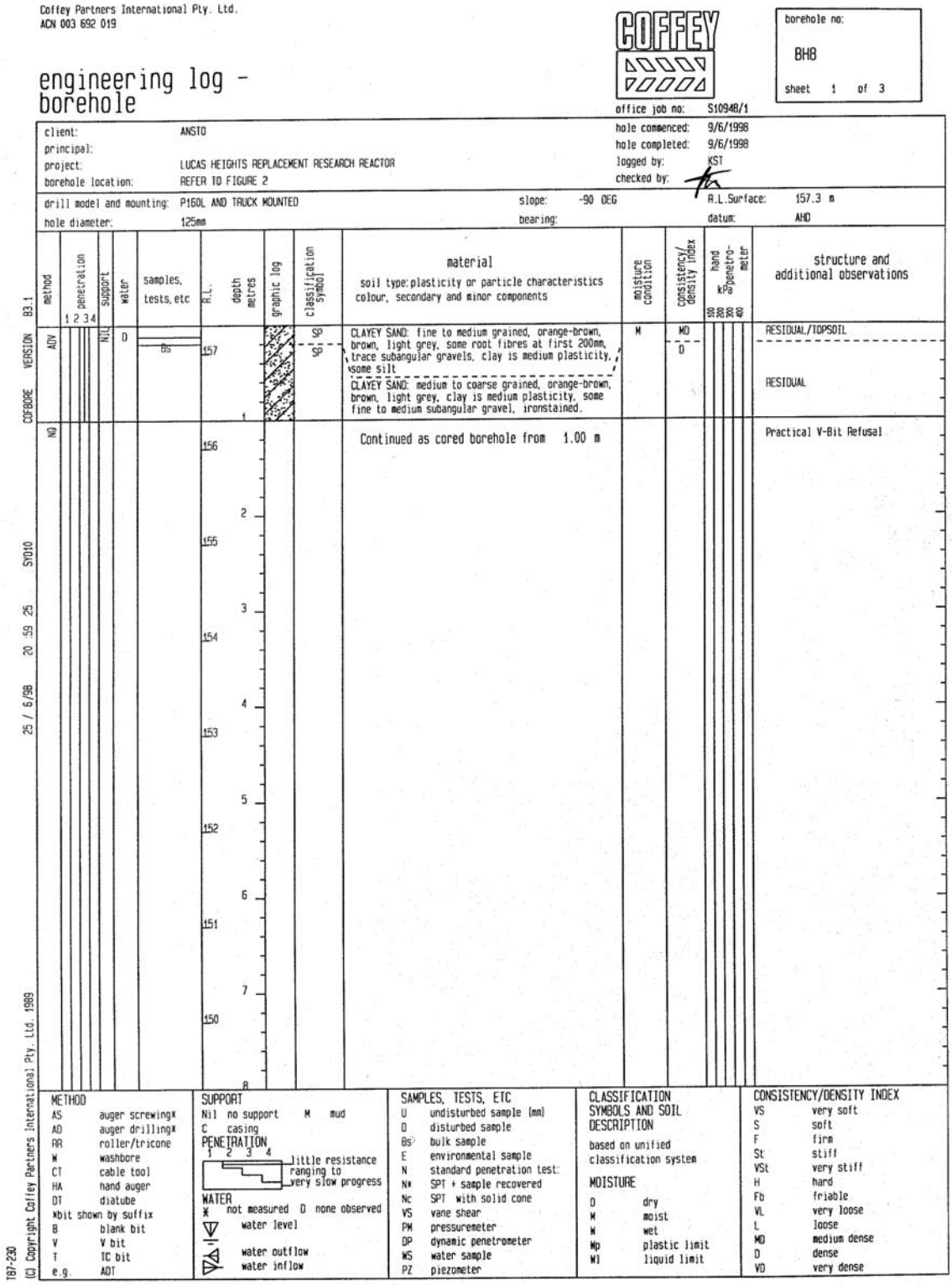
Figure 3.2/22 Engineering Log – Cored Borehole No. BH8



