

# MAR 20200002: Calling Lake

A report on Diamonds exploration on the Calling Lake property near Calling Lake.

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# Rio Tinto Exploration Canada Inc.

## ASSESSMENT REPORT

21 January 2020

PROJECT NAME: RTX CALLING LAKE PROJECT

Designated Representative – Money Rock Resources Ltd.

Metallic and Industrial Minerals Permits No. 9318010225, 9319020080, 9306060989

## PART B

RESUBMITTED WITH REVISIONS BY D. EICHENBERG SEP. 4, 2020

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## Summary

The following report documents results from an exploration diamond drill campaign conducted by Rio Tinto Exploration Canada Inc. (mineral assessment appointee) on behalf of Money Rock Resources Ltd. Work was carried out from November 24<sup>th</sup>, 2019 to December 8<sup>th</sup>, 2019, on the Metallic and Industrial Minerals (MIM) Permit 9306060989 to explore for kimberlite and/or kimberlite indicator minerals. The Calling Lake, Alberta area was selected based on previous exploration activity and assessment done by Money Rock Resources Ltd. Access to the drill site was gained via pre-existing seismic and cut lines. A total of 180.5 m was drilled over a period of 8 days.

## Introduction

The Calling Lake region has been the site of anomalous kimberlite indicator mineral occurrences and has been explored for diamond potential for a number of decades. A number of geophysical targets have been identified by the owners (Money Rock Resources Ltd.) of a larger package of Metallic and Industrial Minerals permits in the region. Rio Tinto Exploration Canada Inc. has partnered with Money Rock Resources Ltd. to conduct an early-stage diamond exploration project in the region in 2019. Several reconnaissance visits to assess ground conditions and sample areas with known indicator mineral concentrations were conducted in May and October, 2019. From November 29, 2019 to December 7, 2019, one diamond drill rig was stationed on MIM Permit 9306060989 (located at NW-2-72-23-4; see figure 1) to test a geophysical target characteristic of kimberlite occurrences.

## Geographic Setting and Access

The RTX Calling Lake project is located near the hamlet of Calling Lake, Alberta at 55.24° N latitude and 113.19°W longitude and is approximately 180 km north of Edmonton. The project is accessible by truck via highways 2 and 813 (approximately a two-hour drive). The town is serviced by surrounding communities such as Athabasca (55 km to the south) and Wabasca-Desmarais (117 km to the north). Metallic and Industrial Mineral permit 9306060989 is accessible via and Alberta-Pacific Forestry Industries Inc. (AL-PAC) service road known as West Calling Lake Road (Figure 1). A network of seismic and cut lines are established in the region and one of these pre-existing access routes (licensed to Canadian Natural Resources Ltd. – LOC962170) was used to access the drill site to minimize the footprint of exploration activity.

