

GEOLOGY OF THE COAL RESERVE

IN THE AREA OF PIT 7

CX-QUINSAM 78(6)A(SEE 4)

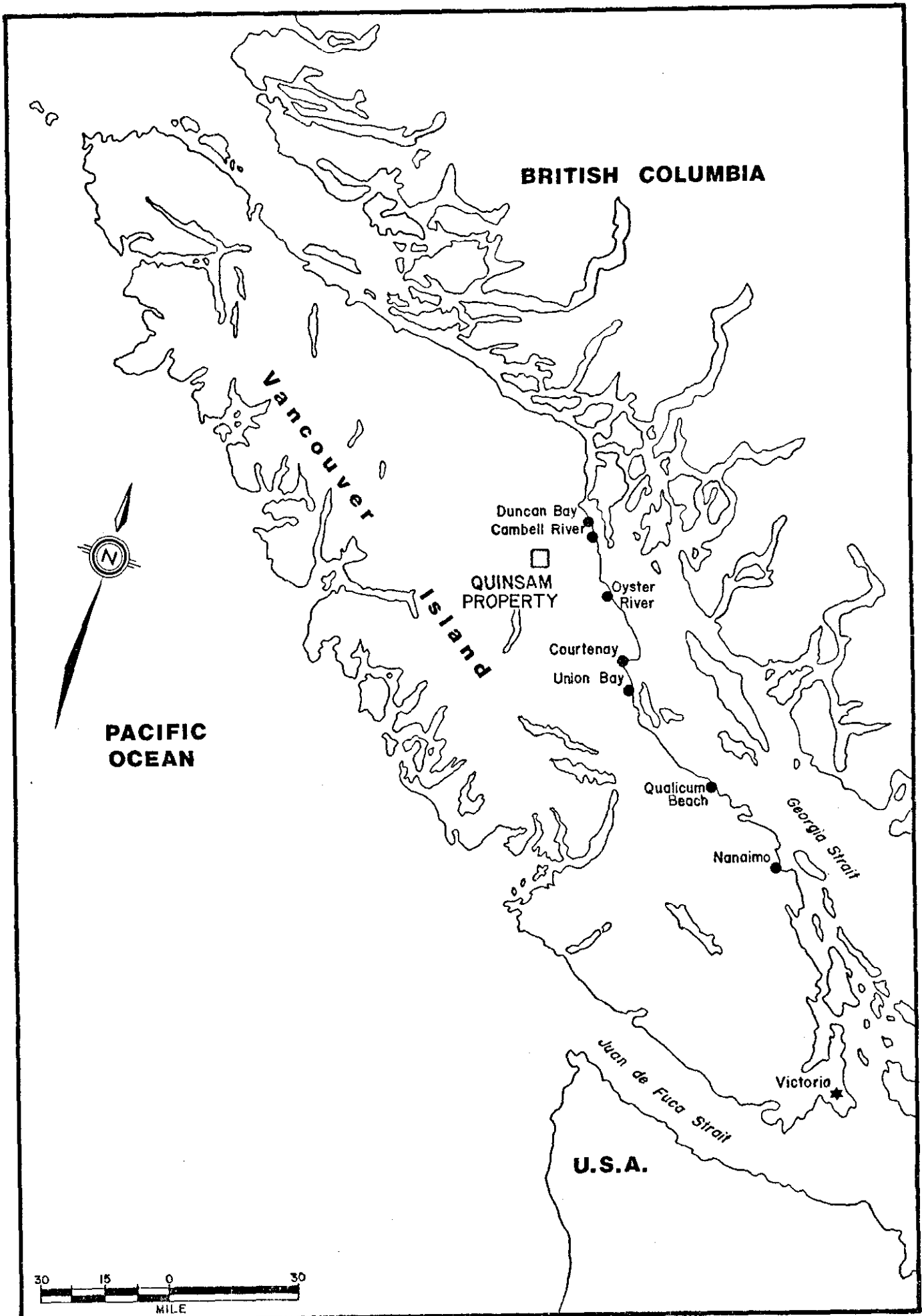
Quinsam, Campbell River  
British Columbia

OPEN FILE

Submitted by  
R. J. Ronaghan

November 1978  
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

00 071



**BRITISH COLUMBIA**

*Vancouver Island*

**QUINSAM  
PROPERTY**

**PACIFIC  
OCEAN**

**U.S.A.**



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(EXPLORATION POTENTIAL FOR SEAM 1 TO 3)

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1.0        INTRODUCTION

This report is a summary of the drilling and coring undertaken in the proposed Pit 7 area. At present the proposed Pit 7 runs north-south in a narrow band between line 0+00 and 60+00, but has excellent possibilities of continuing north over the bank to the flats, (as illustrated by hole QU-78-325).

Pit 7 is situated along the west side of a basalt high and iron rich intrusive. Drainage is basically between the proposed pit and the basalt and intrusive highs to the east. Drainage is to the north into the Quinsam River and to the south into the Ironstone River, (see dia. 1 and 2).

2.0 TECHNICAL INVESTIGATIONS

Drilling and coring operations commenced in the proposed Pit 7 area in mid September and were completed on October 27th, 1978 at an approximate field cost of \$60,000.

| Rig No. | Footage Drilled | Footage Cored |
|---------|-----------------|---------------|
| 07      | 8051.5'         |               |
| 06      |                 | 61.5          |

Rigs 06 and 07 shared the drilling, with Rog 06 performing all coring by a wire line coring system. All cores were logged and sampled at camp 8, and these samples were later sent to the Lexco Lab in Edmonton for analysis.

Other equipment included a D-6 Caterpillar and a geophysical logging unit. The support staff included a two man survey crew, a contract line cutting crew, a drill supervisor and one full time staff geologist.

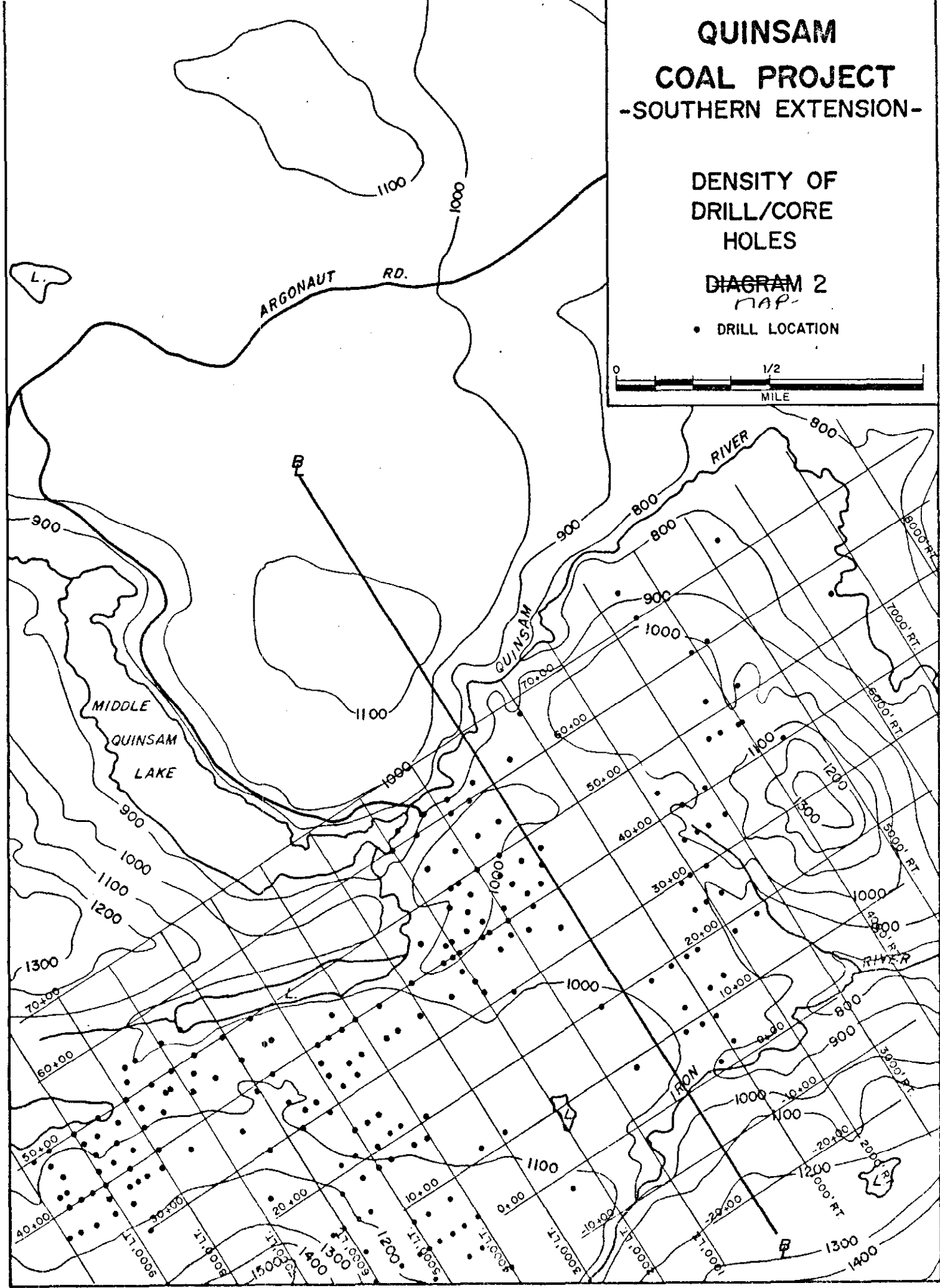
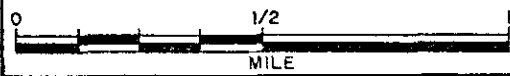


