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**Aurora Platinum Corp. - Falconbridge Ltd.  
Foy Joint Venture Property**

**Claim #1197692 Prospecting Report**

**Bowell Township**

**Michael Byron  
March 28, 2002**

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## 1.0 Introduction

On August 28, 2000, a Joint Venture (JV) agreement was signed by Aurora Platinum Corp. and Falconbridge Ltd. laying the groundwork for exploration programs to be jointly carried out on the Foy (Aurora operator) and Footwall (Falconbridge operator) properties (Fig. 1) within the Sudbury Intrusive Complex (SIC), District of Sudbury, Ontario (81°W longitude; 46°-30'N latitude). In compliance with this agreement, Aurora Platinum Corp. is responsible for keeping a Falconbridge claim (#1197692) in good standing. The claim covers a small lake located within the southern portion of the Bowell Township claim group (Fig. 1). The following report provides a summary of prospecting activities that were carried out on that claim.

## 2.0 Location and Access

Claim #1197692 lies within the Foy JV property, which is located approximately 30 km NNW of Sudbury within parts of Bowell, Foy, Tyrone, and Hardy Townships (Fig. 1). Access is poor, limited to seasonal logging roads and ATV trails. The eastern part of the project area is accessed by driving north from Sudbury on Highway 69N (Regional Road 80) through the towns of Val Caron, Val Therese, and Valley East to the Nelson Lake Road turn off, then north for 6.5 km along this serviced road to Pigeon Lake Road, a non-serviced gravel road that runs north between Nelson Lake and Joe Lake. The centre of the property lies about 18 km up Pigeon Lake Road, near where the road intersects the Ontario Hydro line.

Access to the claim can only be achieved by foot (from the Nickel Lake area), or by helicopter.

