TECHNICAL REPORT ON THE WINTER 2001
EXPLORATION DRILLING PROGRAM

Cargill Township
District of Cochrane
Ontario
NTS 42 G/7

Kapuskasing, Ontario
July, 2001

Peter Marenghi
Geologist
Phone: (705)337-4218
E-mail: Pmarengh@agrium.com
A program of exploratory drilling was conducted on the site of the Kapuskasing Phosphate Operations during the period between January and May of 2001. The program was designed to search for additional phosphate-bearing material beyond the current limits of the proposed Open Pit Mine, and to attempt to expand the limits of selected ore zones.

A total of 5 230 metres of core were produced from 57 drill holes. For the most part, this method of drilling proved rather effective in the recovery of unconsolidated materials. Recoveries were somewhat variable with the different material types, but on an overall basis the recoveries were on the order of 70 to 80%. With some revisions to our procedures, this drilling technique provides a superior sample for our purposes to the alternatives of Reverse Circulation and Sonic Drilling. Specific advantages include increased depth penetration, ability to traverse hard / cemented sections, and a solid recovered core of unconsolidated material which is an immense aid in identification and analysis of the material.
## TABLE OF CONTENTS

Summary | i  
List of Figures | ii  
List of Tables | ii  
Certification | iii  

| 1.0 INTRODUCTION | 1  
| 2.0 LOCATION, ACCESS, AND CLAIMS | 1  
| 3.0 PREVIOUS WORK | 4  
| 4.0 GEOLOGICAL SETTING | 4  
| 5.0 DESCRIPTION OF WINTER 2001 DRILLING PROGRAM | 6  
| 6.0 CONCLUSIONS | 7  
| 7.0 REFERENCES | 7  

APPENDIX I  Detailed Drill logs  
APPENDIX II  Plans and Sections
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Location Map</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Land Holdings Map</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Regional Geological Setting, Kapuskasing Phosphate Operations</td>
<td>5</td>
</tr>
</tbody>
</table>

# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>List of claims and mining leases, Winter 2001 drilling program</td>
<td>1</td>
</tr>
</tbody>
</table>
STATEMENT OF QUALIFICATIONS

I, Peter Marenghi, currently residing at 39 Pine Crescent Street, Kapuskasing, Ontario do hereby certify the following:

1) That I am employed by Agrium General Partnership in the capacity of Geologist at the Kapuskasing Phosphate Operations,
2) That I hold the following degree:

   B. Sc. in Geology, 1989, Universite du Quebec a Chicoutimi, Chicoutimi, Qc

3) That I have been practicing my profession since 1989.

Kapuskasing, Ontario
July, 2001

Peter Marenghi,
Geologist
Phone: (705)337-4218
E-mail: Pmarengh@agrium.com
1.0 INTRODUCTION

A program of exploratory drilling was conducted on the Agrium Kapuskasing Phosphate Operation Mine Site located in Cargill Township during the period between January and April, 2001. This program was designed to search for additional phosphate-bearing material beyond the current limits of the proposed Open Pit mine, and to attempt to expand the limits of selected ore zones.

2.0 LOCATION, ACCESS, AND CLAIMS

The mine site is located in the north western portion of Cargill Township, the southern portion of Cumming Township, and the eastern portion of Ecclestone Township, approximately 30 kilometres south west of the town of Kapuskasing, Ontario (Figure 1). Access to the mine site is provided by all-weather gravel roads departing from the town. The current land holdings are held in the name of Viridian Inc., a predecessor company to Agrium General Partnership, and constitute a series of Mining Leases, unpatented mining claims, and Licenses of Occupation (Figure 2). Table 1 provides the relevant details pertaining to the claims on which the work was done:

Table 1. List of claims and mining leases covered in the Winter 2001 drilling program.

<table>
<thead>
<tr>
<th>Claim No.</th>
<th>Lease No.</th>
<th>Area (Ha)</th>
<th>Amount Drilled (m)</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>89923</td>
<td>104714</td>
<td>18.76</td>
<td>236</td>
<td>$15,801.92</td>
</tr>
<tr>
<td>77326</td>
<td>104714</td>
<td>15.00</td>
<td>166</td>
<td>$11,075.52</td>
</tr>
<tr>
<td>78657</td>
<td>104714</td>
<td>16.32*</td>
<td>974</td>
<td>$68,037.28</td>
</tr>
<tr>
<td>78658</td>
<td>104714</td>
<td>18.66*</td>
<td>1244.5</td>
<td>$83,033.04</td>
</tr>
<tr>
<td>78659</td>
<td>104714</td>
<td>18.63*</td>
<td>231.5</td>
<td>$15,445.68</td>
</tr>
<tr>
<td>413072</td>
<td>104395</td>
<td>2254.43</td>
<td>579.5</td>
<td>$38,664.24</td>
</tr>
<tr>
<td>413073</td>
<td>104395</td>
<td>2254.43</td>
<td>313</td>
<td>$20,862.55</td>
</tr>
<tr>
<td>413074</td>
<td>104395</td>
<td>2254.43</td>
<td>929.5</td>
<td>$57,325.24</td>
</tr>
<tr>
<td>413075</td>
<td>104395</td>
<td>2254.43</td>
<td>327</td>
<td>$21,817.44</td>
</tr>
<tr>
<td>413076</td>
<td>104395</td>
<td>2554.43</td>
<td>229</td>
<td>$17,120.88</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>5 230</strong></td>
<td></td>
<td><strong>$349,183.79</strong></td>
</tr>
</tbody>
</table>

*Note: these claims are contained as individual parcels within the mining lease.
Figure 1: Location Map
Cumming Twp

Ecclestone Twp

Cargill Twp

Area of drilling, Winter 2001

Figure 2. Land Holdings Map
3.0 PREVIOUS WORK

The first record of exploration work on the property was by Continental Copper Mines Limited who conducted a diamond drilling program in 1955 to examine a magnetic anomaly for its potential of hosting copper-nickel mineralization. The phosphate potential of the property was first discovered in 1974, and subsequent work lead to a commencement of full scale production. A listing of the exploration and development activities on the property is given below:

1955: **Continental Copper Mines Limited**, Diamond drilling (rotary), 7 holes, 945 metres.


1975: **International Minerals and Chemical Corporation**, Reverse Circulation drilling, 201 holes, 18 515 metres.


1996: **Viridian Inc.**, Reverse Circulation drilling, 78 holes, 7 530 metres.

1997: **Agrium Inc.**, Diamond drilling (Rotary), 7 holes, 624 metres.

1998: **Agrium Inc.**, Sonic drilling, 5 holes, 403 metres.

2000: **Agrium Inc.**, Diamond drilling (Rotary), 29 holes, 2483 metres.

4.0 GEOLOGICAL SETTING

The property overlies rocks situated within the Kapuskasing Structural Zone (KSZ). This is a northeasterly striking, fault-bounded feature which is interpreted be an up-thrust block of material from the lower portions of the earth's crust. All of the rocks within the KSZ have been metamorphosed to either amphibolite or granulite facies.

The local geology consists of a core complex of multi-phased carbonatite rocks which are surrounded by a ring of pyroxenite, and have provided a U-Pb age date of 1907.
Figure 3. Regional Geological Setting, Kapuskasing Phosphate Operations

Legend

- Pre-glacial Overburden
- Residium
- Leached Carbonatite
- Carbonatite
- Contact Zone
- Pyroxenite (Amphibolite)
- Quartz Diorite Gneiss
- Geological Boundary
- Fault

SCALE 1:20,000

modified from Sage, R.P. (1988), OGS Study 36
Ma +/- 4 (Sage, 1988). These two rock types are in turn situated within quartz diorite gneisses that form a large portion of the Kapuskasing Structural Zone (Figure 3). The carbonatite host rock is sub-divided into two sub-types: sovite and rauhaugite. The sovite is a medium to coarse grained, white, banded rock in which calcite is the dominant carbonate species and it includes accessory minerals such as phlogopite, magnetite, clinohumite, apatite, olivine, pyrrhotite, and amphibole. Apatite can reach 15% abundance in this rock type (Sage, 1988). In sharp contrast to the sovite, the rauhaugite appears as a massive, fine grained, dense, beige to tan coloured rock in which dolomite is the dominant carbonate species. Phosphate values can range to 14% P₂O₅ in the rauhaugite.

The high grade ore at the Kapuskasing Phosphate Operations is derived from the weathering and dissolution of the soluble minerals in the host carbonatite rock (e.g. phlogopite). This process has left behind a residue of the insoluble minerals, largely apatite crystals, which is termed residuum. This residuum is formed above the host carbonatite, and is in turn covered by glacial deposits of lacustrine clays, and boulder tills of the Pleistocene age. Limited data suggest that this weathering took place during the late Cretaceous period (Sage, 1988).

In terms of a reference grid, the UTM co-ordinate system has been adopted (NAD 27, Zone 17).

Additional details regarding the mining, milling, and processing at the Kapuskasing Phosphate Operations are given in Pressacco (2000).

5.0 DESCRIPTION OF THE WINTER 2001 DRILLING PROGRAM

A total of 5230 metres of core were produced from 57 drill holes. All of the holes were spotted by means of a Trimble PRO XRS GPS system with referencing to known survey monuments. The collars of all of the holes were re-surveyed after their completion to determine the as-drilled hole location. The drilling was conducted by Norex Drilling of Timmins, Ontario under the supervision of the author, with assistance from the Reno Pressacco (Geologist, Agrium Kapuskasing Phosphate Operation). The program began in early January, 2001 and was completed with the termination of hole AGR-00-087 on May 10, 2001. The drilling was conducted with the goal of recovering as much of the unconsolidated materials as possible, and to that end, a triple-tube arrangement using regular HQ-sized drill rods was utilized for those materials lying above the rock surface. Once the rock contact was reached, the drilling method switched over to a normal HQ-sized recovery method. All of the recovered material was logged by the author, and is currently stored at the mine site of the Agrium Kapuskasing Phosphate Operations. Copies of the detailed drill logs are provided in Appendix I, and plans and sections of the drill holes are given in Appendix II.
6.0 CONCLUSIONS

For the most part, this method of drilling proved rather effective in the recovery of unconsolidated materials. Recoveries were somewhat variable with the different material types, but on an overall basis the recoveries were on the order of 70 to 80%. With some revisions to our procedures, this drilling technique provides a superior sample for our purposes to the alternatives of Reverse Circulation and Sonic Drilling. Specific advantages include increased depth penetration, ability to traverse hard / cemented sections, and a solid recovered core of unconsolidated material which is an immense aid in identification and analysis of the material.

7.0 REFERENCES


Peter Marenghi,
Geologist
Agrium, Kapuskasing Phosphate Operations
APPENDIX I

DRILL LOGS
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-031

North 5461549.8
East 367292.4
Elevation 209
Proposed Depth 100
Actual Depth 29
Number of Boxes 9

Logged By P. Marenghi
Date Logged 2/2/2001
Claim number 89923
Township Cargill
Azim 0
Dip 90
Drilling Contractor Norex Drilling
Purpose Verify depth of rock in Stage O pit.

Results
Why hole terminated Early penetration into waste rock.
Core Size HQ-3
Casing None
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Pulps
Core Stored Agrium Minesite

Friday, June 08, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>6.0</td>
<td>1.8</td>
<td>713</td>
<td>SAPROLITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark brown, coarse sand/gravel with 10% cemented residuum. Hole drilled on 215 bench in Stage 0 pit, directly in ore/rock. No recovery between 2.0-3.5m and very little between 3.5-5.0m. Lower contact established by the appearance of solid rauhaugite.</td>
</tr>
<tr>
<td>6.0</td>
<td>29.0</td>
<td>21.9</td>
<td>710</td>
<td>RAUHAUGITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Tan/beige, massive, weakly foliated rauhaugite (carbonatite) schistosity 35-40 degrees to core axis. Local coarse grained magnetite xts. Local 0.5m veins of sandy weathered carbonatite rock (saprolite). Numerous cavities filled with calcite/quartz. Moderately fractured (blocky) rock. 29.0 m = EOH.</td>
</tr>
</tbody>
</table>

**Drill Hole ID**

<table>
<thead>
<tr>
<th>North</th>
<th>Start Date</th>
<th>East</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5461549.8</td>
<td>2/1/2001</td>
<td>367292.4</td>
<td>2/2/2001</td>
</tr>
</tbody>
</table>

**Elevation** 209

**Proposed Depth** 100

**Actual Depth** 29

**Number of Boxes** 9

---

*Friday, June 08, 2001*
**Agrium**  
Kapuskasing Phosphate Operation  
Exploration Drilling  
Project Winter 2001

<table>
<thead>
<tr>
<th><strong>Logged By</strong></th>
<th>P. Marenghi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Claim number</strong></td>
<td>89923</td>
</tr>
<tr>
<td><strong>Azim</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Dip</strong></td>
<td>-90</td>
</tr>
<tr>
<td><strong>Drilling Contractor</strong></td>
<td>Norex Drilling</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>Verify depth of rock in Stage 0 Pit.</td>
</tr>
</tbody>
</table>

**Results**

- **Why hole terminated**: Early penetration into waste rock.  
- **Core Size**: HQ-3  
- **Casing**: None  
- **Hole Cemented**: No  
- **Number of Assays**:  
- **Number of ICP**: 0  
- **Rejects/Pulps saved**: Pulps  
- **Core Stored**: Agrium Minesite

**Logged By**: P. Marenghi  
**Date Logged**: 2/7/2001  
**Township**: Cargill

<table>
<thead>
<tr>
<th><strong>Drill Hole ID</strong></th>
<th>AGR-01-032</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North</strong></td>
<td>5461549.3</td>
</tr>
<tr>
<td><strong>Start Date</strong></td>
<td>2/2/2001</td>
</tr>
<tr>
<td><strong>East</strong></td>
<td>367338.5</td>
</tr>
<tr>
<td><strong>End Date</strong></td>
<td>2/4/2001</td>
</tr>
<tr>
<td><strong>Elevation</strong></td>
<td>204.9</td>
</tr>
<tr>
<td><strong>Proposed Depth</strong></td>
<td>120</td>
</tr>
<tr>
<td><strong>Actual Depth</strong></td>
<td>75.5</td>
</tr>
<tr>
<td><strong>Number of Boxes</strong></td>
<td>18</td>
</tr>
</tbody>
</table>

**Claim number**: 89923  
**Township**: Cargill  
**Azi©m O**: Oip -90  

---

*Friday, June 08, 2001*
### Agrium

**Kapuskasing Phosphate Operation**  
**Exploration Drilling**  
**Project**  Winter 2001  

**Drill Hole ID**  AGR-01-032  
**North**  5481549.3  
**East**  367338.5  
**Elevation**  204.9  
**Proposed Depth**  120  
**Actual Depth**  75.5  
**Number of Boxes**  18  
**Start Date**  2/2/2001  
**End Date**  2/4/2001

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 0.0 m | 3.5 m | 0.2 m | 702 | GREY RESIDUUM  
- Dark gray apatite sand. Very poor recovery possibly due to the fact that the hole was drilled in a mined area of Stage 0 Pit (material loosened from blasting and digging). Lower contact established by the appearance of brown rocky rubble. |
| 3.5 m | 11.0 m | 1.4 m | 720 | IRON-STAINED ROCK  
- Dark brown/black, rocky rubble/angular fragments of rock. No recovery from 6.5-8.0m. All fragments have heavy dark brown iron staining (goethite). No fines recovered in this section. Lower contact established by the appearance of brown residuum and the lack of rocky fragments |
| 11.0 m | 24.5 m | 4.4 m | 720 | BROWN RESIDUUM  
- Very dark brown, sandy/muddy, homogeneous residuum. No recovery between 12.5-15.5m and 20.0-21.5m. Some rare 3cm sections of gray sandy residuum. Lower contact established by the appearance of rocky material. |
| 24.5 m | 33.5 m | 4.4 m | 713 | ROCKY SAPROLITE  
- Dark brown rocky and sandy weathered carbonate. Some schistosity visible; 20° to the core axis. Lower contact established by the appearance of tan colored rauhangaite. |

Friday, June 08, 2001  

---

---

---
Drill Hole ID: AGR-01-032
North: 5461549.3
East: 367338.5
Elevation: 204.9
Start Date: 2/2/2001
End Date: 2/4/2001
Proposed Depth: 120
Actual Depth: 75.5
Number of Boxes: 18

Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 33.5 | 75.5 | 42.0 m | RAUHAUGITE        | (WITH SECTIONS OF SAPROLITE)
- 33.5 to 44.0m = 50% rauhaugite and 50% saprolite; tan colored medium grained/weathered carbonatite displaying sub-vertical schistosity and containing 10% medium grained black magnetite xts. Carbonatite is variably weathered and often displays 10-20cm sections of dark brown, muddy/sandy saprolite.
- 44.0-62.0m = 75% rauhaugite and 25% saprolite; mainly tan colored, massive, homogeneous rauhaugite containing 1-2m sections of saprolite (dark brown sandy weathered rauhaugite) approx. 1-2% magnetite phenocrysts.
- 62.0-75.5m = 50% rauhaugite and 50% saprolite; saprolite appears in 2m sections and has a very dark brown color. The visible rauhaugite is very weathered to the semi-consolidated state. Schistosity remains sub-vertical. 75.5m = EOH. |
Drill Hole ID
AGR-01-033

Start Date 3/17/2001
End Date 3/17/2001

North 5461546.946
East 367391.132

Elevation 206.7

Proposed Depth 100
Actual Depth 36.5

Number of Boxes 7

Logged By P. Marenghi
Claim number 89923
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Purpose

Results

Why hole terminated Normal termination
Core Size HQ
Casing None
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Date Logged 5/30/2001
Township Cargill

Friday, June 08, 2001
**Agrium**  
Kapuskasing Phosphate Operation  
Exploration Drilling  

**Project** Winter 2001  

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>5.0 m</td>
<td>1.7 m</td>
<td>720</td>
<td>GREY CEMENTED RESIDUUM</td>
<td>34 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- This hole was drilled in Stage 0 SE CORNER. Water was taken beside the</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>main sump during ore digs. The water was very dirty and caused accelerated</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>wear in the diamond bit. Recovery in this hole is poor mainly due to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>broken and loose ground cause by blasting and digging. Also this is a</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>second drill brought on site with a new crew who aren't used to the</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ground. Medium to navy gray sandy rubble. Probably cemented residuum or</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>hi iron waste rock. Lower contact established by the appearance of brown</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>rubble.</td>
<td></td>
</tr>
<tr>
<td>5.0 m</td>
<td>29.0 m</td>
<td>11.5 m</td>
<td>713</td>
<td>SAPROLITE</td>
<td>48 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very blocky, rocky, iron stained mixture of cemented rubble/residuum.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Conglomerate texture throughout. Local pieces of sovite? Over the last 3m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No recovery from 11.5 to 14m and very poor recovery (approx. 40%) up to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21.5m. Everything is very dirty due to the sump water. Lower contact</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>established by the appearance of light gray sovite.</td>
<td></td>
</tr>
<tr>
<td>29.0 m</td>
<td>36.5 m</td>
<td>6.4 m</td>
<td>711</td>
<td>SOVITE</td>
<td>85 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light to medium gray (fresh sections over the last m) f.g. calcic matrix</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>containing up to 10% xtals of magnetite/chlorite. No visible schistosity.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36.50m = EOH (Hole stopped because of dirty water problems and the bit was</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>burnt out.)</td>
<td></td>
</tr>
</tbody>
</table>

**Friday, June 08, 2001**
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-034

North 5461500.3
East 3670443.3
Elevation 238.6
Proposed Depth 120
Actual Depth 58.5
Number of Boxes 9

Logged By P. Marenghi
Claim number 413076
Azim 0
Dip -90
Drilling Contractor Norex Drilling
Purpose Definition Drilling

Results
Why hole terminated Normal termination in rock
Core Size NQ3
Casing None
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Pulps
Core Stored Agrium Minesite

Date Logged 1/15/2001
Township Cargill

Friday, June 08, 2001
**Agrium**  
Kapuskasing Phosphate Operation  
Exploration Drilling  

**Project:** Winter 2001  
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
</table>
| 0.0 m | 13.5 m | 5.2 m  | 715               | VARVED/GUMBO CLAY  
- 4cm of black organic peat followed by 1m of dark brown layered varved clay (0-1m) followed by light gray, homogeneous gumbo clay (1-13.5m). Contacts are estimated. Lower contact established by the appearance of 1st boulders. No recovery from 3m to 8m. | 30 %       |
| 13.5 m| 24.0 m | 6.3 m  | 717               | BOULDER/BASAL TILL  
- Light gray to light brown very fine till, locally clay, containing up to 10% pebbles and boulders of varying sizes and composition. Visible boulder compositions include granitic gneiss, mafics volcanics and quartz. Sizes range from a few mm to 35 cm. Lower contact established by appearance of brown mud. The last meter was sampled. Very poor recovery over the last 3 m of this section (21m - 24m =18%). | 60 %       |
| 24.0 m| 36.0 m | 9.2 m  | 720               | BROWN RESIDUUM  
- 80% medium to dark brown sandy mud (crumbly texture); strong iron staining locally (goethite) and tan spots also locally (limonite). 20% rocky rubble of 3-4cm pieces of iron stained carbonatite rock (poor recovery in this material). The last meter of this section becomes richer in green clinochlore. None magnetic throughout. Some visible apatite xts. Lower contact established by appearance of green clinochlore. | 77 %       |
| 36.0 m| 39.0 m | 3.0 m  | 704               | CLINOCHLORIE  
- Medium to olive green section of clinochlore. Layer (as a mica) pasty, homogeneous, soft, grading in to a brown mud as in previous section. No structure visible but good recovery due to thickness/pastiness. | 100 %      |

