

Porgera Mine Explosion

2nd August 1994

Background

On the morning of the 2nd August 1994 an explosion occurred at the Dyno Westfarmers explosives plant at the Porgera Gold Mine in Papua New Guinea.

Background

It was unknown at that time if this explosion killed the eleven employees working in the plant. This could not be established as immediately after the explosion it was deemed too dangerous to enter the plant area.

Porgera Aerial



Background

A second explosion occurred shortly after the first through which no one in the plant could have survived.

It was estimated that 110 tonnes of explosives detonated during the second blast

Newspaper Article



PAPUA NEW GUINEA

Post-Courier

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Ten feared dead in mine blasts

By ROBERT PALME, ABBY YADI, DANIEL KUMBON



TEN WORKERS are feared dead after massive blasts ripped apart the explosive storage facility at the giant Porgera gold mine yesterday.

Pyres were still raging late last night and rescue attempts had to be held up as another explosives container with 14 tonnes of dangerous ammonium-nitrate nearby "swagged" from the heat.

Feared killed in the disaster are five Papua New Guineans and the employees of the Australian subcontractor, Dyno Wedfarmers Ltd, the firm in charge of mixing the explosives on site for mine use.

Resident mine manager Peter Harris said electricity had been cut and standby generators were being used. Phone lines were cut.

The huge mine was shut down at midday as a "precautionary measure" until the full extent of damage could be assessed, a spokesman from Porgera Joint-Venture said last night.

The shutdown, sources said, could cost the mine owners revenues of about K1 million a day. But the mine could be back in operation speedily, if the cordoned-off explosives area is cleared of danger today or tomorrow.

Two distinct blasts were heard, about half an hour apart. One was heard in Mt. Hagen, about 130 kilometres away. The cause of the explosions was not yet known, officials said.

Doctors from the Australian High

Commission and an Australian army medical team joined local medical staff at the scene. But relatively few people were injured.

However nearby buildings were rocked, and some damaged by the blasts. An Air Nightingale office on the mine site had all of its windows blown out, bystanders said, and computers crashed to the floor.

National Emergency and Disaster Services chief Leah Anderson said: "A heap of stuff went up. It was a massive explosion by anybody's standards."

"There is still a possibility of further explosions at this stage and it is safe to move in, nobody can say exactly how many are dead."

Management of the mine said the main plant and infrastructure were located safely away from the explosion.

Special flights were arranged to evacuate workers out of Mt Hagen, where they had been flown from Porgera, while another lot would be evacuated to the Sultan camp site, several kilometres from the mine site.

He said the exploder facility had been set aside from other parts of the mine "in case this sort of thing would happen".

It was and had always been considered to be a safe facility and the location had been approved by government departments, the manager said. The methods employed by the Dyno Wedfarmers firm in manufacturing explosives had also been approved.

It looked like a bomb had hit...

By DANIEL KUMBON

Porgera valley was eerily quiet. People looked sad and defeated. The grass around had been burned off, as if sprayed with a dose of Gramscione.

That's the impression I got as I approached the mine and the area where the explosives were stored.

It looked like a bomb had hit it.

I have seen Porgera develop into the giant world class gold mine that it is and I've always had pride in it as an Engan, and visited the mine every time I had the chance. I was there just last Saturday, when a whole group of journalists on a tour to promote the province. What I wanted them to see was that even though Enga is wrongly portrayed as a "righting province", it is home to such a high class mine, and that it has not had any problems in the five or so years it has been operating, let alone affected in any way by tribal fighting. I drove the journalists to many projects which have benefited from the Porgera gold mine, like the Sirinaki-Mullaka road built under PIV's Tax Credit Scheme, and then what met my eyes yesterday was horrifying.

There were two huge trees burning in place of the four usual columns of white smoke that pour out from the mine's shafts. The valley was covered with a blanket of grey smoke.

