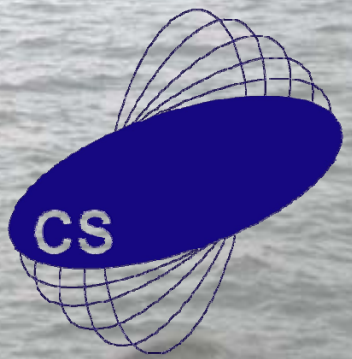
2nd International Mines Rescue Conference

5th - 11th November 2005
Manly Pacific Hotel
Sydney
Australia




Looking Back
What Took Place &
What Was Learnt


Delegates began to fly in from everywhere to the Manly Resort in Sydney.
80 from overseas
70 from Australia
32 partners
Day 1

Once registration was completed there were a few days to get over the jet lag


Day 2

Sun protection was important !

Started to Explore Sydney Harbour

IMRB
Committee Meeting

Day 3

New Members

- New Zealand Mines Rescue
- Queensland Mines Rescue – Australia

Current Member Countries

Poland
Australia
USA
Czech Republic
Ukraine
Germany
Canada
South Africa
United Kingdom
India
Romania
Slovakia
China
New Zealand

A total of 14 countries

Future Conference Hosts

2007	USA
2009	Czech Republic
2011	China
2013	Canada

Web Site

Approved to develop an IMRB web site.

Concept is to have general information on what is coming up for the IMRB and information on current mines rescue activities.

Canada has offered to progress the project.

There was just enough time left in the day to do the bridge climb before dinner

Mine (U/G & O/C) and Rescue Station Visits

Day 4


Newcastle


Wollongong


Hunter Valley


Lithgow
2007/04/05 11:08

Introduced to CABA Self Escape and In-seam Response Systems

Given the opportunity to try the CABA Self Escape system in the U/G simulator

2nd IMRB Conference Officially Opened

Days 5, 6 & 7

A total of eight Sessions was conducted over the three days :-

1. Australasia
2. Africa
3. Asia
4. North America
5. Western Europe
6. Eastern Europe
7. Heat & Humidity
8. General Research & Development

In each Session delegates gave a Summary of their Mines Rescue Systems, Structures and Equipment

UK Mines Rescue Stations


KGHM POLSKA MIEDŹ S.A.
JEDNOSTKA RATOWNICTWA GÓRNICZO-HUTNICZEGO
KGHM
POLSKA MIEDŹ SA
Oddział
Jednostka Ratownictwa
Górniczo Hutniczego
w Lubinie
Mine and Smelter Rescue Company

Longyearbyen - Norway

1900 citizens and

5 PUBS

3 kilometres to airport - one flight to mainland Norway a day

Ontario Mine Rescue

STATE MINE RESCUE SERVICE
IN COAL MINING INDUSTRY OF UKRAINE

The elements of mine-rescuers training

Czech Republic

MEASURING OF THE CONCENTRATION OF GASES FROM A DAM PIPE – LINE WITH SCBA BG4

HLAVNÍ BÁŇSKÁ ZÁCHRANNÁ STANICE OSTRAVA

Some Statistics

China	= 14,328 rescue brigadesmen
Ukraine	= 4,700 permanent rescue men
Czech	= 1,331 rescue men + 210 other
Sth Africa	= 773 brigadesmen
UK	= 97 full time + 210 part time
Australia	= 40 full time + 600 part time

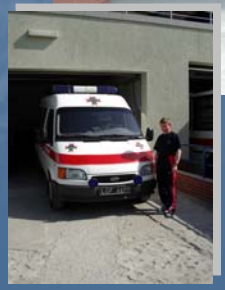
Specialised Equipment & Methods

CMTS Mobile Laboratory

JEDNOSTKA RATOWNICTWA GÓRNICZO-HUTNICZEGO

KGHM

POLSKA MIEDŹ SA



MINES RESCUERS – DIVERS

DIVING ACTION IN THE OLD FLOODED SHAFT CAN BE COMBINED WITH THE CLIMBING ACTION

HLAVNÍ BÁŇSKÁ ZÁCHRANNÁ STANICE OSTRAVA

Summary of Structures

China, Ukraine, Czech Republic, Poland, Romania, Slovakia are based on a military structure with full time personnel.

South Africa, Germany, Canada and India are mine (company) based with a central full time training group.

UK, New Zealand and Australia have a central private company of full time personnel servicing a group of mines from multiple companies.

Each Session included Case Studies of actual events.