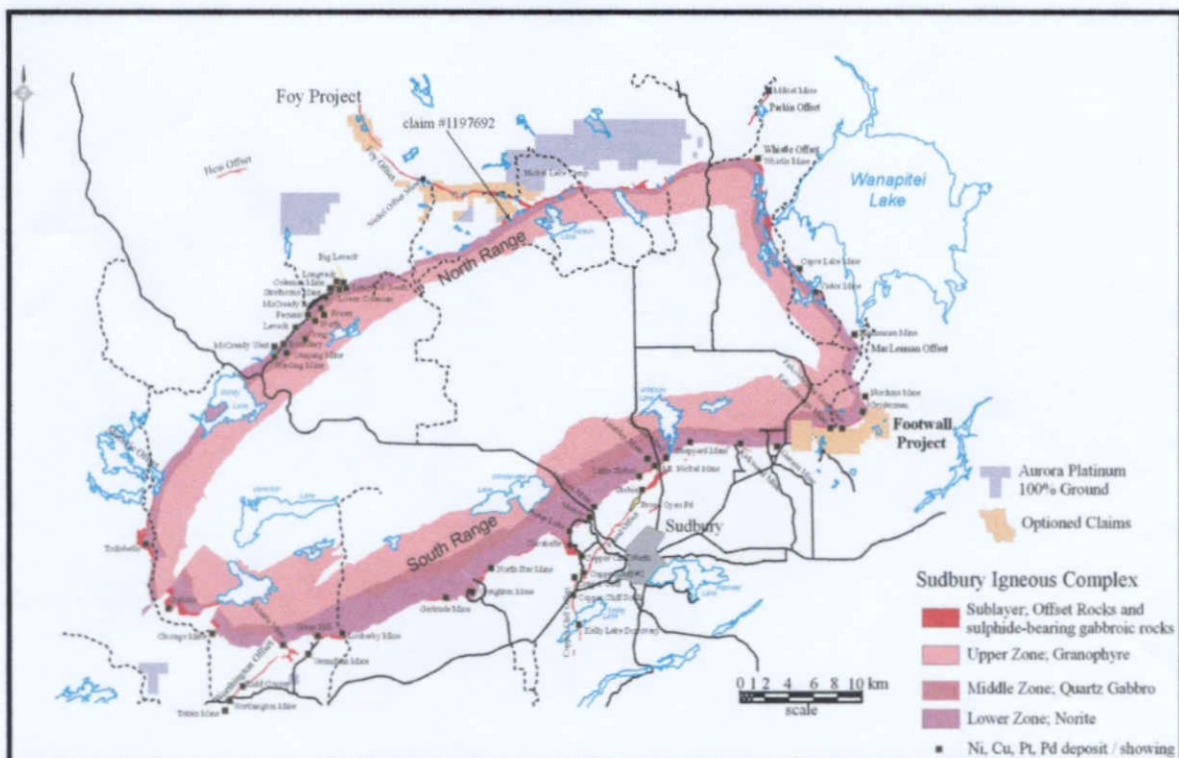


Figure 1. Property Location.

### 3.0 REGIONAL GEOLOGY

The Sudbury Igneous Complex (SIC) is located within the southern part of the Canadian Shield, bordered by Archean units to the north and Proterozoic units to the west, east and south. Archean basement rocks to the north of the complex consist predominantly of felsic plutons and gneisses, with lesser amounts of greenstone, (~2,700 Ma). A significant portion of this terrain is underlain by the Levack Gneiss Complex (a product of Archean tectonometamorphism, dated ~ 2,640 Ma) and associated anatectic granitoids. Northwest trending Matachewan dykes (2,450 Ma) intrude the footwall rocks. Several gabbroic to anorthositic intrusions lie marginal to the SIC.

Huronian Proterozoic sedimentation and volcanism continued to about 2,200 Ma, largely to the south and east of the Sudbury area. The sediments were derived from the Archean superior Province to the north. All of the rocks were intruded by the extensive Nipissing Diabase sill-dyke system about 2,200 Ma.

The Sudbury Impact Event, which is dated at 1850 Ma, affected a large area both inside and outside the current limits of the Sudbury Basin. Estimates of the original diameter of the impact structure range from 150 to 225 km. The current Sudbury Basin is a 60 km by 27 km oval-shaped basin, lying within the larger Sudbury Structure. The Sudbury Structure is comprised of three principal components:

- 1) An outer zone (up to 80 km wide) consisting of fractured and locally brecciated and partially melted Archean and Proterozoic rocks which have been shock deformed by the impact and also intruded by offset dykes coeval with the formation of the (SIC).
- 2) The SIC, an intrusion or melt sheet, which is now exposed in the form of an elliptical collar around the Sudbury Basin. The SIC is divided geographically into a North Range, South Range and East Range.
- 3) The Whitewater Group of sediments comprised of the Onaping, Onwatin and Chelmsford Formations, which filled the impact crater. The Onaping formation is now commonly ascribed to fallback breccia derived from the impact event. The overlying Onwatin Formation is mainly argillite and siltstone, while the Chelmsford Formation is comprised largely of distal turbidites.

The impact resulted in the formation of a radial and concentric pattern of offset dykes and zones of pseudotachylyte within the surrounding Archean and Proterozoic rocks. The South Range Breccia Belt (SRBB) or Frood Sudbury Breccia zone is the largest known pseudotachylyte in the world. It forms an arcuate dyke-like body approximately 45 km in length and between 10 and 2,000 metres wide. Near its eastern end the SRBB hosts the Frood-Stobie deposit, the largest Ni-Cu-PGE (platinum group element) deposit in the world.

The Archean and Proterozoic rocks surrounding the basin have also been intruded by SIC related “quartz diorite” or “offset dykes”. Two major varieties of these dykes have been recognized: radial and concentric. The radial dykes appear to stem from the norite and/or sublayer and extend into the footwall rocks in a radial pattern with respect to the SIC. The concentric dykes may be related to ring faults and may either be connected to the norite/sublayer or represent accumulations of melt rock associated with pseudotachylyte formation.