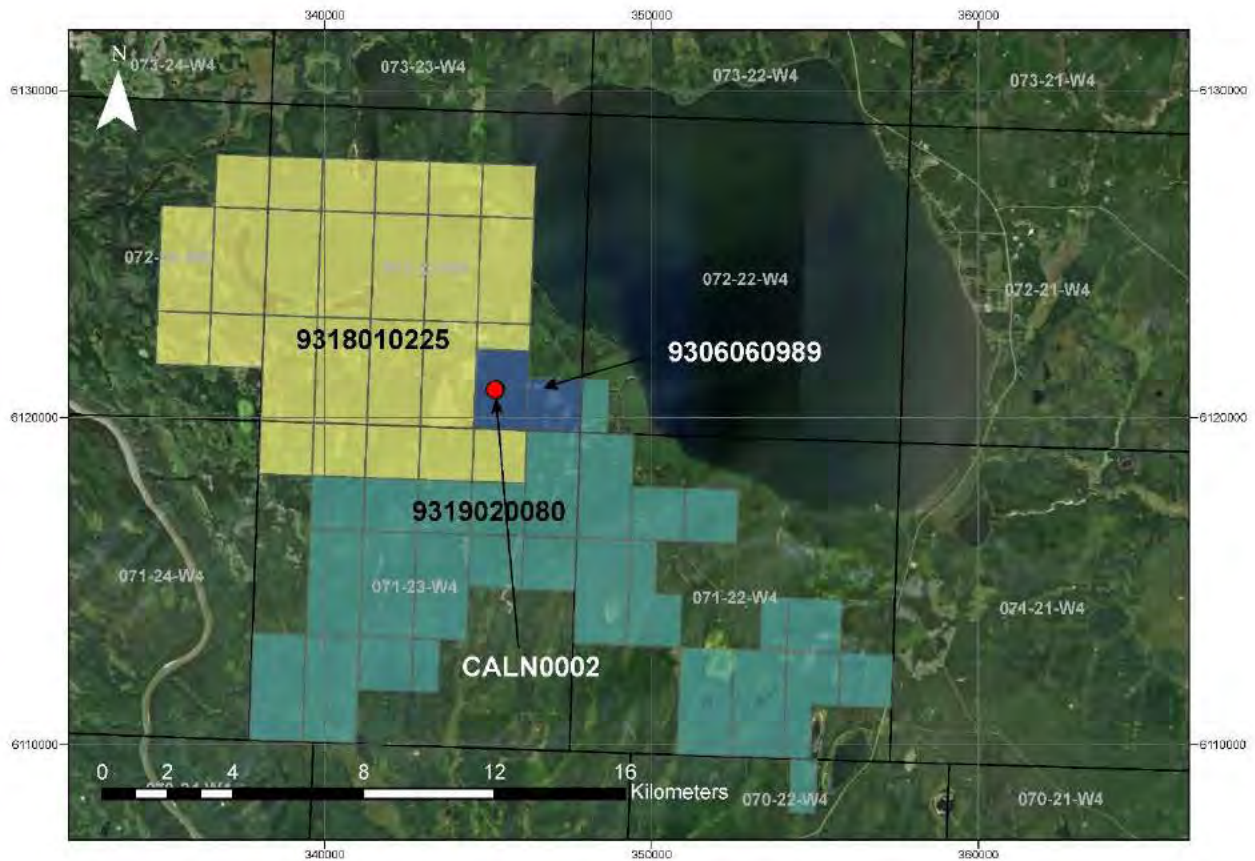


Figure 1: Land position and borehole location map. Borehole CALN0002 located at 345230 E 6120838N NAD83 UTM Zone 12N.

## Infrastructure

Accommodations, food and limited services are available within the hamlet of Calling Lake and fuel was easily sourced from the neighbouring towns of Athabasca and Lac La Biche. Heavy equipment rentals/operators and contractors are located within Calling Lake and also Wabasca-Desmarais and Athabasca.

## Environmental Setting

Calling Lake is located approximately 220 km north of the provincial capital, Edmonton. The hamlet of Calling Lake is located along the eastern shore of Calling Lake and both are situated north of a large bend of the Athabasca River.

Calling Lake is ringed by a series of small tributaries that drain into the lake, which then in turn drains southeast into the Athabasca River via the Calling River. The area is dominated by boreal forest and is actively harvested by ALPAC operations. The surrounding forest is considered mixed wood conifer (<30%) with a significant trembling aspen population and light to moderate debris from clearing operations. Aspens are

young to mature and the forest floor is mostly clear and easy to walk through (lowering risk of wildfire flammability). The region is dominated by a rolling glacial topography and has a mixed Koppen climate classification of Dfb (warm-summer humid continental climate) and Dfc (subarctic/boreal climate). Mean January temperature is  $-13.4^{\circ}\text{C}$  with approximately 7 hours and 30 minutes of daylight, whereas mean July temperature is  $16.6^{\circ}\text{C}$  with 16 hours and 30 minutes of daylight. Average annual snowfall is 111 cm and average annual rainfall is 367 mm.

## Work Performed

### First Nations Consultation

The proposed diamond drill campaign in the Calling Lake region was assessed at a Level 1 Streamlined First Nation Consultation by the Aboriginal Consultation Office (ACO). The initial consultation process commenced on July 24<sup>th</sup>, 2019 with the initial submission of the First Nations Consultation request and was completed on October 7<sup>th</sup>, 2019 when Adequacy Assessment Decisions were issued by the ACO. As part of this process, RTX team members visited the Wabasca-Desmarais community on September 6<sup>th</sup>, 2019 to have a meeting with members of the community. No costs were claimed for this work

On Dec 6<sup>th</sup> 2020 one of the local community groups blockaded the drill and drill operations were shut down. There was no justification for the blockade as significant efforts had been made in consulting the community with no issues being raised and all the proper permits were in hand. A small portion of management expenses resulting from further engagement of the community have been included.

### Diamond Drill Program

**Borehole Name - CALN0002**  
**Location - 345234E 6120837N Nad83 Zone 12U**  
**Elevation – 692m asl**  
**Azimuth – 324 degrees North**  
**Dip - 70 Degrees**  
**EOH – 180.5 m**

Drilling was conducted by Rodren Drilling Ltd. out of West St. Paul, Manitoba and consisted of two, three-person crews (day shift and night shift) supervised by a drill foreman. The drill rig and associated equipment and materials was loaded onto trailers in Athabasca on November 26<sup>th</sup> and transported to the drill site over, with final arrival and set-up occurring from November 26<sup>th</sup> to 28<sup>th</sup>, 2019. Drilling commenced on November

29th and continued until December 6<sup>th</sup>, 2019. Break-down of the rig and demobilization back to Manitoba occurred from December 6<sup>th</sup> to December 9<sup>th</sup>, 2019.

