3 | | 121.3 | 25 - 30 | |
| | 92.2 | 60 - 90 | | | 121.4 | 25 - 30 | |
| | 92.6 | 90 | | | 121.7 | 25 - 30 | |
| | 99.8 | 60 | | | 121.9 | 25 - 30 | |
| | 100.1 | 60 | | | 122.2 | 20 - 40 | |
| | 100.2 | 90 | | | 122.3 | 20 - 40 | |
| | 100.9 | 32 | | | 122.4 | 20 - 40 | |
| | 101.9 | 85 | | | 122.43 | 20 - 40 | |
| | 102.7 | 70 | | | 122.45 | 20 - 40 | |
| | 102.9 | 85 | | | 122.5 | 20 - 40 | |
| | 103.0 - 103.4 | 85 - 90 | similar joint : 2 | | 122.6 | 20 - 40 | |
| | 103.5 | 50 | | | 123.4 | 20 | |
| | 103.7 | 65 | | | 123.5 | 25 | |
| | 103.8 | 85 | | | 123.8 | 25 | |
| | 107.0 - 107.1 | 20 | | | 124.15 | 40 | |
| | 107.0 - 107.1 | 50 | | | 124.4 | 30 | |
| 107.0 - 107.1 | 40 | | 124.6 | 25 | | | |
| 107.4 - 108.0 | 90 | | 125.3 | 25 | | | |
| 108.4 | 20 | | 126.5 | 40 | | | |
| 108.4 | 10 | | 126.6 | 25 | | | |
| 108.5 | 20 - 35 | | 127.7 - 128.0 | 35 - 45 | similar joint : 6 | | |

List of Faults and Joints in Main Drill Holes (11-11)

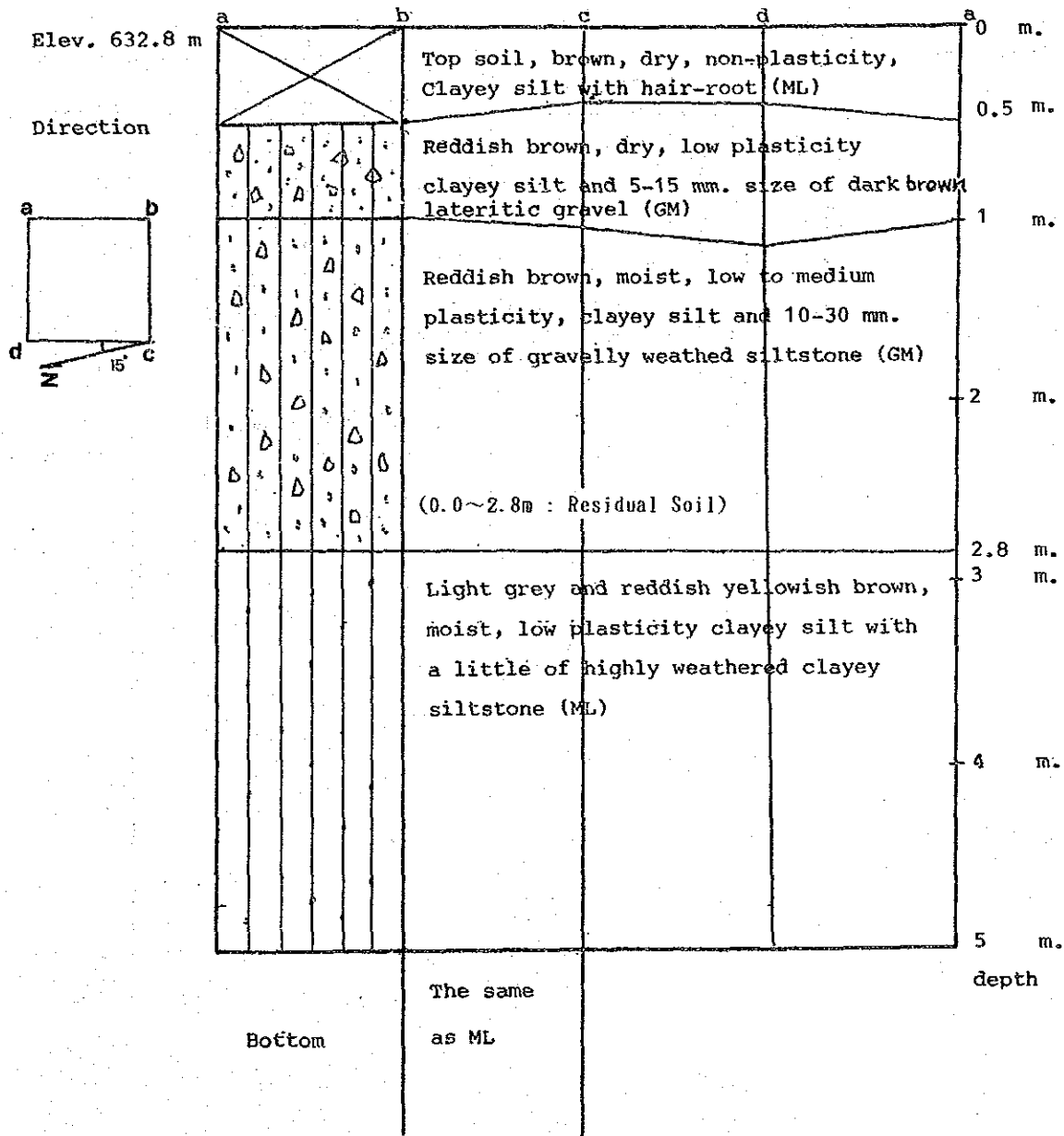
(DHU-1, DHW-1, DHW-2, DHT-1)

| Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) | Drill Hole No. | Depth (m) | Dip (°) | Width of Shear [sh] and Clay [cl] (cm) |
|----------------|---------------|-------------------|--|----------------|---------------|---------|--|
| DHT-1 | 128.3 | 40 | sh = 30 | DHT-1 | 164.3 | 25 | |
| | 140.8 | 75 | | | 164.6 | 25 | |
| | 143.5 | 45 | | | 164.9 | 40 | |
| | 143.7 | 75 | | | 165.9 | 20 ~ 30 | |
| | 143.8 | 75 | | | 165.8 | 20 ~ 30 | |
| | 145.9 | 75 | | | 165.83 | 20 ~ 30 | |
| | 148.4 | 75 | | | 167.4 | 20 ~ 30 | |
| | 149.8 | 85 | | | 167.6 | 20 ~ 30 | |
| | 151.8 | 80 | | | 167.65 | 20 ~ 30 | |
| | 152.6 | 20 | | | 167.7 | 20 ~ 30 | |
| | 152.7 | 20 | | | 168.1 | 20 ~ 30 | |
| | 152.75 | 20 | | | 168.5 | 20 ~ 30 | |
| | 153.8 | 65 | | | 170.85 | 20 | |
| | 153.9 | 60 | | | 171.0 | 20 | similar joint : 2 |
| | 154.6 | 20 | | | 175.9 | 40 | |
| | 154.8 | 20 | | | 176.05 | 20 ~ 30 | |
| | 154.9 | 40 | | | 176.7 | 20 ~ 30 | |
| | 155.5 | 30 | | | 176.8 | 20 ~ 30 | |
| | 155.7 | 30 | | | 178.05 | 20 ~ 30 | |
| | 155.8 | 30 | | | 178.2 | 20 ~ 30 | |
| | 156.6 | 25 | | | 178.5 | 20 ~ 30 | |
| | 156.7 ~ 157.0 | 90 | | | 178.75 | 20 ~ 30 | |
| | 157.5 | 35 | | | 178.9 | 20 ~ 30 | |
| | 157.9 | 20 | | | 179.0 ~ 179.2 | 90 | |
| | 158.3 | 20 | | | 179.6 | 15 | |
| | 160.2 | 25 | | | | | |
| | 160.5 | 25 | | | | | |
| | 161.3 | 15 | | | | | |
| 161.95 | 36 | | | | | | |
| 162.2 | 30 | similar joint : 2 | | | | | |
| 162.6 | 25 | | | | | | |
| 162.8 | 25 | | | | | | |
| 163.2 | 15 | | | | | | |
| 163.3 | 30 | | | | | | |
| 164.2 | 25 | | | | | | |