The SIC has been variously interpreted either as an endogenic intrusion, a melt sheet

formed by meteorite impact, or a combination of the two. Current thinking generally favours a melt sheet origin for this igneous body. The SIC is exposed as an oval-shaped collar around the Sudbury Basin. Dips on the North Range average 35° south, while the South Range dips steeply to the north and is locally overturned with south dips. On the East Range, dips are steep to the west.

The SIC consists of four main units, which are, from bottom to top: the contact sublayer (a discontinuous mineralized xenolith bearing norite); norite; quartz gabbro; and granophyre. The contact sublayer at the base of the SIC occupies kilometre scale radial depressions, referred to as embayment structures. Ni-Cu deposits are localized within these structures in smaller sub-horizontal structures called terraces. Footwall breccia (also known as Late Granite Breccia or Anatexite) a xenolith-bearing metamorphic to igneous-textured breccia, underlies the contact sublayer of the North and East Ranges. The Footwall breccia commonly contains Ni-Cu sulphide mineralization, which probably represents leakage from the contact sublayer.

After its formation the Sudbury Structure was affected by the Penokean orogeny, variously dated at between 1,700-1,900 Ma. Northwesterly directed thrusting during this orogenic event is believed to be responsible for northwest-southeast directed shortening of the SIC and Sudbury Basin, contributing to its current elliptical shape.

#### 4.0 SUDBURY MINERALIZATION

The nickel-copper-PGE orebodies at Sudbury are considered to constitute the largest known concentration of nickel-copper sulphides on Earth. Total reserves and production are estimated at about 1.6 billion tonnes of ore. Production to date is in excess of 8.4 million tonnes of nickel metal and 8.3 million tonnes of copper metal (Naldrett, 1994).

The individual ore deposits are typically zoned. Fractional crystallization of monosulphide solid solution from a sulphide melt is believed to have given rise to a cumulate phase rich in Fe, Co, Rh, Ru, Ir and Os, (pyrrhotite-rich ores) and a fractionated liquid rich in Ni, Cu, Pt, Pd and Au (chalcopyrite and PGE rich ores). In some cases, the liquid phase is then believed to have migrated out from the sublayer and further fractionated to form Cu and PGE rich footwall orebodies.

The mineralization commonly consists of pyrrhotite, pentlandite, chalcopyrite, pyrite and titanium-poor magnetite. Accessory minerals present in lesser amounts include the copper minerals cubanite and bornite; the nickel minerals bravoite, millerite and mancherite; the tellurides altaite and mackinawaite; all the platinum group minerals merenskyte, michenerite, moncheite and sperrylite, as well as argentian bismuth, cassiterite, gold, galena, ilmenite and sphalerite. Secondary minerals include marcasite, violarite and vallerite.

The mineralization occurs in three deposit settings:

- 1) **Contact deposits** along the lower contact of the SIC occur in association with a noritic to gabbroic inclusion-bearing contact phase known as the sublayer. The thickness of the sublayer is highly variable ranging from entirely absent to over 100 metres in thickness. Greatest thicknesses are found in kilometre size radial embayments. Within these embayments are smaller secondary troughs or "terraces". The highest sulphide concentrations within the sublayer are found within the embayments. Large concentrations of sulphides and nickel are often

found in footwall deposits immediately adjacent to these terraces. Copper/nickel ratios are typically lowest in the sublayer and increase towards the Footwall Breccia. Contact deposits comprise 21 of the 35 mines in the camp.

- 2) **Footwall deposits** are zones of sulphide mineralization in the form of stringers, veins, massive sheets and/or disseminated sulphide which have migrated from the base of the sublayer or Footwall Breccia and penetrated deeply into the footwall rocks. In some instances, notably at the Froid-Stobie, the mineralization is associated with extensive zones of metamorphosed Sudbury Breccia, which may have acted as a conduit for the mineralizing fluids. Quartz diorite pods are commonly associated with the highly thermally metamorphosed Sudbury Breccia zones.

The Froid-Stobie mine, which is estimated to have originally contained a geologic resource of 450 to 500 million tonnes, is the largest of the footwall deposits. This mine lies within the South Range Breccia Belt and is situated about 2 km into the footwall.