Spontaneous Combustion & Inertisation

Various Inertisation Methods

Vaporiser Units

Diesel Boiler

Membrane Technology


GAG Used 27-29 Dec 04
27/12/2003


30 July 2005
Fire in Svea Nord

Rescue Cage

Used on Ore Pass

Rescue Cage

China

April 16

6:30 am - MET the people trapped for 5 days, ie 109 hours.

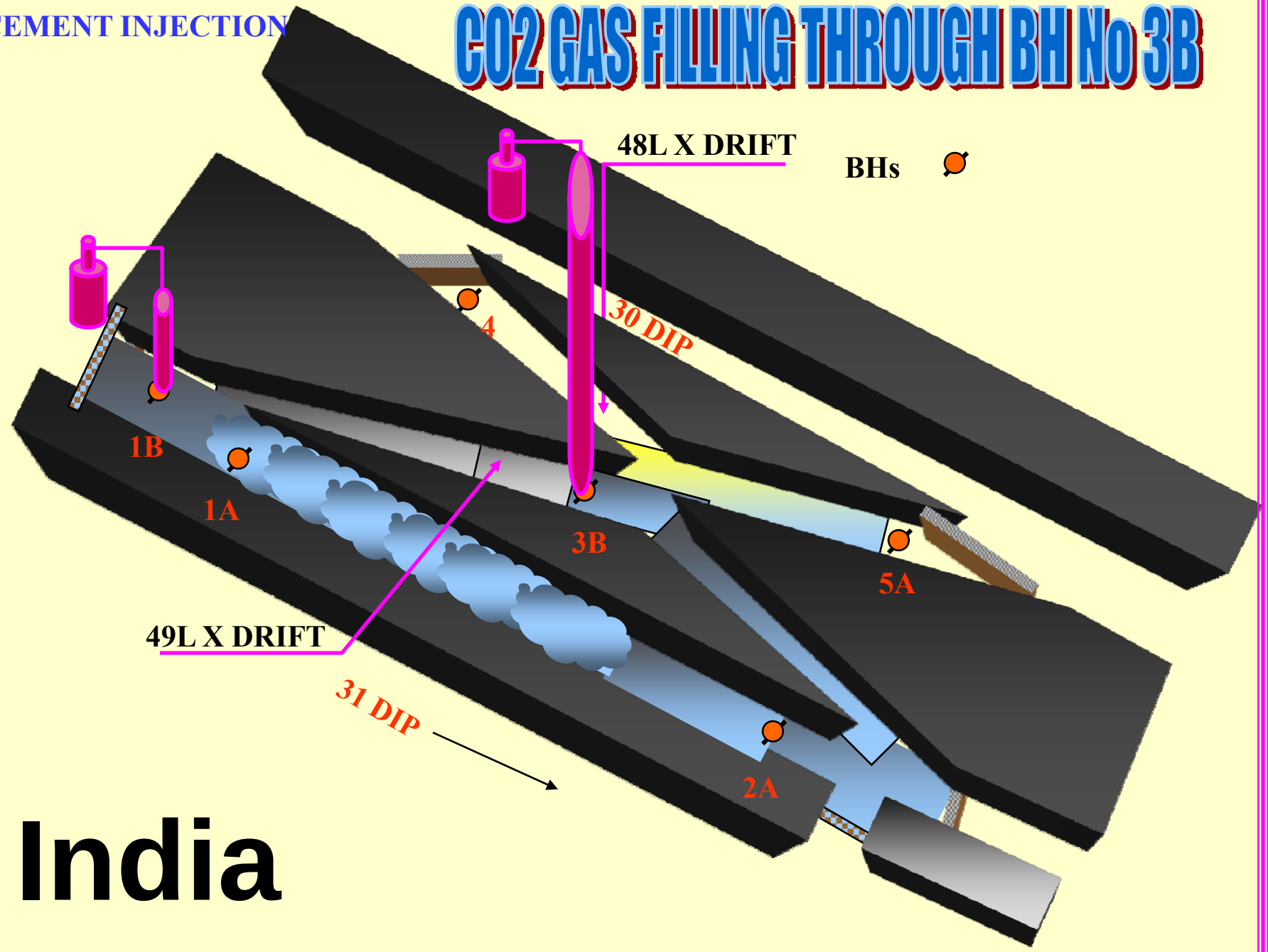
7:20 am -12 people were all RESCUED

9:30 am - all the 12 miners were lifted to the surface

CHEER FOR THE VICTORY

CEMENT INJECTION

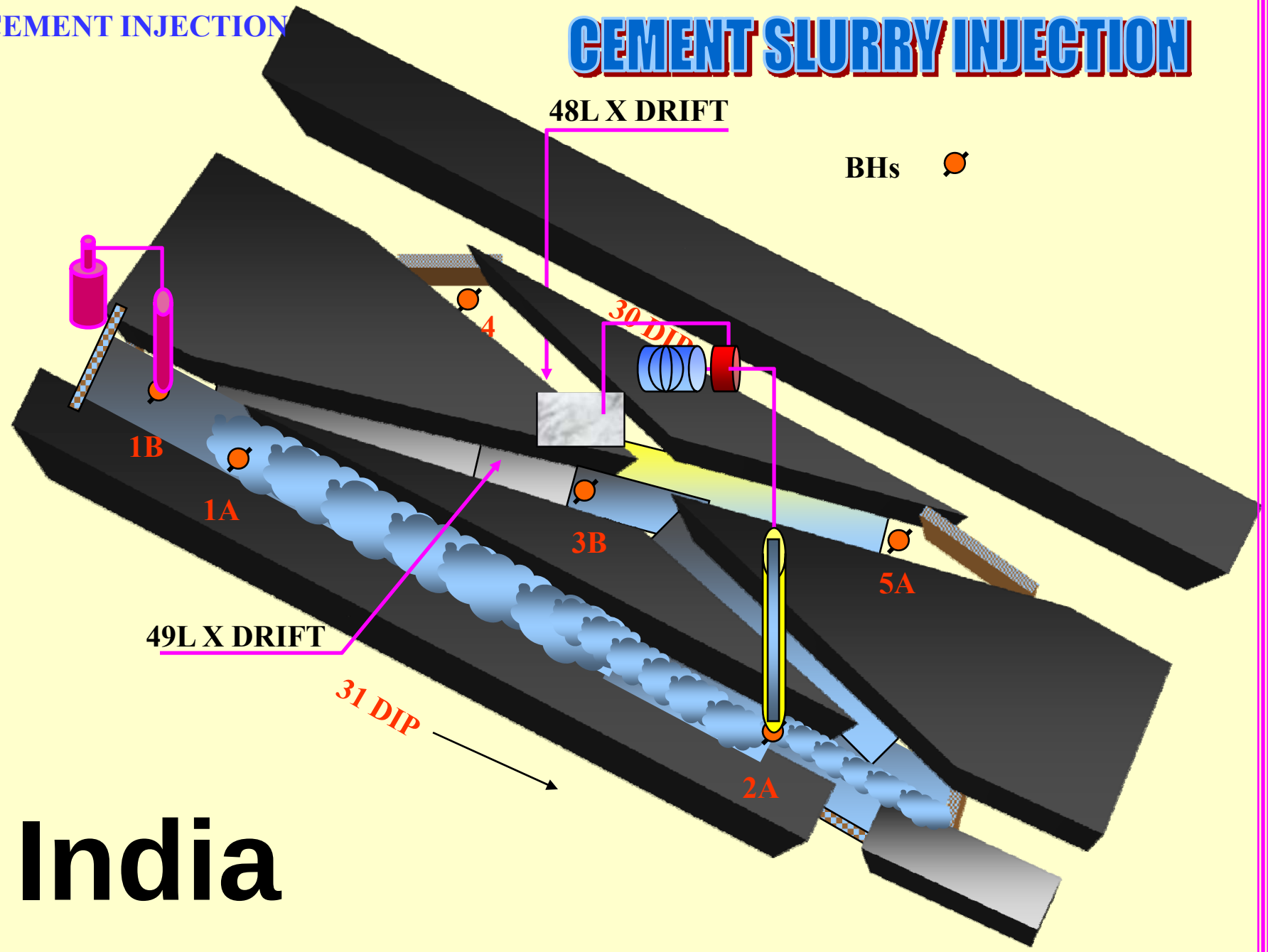
