GRAVIMETRIC SURVEY
property of
NORANDA EXPLORATION CO. LIMITED
FOLEYET Property #92-C
Foleyet Township
Province of Ontario
May 1993

P. Lortie R. Turcotte

RECEIVED
NOV 13 1993
GEOSCIENCE ASSESSMENT OFFICE

93-953
SUMMARY

In March 1993, a gravimetric survey was carried out on the property FOLEYET Property #92-C, owned by NORANDA EXPLORATION CO. LIMITED, after the successful results of an initial test performed during the summer of 1992. The gravimetric survey was performed to investigate the strike length of electromagnetic conductors previously detected by an HLEM survey.

A total of 12 line-kilometres (317 stations) was added by this survey to the original 1.1 line-km (41 stations) of the initial test. This survey covers grid lines from 7+00E to 23+00E and was done with a Lacoste & Romberg gravity meter. An electronic level manufactured by GDD was used to measure the relative elevation of the ground at each station.

Three horizons characterized by narrow and wide anomalies of small positive values of 0.2 to 0.4 mgal were detected throughout the survey area. The most northern horizon is associated with an electromagnetic conductor and should definitely be investigated. The other anomalous horizons may be caused either by bedrock variations, lithological changes or possibly massive sulphide bodies at depth.
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<th>DRAWING NO.</th>
<th>GRAVIMETRIC SURVEY</th>
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<tbody>
<tr>
<td>6.1</td>
<td>Bouguer Gravity and Elevation Profiles</td>
</tr>
<tr>
<td>6.3</td>
<td>Bouguer Contours and Elevation Profiles</td>
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</tbody>
</table>
Figure #1: Claims plan map
NORANDA EXPLORATION CO. LIMITED

FOLEYET Property #92-C

Figure #2: Survey area
INTRODUCTION

In March 1993, a gravimetric survey was carried out on a property owned by NORANDA EXPLORATIONS CO. LIMITED, FOLEYET Property #92-C, Foleyet Township, Province of Ontario.

This survey was designed to locate positive gravimetric anomalies associated with massive sulphide mineralization intersected in a drillhole on the property (after magnetic and horizontal loop electromagnetic surveys).

PROPERTY, LOCATION AND ACCESS

The property is located approximately 5 kilometres SSE of the town of Foleyet in the township of the same name, Province of Ontario.

This property is easily accessible from Highway #101 south of Foleyet, and then via dirt roads and trails to the southeast.

The property claim numbers are registered with the Ministry of Northern Development and Mines and are shown in figure #1. The area covered by the gravimetric survey is shown in figure #2 of the present report.
GEOPHYSICAL SURVEY

A gravimetric survey and a relative elevation survey (values not tied to the national or provincial geodesic database) were carried out on a portion of the property from March 11th to March 21st, 1993. An approximate total of 12 line-kilometres were covered with a LaCoste & Romberg gravity meter, G-642, and with a GDD electronic level meter coupled to a 50-metre cable.

A total of 317 stations were measured every 50 metres (with intermediate values over the electromagnetic conductors) over 15 grid lines, L7+00E to L23+00E.

Results of a test survey, carried out on grid lines 18+00E and 19+00E during the summer of 1992, were provided by NORANDA EXPLORATIONS CO. LIMITED This test survey was performed with a CG-2 gravity meter manufactured by Scintrex and covered 41 stations spaced every 25 metres.

SURVEY SPECIFICATIONS

The gravimetric survey was carried out along grid lines oriented N-S and cut at a 100-metre interval. The grid lines were chained and stations marked every 25 metres.
The gravimetric and relative elevation measurements were done simultaneously on plates above the ground. Relative elevation measurements included the elevation of the ground and of the height of the gravimetric plate (instrument) at each station. The relative elevation values presented on the maps are ground elevation values.

The gravimetric and relative elevation measurements were tied to a base station located at an easily accessible point along the base line, at the following coordinates: 18+92E and 0+05N.

