# ENGINEERING BORELOG

Main Roads

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM BQF 075:191/95

BOREHOLE No : 228
SHEET : 1 OF 2
REFERENCE No : H8166

PROJECT : SOUTH EAST TRANSIT TUNNEL-PACKAGE 2
LOCATION : 4017.287E 162208.747N
PROJECT No : C60117 SURFACE R.L. : 21.27 DRILLER : DALY BROTHERS PTY LTD
JOB No : 650302CN DATUM : AHD DATE DRILLED : 28/11/97

| DEPTH (m) | R.L. (m) | AUGER / CORE DRILLING / CASING / OTHER | RQD ( )% CORE REC% | SAMPLE | MATERIAL DESCRIPTION | USC | WEATHERING | INTACT STRENGTH (EH VH H M L VL) | DEFECT SPACING (mm) (20 60 200 600 2000) | GRAPHIC LOG | ADDITIONAL DATA AND TEST RESULTS | SAMPLES | TESTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 21.27 | | | | **FILL**<br>Pale brown dry gravels. | | | | | | Driller's log only | | |
| 1 | 20.27 | | | | **XW INTERBEDDED ARGILLITE AND GREYWACKE**<br>Exhibits engineering prperties of grey brown to green grey, moist to dry, hard sandy silty clay. | XW | | | | | 6,11,15<br>N=26 | | SPT |
| 2 | 19.77 | | | | HW INTERBEDDED ARGILLITE AND GREYWACKE<br>Frequent corestones and rock kernels | HW | | | | | 19,25,30/90=>50 | | SPT |
| 3 | 18.82 | | (49)<br>96 | | **MW INTERBEDDED GREYWACKE AND ARGILLITE**<br>Orange brown to grey; partly red brown ironstaining; thin (<20mm) frequent XW-HW weathered bands. | MW | | | | | Is(50)=0.45MPa<br>F/D=230/27 | o | |
| 4 | | | | | | | | | | Broken zone | | | |
| 5 | | | (55)<br>100 | | | | | | | SW zone<br>F/D=304/43<br>Broken zone | | | |
| 6 | | | (66)<br>100 | | | | | | | Broken zone | | | |
| 7 | | | (95)<br>100 | | | | | | | HW broken zone | Is(50)=0.49MPa | o | |
| 8 | 13.32 | | | | **SW INTERBEDD ARGILLITE AND GREYWACKE**<br>Red brown ironstaining mainly along defects. | | | | | F/D=000/20<br>Broken zone | | | |
| 9 | | | (78)<br>100 | | | SW | | | | | Is(50)=0.24MPa | x | |
| 10 | 11.27 | | | | | | | | | Sheared zone | | | |

REMARKS : Extensive weathering along argillte bands shows diffrential strength along rockmass. *See attached list for defect descriptions.

LOGGED BY DISS

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LOCATION : 4017.287E 162208.747N
PROJECT No : C60117 SURFACE R.L. : 21.27 DRILLER : DALY BROTHERS PTY LTD
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| DEPTH (m) | R.L. (m) | AUGER / CORE DRILLING / CASING / OTHER | RQD ( )% CORE REC% | SAMPLE | MATERIAL DESCRIPTION | USC | WEATHERING | INTACT STRENGTH (EH VH H M L VL) | DEFECT SPACING (mm) (20 60 200 600 2000) | GRAPHIC LOG | ADDITIONAL DATA AND TEST RESULTS | SAMPLES | TESTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 11.27 | | (64) 100 | | **SW INTERBEDDED ARGILLITE AND GREYWACKE** Red brown ironstaining mainly along defects. | | | | | | Is(50)=0.27MPa XW broken zone | o | |
| 11 | | | | | | | | | | | F/D=050/23 | | |
| 12 | | | (70) 100 | | | SW | | | | | Broken zone | | |
| 13 | | | (76) 100 | | | | | | | | F/D=237/39; Sheared zone Is(50)=0.47MPa | x | |
| | 7.27 | | (38) 100 | | | | | | | | | | |
| 14 | | | | | END OF HOLE | | | | | | | | |
| 15 | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | |

REMARKS : Failure during Point load tests predominantly along foliation plane and/or bedding partings. *Some of the defect data were extracted from BIPS.

