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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No \_\_BH C71 \_\_
SHEET \_\_1 \_ of \_ 2 \_\_
REFERENCE NO \_\_H11230 \_\_

| DECT No FG5799   SURFACE RL   67 40m   PLUNGE   DATE STARTED   S00811   GRID DATUM   MOAST   | ROJ  | ECT   | Bruce Highway Upgrade (Cooroy to Curra) Section C |    |  |        |   |  |                   |  |             |  |               |          |
|--|--|-------|---|----|--|--------|---|--|-------------------|--|-------------|--|---------------|----------|
| No.   23/10/22   HEIGHT DATUM   AHD   BEARING   DATE COMPLETED   10/09/11   DRILLER   Drittography Ltd.  |  |       |   |    |  |        |   |  |                   |  |             |  |               | 5 N      |
| READ   |  |       |   |    |  |        |   |  |                   | - 100  |             |  |               |          |
| CT   CD   CO   CD   CD   CD   CD   CD   CD   | OB NO <u>232/10A/2 HEIGHT DATUM AHD _ BEARING DATE COMPLETED 15/09/11 DRILLER Drillsure Pty Ltd DATE COMPLETED 15/09/11 DRILLER Drillsure Pty Ltd DATE COMPLETED 15/09/11 DRILLER </u>                 |       |   |    |  |        |   |  |                   | <u>.td</u> _                                 |             |  |               |          |
| TOPSOIL: Clayer, moist, clayery sill. Clayer Still, fallurating. See 70  See 7 | DEPTH (m)  | (m)   | EN S  | 유명 | ()%  | SAMPLE |   | ITHOLOGY                               | JSC<br>WEATHERING | INTACT DEFECT STRENGTH SPACING (mm)          | SRAPHIC LOG | AND                                    |               | SAMPLES  |
| Clayer SILT I Alturum; Molled gray/orange brown, soft, moist, gravelly dayey silt. Silty CLAY (Alturum): Brownigrey, moist, firm and becomming very stiff with depth, intermediate to high pleastedy.  Minor organic content.    B   2.5m: Becoming stiff   3.3.4   8  | <del>-</del>   | 67.40 |   | ŕ  | INLO 78  | 1 "    | TOPSOIL: Grey, moist, clayey silt.  |  |                   |  | ‡ <u> </u>  |  |               |          |
| B   2.5m: Becoming stiff.   3.5.7   8  | 1  | 66.70 |   |    |  | А      | Clayey SILT (Altuvium): Mottled grey/orange brown, soft, moist, gravelly clayey silt. Silty CLAY (Altuvium): Brown/grey, moist, firm and becomming very stiff with depth, intermediate to high                            |  | (ML)              |  |             | — Based on driller's logs on           | 3,3,4         | SPT      |
| 61.90 61.80 (0) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1   | 2  |       |   |    |  | В      |   |  |                   |  |             |  | 3,5,7<br>N=12 | SP       |
| ### Also   | 4  |       |   |    |  | С      | 4.0m: Becoming very stiff.  |  | (CI-<br>CH)       | +      |             |  |               | SF       |
| (0) 100 (10) (10) (10) (10) (10) (10) (1   |  |       |   |    |  |        | META SII TSTONE (LIAA): Growbrown   |  | HW                | ‡<br>‡<br>‡                                  |             |  | 30/50         | \$       |
| 100   Grey/brown, fine grained, subtly foliated, medium to high strength.   Defects   Clayey HW zone up to 500mm.   Joint at 20° (>5/m)   Joint at 60° (1-2/m)   Defect spacing is generally very close to close.   Oint   Defect surfaces are planar, slightly rough, tight or open, clay infilled and iron stained.   MMW   Is(50) = 4.79MPa   Is(50) = 0.86MPa   |  |       |   |    | (0)<br>100   |        |   | _                                      |                   |  |             |  | 117-00-       |          |
| tight or open, clay infilled and iron stained.    100  | and a special state of the stat |       |   |    | (0)<br>100<br>(0)<br>100<br>(0)<br>100<br>(0)<br>100<br>(0)<br>100 |        | METASILTSTONE (MW): Grey/brown, fine grained, subtly foliated, medium to high strength.  Defects: -Clayey HW zones up to 500mmJoint at 20° (>5/m) -Joint at 60° (1-2/m)  Defect spacing is generally very close to close. | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |                   |  |             | − Clayey HW Zone<br>− BZ Is(           | 50) = 0.39MPa | 2        |
| 57.60 METASILTSTONE (SW): (See over) SW Is(50) = 0.86MPa   |  |       |   |    | 100<br>(11)<br>84<br>(0)   | X      |   | <b>}</b>                               | MW                |  |             | ⊐− CLy BZ                              | 50) = 4.79MPa |          |
| 57.60  METASILTSTONE (SW): (See over)  SW  HW CLy Zone   |  |       |   |    |  |        |   | <b>***</b>                             |                   |  |             | Γ                                      | 50) = 0.86MPa | <b>)</b> |
|  |  | 57.60 |   |    |  |        | METASII TSTONE (SIAN) (Soo over)  | <b>***</b>                             | CIAI              |  | <b> </b>    | ,                                      |               | ,        |
|  | <u> </u>   |       |   | L  |  |        | INFLIGICIACIONE (SAA): (See OAGL)   | <u></u>                                | 344               | <u>i                                    </u> |             | [————————————————————————————————————— |               |          |



# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

| PRO.                                   | OJECT Bruce Highway Upgrade (Cooroy to Curra) Section C                                    |   |             |        |   |                   |                                    |                               |                           |             |   |
|--|--|---|-------------|--------|---|-------------------|------------------------------------|-------------------------------|---------------------------|-------------|---|
|  |  |   |             |        |   |                   | OORDINATES 473365.0 E; 7088048.5 N |                               |                           |             |   |
|  |  |   |             |        |   |                   | 9/11 GRID DATUM MGA94              |                               |                           |             |   |
| JOB                                    | OB NO 232/10A/2 HEIGHT DATUM AHD BEARING DATE COMPLETED 15/09/11 DRILLER Drillsure Pty Ltd |   |             |        |   |                   |                                    |                               |                           |             |   |
| DEPTH (m)                              | R.L.<br>(m)<br>57.40   | JGER<br>ASING<br>ASH BORING<br>ORE DRILLING | RQD<br>()%  | SAMPLE | MATERIAL<br>DESCRIPTION   | LITHOLOGY         | USC<br>WEATHERING                  | INTACT<br>STRENGTH<br>ボチェヌュメゴ | DEFECT<br>SPACING<br>(mm) | GRAPHIC LOG | ADDITIONAL DATA  AND  TEST RESULTS  ADDITIONAL DATA  AND  TEST RESULTS  |
| 10                                     | 57.40  | 72≷Ω  | REC %       |        | METASILTSTONE (SW): Cont'd  | -<br>-            | <u> </u>                           |                               |                           | <u>ত</u>    | i i i i i i i i i i i i i i i i i i i   |
| -11                                    |  |   | 100<br>(63) |        | Grey, fine grained, subtly foliated, high strength.  Defects: -Joint at 20° (3/m) -Joint at 70° (1-2/m)  Defect spacing is mainly medium to wide. Defect surfaces are planar, open, smooth, iron stained.  Foliation is disturbed throughout. | <b>}</b> }}}}}}}} | sw                                 |                               |                           |             | J, 70°, PI, S, T, FeSt  J, 10°, O, SR, FeSt   Is(50) = 0.77MPa   X   O    BZ  J, 70°, PI, T, FeSt   Is(50) = 1.05MPa   O    Is(50) = 1.67MPa   X   O    Is(50) = 1.67MPa   X   O    J, 50°, PI, T, S, FeSt   Is(50) = 2.18MPa   O    J, 20°, PI, S, O, FeSt   O   O   O    UCS=11MPa   O   O   O    UCS |
|  | 55.09  |   | 100         |        |   | <b>***</b>        |                                    |                               |                           |             | J, 70°, Pl, S, O, Clnf  |
| -13<br>-14<br>-15<br>-16<br>-17<br>-18 |  |   |             |        | Borehole terminated at 12.31m   |                   |                                    |                               |                           |             |   |
|  | EMARK:   | S.  |             |        |   |                   |                                    |                               |                           |             | LOGGED BY   |
| 100                                    | -wmm.  | 120000<br>10000                             |             |        |   |                   |                                    |                               |                           |             | JA/DC   |



### CORE PHOTO LOG - BH C71

| Project Name:  | BRUCE HIGHWAY UPGRADE - SECTION C |                   |            |  |  |  |  |
|----------------|-----------------------------------|-------------------|------------|--|--|--|--|
| Project No.:   | FG5799                            | Date:             | 15/09/2011 |  |  |  |  |
| Details:       | Structure                         | Start Depth (m):  | 5.60       |  |  |  |  |
| Reference No.: | H11240                            | Finish Depth (m): | 12.31      |  |  |  |  |