# QUINSAM COAL PROJECT -SOUTHERN EXTENSION-

DENSITY OF  
DRILL/CORE  
HOLES

DIAGRAM 2  
MAP

• DRILL LOCATION



3.0 REGIONAL GEOLOGY

In general the coal within the proposed Pit 7 area occurs in the Late Cretaceous Comox Formation. This sedimentary sequence lies on top of the Triassic Karmutsen Formation volcanics and is intruded by the Upper Cretaceous Island Intrusives.

The sedimentary sequence consists of a coarse conglomerate at the base above which lies medium grained, grey to brown sandstone interbedded with fine grained, medium to dark brown, siltstone with minor mudstone and coal seams. The conglomerate, which lies unconformably above the Triassic basement volcanics, is composed of sub angular boulders of volcanic origin within a volcanic greywacke matrix.

The main coal seam intersected is the #3 seam, as in other areas this seam is usually capped by a medium grained sandstone. Throughout the area a fourth seam lies above the #3 seam, and to the north two holes intersected all four coal seams.

The normal sedimentary sequence was altered by the uplift of the Island intrusives. This uplift possibly caused some thickening of the #3 seam in the proposed Pit 7 area.

4.0            SURFICIAL GEOLOGY

Glacial till over the proposed Pit 7 area consists mainly of boulder till with a sand and clay matrix; occasional bands of sand and gravel being encountered. The boulder till oxidizes to a reddish brown color.

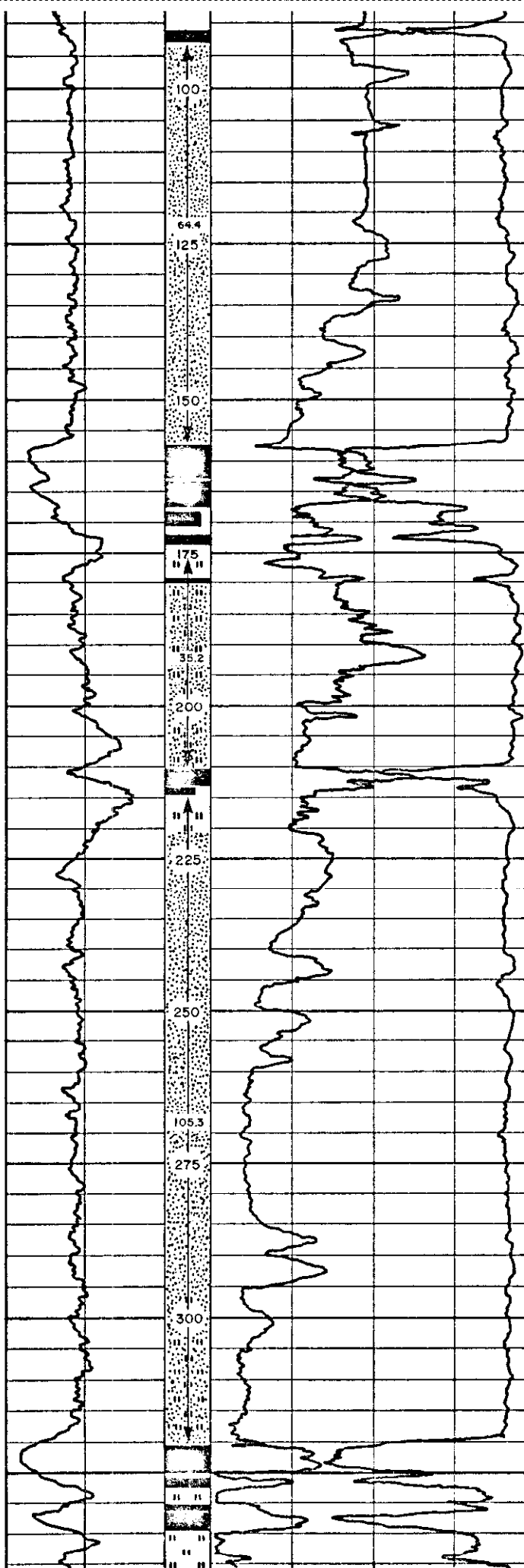
The till depth varies from nil on the highlands uplift to 150' where the sediments encounter the Karmutsen Formation, or the intrusive. At the contact between the basalt and the intrusives, the sediments dip at a much steeper angle than normal, and therefore were susceptible to glacial scouring which formed deep erosional channels. These erosional channels were later filled as the glacier retreated. This action has eroded and covered the subcrop edge of the coal to a depth of 100' in some areas.

5.0 COAL GEOLOGY AND STRATIGRAPHY

The stratigraphy of the proposed Pit 7 area is quite conformable to that of the other pits. The three major seams are in evidence with a 4th seam coming into play above the No. 3 seam (see dia. 4). In this seam the raw coal thickness varies from 1.0' to 4.0' with an average of approximately 2.5'. The interburden between the No. 4 seam and the No. 3 seam varies from approximately 90' to zero, where it actually lies directly on top of the No. 3 seam; in effect, thickening the No. 3 seam (see dia. 5 & 6). This intraformation thinning of the above may be the result of gradual uplifting during the time of deposition of the interfingering sands between the No. 3 and 4 seams. This event would have happened after the deposition of the No. 3 seam, but before that of the No. 4 seam.

Within the Pit 7 area the No. 3 seam forms the majority of the reserves with its average coal thickness, over this area, being approximately 12'. It varies from 8' to 18' in thickness, as it approaches the intrusive and basalt highs (see dia. 7). This variance is due to the proximity of the No. 4 seam, plus the possibility, that as the area was up-lifted, tectonic piling occurred in a pressure release area.

Hole QU-78-326, which didn't intersect any coal, encountered a very iron rich sediment. It is not in the usual form of pyrite, but appears to be in the form of hematite. This is the only hole which encountered this sediment.



