

Northern Laboratory  
NAP/DIAND  
Box 1500  
Yellowknife, NT.

Nov. 30, 1993.

David Jessiman  
Yellowknife District  
NAP/DIAND  
Box 2550  
Yellowknife, NT.

DEPARTMENT OF  
INDIAN AFFAIRS AND  
NORTHERN DEVELOPMENT  
  
NOV 30 1993  
  
YELLOWKNIFE, N.W.T.  
YELLOWKNIFE DISTRICT

Subject: Royal Oak Mines Legal Samples - Sept. 23, 1993.

Results for the above case are now complete. Samples were re-analyzed for arsenic and copper by the alternative technique of ICP-Mass Spectrometry. The results for arsenic by the Hydride technique represent an average of three replicates.

ARSENIC ug/L		COPPER ug/L		
Sample Id.	As Hydride	As ICP-MS	Cu AAS	Cu ICP-MS
932073	939	953	145	154
932074	954	922	161	196
932075	952	947	152	248
932076	961	899	56	32

Please note that we are not certified by CAEAL in the ICP-MS methodology. However, we feel that the ICP-MS technique provides comparable results. Information on analytical performance against quality control references is available.

If you have questions regarding the data for this report please call me at 920-8192.

Sincerely,



Bill Coedy  
Head. Lab Services

30/11/93

INDIAN & NORTHERN AFFAIRS  
WATER RESOURCES LABORATORY  
Box 1500  
Yellowknife, NT. X1A 2R3  
Tel. (403) 920-8129  
Fax. (403) 873-9300

To: Royal Oak Mine  
c/o DIAND  
Yellowknife District Office  
Box 2550  
==> Yellowknife NT X1A\_2P8  
Dave Jessiman

### SAMPLE INFORMATION

Our Lab # : WL932073  
Your Sample ID: 0043-1A  
Sample Matrix : mine effl.

Account No.: N1L30043

Collection:  
Location: 0043-1  
Date: 09/23/93  
By: D.Jessiman

Report Date: 11/30/93

Approved by: *W. Jessiman*

### - SAMPLE ANALYSIS REPORT -

Lab#	Parameter	Result Units	Detect Limit	Method Code
WL932073	Sp. Conduct	2090.0 uS/cm	0.100	2041
	Non-Filt Res.	9 mg/L	3.000	10406
	Ammonia-N	17.910 mg/L	0.002	7509
	pH	6.86 pH	0.050	10301
	T.Arsenic-Hyd.	939.0 ug/L	0.300	33011
	T.Cadmium-S/E	10.2 ug/L	0.200	48302
	Tot.Cyanide	0.080 mg/L	0.004	06613
	T.Cobalt-S/E	231 ug/L	1.000	27302
	T.Chromium-S/E	11 ug/L	1.000	24303
	T.Copper-S/E	145 ug/L	1.000	29305
	T.Iron_DA	227 ug/L	50.000	26304
	T.Nickel-S/E	612 ug/L	1.000	28302
	T.Lead-S/E	10.7 ug/L	0.700	82302
	T.Zinc-S/E	69.0 ug/L	1.000	30305

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### SAMPLE INFORMATION

Our Lab # : WL932074  
Your Sample ID: 0043-1B  
Sample Matrix : mine effl.

Account No.: N1L30043

Collection:  
Location: 0043-1  
Date: 09/23/93  
By: D.Jessiman

Report Date: 11/30/93

Approved by: W. Jessiman

### - SAMPLE ANALYSIS REPORT -

Lab#	Parameter	Result Units	Detect Limit	Method Code
WL932074	Sp. Conduct	2070.0 uS/cm	0.100	2041
	Non-Filt Res.	7 mg/L	3.000	10406
	Ammonia-N	15.600 mg/L	0.002	7509
	pH	6.85 pH	0.050	10301
	T.Arsenic-Hyd.	954.0 ug/L	0.300	33011
	T.Cadmium-S/E	10.2 ug/L	0.200	48302
	Tot. Cyanide	0.078 mg/L	0.004	06613
	T.Cobalt-S/E	235 ug/L	1.000	27302
	T.Chromium-S/E	11 ug/L	1.000	24303
	T.Copper-S/E	161 ug/L	1.000	29305
	T.Iron DA	232 ug/L	50.000	26304
	T.Nickel-S/E	624 ug/L	1.000	28302
	T.Lead-S/E	2 ug/L	0.700	82302
	T.Zinc-S/E	92.0 ug/L	1.000	30305

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### SAMPLE INFORMATION

Our Lab # : WL932075  
Your Sample ID: 0043-1C  
Sample Matrix : mine effl.

Account No.: NIL30043

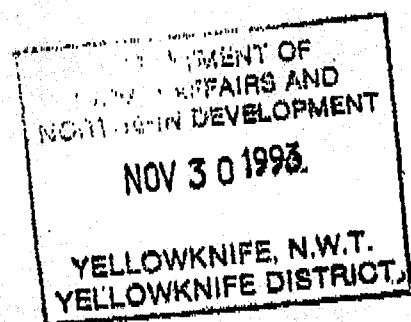
Collection:  
Location: 0043-1  
Date: 09/23/93  
By: D.Jessiman

Report Date: 11/30/93

Approved by: W. Jessiman

### - SAMPLE ANALYSIS REPORT -

Lab#	Parameter	Result Units	Detect Limit	Method Code
WL932075	Sp. Conduct	2070.0 uS/cm	0.100	2041
	Non-Filt Res.	4 mg/L	3.000	10406
	Ammonia-N	17.163 mg/L	0.002	7509
	pH	6.92 pH	0.050	10301
	T.Arsenic-Hyd.	952.0 ug/L	0.300	33011
	T.Cadmium-S/E	LO.2 ug/L	0.200	48302
	Tot.Cyanide	0.079 mg/L	0.004	06613
	T.Cobalt-S/E	227 ug/L	1.000	27302
	T.Chromium-S/E	L1 ug/L	1.000	24303
	T.Copper-S/E	152 ug/L	1.000	29305
	T.Iron_DA	309 ug/L	50.000	26304
	T.Nickel-S/E	585 ug/L	1.000	28302
	T.Lead-S/E	LO.7 ug/L	0.700	82302
	T.Zinc-S/E	32.0 ug/L	1.000	30305



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SAMPLE INFORMATION

Our Lab # : WL932076  
Your Sample ID: 0043-5  
Sample Matrix : effluent

Account No.: N1L30043

Collection:  
Location: 0043-5  
Date: 09/23/93  
By: D.Jessiman

Report Date: 11/30/93

Approved by: Wood

- SAMPLE ANALYSIS REPORT -

Lab#	Parameter	Result Units	Detect Limit	Method Code
WL932076	Sp. Conduct	2050.0 uS/cm	0.100	2041
	Non-Filt Res.	9 mg/L	3.000	10406
	Ammonia-N	14.840 mg/L	0.002	7509
	pH	7.48 pH	0.050	10301
	T.Arsenic-Hyd.	961.0 ug/L	0.300	33011
	T.Cadmium-S/E	10.2 ug/L	0.200	48302
	Tot.Cyanide	0.077 mg/L	0.004	06613
	T.Cobalt-S/E	242 ug/L	1.000	27302
	T.Chromium-S/E	11 ug/L	1.000	24303
	T.Copper-S/E	56 ug/L	1.000	29305
	T.Iron DA	217 ug/L	50.000	26304
	T.Nickel-S/E	525 ug/L	1.000	28302
	T.Lead-S/E	10.7 ug/L	0.700	82302
	T.Zinc-S/E	65.0 ug/L	1.000	30305