A-3 GEOLOGIC SKETCHES OF TEST PITS

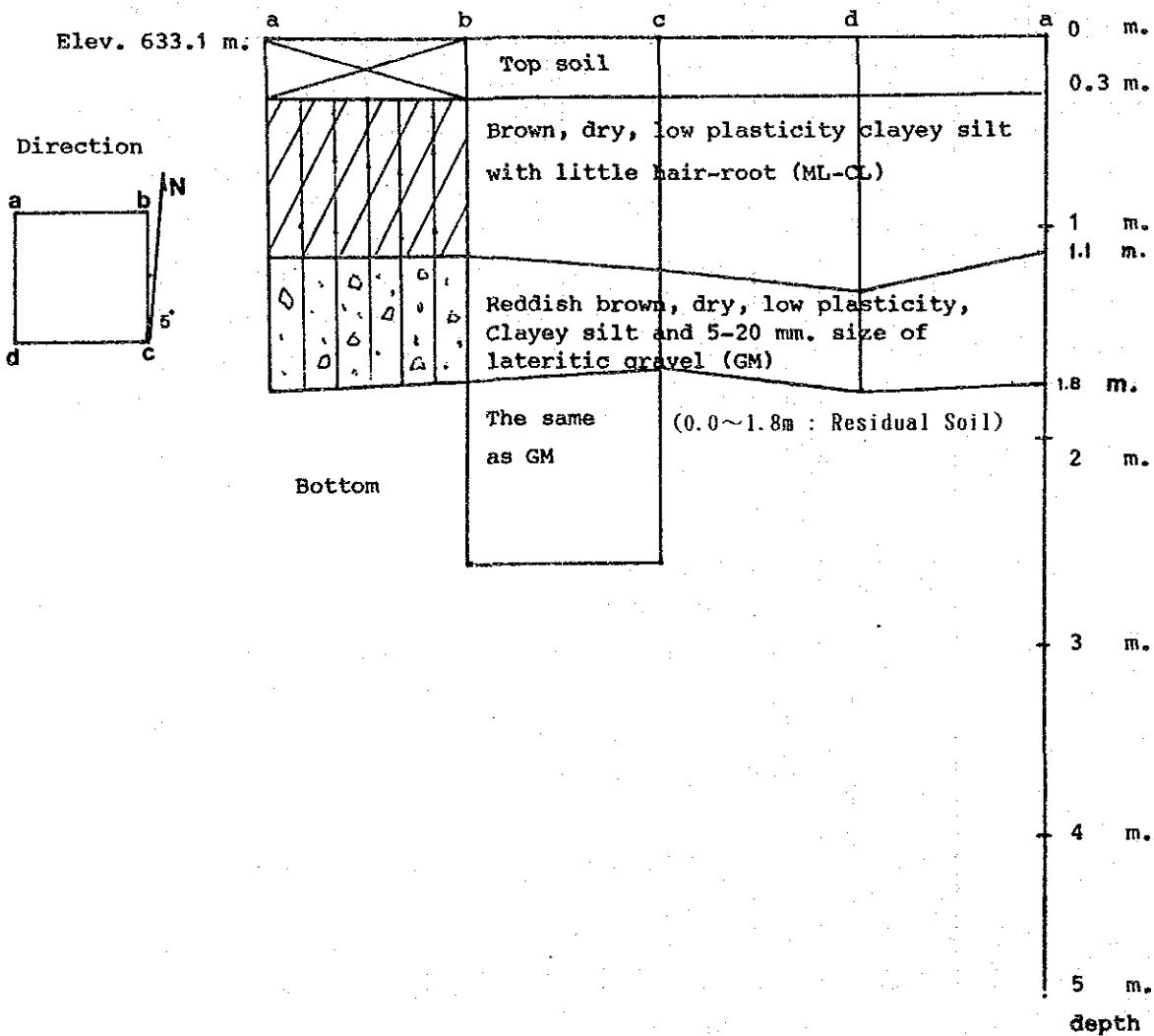
GEOLOGIC SKETCH OF TEST PIT

Name of test pit.....PU-1.....Made by.....Teerachai.....Date.....11 Oct 1990
 Location.....Upper Pondage, Lum Takhong Project.....
 Elevation.....632.8.....m. Depth.....5.0.....m.