CO2 GAS FILLING THROUGH BH No 3B



India

CEMENT INJECTION

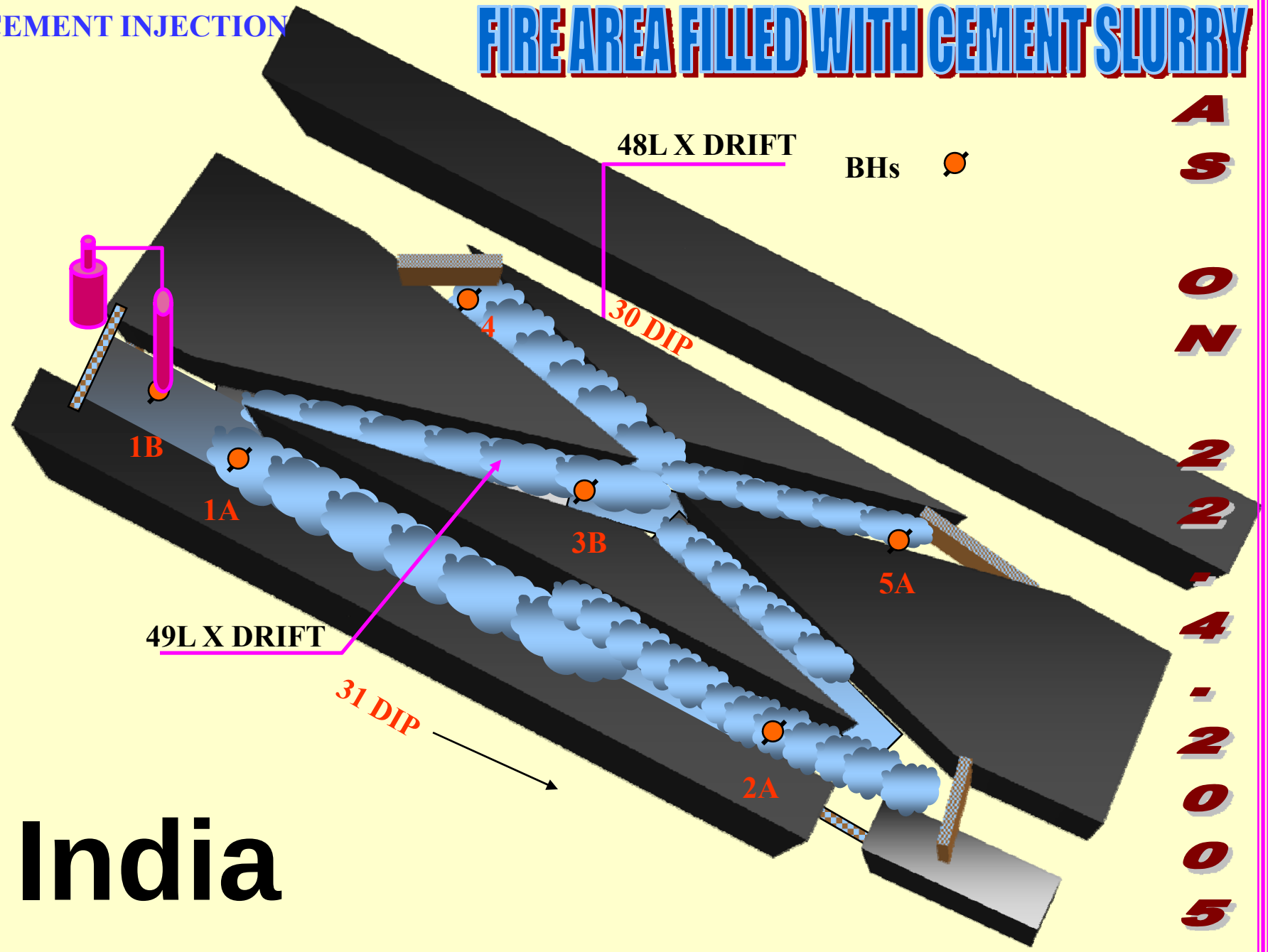
CEMENT SLURRY INJECTION



India

CEMENT INJECTION

FIRE AREA FILLED WITH CEMENT SLURRY



AS ON 22-4-2005

India

CALL-OUT – MANSFIELD - UK

Inrush of Gas & Oil

Three (3) men missing.