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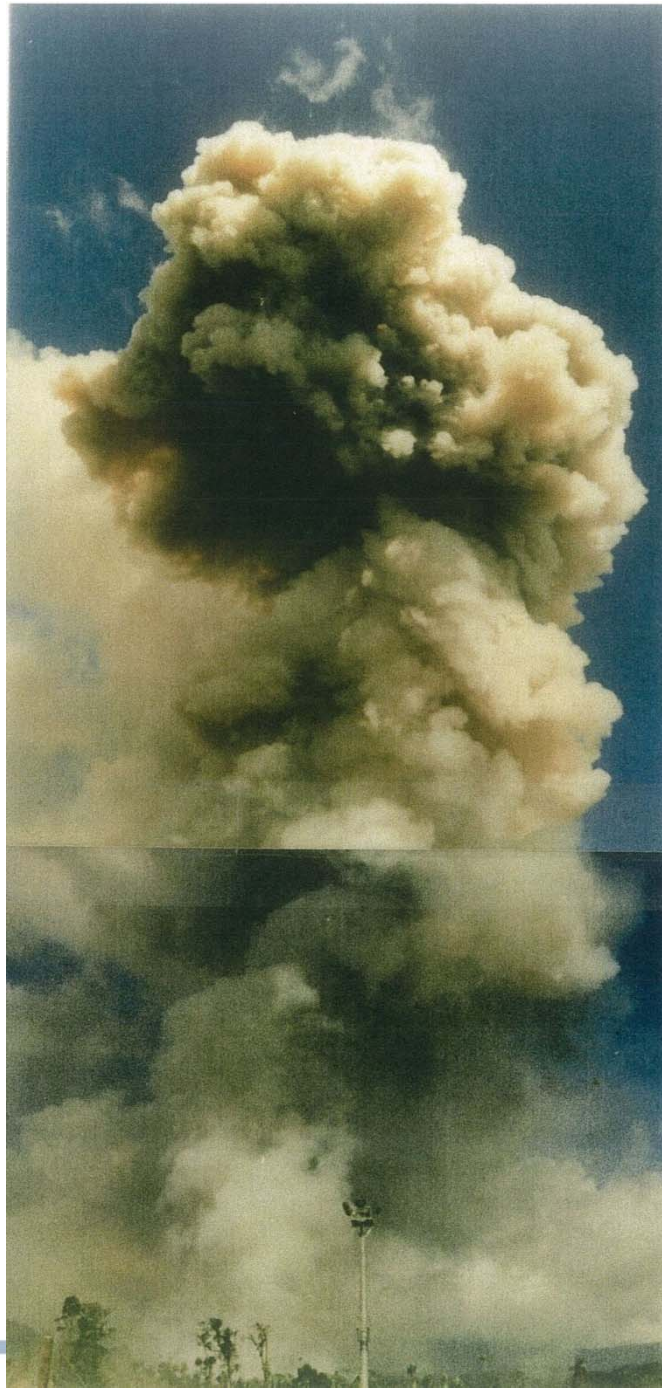
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ABOVE, RIGHT: Porgera gold mine hit by explosions, with the blast mushrooming above the clouds.