A total of 170 m TVD was drilled with HQ3-diameter drill core recovered from 47.00 to 180.5 m. Overburden in the area consists of unconsolidated glacial material (sand, mud and till) and ranges in thickness from 30 – 60 m as observed in previous drill programs conducted in the region. Glacial sediments were observed until approximately 115 m depth, followed by a sequence of mudstone and siltstone. Casing (HWT-diameter) was set into the top of this mudstone/siltstone sequence. Observations from the single-borehole drill campaign are presented below in Table 4:

Table 1. Interpreted drill log for borehole CALN0002.

HOLE ID	GEOLOG FROM	GEOLOG TO	Lith1	Lith1_M od2	AltType	Vein Type	Log Date	Geology Comments
CALN 0002	0	47	OVB				2-Dec-19	No core recovered (Tri-coned).
CALN 0002	47	68	OVB	Bedded	Unaltered	No Veins	2-Dec-19	Silty sandstone. Weak lithification; mostly friable. Contains both planar and cross beds within unit.
CALN 0002	68	115	TILL	Massive	Unaltered	No	2-Dec-19	Silty to sandy till with polymictic sub-rounded and lesser sub-angular clasts with high variability of size (1mm to 90mm) and distribution. Locally matrix contains planar and cross beds. No observable indicator minerals
CALN 0002	115	156.5	SST	Bedded	Unaltered	Veins	4-Dec-19	Fine-grained sandstone. Weak lithification; mostly friable. Contains both planar and cross beds within unit. Organic (coal?) rich laminations and beds increase in frequency with depth. Exact location of lower contact not possible to determine as it
CALN 0002	156.5	180.5	MUDST	Bedded	Unaltered	No	7-Dec-19	Very fine-grained mudstone. Weak lithification. Contains both planar (dominant) and cross beds within unit; bedded (cross-bedded) sandstone sub-unit from 168.5 to 170m. Beds are mostly mm-scale except in sand sub-unit.

Core Photos -1



Core Photos -2



Core Photos – 3



Core Photos - 4



## Core Photos – 5



## Results

Position of the drill collar was within the footprint of the geophysical anomaly and adequately tested the target but did not reach target final depth. The borehole did not intersect any lithology consistent with kimberlite or any units containing kimberlite indicator minerals. There was also no indication of alteration or associated alteration products consistent with proximal kimberlite emplacement.

## Project costs and Assessment Values Applied

A total of \$328,298 is requested to apply against the claims grouping that includes Metallic and Industrial Minerals (MIM) Permit 9318010225, 9306060989 and 9319020080.

Technical Staff		Planning	Drilling	Interp
<b>Assessment breakdown</b>		50% CALN0001	100% CALN0001	50% CALN0001
Geoscience	Project Manager (Project Management)	\$ 6,000	\$ 7,000	\$ 2,000
	Project Manager (Communities Incident during drilling)		\$ 18,000	
	Project Geologist (includes core logging time)	\$ 5,600	\$ 24,640	\$ 1,120
	Contract Geologist		\$ 11,595	
<b>Operations Staff</b>				
	Project Coordinator	\$ 1,120	\$ 16,800	
	Medic		\$ 19,531	
<b>Drilling Costs</b>				
	Drilling Costs		\$ 93,637	
	MOB Trucking costs (50%CALN0001)	\$ 24,000		
	DeMob Trucking Costs		\$ 11,300	
	Water		\$ 5,001	
	Office/Travel/Comms (50% CALN0001)	\$ 4,877		
	Jo-Kat Lodge/ travel accomidation		\$ 25,611	
<b>Operational Equipment</b>				
	(Site safety, Reclamation, special Equip)			
	Project equipment costs (trailers, rentals etc)		\$ 36,580	
	Vehicle costs		\$ 2,047	
	Fuel Costs		\$ 4,352	
<b>Area Totals</b>		\$ 41,597	\$ 276,094	\$ 3,120
<b>CALN0001 Area Totals</b>		\$ 20,798.50	\$ 276,094	\$ 1,560
<b>Overhead costs 10%</b>		\$ 29,845		
<b>Applied Costs</b>		\$ 328,298		

Table 1. Summary of costs requested to be applied for assessment of the aforementioned group of MIM permits. Costs outlined here are representative costs forwarded for assessment.

## Statement of Qualifications

I, David Eichenberg, residing in the city of [REDACTED], do hereby certify that I accept responsibility for the veracity of the technical data and results presented in this assessment report submitted January 21<sup>st</sup>, 2020, and that:

- I graduated from the University of Toronto in 1997 with a 4-year Specialist Degree in Geology
- I have worked as a professional geologist in Canada, Africa and Europe for over 20 years in Technical and Management roles in exploration, resource and mine geoscience for a range of commodities.
- I have specialized skills in diamond exploration and mining and have acted as Qualified Person (43 101) for the commodity.
- I have professional standing with APEGA, NAPEG and AusIMM

Dated January 21<sup>st</sup>, 2020



David Eichenberg, P.Geol.  
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