_Friday, June 08, 2001_
<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.0</td>
<td>51.0</td>
<td>9.5</td>
<td>S130</td>
<td>SAPROLITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Greenish brown muddy/sandy rock (center of core is relatively hard compared to outer layers of core). The green clinochlore is not consistent throughout but rather spotty. This section grades progressively into a harder brown stain carbonatite which determines the lower contact of this unit. Recovery seems to decrease around this rubble zone (soft/hard contacts).</td>
</tr>
<tr>
<td>51.0</td>
<td>58.5</td>
<td>4.0</td>
<td>S10</td>
<td>CARBONATITE (RAUHAUGITE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very blocky, medium to dark brown (stained), very fine grained, locally tan brown, displaying numerous cavities (empty, some filled with chert), local veins of saprolite (dark brown mud), massive texture where visible weathering more pronounced around cavities and veins. Local odd patch of magnetite. Some light brown staining. Could also be cemented ore as it doesn't have the typical rauhaugite look. 58.50m = EOH.</td>
</tr>
</tbody>
</table>

Friday, June 08, 2001
Agrium
Kapuskaising Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-035

Start Date 1/11/2001
End Date 1/13/2001

North 5461448.9
East 367003.3
Elevation 229
Proposed Depth 50
Actual Depth 72.5
Number of Boxes 7

Logged By P. Marenghi
Date Logged 1/19/2001
Township Cargill

Claim number 413076
Azim 0
Dip -90
Drilling Contractor Norex Drilling
Purpose In-fill

Results

Why hole terminated Normal termination in rock
Core Size NO3
Casing Norm
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Pulps
Core Stored Agrium Minesite

Friday, June 08, 2001
**Agrium**

*Kapuskasing Phosphate Operation*

*Exploration Drilling*

**Project** Winter 2001

<table>
<thead>
<tr>
<th>Lithological Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>From</strong></td>
</tr>
<tr>
<td>0.0 m</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>3.5 m</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>15.5 m</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>18.5 m</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>From</td>
</tr>
<tr>
<td>-------</td>
</tr>
</tbody>
</table>
| 26.0 m| 47.0 m| 9.5 m  | 720               | BROWN ROCKY MUD  
- 30% rubble consisting of iron stained rock. The rubble is found mainly between 26m and 38m intermittently mixed with brown/dark mud in 0.5m intervals. The brown mud gets darker with depth (getting closer to the bedrock) which may indicate a layer of saprolite between 41m and 47m. Upper contact established by an increase in the appearance of rock rubble and the lower contact is established by the decrease in brown mud turning progressively to rock. Heavy dark brown staining throughout. Not magnetic. | 45 %     |
| 47.0 m| 72.5 m| 3.7 m  | 720               | MUDDY BROWN ROCK  
- 75-80% light brown to tan brown, blocky rock containing 1.5m intervals (only 1 visible) of saprolite (dark brown mud). Local coarse grained magnetite xts in the rock. Numerous mud filled, iron stained cavities/hairline veins throughout. Some cavities reach up to 10cm. The texture is locally sponge like. Very poor recovery in this section with less than 3m of core between 56.0m and 72.5m. Local grayish green mud typical to saprolite. No apparent structural features. Rock looks massive. 72.5m = EOH. | 15 %     |
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling

Project: Winter 2001

Logged By: P. Marenghi
Claim number: 413076
Azim: 0
Dip: -90
Drilling Contractor: Norex Drilling
Purpose: In-fill

Results

Why hole terminated: Normal termination in rock
Core Size: NQ-3
Casing: None
Hole Cemented: No
Number of Assays
Number of ICP: 0
Rejects/Pulps saved: Pulps
Core Stored: Agrium Minesite

Frikey, June 08, 2001
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>6.5 m</td>
<td>1.4 m</td>
<td>715</td>
<td>VARVED / GUMBO CLAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark brown homogeneous varved clay (0-1.5m), medium gray homogeneous gumbo clay (1.5-6.5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower contact</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>established by appearance of rauhaugite rock. No recovery from 1.5m to 6.0m. No organic material at beginning because of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>hole because this hole was spotted in an existing road.</td>
</tr>
<tr>
<td>6.5 m</td>
<td>34.5 m</td>
<td>28.0 m</td>
<td>710</td>
<td>RAUHAUGITE (CARBONATITE ROCK)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very blocky/broken core but good recovery overall. Drillers tend to spread core out over sections between depth indicators</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(wooden blocks). Recovery is based on actual physical length of core observed in core box divided by the length indicated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>by blocks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light brown (tan) to medium brown, massive rock (carbonatite) displaying numerous hairline fractures and cavities filled</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>with varying minerals (quartz, magnetite, empty...). The rock displays varying degrees of weathering but more pronounced</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>around or close to zones of intense fracturing. Local coarse grained magnetite (black) xtal. Local 1m sections of saprolite</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(brown mud). No evident structural features other than fractures seem to be aligned parallel to core axis. 34.50m = EOH.</td>
</tr>
</tbody>
</table>

---

Friday, June 08, 2001
<table>
<thead>
<tr>
<th>Logged By</th>
<th>P. Marenghi</th>
<th>Date Logged</th>
<th>5/30/2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claim number</td>
<td>78658</td>
<td>Township</td>
<td>Cargill</td>
</tr>
<tr>
<td>Azim</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dip</td>
<td>-90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drilling Contractor</td>
<td>Norex Drilling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Results</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why hole terminated</td>
<td>Normal termination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Size</td>
<td>HQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casing</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hole Cemented</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Assays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of ICP</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rejects/Pulps saved</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Stored</td>
<td>Agrium Minesite</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Friday, June 08, 2001
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project**: Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
</table>
| 0.0  | 20.0 | 20.0   | 720               | GREY RESIDUUM  
- Medium to navy gray, sandy, homogeneous residuum. Lower contact established by the appearance of weathered sovite. | 55 %       |
| 20.0 | 25.3 | 5.3    | 713               | WEATHERED SOVITE  
- Light gray to light green, badly broken sovite. Minor rusty stains in fractures but otherwise unweathered. Locally coarse (1cm) black magnetite xts. Lower contact established by the appearance of fresh sovite. | 70 %       |
| 25.3 | 32.0 | 6.8    | 711               | SOVITE  
- Light gray to white, coarse grained (black magnetite, green chlorite / mica), 0.5 cm xts, sovite. No signs of weathering throughout. Sub-vertical schistosity displayed by thin mm bands of magnetite and chlorite. 32.0m = EOH. | 100 %      |
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Logged By P. Marenghi
Claim number 413074
Azim 0
Dip -90
Drilling Contractor Norex Drilling
Purpose Definition drilling.

Results
Why hole terminated Normal Termination
Core Size HQ-3
Casing None
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Pulps
Core Stored Agrium Minesite

Friday, June 08, 2001
**Agrium**  
*Kapuskasing Phosphate Operation*  
*Exploration Drilling*  
*Project* Winter 2001  

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
</table>
| 0.0      | 1.5    | 0.7        | 714               | VARVED CLAY  
- Brown (medium), semi layered, firm clay. Lower contact established by the appearance of soft gray clay. | 47 %       |
| 1.5      | 7.0    | 2.2        | 715               | GUMBO CLAY  
- Light gray, soft, homogeneous, pasty clay. No inclusions of any kind. Lower contact established by the appearance of pebbles and boulders. | 40 %       |
| 7.0      | 42.5   | 27.6       | 717               | BOULDER / BASAL TILL  
- Medium gray, fine to medium grained silt containing up to 15% pebbles (1mm-4cm) and boulders (reaching up to 1.5m).  
The till is homogeneous for the most part except for rare sections of clay (medium brown; 0.5m) between 8.0 - 12.5m.  
Boulder and pebble composition consist mainly of granodiorite/granitic gneiss/mafic. Boulders are mostly visible on the upper half of this section. Till is fairly massive. Some very well rounded boulders locally. Fairly sharp lower contact established by the appearance of black organic peat unit. | 77 %       |
| 42.5     | 53.0   | 9.5        | 706               | ORGANIC PEAT (CRETACEOUS WASTE)  
- Black to dark gray, soft, homogeneous, organic peat characterized by medium to coarse grained silica sand and very fine organic matrix containing up to 5% pieces of "petrified" wood. This section remains very dark in color until 53m at which depth it turns to a dark gray and "wood chips" seem to disappear (established lower contact). | 90 %       |

*Friday, June 08, 2001*
<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>53.0</td>
<td>63.5</td>
<td>8.4 m</td>
<td>705</td>
<td>SILICA SAND (+ 5% PEAT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium to dark gray, coarse grained, homogeneous sand/coarse silt. Locally</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>bedding is visible in the finer material. Lower contact established on color</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>variation only. Very gradual contact. Grains of sand (mm) are mainly milky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>quartz. Coarseness very visible. Lower contact established by the appearance of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>organic peat.</td>
</tr>
<tr>
<td>63.5</td>
<td>69.5</td>
<td>4.8 m</td>
<td>706</td>
<td>ORGANIC PEAT (CRETACEOUS WASTE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Black/brown very fine organic silt with local 1-2cm pieces of &quot;petrified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>wood&quot;. Fairly sharp lower contact established at A-ore contact. Local beds of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>coarse grained silica sand. No structural features visible. Lower contact</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>established by the appearance of gray residuum.</td>
</tr>
<tr>
<td>69.5</td>
<td>80.0</td>
<td>7.4 m</td>
<td>702</td>
<td>GRAY RESIDUUM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium gray, very fine (flour texture) apatite sand with local streaks of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>white. Lower contact established by the appearance of brown rocky mud.</td>
</tr>
<tr>
<td>80.0</td>
<td>87.5</td>
<td>6.6 m</td>
<td>713</td>
<td>SAPROLITE (WEATHERED SOVITE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark to medium brown, rocky/coarse sand weathered carbonatite (some could</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>be cemented ore). Only 10% is a fresh rock (sovite). Lower contact established</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>by the appearance of &gt; 50% sovite. Some local limonite colored patches. Rock</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>fragments characterized by large cavities, very iron stained, large flakes of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>chlorite, sub-vertical shistosity, large magnetite xts. Lower contact</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>established by the appearance of fresh sovite.</td>
</tr>
</tbody>
</table>
### Agrium

Kapuskasing Phosphate Operation

**Exploration Drilling**

**Project** Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>87.5 m</td>
<td>123.5 m</td>
<td>28.8 m</td>
<td>711</td>
<td>SOVITE/WEATHERED SOVITE</td>
</tr>
</tbody>
</table>

- About 60% grayish green/white/black 1-1.5m sections of sovite with 1-2m intervals of dark brown saprolite. Sections of saprolite decrease with depth, mainly located within the first 10-15m of this section. Sovite is characterized by large (1-4cm) black, widely spaced magnetite phenocrysts, thin layers of green mica/chlorite, matrix of rice shaped white calcite? Many large 2cm cavities are present throughout but seem to decrease with depth. Sub-vertical schistosity. No recovery between 117m and 13.5m due to drilling difficulties. 123.50m = EOH.
Drill Site ID
AGR-01-039

North 5461099.169
East 366890.731

Start Date 2/14/2001
End Date 2/21/2001

Elevation 237.8
Proposed Depth 180
Actual Depth 245
Number of Boxes 65

Logged By: P. Marenghi
Date Logged: 2/21/2001
Township: Cargill

Claim number: 413074
Azim: 0
Dip: -90
Drilling Contractor: Norex Drilling
Purpose: Definition drilling.

Results

Why hole terminated: Early Termination due to danger of squeezing rods.
Core Size: HQ-3
Casing: None
Hole Cemented: No
Number of Assays:
Number of ICP:
Rejects/Pulps saved: Pulps
Core Stored: Agrium Minesite

Friday, June 08, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>9.0</td>
<td>1.4</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>16 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark brown, semi-layered (parallel to core axis), homogeneous, firm clay. Lower contact established by the appearance of gray gumbo clay.</td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>11.0</td>
<td>1.6</td>
<td>715</td>
<td>GUMBO CLAY</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light to medium gray, pasty, homogeneous (no fragments/pebbles) clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td></td>
</tr>
<tr>
<td>11.0</td>
<td>48.5</td>
<td>30.0</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium gray coarse/medium silty-clay matrix containing up to 20% pebbles [mm to 3cm, angular + well rounded] and boulders [3cm up to 40cm, well rounded but occasional angular]. Local beds of fine clay which appear in darker brown/gray and seem ± barren of pebbles. Lower contact (gradual) established by the disappearance of pebbles and boulders. The silty matrix gets finer in texture but the color remains the same both sides of the contact. Lower contact re-established to the appearance of black peat (organic) nan unit. After further investigation there is a section from 39.5 to 46.0m which is clay-fine silt with the absence of pebbles. These pebbles re-appear at 46.0m but boulders are absent.</td>
<td></td>
</tr>
<tr>
<td>48.5</td>
<td>66.5</td>
<td>13.0</td>
<td>705</td>
<td>ORGANIC PEAT RICH / SILICA SAND (CRETACEOUS WASTE)</td>
<td>65 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Black to dark brown organic peat containing local &quot;chips&quot; of petrified wood. Pretty homogeneous unit with the exception of a local 1m section of brown colored, medium grained silica sand. Lower contact established by the appearance of beige/pink clay. No visible bedding throughout.</td>
<td></td>
</tr>
</tbody>
</table>

*Friday, June 08, 2001*
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.5 m</td>
<td>80.0 m</td>
<td>10.9 m</td>
<td>707</td>
<td>CLAY - Light brown to beige to pink clay. Very homogeneous when sliced open; local iron stained (light brown) layers with pink/white specks (???) No visible inclusions. Very soft and muddy texture. Gradual lower contact established by the appearance of black silica sand rich organic peat.</td>
</tr>
<tr>
<td>80.0 m</td>
<td>83.5 m</td>
<td>3.3 m</td>
<td>706</td>
<td>ORGANIC PEAT (CRETACEOUS WASTE) - Black organic peat displaying numerous &quot;wood chips&quot;. Texture is more on the clay side rather that the usual coarse grained silica sand. Lower contact established by the appearance of reddish brown weathered rock.</td>
</tr>
<tr>
<td>83.5 m</td>
<td>84.5 m</td>
<td>1.0 m</td>
<td>720</td>
<td>WEATHERED ROCK - Reddish brown, coarse grained, semi-consolidated sand/conglomerate/weathered rock. Lower contact established by the appearance of black organic rich clay.</td>
</tr>
<tr>
<td>84.5 m</td>
<td>89.0 m</td>
<td>4.0 m</td>
<td>707</td>
<td>MIXED CLAY - Mixture (50/50) of black/dark gray organic rich (or fine silt) and whitish beige clays in a mixed pattern, could be close to contacts (slumping)? Lower contact established by the appearance of greenish sandy clay.</td>
</tr>
<tr>
<td>89.0 m</td>
<td>101.0 m</td>
<td>10.2 m</td>
<td>706</td>
<td>ORGANIC RICH CLAY - Black to dark green mixed sandy clays with colors varying from beige/black/olive green/brown in sections roughly 1m long. Lower contact established by the appearance of rocky green silt. These clays seem to be interbedded (interwoven) in thin 1 cm beds throughout the interior of the core. The overall section is soft (flakes with a knife).</td>
</tr>
</tbody>
</table>

% Recovery

95 %

Friday, June 08, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>101.0 m</td>
<td>110.0 m</td>
<td>5.4 m</td>
<td>713</td>
<td>WEATHERED OOLITHIC ROCK - Overall appearance is dark greenish brown rocky/coarse sandy mud with local 1m sections of lighter rock/mud. Hardness seems to increase with depth. Lower contact established by the appearance of red hematitic mud. One 1m section of rock shows a conglomerate texture with &quot;ooliths&quot; of hematite/magnetite and fragments of chert and other various minerals/rocks. Overall this is a hard section (very blocky and often ground up.)</td>
<td>60%</td>
</tr>
<tr>
<td>110.0 m</td>
<td>113.0 m</td>
<td>2.1 m</td>
<td>708</td>
<td>HEMATITIC SAND / MUD - Dark crimson red, coarse grained sand/silt. Center of core is dark brown in color but of the same texture. Lower contact established by the appearance of clay.</td>
<td>70%</td>
</tr>
<tr>
<td>113.0 m</td>
<td>120.5 m</td>
<td>6.0 m</td>
<td>713</td>
<td>WEATHERED ROCK / KAOLINITE CLAY - The first 3 m seems to be a light brown to beige kaolinite clay but grades into a dark brownish green rubble of rock and coarse sand/mud. Some hematite staining on rock fragments. Where fresh the rock seems to be massive and very fine grained. Lower contact established by the appearance of dark gray cemented ore.</td>
<td>80%</td>
</tr>
<tr>
<td>120.5 m</td>
<td>174.5 m</td>
<td>37.8 m</td>
<td>720</td>
<td>CEMENTED RESIDUUM - Very fine gray fragmental rock, very homogenous and consistent. Has cemented ore texture (cemented fragments) various degrees of weathering throughout. Large fragments range from 30-40cm, very angular locally. Dark color and texture becomes a mixture of sand (60%) and rocky cemented residuum. Lots (&gt;40%), fine visible apatite xals. Floury texture to sand. From 161 to 174.5&gt;60% rock (cemented residuum) and 40% sand/rubble. Cemented rocky residuum is dark gray to dark brown and displays black manganese staining in most fractures. Lower contact established by the appearance of brown sandy residuum.</td>
<td>70%</td>
</tr>
</tbody>
</table>
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>174.5 m</td>
<td>180.5 m</td>
<td>4.8 m</td>
<td>720</td>
<td>SANDY RESIDUUM</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Beige brown medium grained sand with up to 15% rocky cemented residuum. Lower contact established by the appearance of dark brown mud.</td>
<td></td>
</tr>
<tr>
<td>180.5 m</td>
<td>245.0 m</td>
<td>51.6 m</td>
<td>720</td>
<td>MUDDY BROWN RESIDUUM</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very dark brown mud with approx. 10% dark brown to black manganese stained rubble. Lower contact established by the appearance of rock. Color pretty consistent but locally there is crimson red hematite/magnetite staining, tan brown limonite, reddish brown goethite, local black manganese stains also. Weathered chunks of magnetite are also locally abundant. The section gets coarser with depth. The rods were getting tight in the hole therefore the hole was terminated at 245m. The material remains consistent throughout the section. No return between 188m and 189.5m. 245m = EOH</td>
<td></td>
</tr>
</tbody>
</table>
**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

<table>
<thead>
<tr>
<th>Drill Hole ID</th>
<th>North 5461101.886</th>
<th>Start Date 2/21/2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR-01-040</td>
<td>East 366773.2</td>
<td>End Date 3/2/2001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elevation</th>
<th>Proposed Depth</th>
<th>Actual Depth</th>
<th>Number of Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>238.64</td>
<td>100</td>
<td>141.5</td>
<td>35</td>
</tr>
</tbody>
</table>

**Logged By** P. Marenghi  
**Claim number** 413075  
**Azim** 0  
**Dip** -90°  
**Drilling Contractor** Norex Drilling  
**Purpose**

**Results**

**Why hole terminated** Normal termination  
**Core Size** HQ  
**Casing** None  
**Hole Cemented** No  
**Number of Assays**  
**Number of ICP** 0  
**Rejects/Pulps saved** Yes  
**Core Stored** Agrium Minesite

---

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>5.0</td>
<td>0.8</td>
<td>714</td>
<td>VARVED CLAY&lt;br&gt;- Dark brown homogeneous, weakly layered clay. Lower contact established by the appearance of gray clay.</td>
<td>15%</td>
</tr>
<tr>
<td>5.0</td>
<td>8.0</td>
<td>1.0</td>
<td>715</td>
<td>GUMBO CLAY&lt;br&gt;- Medium gray, homogeneous, soft clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>33%</td>
</tr>
<tr>
<td>8.0</td>
<td>26.5</td>
<td>8.0</td>
<td>717</td>
<td>BOULDER / BASAL TILL&lt;br&gt;- Light to medium gray, silty mud containing up to 15% pebbles (mm- 5cm) pebbles and boulders are homogeneous in composition but consist of granodiorite and mafics mostly. Some boulders reach up to 1 m. Lower contact established by the appearance of blackish organic clay.</td>
<td>43%</td>
</tr>
<tr>
<td>26.5</td>
<td>30.5</td>
<td>2.8</td>
<td>706</td>
<td>ORGANIC MATERIAL AND CLAY (CRETACEOUS WASTE)&lt;br&gt;- Black to dark gray, clay and fine silt. Colors vary between lighter and darker shades of gray. First meter is mostly mixed organics and clay. The organics drop off after that. Lower contact established on the appearance of sandy ore texture.</td>
<td>70%</td>
</tr>
</tbody>
</table>
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.5 m</td>
<td>54.5 m</td>
<td>15.6 m</td>
<td>702</td>
<td>SANDY GRAY RESIDUUM - White to very light gray, medium grained, sandy apatite sand with small intervals of whitish gray clay. Upper and lower contacts very hard to establish but assays will allow adjustments. Clays are harder to penetrate using knife than are the sands. The bentonite drilling mud renders everything homogeneous (cakes the core) in color. Lower contact estimated by the texture of clay. Poor recovery between 30.5 and 33.5m (approx. 1m); 42.5 and 45.5m (approx. 1m)</td>
<td></td>
</tr>
<tr>
<td>54.5 m</td>
<td>87.0 m</td>
<td>24.4 m</td>
<td>707</td>
<td>GREY CLAY - Medium to dark gray to medium green homogeneous clay. Very consistent pasty, locally medium silty, locally visible bedding planes (sedimentation). There could be some sections of residuum. We will see with the assays. Lower contact established by the appearance of dark brown mud. <strong>Contains green glassy mineral</strong></td>
<td></td>
</tr>
<tr>
<td>87.0 m</td>
<td>118.3 m</td>
<td>23.4 m</td>
<td>713</td>
<td>WEATHERED CARBONATITE (RAUHAUGITE) - Light brown (tan brown) with sections of rust brown; dark orange brown; reddish brown; dark chocolate brown. Muddy coarse grained crumbly weathered carbonatite (probably rauhaugite). Spotted interior of chlorite/magnetite/mica. Locally hard rock but very heavily iron stained. Poor recovery between 87m–90.5m and 107m–108.5m. Lower contact established by the appearance of white/green unit.</td>
<td></td>
</tr>
<tr>
<td>118.3 m</td>
<td>128.0 m</td>
<td>7.3 m</td>
<td>712</td>
<td>WEATHERED PYROXENITE / CARBONATITE - Mixed sections of light to medium grey to medium green pyroxenite (70%) and light rusty brown crumbly weathered rauhaugite (carbonatite). Pyroxenite contains approx. 40% flakes of chloritaminate. Lower contact established by the disappearance of pyroxenite. Pyroxenite has a sandy coarse ore texture and locally clay texture.</td>
<td></td>
</tr>
</tbody>
</table>