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Main Roads
Queensland Department of Main Roads

# DEFECT DESCRIPTIONS OF BORELOGS

[FOR GEOTECHNICAL TERMS AND SYMBOLS

REFER FORM BQF 075:191/95]

| | |
|---|---|
| BOREHOLE NO : | 228 |
| SHEET : | 1 of 2 |
| REFERENCE NO : | H8166 |

PROJECT : SOUTH EAST TRANSIT PROJECT - SECTION 2

LOCATION : 4017.287E 162208.747N

PROJECT NO : C60117 SURFACE R.L : 21.27 DRILLER : DALY BROTHERS PTY LTD

JOB NO : 650302CN DATUM : AHD DATE DRILLED : 2/12/97

| DEPTH | DEFECT TYPE | DIP(Degrees) | PLANARITY | ROUGHNESS | APERTURE | WALL ALTERATION | OTHER |
|---|---|---|---|---|---|---|---|
| 2.5 | J | 35 | Ir | R | | PFeSt | |
| 2.8 | | 35 | Ir | | | PFeSt | 20mm QZ |
| 2.9 | | | | | | | QZ |
| 3.14 | J | 20 | Ir | R | | PFeSt | |
| 3.47 | J | 25 | Ir | R | | T | |
| 3.56 | J | 58 | | Sm | | | Cn |
| 4.05 | J | 35 | Ir | R | | PFeSt | |
| 4.65 | J | | | R | | CoFeSt | |
| 4.88 | J | 80 | Ir | R | | | Cn |
| 5.1 | J | 35 | Ir | R | | | CI |
| 5.23 | J | 40 | Ir | R | | | In |
| 5.33 | | | | | | | QZ |
| 5.39 | | | | | | | QZ |
| 5.88 | J | | Ir | | | | |
| 6.1 | J | 15 | Ir | | | | Cn |
| 6.5 | J | 22 | Ir | R | | | |
| 6.77 | J | | Ir | | | CoFeSt | H |
| 7.48 | J | 15 | | | | | CI |
| 7.6 | J | | Ir | | | | H,Cn |
| 8.26 | J | 20 | | Sm | | | T,Cn |
| 8.55 | J | 20 | Ir | | | FeST | |
| 9.07 | J | 20 | Ir | | | CoFeSt | |
| 9.44 | J | 55 | | | | CoFeSt | O,H |
| 9.78 | J | 50 | Ir | | | | Cn |

## Abbreviations

| ROUGHNESS | | WALL ALTERATIONS | | TYPE | | OTHER | |
|---|---|---|---|---|---|---|---|
| R | Rough | FeSt | Iron Stained | J | Joint | P | Partly |
| Sm | Smooth | W | Weathered | B | Bedding | QZ | Quartz Vein |
| SL | Slickensided | | | BP | Bedding Parting | Co | Completely |
| | | | | F | Folliation | In | Incipient |
| **PLANARITY** | | **APERTURE** | | SZ | Sheared Zone | SI | Sand Infill |
| Pl | Planar | C | Closed | WS | Weathered Seam | H | Horizontal |
| St | Stepped | O | Open | CZ | Crushed Zone | V | Vertical |
| Un | Undulating | F | Filled | SM | Secondary Mineralisation | CI | Clay Infill |
| Cu | Curved | T | Tight | BZ | Broken Zone | Cn | Clean |
| Ir | Irregular | | | HFZ | Highly Fractured Zone | | |

NOTE: This sheet should be read in conjunction with appropriate Engineering Borelog.