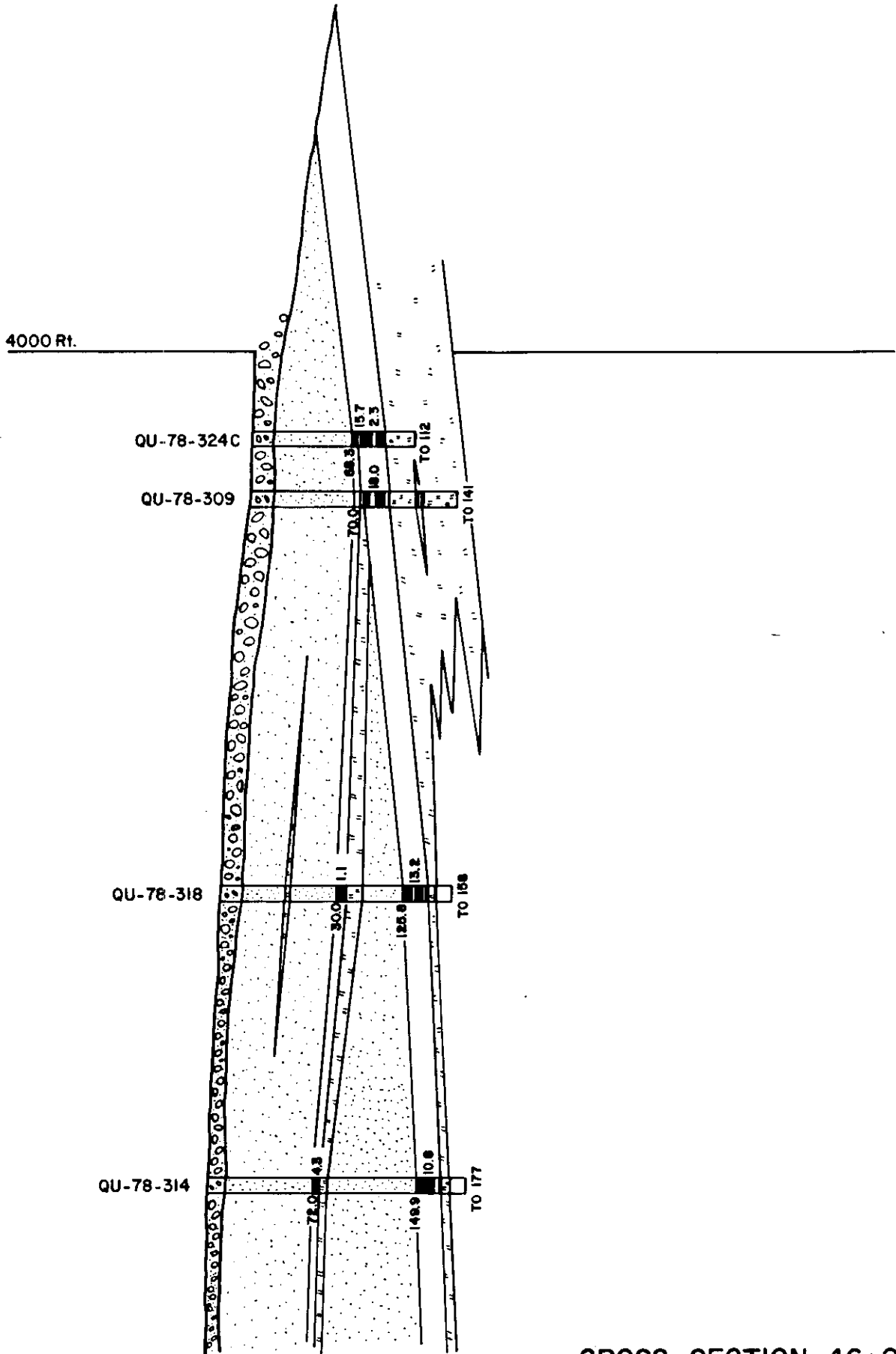
Seam N° 4

Seam N° 3

Seam N° 2

STRATIGRAPHIC SECTION  
 SHOWING FOUR SEAMS  
 DIAGRAM 3  
 GRAPH # 1

Seam N° 1

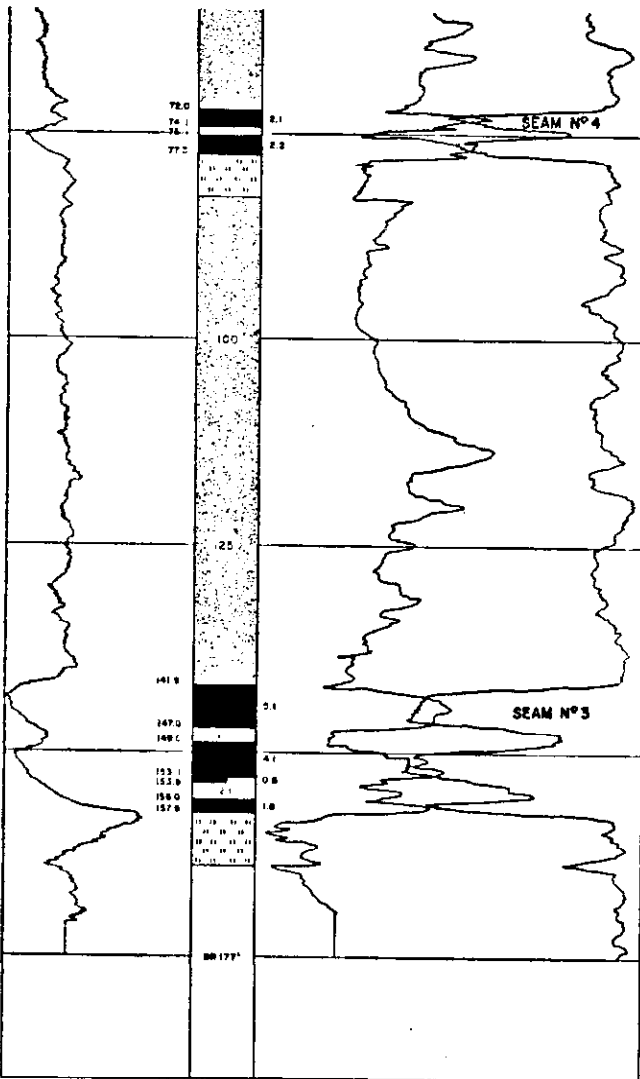


CROSS-SECTION 46+00

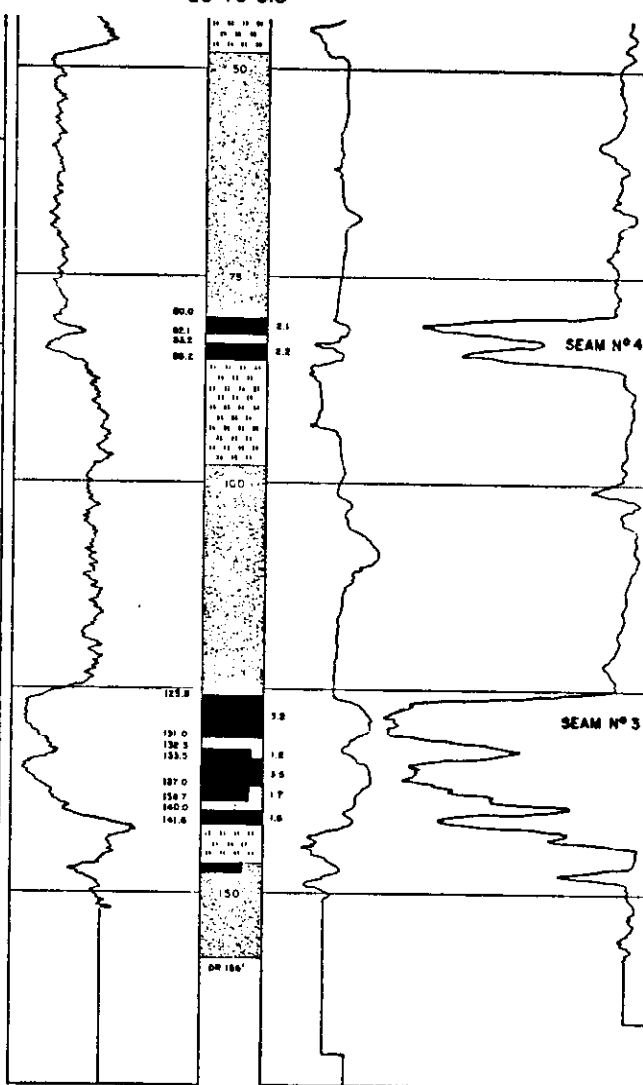
GRAPH # 2

DIAGRAM 4

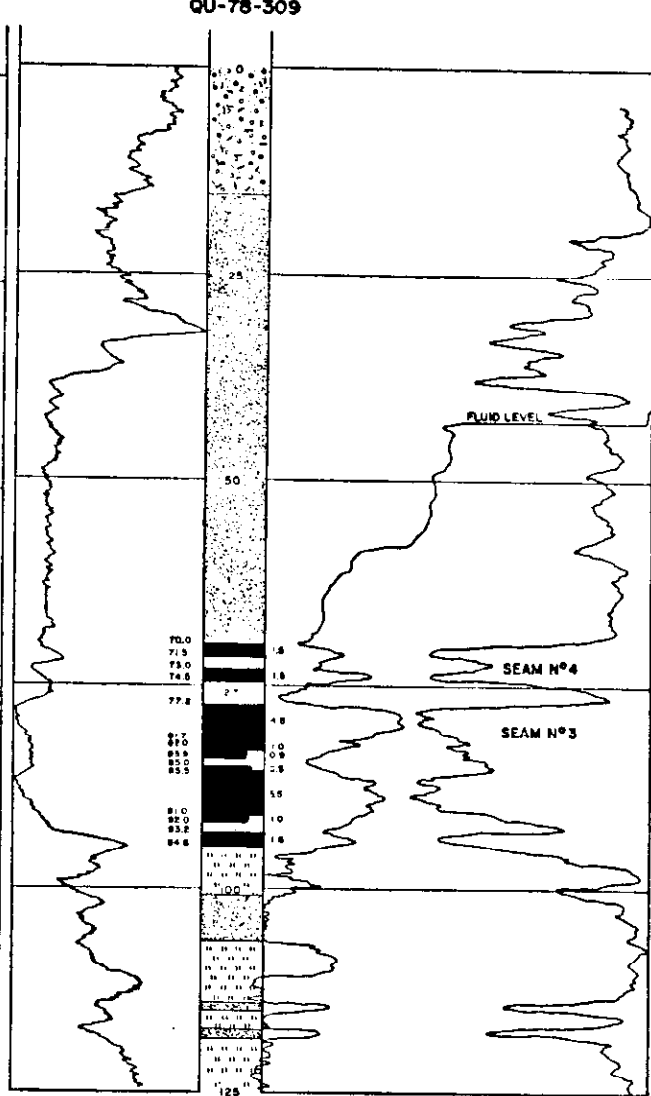
QU-78-314



QU-78-318



QU-78-309

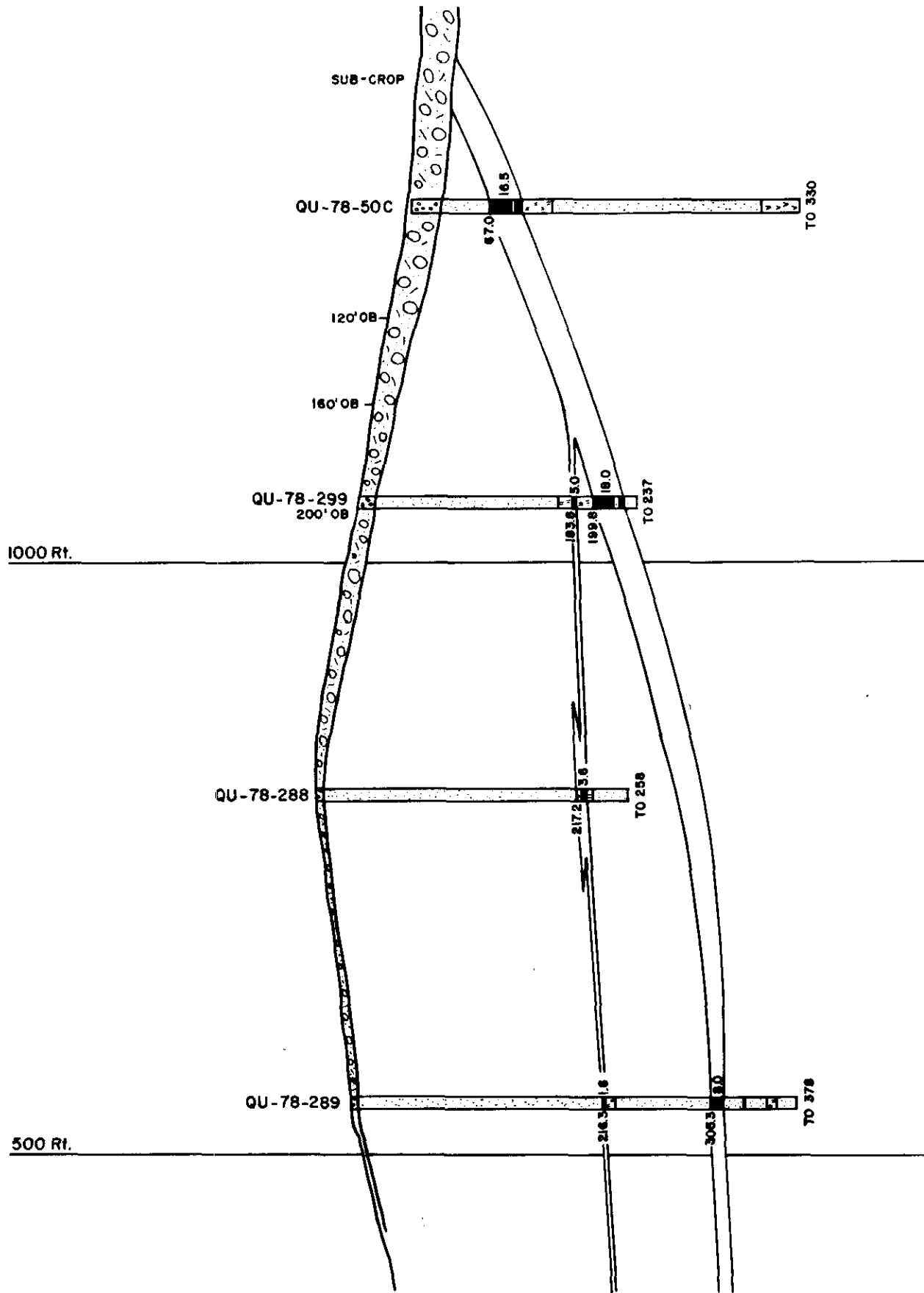


SECTION SHOWING CONFLUENCE OF 4 AND 3 SEAMS

GRAPH # 3

SECTION 46+00

DIAGRAM 5



GRAPH # 4 CROSS-SECTION 9+00  
 DIAGRAM 6



6.0        STRUCTURAL GEOLOGY






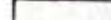
Pit 7 is split into four major blocks, by a series of high angle, subparallel normal faults that originate in the basement. As the Island intrusives intruded the southeast side of Pit 7, they up-lifted the whole eastern margin, this in turn steepened the dip of the sediments along this margin. There is a good possibility that with this up-lift, faulting perpendicular to the up-lift occurred, accompanied by the lateral movement within the sediments. Some of the movement would be taken up within the coal zone, breaking and crushing the coal in part. This same bedding plane slip action may be responsible for thickening the coal on the eastern boundary.

