



### Hydraulic Oil Water Contamination : PWG Kings Engineering, Maitland NSW

Kings were re commissioning a continuous miner to be sent overseas, upon examination of the hydraulic tank it was found to have water in the oil.

The options were to drain the oil, refill it with new oil and run the machine working all the circuits, draining the oil and repeating the process, it was assessed it would take up to three to four oil drains to achieve a result that would be satisfactory.

The hydraulic circuit contained 600 litres and this option would be costly as it could take up to 2400 litre of oil. It was decided to try to filter the oil using a Filter Technology FM 502, buggy working the circuits until a satisfactory decrease in the level of the water in the circuit was achieved, the oil would then be changed.

This process took a week and the element usage was high due to having to change the elements four times as the circuit was found to have more water than reported below. The bottles pictured below show the improvement visually in the oil and the Oil Analysis indicates a reduction in the water from 1112ppm to 122 ppm which is a 89% reduction in the circuit.

Cost: Buggy Hire & Elements \$1,044.00 plus the 600 litre of new oil which worked out a far cheaper option than originally planned. which is far cheaper than 2,400 litres in the first option.



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This Report No:

207.797

Date	16-Feb-04	20-Feb-04	27-Feb-04
Report No.	207,283	207,489	207,797
Meter Reading	0hrs	0hrs	0hrs
Oil Hrs	-	-	-
Oil Changed	No	No	No

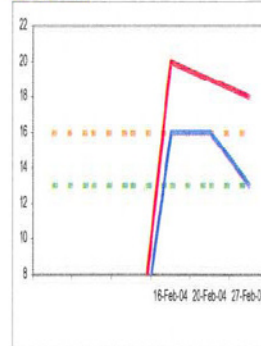
**Client:** Filter Technology Australia Pty Ltd  
**Attention To:** PHIL MARHEINE - 71 Racecourse Road, Rutherford  
**Machine:** KINGS Kings  
**Sample Location:** Continuous Miner - Hydraulics  
**Oil Type:** ISO 68

Particle Analysis

Limit

	16-Feb-04	20-Feb-04	27-Feb-04
> 4 um Count	28372	22214	5973
> 6 um Count	5111	4642	1302
> 10 um Count	963	908	187
> 14 um Count	374	335	51
> 21 um Count	128	104	12
> 25 um Count	77	57	9
> 38 um Count	13	13	1
> 70 um Count		1	

ISO 4406 Trend



Comment

Solid particle contamination has improved.

Cleanliness Analysis

Limit

	16113	19116	18113
SO-4406 Gum   14um	-	-	-
Water Content ppm	100	1112	850
		122	

### Particle Size Analysis