Arbitrary values of 100.00 metres and 10.00 mgals were selected for the relative elevation and gravimetric values of the base station (at ground level).

The gravity meter and the electronic level meter permitted measurements to be made with a resolution of 0.01 mgal and 0.001 metre respectively. It is estimated that the noise level of the survey is such that Bouguer Anomaly and elevation values have respective accuracies of 0.07 mgal and 0.05 metre.

DATA REDUCTION SPECIFICATIONS

The gravimetric measurements were reduced to obtain Bouguer Anomaly values. The following corrections were applied to the measurements:
1. Earth-tide correction: calculated with a software developed by the Geological Survey of Canada. Resolution of 0.001 mgal.

2. Meter drift correction: calculated from the closure values at the base station, after the Earth-tide correction was done. Resolution of 0.01 mgal.

3. Latitude correction: calculated from the base line with the equations 0.0008071 sin 2@ mgal/metre, where @ is the reference latitude (48°12'N). The reference longitude was 82°25'W. Resolution of 0.01 mgal.

4. Free-air correction: calculated with the equation -0.3085 mgal/metre of the relative elevation difference between each station and the base station assumed datum (100.00 metres). Resolution of 0.01 mgal.

5. Bouguer correction: calculated with the equation 0.112 mgal/metre of the relative elevation difference between each station and the base station assumed datum (100.00 metres), and an assumed density of 2.67 gr/cc. Resolution of 0.01 mgal.

No topographic corrections were done for this project, as most topographic effects were evaluated to be less than 0.03 mgal.
A gravity meter constant of 1.02745 was used to change the meter measurements into gravimetric values. The Bouguer Anomaly was obtained by adjusting the calculated gravimetric value at each station to the value of the local base station.

The results of the test survey (1992) were also adjusted as follows: the original elevation values were not changed, but the base level of the Bouguer Anomaly was adjusted by subtracting a value of 109.73 mgal to both grid lines (18+00E and 19+00E) values.

RESULTS AND INTERPRETATION

The gravimetric results indicate a very subdued regional gradient from east to west, with very little variation from south to north.

Small positive anomalies with amplitude variations of 0.2 to 0.5 mgal were detected on several grid lines throughout most of the survey area. Most of these anomalies form three horizons striking approximately E-W to SE-NW (from east to west).

One of these horizons (the northern trend) is caused by a near surface body of higher density, with respect to the local environment, and is closely associated with the position of an electromagnetic conductor. The strongest anomaly along this horizon is located on L18+00E at 0+85N.
A second horizon, from L15+00E to L11+00E, has a similar amplitude but a much wider shape, possibly caused by the presence of a body at depth or a variation in bedrock topography (bedrock closer to surface). The most definite anomaly for this horizon is located on L15+00E at 0+75N.

A third horizon located south of the base line on L17+00E and L18+00E is characterized by wide positive anomalies of small amplitude, possibly caused by a body at an approximate depth of 100 metres. The anomaly is somewhat similar on both grid lines.

Another positive anomaly was detected on L7+00E at 3+75N with no apparent extension to the east. It is suggested to extend the survey coverage to the west for a better evaluation of this trend.

The smaller variations of the Bouguer Anomaly profiles are probably associated with bedrock topography and/or lithological variations.
CONCLUSION AND RECOMMENDATIONS

The gravimetric survey carried out on the FOLEYET Property #92-C of NORANDA EXPLORATIONS CO. LIMITED defined some broad and narrow, small positive anomalies possibly associated with sources located at depth and near surface. Some of these anomalies coincide with electromagnetic conductors detected on previous HLEM surveys.

Most of the noticeable anomalies are interpreted to be caused by lithological changes and/or by the presence of sulphide-rich bodies. Some sources appear to be located at depth, especially the anomalous source located south of the base line.

Respectfully submitted,

VAL D'OR GEOPHYSIQUE LTD

By: Paul Lortie, P.Eng.
Geophysicist

And by: Robert Turcotte T.Sc.A.
CERTIFICATE

THIS IS TO CERTIFY THAT:

I reside at 681 Boulle, Beloeil, province of Quebec, since 1990.

