# NORTHWEST TERRITORIES WATER BOARD

Pursuant to the Northwest Territories Waters Act and Regulations the Northwest Territories Water Board, hereinafter referred to as the Board, hereby grants to

LYTTON MINERALS L	IMITED
(Licensee) 501 - 700 WEST PENI	
of <u>VANCOUVER</u> , BRITIS (Mailing Address)	H COLUMBIA VOC 1G0
subject to the restrictions and cond	e right to alter, divert or otherwise use water itions contained in the Northwest Territories hereunder and subject to and in accordance Licence.
Licence Number	N7L2-1666
Licence Type	"B"
Water Management Area	NORTHWEST TERRITORIES 07
Location	JERICHO DIAMOND PROJECT IN THE CARAT LAKE AREA, LATITUDE 65° 59' 50" N., LONGITUDE 111° 28' 30" W., NORTHWEST TERRITORIES
Purpose	A MINING AND MILLING UNDERTAKING
Description	DISPOSAL OF WASTE FOR THE EXTRACTION OF A BULK SAMPLE AND ASSOCIATED USES
Effective Date of Licence	MAY 1, 1996
Expiry Date of Licence	APRIL 30, 1998
This Licence issued and recorded a	nt Yellowknife includes and is subject to the

NORTHWEST TERRITORIES WATER BOARD

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annexed conditions.

Chairman

#### PART A: SCOPE AND DEFINITIONS

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#### 1. Scope:

- a) This Licence entitles Lytton Minerals Limited to dispose of waste for the extraction of a bulk sample, and associated uses at the Jericho Diamond Project in the Carat Lake area, Northwest Territories (Latitude 65°59' 50" N., Longitude 111° 28' 30" W.);
- b) The Licensee shall have applied for and received a new Licence for mining and milling undertakings before any ore bodies in the area referred to in Part A, Item 1(a) are brought into production, other than for the mining of a bulk ore sample.
- c) This Licence is issued subject to the conditions contained herein with respect to the disposal of underground water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposit of such waste may enter any waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Northwest Territories Waters Act, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited this Licence shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform with such Regulations.
- d) Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of other Federal, Territorial or Municipal legislation.

#### 2. Definitions in this Licence N7L2-1666:

"Act" means the Northwest Territories Waters Act;

"Analyst"means an Analyst designated by the Minister under Section 35(1) of the Northwest Territories Waters Act;

"Board" means the Northwest Territories Water Board established under Section 10 of the Northwest Territories Waters Act;

"Inspector" means an Inspector designated by the Minister under Section 35(1) of the Northwest Territories Waters Act:

"Licensee" means the holder of this Licence;

- "Regulations" means Regulations proclaimed pursuant to Section 33 of the Northwest Territories Waters Act;
- "Waste"means waste as defined by Section 2 of the Northwest Territories Waters Act;
- "Average Concentration" means the running average of any four consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the "Surveillance Network Program";
- "<u>Minewater</u>"means groundwater or any other water which is pumped or flows out of any underground workings or open pits;
- "Waste Rock" means all rock materials, except ore and tailings, which are produced as a result of mining operations; and
- "Retention Pond" means any natural or man made depression designed to act as a settling facility for the purpose of separating solids from minewater.

#### PART B: GENERAL CONDITIONS

- 1. Prior to the deposit of waste for any undertaking directly associated with the extraction of a bulk sample, the Licensee shall have posted and shall maintain a Security Deposit in the amount of Dollars pursuant to Section 17(1) of the Act and Section 12 of the Regulations. The Security Deposit shall be maintained until such time as the Board is satisfied that the Licensee has complied with all provisions of the final Abandonment and Restoration Plan. This clause shall survive the expiry of this Licence or renewals thereof.
- The Licensee shall file an annual report with the Board not later than March 31st of the year following the calendar year reported which shall contain the following information:
  - the monthly and annual quantities in cubic metres of minewater pumped from underground;
  - b) tabular summaries of all data generated under the "Surveillance Network Program";
  - a summary of modifications and/or major maintenance work carried out on the waste disposal facilities, including all associated structures;

- d) a summary of exploration and development activities as they relate to water use and waste disposal;
- e) a list of any unauthorized discharges;
- f) a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
- g) results from acid generating potential samples collected on ore and waste rock as referred to in Part C, Item 5; and
- h) any other details on water use and waste disposal requested by the Board by November 1st of the year being reported.
- 4. The Licensee shall comply with the "Surveillance Network Program" annexed to this Licence, and any amendment to the said "Surveillance Network Program" as may be made from time to time, pursuant to the conditions of this Licence.
- 5. The "Surveillance Network Program" and compliance dates specified in this Licence may be modified at the discretion of the Board.
- 6. Meters, devices or other such methods for measuring the volumes of waste discharged shall be installed, operated and maintained by the Licensee to the satisfaction of an Inspector.
- 7. The Licensee shall, within thirty (30) days prior to the discharge of waste, post the necessary signs to identify the stations of the "Surveillance Network Program". All postings shall be located and maintained to the satisfaction of an Inspector.
- 8. The Licensee shall ensure a copy of this Licence is maintained at the site of operation at all times.