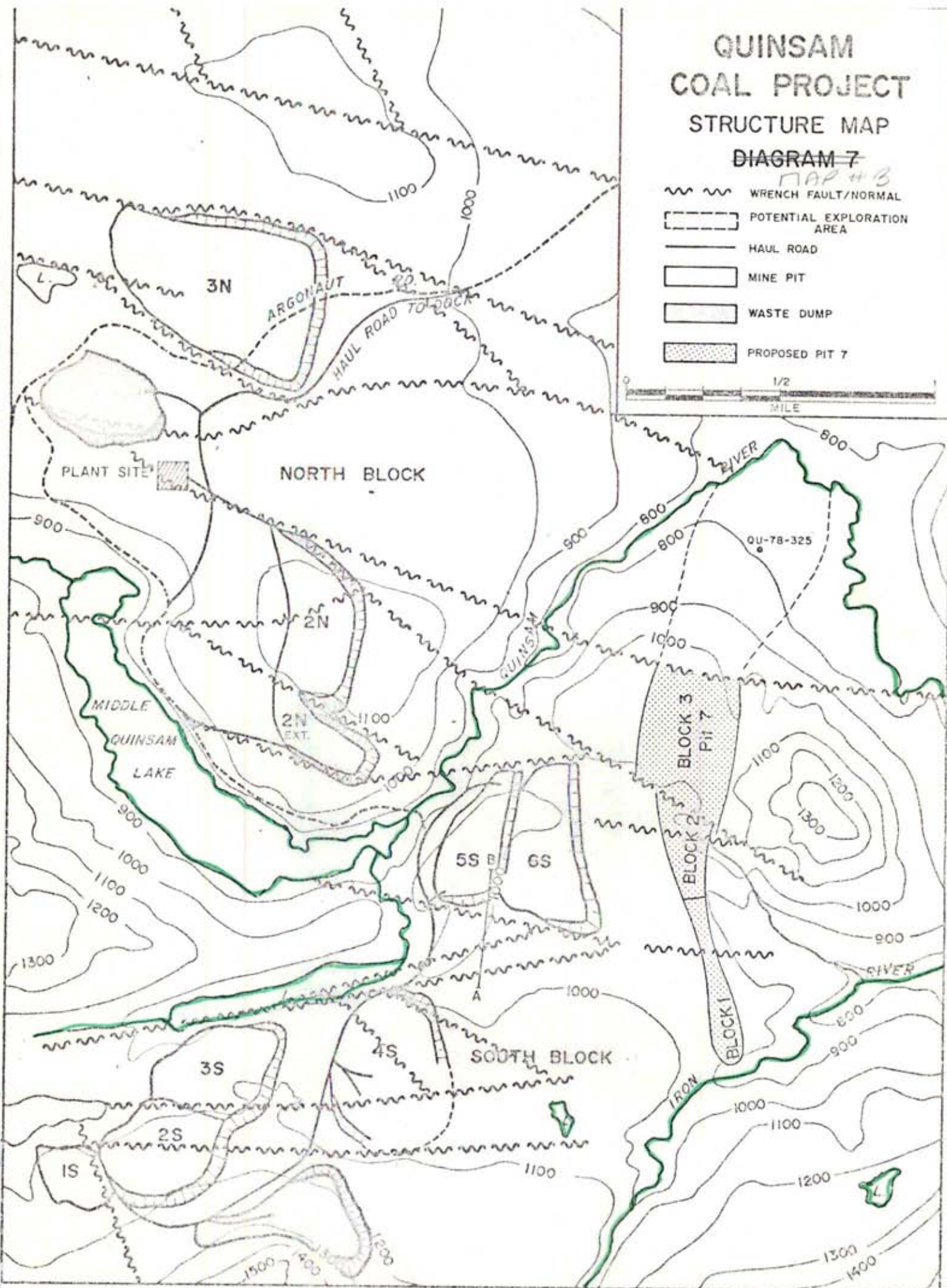
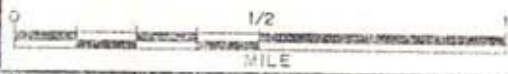
The most northern block appears to be a down block. It is probable that the #3 seam will continue down into the Quinsam River Valley, but if it subcrops within the valley wall, the #1 seam should continue across. Hole QU-78-325, midway down the bank, encountered a full coal sequence, cutting the #3 seam at 75.3' and the #1 seam at 232.5'.

# QUINSAM COAL PROJECT STRUCTURE MAP

## DIAGRAM 7

*MAP # 3*

-  WRENCH FAULT/NORMAL
-  POTENTIAL EXPLORATION AREA
-  HAUL ROAD
-  MINE PIT
-  WASTE DUMP
-  PROPOSED PIT 7



7.0 COAL QUALITY

At the time of writing analytical results from the recent coring were not available. When analysis are complete, current results will be tabulated and examined in an Addendum to this report.

Coal quality information is from one hole in the south block drilled in 1977. At that time the main seam of the area was labeled the #1 seam, but has now been determined as the #3 seam.

# LEXCO TESTING LTD.

screen size analysis

COAL FIELD: Quinsam LAB NO.: 77- composite (857 to 859)

HOLE NO.: Qu- 77-50 DATE SAMPLED: \_\_\_\_\_

LOCATION: 9+00 1300 Rt. D.L. DATE RECIEVED: \_\_\_\_\_

INTERVAL: 68.9 - 94.85 DATE REPORTED: \_\_\_\_\_

TYPE: \_\_\_\_\_ CORE: X CHANNEL: \_\_\_\_\_ CHIP: \_\_\_\_\_

ANALYST: \_\_\_\_\_

| RAW COAL | MOISTURE% | ASH%  | VOLATILE MATTER | FIXED CARBON | TOTAL SULPHUR | CALORIFIC VALUE | F.S.I. |
|----------|-----------|-------|-----------------|--------------|---------------|-----------------|--------|
|          | 2.49      | 20.38 | 32.23           | 44.90        | 1.10          | 10,435          | 1½     |
|          |           |       |                 |              |               |                 |        |

| SIZE         | Wt.(grams) | Wt. % | ASH%  |  |
|--------------|------------|-------|-------|--|
| +2"          |            |       |       |  |
| 2"x1"        |            |       |       |  |
| 1"x3/4"      | 454        | 1.9   | 56.89 |  |
| 3/4"x1/2"    | 2524       | 10.3  | 34.68 |  |
| 1/2"x1/4"    | 6793       | 27.6  | 17.26 |  |
| 1/4"x8 MESH  | 7045       | 28.7  | 14.26 |  |
| 8 x28 MESH   | 5661       | 23.1  | 15.30 |  |
| 28 x100 MESH | 1669       | 6.8   | 20.56 |  |
| 100 x0 MESH  | 400        | 1.6   | 27.83 |  |
|              | 24546      | 100.0 |       |  |

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# LEXCO TESTING LTD.