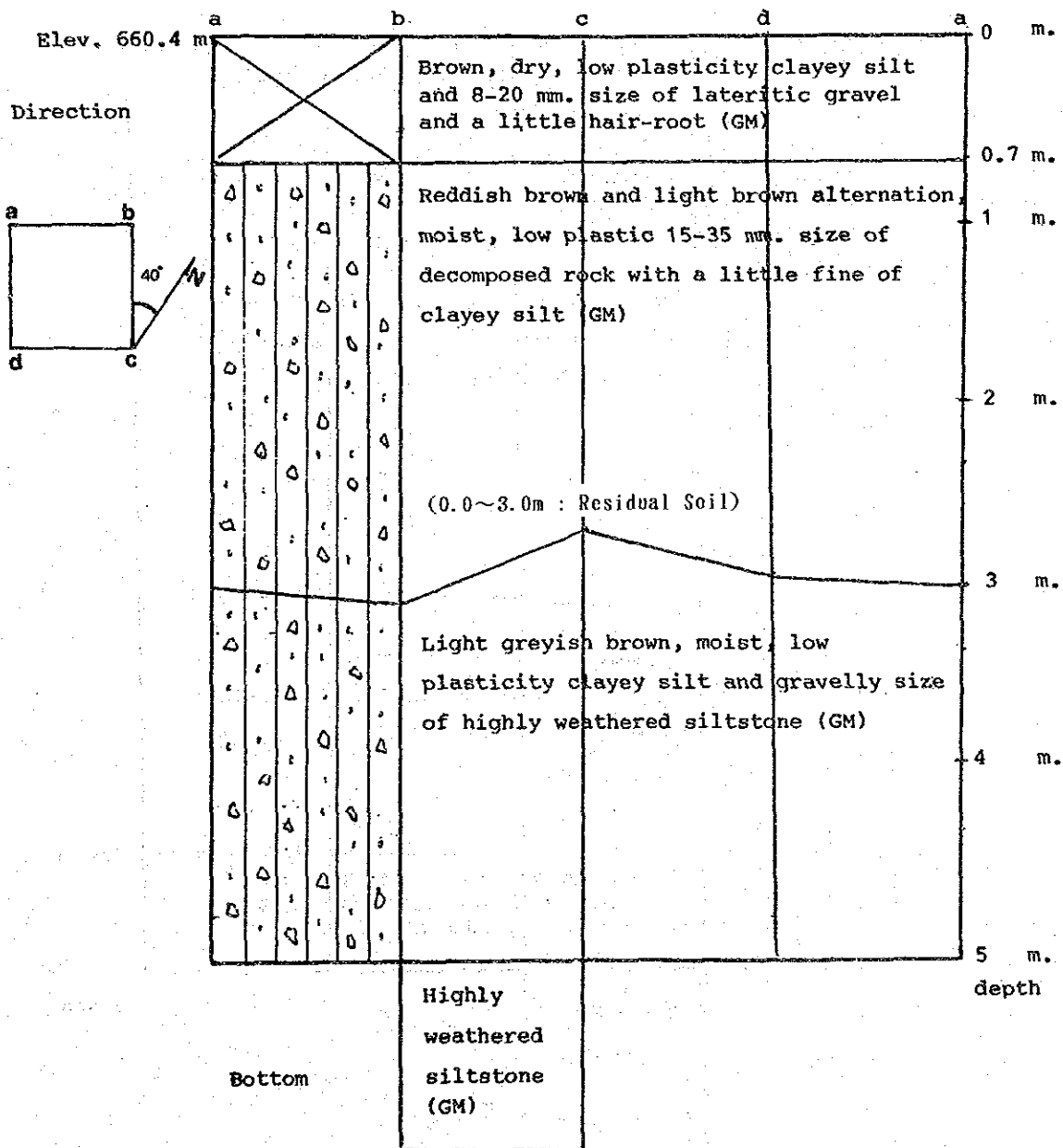
GEOLOGIC SKETCH OF TEST PIT

Name of test pit..... PU-2Made by..... TeerachaiDate..... 11 Oct 1990
 Location..... Upper Pondage, Lam Takhong Project
 Elevation..... 633.1m. Depth..... 1.8m.
 Remark:..... the bottom is very hard



