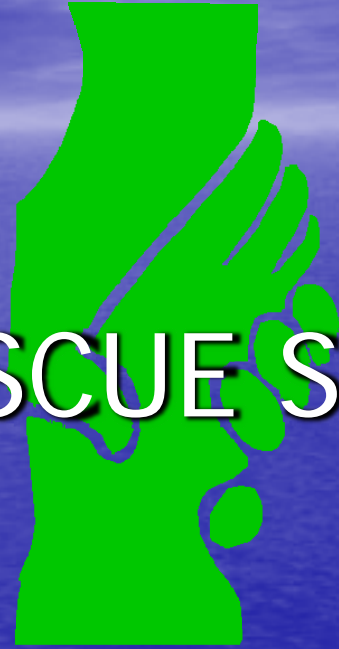




Mines Rescue



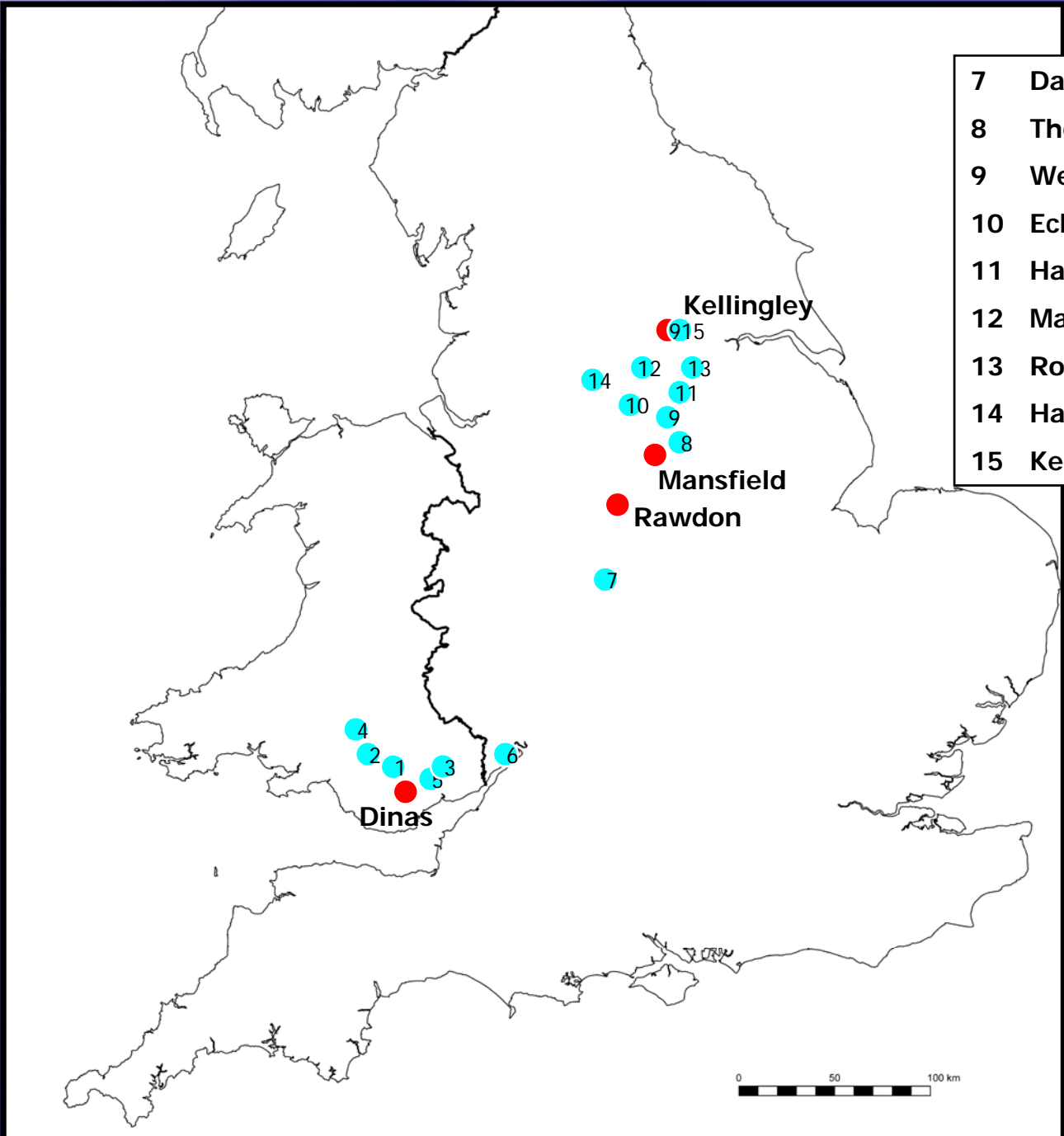
MINES RESCUE SERVICE LTD

Mines Rescue



- 1 Tower
- 2 Aberpergwm
- 3 Blaentillery
- 4 Nant Hir
- 5 Black Barn
- 6 Monument

- 7 Daw Mill
- 8 Thoresby
- 9 Welbeck