# coal washability analysis

**COAL FIELD:** Quinsam **LAB NO.:** 77 Composite (857 to 859)  
**HOLE NO.:** Qu 77-50 **DATE SAMPLED:** \_\_\_\_\_  
**LOCATION:** \_\_\_\_\_ **DATE RECEIVED:** \_\_\_\_\_  
**INTERVAL:** \_\_\_\_\_ **DATE REPORTED:** \_\_\_\_\_  
**RAW COAL SIZE FRACTION:** 28 x 100  
**WT.% ASH% BTU.:** \_\_\_\_\_ **ANALYST:** \_\_\_\_\_

| SPECIFIC GRAVITY |       | ELEMENTARY |      |       |      |          | CUMULATIVE FLOAT |       |      |          | CUMULATIVE SINK |       |     |       |
|------------------|-------|------------|------|-------|------|----------|------------------|-------|------|----------|-----------------|-------|-----|-------|
| SINK             | FLOAT | Wt.        | Wt % | ASH % | S %  | Btu./lb. | Wt. %            | ASH % | S %  | Btu./lb. | Wt. %           | ASH % | S % | Btu./ |
|                  | 1.30  | 11         | 3.5  | 3.14  | 0.61 | 13148    | 3.5              | 3.14  | 0.61 | 13148    |                 |       |     |       |
| 1.30             | 1.35  | 172        | 54.7 | 3.26  | 0.60 | 13122    | 58.2             | 3.25  | 0.60 | 13123    |                 |       |     |       |
| 1.35             | 1.40  | 26         | 8.3  | 9.57  | 0.86 | 11794    | 66.5             | 4.04  | 0.63 | 12958    |                 |       |     |       |
| 1.40             | 1.45  | 11         | 3.5  | 14.57 | 1.02 | 11225    | 70.0             | 4.57  | 0.65 | 12871    |                 |       |     |       |
| 1.45             | 1.50  | 10         | 3.2  | 18.73 | 1.45 | 10826    | 73.2             | 5.19  | 0.69 | 12782    |                 |       |     |       |
| 1.50             | 1.55  | 6          | 1.9  | 24.99 | 1.29 | 9860     | 75.1             | 5.69  | 0.70 | 12708    |                 |       |     |       |
| 1.55             | 1.60  | 4          | 1.3  | 28.72 | 1.72 | N.S.     | 76.4             | 6.08  | 0.72 | --       |                 |       |     |       |
| 1.60             | 1.70  | 5          | 1.6  | 32.71 |      | 8591     | 78.0             | 6.63  | 0.74 | --       |                 |       |     |       |
| 1.70             | 1.80  | 3          | 1.0  | 40.41 | N.S. | N.S.     | 79.0             | 7.05  | --   | --       |                 |       |     |       |
| 1.80             | 1.90  | 3          | 1.0  | 47.29 | N.S. | N.S.     | 80.0             | 7.56  | --   | --       |                 |       |     |       |
| 1.90             | +1.90 | 63         | 20.0 | 85.82 | --   |          | 100.0            | 23.21 | --   | --       |                 |       |     |       |

REMARKS: \_\_\_\_\_



# LEXCO TESTING LTD.

# coal washability analysis

**COAL FIELD:** Quinsam **LAB NO.:** 77- Composite (857 to 859)  
**HOLE NO.:** Qu 77-50 **DATE SAMPLED:** \_\_\_\_\_  
**LOCATION:** \_\_\_\_\_ **DATE RECEIVED:** \_\_\_\_\_  
**INTERVAL:** \_\_\_\_\_ **DATE REPORTED:** \_\_\_\_\_  
**RAW COAL SIZE FRACTION:** 1/2 X 28  
**WT.%** \_\_\_\_\_ **ASH%** \_\_\_\_\_ **BTU.:** \_\_\_\_\_ **ANALYST:** \_\_\_\_\_

| SPECIFIC GRAVITY |       | ELEMENTARY |      |       |      |          | CUMULATIVE FLOAT |       |      |          | CUMULATIVE SINK |       |     |          |
|------------------|-------|------------|------|-------|------|----------|------------------|-------|------|----------|-----------------|-------|-----|----------|
| SINK             | FLOAT | Wt.        | Wt % | ASH%  | S%   | Btu./lb. | Wt. %            | ASH%  | S%   | Btu./lb. | Wt. %           | ASH % | S % | Btu./lb. |
|                  | 1.30  | 152        | 11.9 | 2.58  | 0.44 | 13360    | 11.9             | 2.58  | 0.44 | 13360    |                 |       |     |          |
| 1.30             | 1.35  | 503        | 39.2 | 5.62  | 0.63 | 12911    | 51.1             | 4.91  | 0.59 | 13016    |                 |       |     |          |
| 1.35             | 1.40  | 256        | 20.0 | 11.18 | 0.68 | 12112    | 71.1             | 6.68  | 0.61 | 12761    |                 |       |     |          |
| 1.40             | 1.45  | 86         | 6.7  | 18.26 | 1.03 | 11092    | 77.8             | 7.67  | 0.65 | 12618    |                 |       |     |          |
| 1.45             | 1.50  | 49         | 3.8  | 23.48 | 1.30 | 10203    | 81.6             | 8.41  | 0.68 | 12505    |                 |       |     |          |
| 1.50             | 1.55  | 30         | 2.3  | 28.48 | 1.48 | 9489     | 83.9             | 8.96  | 0.70 | 12423    |                 |       |     |          |
| 1.55             | 1.60  | 20         | 1.6  | 32.24 | 2.51 | 8903     | 85.5             | 9.39  | 0.73 | 12357    |                 |       |     |          |
| 1.60             | 1.70  | 26         | 2.0  | 37.34 | 1.69 | 7809     | 87.5             | 10.03 | 0.76 | 12253    |                 |       |     |          |
| 1.70             | 1.80  | 18         | 1.4  | 43.83 | 1.40 | 7110     | 88.9             | 10.57 | 0.77 | 12172    |                 |       |     |          |
| 1.80             | 1.90  | 12         | 0.9  | 52.75 | 0.57 | --       | 89.8             | 10.99 | 0.76 | --       |                 |       |     |          |
| 1.90             |       | 130        | 10.2 | 76.99 | 0.45 | --       | 100.0            | 17.72 | 0.73 | --       |                 |       |     |          |