- 3) **Offset dyke deposits** are intimately associated with radial and concentric dykes that have penetrated the footwall rocks. The mineralization occurs as disseminated to massive sulphides within the dykes. The massive sulphide bodies are often rimmed by a halo of disseminated material.

The Copper Cliff and Worthington radial offset dykes host major zones of sulphide mineralization containing high levels of PGE's. A new orebody in the Copper Cliff dyke, the Kelly Lake deposit, is estimated to contain a resource of over 10 million tonnes at a grade of 1.77% Ni, 1.34% Cu and 3.6 g/t PGE.

At the Totten Mine on the Worthington Offset, INCO announced a new discovery in 1999. This is high grade mineralization and the reported highest grade intersection assayed 3.6% Cu, 3.2% Ni and 5.7 g/t PGE's over a core length of 16 metres.

## 5.0 Property Geology

A detailed geological mapping program (1:2500) was carried out between July 20, and September 9, on the Foy Footwall grid (1.8 km surveyed baseline; 13.13 km grid line; 400 m tieline). Although the grid was not cut over the area surrounding claim S1197692 (the grid lies 200m west of the water claim), preliminary reconnaissance activities were carried out off the grid in the area surrounding S1197692. Sample 665029 was collected during that time.

Local supracrustal geology consists predominantly of Archean granites/granodiorites, with lesser migmatitic granites and footwall breccia. Several extensive Sudbury Breccia zones were also delineated. In summary, the local country rock consists of:

- 1) Granite (5% to 25% anhedral quartz (up to 1.0 cm), 30% anhedral (pink) K-feldspar, 15% anhedral plagioclase, 15% anhedral (black) hornblende (up to 0.5 cm), and 2-3% anhedral epidote). A medium grain, weakly magnetic, rock exhibiting a minor localized granophyric texture, weak to moderate foliation, and localized patches of intense (pervasive) hematization that imparts a pinkish-red colour to the rock;
- 2) Granodiorite to hornblende granodiorite. A grey to pinkish-grey, medium grain to coarse grain rock, massive to weakly foliated, and moderately pervasively magnetic;
- 3) Migmatitic hornblende (biotite) gneiss. A medium grey, poorly to moderately banded, weakly to moderately semi-pervasively magnetic rock;
- 4) Hornblende gneiss. A medium dark grey, medium grain to coarse grain, weakly to moderately semi-pervasively magnetic, moderate to well-banded rock;
- 5) Diabase. Typically, fine grain, black, moderately magnetic, rock. Olivine diabase, plagioclase porphyritic diabase, and fine grain trap dykes were also observed. The claim spans the SIC/footwall rock contact (Figure 2). Sample 665029 was taken from an outcrop of norite along the western shore of the lake. At that location, the norite contains <1% disseminated and blebby pyrrhotite (Figure 3).



Figure 3. Outcrop of mineralized norite along the shores of water claim #1197692.



## 6.0 Summary of Exploration Activities

In mid-July, 2000, a Beep Mat (portable small-loop EM) was borrowed from the Sudbury Resident Geologist's office in order to test its effectiveness as a prospecting tool. An orientation survey was carried out over a surface sulfide occurrence within the Foy offset dyke, located 400 m southeast of Nickel Lake (Fig. 2). The machine readily responded to the sulphide mineralization. Based on this result, it was decided that Beep Mat assisted prospecting would be employed, in conjunction with traditional prospecting activities, to help find new sulphide mineralization.

On September 9, 2000, Mike Byron, Yves Clement, and Randy Clark conducted some preliminary reconnaissance prospecting within the area around, and including, claim S1197692. At that time, a sample of mineralized norite (665029) was collected from the north shore of the lake covered by the claim (Fig. 4). The outcrop area contains <1% blebby, disseminated, pyrrhotite (Fig. 3).

In late August 2001, two days of beep mat assisted prospecting was carried out on claim 1197692, to follow up on the mineralization noted on September 9, 2000. Two beep mats and three prospectors methodically prospected the area outlined in Figure 4. No significant sulfide occurrences were noted.