- 10 Eckington
- 11 Harworth
- 12 Maltby
- 13 Rossington
- 14 Hay Royds
- 15 Kellingley





CALL-OUT – MANSFIELD MINES RESCUE STATION

0955 HOURS

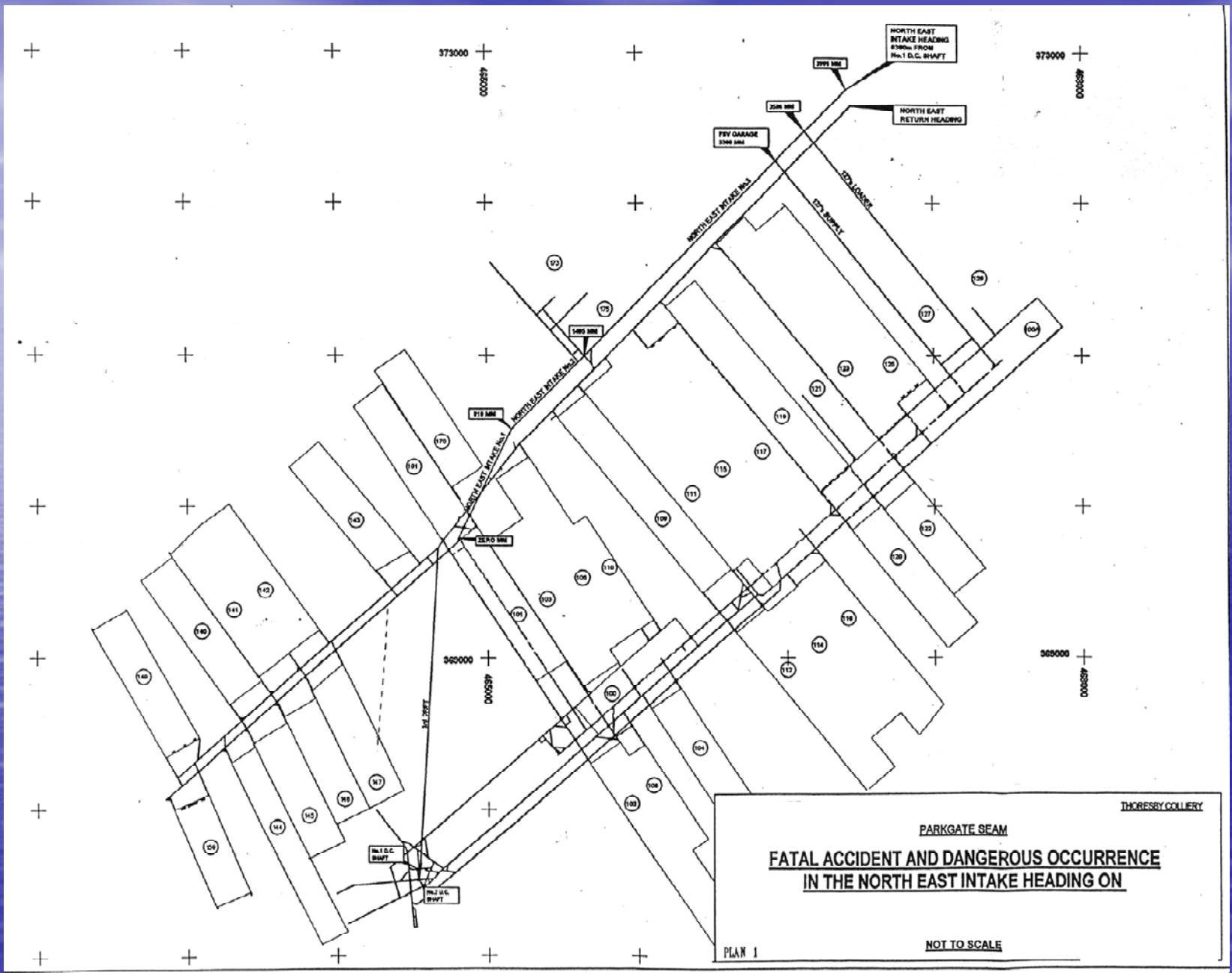
“Inrush of Gas and Oil from
129s Development Heading.
Three men missing.”