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Main Roads
Queensland Department of Main Roads

# DEFECT DESCRIPTIONS OF BORELOGS

[FOR GEOTECHNICAL TERMS AND SYMBOLS

REFER FORM BQF 075.191/95]

| | |
|---|---|
| BOREHOLE NO : | 228 |
| SHEET : | 2 OF 2 |
| REFERENCE NO : | H8166 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PROJECT | | SOUTH EAST TRANSIT PROJECT - SECTION 2 | | | | | |
| LOCATION | : | 4017.287E | 162208.747N | | | | |
| PROJECT NO | : | C60117 | SURFACE R.L | : | 21.27 | DRILLER | : DALY BROTHERS PTY LTD |
| JOB NO | : | 650302CN | DATUM | : | AHD | DATE DRILLED | : 2/12/97 |

| DEPTH | DEFECT TYPE | DIP(Degrees) | PLANARITY | ROUGHNESS | APERTURE | WALL ALTERATION | OTHER |
|---|---|---|---|---|---|---|---|
| 10.95 | J | 25 | | Sm | T | | Cn |
| 11.55 | J | 25 | Ir | | | | |
| 11.84 | J | 30 | | Sm | T | | Cn |
| 12.25 | J | | Ir | R | | PFeSt | |
| 12.36 | J | 50 | | Sm | T | | Cn |
| 12.5 | J | | Ir | | | FeSt | |
| 12.55 | | | | | | | QZ |
| 12.82 | | | | | | | QZ |
| 13.08 | J | 20 | | Sm | | | CI |
| 13.23 | J | 40 | Ir | | | | CI |
| 13.36 | J | 40 | Ir | | | FeSt | |
| 13.4 | J | 45 | Ir | | | FeSt | |
| 13.65 | J | 60 | Ir | | | FeSt | |
| 13.7 | J | 40 | Ir | | | FeSt | |
| 13.83 | J | 40 | Ir | | | FeSt | |
| 13.85 | J | 40 | Ir | | | FeSt | |
| 13.87 | J | 40 | Ir | | | FeSt | |
| 13.91 | J | 40 | Ir | | | FeSt | |
| | | | | | | | |

## Abbreviations

| ROUGHNESS | | WALL ALTERATIONS | | TYPE | | OTHER | |
|---|---|---|---|---|---|---|---|
| R | Rough | FeSt | Iron Stained | J | Joint | P | Partly |
| Sm | Smooth | W | Weathered | B | Bedding | QZ | Quartz Vein |
| SL | Slickensided | | | BP | Bedding Parting | Co | Completely |
| | | | | F | Folliation | In | Incipient |
| PLANARITY | | APERTURE | | SZ | Sheared Zone | SI | Sand Infil |
| Pl | Planar | C | Closed | WS | Weathered Seam | H | Horizontal |
| St | Stepped | O | Open | CZ | Crushed Zone | V | Vertical |
| Un | Undulating | F | Filled | SM | Secondary | CI | Clay Infill |
| Cu | Curved | T | Tight | BZ | Broken Zone | Cn | Clean |
| Ir | Irregular | | | HFZ | Highly Fractured Zone | | |