Fires

Rock Burst & Roof Fall Events

Storm Decline Disaster

Common Mines Rescue Issues

Heat & Humidity

Communications

Aging Workforces

Decision Making in Emergencies

Common Mines Rescue Issues

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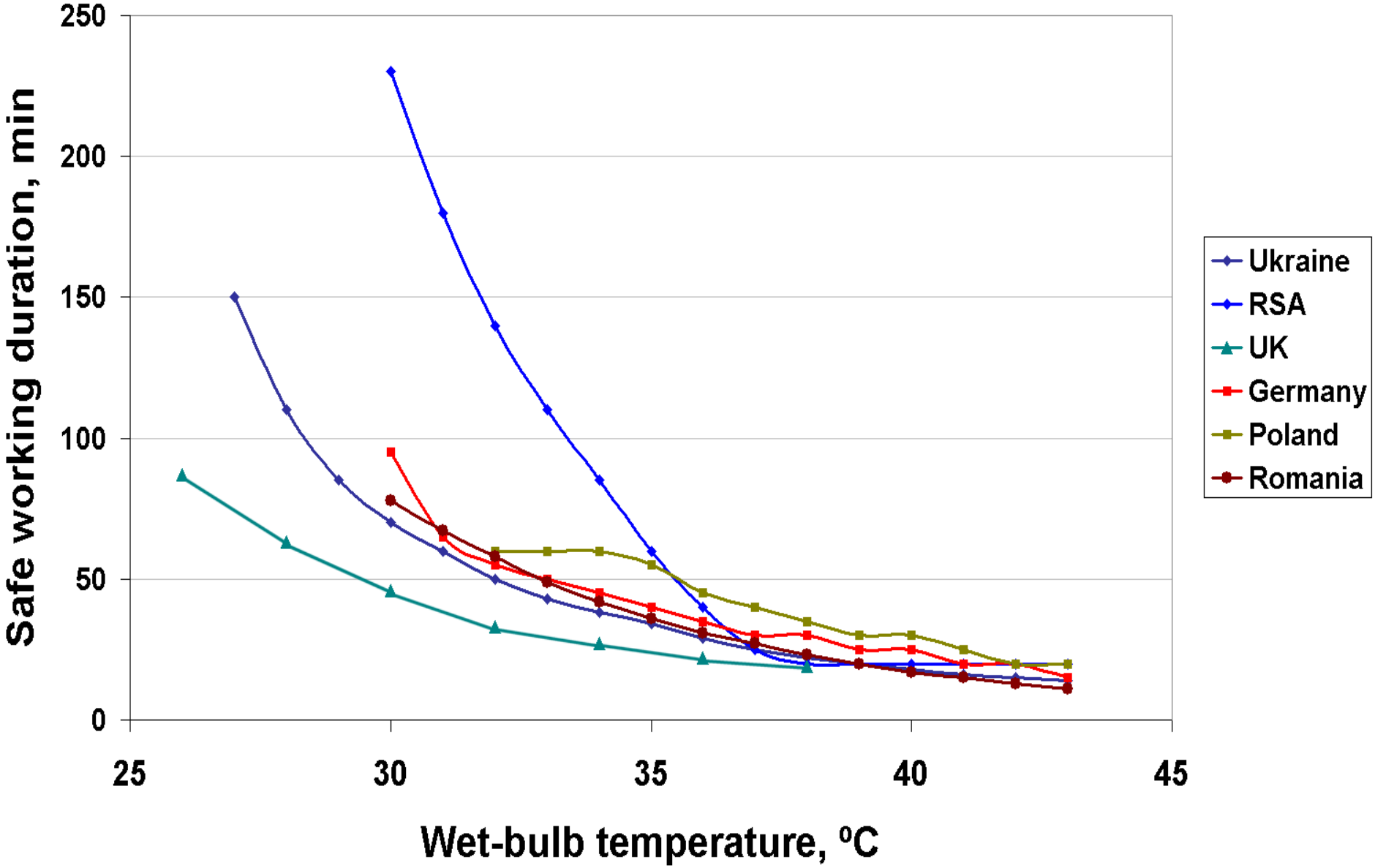
Comparison of National Rescue Heat Codes



Measuring Heat Strain

CorTemp swallowable heat sensor pills

Recorder, Alarm and Heart Rate Chest Strap

Results

Apparatus Type (with & without cooling)

No Reduction in Core Temperature

Results

Hydration Supplied Masks

Significant Reductions in Core Temperature

International Mines Rescue Body - Heat & Humidity Questions

Range: Lowest Highest

	Aust	NZ	USA	Canada	SA	UK	Germany	Romania	Poland	India	Norway	China	Ukraine	Czech
Q1. What year did your Rescue Service commence ?														
Answers:	1925	1930	1911	1929	1924	1902	1907	1920	1924	1923	1916	**1949**	1902	**1897**
Q2. What Is the maximum time that a Mines Rescue team can go active with the BG4 or BioMarine unit (in hours)														
Answers:	3	2	3.5	2	4	2	2	2	2	**1.5**	3			4
Q3. At what temperature do you start to reduce Mines Rescue teams active time - hot and humid atmosphere (^{o} C)?														
Answers:	26	26	27			**24**	**24**	25	**28**	**28**	na			26
Q4. Do you use external cooling devices like "Ice Jackets" etc ?														
Answers:	n	n	n	n	**y**	n	n	n	**y**	n	n			**y**
Q5. What is the maximum temperature that Mines Rescue teams can operate in (^{o} C - assume 100% humidity) ?														
Answers:	45	?	44		45	44	**55**	45	?	**41**	50			na

Norway had a different challenge - Keeping Warm !

and keeping safe from the Polar bears!