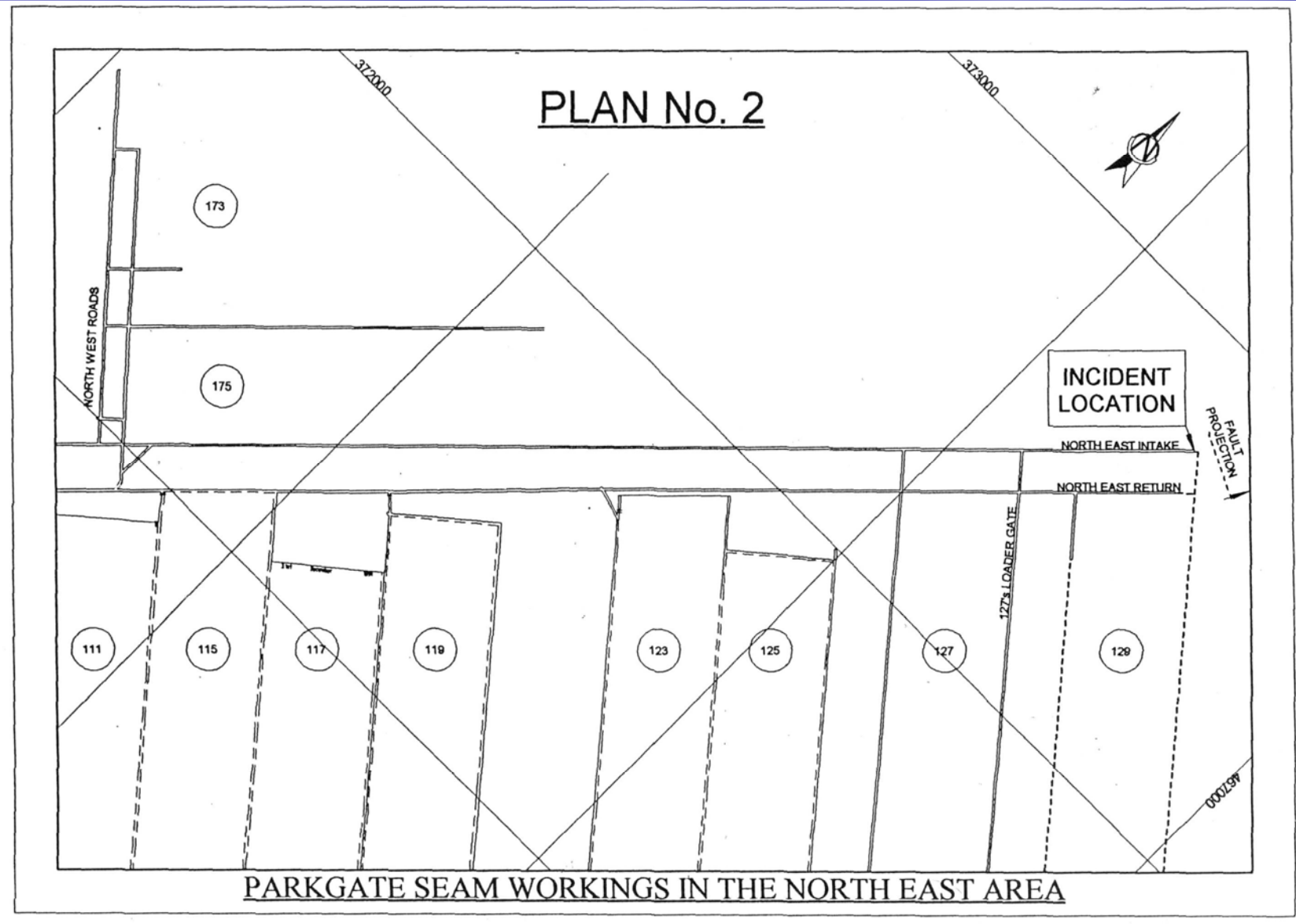


Timetable of Events

Mines Rescue

- 0945 hrs Outburst in heading 6.4km from shaft
- 0955 hrs Call-out Mines Rescue
- 1008 hrs Rescue Team at the mine
- 1030 hrs No 1 Team down the Shaft
- 1100 hrs 21 Rescue Workers
 - 3 Rescue Officers
 - 2 Teams in the mine
- 1139 hrs No 1 Team arrives at FAB
 - 2 men still missing
- 1143 hrs No 1 Team into heading wearing BA
- 1209 hrs No 1 Team and 2 missing men out of heading
 - One fatality
 - Two casualties requiring further treatment, including one Rescue Brigadesman







Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





Subsequent Investigations concluded:

- 1 "Heading had intersected splinter faulting off the main fault. Oil and water had percolated along fault planes from a known oilfield area some considerable distance lower down, and erupted under pressure into the heading."
- 2 Water/oil flow was:
 - 350 gals/min
 - 150 gals/min – 10 hrs
 - 20 gals/min – 24 hrs



Mines Rescue

ANALYSIS OF THE WATER/OIL MIX

- 1 "crude oil containing a mixture of hydrocarbons predominantly a paraffinic hydrocarbon"
- 2 Gases present included:-
 - Methane
 - Hexane
 - nhexane
 - Benzene



Initial Assessment of the Rescue Service

- 1 21 Rescue men arrived within 60 minutes
106 attended in total.**
- 2 A Permanent Corps Rescue man overcome with heat
and exhaustion. Others afterwards stated they were
also close to collapse.**