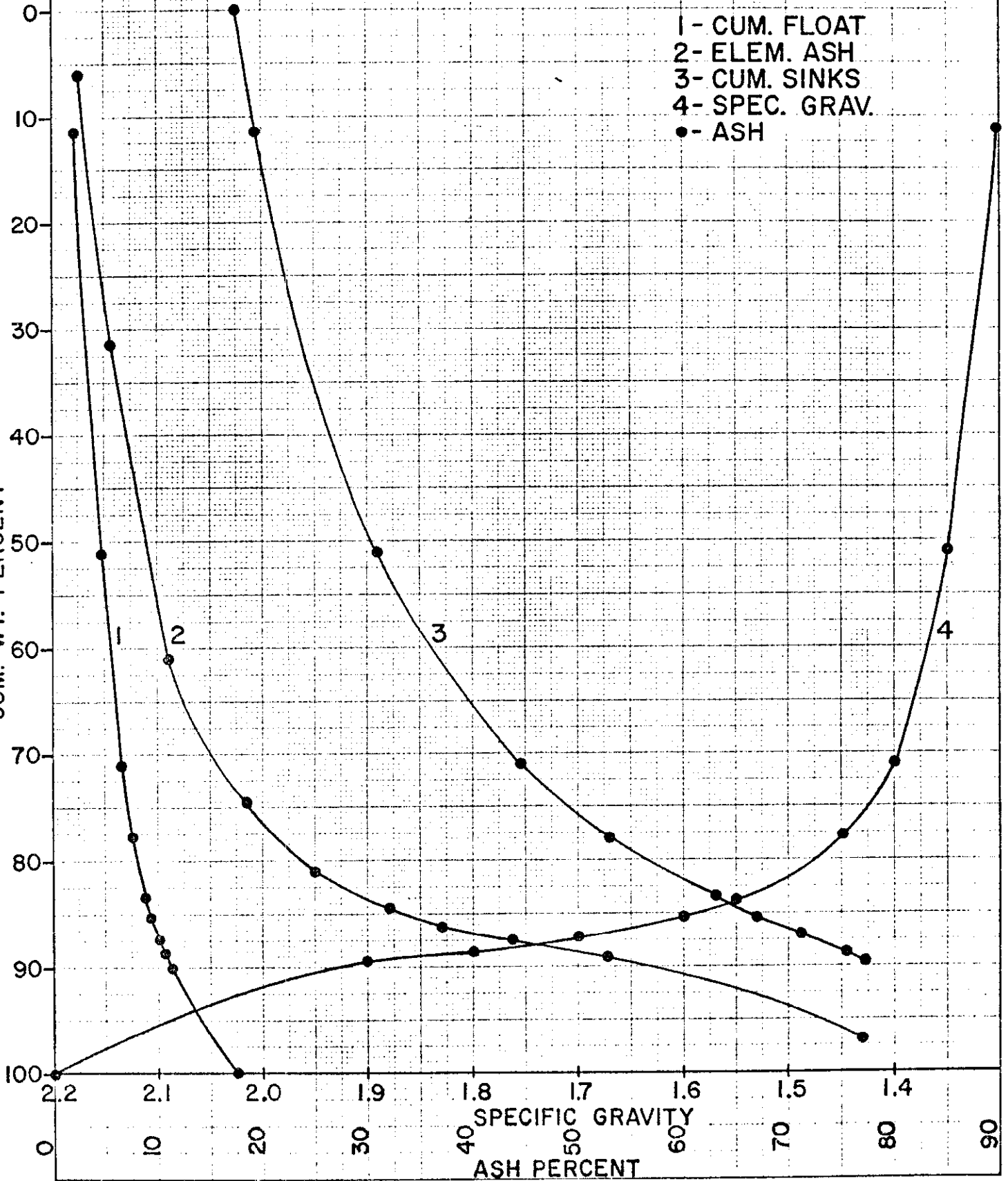
1282 100.0

REMARKS: \_\_\_\_\_

# WASHABILITY CURVES

- 1 - CUM. FLOAT
- 2 - ELEM. ASH
- 3 - CUM. SINKS
- 4 - SPEC. GRAV.
- - ASH

CUM. WT. PERCENT



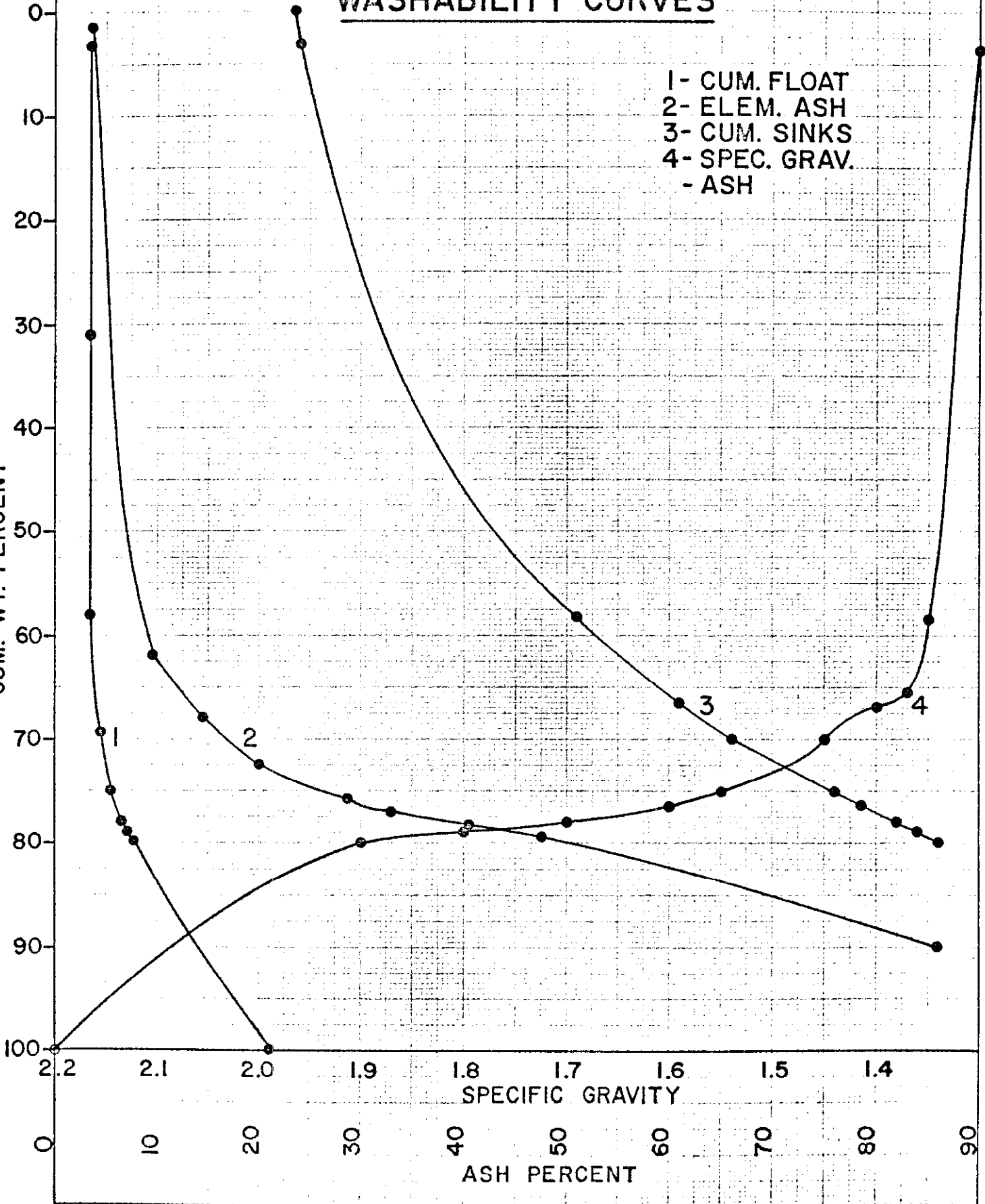
### WASHABILITY CURVES

- 1 - CUM. FLOAT
- 2 - ELEM. ASH
- 3 - CUM. SINKS
- 4 - SPEC. GRAV.
- ASH

CUM. WT. PERCENT

SPECIFIC GRAVITY

ASH PERCENT





8.0 RESERVES

The inplace recoverable coal reserves were calculated within a 0-200' highwall using three standard categories:

1. 0 - 120' of overburden
2. 120 - 160' of overburden
3. 160 - 200' of overburden

Reserves were calculated by planimentering the areas of each of the categories and converting this figure to square feet. This figure was then multiplied by the average raw coal thickness in the category to obtain a volume of coal. Coal volume was converted to a tonnage by using 1.2 tons/cu. yd., and overburden was estimated by multiplying surface area by mean overburden thickness.

Table No. 1 Total Overburden in M cu. yd.

| Block | 0-120         | 120-160       | 160-200       | Totals        |
|-------|---------------|---------------|---------------|---------------|
| 1     | 1.618 M cu yd | 1.472 M cu yd | 2.306 M cu yd | 5.396 M cu yd |
| 2     | 1.504 M cu yd | 1.472 M cu yd | 1.853 M cu yd | 4.829 M cu yd |
| 3     | 2.301 M cu yd | 4.365 M cu yd | 2.74 M cu yd  | 9.406 M cu yd |
| 3     | Probable      |               | 7.900 M cu yd | 7.900 M cu yd |

Table No. 2 Total Coal M Tons

| Block | 0-120       | 120-160     | 160-200     | Totals       |
|-------|-------------|-------------|-------------|--------------|
| 1     | .336 M tons | .186 M tons | .225 M tons | .747 M tons  |
| 2     | .262 M tons | .140 M tons | .135 M tons | .537 M tons  |
| 3     | .529 M tons | .402 M tons | .183 M tons | 1.114 M tons |
| 3     | Probable    |             | .531 M tons | .531 M tons  |