---

**Friday, June 08, 2001**
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 128.0 m| 135.5 m| 6.0 m  | 713               | WEATHERED CARBONATITE  
- Light tan brown to medium brown to rusty orange brown, crumbly, muddy, coarse sandy weathered carbonatite (rauhaugite). Locally hard iron stained nuggets. Lower contact established by the appearance of green weathered pyroxenite. | 80 % |
| 135.5 m| 141.5 m| 5.1 m  | 712               | WEATHERED PYROXENITE  
- Dark green with strings of white/pink plagioclase. The dark green is pyroxene and appears flaky and soft almost muddy, very homogeneous section. Seems to get harder with depth. 141.50m = EOH. | 85 % |

---

**Drill Hole ID**  
**AGR-01-040**  

**North** 548101.886  
**Start Date** 2/21/2001  
**Elevation** 238.64  
**East** 366773.2  
**End Date** 3/2/2001  
**Proposed Depth** 100  
**Actual Depth** 141.5  
**Number of Boxes** 35
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Logged By P. Maronghi
Claim number 413074
Azim 0
Dip -90
Drilling Contractor Norex Drilling
Purpose
Results

Why hole terminated Normal termination
Core Size HQ
Casing None
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Date Logged 5/30/2001
Township Cargill

Friday, June 08, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>2.2 m</td>
<td>0.2 m</td>
<td>718</td>
<td>FOREST GROWTH - Black organic forest floor organics. Lower contact established by the appearance of varved clay.</td>
<td>10 %</td>
</tr>
<tr>
<td>2.2 m</td>
<td>4.8 m</td>
<td>1.7 m</td>
<td>714</td>
<td>VARVED CLAY - Medium brown, semi-layered varved clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>65 %</td>
</tr>
<tr>
<td>4.8 m</td>
<td>23.0 m</td>
<td>10.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL - Light gray silty clay matrix containing up to 10-15% pebbles and boulders heterogeneous in composition. Pebbles range in size from 1mm to 3cm and boulders range from 5cm to 15cm. Composition of pebbles and boulders is mostly granodiorite and some mafics. Lower contact established by the appearance of dark gray clay. Lower contact is gradual and boulders become less frequent with depth. No recovery from 5 to 8m and from 17 to 18.5m.</td>
<td>55 %</td>
</tr>
<tr>
<td>23.0 m</td>
<td>33.5 m</td>
<td>8.9 m</td>
<td>706</td>
<td>ORGANIC CLAY (CRETACEOUS WASTE) - Dark gray to black to dark green, homogeneous, locally organic rich clay. Colors vary through 2-3cm sections. Gradual lower contact. Lower contact established by the appearance of homogeneous gray clay.</td>
<td>85 %</td>
</tr>
</tbody>
</table>
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.5</td>
<td>45.5</td>
<td>11.4</td>
<td>707</td>
<td>GRAY CLAY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light to medium navy gray, homogeneous pasty clay. Inner texture is speckled dark gray on white. Looks very similar to A ore but more pasty in texture. Lower sharp contact established by the appearance of black organic peat/clay.</td>
<td>95 %</td>
</tr>
<tr>
<td>45.5</td>
<td>59.0</td>
<td>12.2</td>
<td>706</td>
<td>ORGANIC PEAT / CLAY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Pitch black, homogeneous, organic peat/clay with local 0.5m sections of silty/sandy beds lighter in color. Very soft locally. Lower contact established by the appearance of gray clay. Gradual contact over 1 m.</td>
<td>90 %</td>
</tr>
<tr>
<td>59.0</td>
<td>69.5</td>
<td>9.5</td>
<td>707</td>
<td>GRAY CLAY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light to medium navy gray, homogeneous pasty clay. Gradual lower contact established by the appearance of dark gray to black organic clay. Some speckled black on white texture for interior clay.</td>
<td>90 %</td>
</tr>
<tr>
<td>69.5</td>
<td>78.5</td>
<td>6.8</td>
<td>705</td>
<td>BLACK CLAY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark gray to black, soft, locally sandy organic clay. Lower contact established by the appearance of brownish gray sandy residuum.</td>
<td>75 %</td>
</tr>
</tbody>
</table>

*Friday, June 08, 2001*
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>78.5 m</td>
<td>125.0 m</td>
<td>37.2 m</td>
<td>720</td>
<td>SANDY RESIDUEUM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- First 2m are medium brown coarse sandy silica sand which grades gradually into a mixed brown/navy gray, fine grained, locally clay rich, residuum. Very consistent throughout. Recovery problems: 99.50-101.00 = 0.4171, 102.50-104.00 = 0.8m, 108.50-110.00 = 0.5m, 111.50-114.50 = 0.4m From 119.00m to 125.00m 50% rocky rubble but remains gray throughout. Recovery remain good throughout. Lower contact established by the appearance of brown mud/rock.</td>
</tr>
<tr>
<td>125.0 m</td>
<td>169.5 m</td>
<td>37.8 m</td>
<td>713</td>
<td>WEATHERED CARBONATITE/SPROLITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark rusty brown to orange brown to tan brown in mixed intervals of 5-8m. From 125.00m to 129.00m there is a transition zone of tan cemented ore? (Rock), gray sand and tan mud. From there on the gray material disappears. The tan material really starts at about 145m and seems to be weathered rauhaugite. Prior to this all the rubble is heavily iron stained. The overall material consist of 60-65% coarse sandy mud of iron stained rock. Material gets darker (dark brown), sharp contact (over 20cm) @ 169.50m. Lower contact established by the appearance of rauhaugite rock.</td>
</tr>
<tr>
<td>169.5 m</td>
<td>190.0 m</td>
<td>7.9 m</td>
<td>710</td>
<td>RAUHAUGITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium brown, very blocky, weathered rauhaugite. Locally brecciated. Local 10cm &quot;veins of saprolite.&quot; Numerous cavities and hairline fractures. All sections is heavily iron stained. No visible structural features. 180.0m = EOH.</td>
</tr>
</tbody>
</table>

©Friday, June 08, 2001
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-042

Date Logged 5/30/2001
Township Cargill

Logged By P. Maranghi
Claim number 413074
Azim 0
Dip -90
Drilling Contractor Norex Drilling
Purpose
Results

Why hole terminated Normal termination
Core Size HQ
Casing None
Hole Cemented No
Number of Assays 0
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
**Drill Hole ID**  
AGR-01-042  
**North** 5461050.193  
**Start Date** 3/6/2001  
**East** 366790.61  
**End Date** 3/8/2001  
**Elevation** 239.31  
**Proposed Depth** 130  
**Actual Depth** 141.5  
**Number of Boxes** 37

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>5.0 m</td>
<td>0.5 m</td>
<td>714</td>
<td>VARVED CLAY - Medium brown, semi-layered, thick brown clay. Lower contact established by the appearance of gray gumbo clay.</td>
<td>10 %</td>
</tr>
<tr>
<td>5.0 m</td>
<td>18.5 m</td>
<td>4.0 m</td>
<td>715</td>
<td>GUMBO CLAY - Medium gray, homogeneous, soft clay. No recovery between 5.0m-11.0m; 12.5m-14.0m; 15.5m-17.0m (20%). Lower contact established by the appearance of pebbles and boulders from the next unit.</td>
<td>30 %</td>
</tr>
<tr>
<td>18.5 m</td>
<td>36.5 m</td>
<td>10.8 m</td>
<td>717</td>
<td>BOULDER/BASAL TILL - Light to medium gray silty clay/line silt matrix containing up to 15 % pebbles and boulders. Pebbles range from 2mm to 6cm, boulders range from 6cm-80cm. Composition varies widely but granodiorite and fine grained mafic composition dominate. Lower contact established by the disappearance of these pebbles and boulders.</td>
<td>60 %</td>
</tr>
<tr>
<td>36.5 m</td>
<td>41.0 m</td>
<td>3.2 m</td>
<td>714</td>
<td>VARVED CLAY - Multicolored clay (grayish green; beige; light brown) with no inclusions. Section of clinohlore at 38m-39m. Gradual lower contact established by the appearance of homogeneous sandy gray clay.</td>
<td>70 %</td>
</tr>
<tr>
<td>41.0 m</td>
<td>53.0 m</td>
<td>10.2 m</td>
<td>707</td>
<td>GRAY CLAY - Navy gray, sandy clay with speckled dark green-gray on white texture on fresh interior of core. Very homogeneous and looks very much like Stage 0 A ore. Gradual lower contact established by the appearance of brown residuum.</td>
<td>80 %</td>
</tr>
</tbody>
</table>

---

Friday, June 08, 2001
**Agrium**

Kapuskasing Phosphate Operation

Exploration Drilling

Project: Winter 2001

### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>53.0 m</td>
<td>89.8 m</td>
<td>29.4 m</td>
<td>720</td>
<td>GREY RESIDUUM - Navy gray to tan brown, fine grained (floury texture), homogeneous sandy residuum the color texture is interwoven tan/tan. Locally some clay. Very consistent unit. About 10% green flakes (mica?) throughout. Gradual lower contact established by the appearance of brown residuum.</td>
<td>80 %</td>
</tr>
<tr>
<td>89.8 m</td>
<td>95.0 m</td>
<td>2.9 m</td>
<td>720</td>
<td>BROWN RESIDUUM - Tan brown to orange brown, sandy and locally rocky, coarse grained residuum. Very little recovery between 92.0 and 95.0m (0.4m). All rocky chunks are heavily iron stained. Sharp lower contact established by the appearance of gray clay.</td>
<td>55 %</td>
</tr>
<tr>
<td>95.0 m</td>
<td>98.8 m</td>
<td>3.4 m</td>
<td>708</td>
<td>GRAY CLAY - Navy gray clay with green on white speckled interior texture. Lower contact established by the appearance of brown residuum.</td>
<td>90 %</td>
</tr>
<tr>
<td>98.8 m</td>
<td>117.5 m</td>
<td>16.9 m</td>
<td>720</td>
<td>BROWN RESIDUUM - Medium brown to orange brown to tan brown, coarse grained residuum. Locally tan colored like weathered rauhaugite. Locally very dark brown with weathered magnetite xtabs. Locally weathered chunks (0-4cm) of unweathered rauhaugite. Lower contact established by the appearance of gray weathered pyroxenite.</td>
<td>90 %</td>
</tr>
<tr>
<td>117.5 m</td>
<td>120.5 m</td>
<td>2.7 m</td>
<td>713</td>
<td>WEATHERED PYROXENITE - Dark grayish green to speckled white strongly weathered pyroxenite. Local small 2-5cm sections of brown residuum. Lower contact established by the appearance of brown residuum.</td>
<td>90 %</td>
</tr>
</tbody>
</table>
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 120.5    | 125.0  | 4.1        | 720               | BROWN RESIDUUM  
- Medium to reddish brown rocky residuum with local intervals of gray sandy material (probably weathered pyroxenite). Lower contact established by the appearance of green weathered pyroxenite.  
- % Recovery 90% |
| 125.0    | 141.5  | 15.7       | 713               | WEATHERED PYROXENITE  
- Dark green to dark gray, strongly weathered pyroxenite. Very homogeneous section. Local large flakes of mica (dark green)/chlorite/pyroxene. Local stringers of white sand? 141.50m = EOH.  
- % Recovery 95% |

**Drill Hole ID**

AGR-01-042

| North  | Start Date  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5461050.193</td>
<td>3/6/2001</td>
</tr>
</tbody>
</table>

| East  | End Date   
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>366750.61</td>
<td>3/8/2001</td>
</tr>
</tbody>
</table>

| Elevation  
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>239.31</td>
</tr>
</tbody>
</table>

| Proposed Depth  
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
</tr>
</tbody>
</table>

| Actual Depth  
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>141.5</td>
</tr>
</tbody>
</table>

| Number of Boxes  
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
</tr>
</tbody>
</table>

Friday, June 08, 2001
**Drill Hole ID**

<table>
<thead>
<tr>
<th>North</th>
<th>Start Date</th>
<th>East</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR-01-043</td>
<td>4/21/2001</td>
<td>367651.3</td>
<td>4/23/2001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elevation</th>
<th>Proposed Depth</th>
<th>Actual Depth</th>
<th>Number of Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>252.9</td>
<td>150</td>
<td>101</td>
<td>19</td>
</tr>
</tbody>
</table>

---

**Logged By** P. Marerghi

**Date Logged** 5/30/2001

**Claim number** 78657

**Township** Cargill

**Azim** 0

**Dip** -90

**Drilling Contractor** Norex Drilling

**Purpose**

**Results**

**Why hole terminated** Normal termination

**Core Size** HQ

**Casing** No

**Hole Cemented** No

**Number of Assays**

**Number of ICP** 0

**Rejects/Pulps saved** Yes

**Core Stored** Agrium Minesite

---

Friday, June 08, 2001

---

Page 1 of 2
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>30.5 m</td>
<td>30.5 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>40 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light grey, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 30cm in size.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum.</td>
<td></td>
</tr>
<tr>
<td>30.5 m</td>
<td>80.0 m</td>
<td>49.5 m</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
<td>75 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Gray brown to tan brown to medium brown, sandy / muddy residuum. Locally chunky (rocky). Lower contact established by the appearance of weathered sovite.</td>
<td></td>
</tr>
<tr>
<td>80.0 m</td>
<td>95.0 m</td>
<td>15.0 m</td>
<td>713</td>
<td>WEATHERED SOVITE</td>
<td>50 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Greenish brown, coarse grained, semi-layered sovite rock. Sub-vertical schistosity displayed by 1cm thick bands of coarse grained, black magnetite / pyroxene xtals. Lower contact established by the appearance of fresh sovite rock. Very blocky section.</td>
<td></td>
</tr>
<tr>
<td>95.0 m</td>
<td>101.0 m</td>
<td>6.0 m</td>
<td>711</td>
<td>SOVITE</td>
<td>100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light grey, fine grained matrix containing up to 10% coarse grained, black magnetite xtals in 1cm bands. No visible weathering in this section. 101.00m = EOH.</td>
<td></td>
</tr>
<tr>
<td><strong>Logged By</strong></td>
<td>P. Marenghi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Claim number</strong></td>
<td>78658</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Azim</strong></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dip</strong></td>
<td>-90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Drilling Contractor</strong></td>
<td>Norex Drilling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Proposed Depth</strong></td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Actual Depth</strong></td>
<td>113</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of Boxes</strong></td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Drill Hole ID</strong></td>
<td>AGR-01-044</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>North</strong></td>
<td>5461349.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>East</strong></td>
<td>367295</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elevation</strong></td>
<td>226.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Start Date</strong></td>
<td>4/18/2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>End Date</strong></td>
<td>4/19/2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Date Logged</strong></td>
<td>5/30/2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Township</strong></td>
<td>Cargill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Why hole terminated</strong></td>
<td>Normal termination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Core Size</strong></td>
<td>HQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Casing</strong></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hole Cemented</strong></td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of Assays</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of ICP</strong></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rejects/Pulps saved</strong></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Core Stored</strong></td>
<td>Agrium Minesite</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Friday, June 08, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>80.0</td>
<td>80.0</td>
<td>706</td>
<td>CRETACEOUS WASTE - Mixture of 60% black organic rich peat, 30% medium to coarse grained silica sand ranging from white to beige and 10% whitish gray clay. Interbedded sections of 1-5m. Most of the peat displays wood chips and is silaceous to some extent. Very gradual lower contact established by a weight change and slightly grayer color.</td>
<td>85%</td>
</tr>
<tr>
<td>80.0</td>
<td>108.5</td>
<td>28.5</td>
<td>720</td>
<td>GRAY RESIDUUM - Medium to navy gray, fine sandy, homogeneous residuum. Lower contact established by the appearance of gray rock.</td>
<td>85%</td>
</tr>
<tr>
<td>108.5</td>
<td>113.0</td>
<td>4.5</td>
<td>713</td>
<td>GRAY ROCK - Medium gray, very blocky rock. Brecciated or conglomeratic texture. Visible apatite grains. Hole stopped due to technical difficulties. 113.0m = EOF.</td>
<td>90%</td>
</tr>
</tbody>
</table>

**Drill Hole ID**
- **AGR-01-044**

**Project**
- Kapuskasing Phosphate Operation
- Exploration Drilling

**From To**
- Winter 2001

**Lithological Code**
- 706 CRETACEOUS WASTE

**Start Date**
- 4/18/2001

**End Date**
- 4/19/2001

**Number of Boxes**
- 24

**Friday, June 08, 2001**
**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

---

**Logged By** P. Marenghi

**Claim number** 78658

**Azim** 0

**Dip** -90

**Drilling Contractor** Norex Drilling

**Purpose**

**Results**

**Why hole terminated** Normal termination

**Core Size** HQ

**Casing** No

**Hole Cemented** No

**Number of Assays**

**Number of ICP** 0

**Rejects/Pulps saved** Yes

**Core Stored** Agrium Minesite

---

**Start Date** 4/18/2001

**End Date** 4/18/2001

**Drill Hole ID**

**AGR-01-045**

**North** 548122.2

**East** 367340.9

**Elevation** 237.2

**Proposed Depth** 100

**Actual Depth** 24.5

**Number of Boxes** 6

---

Friday, June 08, 2001

---
Drill Hole ID: AGR-01-045  
North: 546122.2  
East: 367340.9  
Start Date: 4/18/2001  
End Date: 4/18/2001  
Elevation: 237.2  
Proposed Depth: 100  
Actual Depth: 24.5  
Number of Boxes: 6

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 0.0      | 6.5    | 6.5        | 717               | BOULDER / BASAL TILL  
- Light gray, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 40cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of weathered sovite. |
| 6.5      | 24.5   | 18.0       | 713               | WEATHERED SOVITE  
- Light gray, coarse grained (magnetite / chlorite / mica), massive sovite rock. Weak sub-vertical schistosity. Medium weathering which seems to decrease with depth. Most fractures are heavily iron stained. 24.50m = EOH. |

% Recovery: 60%  

Friday, June 08, 2001
**Drill Hole ID**
AGR-01-046

**North** 5461077.3  **Start Date** 3/20/2001
**East** 367392.8  **End Date** 3/27/2001

**Elevation** 247.1
**Proposed Depth** 150
**Actual Depth** 132.5

**Number of Boxes** 28

---

**Logged By** P. Marenghi
**Date Logged** 5/30/2001
**Township** Cargill

**Claim number** 78656
**Azim** 0
**Dip** -90

**Drilling Contractor** Norex Drilling
**Purpose**

**Results**

**Why hole terminated** Normal termination
**Core Size** HQ
**Casing** No
**Hole Cemented** No

**Number of Assays**
**Number of ICP** 0
**Rejects/Pulps saved** Yes

**Core Stored** Agrium Minesite

---

Friday, June 08, 2001
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project Winter 2001**

<table>
<thead>
<tr>
<th>Lithological Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
</tr>
<tr>
<td>0.0 m</td>
</tr>
<tr>
<td>12.5 m</td>
</tr>
<tr>
<td>30.5 m</td>
</tr>
<tr>
<td>75.5 m</td>
</tr>
</tbody>
</table>

**Drill Hole ID**

- **AGR-01-046**
- **North 546177.3**
- **East 367392.8**
- **Start Date 3/20/2001**
- **End Date 3/27/2001**
- **Elevation 247.1**
- **Proposed Depth 150**
- **Actual Depth 132.5**
- **Number of Boxes 28**

**% Recovery**

- 25%
- 30%
- 80%
- 85%

**Friday, June 08, 2001**
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling

Project: Winter 2001

Logged By: P. Marenghi
Claim number: 78658
Azim: 0
Dip: -90
Drilling Contractor: Norex Drilling
Purpose: Exploration Drilling

Results:

Why hole terminated: Normal termination
Core Size: HQ
Casing: No
Hole Cemented: No
Number of Assays: 1
Number of ICP: 0
Rejects/Pulps saved: Yes
Core Stored: Agrium Minesite

Date Logged: 5/30/2001
Township: Cargill

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>9.5 m</td>
<td>9.5 m</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>17 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, silt clay. The first 20 cm is black organic matter.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>From 7.0 - 9.5 m; some granitic boulders. No recovery from 5.0-6.5 m.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower contact established by the appearance of gray gumbo clay.</td>
<td></td>
</tr>
<tr>
<td>9.5 m</td>
<td>14.0 m</td>
<td>4.5 m</td>
<td>715</td>
<td>GUMBO CLAY</td>
<td>100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, homogenous, soft clay. No inclusions in this section.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower contact established by the appearance of pebbles and boulders.</td>
<td></td>
</tr>
<tr>
<td>14.0 m</td>
<td>32.0 m</td>
<td>18.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>19 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light grey, silty / muddy matrix containing up to 15% pebbles and boulders</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ranging from 5mm to 6cm in size. Composition varies but granodiorite and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mafic units predominate. Lower contact established by the appearance of</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>brown residuum.</td>
<td></td>
</tr>
<tr>
<td>32.0 m</td>
<td>48.0 m</td>
<td>16.0 m</td>
<td>720</td>
<td>BROWN ROCKY RESIDUUM</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark rusty brown to tan brown to medium brown, rocky / coarse sandy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>residuum. Locally 10-20cm sections of chlorite rich green to dark green.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>All rock fragments are heavily iron stained. Lower contact established by</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>the appearance of gray residuum.</td>
<td></td>
</tr>
<tr>
<td>48.0 m</td>
<td>66.5 m</td>
<td>18.5 m</td>
<td>702</td>
<td>GRAY SANDY RESIDUUM</td>
<td>85 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium to dark gray, fine sandy, chlorite rich, homogeneous residuum.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Local 10cm dark brown sections. Local black sections (very dark green).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The last 3m of this section grades into brown residuum (lower contact</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>established).</td>
<td></td>
</tr>
</tbody>
</table>