I am a graduate of Ecole Polytechnique, Université de Montréal, where I have received a B.Sc.A. in Geological Engineering in 1979.

I have been engaged in exploration geophysics since 1977, and have been practicing as a professional engineer since 1979.

I am a member of the Ordre des Ingénieurs du Québec since 1979.

I am a member of the Prospectors & Developers Association of Canada, the Quebec Prospectors Association, the Association des Professionnels en Géologie et Géophysique du Québec, and the Société de Géophysique du Québec.

I do not hold nor do I expect to receive an interest of any kind in the claims held by NORANDA EXPLORATIONS CO. LIMITED

Signed in Val d'Or, this May 20, 1993.

By:

Paul Lortie, P.Eng.
Geophysicist.
CERTIFICATE

THIS IS TO CERTIFY THAT:

I am a resident of Val d'Or, province of Quebec, since 1977.

I am a technologist graduated from "College du Nord-Ouest", Rouyn-Noranda, Quebec in 1977.

I have been actively engaged in geophysical exploration since 1977 and have acquired a wide range of experience in geophysical methods and techniques.

I am a member of "Corporation professionnelle des Technologues des Sciences Appliquees du Quebec" and also a member of the Quebec prospectors association and of the Canadian Institute of Mining and Metallurgy.

I do not hold nor do I expect to receive an interest of any kind in these claims held by NORANDA EXPLORATIONS CO. LIMITED

Signed in Val d'Or, this May 20, 1993.

By: Robert Turcotte, T.Sc.A.
Declaration of Assessment Work Performed on Mining Land

Instructions: - For work performed on mining land, please fill out form 0240.

1. Recorded holder(s) (Attach a list if necessary)

<table>
<thead>
<tr>
<th>Name</th>
<th>Client Number</th>
<th>Telephone Number</th>
<th>Fax Number</th>
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</thead>
<tbody>
<tr>
<td>Mines Exploration Noranda Inc</td>
<td>176 208</td>
<td>819-762-0813</td>
<td>819-762-9650</td>
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</tbody>
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2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

- Geotechnical: prospecting, surveys, assays and work under section 18 (regs) [✓]
- Physical: drilling, stripping, trenching and associated assays [ ]
- Rehabilitation [ ]

<table>
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<th>Work Type</th>
<th>Office Use</th>
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<td>GRAVIMETRIC SURVEY</td>
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<th>To</th>
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<tr>
<td>Day</td>
<td>Month</td>
<td>Year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1993</td>
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</table>

<table>
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<tr>
<th>Global Positioning System Data (if available)</th>
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<tr>
<td>Township/Area</td>
</tr>
<tr>
<td>M or G-Plan Number</td>
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<table>
<thead>
<tr>
<th>Commodity</th>
<th>Total $ Value of Work Claimed</th>
<th>NTS Reference</th>
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<tr>
<td></td>
<td>4,820.00</td>
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<tr>
<th>Mining Division</th>
<th>Resident Geologist</th>
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<tbody>
<tr>
<td>Porcupine</td>
<td>Porcupine</td>
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</table>

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;
- provide proper notice to surface rights holders before starting work;
- complete and attach a Statement of Costs, form 0212;
- provide a map showing contiguous mining lands that are linked for assigning work;
- include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

<table>
<thead>
<tr>
<th>Name</th>
<th>Telephone Number</th>
<th>Fax Number</th>
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<tbody>
<tr>
<td>Validor Geophysique</td>
<td>819-825-6529</td>
<td>819-825-1342</td>
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<th>Name</th>
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<th>Fax Number</th>
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<tr>
<td>Paul Lortie, P. Enz Geophysicist</td>
<td>819-825-6537</td>
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4. Certification by Recorded Holder or Agent

I, ________________________, do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent

Date: ________________________

Agent's Address: 152 Ave. Murdoch, Quebec, J9X 1B2

Transaction Number (office use) 187960 00628

Assessment Files Research Imaging
5. **Work to be recorded and distributed.** Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