Other Research & Development Topics

Robot approaching the decline with testing equipment.

Applying Virtual Reality to Ontario Mine Rescue Operations

Alex Gryska

Ontario Mine Rescue Manager

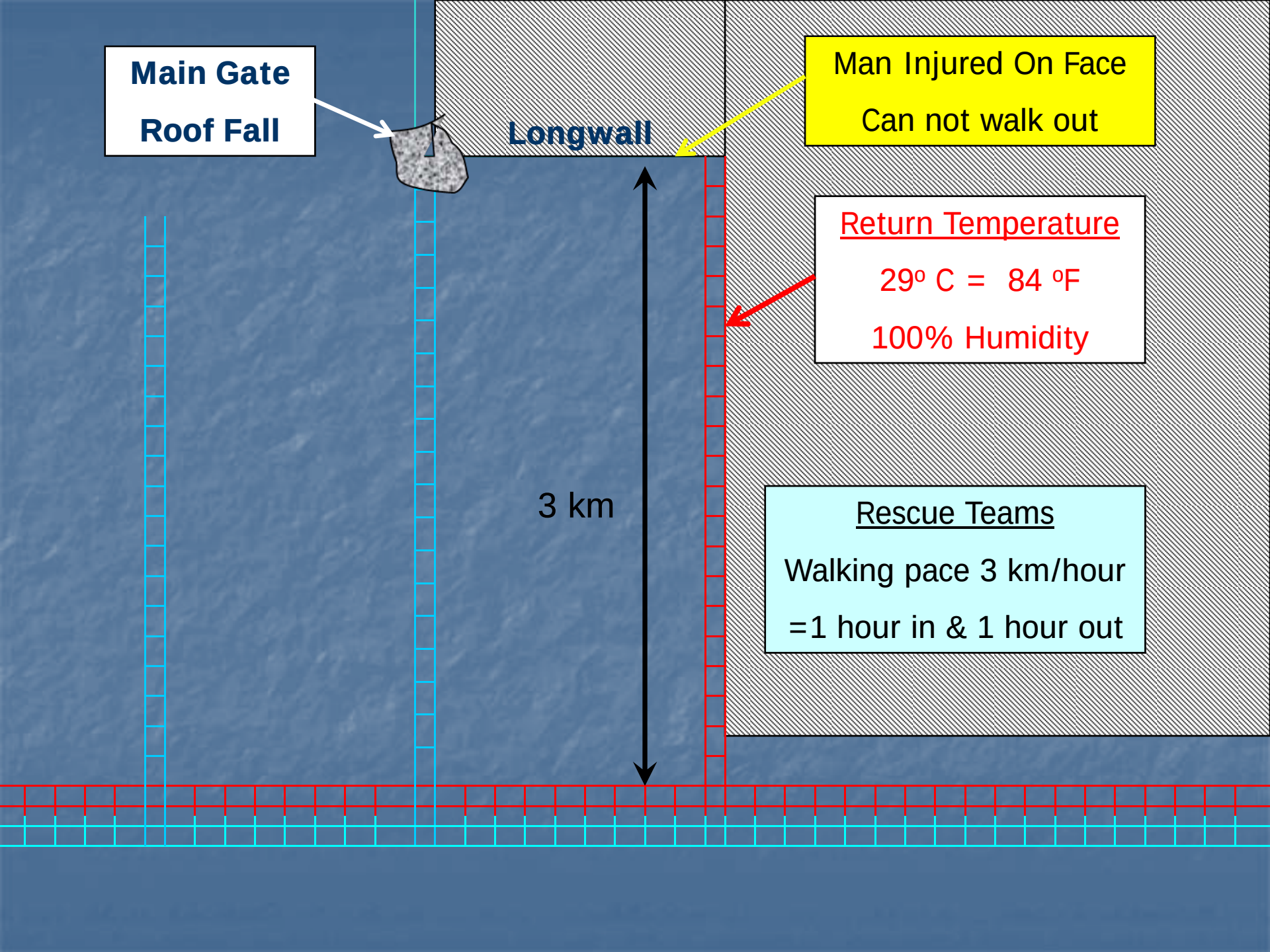
Mines and Aggregates Safety and Health Association

Mines and Aggregates Safety and Health Association

LaurentianUniversity UniversitéLaurentienne

Mirarco MINING INNOVATION

Open Session


Main Gate
Roof Fall
Longwall
Man Injured On Face
Can not walk out
Return Temperature
29° C = 84 °F
100% Humidity
3 km
Rescue Teams
Walking pace 3 km/hour
=1 hour in & 1 hour out

Transport can get into the return but there is methane (CH4) present.