**NOTE:** This sheet should be read in conjunction with appropriate Engineering Borelog.

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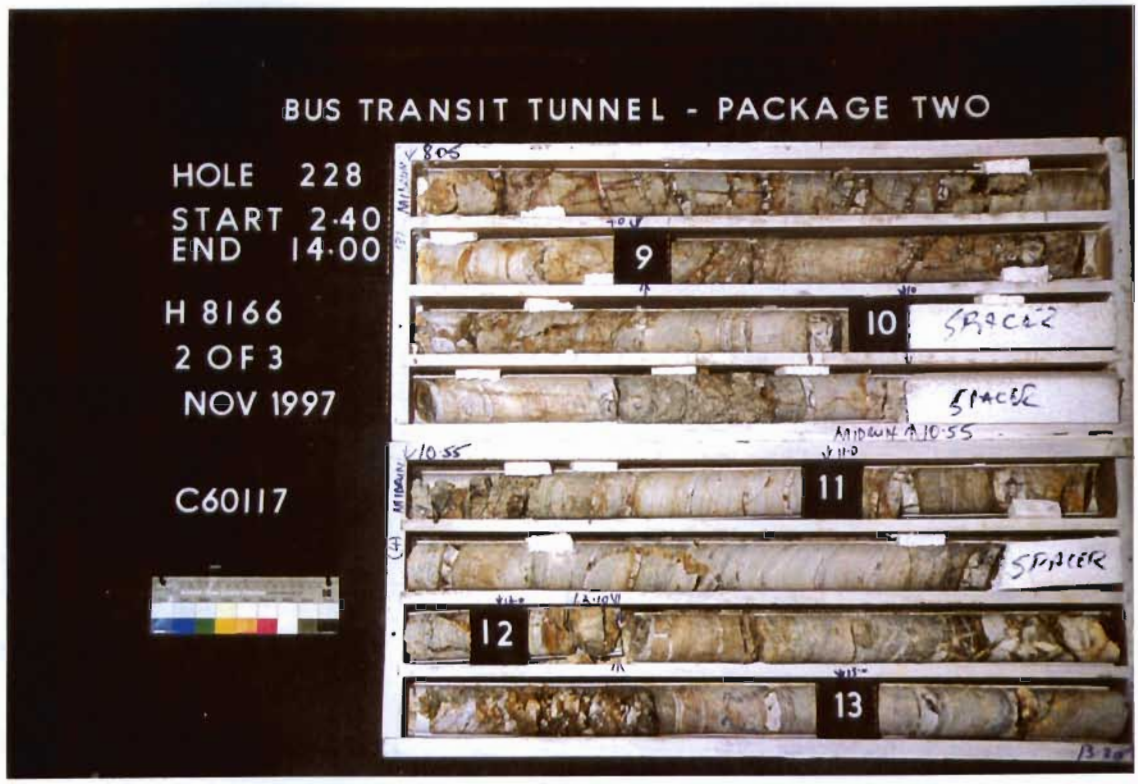
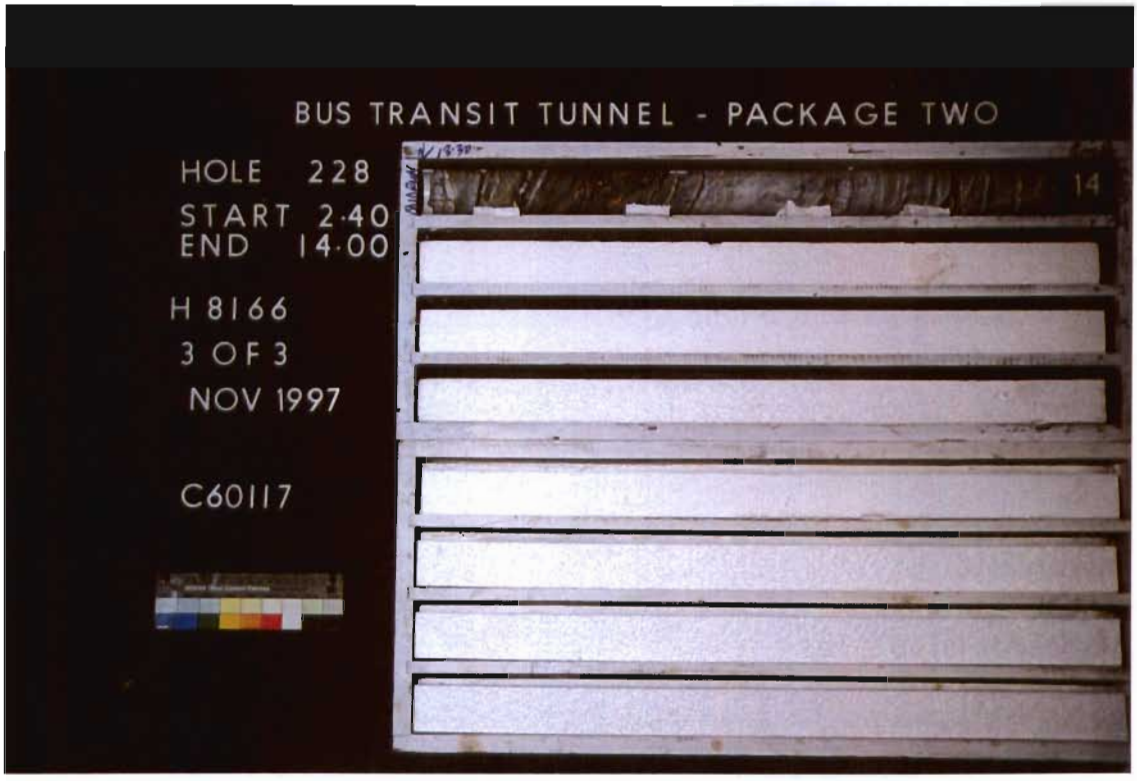
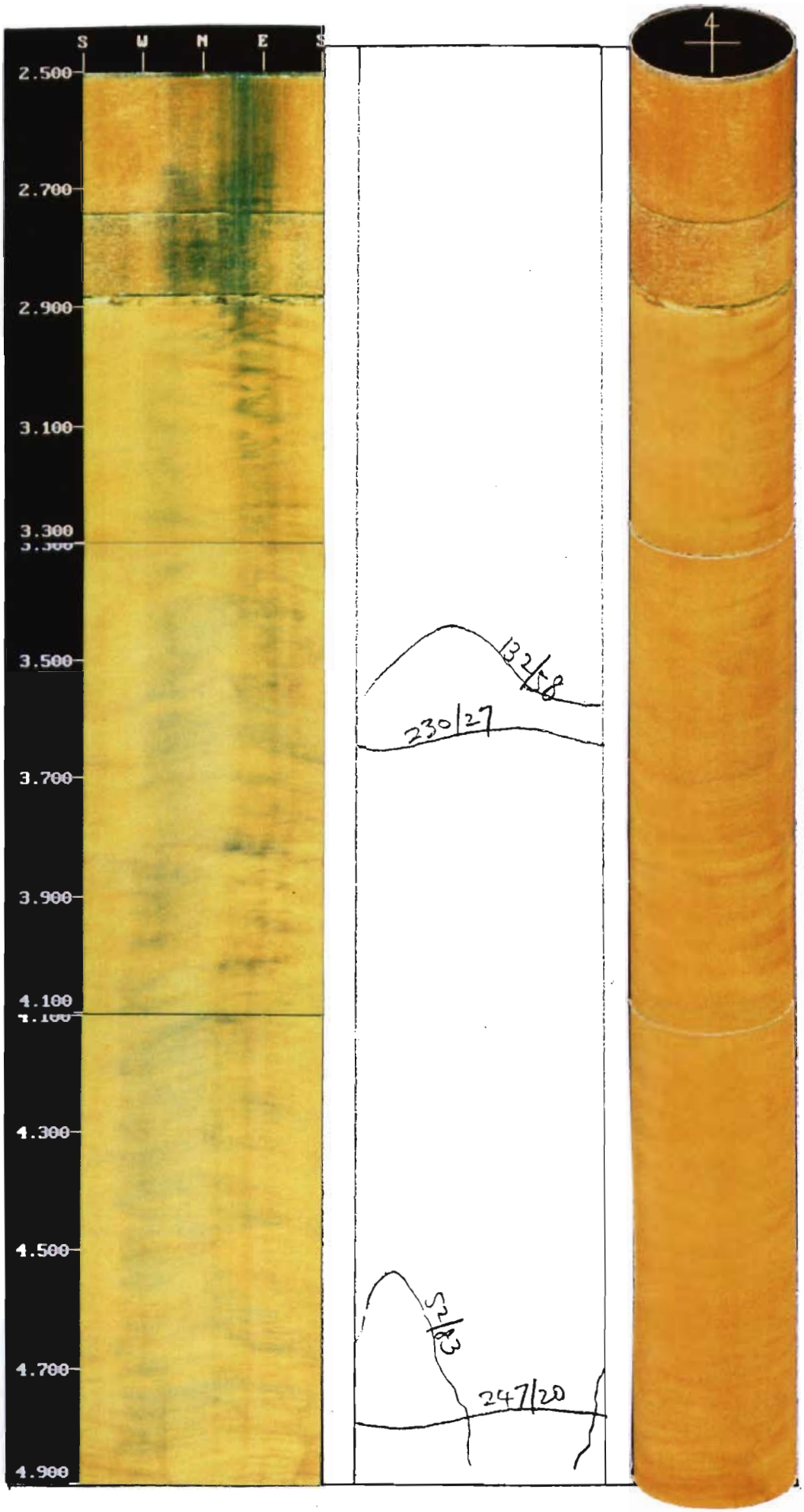