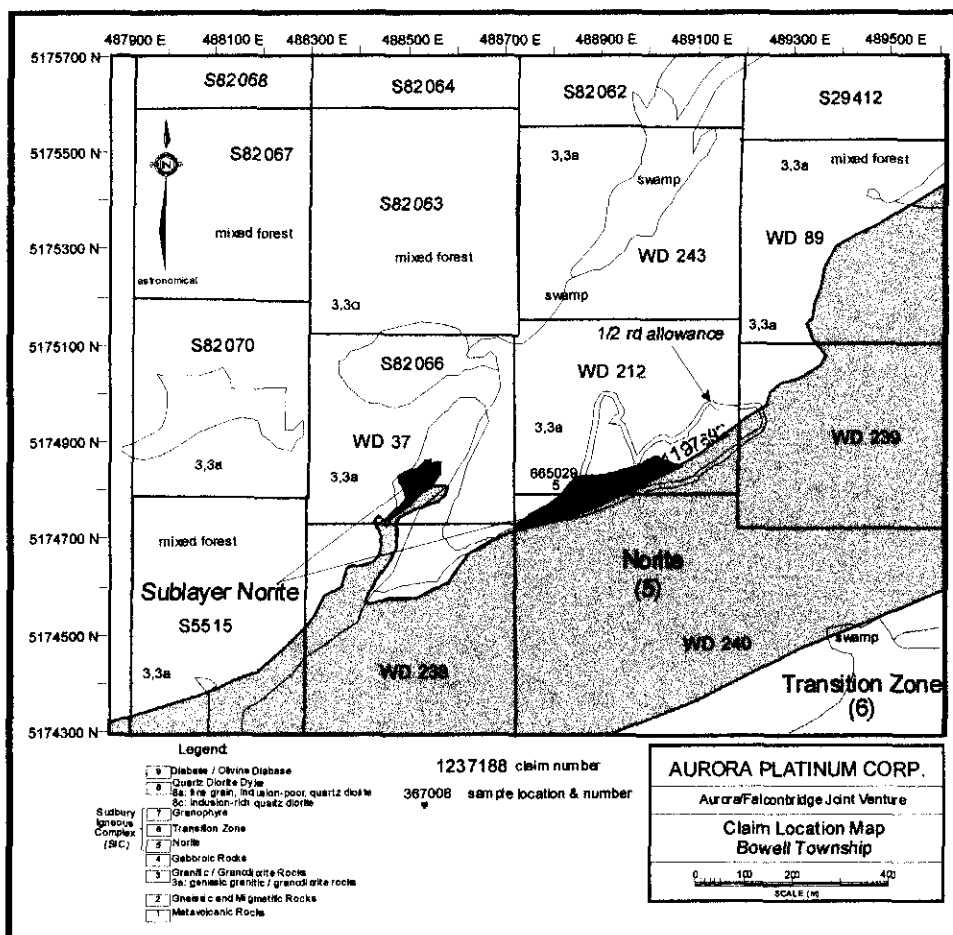


Figure 2. Claim #S1197692 location and local geology map.