Ground View



Aerial



Drafting Area



Drafting Area



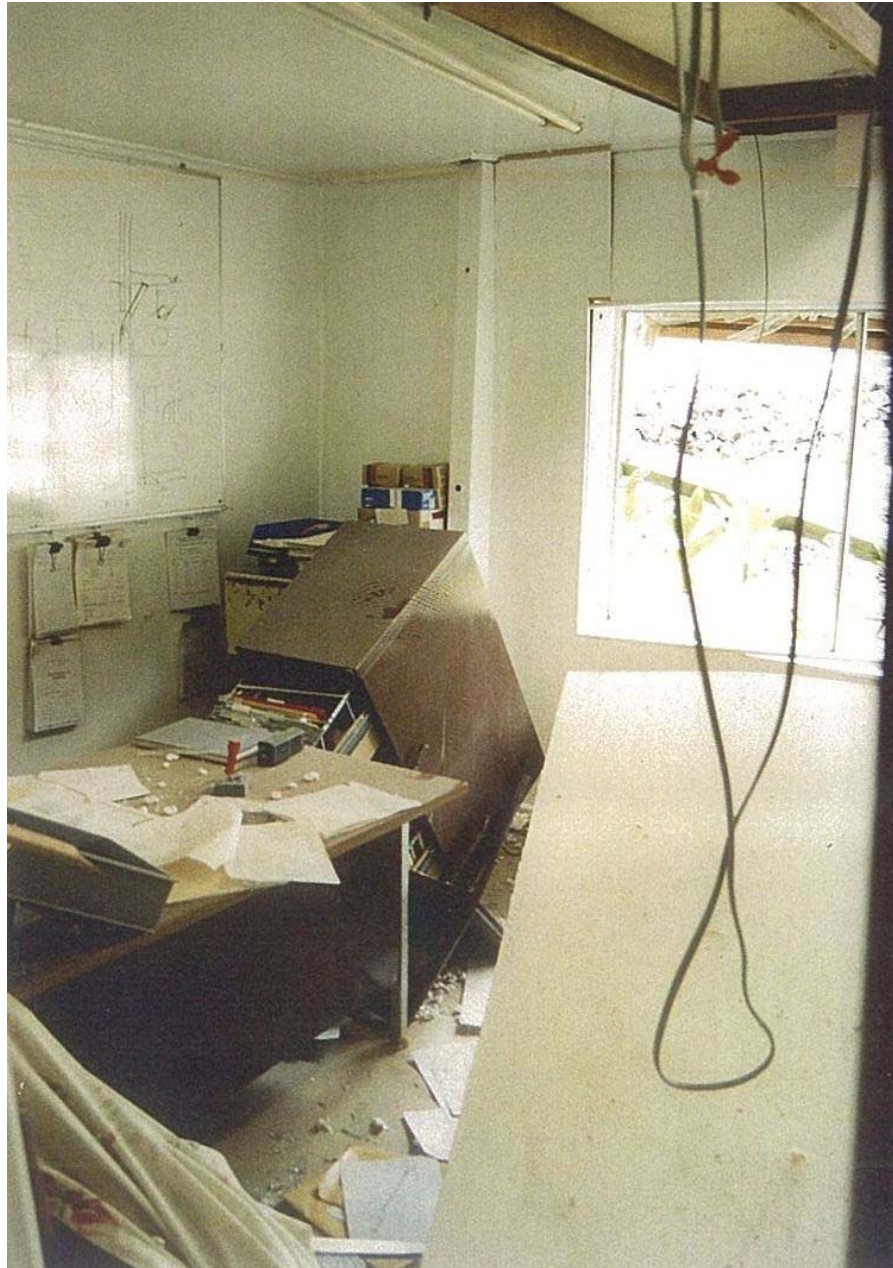
Internal walls moved



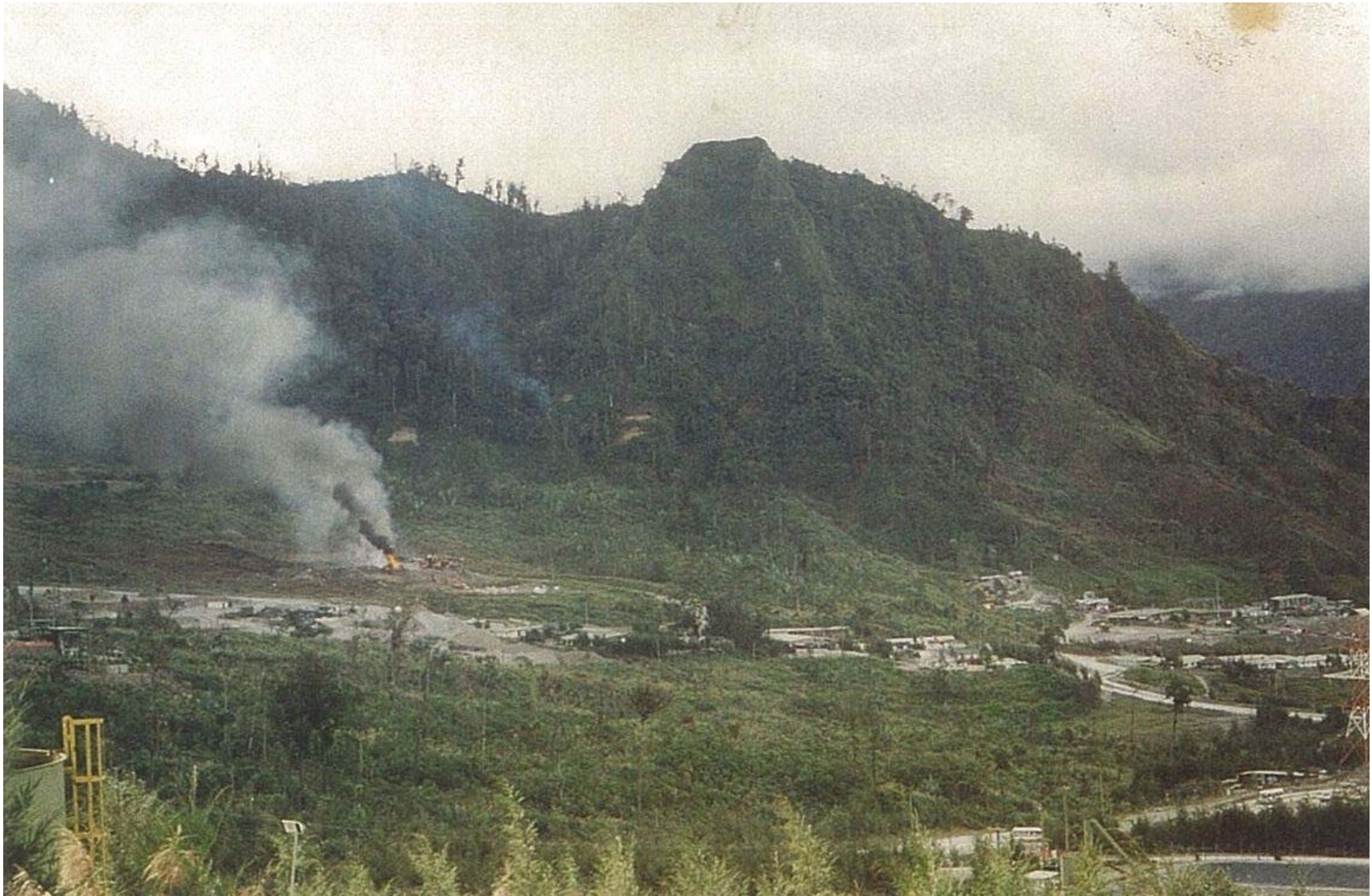
Office Damage



Office Damage



Still Burning 4 days later



Workshop cladding blown out



Change house – Direct line 700 metre



Non Blast side of office



Blast side of office – protected by earth embankment



Body Recovery



Newspaper article

Miners still show signs of shock from the blast

PORGERA mine workers, who last night were evacuated into Port Moresby, said they were all "shell-shocked" when the mine's explosive storage facility blew up yesterday morning.

Three plane-loads of both expatriate and national workers were flown into Port Moresby from Mt. Hagen. The Australian personnel continued to Cairns last night.

A group of national employees interviewed on arrival at Jacksons Airport soon after 7 o'clock last night said the explosion came as a shock.

Most of them spoken to could not say much about the blast and casualties.

"I could not believe what had happened. There was a loud bang and all of a sudden, smoke and fire started rising," one worker, still dressed in uniform said.

Among the evacuees were two female employees, Mary Haca and

By ABBY YADI

Martha Orim, who said they were still "shaken" by the incident.

While not being near the site of the explosion to see what had actually happened, they said the whole place shook violently under the impact of the blast.

Mary and Martha are among a number of women employed at the mine site in office jobs as well as other site work.

The employees last night spent the night at the Gateway Hotel and the Airways Motel, and would today make flight arrangements to return to their homes.

They have all been issued open airline tickets and informed by the mine management to return home until further notice.

The blast took place at an explosives magazine located at the foot of the open pit mine.

Disaster: like the end of the world to some

From Page 1

Some said they thought it was the end of the world and wondered if it would be like that when the world ends.

Others who saw the explosions said the clouds looked like pictures of Hiroshima.

All the while it seemed the people were mentally affected.

Porgera Valley was eerily quite - and it would be like this for some time.

The first major disaster at a major mining project in PNG had struck at 9.45am in which expatriate and nationals died side by side.