# SOUTH EAST TRANSIT PROJECT

## BH 228 2.50 - 4.90 M



# SOUTH EAST TRANSIT PROJECT
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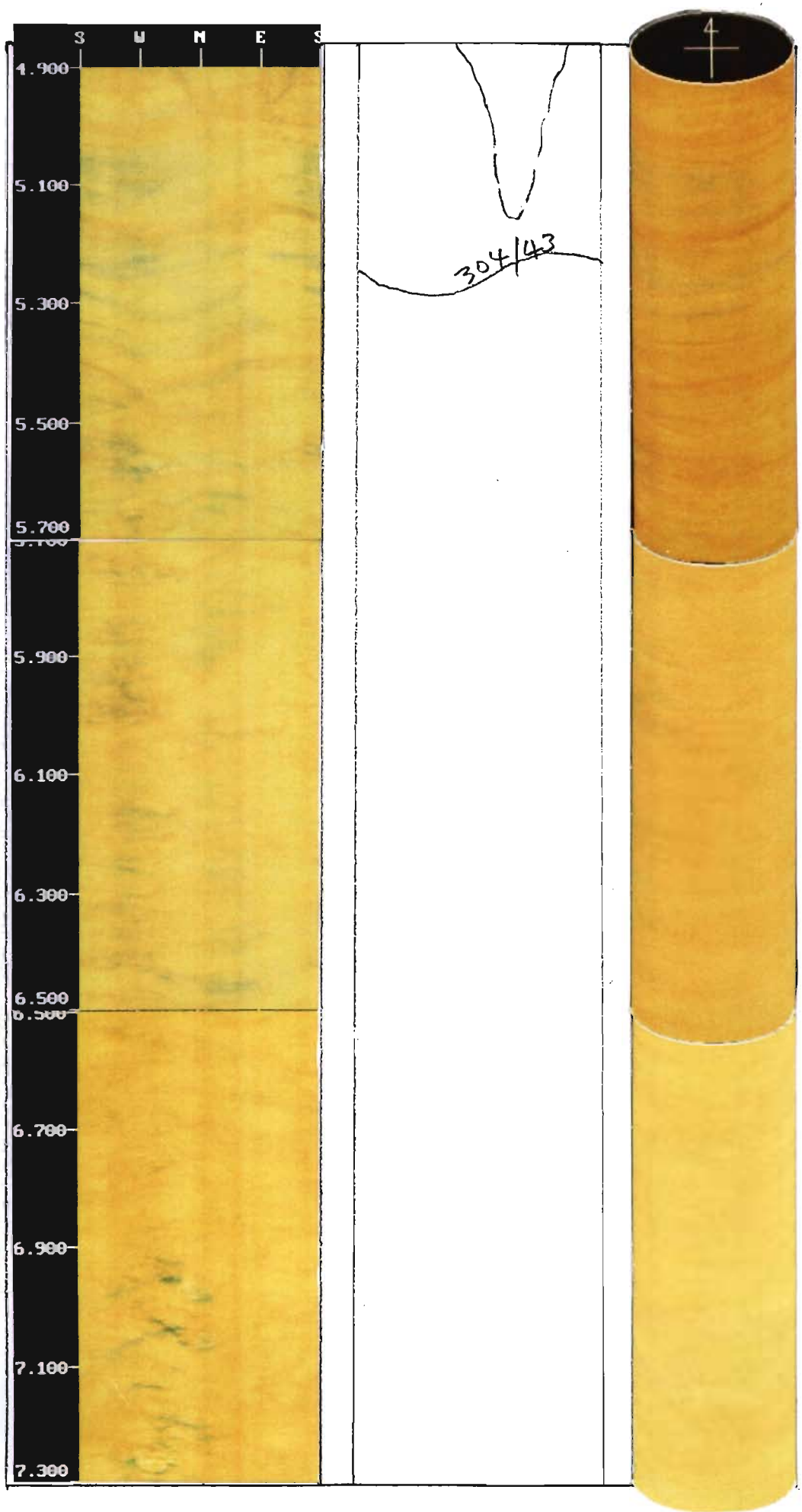

