# **QUARTZ MINING LICENSE QML-0004**

This License is issued pursuant to s.135 (2) of the Quartz Mining Act S.Y. 2003, c.14

Mining License No:

QML-0004

Issued to:

Sa Dena Hes Operating Corporation

c/o Teck Resources Limited 3300-550 Burrard Street Vancouver, British Columbia

V6C 083

**Project Name:** 

Sa Dena Hes Mine

Location:

NTS 105A/7, 10;

Latitude: 60° 35'N, Longitude: 128° 53'W

Watson Lake Mining District

**Effective Date:** 

The date upon which the signature of the Minister is affixed

**Expiry Date:** 

December 31, 2040

Scope of Authorization:

Reclamation, remediation, closure and post-closure care and maintenance related to the production and development

activities that occurred at the Sa Dena Hes Mine Site

Dated this 31 day of December, 2015

Director, Mineral Resources Energy, Mines and Resources

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#### PART I – GENERAL PROVISIONS

#### 1.0 Definitions

1.1 In this License,

"Act" means the Quartz Mining Act, S.Y. 2003, c.14;

"day" means calendar day;

"Director" means the Director of the Mineral Resources Branch;

"engineer" means a professional engineer as defined in the Engineering Professions Act, R.S.Y. 2002, c.75;

"Inspector" means an inspector designated pursuant to the Act;

"License" means Quartz Mining License QML-0004;

"Licensee" means the person to whom this Licence is issued;

"Minister" means the Minister of Energy, Mines and Resources;

"Detailed Decommissioning and Reclamation Plan" (the "DDRP") means the Detailed Decommissioning and Reclamation Plan August 2015 Update, prepared by Teck Resources Limited, dated August 31, 2015, or an updated version which is approved in writing by the Director;

"plan" means any of the plans listed in Schedule B

"site" means the area where the Undertaking is taking place;

"Undertaking" means all reclamation, closure, and post-closure activities authorized by this License to be carried out on the mineral claims identified in Schedule A;

- 1.2 Any term not defined in this License that is defined in the Act has the same meaning as in the Act.
- 1.3 The following schedules form a part of this License
  - (a) Schedule A Claims Covering the Mine and Mine Facilities
  - (b) Schedule B Plans to be submitted as Approved Plans
  - (c) Schedule C Approved Plans and Authorized Activities
  - (d) Schedule D Annual Reporting Requirements
- 1.4 Unless otherwise specified by the Director, all plans and reports required to be submitted under this Licence shall be submitted in the form of one bound copy and one electronic copy.

## 2.0 Coming into Effect

2.1 The authorizations, obligations, and requirements set out in this License come into effect on the Effective Date.

## 3.0 Limitations on the Undertaking

- 3.1 The Licensee is authorized to carry out the Undertaking only
  - (a) on the mineral claims listed in Schedule A; and
  - (b) in accordance with the conditions set out in this License.

#### 4.0 Extensions of Time Limits

4.1 With respect to time limits other than the expiry of this License, if the Licensee submits a written request to extend a time limit imposed by this License no less than five days before the expiry of the time limit in question, the Director may extend the time limit. The new time limit will replace the time limit imposed in this Licence solely with respect to the written request.

# 5.0 Correspondence

5.1 Any written communication, notice or report required to be given by the Licensee pursuant to this License may be provided by personal delivery to the persons identified below, by facsimile, electronic mail or by registered mail to the addresses set out below.

To the Licensee:

Sa Dena Hes Operating Corporation

c/o Teck Resources Limited 3300-550 Burrard Street Vancouver, British Columbia

V6C OB3

Fax: (604) 699-4750

To the Director:

Director, Mineral Resources Branch

Department of Energy, Mines and Resources

P.O. Box 2703 Whitehorse, Yukon

Y1A 2C6

Fax: (867) 456-3899

5.2 Either the Licensee or the Director may change its address for service while this License is in effect by notifying the other in writing. All written communications, notices or reports will be considered to have been received by the Licensee or the Director, as the case may be, 10 days after the mailing thereof, or if personally delivered or sent by facsimile or by electronic mail, on the day of delivery.