*Friday, June 08, 2001*
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>66.5 m</td>
<td>111.5 m</td>
<td>45.0 m</td>
<td>720</td>
<td><strong>BROWN MUDDY RESIDUUM</strong>&lt;br&gt;Chocolate brown to orange brown, muddy and locally rocky, homogeneous residuum. From 102.50 to 111.50m; the color becomes darker in brown and could represent a saprolite zone. Lower contact established by the appearance of gray sovite rock.</td>
</tr>
<tr>
<td>111.5 m</td>
<td>125.0 m</td>
<td>13.5 m</td>
<td>711</td>
<td><strong>SOVITE</strong> - Light gray, massive sovite rock. No visible weathering after 114.50m. Sub-vertical schistosity with 5cm bands of magnetite / chlorite / mica phenocrysts. 125.00m = EOH.</td>
</tr>
</tbody>
</table>

---

**Drill Hole ID**<br>AGR-01-047<br><br>**Start Date** 3/27/2001<br>**End Date** 3/29/2001<br>**Elevation** 247.9<br>**Proposed Depth** 150<br>**Actual Depth** 125

**Number of Boxes** 30

**% Recovery** 85 %


**Drill Hole ID**
AGR-01-048

**Start Date** 3/30/2001

**End Date** 4/1/2001

**Elevation** 248.5

**Proosed Depth** 150

**Actual Depth** 153.5

**Number of Boxes** 37

---

**Logged By** P. Maronghi

**Claim number** 79658

**Azim** 0

**Dip** 90

**Drilling Contractor** Norex Driling

**Purpose**

**Results**

**Why hole terminated** Normal termination

**Core Size** HQ

**Casing** No

**Hole Cemented** No

**Number of Assays**

**Number of ICP**

**Rejects/Pulps saved** Yes

**Core Stored** Agrium Minesite

---

Friday, June 08, 2001
### Agrium

**Kapuskasing Phosphate Operation**  
**Exploration Drilling**

**Project**  Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>5.0</td>
<td>5.0</td>
<td>714</td>
<td>VARVED CLAY</td>
</tr>
<tr>
<td>5.0</td>
<td>18.5</td>
<td>13.5</td>
<td>715</td>
<td>GUMBO CLAY</td>
</tr>
<tr>
<td>18.5</td>
<td>32.0</td>
<td>13.5</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
</tr>
<tr>
<td>32.0</td>
<td>89.0</td>
<td>57.0</td>
<td>720</td>
<td>GRAY SANDY RESIDUUM</td>
</tr>
<tr>
<td>89.0</td>
<td>143.8</td>
<td>54.8</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
</tr>
</tbody>
</table>

- **% Recovery**
  - VARVED CLAY: 28%
  - GUMBO CLAY: 34%
  - BOULDER / BASAL TILL: 22%
  - GRAY SANDY RESIDUUM: 85%
  - BROWN RESIDUUM: 80%

---

**Drill Hole ID**  AGR-01-048  
**North**  546168.6  
**East**  367490.9  
**Start Date**  3/30/2001  
**End Date**  4/1/2001  
**Elevation**  248.5  
**Proposed Depth**  150  
**Actual Depth**  153.5  
**Number of Boxes**  37

---

Friday, June 08, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>143.8 m</td>
<td>153.5 m</td>
<td>9.8 m</td>
<td>711</td>
<td>SOVITE - Light gray, fine grained matrix containing up to 10% coarse grained (20mm) black magnetite xtal. No visible weathering after 114.50m. Sub - vertical schistosity with 5cm bands of magnetite / chlorite / mica phenocrysts. 153.50m = EOH.</td>
</tr>
</tbody>
</table>

**Drill Hole ID**  
AGR-01-048

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5461098.6</td>
<td>367490.9</td>
<td>3/30/2001</td>
<td>4/1/2001</td>
</tr>
</tbody>
</table>

**Elevation** 248.5  
**Proposed Depth** 150  
**Actual Depth** 153.5  
**Number of Boxes** 37  

% Recovery 100 %
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-049

Log by P. Marenghi
Claim number 78658
Azim 0
Dip 90
Drilling Contractor Norex Drilling

Date Logged 5/30/2001
Township Cargill

Logged By P. Marenghi
Date Logged 5/30/2001
Township Cargill

North 5461050.429
East 367310.647

Start Date 3/19/2001
End Date 3/20/2001

Elevation 244.74
Proposed Depth 100
Actual Depth 21.5
Number of Boxes 6

Why hole terminated Normal termination
Core Size HQ
Casing None
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>4.7</td>
<td>4.2</td>
<td>714</td>
<td>VARVED CLAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium to light brown, semi layered, firm clay. No gumbo clay following this unit. Lower contact established by the appearance of boulders and pebbles.</td>
</tr>
<tr>
<td>4.7</td>
<td>14.7</td>
<td>9.0</td>
<td>717</td>
<td>BOULDER/BASAL TILL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light greenish gray, silty/sandy muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in diameter. Composition varies but granodiorite and mafic units are predominant. Most boulders are well rounded. Sharp lower contact established by the appearance of fresh massive sovite.</td>
</tr>
<tr>
<td>14.7</td>
<td>21.5</td>
<td>6.8</td>
<td>711</td>
<td>SOVITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Grayish white, massive, homogeneous carbonatite. 10-15% 2mm-5mm chlorite/mica/po asals peppered in a calcic matrix. No visible weathering throughout. 21.50m = EOH.</td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling

Project: Winter 2001

Logged By: P. Marenghi
Claim number: 78658

Azim: 0
Dip: -90

Drilling Contractor: Norex Drilling

Date Logged: 5/30/2001
Township: Cargill

Date: Friday, June 08, 2001

Hole ID: AGR-01-050
North: 6461050
East: 367430

Start Date: 4/2/2001
End Date: 4/5/2001

Elevation: 247.1

Proposed Depth: 150
Actual Depth: 156.5

Number of Boxes: 32

Results:

Why hole terminated: Normal termination

Core Size: HQ

Casing: No

Hole Cemented: No

Number of Assays: 0

Number of ICP: 0

Rejects/Pulps saved: Yes

Core Stored: Agrium Minesite
<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>2.0 m</td>
<td>2.0 m</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of gray gumbo clay.</td>
<td></td>
</tr>
<tr>
<td>2.0 m</td>
<td>20.0 m</td>
<td>18.0 m</td>
<td>715</td>
<td>GUMBO CLAY</td>
<td>100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, homogenous, soft clay. Local boulders at the top of this unit. Lower contact established by the appearance of pebbles and boulders.</td>
<td></td>
</tr>
<tr>
<td>20.0 m</td>
<td>35.0 m</td>
<td>15.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>24 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very little material was recovered. Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown mud.</td>
<td></td>
</tr>
<tr>
<td>35.0 m</td>
<td>144.5 m</td>
<td>108.5 m</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark brown, rocky/sandy residuum. Rocky chunks are heavily iron stained. Local 10m sections of sandy, tan brown residuum. No recovery from 96.50-99.50m. Local orange brown, very muddy 3-5m sections of residuum. Local red hematite staining. Around 135m, the residuum becomes coarse grained and rusty brown. Some local 1m sections of iron stained rock. Lower contact established by the appearance of brown/black mud.</td>
<td></td>
</tr>
</tbody>
</table>
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project**  Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 144.5 m | 152.8 m | 8.3 m  | 713               | SAPROLITE  
- Dark brown to dark green to black, coarse grained, muddy, weathered sovite. Very homogeneous and local black coarse grained magnetite xts. Lower contact established by the appearance of sovite rock. |
| 152.8 m | 156.5 m | 3.8 m  | 711               | SOVITE  
- Light gray, fine grained matrix containing up to 10% coarse grained (20mm) black magnetite xts.. No visible weathering after the first 20cm. Sub - vertical schistosity with 2-3cm bands of magnetite / chlorite / mica phanocrysts. 156.50m = EOH. |

**Drill Hole ID**

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
</tr>
</thead>
<tbody>
<tr>
<td>5461050</td>
<td>367430</td>
</tr>
</tbody>
</table>

**Proposed Depth** 150

**Actual Depth** 156.5

**Number of Boxes** 32

**% Recovery** 90 %, 100 %

*Friday, June 08, 2001*
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling

Project: Winter 2001

Logged By: P. Marenghi

Claim number: 413076
Azim: 0
Dip: -90

Drilling Contractor: Norex Drilling
Purpose: Definition drilling.

Results
Why hole terminated: Normal Termination
Core Size: HQ-3
Casing: None
Hole Cemented: No
Number of Assays: 0
Number of ICP: 0
Rejects/Pulps saved: Pulps
Core Stored: Agrium Minesite

Date Logged: 2/8/2001
Township: Cargill

Friday, June 08, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>11.5 m</td>
<td>1.5 m</td>
<td>715</td>
<td>GUMBO CLAY</td>
<td>13 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark gray/brown, homogeneous, pasty gumbo clay. Lower section established by the appearance of boulders and pebbles.</td>
<td></td>
</tr>
<tr>
<td>11.5 m</td>
<td>15.5 m</td>
<td>3.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>75 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Grey fine grained silty mud containing up to 10% pebbles and boulders of mainly granitic gneiss and fine/coarse grained green mafics. Some fragments/boulders reach up to 20cm but most are 0-5cm and smaller. Lower contact established by the appearance of green weathered granitic.</td>
<td></td>
</tr>
<tr>
<td>15.5 m</td>
<td>63.5 m</td>
<td>43.2 m</td>
<td>709</td>
<td>WEATHERED GRANODIORITE/GRANATIC GNEISS</td>
<td>90 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very badly weathered (crumbly very coarse grained sand texture), semi-consolidated, green/pink/brown coarse grained granodiorite/ granitic gneiss. Schistosity/foliation sub-horizontal to core axis. Only 15% of total section is semi-consolidated. Visible minerals in sand include microcline (pink), epidote (lime green), iron staining (brown), quartz (white), amphibole/chlorite (green), mica (flaky brown) some specks of pyrite. Rock does not seem to get more consolidated with depth. Spot check samples were taken throughout. 43.20 m = EOH.</td>
<td></td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Logged By P. Marenghi
Claim number 78658
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Date Logged 5/30/2001
Township Cargill

Why hole terminated Normal termination
Core Size HQ
Casing None
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>2.0 m</td>
<td>0.4 m</td>
<td>714</td>
<td><strong>VARVED CLAY</strong>&lt;br&gt;- Very little recovery and some boulders but medium brown colored matrix. Could also be boulder till. Lower contact established by the appearance of greyish green boulder till.</td>
</tr>
<tr>
<td>2.0 m</td>
<td>12.5 m</td>
<td>9.5 m</td>
<td>717</td>
<td><strong>BOULDER / BASAL TILL</strong>&lt;br&gt;- Greyish green silty/muddy clay matrix containing up to 15% pebbles and boulders. Pebbles vary from 5mm to 60cm and boulders range from 60cm to 600cm. Composition varies but granodiorite and mafic units are dominant. Most boulders are well rounded. Lower contact established by the appearance of rocky dark green unit.</td>
</tr>
<tr>
<td>12.5 m</td>
<td>26.0 m</td>
<td>12.8 m</td>
<td>720</td>
<td><strong>SAPROLITE</strong>&lt;br&gt;- Dark green sandy and rocky (fragmental texture) mica rich (or chlorite rich) unit, inter mixed in 2-3m sections with fragmental brown to very dark brown, locally sandy cemented residuum/carbonatite. Very good ground and recovery. No visible structural features. Overall texture like cemented ore.</td>
</tr>
<tr>
<td>26.0 m</td>
<td>50.0 m</td>
<td>22.8 m</td>
<td>711</td>
<td><strong>WEATHERED SOVITE</strong>&lt;br&gt;- Green to brownish green, strongly weathered locally to a brown sand, good visible schistosity locally where bands (1-2cm) of iron stained magnetite/chlorite trend at 45° to the core axis. This could be the same unit as above but there was no visible structure in the above unit. At 26.75m the brown color disappears and the rock (sovite) although weathered to various degrees, becomes more and more fresh with depth. Good schistosity developed sub-parallel to the core axis. Magnetcite/chlorite po xists become more developed with depth and range from 10-20mm in diameter. Local veins (1cm) of pink glassy mineral (discoloration?). This sovite is not whitish grey as the sovite intersected in the surrounding holes. 50.0m = EOR.</td>
</tr>
</tbody>
</table>

**Drill Hole ID**<br>AGR-01-052

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5460998.929</td>
<td>367214.277</td>
<td>3/19/2001</td>
<td>3/19/2001</td>
</tr>
</tbody>
</table>

**Elevation**<br>241.32

**Proposed Depth**<br>50

**Actual Depth**<br>50

**Number of Boxes**<br>14

% Recovery

---

Friday, June 08, 2001
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Logged By P. Marenghi
Claim number 78658
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Why hole terminated Normal termination
Core Size HQ
Casing None
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>6.5</td>
<td>6.5</td>
<td>714</td>
<td><strong>VARVED CLAY</strong>&lt;br&gt;- Medium brown, semi-layered, thick and pasty, clay. Very good recovery in this hole. No presence of gumbo clay in this area. Lower contact established by the appearance of pebbles and boulders from the next unit.</td>
<td>100 %</td>
</tr>
<tr>
<td>6.5</td>
<td>17.0</td>
<td>9.5</td>
<td>717</td>
<td><strong>BOULDER / BASAL TILL</strong>&lt;br&gt;- Light to medium gray/green silty/clay matrix containing up to 15% pebbles and boulders ranging from 5mm to 60cm. Composition varies but granodiorite and mafic units are dominant. Lower contact established by the appearance of brown weathered rock.</td>
<td>90 %</td>
</tr>
<tr>
<td>17.0</td>
<td>41.0</td>
<td>20.4</td>
<td>713</td>
<td><strong>SAPROLITE</strong>&lt;br&gt;- Dark rusty brown to medium brown to medium/dark green to pale green, crumbly/rocky/sandy, cemented (fragmental texture) weathered rock (carbonatite). Some sections are chlorite rich others are iron poor but overall mixing of different colors is consistent. Lower contact established by the appearance of sovite.</td>
<td>65 %</td>
</tr>
<tr>
<td>41.0</td>
<td>56.0</td>
<td>15.0</td>
<td>711</td>
<td><strong>SOVITE</strong>&lt;br&gt;- Whitish gray, massive, banded (schistosity sub-vertical to the core axis). Bands are 2-3cm wide and consist of 2-8mm (local 1cm) xts of magnetite/black to green chloritepo. No weathering throughout this section. EOH.</td>
<td>100 %</td>
</tr>
</tbody>
</table>
Drill Hole ID
AGR-01-054

North 5461000-615
East 367314.261
Elevation 245.7

Start Date 3/16/2001
End Date 3/17/2001

Proposed Depth 100
Actual Depth 68

Number of Boxes 18

Logged By P. Maranghi
Claim number 78658

Azim 0
Dip -90

Drilling Contractor Norex Drilling

Purpose

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays 0
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Township Cargill

Date Logged 5/30/2001

Friday, June 08, 2001
<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>5.0</td>
<td>1.1</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium brown, semi-layered, thick, hard clay. No recovery from 0-2m; 3.5-5.0m. Lower contact established by the appearance of gray gumbo clay.</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>12.0</td>
<td>3.4</td>
<td>715</td>
<td>GUMBO CLAY</td>
<td>48%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium gray, soft, homogeneous, pasty clay. No recovery between 6.5m and 9.5m. Lower contact established by the appearance of the first pebbles and boulder of the next unit.</td>
<td></td>
</tr>
<tr>
<td>12.0</td>
<td>24.5</td>
<td>9.0</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>72%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light to medium gray silt/muddy/clay matrix containing up to 15% pebbles and boulders. Pebbles vary in size from 3mm to 5 cm and 5cm to 30cm. Composition varies from granodiorite to mafic units. Lower contact established by the appearance of rock.</td>
<td></td>
</tr>
<tr>
<td>24.5</td>
<td>27.5</td>
<td>0.0</td>
<td>711</td>
<td>SOVITE</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Coarse grained (magnetite/pyroxene/chlorite) 1 cm carbonatite rock (white calcic matrix) Could be a boulder. Lower contact established by the appearance of brown weathered carbonatite.</td>
<td></td>
</tr>
<tr>
<td>27.5</td>
<td>44.0</td>
<td>14.0</td>
<td>720</td>
<td>WEATHERED CARBONATITE</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very dark chocolate brown to rusty brown rocky/sandy iron stained carbonatite rubble and residuum. Most pieces of iron stained rock look like sovite but hard to tell. Some of this material could be cemented residuum. Lower contact established by the appearance of fresh sovite.</td>
<td></td>
</tr>
</tbody>
</table>
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.0 m</td>
<td>59.0 m</td>
<td>13.5 m</td>
<td>713</td>
<td><strong>SAPROLITE</strong>&lt;br&gt; - Mixture of 70% rusty brown sandy/rocky saprolite of residuum and 30% weathered, iron stained, grayish brown to gray, locally unweathered sovite. Sections of sovite range from 1-3m. Some schistosity visible but varies to 45 degrees to core axis to 0 degrees to core axis. Locally large black magnetite/chlorite/po xts. Lower contact established by the appearance of fresh sovite.</td>
<td>90%</td>
</tr>
<tr>
<td>59.0 m</td>
<td>68.0 m</td>
<td>8.6 m</td>
<td>711</td>
<td><strong>SOVITE</strong>&lt;br&gt; - Very blocky sovite rock. Sovite; white to light gray to light green calcic matrix (vfg) containing up to 10% xts of black magnetite/green chlorite/mica and po. Schistosity sub-parallel to core axis and banding in 1-2cm wide mineral rich layers also aligned sub parallel. Most fractures are coated with some form of iron staining. 68.0m = EOH.</td>
<td>95%</td>
</tr>
<tr>
<td>Logged By</td>
<td>P. Marenghi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Claim number</td>
<td>78658</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azim</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dip</td>
<td>-90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drilling Contractor</td>
<td>Norex Drilling</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why hole terminated</td>
<td>Normal termination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Size</td>
<td>HQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casing</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hole Cemented</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Assays</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of ICP</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rejets/Pulps saved</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Stored</td>
<td>Agrium Minesite</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date Logged</td>
<td>5/30/2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Township</td>
<td>Cargill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Drill Hole ID: AGR-01-055

<table>
<thead>
<tr>
<th>North</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>367364.922</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Elevation: 246.2
Proposed Depth: 125
Actual Depth: 138.5
Number of Boxes: 33

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>3.5</td>
<td>1.2</td>
<td>714</td>
<td>VARVED CLAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium brown, semi-layered, thick, hard brown clay. Lower contact established by the appearance of gray gumbo clay.</td>
</tr>
<tr>
<td>3.5</td>
<td>21.5</td>
<td>11.0</td>
<td>715</td>
<td>GUMBO CLAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Soft, brownish gray, homogeneous, soft clay. Lower contact established by the appearance of boulders and pebbles of the next unit. No recovery from 11.0-14.0m.</td>
</tr>
<tr>
<td>21.5</td>
<td>38.0</td>
<td>4.4</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brownish gray silty matrix containing up to 15% pebbles and boulders. Pebbles range from 2mm to 5cm and boulders from 5cm to 60cm. Composition of pebbles and boulders varies but is mainly granodiorite and mafic units. Lower contact established by the appearance of brown residuum.</td>
</tr>
<tr>
<td>38.0</td>
<td>48.5</td>
<td>8.9</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Tan brown to rusty brown to dark orange brown (color darkens with depth), sandy and rocky (increasing rockiness with depth) weathered carbonatite (residuum). Rocky chunks are heavily iron stained and contain visible magnetite/chlorite xts. Lower contact established by the appearance of clinochlore.</td>
</tr>
<tr>
<td>48.5</td>
<td>56.2</td>
<td>6.9</td>
<td>704</td>
<td>CLINOCHLORE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Grayish green, almost metallic green, homogeneous, chlorite rich, pasty &quot;clay&quot;. This section is about 90% clinochlore. Very small &lt;mm shiny dark green flakes of chlorite abundant throughout. Lower contact established by the appearance of brown residuum.</td>
</tr>
</tbody>
</table>

---

Friday, June 88, 2001
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 56.2     | 71.0   | 12.6       | 720               | BROWN RESIDUUM  
- Tan to medium brown, sandy, homogeneous residuum. Becomes rocky around 69.5m. 1m rocky granitic section from 66.5m to 67.5m. Lower contact established by the appearance of rocky cemented residuum. |
| 71.0     | 81.5   | 9.5        | 720               | CEMENTED RESIDUUM  
- Light gray, iron stained, fragmental, blocky cemented residuum. Approx. 10% 2mm-1cm magnetite xts pretty well throughout. No visible banding/schistosity. Locally porous texture. Local sandy section from 74.0-77.0m. Lower contact established by the appearance of sandy brown residuum. |
| 81.5     | 87.5   | 5.4        | 720               | BROWN SANDY RESIDUUM  
- Medium to rusty brown, slightly rocky sandy residuum. Very homogeneous section. Some limonite colored sections. Lower contact established by the appearance of rocky material. |
| 87.5     | 108.5  | 16.8       | 713               | WEATHERED CARBONATITE  
- 80-85% brown (iron stained) weathered sovite/maybe cemented residuum. Very rocky and blocky section. Most chunks range 10-20cm. Lower contact established by the appearance of sandy material. |
| 108.5    | 131.0  | 19.1       | 720               | SANDY RESIDUUM  
- Tan to medium brown sandy (5% rocky rubble). Very sandy material and very homogeneous and consistent texture. Lower contact established by the appearance of white sovite rock. |

**Drill Hole ID**  
AGR-01-055

**Drill Site**  
Kapuskasing Phosphate Operation

**Project**  
Exploration Drilling

**Location**  
Winter 2001

**Lithological Descriptions**  
Friday, June 08, 2001

---

**Friday, June 08, 2001**
### Agrium
**Kapuskasing Phosphate Operation**
**Exploration Drilling**

**Project** | Winter 2001
---|---

### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>131.0 m</td>
<td>138.5 m</td>
<td>7.5 m</td>
<td>711</td>
<td>SOVITE</td>
</tr>
</tbody>
</table>
- Light gray to white speckled textures; black magnetite and brown pyroxenes (3mm to 1cm) on a whitish gray calcic matrix. No obvious schistosity; pretty massive rock. No weathering after 132.00m. = EOH. |