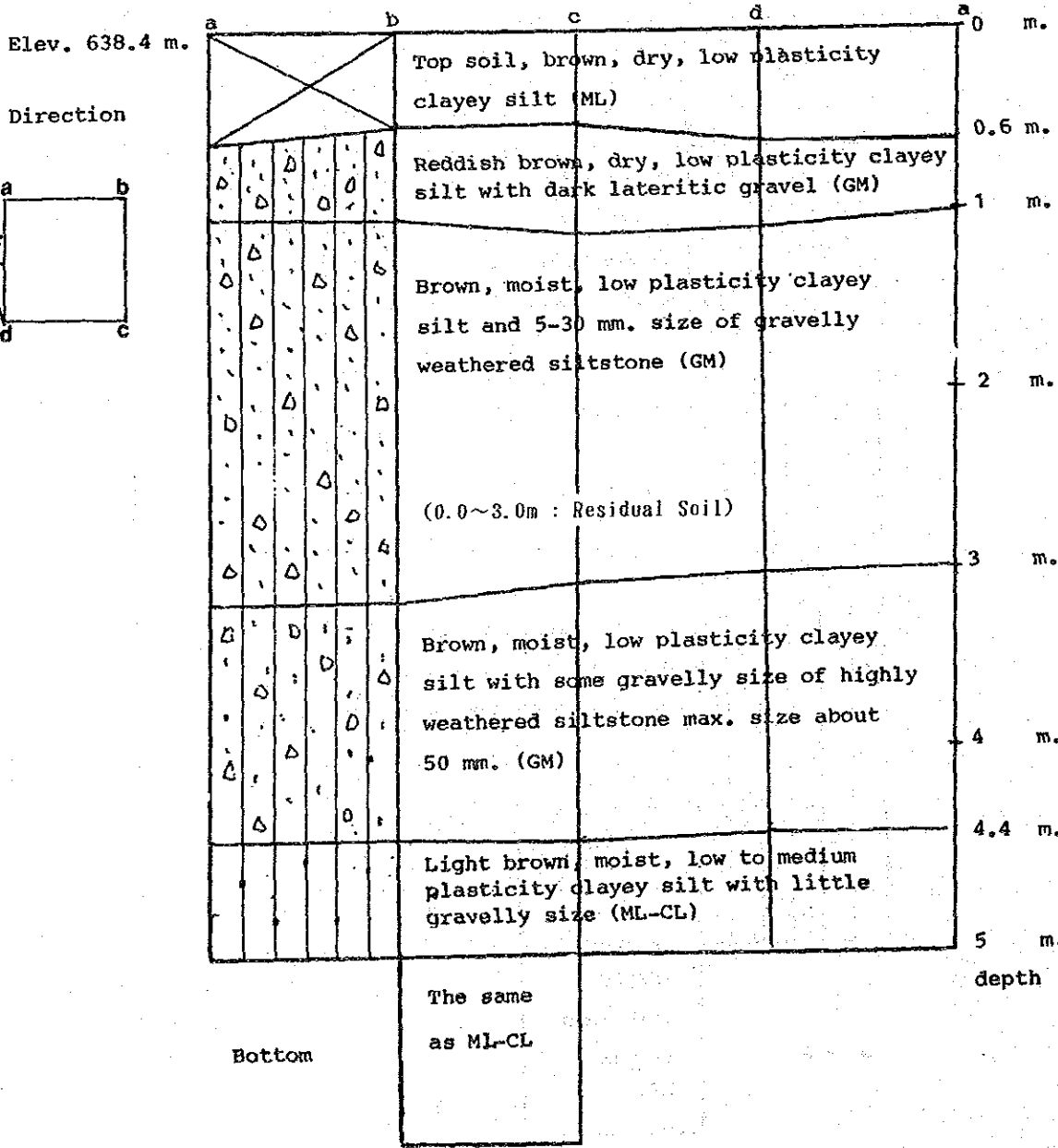
GEOLOGIC SKETCH OF TEST PIT

Name of test pit.....PU-3.....Made by..Teerachai.....Date..11 Oct 1990...
 Location.....Upper Pondage, Lam Takhong Project.....
 Elevation.....660.4.....m. Depth.....5.0.....m.



GEOLOGIC SKETCH OF TEST PIT

Name of test pit..... PU-4 Made..... Teerachai Date..... 11 Oct 1990
 Location..... Upper Pondage, Lum Takhong Project
 Elevation..... 638.4m. Depth..... 5.0m.