At what methane (CH^4) level do you not enter ?

1%

2%

3%

4%

5%

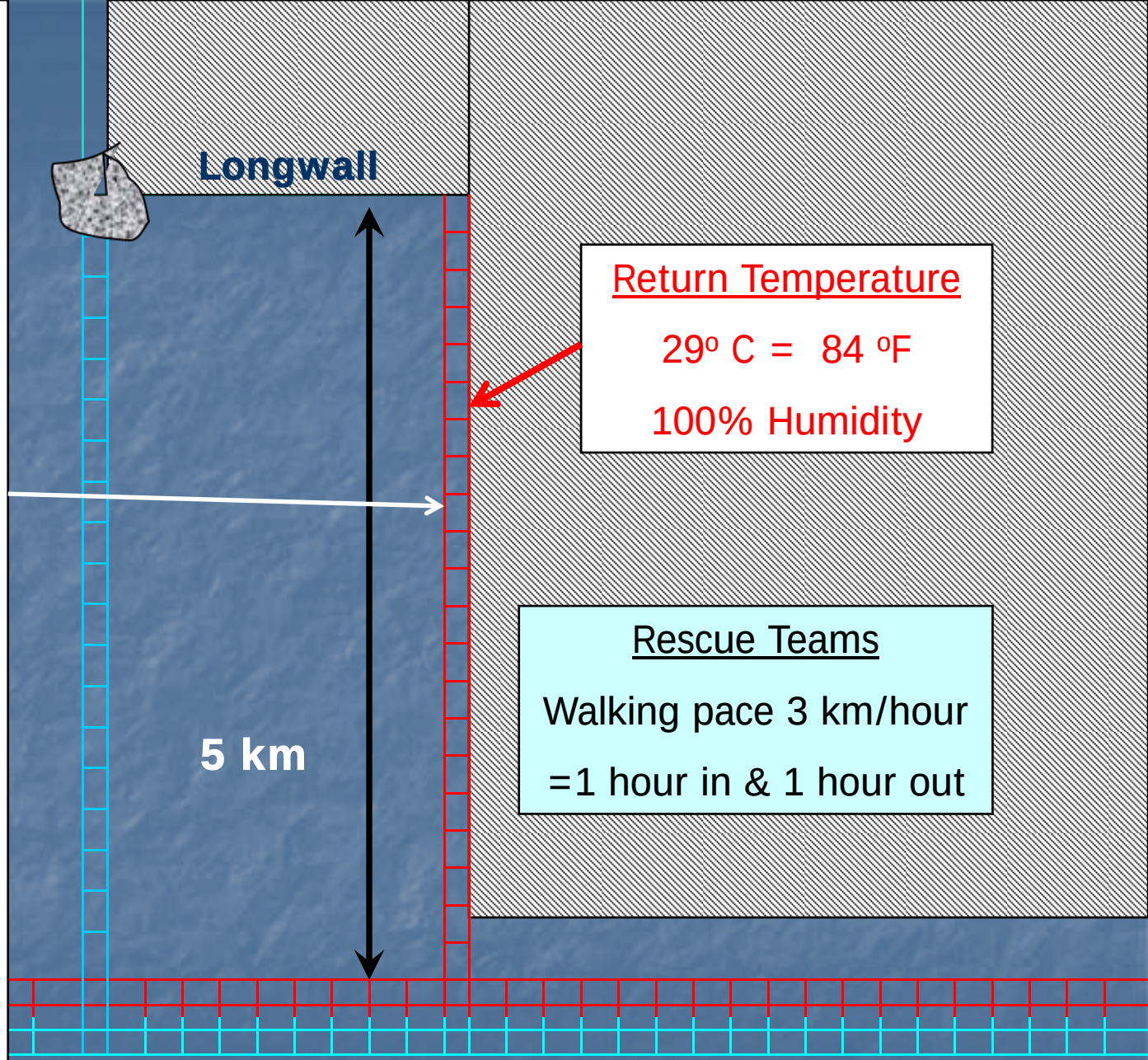
6%

7%

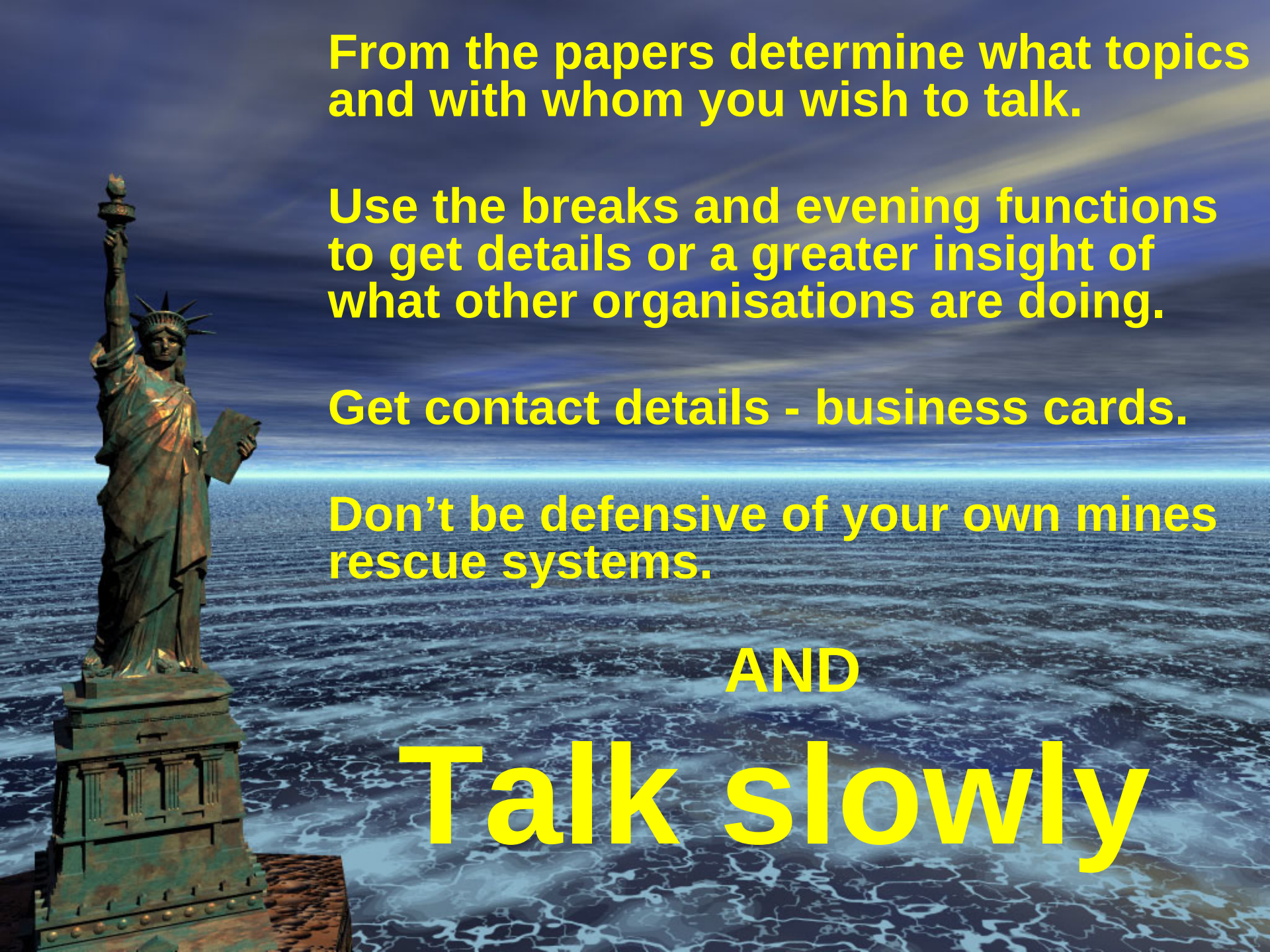
8%

9%

10%




Looking Forward
How To Get the Best
From These Conferences


From the papers determine what topics and with whom you wish to talk.
Use the breaks and evening functions to get details or a greater insight of what other organisations are doing.
Get contact details - business cards.
Don’t be defensive of your own mines rescue systems.
AND
Talk slowly

Sydney is now a memory so lets continue to learn at Nashville