### Drilling Details

<table>
<thead>
<tr>
<th>Drill Hole ID</th>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Elevation</th>
<th>Proposed Depth</th>
<th>Actual Depth</th>
<th>Number of Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>246.2</td>
<td>125</td>
<td>138.5</td>
<td>33</td>
</tr>
</tbody>
</table>

---

Friday, June 08, 2001
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Logged By P. Maranghi
Claim number 78657
Azim 0
Dip 90
Drilling Contractor Norex Drilling

Date Logged 5/30/2001
Township Cargill

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No

Number of Assays
Number of ICP 0
Rejected/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 0.0 m| 5.0 m| 5.0 m  | 714               | VARVED CLAY  
- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders. |
| 5.0 m| 22.8 m| 17.8 m | 717               | BOULDER / BASAL TILL  
- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 30cm in size.  
Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum. |
| 22.8 m| 41.0 m| 18.3 m | 720               | BROWN RESIDUUM  
- Dark brown to orange brown, rocky/muddy residuum. Lower contact established by the appearance of greenish mud. |
| 41.0 m| 45.5 m| 4.5 m  | 713               | GREEN MUD,  
- Weathered pyroxenite? Homogeneous, flakey green mud. Lower contact established by the appearance of rock. |
| 45.5 m| 51.5 m| 6.0 m  | 711               | SOVITE -Light gray, fine grained matrix containing up to 10% coarse grained (20mm) black magnetite crystals. No visible weathering after the first 30cm. Sub-vertical schistosity. 51.50m = EOH. |

**Friday, June 08, 2001**
**Drill Hole ID**
AGR-01-057

**North** 5461251.4  **Start Date** 4/11/2001
**East** 367538.5 **End Date** 4/11/2001

**Elevation** 249.6

**Proposed Depth** 150  **Actual Depth** 44

**Number of Boxes** 12

---

**Logged By** P. Marenghi

**Claim number** 78657

**Azim** 0

**Dip** -90

**Drilling Contractor** Norex Drilling

**Purpose**

**Results**

Why hole terminated Normal termination

**Core Size** HQ

**Casing** No

**Hole Cemented** No

**Number of Assays**

**Number of ICP** 0

**Rejects/Pulps saved** Yes

**Core Stored** Agrium Minesite

---

Friday, June 08, 2001
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>3.5</td>
<td>3.5</td>
<td>714</td>
<td>VARVED CLAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
</tr>
<tr>
<td>3.5</td>
<td>15.5</td>
<td>12.0</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 30cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum.</td>
</tr>
<tr>
<td>15.5</td>
<td>24.7</td>
<td>9.2</td>
<td>713</td>
<td>SAPROLITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark brown to rusty brown, chunky rubble mixed with about 20% sandy residuum. Very homogeneous and local black coarse grained magnetite xts. Lower contact established by the appearance of sovite rock.</td>
</tr>
<tr>
<td>24.7</td>
<td>44.0</td>
<td>19.3</td>
<td>711</td>
<td>SOVITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, fine grained matrix containing up to 10% coarse grained (20mm) black magnetite / mica / chlorite xts. No visible weathering after the first 30cm. Sub-vertical schistosity. 44.00m = EOH.</td>
</tr>
</tbody>
</table>

Friday, June 08, 2001
**Drill Hole ID**  
**AGR-01-058**

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5461951.2</td>
<td>367525.8</td>
<td>4/5/2001</td>
<td>4/11/2001</td>
</tr>
</tbody>
</table>

**Elevation** 247.3

**Proposal Depth** 120

**Actual Depth** 126

**Number of Boxes** 24

---

**Logged By**  P. Maranghi

**Claim number** 78659

**Azim** 0

**Dip** -90

**Drilling Contractor** Norex Drilling

**Purpose**

**Results**

**Why hole terminated** Normal termination

**Core Size** HQ

**Casing** No

**Hole Cemented** No

**Number of Assays**

**Number of ICP** 0

**Rejects/Pulps saved** Yes

**Core Stored** Agrium Minesite

---

*Friday, June 08, 2001*
## Agrium Kapuskasing Phosphate Operation
### Exploration Drilling

**Project**  
Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>11.0</td>
<td>11.0</td>
<td>714</td>
<td>VARVED CLAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
</tr>
<tr>
<td>11.0</td>
<td>45.5</td>
<td>34.5</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very little material was recovered. Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 60cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum.</td>
</tr>
<tr>
<td>45.5</td>
<td>95.0</td>
<td>49.5</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Tan brown to orange brown to dark brown and locally green, sandy/muddy residuum. Lower contact established by the appearance of greenish mud.</td>
</tr>
<tr>
<td>95.0</td>
<td>99.5</td>
<td>4.5</td>
<td>704</td>
<td>CLINOCHLORITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark green to black clinohlore. Very consistent with no brown residuum. Lower contact established by the appearance of brown residuum.</td>
</tr>
<tr>
<td>99.5</td>
<td>117.5</td>
<td>18.0</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Tan brown to orange brown to dark brown and locally green chlorite rich (10%), sandy/muddy residuum. Lower contact established by the appearance of brown rocky mud.</td>
</tr>
</tbody>
</table>

**Friday, June 08, 2001**
**Drill Hole ID**  
AGR-01-058

**North** 5481951.2  
**East** 367525.8  
**Elevation** 247.3  
**Proposed Depth** 120  
**Actual Depth** 126  
**Start Date** 4/5/2001  
**End Date** 4/11/2001

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 117.5 m | 122.0 m | 4.5 m  | 713               | **SAPROLITE**  
- Dark brown to rusty brown, fine grained purplish (siderite??) chunky rubble. Well developed foliation at 60 degrees to the core axis. Lower contact established by the appearance of sovite rock. |
| 122.0 m | 126.0 m | 4.0 m  | 711               | **SOVITE**  
- Light gray, fine grained matrix containing up to 10% coarse grained (up to 7cm) black magnetite / mica / chlorite xhtals. No visible weathering after the first 30cm. Sub - vertical schistosity. 126.00m = EOH. |

% Recovery: 100%
Drill Hole ID
AGR-01-059

Drill Hole ID North 5460977.3
East 357524.9

Elevation 248.1

Proposed Depth 120
Actual Depth 138.5

Number of Boxes 27

Logged By P. Marenghi

Date Logged 5/30/2001

Township Cargill

Claim number 78658
Azim 0
Dip 90

Drilling Contractor Norex Drilling

Purpose

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No

Number of Assays 0
Number of ICP 0

Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>3.5 m</td>
<td>3.5 m</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>29 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td></td>
</tr>
<tr>
<td>3.5 m</td>
<td>51.5 m</td>
<td>48.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>30 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very little material was recovered, 27.50-51.5m = 3.3m. No recovery from 3.50-9.50m, 17.0-18.50m, 35.0-42.0m. Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 60cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum.</td>
<td></td>
</tr>
<tr>
<td>51.5 m</td>
<td>66.5 m</td>
<td>15.0 m</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
<td>75 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Tan brown with local patches of grayish white, sandy / muddy residuum. Lower contact established by the appearance of gray residuum.</td>
<td></td>
</tr>
<tr>
<td>66.5 m</td>
<td>90.5 m</td>
<td>24.0 m</td>
<td>720</td>
<td>GRAY SANDY RESIDUUM</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium to dark gray, fine sand / muddy, chlorite rich, homogeneous residuum. Local 0.5 - 1.0m clay sections. The last 3m of this section grades into brown residuum (lower contact established).</td>
<td></td>
</tr>
<tr>
<td>90.5 m</td>
<td>94.3 m</td>
<td>3.8 m</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
<td>90 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Rusty brown flaky, sandy / muddy residuum. Local 20cm iron stained rocky rubble. Lower contact established by the appearance of gray residuum.</td>
<td></td>
</tr>
</tbody>
</table>

**Friday, June 08, 2001**
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling

Project Winter 2001

Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>94.3 m</td>
<td>116.8 m</td>
<td>22.5 m</td>
<td>720</td>
<td>GRAY SANDY RESIDUUM - Grayish green to whitish beige, sandy residuum. Local large (2cm) flakes of chlorite. Local white sand. No recovery from 103.5 to 104.0m. Lower contact established by the appearance of brown residuum.</td>
<td>80 %</td>
</tr>
<tr>
<td>116.8 m</td>
<td>131.0 m</td>
<td>14.3 m</td>
<td>713</td>
<td>SAPROLITE - Dark brown to rusty brown sandy / muddy residuum, locally rocky rubble. Rock portion increases with depth. Lower contact established by the appearance of sovite rock.</td>
<td>85 %</td>
</tr>
<tr>
<td>131.0 m</td>
<td>138.5 m</td>
<td>7.5 m</td>
<td>711</td>
<td>SOVITE - Light gray, fine grained matrix containing up to 10% coarse grained (up to 7cm) black magnetite / mica / chlorite / po x tal. - No visible weathering after the first 30cm. Sub - vertical schistosity. 138.50m = EOH.</td>
<td>95 %</td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling

**Project: Winter 2001**

---

**Logged By:** P. Marenghi
**Claim number:** 78657
**Azim:** 0
**Dip:** 90°
**Drilling Contractor:** Norex Drilling
**Purpose:**
**Results:**
**Why hole terminated:** Normal termination
**Core Size:** HQ
**Casing:** No
**Hole Cemented:** No
**Number of Assays:**
**Number of ICP:** 0
**Rejects/Pulps saved:** Yes
**Core Stored:** Agrium Minesite

---

**Date Logged:** 5/30/2001
**Township:** Cargill

---

**Drill Hole ID:**
**AGR-01-060**

---

**North:** 5461105.4
**East:** 367590.7
**Elevation:** 250.5
**Proposed Depth:** 150
**Actual Depth:** 128
**Number of Boxes:** 24

---

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>9.5 m</td>
<td>9.5 m</td>
<td>714</td>
<td>VARVED CLAY&lt;br&gt;- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>11 %</td>
</tr>
<tr>
<td>9.5 m</td>
<td>42.5 m</td>
<td>33.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL&lt;br&gt;- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 30cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of gray residuum.</td>
<td>22 %</td>
</tr>
<tr>
<td>42.5 m</td>
<td>96.5 m</td>
<td>54.0 m</td>
<td>720</td>
<td>GRAY SANDY RESIDUUM&lt;br&gt;- Medium to navy gray to whitish gray, sandy residuum. Local sections of clay. Local sections that are mica / chlorite rich. Overall, very homogeneous section. Lower contact established by the appearance of brown residuum (gradual contact over 4m).</td>
<td>75 %</td>
</tr>
<tr>
<td>96.5 m</td>
<td>126.5 m</td>
<td>30.0 m</td>
<td>720</td>
<td>BROWN RESIDUUM&lt;br&gt;- Dark brown to orange brown, sandy / muddy / rocky residuum. Local 0.5m of white clay. Lower contact established by the appearance of sovite rock.</td>
<td>75 %</td>
</tr>
<tr>
<td>126.5 m</td>
<td>130.0 m</td>
<td>3.5 m</td>
<td>711</td>
<td>SOVITE -Blocky ground over the first 4m. Light gray, fine grained matrix containing up to 10% coarse grained (up to 7cm) black magnetite / mica / chlorite / po xtalts. No visible weathering after the first 30cm. Sub - vertical schistosity. 130.00m EOH.</td>
<td>70 %</td>
</tr>
</tbody>
</table>
**Agrium**

*Kapuskasing Phosphate Operation*

*Exploration Drilling*

*Project* Winter 2001

---

<table>
<thead>
<tr>
<th>Drift Hole ID</th>
<th>North</th>
<th>Start Date</th>
<th>East</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR-01-061</td>
<td>5461101.1</td>
<td>4/17/2001</td>
<td>367638.4</td>
<td>4/19/2001</td>
</tr>
</tbody>
</table>

**Elevation** 251.9

**Proposed Depth** 120

**Actual Depth** 130

**Number of Boxes** 27

---

**Logged By** P. Marenghi

**Claim number** 78657

**Asim** 0

**Dip** 90

**Drilling Contractor** Norex Drilling

**Purpose**

---

**Results**

---

**Why hole terminated** Normal termination

**Core Size** HQ

**Casing** No

**Hole Cemented** No

**Number of Assays**

**Number of ICP** 0

**Rejects/Pulps saved** Yes

**Core Stored** Agrium Minesite

---

**Date Logged** 5/30/2001

**Township** Cargill

---

**Friday, June 01, 2001**
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>21.5</td>
<td>21.5</td>
<td>714</td>
<td>VARVED CLAY</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>30 %</td>
</tr>
<tr>
<td>21.5</td>
<td>41.8</td>
<td>20.3</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 20cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum.</td>
<td>25 %</td>
</tr>
<tr>
<td>41.8</td>
<td>86.0</td>
<td>44.3</td>
<td>708</td>
<td>BROWN RESIDUUM / CLAY MIXTURE</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- 65% light gray to brownish gray to reddish gray clay interbedded with 1-3m sections of dark brown to orange brown, sandy/muddy / rocky residuum. The clay becomes absent with depth. Lower contact established by the appearance of brown residuum (no clay).</td>
<td>70 %</td>
</tr>
<tr>
<td>86.0</td>
<td>104.0</td>
<td>18.0</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark brown to orange brown, sandy / muddy / rocky residuum. Lower contact established by the appearance of green clinohlore.</td>
<td>70 %</td>
</tr>
<tr>
<td>104.0</td>
<td>122.0</td>
<td>18.0</td>
<td>704</td>
<td>CLINOCHLORI</td>
<td>- Dark green to black clinohlore. Saprolite section from 105.5 - 109.0m. The green unit grades from soft into hard rock with depth. The rock contains large chlorite rich bands that could be sovite banding. Lower contact established by the appearance of sovite rock.</td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001
Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>122.0</td>
<td>128.0</td>
<td>6.0 m</td>
<td>711</td>
<td>SOVITE - Light gray, fine grained matrix containing up to 10% coarse grained (up to 10mm) black magnetite / mica / chlorite / po xtal. No visible weathering after the first 30cm. Sub - vertical schistosity displayed by 2m thick bands @ 70 deg. to the core axis. 128.00m = EOH.</td>
<td>100 %</td>
</tr>
</tbody>
</table>

Drill Hole ID  AGR-01-061
North         5461101.1
Start Date    4/17/2001
East          367938.4
End Date      4/19/2001
Elevation     251.9
Proposed Depth 120
Actual Depth  130
Number of Boxes 27
### Agrium

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

<table>
<thead>
<tr>
<th>Logged By</th>
<th>Date Logged</th>
<th>Township</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. Maranghi</td>
<td>5/30/2001</td>
<td>Cargill</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Claim number</th>
<th>78657</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azim</td>
<td>0</td>
</tr>
<tr>
<td>Dip</td>
<td>-90</td>
</tr>
<tr>
<td>Drilling Contractor</td>
<td>Norex Drilling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploration Drilling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why hole terminated</td>
</tr>
<tr>
<td>Core Size</td>
</tr>
<tr>
<td>Casing</td>
</tr>
<tr>
<td>Hole Cemented</td>
</tr>
<tr>
<td>Number of Assays</td>
</tr>
<tr>
<td>Number of ICP Assays</td>
</tr>
<tr>
<td>Rejects/Pulps saved</td>
</tr>
<tr>
<td>Core Stored</td>
</tr>
</tbody>
</table>

**Drill Hole ID**

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5481204.2</td>
<td>367600.8</td>
<td>4/23/2001</td>
<td>4/24/2001</td>
</tr>
</tbody>
</table>

**Elevation** 250.3

**Proposed Depth** 150

**Actual Depth** 22.5

**Number of Boxes** 13

---

Friday, June 08, 2001
# Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>5.0 m</td>
<td>5.0 m</td>
<td>714</td>
<td>VARVED CLAY&lt;br&gt;- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>60 %</td>
</tr>
<tr>
<td>5.0 m</td>
<td>27.5 m</td>
<td>22.5 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL&lt;br&gt;- Light gray, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 20cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of gray residuum.</td>
<td>27 %</td>
</tr>
<tr>
<td>27.5 m</td>
<td>36.5 m</td>
<td>9.0 m</td>
<td>720</td>
<td>GRAY SANDY RESIDUUM&lt;br&gt;- Medium to navy gray to whitish gray, sandy residuum. Local sections that are mica / chlorite rich. Overall, very homogeneous section. Lower contact established by the appearance of brown residuum (gradual contact over 4m).</td>
<td>60 %</td>
</tr>
<tr>
<td>36.5 m</td>
<td>71.0 m</td>
<td>34.5 m</td>
<td>720</td>
<td>BROWN RESIDUUM&lt;br&gt;- Dark brown to orange brown, sandy / muddy / rocky residuum. No recovery from 48.50 - 50.0m. Very poor recovery overall. Lower contact established by the appearance of sovite.</td>
<td>60 %</td>
</tr>
<tr>
<td>71.0 m</td>
<td>77.0 m</td>
<td>6.0 m</td>
<td>711</td>
<td>SOVITE&lt;br&gt;- Light gray, fine grained matrix containing up to 50% coarse grained (up to 10mm) black magnetite / mica / chlorite / go xtal. No visible weathering after the first 30cm. Sub - vertical schistosity. From 74.0 - 77.0m = massive white sovite. 77.00m = EOH.</td>
<td>100 %</td>
</tr>
</tbody>
</table>
**Drill Hole ID**
- **AGR-01-063**

**North** 5461202
**East** 367501.5
**Start Date** 4/10/2001
**End Date** 4/10/2001

**Elevation** 248.5
**Proposed Depth** 150
**Actual Depth** 35
**Number of Boxes** 5

---

**Logged By** P. Marenghi
**Claim number** 78658
**Azim** 0
**Dip** -90

**Drilling Contractor** Norex Drilling

---

**Logged Date** 5/30/2001
**Date Logged** 5/30/2001

**Township** Cargill

---

**Results**

- **Why hole terminated** Normal termination
- **Core Size** HQ
- **Casing** No
- **Hole Cemented** No
- **Number of Assays**
- **Number of ICP** 0
- **Rejects/Pulps saved** Yes
- **Core Stored** Agrrium Minesite

---

**Friday, June 08, 2001**
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
</table>
| 0.0 m  | 6.5 m | 6.5 m  | 714               | VARVED CLAY  
Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders. | 10 %       |
| 6.5 m  | 20.0 m| 13.5 m | 717               | BOULDER / BASAL TILL  
Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum. | 70 %       |
| 20.0 m | 29.0 m| 9.0 m  | 713               | SAPROLITE  
Dark brown to rusty brown sandy/muddy residuum, locally rocky rubble. Local patches of chlorite rich mud. Sharp lower contact. Lower contact established by the appearance of sovite rock. | 50 %       |
| 29.0 m | 32.0 m| 3.0 m  | 711               | SOVITE  
Light gray, fine grained matrix containing up to 10% coarse grained (up to 7cm) black magnetite/mica/chlorite/po xtabs. No visible weathering. Sub-vertical schistosity. 32.0m = EOH. | 100 %      |

Friday, June 08, 2001
## Drilling Project Details

**Project:** Winter 2001

### Drill Hole ID
- **ID:** AGR-01-064
- **North:** 5461402.6
- **East:** 367304.3
- **Elevation:** 221.1
- **Proposed Depth:** 170
- **Actual Depth:** 95
- **Number of Boxes:** 20

### Logs
- **Logged By:** P. Maronghi
- **Claim number:** 89923
- **Azim:** 0
- **Dip:** 90
- **Drilling Contractor:** Norex Drilling
- **Purpose:**
- **Results:**
  - **Why hole terminated:** Normal termination
  - **Core Size:** HQ
  - **Casing:** No
  - **Hole Cemented:** No
  - **Number of Assays:**
  - **Number of ICP:** 0
  - **Rejects/Pulps saved:** Yes
  - **Core Stored:** Agrium Minesite

**Date Logged:** 5/30/2001

**Township:** Cargill

---

Friday, June 08, 2001
**Agrium**  
**Kapuskasing Phosphate Operation**  
**Exploration Drilling**  

**Project** Winter 2001  

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 0.0 m | 63.5 m| 63.5 m | 706               | CRETACEOUS WASTE  
- Mixture of 60% black organic rich peat, 30% medium to coarse grained silica sand ranging from white to beige and 10% whitish gray clay. Interbedded sections of 1-5m. Most of the peat displays wood chips and is silaceous to some extent. Very gradual lower contact into gray residuum. |
| 63.5 m| 95.0 m| 31.5 m | 720               | GRAY SANDY RESIDUEUM  
- Medium to navy gray to whitish gray, sandy residuum. Local sections that are mica / chlorite rich. Overall, very homogeneous section. 95.0m = EOH. Hole stopped due to technical difficulties. |

**Drill Hole ID**  
**AGR-01-064**

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5461402.6</td>
<td>367304.3</td>
<td>4/20/2001</td>
<td>4/23/2001</td>
</tr>
</tbody>
</table>

**Elevation**  
221.1

**Proposed Depth**  
170

**Actual Depth**  
95

**Number of Boxes**  
20

**% Recovery**  
70 %

**% Recovery**  
65 %
**Drill Hole ID**

- **AGR-01-065**

**North:** 5461300

**East:** 367600

**Start Date:** 4/9/2001

**End Date:** 4/9/2001

**Elevation:** 249.3

**Proposed Depth:** 50

**Actual Depth:** 23

**Number of Boxes:** 7

---

**Logged By:** P. Maronghi

**Date Logged:** 5/30/2001

**Township:** Cargill

**Contractor:** Norex Drilling

**Purpose:** Exploration Drilling

**Proposed Depth:** 50

**Actual Depth:** 23

**Number of Boxes:** 7

**Churn number:** 78657

**Dip:** -90

**Azim:** 0

---

**Why hole terminated:** Normal termination

**Core Size:** HQ

**Casing:** No

**Hole Cemented:** No

**Number of Assays:** 150

**Number of ICP:** 0

**Rejected/Paralyzed:** Yes

**Core Stored:** Agrium Minesite

---

Friday, June 08, 2001

---

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>11.0</td>
<td>11.0</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of sovite rock.</td>
</tr>
<tr>
<td>11.0</td>
<td>23.0</td>
<td>12.0</td>
<td>711</td>
<td>SOVITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, fine grained matrix containing up to 10% coarse grained (up to 7cm) black magnetite / mica / chlorite / po xtals. No visible weathering. Sub - vertical schistosity. 23.0m = EOH.</td>
</tr>
</tbody>
</table>