It will only be seen by checking the roster of who was working on this sadly historic day that it will be known who was killed.

They were mostly, if not all, employees of Dyno Wesfarmers, the sub-contractor company respon-

sible to look after the explosives used at the giant mine.

Nobody knows exactly what happened but most people later felt the explosives went off due to an electrical fault or perhaps some carelessness.

Two explosions occurred 20 minutes apart at the explosives facilities had claimed maybe 11 lives, injured several others, caused millions of kina worth of damage and forced the mine to come to a sudden halt.

The only indication of anybody working was security men at the main gates. But they did not concentrate like they always do - visibly they were afraid.

And who could blame them? Everybody had reason to be afraid when people can just blow to dust without the slightest warning.

Why did it happen?

It was difficult to ascertain the cause of the first explosion however forensic experts recovered components of the emulsion mixer and believe it was within the mono-pump that the explosion initiated.

The most likely cause was penetration of explosive product into the mono-pump bearing during operation.

Enough compression and friction in the bearing detonated the product which then propagated through the full batch.

What else went wrong

The site was totally unprepared for this event:

- The plant had been located central to the mine lease for security reasons
- No bunding was in place around the plant to deflect an explosion.
- No method of remote application of water or fire suppression was in place to quench the fire after the first explosion.
- The people evacuated from site were those in administration who were least affected by the blast.
- Rescue teams were the workmates of those who were killed. Their trauma was exacerbated by providing barbeques each day after they had spent their time recovering human remains.
- Senior management were conspicuously absent for the first 3 days after the event as they reported upwards and made plans to resume operations and secure another explosives source.
- Counselling was finally offered approximately 1 week after the event.

Aftermath

The tragedy made international news.

The story ran in Australia for the next 4 days.

On April 7th , 5 days after the Porgera explosion, eleven Australians were killed by an underground explosion at the Moura No. 2 mine.

The media attention focused on Moura and the Porgera explosion was barely mentioned again.



THANK YOU