<table>
<thead>
<tr>
<th>Number of Claim Units, For other mining land, list hectares.</th>
<th>Value of work performed on this claim or other mining land.</th>
<th>Value of work applied to this claim.</th>
<th>Value of work assigned to other mining claims.</th>
<th>Bank, Value of work to be distributed at a future date.</th>
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<td>300</td>
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**Column Totals**: $4,800  

6. **Instructions for cutting back credits that are not approved.**

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

*Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.*

For Office Use Only

Received Stamp  
Deemed Approved Date  
Date Notification Sent  
Date Approved  
Total Value of Credit Approved  
Approved for Recording by Mining Recorder (Signature)
Statement of Costs
for Assessment Credit

État des coûts aux fins
du crédit d'évaluation

Mining Act/Lol sur les mines

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.


1. Direct Costs/Coûts directs

<table>
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<th>Description</th>
<th>Amount Montant</th>
<th>Totals Total global</th>
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<td>Supervision sur le terrain</td>
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<td>Equipment Rental Location de matériel</td>
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Total Direct Costs
Total des coûts directs 9,600

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject any or part of the assessment work submitted.

Remises pour dépôt
1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Certification Verifying Statement of Costs
I hereby certify:

that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as ______________________, I am authorized

(Recorded Holder, Agent, Position in Company)
to make this certification.

Signature

Date

Filing Discount
1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.

2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

   Total Value of Assessment Credit
   x 0.50 = Total Assessment Claimed

   9,600 x 0.50 = 4,800

Total Value of Assessment Credit
Total Assessment Claimed

Certification Verifying Statement of Costs
I hereby certify:

that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as ______________________, I am authorized

(Recorded Holder, Agent, Position in Company)
to make this certification.

Signature

Date

Remises pour dépôt
1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Attestation de l'état des coûts
J'atteste par la présente:
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de ______________________, je suis autorisé

(Titulaire enregistré, représentant, poste occupé dans la compagnie)

À faire cette attestation.
February 3, 1998

Paul Masse
MINES ET EXPLORATION NORANDA INC.
SUITE 2700
1 ADELAIDE STREET EAST
TORONTO, Ontario
M5C-2Z8

Dear Sir or Madam:

Subject: Transaction Number(s):

Submission Number: 2.17900

Status

W9760.00628 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Lucille Jerome by e-mail at jeromel2@epo.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,

Original Signed by
Blair Kite
Supervisor, Geoscience Assessment Office
Mining Lands Section

Correspondence ID: 11855
Copy for: Assessment Library
## Work Report Assessment Results

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</tr>
<tr>
<td>Assessor</td>
<td>Lucille Jerome</td>
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<td>First Claim Number</td>
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<td>1182843</td>
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### Correspondence to:
- Resident Geologist
- South Porcupine, ON
- Assessment Files Library
- Sudbury, ON

### Recorded Holder(s) and/or Agent(s):
- Paul Masse
- MINES ET EXPLORATION NORANDA INC.
- TORONTO, Ontario
LEGEND
INTERPRETATION.

GRAVITY PROFILES
Probable gravity anomaly axes.
Possible gravity anomaly axes.

Readings:
Bouguer Gravity: 1 cm = 0.5 mgal, relative zero = 10.00
Relative Elevation: 1 cm = 10 metres, relative zero = 100.00

Instruments: LACOSTE & ROMBERG Gravimeter, G-642
G.D.D. Electronic Level

* Lines 1800E S to 1990E were surveyed in 1992

SCALE 1 : 5 000
O 100 200 300 400
O 500 1000 2000 3000

NORANDA EXPLORATION CO. LTD
FOLEYET PROPERTY #92-C
GRAVITY SURVEY
BOUGUER GRAVITY AND ELEVATION PROFILES
VAL D'OR GEOPHYSIQUE LTEE
Interpreted by: P. Lortie, P. Eng.
Date 05/93
Scale 1 : 5 000
Drawing no. 93-953-6.1