% Recovery: 90% 100%
**Agrium**
Kapuskasing Phosphate Operation
Exploration Drilling

*Project* Winter 2001

---

### Drilling Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drill Hole ID</strong></td>
<td>AGR-01-066</td>
</tr>
<tr>
<td><strong>North</strong></td>
<td>5481297.6</td>
</tr>
<tr>
<td><strong>Start Date</strong></td>
<td>4/10/2001</td>
</tr>
<tr>
<td><strong>East</strong></td>
<td>367548.1</td>
</tr>
<tr>
<td><strong>End Date</strong></td>
<td>4/11/2001</td>
</tr>
<tr>
<td><strong>Elevation</strong></td>
<td>250.6</td>
</tr>
<tr>
<td><strong>Proposed Depth</strong></td>
<td>50</td>
</tr>
<tr>
<td><strong>Actual Depth</strong></td>
<td>30.5</td>
</tr>
<tr>
<td><strong>Number of Boxes</strong></td>
<td>8</td>
</tr>
</tbody>
</table>

---

### Drilling Details

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logged By</strong></td>
<td>P. Marenghi</td>
</tr>
<tr>
<td><strong>Claim number</strong></td>
<td>78657</td>
</tr>
<tr>
<td><strong>Azim</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Dip</strong></td>
<td>-90</td>
</tr>
<tr>
<td><strong>Drilling Contractor</strong></td>
<td>Norex Drilling</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Why hole terminated</strong></td>
<td>Normal termination</td>
</tr>
<tr>
<td><strong>Core Size</strong></td>
<td>HQ</td>
</tr>
<tr>
<td><strong>Casing</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Hole Cemented</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Number of Assays</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Number of ICP</strong></td>
<td>0</td>
</tr>
<tr>
<td><strong>Rejects/ Pulps saved</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Core Stored</strong></td>
<td>Agrium Minesite</td>
</tr>
</tbody>
</table>

---

**Friday, June 08, 2001**
**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>11.8 m</td>
<td>11.8 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL&lt;br&gt;- Light grey, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of sovite rock.</td>
<td>65 %</td>
</tr>
<tr>
<td>11.8 m</td>
<td>30.5 m</td>
<td>18.8 m</td>
<td>711</td>
<td>SOVITE - Light grey, fine grained matrix containing up to 10% coarse grained (up to 7cm) black magnetite / mica / chlorite / po xtal. No visible weathering. Sub - vertical schistosity. 30.5m = EOH. Badly broken core.</td>
<td>75 %</td>
</tr>
</tbody>
</table>
## Agrium

### Kapuskasing Phosphate Operation

#### Exploration Drilling

**Project:** Winter 2001

<table>
<thead>
<tr>
<th>Lithological Descriptions</th>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARVED CLAY</td>
<td>0.0</td>
<td>5.0</td>
<td>5.0</td>
<td>714</td>
<td>Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>20%</td>
</tr>
<tr>
<td>BOULDER / BASAL TILL</td>
<td>5.0</td>
<td>11.0</td>
<td>6.0</td>
<td>717</td>
<td>Light gray, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 20cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum.</td>
<td>67%</td>
</tr>
<tr>
<td>BROWN RESIDUUM</td>
<td>11.0</td>
<td>21.0</td>
<td>10.0</td>
<td>720</td>
<td>Dark brown to orange brown, sandy / muddy / rocky residuum. No recovery from 48.50 - 50.0m. Very poor recovery overall. Lower contact established by the appearance of saprolite.</td>
<td>40%</td>
</tr>
<tr>
<td>SAPROLITE</td>
<td>21.0</td>
<td>35.8</td>
<td>14.8</td>
<td>713</td>
<td>Dark brown to rusty brown rocky rubble. Local patches of chlorite rich mud. Poor recovery. Lower contact established by the appearance of sovite rock.</td>
<td>65%</td>
</tr>
<tr>
<td>SOVITE</td>
<td>35.8</td>
<td>42.5</td>
<td>6.8</td>
<td>711</td>
<td>Light gray, fine grained matrix containing up to 10% coarse grained (up to 7cm) black magnetite / mica / chlorite / po xals. No viable weathering. Sub - vertical schistosity. 42.75m = EOH.</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Drill Hole ID**

- **ID:** AGR-01-067
- **North:** 5461351.7
- **East:** 367663
- **Elevation:** 248.9
- **Start Date:** 4/11/2001
- **End Date:** 4/12/2001
- **Proposed Depth:** 70
- **Actual Depth:** 42.5
- **Number of Boxes:** 9

*Friday, June 08, 2001*
Drill Hole ID  
AGR-01-068

Logged By P. Marenghi  
Claim number 78657
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Start Date 4/27/2001
End Date 4/27/2001

Date Logged 5/30/2001
Township Cargill

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No

Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Proposed Depth 70
Actual Depth 23
Number of Boxes 6

Friday, June 08, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>5.0 m</td>
<td>5.0 m</td>
<td>714</td>
<td><strong>VARVED CLAY</strong>  &lt;br&gt;- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>40 %</td>
</tr>
<tr>
<td>5.0 m</td>
<td>10.3 m</td>
<td>5.3 m</td>
<td>717</td>
<td><strong>BOULDER / BASAL TILL</strong>  &lt;br&gt;- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 10cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum.</td>
<td>90 %</td>
</tr>
<tr>
<td>10.3 m</td>
<td>16.3 m</td>
<td>6.0 m</td>
<td>720</td>
<td><strong>BROWN RESIDUUM</strong>  &lt;br&gt;- Dark brown, sandy/muddy/rocky residuum. Lower contact established by the appearance of sovite.</td>
<td>67 %</td>
</tr>
<tr>
<td>16.3 m</td>
<td>23.0 m</td>
<td>6.8 m</td>
<td>711</td>
<td><strong>SOVITE</strong>  &lt;br&gt;- Light gray, fine grained matrix containing up to 10% coarse grained (up to 7cm) black magnetite/mica/chlorite/pyroxene. No visible weathering. Sub-vertical schistosity. 23.05m = EOH.</td>
<td>100 %</td>
</tr>
</tbody>
</table>
Agrium
Kapusaking Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-069

Start Date 4/22/2001
End Date 4/22/2001

North 5461350.8
East 367649.7
Elevation 251.7
Proposed Depth 70
Actual Depth 38
Number of Boxes 6

Logged By P. Marenghi
Claim number 78657
Azim 0
Dip 90
Drilling Contractor Norox Drilling
Purpose
Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays 0
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Date Logged 5/30/2001
Township Cargill

Friday, June 08, 2001
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>3.5 m</td>
<td>3.5 m</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>6 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>the appearance of pebbles and boulders.</td>
<td></td>
</tr>
<tr>
<td>3.5 m</td>
<td>15.5 m</td>
<td>12.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ranging from 5mm to 40cm in size. Composition varies but granodiorite and</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mafic units predominate. Lower contact established by the appearance of brown</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>residuum.</td>
<td></td>
</tr>
<tr>
<td>15.5 m</td>
<td>30.5 m</td>
<td>15.0 m</td>
<td>713</td>
<td>SAPROLITE</td>
<td>60 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark brown to rusty brown rocky rubble. Local patches of chlorite rich</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mud. Poor recovery. Lower contact established by the appearance of sovite</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>rock.</td>
<td></td>
</tr>
<tr>
<td>30.5 m</td>
<td>38.0 m</td>
<td>7.5 m</td>
<td>711</td>
<td>SOVITE</td>
<td>100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, fine grained matrix containing up to 10% medium grained (up</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>to 2mm) black magnetite/mica/chlorite/poxtals. No visible weathering. Sub-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>vertical schistosity. 38.0m = EOH.</td>
<td></td>
</tr>
</tbody>
</table>

*Friday, June 08, 2001*
<table>
<thead>
<tr>
<th>Drill Hole ID</th>
<th>North</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR-01-070</td>
<td>5461400.6</td>
<td>4/24/2001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>East</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>367672.2</td>
<td>4/25/2001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elevation</th>
<th>Proposed Depth</th>
<th>Actual Depth</th>
<th>Number of Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>252.6</td>
<td>70</td>
<td>75.5</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Logged By</th>
<th>Claim number</th>
<th>Azim</th>
<th>Dip</th>
<th>Drilling Contractor</th>
<th>Purpose</th>
<th>Why hole terminated</th>
<th>Core Size</th>
<th>Casing</th>
<th>Hole Cemented</th>
<th>Number of Assays</th>
<th>Number of ICP</th>
<th>Rejects/Pulps saved</th>
<th>Core Stored</th>
<th>Date Logged</th>
<th>Township</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. Marenghi</td>
<td>70057</td>
<td>0</td>
<td>-90</td>
<td>Norex Drilling</td>
<td></td>
<td>Normal termination</td>
<td>HQ</td>
<td>No</td>
<td>No</td>
<td>0</td>
<td>0</td>
<td>Yes</td>
<td>Agrium Minesite</td>
<td>5/30/2001</td>
<td>Cargill</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hole Depth</th>
<th>Core Size</th>
<th>Casing</th>
<th>Hole Cemented</th>
<th>Number of Assays</th>
<th>Number of ICP</th>
<th>Rejects/Pulps saved</th>
<th>Core Stored</th>
</tr>
</thead>
<tbody>
<tr>
<td>75.5</td>
<td>HQ</td>
<td>No</td>
<td>No</td>
<td>0</td>
<td>0</td>
<td>Yes</td>
<td>Agrium Minesite</td>
</tr>
</tbody>
</table>

Friday, June 08, 2001

Page 1 of 2
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>23.0 m</td>
<td>23.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL - Light gray, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 15cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of green chlorite.</td>
<td>70 %</td>
</tr>
<tr>
<td>23.0 m</td>
<td>27.5 m</td>
<td>4.5 m</td>
<td>704</td>
<td>CLINOCHLOR - Dark green to black chlorite. Lower contact established by the appearance of brown residuum.</td>
<td>70 %</td>
</tr>
<tr>
<td>27.5 m</td>
<td>60.5 m</td>
<td>33.0 m</td>
<td>720</td>
<td>BROWN RESIDUUM - Dark brown to orange brown to tan brown with local yellowish brown, clay rich / muddy residuum. Lower contact established by the appearance of sovite rubble and rock.</td>
<td>90 %</td>
</tr>
<tr>
<td>60.5 m</td>
<td>75.5 m</td>
<td>15.0 m</td>
<td>711</td>
<td>SOVITE - Light gray, fine grained matrix containing up to 10% medium grained (up to 2mm) black magnetite / mica / chlorite / poxites. No visible weathering. Sub - vertical schistosity. 75.50m = EOH.</td>
<td>100 %</td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-071

North 54°61.400.7
East 36°75.599.7
Elevation 248.3

Proposed Depth 70
Actual Depth 56
Number of Boxes 13

Logged By P. Marenghi
Claim number 78657
Azim 0
Dip -90
Drilling Contractor Norex Drilling
Purpose

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Date Logged 5/30/2001
Township Cargill

Friday, June 08, 2001
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

**Drill Hole ID**

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
</table>

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>3.5 m</td>
<td>3.5 m</td>
<td>714</td>
<td>VARVED CLAY - Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
</tr>
<tr>
<td>3.5 m</td>
<td>9.5 m</td>
<td>6.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL - Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 20cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of cemented residuum.</td>
</tr>
<tr>
<td>9.5 m</td>
<td>35.0 m</td>
<td>25.5 m</td>
<td>720</td>
<td>CEMENTED RESIDUUM - 70% cemented / rocky residuum with 30% chlorite sections. The cemented residuum appears as fragmental, fine-grained, calcite cemented, very dirty rock. Sections of rock range from 1-4m. Lower contact established by the appearance of brown residuum.</td>
</tr>
<tr>
<td>35.0 m</td>
<td>54.5 m</td>
<td>19.5 m</td>
<td>713</td>
<td>SAPIROITE - 50% sovite rubble (white, fine-grained, massive 20-70cm chunks) mixed with tan to dark brown to rusty brown rocky rubble. Sovite content increases with depth. Lower contact established by the appearance of sovite rock.</td>
</tr>
<tr>
<td>54.5 m</td>
<td>56.0 m</td>
<td>1.5 m</td>
<td>711</td>
<td>SOVITE - Light gray, fine-grained matrix containing up to 10% medium grained (up to 2mm) black magnetite / mica / chlorite / po xts. No visible weathering. Sub - vertical schistosity. 56.0m = EOH.</td>
</tr>
</tbody>
</table>

% Recovery
- 43%
- 84%
- 80%
- 70%
- 100%
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-072

Drill Hole ID
AGR-01-072

North 5461462.9
East 367601.7
Elevation 249.6
Proposed Depth 70
Actual Depth 36.5
Number of Boxes 6

Logged By P. Marenghi
Claim number 78857
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Date Logged 5/30/2001
Township Cargill

Logged By P. Marenghi
Claim number 78857
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Date Logged 5/30/2001
Township Cargill

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
**Agrium**  
Kapuskasing Phosphate Operation  
Exploration Drilling  
Project: Winter 2001

### Lithological Descriptions

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
</table>
| 0.0      | 5.0    | 5.0        | 714               | **VARVED CLAY**  
- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.                                                            | 20%        |
| 5.0      | 8.0    | 3.0        | 717               | **BOULDER / BASAL TILL**  
- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 5cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum. | 17%        |
| 8.0      | 30.5   | 22.5       | 720               | **BROWN RESIDUUM**  
- Dark brown to orange brown, rocky/muddy residuum. No recovery between 24.5 - 26.0m and 27.5 - 29.0m. Lower contact established by the appearance of sovite rock. | 70%        |
| 30.5     | 36.5   | 6.0        | 711               | **SOVITE**  
- Light gray, fine grained matrix containing up to 5% medium grained (up to 3mm) black magnetite / mica / chlorite / porphyroblasts. No visible weathering. Sub - vertical schistosity. 36.50m = EOH. | 100%       |

---

Friday, June 08, 2001
<table>
<thead>
<tr>
<th>Drll Hole ID</th>
<th>North</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR-01-073</td>
<td>5461452</td>
<td>4/26/2001</td>
</tr>
<tr>
<td></td>
<td>East</td>
<td>End Date</td>
</tr>
<tr>
<td></td>
<td>367648.4</td>
<td>4/27/2001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elevation</th>
<th>Proposed Depth</th>
<th>Actual Depth</th>
<th>Number of Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>250.9</td>
<td>70</td>
<td>54.5</td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Logged By</th>
<th>Date Logged</th>
<th>Township</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. Marenghi</td>
<td>5/30/2001</td>
<td>Cargill</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Claim number</th>
<th>Azim</th>
<th>Dip</th>
<th>Drilling Contractor</th>
<th>Purpose</th>
<th>Results</th>
<th>Why hole terminated</th>
<th>Core Size</th>
<th>Casing</th>
<th>Hole Cemented</th>
<th>Number of Assays</th>
<th>Number of ICP</th>
<th>Rejects/Pulps saved</th>
<th>Core Stored</th>
<th>Date Logged</th>
<th>Townsip</th>
</tr>
</thead>
<tbody>
<tr>
<td>78657</td>
<td>0</td>
<td>-90</td>
<td>Norex Drilling</td>
<td></td>
<td></td>
<td>Normal termination</td>
<td>HQ</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>0</td>
<td>Yes</td>
<td>Agrium Minesite</td>
<td>5/30/2001</td>
<td>Cargill</td>
</tr>
</tbody>
</table>

*Logged By: P. Marenghi
Claim number: 78657
Azim: 0
Dip: -90
Drilling Contractor: Norex Drilling
Purpose:
Results:
Why hole terminated: Normal termination
Core Size: HQ
Casing: No
Hole Cemented: No
Number of Assays: No
Number of ICP: 0
Rejects/Pulps saved: Yes
Core Stored: Agrium Minesite
Date Logged: 5/30/2001
Township: Cargill

Friday, June 08, 2001
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

<table>
<thead>
<tr>
<th>Lithological Description</th>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARVED CLAY</td>
<td>0.0 m</td>
<td>4.0 m</td>
<td>4.0 m</td>
<td>714</td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
</tr>
<tr>
<td></td>
<td>4.0 m</td>
<td>14.8 m</td>
<td>10.8 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
</tr>
<tr>
<td></td>
<td>14.8 m</td>
<td>47.0 m</td>
<td>32.3 m</td>
<td>713</td>
<td>SAPROLITE</td>
</tr>
<tr>
<td></td>
<td>47.0 m</td>
<td>54.5 m</td>
<td>7.5 m</td>
<td>711</td>
<td>SOVITE</td>
</tr>
</tbody>
</table>

- Light gray, fine grained matrix containing up to 15% medium grained (up to 2mm) black magnetite / mica / chlorite / po xtal. No visible weathering. Sub-vertical schistosity. 54.50m = EOH.

**Drill Hole ID**

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
</tr>
</thead>
<tbody>
<tr>
<td>5461.452</td>
<td>367648.4</td>
</tr>
</tbody>
</table>

**Elevation**

250.9

**Proposed Depth**

70

**Actual Depth**

54.5

**Number of Boxes**

14

**Start Date**

4/26/2001

**End Date**

4/27/2001

Friday, June 08, 2001
**Agrium**  
**Kapuskasing Phosphate Operation**  
**Exploration Drilling**  
**Project**  
Winter 2001

### Lithological Descriptions

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 0.0      | 5.0    | 5.0        | 714               | VARVED CLAY  
- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of gray gumbo clay. |
| 5.0      | 15.5   | 10.5       | 715               | GUMBO CLAY  
- Light gray, homogenous, soft clay. Local boulders at the top of this unit. Lower contact established by the appearance of pebbles and boulders. |
| 15.5     | 29.0   | 13.5       | 717               | BOULDER / BASAL TILL  
- Very little material was recovered. Light gray, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of green / tan clay. |
| 29.0     | 36.5   | 7.5        | 707               | GREEN / BROWN CLAY  
- Wood brown and epidote green clay. Locally very dark rusty brown. Speckled texture on fresh breaks. Lower contact established by the appearance of green clay. |
| 36.5     | 46.3   | 9.8        | 713               | WEATHERED PYROXENITE  
- Dark green, sandy mud with white stringers of weathered feldspar. Gradual upper contact grading into a dark green. Very homogeneous unit. Does not look like A ore. Numerous large chlorite flakes. Lower contact established by the appearance of brownish green sandy mud. |

**Drill Hole ID**  
AGR-01-074

**North** 546100.2  
**East** 366720.4  
**Elevation** 239.7

**Start Date** 3/18/2001  
**End Date** 3/20/2001

**Proposed Depth** 100  
**Actual Depth** 80  
**Number of Boxes** 20

Monday, June 11, 2001

---

Monday, June 11, 2001  
Page 2 of 3
### Agrium

Kapuskasing Phosphate Operation

**Exploration Drilling**

**Project** Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>46.3 m</td>
<td>56.0 m</td>
<td>9.8 m</td>
<td>720</td>
<td><strong>BROWN RESIDUUM</strong>&lt;br&gt;Dark chocolate brown to tan brown to green with local yellowish brown, sandy / muddy residuum. Lower contact established by the appearance of green rock.</td>
</tr>
<tr>
<td>56.0 m</td>
<td>59.0 m</td>
<td>3.0 m</td>
<td>713</td>
<td><strong>WEATHERED PYROXENITE</strong>&lt;br&gt;Dark green, sandy mud with white stringers of weathered feldspar. Gradual upper contact grading into a dark green. Very homogeneous unit. Does not look like A ore. Numerous large chlorite flakes. Lower contact established by the appearance of brownish rock.</td>
</tr>
<tr>
<td>59.0 m</td>
<td>71.0 m</td>
<td>12.0 m</td>
<td>720</td>
<td><strong>BROWN ROCK</strong>&lt;br&gt;Dark rusty brown to tan brown to green to beige, rocky / clay like residuum. Could be weathered mafic unit but probably not pyroxenite (altered country rock). Green / lime green seems to be epidote. No structural features visible. Lower contact established by the appearance of dark green pyroxenite.</td>
</tr>
<tr>
<td>71.0 m</td>
<td>80.0 m</td>
<td>9.0 m</td>
<td>712</td>
<td><strong>PYROXENITE</strong>&lt;br&gt;Very dark green, partially weathered to a sandy muddy consistency but becoming more fresh with depth. Locally visible chlorite / pyroxene / feldspar xtal (1-4mm). Very blocky ground. 80.0 m = EOH.</td>
</tr>
</tbody>
</table>

**Drill Hole ID**

**AGR-01-074**

**North** 5461100.2<br>**East** 366720.4

**Elevation** 239.7

**Proposed Depth** 100<br>**Actual Depth** 90<br>**Number of Boxes** 20

**% Recovery**

85%

80%

85%

85%
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Logged By P. Maronghi
Claim number 413074
Azim 0
Dip 90
Drilling Contractor Norox Drilling
Purpose
Results

Why hole terminated Normal termination
Core Size HQ
Casing None
Hole Cemented No
Number of Assays 0
Number of ICP 0
Rejects/Palps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
**Agrium**