- 3 No problems with the BA – 32 worn.**
- 4 Revivers & Escape apparatus used with some difficulty
due to casualties' faces and clothing covered with oil.**
- 5 Oil contaminated everything worn and carried.**
- 6 There was room for improvement!**



Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





Mines Rescue





RECOMMENDATIONS

Mines Rescue

- 1** Outburst showed the deficiency of Filter Self Rescuers – SCSRs to be carried.
- 2** Priority to be given by mine to Rescue Teams for:
 - Transport
 - Assistance with equipment
 - Provision of information
 - Provision of drinks
- 3** Clothing to be worn by Teams to be re-assessed:
 - Overalls
 - Shorts/vests
 - Shirts/trousers
 - materials



Mines Rescue





Mines Rescue

RECOMMENDATIONS cont'd

- 4 Equipment to be replaced if too heavy:**
 - Stretchers
 - Revivers
 - Can SEFA be replaced?
- 5 Up-to-date environmental information to be:-**
 - Measured and displayed on plans
 - Make plans available to Rescue Service
- 6 Re-assess Gas Monitors available to Rescue Teams:**
 - Unable to measure methane due to presence of other gases
 - Hexane & nHexane
 - Raise awareness



Mines Rescue

RECOMMENDATIONS cont'd

- 7 Raise the profile of the effects of heat and humidity:**
 - **Diet**
 - **Alcohol**
 - **Fluids**
 - **Clothing**
- 8 Obtain communication equipment for use by Rescue Teams**
- 9 Emphasise the role of the Rescue Officer**