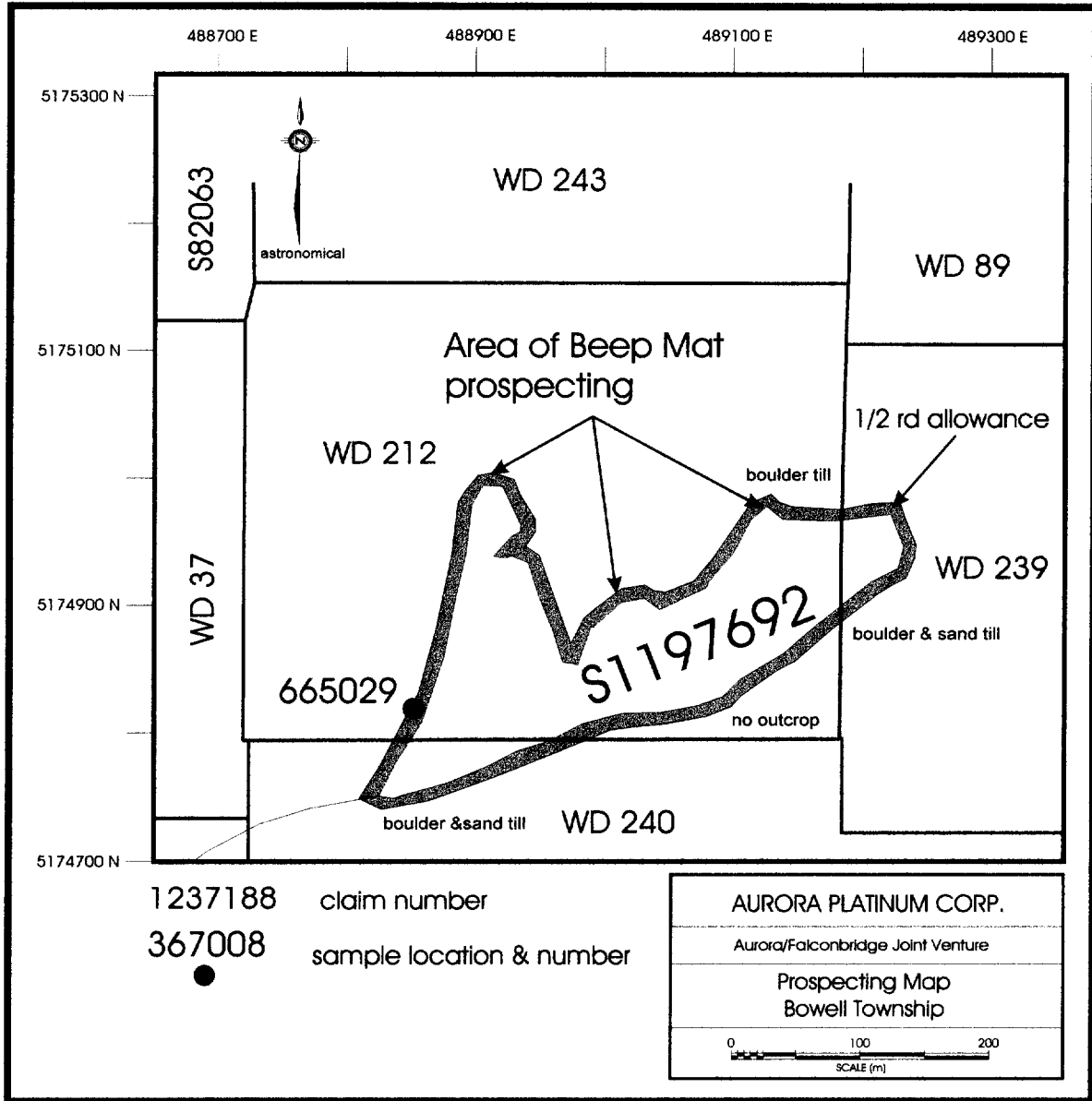


Figure 4. Location map of Beep Mat assisted prospecting.

## 7.0 REFERENCES

Card, K.D. and Meyn, H.D., 1969

Geology of the Leinster-Bowell Area, District of Sudbury. Ontario Department of Mines, Geological Report 65.

Naldrett, A.J., 1994

The Sudbury-Noril'sk Symposium, An Overview, in Lightfoot, P.C. and Naldrett, A.J. (eds.) Proceedings of the Sudbury-Noril'sk Symposium, Ontario Geological Survey Special Volume 5, 3-8.

Appendix 1.  
Sample Description

Sample 665029 (488850 E, 5174820 N): Medium grain felsic norite with <1% blebby pyrrhotite.