## PART C: CONDITIONS APPLYING TO WASTE DISPOSAL

 All minewater, should it be encountered, shall be directed to the Retention Pond or as approved by the Board. 2. All minewater discharges shall meet the following effluent quality requirements:

PARAMETER	MAXIMUM AVERAGE CONCENTRATION	MAXIMUM CONCENTRATION OF ANY GRAB SAMPLE
Total Arsenic	0.50 mg/L	1.0 mg/L
Total Copper	0.30 mg/L	0.6 mg/L
Total Lead	0.20 mg/L	0.4 mg/L
Total Nickel	0.50 mg/L	1.0 mg/L
Total Zinc	0.50 mg/L	1.0 mg/L
Total Suspended Solids	25.0 mg/L	50.0 mg/L
Oil and Grease	5.0 mg/L	

The waste discharged shall have a pH between 6.0 and 9.5.

- 3. The Licensee shall provide notice to an Inspector prior to the first proposed discharge of minewater from the portal entrance.
- 4. All minewater discharged shall be conducted in such a manner to minimize surface erosion.
- The Licensee shall develop and implement an acid generation potential monitoring plan for the ore and waste rock generated during the extraction of the bulk sample.

### PART D: CONDITIONS APPLYING TO MODIFICATIONS

- 1. The Licensee may, without written consent from the Board, carry out modifications to the planned undertakings provided that such modifications are consistent with the terms of this Licence and the following requirements are met:
  - the Licensee has notified the Board in writing of such proposed modifications at least thirty (30) days prior to beginning the modifications;
  - b) such modifications do not place the Licensee in contravention of either this Licence or the Act;
  - the Board has not, during the thirty (30) days following notification of the proposed modifications, informed the Licensee that review of the proposal will require more than thirty (30) days; and

- d) the Board has not rejected the proposed modifications.
- 2. Modifications for which all of the conditions referred to in Part D, Item 1, have not been met, can be carried out only with written consent from the Board.

#### PART E: CONDITIONS APPLYING TO CONTINGENCY PLANNING

- The Licensee shall implement the plan to discharge minewater directly to Tailings Lake, as described in the Water Licence Application dated February 27, 1996, if the minewater discharge exceeds the Licence effluent quality requirements.
- 2. The Licensee shall implement the plan to discharge minewater directly to Tailings Lake, as described in the Water Licence Application dated February 27, 1996, if the minewater discharge exceeds the holding capacity of the Retention Pond.
- 3. The Licensee shall review the Contingency Plan annually and modify the Plan as necessary to reflect changes in operation and technology. Any proposed modifications shall be submitted to the Board for approval.
- 4. If, during the period of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - a) employ the appropriate Contingency Plan;
  - b) advise the Inspector immediately via the 24 Hour Spill Reporting Line (403) 920-8130; and
  - c) submit to the Inspector a detailed report on each occurrence not later than thirty (30) days after initially reporting the event.

NORTHWEST TERRITORIES WATER BOARD

Witness Chairman

## NORTHWEST TERRITORIES WATER BOARD

LICENSEE:

LYTTON MINERALS LIMITED.

LICENCE NUMBER:

N7L2-1666

**EFFECTIVE DATE OF LICENCE:** 

EFFECTIVE DATE OF SURVEILLANCE NETWORK PROGRAM:

#### SURVEILLANCE NETWORK PROGRAM

## A. Location of Sampling Stations

Station Number	<u>Description</u>
1666-1	Minewater discharge into Retention Pond
1666-2	Minewater discharge into Tailings Lake
1666-3	Outflow from Retention Pond
1666-4	Outflow from Tailings Lake into Seep Creek

## B. Sampling and Analysis Requirements

1. During periods of minewater discharge, effluent at Station Number 1666-1, and 1666-2 shall be sampled once during the first week and monthly thereafter, and analyzed for the following parameters:

Total Suspended Solids

Total Ammonia Total Arsenic

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- 2. During periods of minewater discharge, effluent at Station Number 1666-1 and 1666-2 shall also be sampled once per month, and analyzed for a complete ICP metal scan.
- 3. During periods of minewater discharge, effluent at Station Number 1666-3 shall be sampled once during the first week and monthly thereafter, and analyzed for the following parameters:

Total Arsenic

Total Nickel

**Total Copper** 

Total Zinc

Total Lead

**Total Suspended Solids** 

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4. During periods of minewater discharge into Tailings Lake, effluent at Station Number 1666-4 shall be sampled once during the first week and monthly thereafter, and analyzed for the following parameters:

Total Arsenic

**Total Nickel** 

**Total Copper** 

**Total Zinc** 

Total Lead

**Total Suspended Solids** 

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- All sampling, sample preservation, and analyses shall be conducted in accordance with methods prescribed in the current edition of "Standard Methods for the Examination of Water and Wastewater", or by such other methods approved by an Analyst.
- 6. All analysis shall be performed in a laboratory approved by an Analyst.
- 7. The Licensee shall, by August 1, 1996, submit to an Analyst for approval a quality assurance/quality control plan which addresses analysis of field blanks and certified reference material, and replicate sampling in order to assess accuracy, precision and field contamination.
- 8. The plan referred to in Part B, Item 7 shall be implemented as approved by an Analyst.

C.	<u>Reports</u>
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The Licensee shall, within thirty (30) days following the month being reported, 1. submit to the Board all data and information required by the "Surveillance Network Program" including the results of the approved quality assurance pian.

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Witness Chairman

### C. Reports

1. The Licensee shall, within thirty (30) days following the month being reported, submit to the Board all data and information required by the "Surveillance Network Program" including the results of the approved quality assurance plan.

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