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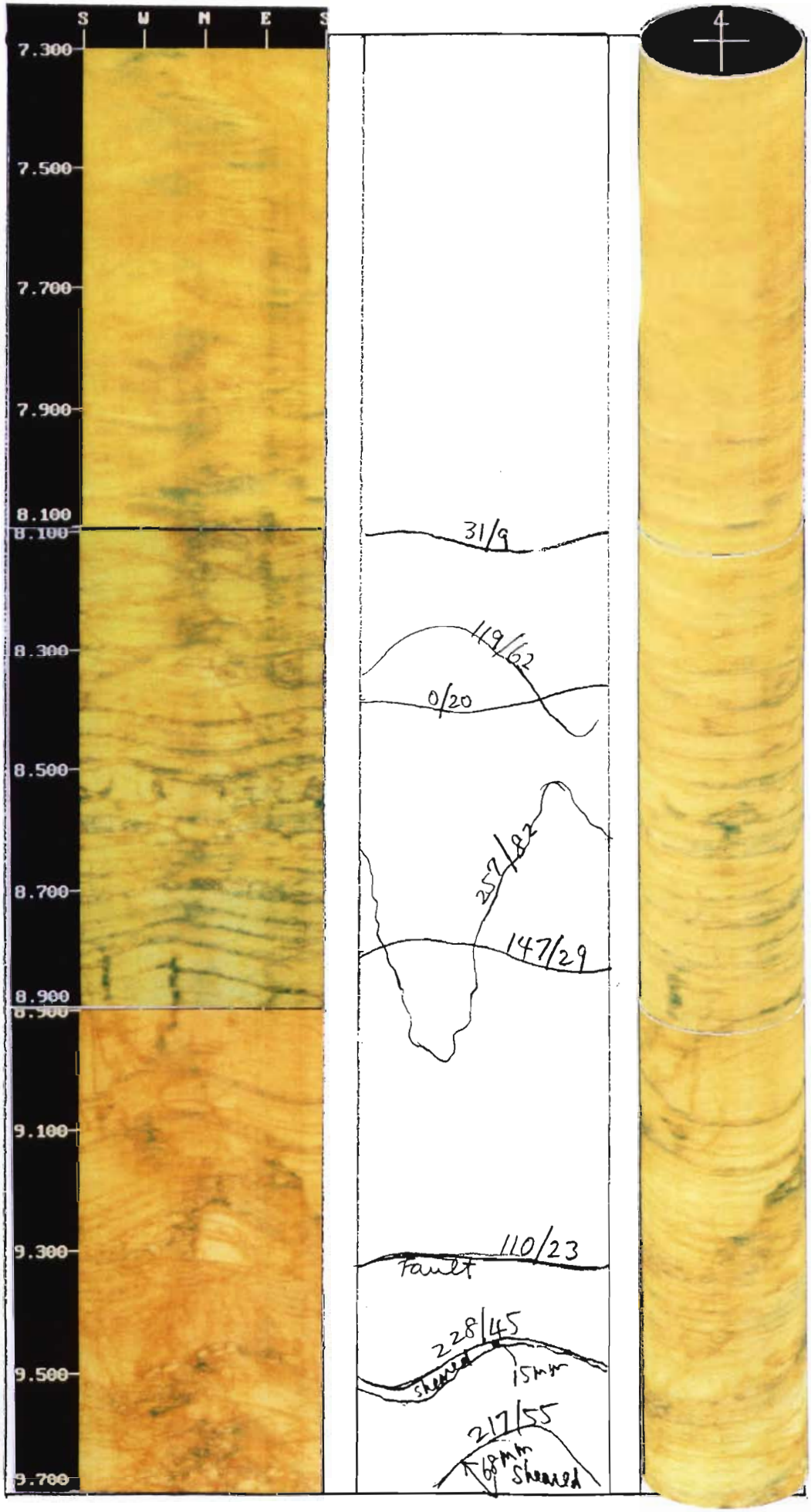
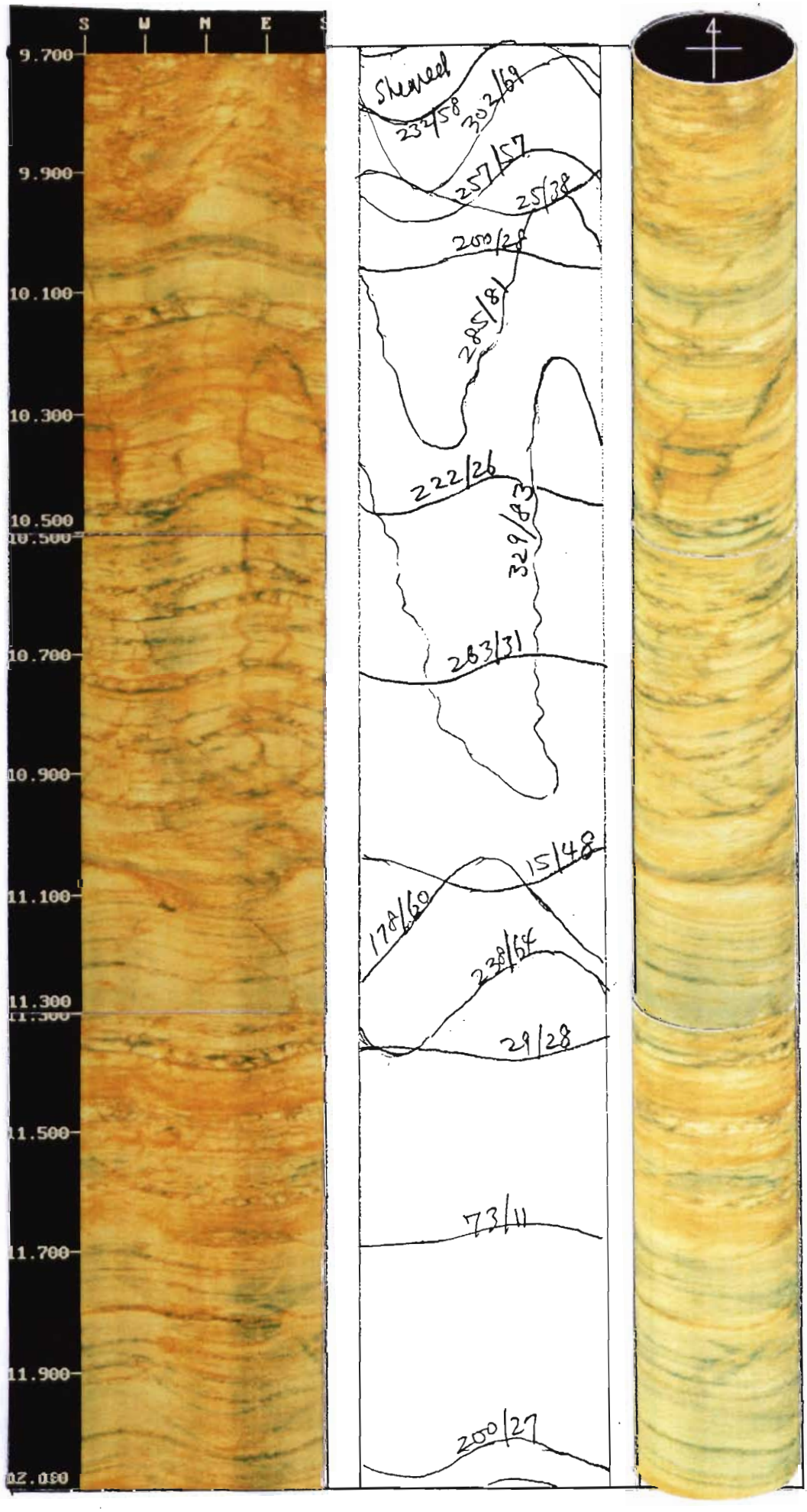


# SOUTH EAST TRANSIT PROJECT
## BH 228 9.70 - 12.10 M



# SOUTH EAST TRANSIT PROJECT
## BH 228 12.10 - 14.20 M