*Kapuskasing Phosphate Operation*

*Exploration Drilling*

Project: Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>3.5 m</td>
<td>3.5 m</td>
<td>714</td>
<td><strong>VARVED CLAY</strong>&lt;br&gt;- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
</tr>
<tr>
<td>3.5 m</td>
<td>42.5 m</td>
<td>39.0 m</td>
<td>717</td>
<td><strong>BOULDER / BASAL TILL</strong>&lt;br&gt;- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 30cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of gray residuum.</td>
</tr>
<tr>
<td>42.5 m</td>
<td>86.0 m</td>
<td>43.5 m</td>
<td>720</td>
<td><strong>GRAY SANDY RESIDUUM</strong>&lt;br&gt;- Medium to navy gray to whitish gray to dark green with white stringers, chlorite rich (dark green flakes), locally clay rich, sandy residuum. Lower contact established by the appearance of mud and rocky rubble.</td>
</tr>
<tr>
<td>86.0 m</td>
<td>92.0 m</td>
<td>6.0 m</td>
<td>720</td>
<td><strong>CEMENTED RESIDUUM</strong>&lt;br&gt;- Light to medium brownish green, rocky residuum. The cemented residuum appears as fragmental, fine grained, calcite cemented, very dirty rock. Could also be weathered carbonatite as most fragments are heavily iron stained. Sections of rock range from 1-4m. Lower contact established by the appearance of brown residuum.</td>
</tr>
<tr>
<td>92.0 m</td>
<td>98.0 m</td>
<td>6.0 m</td>
<td>720</td>
<td><strong>BROWN RESIDUUM</strong>&lt;br&gt;- Dark chocolate brown to tan brown to green with local yellowish brown, sandy/muddy residuum. Hole stopped due to technical difficulties. 98.0 m = EOH.</td>
</tr>
</tbody>
</table>

Friday, June 08, 2001
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-076

Date Logged 5/30/2001
Township Cargill

Logged By P. Marangi
Claim number 413075
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Drill Hole ID
North 5401649.3
East 366740.7
Elevation 242.3
Proposed Depth 100
Actual Depth 105.5
Number of Boxes 20

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>6.5</td>
<td>6.5</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>19 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- First 50cm is black peat. Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of gray gumbo clay.</td>
<td></td>
</tr>
<tr>
<td>6.5</td>
<td>17.0</td>
<td>10.5</td>
<td>715</td>
<td>GUMBO CLAY</td>
<td>38 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, homogenous, soft clay. Local boulders at the top of this unit. Lower contact established by the appearance of pebbles and boulders.</td>
<td></td>
</tr>
<tr>
<td>17.0</td>
<td>27.5</td>
<td>10.5</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>21 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very little material was recovered. Light gray, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in size. Composition varies but granodiorite and mafic units predominate. No recovery from 18.50-21.50m. Lower contact established by the appearance of brown residuum.</td>
<td></td>
</tr>
<tr>
<td>27.5</td>
<td>35.0</td>
<td>7.5</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
<td>74 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark brown to medium brown, sandy / muddy residuum. Lower contact established by the appearance of gray residuum.</td>
<td></td>
</tr>
<tr>
<td>35.0</td>
<td>39.5</td>
<td>4.5</td>
<td>720</td>
<td>GRAY SANDY RESIDUUM</td>
<td>90 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium to very gray to dark green with white stringers, chlorite rich (dark green flakes), locally clay rich, sandy residuum. Lower contact established by the appearance of mud and rocky rubble.</td>
<td></td>
</tr>
</tbody>
</table>
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>39.5 m</td>
<td>57.5 m</td>
<td>18.0 m</td>
<td>713</td>
<td>WEATHERED CARBONATITE&lt;br&gt;- 70% tan brown to dark brown, iron stained, cavity rich rocky rubble in 5-10cm pieces mixed together with sandy / muddy residuum. Lower contact established by the appearance of rocky rubble.</td>
<td>45 %</td>
</tr>
<tr>
<td>57.5 m</td>
<td>81.5 m</td>
<td>24.0 m</td>
<td>720</td>
<td>BROWN RESIDUUM&lt;br&gt;- Dark brown to medium brown to orange brown, sandy / muddy residuum. About 20% rocky rubble. Lower contact established by the appearance of clinochlore.</td>
<td>85 %</td>
</tr>
<tr>
<td>81.5 m</td>
<td>88.0 m</td>
<td>7.5 m</td>
<td>704</td>
<td>CLINOCHLORIE&lt;br&gt;- Dark green to black clinochlore. Lower contact established by the appearance of brown residuum.</td>
<td>70 %</td>
</tr>
<tr>
<td>89.0 m</td>
<td>98.8 m</td>
<td>9.8 m</td>
<td>720</td>
<td>BROWN RESIDUUM&lt;br&gt;- Dark brown to medium brown to orange brown, sandy / muddy residuum. About 20% rocky rubble. This could be a saprolite zone. Lower contact established by the appearance of sovite.</td>
<td>80 %</td>
</tr>
<tr>
<td>98.8 m</td>
<td>105.5 m</td>
<td>6.8 m</td>
<td>711</td>
<td>SOVITE&lt;br&gt;- Light gray, fine grained matrix containing up to 15% medium grained (up to 2mm) black magnetite / mica / chlorite / po xtal. No visible weathering. Sub - vertical schistosity. 105.50m = EOH.</td>
<td>100 %</td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-077

North 5460800.3
East 366805.4

Elevation 242.2

Proposed Depth 150
Actual Depth 141.5
Number of Boxes 30

Logged By P. Marenghi
Date Logged 5/30/2001
Claim number 413074
Azim 0
Dip 90
Township Cargill
Drilling Contractor Norex Drilling
Purpose

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays No
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Friday, June 08, 2001
<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>15.5 m</td>
<td>15.5 m</td>
<td>714</td>
<td>VARVED CLAY - Brown, homogeneous, semi-layered, firm clay. No recovery from 0-2m, 3.5-5.0m, 8.0-11.0m. Lower contact established by the appearance of pebbles and boulders.</td>
<td>23 %</td>
</tr>
<tr>
<td>15.5 m</td>
<td>30.5 m</td>
<td>15.0 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL - Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 20cm in size. Composition varies but granodiorite and mafic units predominate. No recovery from 17.0-18.5m. Lower contact established by the appearance of cretaceous waste.</td>
<td>60 %</td>
</tr>
<tr>
<td>30.5 m</td>
<td>48.5 m</td>
<td>18.0 m</td>
<td>706</td>
<td>CRETACEOUS WASTE - Mixture of 60% black organic rich peat, 30% medium to coarse grained silica sand ranging from white to beige and 10% whitish gray clay. Interbedded sections of 1-5m. Most of the peat displays wood chips and is siliceous to some extent. Lower contact established by the appearance of gray clay.</td>
<td>60 %</td>
</tr>
<tr>
<td>48.5 m</td>
<td>57.5 m</td>
<td>9.0</td>
<td>707</td>
<td>GRAY CLAY / SILICA SAND - Light gray, very homogeneous clay becoming sandy (silica sand) towards the end of the section. Lower contact established by the appearance of greenish brown residuum.</td>
<td>60 %</td>
</tr>
<tr>
<td>57.5 m</td>
<td>141.5 m</td>
<td>84.0 m</td>
<td>720</td>
<td>BROWN RESIDUUM - Greenish brown to medium brown to reddish brown, sandy/muddy and locally rocky residuum. After 89m the material becomes very homogeneous and a dark brown. After 100m the material becomes more rocky (15-20%). The rocky portion seems to increase with depth. 141.50m = EOH.</td>
<td>60 %</td>
</tr>
</tbody>
</table>
Drill Hole ID
AGR-01-078

North 5460795.9
East 366706.9
Start Date 4/2/2001
End Date 4/3/2001

Elevation 241.5
Proposed Depth 150
Actual Depth 117.5
Number of Boxes 26

Logged By P. Marenghi
Date Logged 5/30/2001

Claim number 413072
Township Cargill

Azim 0
Dip 90

Drilling Contractor Norex Drilling

Purpose

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays
Number of ICP
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Monday, June 11, 2001
**Drill Hole ID** | **North** | **Start Date**  
**AGR-01-078** | 5460795.9 | 4/2/2001  
**Elevation** | 241.5 |  
**Proposed Depth** | 150 |  
**Actual Depth** | 117.5 |  
**End Date** | 4/3/2001 |  
**Number of Boxes** | 26 |  

### Lithological Descriptions

<table>
<thead>
<tr>
<th>From To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 0.0 m 9.5 m | 9.5 m | 714 | VARVED CLAY  
- Brown, homogeneous, semi-layered, firm clay. No recovery from 0-2m, 3.5-5.0m, 8.0-11.0m. Lower contact established by the appearance of pebbles and boulders. | 70 % |
| 9.5 m 34.3 m | 24.8 m | 717 | BOULDER / BASAL TILL  
- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in size. Composition varies but granodiorite and mafic units predominate. No recovery from 17.0-18.5m. Lower contact established by the appearance of gray clay. | 40 % |
| 34.3 m 45.5 m | 11.3 m | 707 | GRAY CLAY  
- Light gray to white to locally brown, very homogeneous clay. Chlorite rich stringers throughout. Lower contact established by the appearance of grayish gray residuum. | 80 % |
| 45.5 m 52.3 m | 6.8 m | 720 | GRAY RESIDUUM  
- Medium to navy gray to tan brown, chlorite rich (dark green flakes) dark brown sections locally, sandy residuum. Lower contact established by the appearance of brown residuum. | 60 % |
| 52.3 m 66.5 m | 14.3 m | 720 | BROWN RESIDUUM  
- Tan brown to medium brown, sandy/muddy and locally rocky residuum. Local 0.5m sections of gray residuum. Lower contact established by the appearance of gray residuum. | 90 % |
<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>66.5 m</td>
<td>99.5 m</td>
<td>33.0 m</td>
<td>720</td>
<td>GRAY RESIDUUM</td>
<td>90 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Medium to navy gray to tan brown, chlorite rich (dark green flakes) dark brown sections locally, sandy residuum. Lower contact established by the appearance of weathered carbonatite.</td>
<td></td>
</tr>
<tr>
<td>99.5 m</td>
<td>111.5 m</td>
<td>12.0 m</td>
<td>713</td>
<td>WEATHERED CARBONATITE</td>
<td>85 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- 70% tan brown to bark brown, iron stained, cavity rich rocky rubble in 5-10cm pieces mixed together with sandy / muddy residuum. Badly broken core. Lower contact established by the appearance of fresh sovite rock.</td>
<td></td>
</tr>
<tr>
<td>111.5 m</td>
<td>117.5 m</td>
<td>6.0 m</td>
<td>711</td>
<td>SOVITE</td>
<td>100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, fine grained matrix containing up to 15% medium grained (up to 2mm) black magnetite / mica / chlorite / po xtails. No visible weathering. Sub - vertical schistosity. 117.50m = EOH.</td>
<td></td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Logged By: P. Marenghi
Date Logged: 5/30/2001

Drill Hole ID:
AGR-01-079

Claim number: 413073
Azim 0
Dip: 90

Drilling Contractor: Norex Drilling
Purpose

Results

Why hole terminated: Normal termination
Core Size: HQ
Casing: No
Hole Cemented: No
Number of Assays: 150
Number of ICP: 0
Rejects/Pulps saved: Yes
Core Stored: Agrium Minesite

Start Date: 4/4/2001
End Date: 4/4/2001
Elevation: 241.6
Proposed Depth: 100
Actual Depth: 99.5
Number of Boxes: 21

Monday, June 11, 2001
Drive Hole ID: AGR-01-079

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>9.5</td>
<td>9.5</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>21%</td>
</tr>
<tr>
<td>9.5</td>
<td>38.0</td>
<td>28.5</td>
<td>717</td>
<td>BOULDER/BASAL TILL</td>
<td>62%</td>
</tr>
<tr>
<td>38.0</td>
<td>62.0</td>
<td>24.0</td>
<td>706</td>
<td>CRETACEOUS WASTE</td>
<td>90%</td>
</tr>
<tr>
<td>62.0</td>
<td>77.0</td>
<td>15.0</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
<td>90%</td>
</tr>
<tr>
<td>77.0</td>
<td>93.5</td>
<td>16.5</td>
<td>707</td>
<td>GRAY CLAY</td>
<td>90%</td>
</tr>
</tbody>
</table>

- VARVED CLAY: Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.
- BOULDER/BASAL TILL: Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 1m in size. Composition varies but granodiorite and mafic units predominate. No recovery from 17.0-18.5m. Lower contact established by the appearance of cretaceous waste.
- CRETACEOUS WASTE: Mixture of 50% black organic rich peat, 30% medium to coarse grained silica sand ranging from white to beige and 10% whitish gray clay. Interbedded sections 1-5m. Most of the peat displays wood chips and is silaceous to some extent. Lower contact established by the appearance of brown residuum.
- BROWN RESIDUUM: Dark brown to medium brown to orange brown, clay like/muddy residuum. About 20% rocky rubble. This could be a saprolite zone. Lower contact established by the appearance of gray clay/residuum.
- GRAY CLAY: Light gray to white, very homogeneous and locally sandy clay. No visible characteristics in color texture to separate units. This material becomes very sandy after 85m. Some local white sections around 80m. Lower contact established by the appearance of greenish brown residuum.

Monday, June 11, 2001
**Agrium**  
**Kapuskasing Phosphate Operation**  
**Exploration Drilling**  
**Project** Winter 2001

### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>93.5 m</td>
<td>99.5 m</td>
<td>6.0 m</td>
<td>720</td>
<td>BROWN RESIDUUM - Dark brown to medium brown to orange brown, sandy / muddy residuum. About 20% rocky rubble.</td>
<td>95 %</td>
</tr>
</tbody>
</table>

This could be a saprolite zone. 99.50m = EOH.
**Drill Hole ID**
AGR-01-080

**North** 5481151  
**East** 367644.6

**Start Date** 4/25/2001  
**End Date** 4/26/2001

**Elevation** 251.3

**Proposed Depth** 100  
**Actual Depth** 117.5

**Number of Boxes** 20

---

**Logged By** P. Marenghi  
**Date Logged** 5/30/2001  
**Township** Cargill

**Claim number** 78657  
**Azim** 0  
**Dip** -90

**Drilling Contractor** Norex Drilling

**Purpose**

**Results**

**Why hole terminated** Normal termination

**Core Size** HQ  
**Casing** No  
**Hole Cemented** No

**Number of Assays**  
**Number of ICP** 0

**Rejects/Pulps saved** Yes  
**Core Stored** Agrium Minesite

---

**Monday, June 11, 2001**
**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithologica Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>5.0</td>
<td>5.0</td>
<td>714</td>
<td>VARVED CLAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
</tr>
<tr>
<td>5.0</td>
<td>44.0</td>
<td>39.0</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 25cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of gray clay.</td>
</tr>
<tr>
<td>44.0</td>
<td>71.0</td>
<td>27.0</td>
<td>707</td>
<td>GRAY CLAY</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray to white, very homogeneous clay mixed with local 1-3m sections of brown residuum. Lower contact established by the appearance of greenish brown residuum.</td>
</tr>
<tr>
<td>71.0</td>
<td>111.5</td>
<td>40.5</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Tan brown to medium brown, sandy/muddy and locally rocky residuum. Local 1-3m sections of gray and purple residuum. Lower contact established by the appearance of sovite.</td>
</tr>
<tr>
<td>111.5</td>
<td>117.5</td>
<td>6.0</td>
<td>711</td>
<td>SOVITE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, fine grained matrix containing up to 15% medium grained (up to 2mm) black magnetite/mica/chlorite/poxtals. No visible weathering. Sub - vertical schistosity. 117.50m = EOF.</td>
</tr>
</tbody>
</table>

**Drill Hole ID**

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>546151</td>
<td>38764.6</td>
<td>4/25/2001</td>
<td>4/26/2001</td>
</tr>
</tbody>
</table>

**Elevation** 251.3

**Proposed Depth** 100

**Actual Depth** 117.5

**Number of Boxes** 20

---

*Monday, June 11, 2001*
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-081

North 5460998.1
East 367579.3

Elevation 247.2
Proposed Depth 130
Actual Depth 92
Number of Boxes 17

Logged By P. Marenghi
Claim number 77326
Azim 0
Dip -90
Drilling Contractor Norox Drilling

Date Logged 5/30/2001
Township Cargill
Logged By P. Marenghi

Start Date 4/26/2001
End Date 4/27/2001

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Monday, June 11, 2001
**Agrium**  
*Kapuskasing Phosphate Operation*  
*Exploration Drilling*  
*Project Winter 2001*

**Lithological Descriptions**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
</table>
| 0.0 m | 27.0 m| 27.0 m | 714               | VARVED CLAY  
- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders. | 19 %       |
| 27.0 m| 45.0 m| 18.0 m | 717               | BOULDER / BASAL TILL  
- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 25cm in size.  
Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum / clinochlore. | 17 %       |
| 45.0 m| 71.0 m| 26.0 m | 720               | BROWN RESIDUUM  
- Tan brown to medium brown to greenish brown, sandy/muddy and locally rocky residuum. Local 1-3m sections of green clinochlore. Lower contact established by the appearance of weathered pyroxenite. | 75 %       |
| 71.0 m| 92.0 m| 21.0 m | 712               | PYROXENITE - Very dark green, partially weathered to a sandy muddy consistency but becoming more fresh with depth.  
Locally-visible chlorite / pyroxene / feldspar striae (1-4mm). 92.0m = EOH. | 100 %      |
Drill Hole ID  
AGR-01-082  

Start Date 4/27/2001  
End Date 4/28/2001  

Elevation 245.8  
Proposed Depth 130  
Actual Depth 74  
Number of Boxes 14  

Logged By  
P. Marenghi  
Claim number 77326  
Azim 0  
Dip -90  
Drilling Contractor Norex Drilling  
Purpose  

Results  

Why hole terminated Normal termination  
Core Size HQ  
Casing No  
Hole Cemented No  
Number of Assays  
Number of ICP 0  
Rejects/Pulps saved Yes  
Core Stored Agrium Minesite  

Date Logged 5/30/2001  
Township Cargill  

Monday, June 11, 2001  

[Map Image with locations and钻点标注]
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>29.0 m</td>
<td>29.0 m</td>
<td>714</td>
<td><strong>VARVED CLAY</strong>&lt;br&gt;- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>14 %</td>
</tr>
<tr>
<td>29.0 m</td>
<td>38.0 m</td>
<td>9.0 m</td>
<td>717</td>
<td><strong>BOULDER/BASAL TILL</strong>&lt;br&gt;- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 20cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum/clinochlore.</td>
<td>23 %</td>
</tr>
<tr>
<td>38.0 m</td>
<td>68.8 m</td>
<td>30.8 m</td>
<td>720</td>
<td><strong>BROWN RESIDUUM</strong>&lt;br&gt;- Tan brown to medium brown to orange brown to greenish brown, sandy/muddy and locally rocky residuum. Local 1-3m sections of green clinochlore. Lower contact established by the appearance of weathered pyroxenite.</td>
<td>70 %</td>
</tr>
<tr>
<td>68.8 m</td>
<td>74.0 m</td>
<td>5.3 m</td>
<td>712</td>
<td><strong>PYROXENITE</strong>&lt;br&gt;- Very dark green, partially weathered to a sandy muddy consistency but becoming more fresh with depth. Locally visible chlorite/pyroxene/tellspar xtals (1-4mm) and sovite sections. 74.0m = EOH.</td>
<td>100 %</td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-083

North 5480950
Start Date 4/28/2001
End Date 4/30/2001

East 367475
Elevation 244

Proposed Depth 130
Actual Depth 105.5
Number of Boxes 16

Logged By P. Marenghi
Date Logged 5/30/2001
Claim number 78059
Township Cargill
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Purpose

Results

Why hole terminated Normal termination

Core Size HQ

Casing No

Hole Cemented No

Number of Assays

Number of ICP 0

Rejects/Pulps saved Yes

Core Stored Agrium Minesite

Monday, June 11, 2001
**Agrium**

**Kapuskasing Phosphate Operation**

**Exploration Drilling**

**Project** Winter 2001

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>50.0</td>
<td>50.0</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
</tr>
<tr>
<td>50.0</td>
<td>89.0</td>
<td>39.0</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
</tr>
<tr>
<td>89.0</td>
<td>105.5</td>
<td>16.5</td>
<td>708</td>
<td>GREEN MUD</td>
</tr>
</tbody>
</table>

**Drill Hole ID** AGR-01-083

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
</table>

**Elevation** 244

**Proposed Depth** 130

**Actual Depth** 105.5

**Number of Boxes** 16

Monday, June 11, 2001
Drill Hole ID
AGR-01-084

North 5460705
East 366679
Elevation 241.4
Proposed Depth 170
Actual Depth 170
Number of Boxes 37

Logged By P. Marenghi
Date Logged 5/30/2001
Township Cargill

Claim number 413702
Azim 0
Dip -90
Drilling Contractor Norex Drilling

Purpose

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays 0
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Monday, June 11, 2001

Page 1 of 3
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>30.0 m</td>
<td>30.0 m</td>
<td>714</td>
<td>VARVED CLAY</td>
<td>24 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td></td>
</tr>
<tr>
<td>30.0 m</td>
<td>39.5 m</td>
<td>9.5 m</td>
<td>717</td>
<td>BOULDER / BASAL TILL</td>
<td>21 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 20cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum / clinohilite.</td>
<td></td>
</tr>
<tr>
<td>39.5 m</td>
<td>132.5 m</td>
<td>93.0 m</td>
<td>720</td>
<td>BROWN RESIDUUM</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Tan brown to medium brown to orange brown to greenish brown, sandy/muddy and locally clay like residuum. Local 1-3m sections of lime green / deep purple motiled minerals (hematite/epidote?). Local 0.5m sections of sovite rock. Local 0.5m sections of chlorite rich mud. Lower contact established by the appearance of weathered pyroxenite?.</td>
<td></td>
</tr>
<tr>
<td>132.5 m</td>
<td>156.0 m</td>
<td>25.5 m</td>
<td>708</td>
<td>GREEN MUD</td>
<td>80 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Dark green, chlorite rich, sandy mud. Locally hard rocky residuum. Weathered pyroxenite?. Lower contact established by the appearance of pyroxenite rock.</td>
<td></td>
</tr>
<tr>
<td>158.0 m</td>
<td>165.5 m</td>
<td>7.5 m</td>
<td>712</td>
<td>PYROXENITE</td>
<td>100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Very dark green, partially weathered to a sandy muddy consistency but becoming more fresh with depth. Locally visible chlorite / pyroxene / feldspar xtals (1-4mm).</td>
<td></td>
</tr>
</tbody>
</table>
Agrium

Kapuskasing Phosphate Operation
Exploration Drilling

Project  Winter 2001

Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>165.5</td>
<td>170.0</td>
<td>4.5 m</td>
<td>711</td>
<td>SOVITE - Light gray, fine grained matrix containing up to 15% medium grained (up to 2mm) black magnetite / mica / chlorite / poxtals. No visible weathering. Sub - vertical schistosity. 170.00m = EOH.</td>
</tr>
</tbody>
</table>