#### PART II - DEVELOPMENT AND IMPLEMENTATION OF PLANS

# 6.0 Approval and Amendment of Plans

- 6.1 When the Licensee is required to submit a plan under this License or wishes to amend an approved plan, the Licensee must
  - (a) submit the plan or proposed amendment in writing to the Director;
  - (b) ensure that the plan or proposed amendment meets the requirements for that type of plan as directed by the Director in writing; and
  - (c) not undertake any of the activities described in the plan or the proposed amendment until the plan becomes an approved plan, as evidenced by its listing in Schedule C.
- 6.2 If the Licensee wishes to amend an approved plan, it must submit the proposed amendment to the Director no less than ninety (90) days prior to the date the Licensee wishes to carry out any of the activities set out in the proposed amendment.
- 6.3 If the Director approves an amendment to an approved plan as evidenced by its listing in Schedule C, the amendment will be considered to be an approved plan or a part of an approved plan, whichever is appropriate in the circumstance, and replaces any prior approved plan or part thereof.
- 6.4 If the Director directs in writing and with reasons than an approved plan be amended, the Licensee must prepare the required amendment and submit it to the Director as if it was a plan referred to in paragraph 6.1 of this License.
- 6.5 All plans and reports submitted by the Licensee with respect to the design or construction of any engineered structures, works or installations related to the Undertaking must be under the stamp or seal of an engineer.

# 7.0 Required Plans

- 7.1 The Licensee must submit to the Director the plans listed in Schedule B.
- 7.2 The Licensee must
  - (a) submit to the Director an Environmental Monitoring, Surveillance and Reporting Plan no later than June 30, 2016; and
  - (b) submit to the Director an Adaptive Management Plan no later than June 30, 2016.

## 8.0 Implementation of Plans

- 8.1 Unless otherwise indicated in writing by the Director, the Licensee must implement each approved plan as of the date each becomes an approved plan.
- 8.2 The Licensee must carry out the Undertaking in accordance with the DDRP and the

conditions of this Licence prior to the expiry of the License.

#### PART III - FINANCIAL SECURITY

#### 9.0 Financial Security

- 9.1 The Licensee must furnish and maintain security with the Minister in the amount of \$4,941,924.50 immediately on the effective date of this License.
- 9.2 The amount of security to be furnished and maintained may be reviewed and adjusted by the Minister, no less than once every two years, in accordance with the Security Regulation, OIC 2007/77.
- 9.3 If the Minister determines that additional security must be provided during the term of this Licence, the Licensee must furnish and maintain the additional amount of security.
- 9.4 The Licensee acknowledges that the written notice of the Minister referred to in paragraph 9.3 of this License will, upon issuance, amend paragraph 9.1 of this License with respect to the amount of security and subject to paragraph 9.3, the requirement to furnish and maintain security in accordance with the payment schedule included in the notice will be considered a requirement of this License as of the date of the notice.

#### **PART IV - DEVELOPMENT AND MINE OPERATIONS**

#### 10.0 Production and Development

10.1 The Licensee is not authorized to carry out production and development as part of the Undertaking.

#### PART V - REPORTING, MONITORING AND INSPECTIONS

#### 11.0 Annual Inspections

- 11.1 The Licensee must ensure that inspection of the physical stability of all engineered structures, works and installations located at the site is conducted by an independent engineer by September 30 of each year of the term of this License.
- 11.2 Within ninety (90) days of the inspections referred to in paragraph 11.1 of this License, the Licensee must submit to the Director and the Inspector a written report prepared by the engineer that conducted the annual inspection documenting the results of the inspection, including a
  - (a) summary of the stability, integrity and status of all of the inspected structures,

works, and installations; and

- (b) any recommendations for remedial actions made as a result of these investigations and evaluations.
- 11.3 The Licensee must take immediate steps to implement any of the recommendations for remedial action made as a result of the inspection referred to in paragraph 11.1 of this License and provide the Director and the Inspector a written statement detailing how and when each of the recommendations for remedial action was addressed.
- 11.4 On or before March 31 of each year of the term of this License, the Licensee must submit an annual report, in writing, containing the information set out in Schedule D, covering the period of January 1 to December 31 of the prior year.

