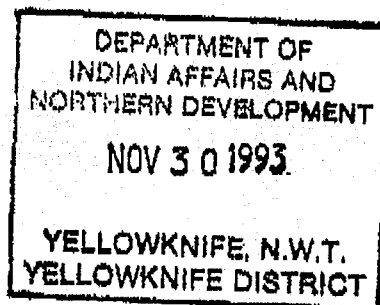


Northern Laboratory  
NAP/DIAND  
Box 1500  
Yellowknife, NT.

Nov. 25, 1993.

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



Subject: Royal Oak Mines Legal Samples - July 26, 1993.

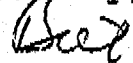
Results for the above case are now complete. Re-analyses for arsenic and copper were necessary as the results indicated poor agreement between replicates. Results for the repeats are in good agreement with values from the alternative technique of ICP-Mass Spec.

ARSENIC ug/L			COPPER ug/L	
Sample Id.	As Hydride	As ICP-MS	Cu AAS	Cu ICP-MS
931129	780	722	151	150
931130	765	744	148	148
931131	846	762	151	160
931132	711	674	69	64
931133	665	682	73	65
931134	620	610	62	65

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.

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

Sincerely,

  
Bill Coedy  
Head. Lab Services

NORTHERN LABORATORY  
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Tel: 920-8129  
Fax: 873-9300

TO: DIAND  
YELLOWKNIFE DISTRICT  
Box 2550,  
Yellowknife, NT.  
X1A 2P8  
Attn: David Jessiman

-----  
SAMPLE INFORMATION

Our Lab # : WL931129  
Your Sample Id: 0043-1-1  
Sample Matrix : water

Account No. : N1L30043  
File: Royal Oak Mines  
Status: Legal

COLLECTION:

Location : 0043-1  
Date : July 26, 1993.  
By : David Jessiman

Report Date: Nov.25, 1993

Approved by :

  
William Coedy

-----  
- SAMPLE ANALYSIS REPORT -

Lab #	Parameter	Results	Units	Det. Limit	Method Code
WL931129	Spec. Conductance	2070	uS/cm	0.1	2041
	Non Filt. Residue	3	mg/L	3	10406
	Ammonia - N	16.00	mg/L	0.002	7509
	pH	7.53	pH	0.05	10301
	T.Arsenic - Hyd.	780	ug/L	0.3	33011
	T. Cadmium -S/E	0.5	ug/L	0.2	48302
	Tot. Cyanide	0.049	mg/L	0.004	6613
	T. Cobalt -S/E	218	ug/L	1	27302
	T. Chromium -S/E	2	ug/L	1	24303
	T. Copper - DA	151	ug/L	5	29006
	T. Iron - DA	145	ug/L	20	26004
	T. Nickel -S/E	384	ug/L	1	28302
	T. Lead - S/E	L4	ug/L	4	82302
	T. Zinc - S/E	49.0	ug/L	1	30305

DEPARTMENT OF  
INDIAN AFFAIRS AND  
NORTHERN DEVELOPMENT

NOV 30 1993

YELLOWKNIFE, N.W.T.  
YELLOWKNIFE DISTRICT

NORTHERN LABORATORY  
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Box 2550,  
Yellowknife, NT.  
X1A 2P8  
Attn: David Jessiman

-----  
SAMPLE INFORMATION

Our Lab # : WL931130  
Your Sample Id: 0043-1-2  
Sample Matrix : water

Account No. : N1L30043  
File: Royal Oak Mines  
Status: Legal

COLLECTION:

Location : 0043-1  
Date : July 26, 1993.  
By : David Jessiman

Report Date: Nov.25, 1993

Approved by : W Coedy  
William Coedy

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- SAMPLE ANALYSIS REPORT -

Lab #	Parameter	Results	Units	Det. Limit	Method Code
WL931130	Spec. Conductance	2050	uS/cm	0.1	2041
	Non Filt. Residue	3	mg/L	3	10406
	Ammonia - N	16.10	mg/L	0.002	7509
	pH	7.50	pH	0.05	10301
	T.Arsenic - Hyd.	765	ug/L	0.3	33011
	T. Cadmium -S/E	0.4	ug/L	0.2	48302
	Tot. Cyanide	0.049	mg/L	0.004	6613
	T. Cobalt -S/E	216	ug/L	1	27302
	T. Chromium -S/E	6	ug/L	1	24303
	T. Copper - DA	148	ug/L	5	29006
	T. Iron - DA	156	ug/L	20	26004
	T. Nickel -S/E	388	ug/L	1	28302
	T. Lead - S/E	L4	ug/L	4	82302
	T. Zinc - S/E	27.0	ug/L	1	30305

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Attn: David Jessiman

-----  
SAMPLE INFORMATION

Our Lab # : WL931131  
Your Sample Id: 0043-1-3  
Sample Matrix : water

Account No. : N1L30043  
File: Royal Oak Mines  
Status: Legal

COLLECTION:

Location : 0043-1  
Date : July 26, 1993.  
By : David Jessiman

Report Date: Nov.25, 1993

Approved by : W Coedy  
William Coedy

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- SAMPLE ANALYSIS REPORT -

Lab #	Parameter	Results	Units	Det. Limit	Method Code
WL931131	Spec. Conductance	2059	uS/cm	0.1	2041
	Non Filt. Residue	L3	mg/L	3	10406
	Ammonia - N	16.50	mg/L	0.002	7509
	pH	7.53	pH	0.05	10301
	T.Arsenic - Hyd.	846	ug/L	0.3	33011
	T. Cadmium -S/E	0.5	ug/L	0.2	48302
	Tot. Cyanide	0.050	mg/L	0.004	6613
	T. Cobalt -S/E	192	ug/L	1	27302
	T. Chromium -S/E	3	ug/L	1	24303
	T. Copper - DA	151	ug/L	5	29006
	T. Iron - DA	136	ug/L	20	26004
	T. Nickel -S/E	384	ug/L	1	28302
	T. Lead - S/E	L4	ug/L	4	82302
	T. Zinc - S/E	10.0	ug/L	1	30305

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TO: DIAND  
YELLOWKNIFE DISTRICT  
Box 2550,  
Yellowknife, NT.  
X1A 2P8  
Attn: David Jessiman

-----  
SAMPLE INFORMATION

Our Lab # : WL931132  
Your Sample Id: 0043-5-1  
Sample Matrix : water

Account No. : N1L30043  
File: Royal Oak Mines  
Status: Legal

COLLECTION:

Location : 0043-5  
Date : July 26, 1993.  
By : David Jessiman

Report Date: Nov.25, 1993

Approved by : W. Coedy  
William Coedy

-----  
- SAMPLE ANALYSIS REPORT -

Lab #	Parameter	Results	Units	Det. Limit	Method Code
WL931132	Spec. Conductance	1949	uS/cm	0.1	2041
	Non Filt. Residue	3	mg/L	3	10406
	Ammonia - N	14.70	mg/L	0.002	7509
	pH	7.50	pH	0.05	10301
	T.Arsenic - Hyd.	711	ug/L	0.3	33011
	T. Cadmium -S/E	1.4	ug/L	0.2	48302
	Tot. Cyanide	0.036	mg/L	0.004	6613
	T. Cobalt -S/E	163	ug/L	1	27302
	T. Chromium -S/E	6	ug/L	1	24303
	T. Copper - DA	83	ug/L	5	29006
	T. Iron - DA	169	ug/L	20	26004
	T. Nickel -S/E	348	ug/L	1	28302
	T. Lead - S/E	14	ug/L	4	82302
	T. Zinc - S/E	47.0	ug/L	1	30305

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Attn: David Jessiman

-----  
SAMPLE INFORMATION

Our Lab # : WL931133  
Your Sample Id: 0043-5-2  
Sample Matrix : water

Account No. : N1L30043  
File: Royal Oak Mines  
Status: Legal

COLLECTION:

Location : 0043-5  
Date : July 26, 1993.  
By : David Jessiman

Report Date: Nov.25, 1993

Approved by : W Coedy  
William Coedy

-----  
- SAMPLE ANALYSIS REPORT -

Lab #	Parameter	Results	Units	Det. Limit	Method Code
WL931133	Spec. Conductance	1990	uS/cm	0.1	2041
	Non Filt. Residue	3	mg/L	3	10406
	Ammonia - N	15.00	mg/L	0.002	7509
	pH	7.48	pH	0.05	10301
	T.Arsenic - Hyd.	665	ug/L	0.3	33011
	T. Cadmium -S/E	1.6	ug/L	0.2	48302
	Tot. Cyanide	0.035	mg/L	0.004	6613
	T. Cobalt -S/E	168	ug/L	1	27302
	T. Chromium -S/E	23	ug/L	1	24303
	T. Copper - DA	82	ug/L	5	29006
	T. Iron - DA	183	ug/L	20	26004
	T. Nickel -S/E	349	ug/L	1	28302
	T. Lead - S/E	6	ug/L	4	82302
	T. Zinc - S/E	30.0	ug/L	1	30305

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TO: DIAND  
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 Yellowknife, NT.  
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 Attn: David Jessiman

### SAMPLE INFORMATION

Our Lab # : WL931134  
 Your Sample Id: 0043-5-3  
 Sample Matrix : water

Account No. : NIL30043  
 File: Royal Oak Mines  
 Status: Legal

### COLLECTION:

Location : 0043-5  
 Date : July 26, 1993.  
 By : David Jessiman

Report Date: Nov.25, 1993

Approved by : W. Coedy  
 William Coedy

### - SAMPLE ANALYSIS REPORT -

Lab #	Parameter	Results	Units	Det. Limit	Method Code
WL931134	Spec. Conductance	2000	uS/cm	0.1	2041
	Non Filt. Residue	3	mg/L	3	10406
	Ammonia - N	15.00	mg/L	0.002	7509
	pH	7.48	pH	0.05	10301
	T.Arsenic - Hyd.	620	ug/L	0.3	33011
	T. Cadmium -S/E	1.7	ug/L	0.2	48302
	Tot. Cyanide	0.040	mg/L	0.004	6613
	T. Cobalt -S/E	166	ug/L	1	27302
	T. Chromium -S/E	4	ug/L	1	24303
	T. Copper - DA	62	ug/L	5	29006
	T. Iron - DA	117	ug/L	20	26004
	T. Nickel -S/E	346	ug/L	1	28302
	T. Lead - S/E	12	ug/L	4	82302
	T. Zinc - S/E	34.0	ug/L	1	30305

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