Coffey Partners International Pty. Ltd.
ACN 003 692 019

COFFEY

borehole no: BH8
sheet 1 of 3

engineering log - borehole

office job no: S10948/1
client: ANSTO
principal:
project: LUCAS HEIGHTS REPLACEMENT RESEARCH REACTOR
borehole location: REFER TO FIGURE 2
hole commenced: 9/6/1998
hole completed: 9/6/1998
logged by: KST
checked by:
drill model and mounting: P160L AND TRUCK MOUNTED
hole diameter: 125mm
slope: -90 DEG
bearing:
R.L.Surface: 157.3 m
datum: AHD

method	penetration 1 2 3 4	support	water	samples, tests, etc	R.L.	depth metres	graphic log	classification symbol	material: soil type: plasticity or particle characteristics colour, secondary and minor components	moisture condition	consistency/ density index	hand penetrometer kPa 100 200 300 400	structure and additional observations
ADV		Nil	D	Bs	157	1		SP SC	CLAYEY SAND: fine to medium grained, orange-brown, brown, light grey, some root fibres at first 200mm, trace subangular gravels, clay is medium plasticity, some silt CLAYEY SAND: medium to coarse grained, orange-brown, brown, light grey, clay is medium plasticity, some fine to medium subangular gravel, ironstained.	M	MD D		RESIDUAL/TOPSOIL RESIDUAL
NQ					156	2			Continued as cored borehole from 1.00 m				Practical V-Bit Refusal
					155	3							
					154	4							
					153	5							
					152	6							
					151	7							
					150	8							

METHOD
AS auger screwing*
AD auger drilling*
AR roller/tricone
W washbore
CT cable tool
HA hand auger
DT diatube
*bit shown by suffix
B blank bit
V V bit
T TC bit
e.g. ADT

SUPPORT
Nil no support M mud
C casing

PENETRATION
1 2 3 4
little resistance ranging to very slow progress

WATER
* not measured D none observed
water level
water outflow
water inflow

SAMPLES, TESTS, ETC
U undisturbed sample (mm)
D disturbed sample
Bs bulk sample
E environmental sample
N standard penetration test:
N* SPT + sample recovered
Nc SPT with solid cone
VS vane shear
PM pressuremeter
DP dynamic penetrometer
WS water sample
PZ piezometer

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
based on unified classification system

MOISTURE
D dry
M moist
W wet
Wp plastic limit
Wl liquid limit

CONSISTENCY/DENSITY INDEX
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Fb friable
VL very loose
L loose
MD medium dense
D dense
VD very dense