**Appendix 2.**  
**Certificate of Analyses**



# ALS Chemex

Aurora Laboratory Services Ltd.  
Analytical Chemists \* Geochemists \* Registered Assayers  
5175 Timberlea Blvd., Mississauga  
Ontario, Canada L4W 2S3  
PHONE: 905-624-2806 FAX: 905-624-6163

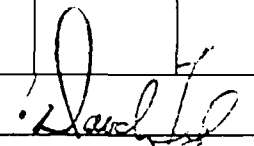
To: AURORA PLATINUM CORP.  
P.O. BOX 10102, 1650 - 701 W. GEORGIA ST.  
VANCOUVER, BC  
V7Y 1C6

Page Number :2  
Total Pages :2  
Certificate Date: 14-DEC-2000  
Invoice No. : I0035140  
P.O. Number :  
Account : SGY

Project :  
Comments: ATTN: DAN INNES CC: MIKE BYRON

**CERTIFICATE OF ANALYSIS** **A0035140**

665029	205	219	4	10	8	318	0.2	580	65	< 0.1		
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CERTIFICATION:  \*





Date: 2002-SEP-06

GEOSCIENCE ASSESSMENT OFFICE  
933 RAMSEY LAKE ROAD, 6th FLOOR  
SUDBURY, ONTARIO  
P3E 6B5

Tel: (888) 415-9845  
Fax: (877) 670-1555

FALCONBRIDGE LIMITED  
SUITE 1200, 95 WELLINGTON STREET WEST  
TORONTO, ONTARIO  
M5J 2V4 CANADA

**Submission Number:** 2.23661  
**Transaction Number(s):** W0270.00936

Dear Sir or Madam

**Subject: Deemed Approval of Assessment Work**

We have approved your Assessment Work Submission with the above noted Transaction Number(s) as per 6(7) of the Assessment Work Regulation. Only eligible assessment work is deemed approved for assessment work credit. The attached Work Report Summary indicates the results of the approval.

NOTE: The report has not been reviewed for technical deficiencies and reported expenses were not evaluated based on the Industry Standard.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact LUCILLE JEROME by email at [lucille.jerome@ndm.gov.on.ca](mailto:lucille.jerome@ndm.gov.on.ca) or by phone at (705) 670-5858.