A-4 DATA OF PERMEABILITY TEST IN PITS

WELL PERMEAMETER TEST DATA SHEET : WELL DIMENSIONS AND DISCHARGE RATE

Test No. PU-1-1 Date Aug. 18 1990 Made by _____
 Location Test Pilt PU-1 Ground elevation 632.8 m
 Geologic condition Highly weathered claystone (weathering:4-5, hardness:4-5
 of test well crack spacing:4-5, rock evaluation: S3)
 Thickness of unsaturated Strata (Tu) more than 280 cm

well Dimensions

Depth from ground surface to the top of well (the bottom of pit) 4.9 m
 Depth of well 73 cm Depth of gravel (hg) 60 cm
 Radius of well (r) 6.6 cm

Test Result

Depth of water in well (h) 68 cm
 Air temperature 30.5 °C Ground temperature 26.5 °C

| Time (min:sec) | Difference time (seconds) | Water volume (Difference flow) (cm ³) | Discharge rate (cm ³ /s) | Water temperature (°C) |
|-------------------|---------------------------------|---|---|------------------------------|
| 15:10 | 910 | 375 | 0.4121 | 27.0 |
| 28:46 | 826 | 375 | 0.4540 | |
| 45:36 | 1,010 | 375 | 0.3713 | |
| 63:05 | 1,049 | 375 | 0.3575 | |
| 82:49 | 1,184 | 375 | 0.3167 | |
| 111:32 | 1,723 | 375 | 0.2176 | |
| 149:00 | 2,248 | 375 | 0.1668 | |
| 179:04 | 1,804 | 375 | 0.2079 | |
| 192:00 | 776 | 187 | 0.2410 | |
| 204:45 | 765 | 187 | 0.2444 | |
| 214:06 | 561 | 187 | 0.3333 | |
| 228:36 | 870 | 187 | 0.2149 | |
| 240:06 | 690 | 187 | 0.2710 | |
| 252:20 | 734 | 187 | 0.2548 | |
| 264:16 | 716 | 187 | 0.2612 | |
| 278:15 | 839 | 187 | 0.2229 | |
| 290:52 | 754 | 187 | 0.2480 | |

steady state

Discharge rate of water for steady state condition (Q) 0.25 cm³/s

Coefficient of permeability (k) 1.7 × 10⁻⁵ cm/s

OPEN-END PIPE TEST DATA SHEET : PIPE DIMENSIONS AND DISCHARGE RATE

Test No. PU-1-2 Date Aug. 1990 Made by _____
 Location Test Piit PU-1 Ground elevation 632.8 m
 Geologic condition Highly weathered claystone (weathering:4-5, hardness:4-5
 of test well crack spacing:4-5, rock evaluation: S3)
 Thickness of unsaturated Strata (Tu) more than 280 cm

Pipe Dimensions

Depth from ground surface to the top of pipe(the bottom of pit) 5.4 m
 Depth of pipe 30.5 cm
 Radius of pipe (r) 15.0 cm

Test Result

Initial depth of water in pipe (h) 25.0 cm Ground temperature _____ °C

| Time (hour:min) | Difference time (seconds) | Water hight (cm ³) | Water volume (Difference flow) (cm ³) | Discharge rate (cm ³ /s) | Water temperature (°C) |
|--------------------|---------------------------------|--------------------------------------|---|---|------------------------------|
| 0:30 | 1,800 | 24.8 | 141.4 | 0.0785 | |
| 1:00 | 1,800 | 24.8 | 0.0 | 0.0000 | |
| 1:30 | 1,800 | 24.6 | 141.4 | 0.0785 | |
| 2:00 | 1,800 | 24.5 | 70.7 | 0.0393 | |
| 2:30 | 1,800 | 24.4 | 70.7 | 0.0393 | |
| 3:00 | 1,800 | 24.3 | 70.7 | 0.0393 | |
| 3:30 | 1,800 | 24.2 | 70.7 | 0.0393 | |
| 21:50 | 66,000 | 21.5 | 1908.5 | 0.0289 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Discharge rate of water for steady state condition (Q) 0.0393 cm³/s

