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NORCEN ENERGY RESOURCES LIMITED

YEAR-END REPORT
1977 EXPLORATION PROGRAM
QUARTZ MINERAL EXPLORATION PERMITS
NORTHEASTERN ALBERTA
ORIGINAL

November, 1977

G. McWilliams
D. A. Sawyer, P. Geol.

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## Drilling Summary

### Hole #1

**Location:** Tp. 107 R9 Sec. 4 NW West of the 4th Meridian  
**Permit No.:** 6876120003  
**Started:** August 18, 1977  
**Completed:** August 20, 1977  

<table>
<thead>
<tr>
<th>Depth Range</th>
<th>Feet</th>
<th>Metres</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-142</td>
<td>142</td>
<td>43.3</td>
<td>overburden</td>
</tr>
<tr>
<td>142-189</td>
<td>47</td>
<td>14.3</td>
<td>dolomite</td>
</tr>
<tr>
<td>189-275</td>
<td>86</td>
<td>26.3</td>
<td>mudstone</td>
</tr>
<tr>
<td>275-305</td>
<td>30</td>
<td>9.5</td>
<td>granitic gneiss</td>
</tr>
</tbody>
</table>

### Hole #2

**Location:** Tp 104 R6 Sec. 21 NW West of the 4th Meridian  
**Permit No.:** 687612005  
**Started:** August 23, 1977  
**Completed:** August 24, 1977  

<table>
<thead>
<tr>
<th>Depth Range</th>
<th>Feet</th>
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<th>Description</th>
</tr>
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<tbody>
<tr>
<td>0-110</td>
<td>110</td>
<td>33.6</td>
<td>overburden</td>
</tr>
<tr>
<td>110-160</td>
<td>50</td>
<td>15.2</td>
<td>mudstone dolomite</td>
</tr>
<tr>
<td>160-184</td>
<td>24</td>
<td>7.4</td>
<td>sandstone La Loche formation</td>
</tr>
<tr>
<td>184-194</td>
<td>10</td>
<td>3.1</td>
<td>paragneiss</td>
</tr>
</tbody>
</table>

### Hole #3

**Location:** Tp. 103 R7 Sec. 35 NW West of the 4th Meridian  
**Permit No.:** 6876120006  
**Started:** August 25, 1977  
**Completed:** August 26, 1977  

<table>
<thead>
<tr>
<th>Depth Range</th>
<th>Feet</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-91</td>
<td>91</td>
<td>27.8</td>
<td>overburden</td>
</tr>
<tr>
<td>91-160</td>
<td>71</td>
<td>21.8</td>
<td>dolomite</td>
</tr>
<tr>
<td>160-172</td>
<td>12</td>
<td>3.7</td>
<td>mudstone</td>
</tr>
<tr>
<td>172-197</td>
<td>25</td>
<td>7.5</td>
<td>mudstone sandstone</td>
</tr>
<tr>
<td>197-225</td>
<td>32</td>
<td>9.9</td>
<td>granitic gneiss</td>
</tr>
</tbody>
</table>

### Hole #4

**Location:** Tp. 105 R6 Sec. 14 NW West of the 4th Meridian  
**Permit No.:** 687612004  
**Started:** August 27, 1977  
**Completed:** August 31, 1977  

<table>
<thead>
<tr>
<th>Depth Range</th>
<th>Feet</th>
<th>Metres</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-205</td>
<td>205</td>
<td>62.5</td>
<td>overburden</td>
</tr>
<tr>
<td>205-320</td>
<td>115</td>
<td>35.6</td>
<td>sandstone mudstone</td>
</tr>
<tr>
<td>320-337</td>
<td>17</td>
<td>5.2</td>
<td>granodiorite</td>
</tr>
</tbody>
</table>
Hole #5
Location: Tp. 107 R5 Sec. 28 SE West of the 4th Meridian
Permit No. 211 N.T.S. 74L
Started: September 3, 1977 Completed: September 10, 1977
0-115 feet 0-35.1 metres - overburden
115-827 feet 35.1-252.2 metres - Athabasca sandstone

Hole #6
Location: Tp. 107 R6 Sec. 27 NE West of the 4th Meridian
Permit No. 687612002 N.T.S. 74L
Started: September 13, 1977 Completed: September 19, 1977
0-45 feet 0-12.8 metres - overburden
45-578 feet 12.8-176.4 metres - Athabasca sandstone
578-721 feet 176.4-220.1 metres - coarse Athabasca sandstone
721-767 feet 220.1-233.9 metres - altered granite

Hole #7
Location: Tp. 107 R2 Sec. 28 NE West of the 4th Meridian
Permit No. 210 N.T.S. 74I
Started: September 20, 1977 Completed: September 24, 1977
0-156 feet 0-47.6 metres - overburden
156-604 feet 47.6-184.2 metres - Athabasca sandstone

Hole #8
Location: Tp. 104 R2 Sec. 9 NE West of the 4th Meridian
Permit No. 208 N.T.S. 74L
Started: September 26, 1977 Completed: September 29, 1977
0-114 feet 0-34.8 metres - overburden
114-747 feet 34.8-227.8 metres - Athabasca sandstone
FIGURE 2
LOCATION OF DRILL SITES

2 DRILL SITES
LINE OF CROSS SECTION
LOCATION OF DRILL SITES

FIGURE 2

LOCH, Ed 500,000
EAST - WEST CROSS SECTION
DRAWN ALONG 58° 20'

PLEISTOCENE
- Glacial Sand & Boulders

DEVONIAN
- Sandstone, Dolomite, Mudstone

PROTEROZOIC
- Athabasca Sandstone

ARCHAEOAN
- Granite Paragneiss