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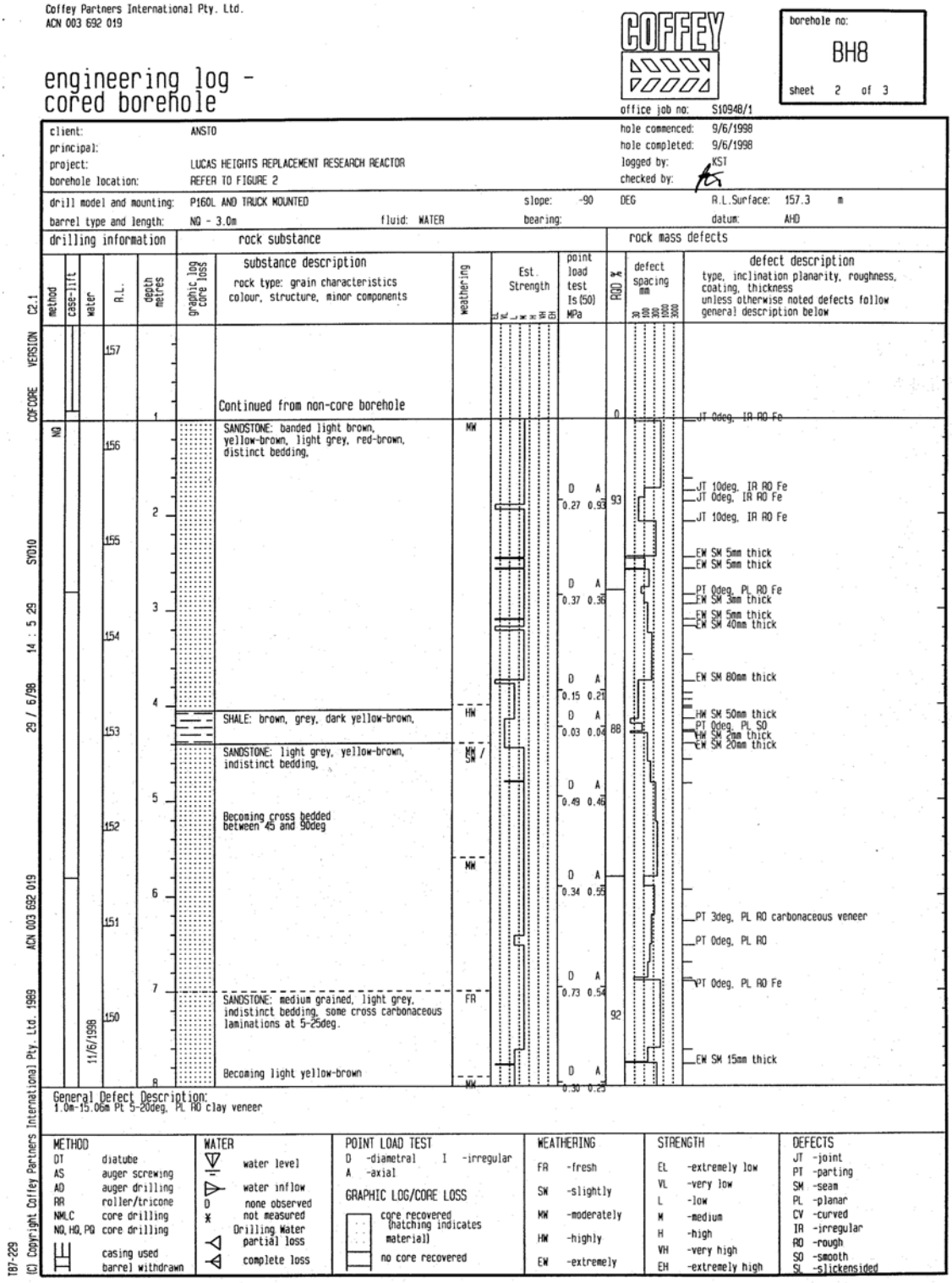
COFBORE VERSION B3.1 SYD10 25 59 20 25 / 6/98