Average depth of water in pipe for calculation (h) 24.4 cm

Coefficient of permeability (k) 2.0 × 10⁻⁵ cm/s

WELL PERMEAMETER TEST DATA SHEET : WELL DIMENSIONS AND DISCHARGE RATE

Test No. PJ-3-1 Date Aug 1990 Made by _____
 Location Test Pit PU-3 Ground elevation 660.4 m
 Geologic condition Highly weathered claystone (weathering:4-5, hardness:4-5
 of test well crack spacing:4-5, rock evaluation: S3)
 Thickness of unsaturated Strata (Tu) more than 200 cm

well Dimensions

Depth from ground surface to the top of well (the bottom of pit) 4.9 m
 Depth of well 70 cm
 Radius of well (r) 6.85 cm

Test Result

Depth of water in well (h) 64 cm
 Air temperature _____ °C Ground temperature _____ °C

| Time (min:sec) | Difference time (seconds) | Water volume (Difference flow) (cm ³) | Discharge rate (cm ³ /s) | Water temperature (°C) |
|-------------------|---------------------------------|---|---|------------------------------|
| 12:00 | 720 | 100 | 0.1389 | |
| 27:00 | 900 | 100 | 0.1111 | |
| 40:30 | 750 | 100 | 0.1333 | |
| 54:50 | 860 | 100 | 0.1163 | |
| 68:40 | 830 | 100 | 0.1205 | |
| 83:50 | 910 | 100 | 0.1099 | |
| 98:10 | 860 | 100 | 0.1163 | |
| 113:27 | 917 | 100 | 0.1091 | |
| 128:40 | 913 | 100 | 0.1095 | |
| 142:50 | 850 | 100 | 0.1176 | |
| 157:35 | 885 | 100 | 0.1130 | |
| 173:30 | 955 | 100 | 0.1047 | |
| 188:14 | 884 | 100 | 0.1131 | |
| 204:00 | 946 | 100 | 0.1057 | |
| 220:20 | 980 | 100 | 0.1020 | |
| 236:40 | 980 | 100 | 0.1020 | |
| 251:48 | 908 | 100 | 0.1101 | |

steady state

(Note: The preliminary test had been carried out before this measurement.)

Discharge rate of water for steady state condition (Q) 0.25 cm³/s
 Coefficient of permeability (k) 1.7 × 10⁻⁵ cm/s

OPEN-END PIPE TEST DATA SHEET : PIPE DIMENSIONS AND DISCHARGE RATE

Test No. PU-3-2 Date Aug 1990 Made by _____
 Location Test Piit PU-3 Ground elevation 660.4 m
 Geologic condition Highly weathered claystone (weathering:4-5, hardness:4-5
 of test well crack spacing:4-5, rock evaluation: S3)
 Thickness of unsaturated Strata (Tu) more than 200 cm

Pipe Dimensions

Depth from ground surface to the top of pipe(the bottom of pit) 5.6 m
 Depth of pipe 30.5 cm
 Radius of pipe (r) 15.0 cm

Test Result

Initial depth of water in pipe (h) 24.4 cm Ground temperature _____ °C

| Time (hour:min) | Difference time (seconds) | Water hight (cm ³) | Water volume (Difference flow) (cm ³) | Discharge rate (cm ³ /s) | Water temperature (°C) |
|--------------------|---------------------------------|--------------------------------------|---|---|------------------------------|
| 0:10 | 600 | 24.3 | 70.7 | 0.1178 | |
| 1:00 | 3,000 | 24.2 | 70.7 | 0.0236 | |
| 1:30 | 1,800 | 24.1 | 70.7 | 0.0393 | |
| 2:00 | 1,800 | 24.0 | 70.7 | 0.0393 | |
| 2:30 | 1,800 | 23.9 | 70.7 | 0.0393 | |
| 3:30 | 3,600 | 23.8 | 70.7 | 0.0196 | |
| 4:30 | 3,600 | 23.6 | 141.4 | 0.0393 | |
| 5:30 | 3,600 | 23.4 | 70.7 | 0.0196 | |
| 6:30 | 3,600 | 23.3 | 70.7 | 0.0196 | |
| 7:30 | 3,600 | 23.1 | 141.4 | 0.0393 | |
| | | | | steady state | |
| | | | | | |
| | | | | | |

Discharge rate of water for steady state condition (Q) 0.0321 cm³/s

Average depth of water in pipe for calculation (h) 23.7 cm

Coefficient of permeability (k) 1.6 × 10⁻⁶ cm/s