Yours Sincerely,



Roy Spooner  
Acting Senior Manager, Mining Lands Section

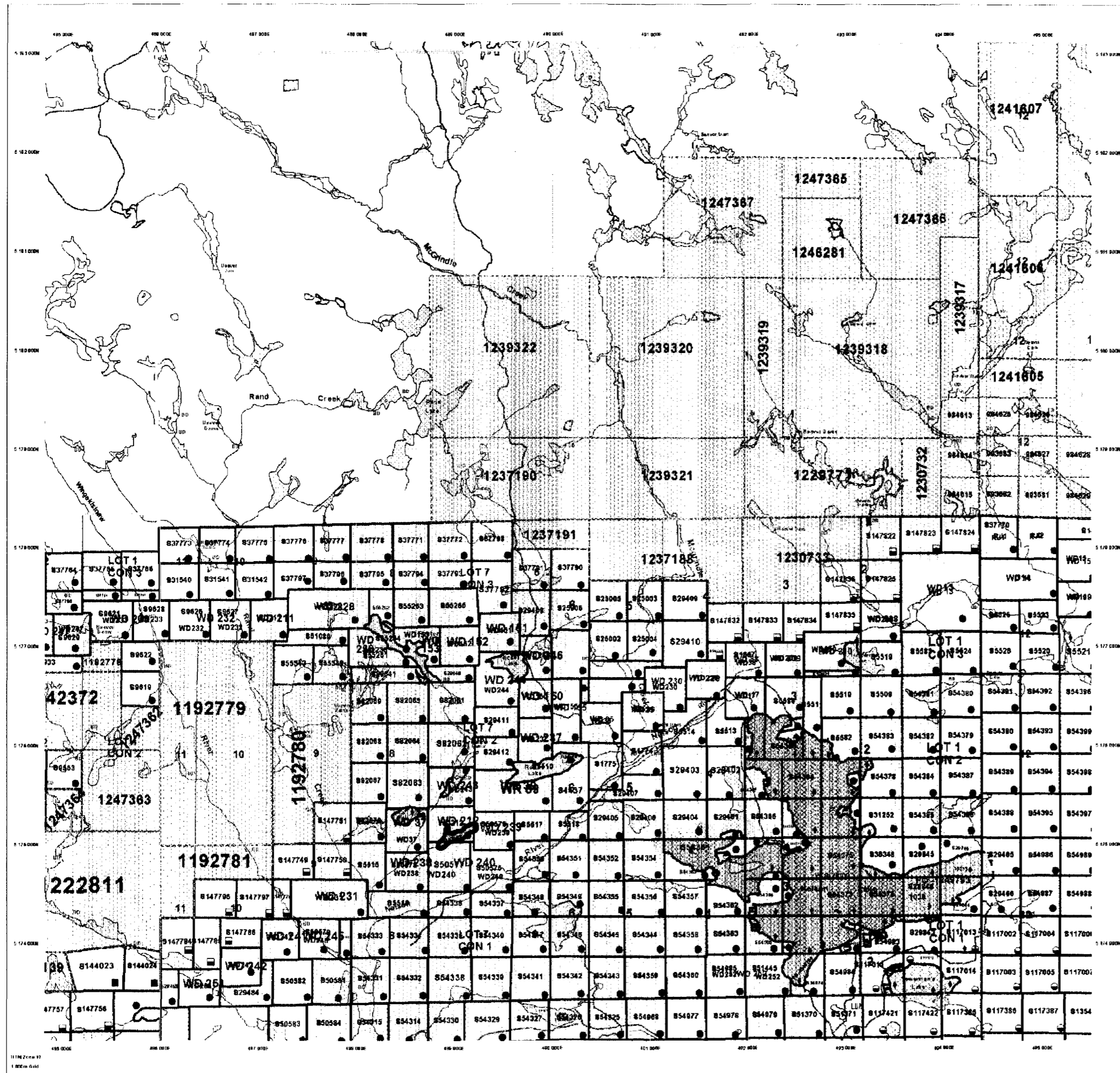
**Cc:** Resident Geologist

Falconbridge Limited  
(Claim Holder)

Aurora Platinum Corp.  
(Agent)

Assessment File Library

Falconbridge Limited  
(Assessment Office)



**TOPOGRAPHIC**

- ▲ Mine Mouth
- ▲ Mine Entrance
- ▲ Road
- ▲ Foot
- ▲ Top
- ▲ Industrial Facility
- ▲ Railway
- ▲ CANAL / DRAIN LINE
- ▲ Wooded Area
- ▲ Municipal / Central / Other / Other Control

**LAND TENURE**

- 100000 Footed
- 200000 Footed
- 300000 Footed
- 400000 Footed
- 500000 Footed
- 600000 Footed
- 700000 Footed
- 800000 Footed
- 900000 Footed
- 1000000 Footed
- 1100000 Footed
- 1200000 Footed
- 1300000 Footed
- 1400000 Footed
- 1500000 Footed
- 1600000 Footed
- 1700000 Footed
- 1800000 Footed
- 1900000 Footed
- 2000000 Footed

**LAND TENURE WITHDRAWALS**

123164 Area Withdrawal from Discretion Mining Act Withdrawal Types

WB 123164 Area Withdrawal from Discretion Mining Act Withdrawal Types

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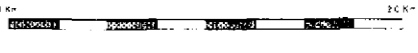
**IMPORTANT NOTICES**

**LAND TENURE WITHDRAWAL DESCRIPTIONS**

Serial	Date	Description
WS 2400	WSM	MAY 28 2000 340.21 10'S. 2100' 2650W' 845' 19150'
WS 1	WH	JUN 1 1983 PUBLIC BEACH 1400'S.N.D.

**IMPORTANT NOTICES**

State with which each registration, land title or condition was filed, affecting mining or mineral development activities.



411LINE2005 2.23661 BOWELL

*2.23661  
PROSP  
ASSAY*

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Projection: UTM (8 Zones)  
Tape: 1:50,000  
Meters & Tensives: Provincial Mining Registrars' Office

1:100 000 Scale