Coffey Partners International Pty. Ltd.
ACN 003 692 019
engineering log - cored borehole
COFFEY
borehole no: BH8
sheet 2 of 3
office job no: S10948/1
client: ANSTO
principal:
project: LUCAS HEIGHTS REPLACEMENT RESEARCH REACTOR
borehole location: REFER TO FIGURE 2
hole commenced: 9/6/1998
hole completed: 9/6/1998
logged by: KST
checked by:
drill model and mounting: P160L AND TRUCK MOUNTED
slope: -90 DEG
R.L.Surface: 157.3 m
barrel type and length: NQ - 3.0m
fluid: WATER
bearing:
datum: AHD
drilling information
rock substance
rock mass defects
substance description
rock type: grain characteristics colour, structure, minor components
weathering
Est. Strength
point load test Is(50) MPa
RQD %
defect spacing mm
defect description
type, inclination planarity, roughness, coating, thickness
unless otherwise noted defects follow general description below
method
case-lift
water
R.L.
depth metres
graphic log core loss
Continued from non-core borehole
SANDSTONE: banded light brown, yellow-brown, light grey, red-brown, distinct bedding,
SHALE: brown, grey, dark yellow-brown,
SANDSTONE: light grey, yellow-brown, indistinct bedding,
Becoming cross bedded between 45 and 90deg
SANDSTONE: medium grained, light grey, indistinct bedding, some cross carbonaceous laminations at 5-25deg.
Becoming light yellow-brown
JT 0deg, IR RO Fe
JT 10deg, IR RO Fe
JT 0deg, IR RO Fe
JT 10deg, IR RO Fe
EW SM 5mm thick
EW SM 5mm thick
PT 0deg, PL RO Fe
EW SM 3mm thick
EW SM 5mm thick
EW SM 40mm thick
EW SM 80mm thick
HW SM 50mm thick
PT 0deg, PL SO
EW SM 2mm thick
EW SM 20mm thick
PT 3deg, PL RO carbonaceous veneer
PT 0deg, PL RO
PT 0deg, PL RO Fe
EW SM 15mm thick
General Defect Description:
1.0m-15.06m Pt 5-20deg, PL RO clay veneer
METHOD
DT diatube
AS auger screwing
AD auger drilling
RR roller/tricone
NMLC core drilling
NQ, HQ, PQ core drilling
casing used
barrel withdrawn
WATER
water level
water inflow
D none observed
not measured
Drilling Water
partial loss
complete loss
POINT LOAD TEST
D -diametral I -irregular
A -axial
GRAPHIC LOG/CORE LOSS
core recovered (hatching indicates material)
no core recovered
WEATHERING
FR -fresh
SW -slightly
MW -moderately