# SCHEDULE A - CLAIMS COVERING THE MINE AND MINE FACILITIES

# Quartz Claims:

GRANT NUMBER	CLAIM NAME	GRANT NUMBER	CLAIM NAME
YA35951-YA35968	CIMA 13-30	YA71556-YA71560	HUN 107-111
YA45288-YA45296	CIMA 31-39	YA73504-YA73511	HUN 112-119
YA45689-YA45690	CIMA 42-43	YA73680-YA73687	HUN 120-127
YA45631-YA45638	CIMA 44-51	YA73688-YA73695	HUN 129-136
YA45691-YA45692	CIMA 52-53	YA90244-YA90269	HUN 137-162
YA46141-YA46157	CIMA 54-70	YA90777-YA90802	HUN 163-188
YA46246-YA46253	CIMA 71-78	YA90803-YA90824	HUN 191-212
YA46158-YA46179	CIMA 79-100	YA91033-YA91040	HUN 213-220
YA46180	CIMA 101	YA90997-YA91010	HUN 221-234
YA46181	CIMA 102	YA91041-YA91070	HUN 235-264
YB16163-YB16192	EAGLE 1-30	YA91027-YA91030	HUN 265-268
YB92377-YB92380	EAGLE 31-34	YA91011-YA91026	HUN 269-284
YB16200-YB16261	EAGLE 38-99	YA91071-YA91078	HUN 285-292
YB16262-YB16283	EAGLE 100-121	YA91093-YA91100	HUN 293-300
YB16685-YB16688	EAGLE 122-125	YA91147-YA91154	HUN 301-308
YB16713-YB16725	EAGLE 126-138	YB01714-YB01723	HUN 309-318
YB33093-YB33098	EAGLE 139-144	YB14151-YB14160	HUN 319-328
YB15876-YB15877	GMN 23-24	YB33542-YB33627	HUN 329-414
YB15879	GMN 26	YB33634-YB33641	HUN 415-422
YB16310-YB16317	HAWK 1-8	YA00412-YA00415	MICA 1-4
YA71386-YA71465	HUN 1-80	YA35947-YA35950	MICA 9-12
YA71503-YA71510	HUN 81-88	YA45297-YA45298	MICA 40-41
YA71466-YA71481	HUN 89-104	YB16288-YB16309	THUNDER 1-22
YA73512-YA73513	HUN 105-106		

# **Quartz Leases:**

GRANT NUMBER	CLAIM NAME	LEASE LOT NUMBER
YA00416	MICA 5	3513
YA00417	MICA 6	3514
YA00418	MICA 7	3515
YA00419	MICA 8	3516

## SCHEDULE B - PLANS TO BE SUBMITTED AS APPROVED PLANS

Adaptive Management Plan - A plan that provides detailed descriptions of procedures and actions that will be employed should negative effects on the environment be observed. The plan should demonstrate that actions can be taken prior to causing unacceptable effects.

*Detailed Decommissioning and Reclamation Plan* - A plan that details the activities to be undertaken to decommission and reclaim the Undertaking.

*Environmental Monitoring, Surveillance and Reporting Plan* - A plan that describes methods and techniques for collecting and reporting monitoring information regarding environmental conditions at the Undertaking, as well as quantitative thresholds which trigger the implementation of adaptive management strategies.

#### SCHEDULE C - APPROVED PLANS AND AUTHORIZED ACTIVITIES

#### **Part 1: Authorized Activities**

The Licensee is authorized to carry out the following activities as set out below as directed by the approved plans set out in Part 2.

#### 1.0 Access

The Licensee is authorized to access the Undertaking via a gravel road to the site. The location of the road must be as shown on Figure 1-2 of the "Detailed Decommissioning and Reclamation Plan" dated August 31, 2015 and prepared by Teck Resources Limited.

#### 2.0 Decommissioning Activities

The Licensee is authorized to decommission and reclaim the undertaking in accordance with the Detailed Decommissioning and Reclamation Plan.

#### Part 2: Approved Plans

The following plans are approved, subject to the listed conditions.

#### Detailed Decommissioning and Reclamation Plan

 "Detailed Decommissioning and Reclamation Plan, August 2015 Update" dated August 31, 2015 and prepared by Teck Resources Limited.

# Subject to the following conditions:

(a) Prior to decommissioning the Main Access Road, the Licensee must consult with affected First Nations and the trappers of trapline concession #356 and #358 to identify any access concerns and determine potential solutions to these concerns.

# **SCHEDULE D - ANNUAL REPORTING REQUIREMENTS**

The Annual Report must include:

- (b) a summary of decommissioning and reclamation activities undertaken;
- (c) a summary of decommissioning and reclamation activities planned for the upcoming year;
- (d) the effectiveness of the remediation measures implemented by the Licensee;
- (e) a map showing the status of all decommissioning and reclamation activities;
- (f) details respecting any action taken as a result of the recommendations made by the engineer in relation to the inspection referred to in 11.2 of QML -0004;
- (g) a summary of the programs undertaken for environmental monitoring and surveillance, including an analysis of data and any action taken or adaptive management strategies implemented to monitor or address any changes in environmental performance;
- (h) a summary of invasive plants that have been identified on site and measures taken to control or remove invasive plants;
- (i) a summary of spills and accidents that occurred at the site and measures taken to respond to any spills or accidents;
- (j) a summary of wildlife incidents and other accidents, and any upgrade or maintenance work planned for the upcoming year; and
- (k) a summary of any site improvements undertaken to address sediment and erosion control.