% Recovery 100 %
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project: Winter 2001

Drill Hole ID: AGR-01-085
Start Date: 5/4/2001
End Date: 5/5/2001
North: 5460650.9
East: 366649.2
Elevation: 241.7
Proposed Depth: 150
Actual Depth: 147.5
Number of Boxes: 33

Logged By: P. Marenghi
Claim number: 413702
Azim: 0
Dip: 90
Drilling Contractor: Norex Drilling
Purpose: Survey
Results:
Why hole terminated: Normal termination
Core Size: HQ
Casing: No
Hole Cemented: No
Number of Assays: 0
Number of ICP: 0
Rejects/Pulps saved: Yes
Core Stored: Agrium Minesite

Date Logged: 5/30/2001
Township: Cargill

Page 1 of 2
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From (m)</th>
<th>To (m)</th>
<th>Length (m)</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0</td>
<td>11.0</td>
<td>11.0</td>
<td>714</td>
<td>VARVED CLAY - Brown, homogeneous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
<td>8%</td>
</tr>
<tr>
<td>11.0</td>
<td>39.5</td>
<td>28.5</td>
<td>717</td>
<td>BOULDER / BASAL TILL - Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 50cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum/clinochole.</td>
<td>21%</td>
</tr>
<tr>
<td>39.5</td>
<td>65.0</td>
<td>25.5</td>
<td>720</td>
<td>BROWN RESIDUUM - Tan brown to medium brown to greenish brown, sandy/muddy and locally clay like residuum. Lower contact established by the appearance of weathered pyroxenite?.</td>
<td>60%</td>
</tr>
<tr>
<td>65.0</td>
<td>104.0</td>
<td>39.0</td>
<td>708</td>
<td>GREEN MUD - Dark green, clinoite rich, sandy mud. Locally hard rocky residuum. Weathered pyroxenite?. Lower contact established by the appearance of pyroxenite rock.</td>
<td>75%</td>
</tr>
<tr>
<td>104.0</td>
<td>147.5</td>
<td>43.5</td>
<td>712</td>
<td>PYROXENITE - Very dark green, partially weathered to a sandy muddy consistency but becoming more fresh with depth. Locally visible clinoite/pyroxene/feldspar xts (1-4mm). Banding @ 45 deg. To the core axis: 147.5m = EOH</td>
<td>100%</td>
</tr>
</tbody>
</table>
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling
Project Winter 2001

Drill Hole ID
AGR-01-086

Date Logged 5/30/2001
Logged By P. Marenghi

Claim number 413702
Azim 0
Dip -90

Drilling Contractor Norex Drilling

Purpose

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Monday, June 11, 2001
**Agrium**
*Kapuskasing Phosphate Operation*

**Exploration Drilling**

**Project** Winter 2001

<table>
<thead>
<tr>
<th>Lithological Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARVED CLAY</td>
<td>Brown, homogenous, semi-layered, firm clay. Lower contact established by the appearance of pebbles and boulders.</td>
</tr>
<tr>
<td>BOULDER / BASAL TILL</td>
<td>Light gray, silty/muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 25cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown residuum/clinochlore.</td>
</tr>
<tr>
<td>BROWN RESIDUUM</td>
<td>Tan brown to medium brown to orange brown to dark chocolate brown, sandy/muddy and locally clay like residuum. Local deep purple mineral in vein like structures (102.5-113m). Lime green, flaky mineral (fuchite?) but looks like epidote throughout. Local chlorite rich sections. Lower contact established by the appearance of pyroxenite.</td>
</tr>
<tr>
<td>PYROXENITE</td>
<td>Very dark green, partially weathered to a sandy muddy consistency but becoming more fresh with depth. Locally visible chlorite / pyroxene / feldspar xts (1-4mm). Banding @ 45 deg. To the core axis. 144.50m = EOH</td>
</tr>
</tbody>
</table>

**Drill Hole ID**

<table>
<thead>
<tr>
<th>North</th>
<th>East</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>5460653.3</td>
<td>366699.8</td>
<td>5/6/2001</td>
<td>5/7/2001</td>
</tr>
</tbody>
</table>

Elevation 240

Proposed Depth 150

Actual Depth 144.5

Number of Boxes 28

% Recovery

21 %

17 %

75 %

100 %
Agrium
Kapuskasing Phosphate Operation
Exploration Drilling

Project Winter 2001

Drill Hole ID
AGR-01-087

North 5460651.1
East 366750.2
Elevation 240.4
Proposed Depth 200
Actual Depth 213.5
Number of Boxes 46

Logged By P. Marenghi
Date Logged 5/30/2001

Claim number 413703
Azim 0
Dip -90

Drilling Contractor Norex Drilling

Results

Why hole terminated Normal termination
Core Size HQ
Casing No
Hole Cemented No
Number of Assays
Number of ICP 0
Rejects/Pulps saved Yes
Core Stored Agrium Minesite

Monday, June 11, 2001
### Lithological Descriptions

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>Lithological Code</th>
<th>Description</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 m</td>
<td>48.5 m</td>
<td>48.5 m</td>
<td>717</td>
<td>Boulders / Basal Till - Light gray, silty / muddy matrix containing up to 15% pebbles and boulders ranging from 5mm to 40cm in size. Composition varies but granodiorite and mafic units predominate. Lower contact established by the appearance of brown clay.</td>
<td>11 %</td>
</tr>
<tr>
<td>48.5 m</td>
<td>104.0 m</td>
<td>55.5 m</td>
<td>707</td>
<td>Green / Brown Clay - Light brown to tan brown to reddish brown to greyish brown clay. The fresh center of the core is often white (kaolinite) with black weathered specks of magnetite or manganese. Locally the clay turns gray over 3m. Locally very dark rusty brown. Speckled texture on fresh breaks. Lower contact established by the appearance of brown residuum.</td>
<td>85 %</td>
</tr>
<tr>
<td>104.0 m</td>
<td>196.3 m</td>
<td>92.3 m</td>
<td>720</td>
<td>Brown Residuum - Tan brown to medium brown to reddish brown to dark chocolate brown, sandy / muddy and locally clay like residuum. Local deep purple mineral in vein like structures (102.5-113m). Lime green, flaky mineral (fuchsite?) but looks like epidote throughout. Local chlorite rich sections. Lower contact established by the appearance of pyroxenite.</td>
<td>85 %</td>
</tr>
<tr>
<td>196.3 m</td>
<td>213.5 m</td>
<td>17.3 m</td>
<td>712</td>
<td>Pyroxenite - Very dark green, partially weathered to a sandy muddy consistency but becoming more fresh with depth. Locally visible chlorite / pyroxene / feldspar xtabs (1-4mm). Banding @ 45 deg. To the core axis. 213.50m = EOH</td>
<td>85 %</td>
</tr>
</tbody>
</table>
APPENDIX II

MAPS AND SECTIONS
**Work Report Summary**

**Transaction No:** W0160.30621  
**Recording Date:** 2001-AUG-23  
**Approval Date:** 2001-SEP-20  
**Client(s):** 193876 VIRIDIAN INC.  
**Survey Type(s):** PDRILL  
**Status:** APPROVED  
**Work Done from:** 2001-JAN-08 to: 2001-APR-30

<table>
<thead>
<tr>
<th>Claim#</th>
<th>Perform</th>
<th>Perform Approve</th>
<th>Applied</th>
<th>Applied Approve</th>
<th>Assign</th>
<th>Assign Approve</th>
<th>Reserve</th>
<th>Reserve Approve</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>G 6000409</td>
<td>$83,033</td>
<td>$83,033</td>
<td>$0</td>
<td>$0</td>
<td>$27,990</td>
<td>$27,990</td>
<td>$55,043</td>
<td>$55,043</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>G 6000410</td>
<td>$68,037</td>
<td>$68,037</td>
<td>$0</td>
<td>$0</td>
<td>$24,480</td>
<td>$24,480</td>
<td>$43,557</td>
<td>$43,557</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>G 6060009</td>
<td>$155,790</td>
<td>$155,790</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$155,790</td>
<td>$155,790</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>G 6060010</td>
<td>$11,076</td>
<td>$11,076</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$11,076</td>
<td>$11,076</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>G 6060013</td>
<td>$15,446</td>
<td>$15,446</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$15,446</td>
<td>$15,446</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>G 6060014</td>
<td>$15,802</td>
<td>$15,802</td>
<td>$0</td>
<td>$0</td>
<td>$7,530</td>
<td>$7,530</td>
<td>$8,272</td>
<td>$8,272</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>P 1223668</td>
<td>$0</td>
<td>$0</td>
<td>$12,000</td>
<td>$12,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>P 1223669</td>
<td>$0</td>
<td>$0</td>
<td>$12,000</td>
<td>$12,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>P 1223670</td>
<td>$0</td>
<td>$0</td>
<td>$18,000</td>
<td>$18,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>2007-MAY-02</td>
</tr>
<tr>
<td>P 1223671</td>
<td>$0</td>
<td>$0</td>
<td>$18,000</td>
<td>$18,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>2007-MAY-02</td>
</tr>
</tbody>
</table>

$349,184, $349,184, $50,000, $50,000, $50,000, $50,000, $289,184, $289,184

Status of claim is based on information currently on record.
Dear Sir or Madam,

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

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 JIM MCAULEY by email at james.mcauley@ndm.gov.on.ca or by phone at (705) 670-5855.

Yours Sincerely,

Ron Gashinski
Supervisor, Geoscience Assessment Office

Cc: Resident Geologist
    Reno Pressacco
    (Agent)

    Viridian Inc.
    (Claim Holder)

    Viridian Inc.
    (Assessment Office)
The image contains a geological map with lithologic codes and a legend. The map is labeled with coordinates and claims, and there is a scale of 1:1000. The map shows two sections labeled West and East, with various geological features marked. The legend includes Cretaceous and Proterozoic material types, as well as general codes for lost core and no sample recovery.
### Lithologic Legend

**Cretaceous:**
- **A ORE** (GREY ORE)
- Bl ORE
- B2 ORE (GREEN MICA CLAY)
- HASTE (SILICA SANDS)
- WASTE (PEAT S ORGANICS)
- WASTE (ALL CLAYS)
- WASTE (UNDIFFERENTIATED)
- RESIDUUM (UNDIFFERENTIATED)

**Proterozoic:**
- **709 ROCK - GNEISS**
- 710 ROCK - RAUHAUGITE
- 711 ROCK - SOVITE
- 712 ROCK - PYROXENITE
- 713 ROCK - MISC. (UNDIFFERENTIATED)

**Pleistocene:**
- **714 BROWN, VARVED CLAY**
- **715 GREY GUMBO (LEDOA) CLAY**
- 716 QUARTZ-RICH SANDS
- **717 BROWN BOULDER TILL**
- OTHER (UNDIFFERENTIATED)

**General Codes:**
- **799 LOST CORE**
- **1 NO RECOVERY**
- **1 NO SAMPLE**

---

**Map Details:**
- **Scale:** 1:1000
- **Plan No.:** 21-Jun-01
- **Date:** 21-Jun-01
- **Looking North**
- **West**
- **East**
- **Claim 413072**
- **Claim 413073**
- **50 m**
- **SuPhac Vision - SURPAC Software International**
# Lithologic Legend

### Cretaceous:
- **Material Type**
  - 701: A Ore
  - 702: A (Grey) Ore
  - 703: B Ore
  - 704: 82 Ore
  - 705: Green Mica Clay
  - 706: Waste (Silica Sands)
  - 707: Waste (Peat or Organics)
  - 708: Waste (All Clays)
  - 709: Waste (Undifferentiated)
  - 710: Residuum (Undifferentiated)

### Proterozoic:
- **Rock**
  - 709: Rock - Gneiss
  - 710: Rock - Rauhaugite
  - 711: Rock - Sovite
  - 712: Rock - Pyroxenite
  - 713: Rock - Misc./Undifferentiated

### Pleistocene:
- **Material Type**
  - 714: Brown, Varved Clay
  - 715: Grey Gumbo (Ledda) Clay
  - 716: Quartz-Rich Sands
  - 717: Brown Boulder Till
  - 718: Undifferentiated

### General Codes:
- **Lost Core**
- **No Recovery**
- **No Sample**
### Lithologic Code

#### Cretaceous:
- **701** A ORE
- **702** A (GREY) ORE
- **703** Si ORE
- **704** B2 ORE
- **705** GREEN MICA CLAY
- **706** WASTE (SILICA SANDS)
- **707** WASTE (PEAT ORGANICS)
- **708** WASTE (ALL CLAYS)
- **709** RESIDUUM (UNDIFFERENTIATED)

#### Proterozoic:
- **709** ROCK - GNEISS
- **710** ROCK - RAUHAUGITE
- **711** ROCK - SOVITE
- **712** ROCK - PYROXENITE
- **713** ROCK - MISC.
- **714** ROCK - MISC. (UNDIFFERENTIATED)

#### Pleistocene:
- **714** BROWN, VARVED CLAY
- **715** GREY GUMBO (LEDDA) CLAY
- **716** QUARTZ-RICH SANDS
- **717** BROWN BOULDER TILL
- **718** OTHER 7 UNDIFFERENTIATED

#### General Codes:
- **799** LOST CORE
- **700** NO RECOVERY
- **701** NO SAMPLE

### Cross Section

- **Plan No.:** 5460850
- **Looking North**
- **Date:** 21-Jun-01
- **Scale:** 1:1000

### Claim

- **Claim 413075**
- **Claim 413074**
SOON
400N
AGRIUM KAPUSKASING PHOSPHATE OPERATIONS

LITHOLOGIC LEGEND

LITHOLOGIC CODE

CRETACEOUS:

701 A ORE
702 A (GREY) ORE
703 B1 ORE
704 B2 ORE
705 GREEN MICA CLAY
706 (SILICA SANDS)
707 WASTE (PEAT ORGANICS)
708 WASTE (ALL CLAYS)
709 RESIDUUM (UNDIFFERENTIATED)

PROTEROZOIC:

710 ROCK - GNEISS
711 ROCK - RAUHAUGITE
712 ROCK - SOVITE
713 ROCK - PYROXENITE
714 ROCK - MISC.

PLEISTOCENE:

715 BROWN, VARVED CLAY
716 SREY GUMBO (LEDOA) CLAY
717 QUARTZ-RICH SANDS
718 BROWN BOULDER TILL
719 OTHER

GENERAL CODES:

799 LOST CORE
7 NO RECOVERY
7 NO SAMPLE

West

Claim 413075

Claim 413074

Claim 78658

Claim 78657

East

Scale: 1:1000
Plan No.
Date: 21-Jun-01

SURPAC VISION - SURPAC Software International
AGRIUM KAPUSKASING PHOSPHATE OPERATIONS

LITHOLOGIC LEGEND

MATERIAL TYPE
LITHOLOGIC CODE

CRETACEOUS:
- 701 A ORE
- 702 A (GREY) ORE
- 703 B1 ORE
- 704 B2 ORE
- 705 WASTE (SILICA SANDS)
- 706 WASTE (PEAT ORGANICS)
- 707 WASTE (ALL CLAYS)
- 708 WASTE (UNDIFFERENTIATED)
- 720 RESIDUUM (UNDIFFERENTIATED)

PROTEROZOIC:
- 709 ROCK - GNEISS
- 710 ROCK - RAUHAUGITE
- 711 ROCK - SOVITE
- 712 ROCK - PYROXENITE
- 713 ROCK - MISC.

PLEISTOCENE:
- 714 BROWN, VARVED CLAY
- 715 GREY GUMBO (LEDDA) CLAY
- 716 QUARTZ-RICH SANDS
- 717 BROWN BOULDER TILL
- 718 OTHER (UNDIFFERENTIATED)

GENERAL CODES:
- 799, LOST CORE / NO RECOVERY / NO SAMPLE

West

Claim 413075

Claim 413074

Claim 4145

Claim 78658

Claim 78657

East

Scale: 1:1000

Date: 22-Jun-01

Plan No.

Looking North

Cross Section 5461150

West

Claim 413075

Claim 413074

Claim 4145

Claim 78658

Claim 78657

East

Scale: 1:1000

Date: 22-Jun-01

Plan No.

Looking North

Cross Section 5461150
### Lithologic Legend

#### Cretaceous:
- **701**: Material Type
- **702**: A (Gray) Ore
- **703**: B1 Ore
- **704**: B2 Green Mica Clay
- **705**: Waste (Silica Sands)
- **706**: Waste (Peat or Organics)
- **707**: Waste (All Clays)
- **708**: Waste (Undifferentiated and Other)
- **709**: Residuum (Undifferentiated)

#### Proterozoic:
- **709**: Rock - Gneiss
- **710**: Rock - Rauhaugite
- **711**: Rock - Sovite
- **712**: Rock - Pyroxenite
- **713**: Rock - Misc. and Undifferentiated

#### Pleistocene:
- **714**: Brown, Varved Clay
- **715**: Grey Gumbo (Leda) Clay
- **716**: Quartz-Rich Sands
- **717**: Brown Boulder Till
- **718**: Other and Undifferentiated

#### General Codes:
- **799**: Lost Core, No Recovery, No Sample

---

**Cross Section 5461250**

Looking North

Scale: 1:1000

Plan No.

Date: 22-Jun-10

SURPAC VISION - SURPAC Software International
LITHOLOGIC LEGEND

CRETACEOUS:

- ORE
- A (GREY) ORE
- B1 ORE
- GREEN MICA CLAY
- WASTE (SILICA SANDS)
- WASTE (PEAT ORGANICS)
- WASTE (ALL CLAYS)
- WASTE (UNDIFFERENTIATED)
- RESIDUUM (UNDIFFERENTIATED)

PROTEROZOIC:

- ROCK - GNEISS
- ROCK - RAUHAUGITE
- ROCK - SOVITE
- ROCK - PYROXENITE
- ROCK - MISC. (UNDIFFERENTIATED)

PLEISTOCENE:

- BROWN, VARVED CLAY
- GREY GUMBO (LEDDA) CLAY
- QUARTZ-RICH SANDS
- BROWN BOULDER TILL
- OTHER (UNDIFFERENTIATED)

GENERAL CODES:

- LOST CORE
- NO RECOVERY
- NO SAMPLE

Other:

- SCALE: 1:1000
- Cross Section 5461300
- Looking North
- Date: 22-Jun-01
- Claim 413076
- Claim 78658
- Claim 78657

SUHPAC VISION - SURPAC Software International
AGRIUM KAPUSKASING PHOSPHATE OPERATIONS

LITHOLOGIC LEGEND

LITHOLOGIC CODE

CRETACEOUS:

- 701: A (GREY) ORE
- 702: B (GREEN MICA CLAY)
- 703: WASTE (SILICA SANDS)
- 704: WASTE (PEAT ORGANICS)
- 705: WASTE (ALL CLAYS)
- 706: WASTE (UNOIFFERENTIATED)
- 707: RESIDUUM (UNDIFFERENTIATED)

PROTEROZOIC:

- 708: ROCK - GNEISS
- 709: ROCK - RAUHAUGITE
- 710: ROCK - SOVITE
- 711: ROCK - PYROXENITE
- 712: ROCK - MISC. (UNDIFFERENTIATED)

PLEISTOCENE:

- 713: BROWN. VARVED CLAY
- 714: GREY GUMBO (LEQDA) CLAY
- 715: QUARTZ-RICH SANDS
- 716: BROWN BOULDER TILL
- 717: OTHER X UNDIFFERENTIATED

GENERAL CODES:

- 799: LOST CORE
- 7: NO RECOVERY
- 7: NO SAMPLE

Scale: 1:1000
Plan No.
Date: 22-Jun-01

SURPAC VISION - SURPAC Software International

Claim 413076
Claim 89923
Claim 78657
<table>
<thead>
<tr>
<th>LITHOLOGIC CODE</th>
<th>MATERIAL TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>A ORE</td>
</tr>
<tr>
<td>702 A</td>
<td>GREY ORE</td>
</tr>
<tr>
<td>703</td>
<td>B ORE</td>
</tr>
<tr>
<td>704 B2</td>
<td>GREEN MICA CLAY</td>
</tr>
<tr>
<td>705</td>
<td>WASTE (SILICA SANDS)</td>
</tr>
<tr>
<td>706</td>
<td>WASTE (PEAT ORGANICS)</td>
</tr>
<tr>
<td>707</td>
<td>WASTE (ALL CLAYS)</td>
</tr>
<tr>
<td>708</td>
<td>WASTE (UNDIFFERENTIATED)</td>
</tr>
<tr>
<td>720</td>
<td>RESIDUUM (UNDIFFERENTIATED)</td>
</tr>
<tr>
<td>709</td>
<td>ROCK - GNEISS</td>
</tr>
<tr>
<td>710</td>
<td>ROCK - RAUHAUGITE</td>
</tr>
<tr>
<td>711</td>
<td>ROCK - SOVITE</td>
</tr>
<tr>
<td>712</td>
<td>ROCK - PYROXENITE</td>
</tr>
<tr>
<td>713</td>
<td>ROCK - MISC.</td>
</tr>
<tr>
<td>714</td>
<td>PLEISTOCENE: BROWN, VARVED CLAY</td>
</tr>
<tr>
<td>715</td>
<td>GREY GUMBO (LEDDA) CLAY</td>
</tr>
<tr>
<td>716</td>
<td>QUARTZ-RICH SANDS</td>
</tr>
<tr>
<td>717</td>
<td>BROWN BOULDER TILL</td>
</tr>
<tr>
<td>718</td>
<td>OTHER (UNDIFFERENTIATED)</td>
</tr>
<tr>
<td>799</td>
<td>LOST CORE</td>
</tr>
<tr>
<td></td>
<td>NO RECOVERY</td>
</tr>
<tr>
<td></td>
<td>NO SAMPLE</td>
</tr>
</tbody>
</table>

**Scale:** 1:1000

**Plan No.:**

**Date:** 22-Jun-01

**Claim Numbers:**
- Claim 413077
- Claim 413076
- Claim 89923
- Claim 78657

**Cross Section:** 5461450

Looking North