HW -highly
EW -extremely
STRENGTH
EL -extremely low
VL -very low
L -low
M -medium
H -high
VH -very high
EH -extremely high
DEFECTS
JT -joint
PT -parting
SM -seam
PL -planar
CV -curved
IR -irregular
RO -rough
SO -smooth
SL -slickensided
COREVERSION C2.1
SYD10 14 : 5 29 / 6/98
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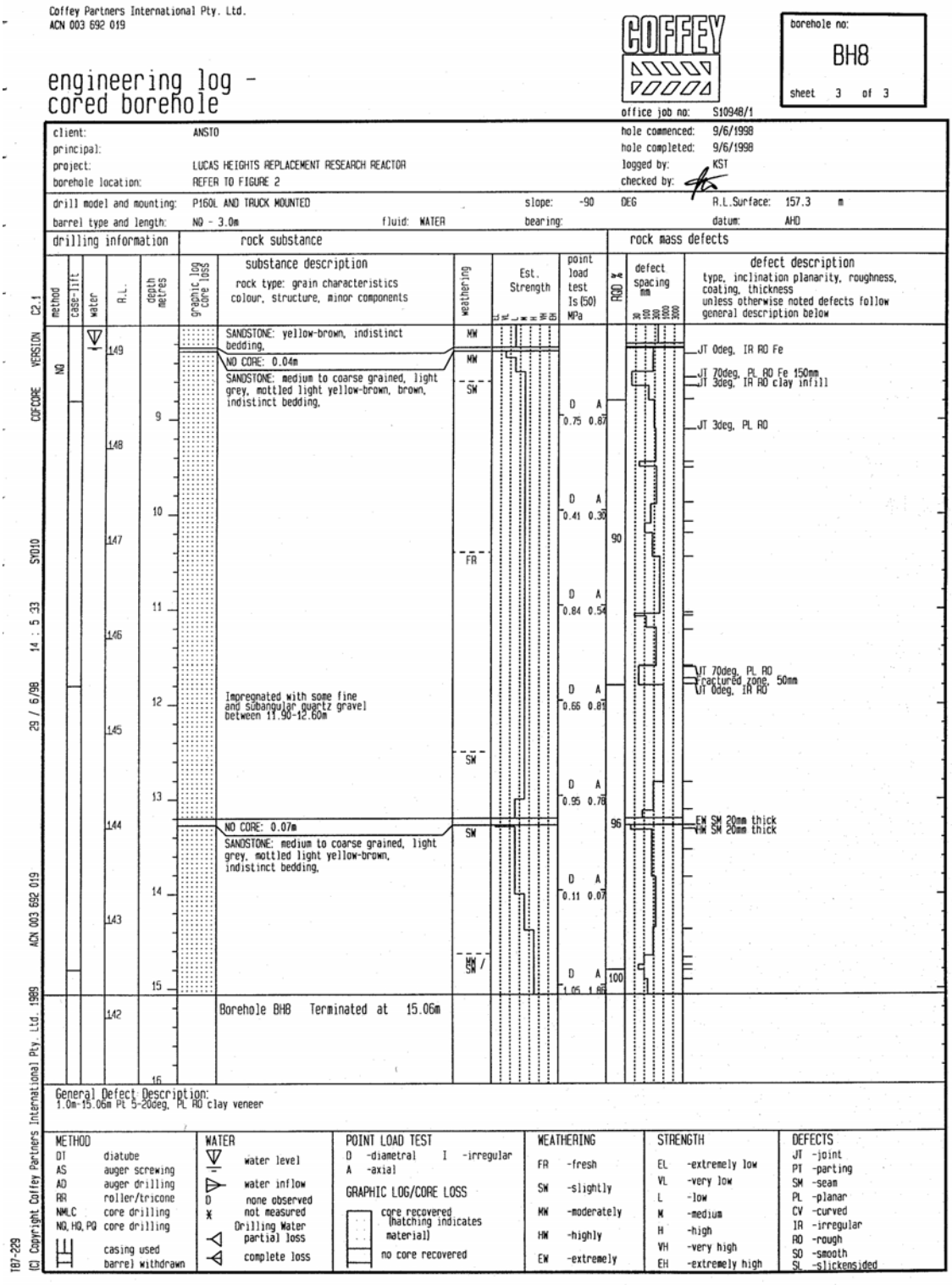
Coffey Partners International Pty. Ltd.
ACN 003 692 019
engineering log - cored borehole
COFFEY
borehole no: BH8
sheet 3 of 3
office job no: S10948/1
client: ANSTO
principal:
project: LUCAS HEIGHTS REPLACEMENT RESEARCH REACTOR
borehole location: REFER TO FIGURE 2
hole commenced: 9/6/1998
hole completed: 9/6/1998
logged by: KST
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drill model and mounting: P160L AND TRUCK MOUNTED
slope: -90 DEG
R.L.Surface: 157.3 m
barrel type and length: NQ - 3.0m
fluid: WATER
bearing:
datum: AHD
drilling information
rock substance
rock mass defects
method
case-litt
water
R.L.
depth metres
graphic log core loss
substance description
rock type: grain characteristics
colour, structure, minor components
weathering
Est. Strength
point load test Is(50) MPa
RQD %
defect spacing mm
defect description
type, inclination planarity, roughness, coating, thickness
unless otherwise noted defects follow general description below
SANDSTONE: yellow-brown, indistinct bedding,
NO CORE: 0.04m
SANDSTONE: medium to coarse grained, light grey, mottled light yellow-brown, brown, indistinct bedding,
Impregnated with some fine and subangular quartz gravel between 11.90-12.60m
NO CORE: 0.07m
SANDSTONE: medium to coarse grained, light grey, mottled light yellow-brown, indistinct bedding,
Borehole BH8 Terminated at 15.06m
JT 0deg, IR RO Fe
JT 70deg, PL RO Fe 150mm
JT 3deg, IR RO clay infill
JT 3deg, PL RO
JT 70deg, PL RO
fractured zone, 50mm
JT 0deg, IR RO
EW SM 20mm thick
HW SM 20mm thick
General Defect Description:
1.0m-15.06m Pl 5-20deg, PL RO clay veneer
METHOD
WATER
POINT LOAD TEST
WEATHERING
STRENGTH
DEFECTS
GRAPHIC LOG/CORE LOSS
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COFCORE VERSION C2.1
SYD10
29 / 6/98 14 : 5 33
187-229