# CUMDAM COAL PROJECT

## RESERVE BLOCKS

~~DIAGRAM 8~~

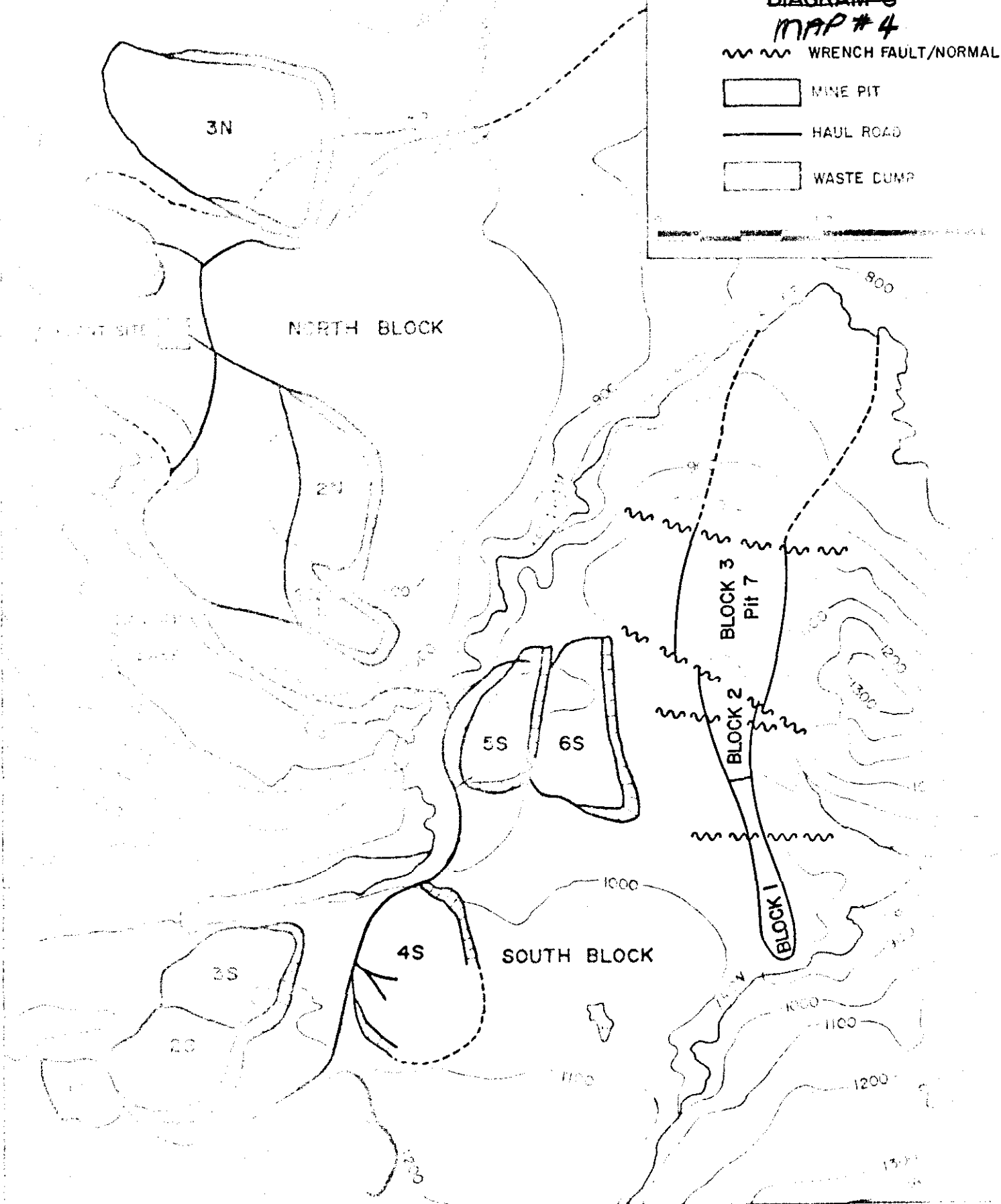
MAP # 4

~~~~~ WRENCH FAULT/NORMAL

▭ MINE PIT

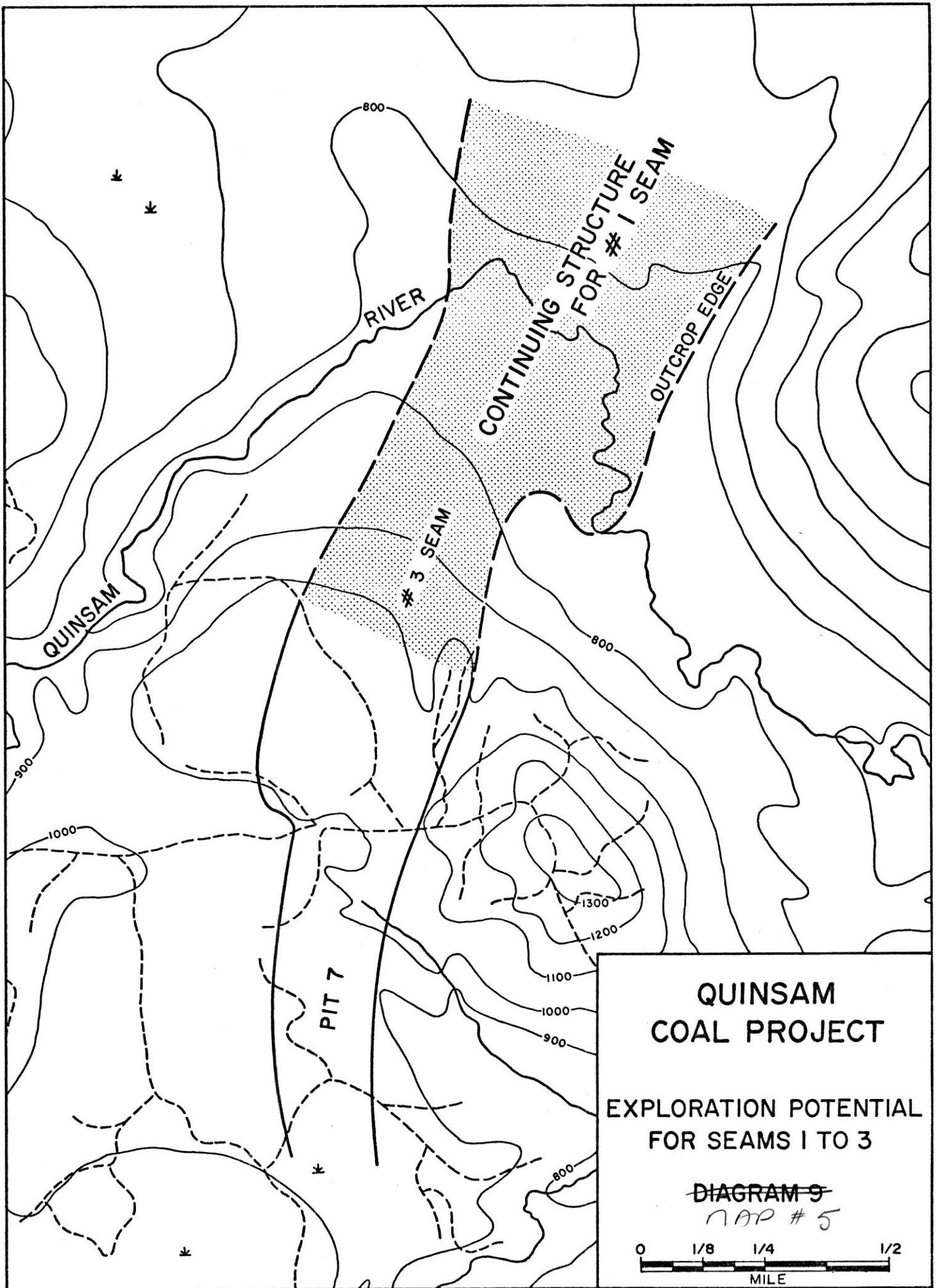
— HAUL ROAD

▭ WASTE DUMP



9.0            RECOMMENDATIONS

Drilling to date has outlined the need for more exploration work to the north of the existing Pit 7 area. Holes should be drilled down the bank and across the river flats to the north. The structure may continue across the Quinsam River and at the same time wrap around the basalt high to the east of the pit (see dia. 9 ). Both of these potential areas need work in the future.

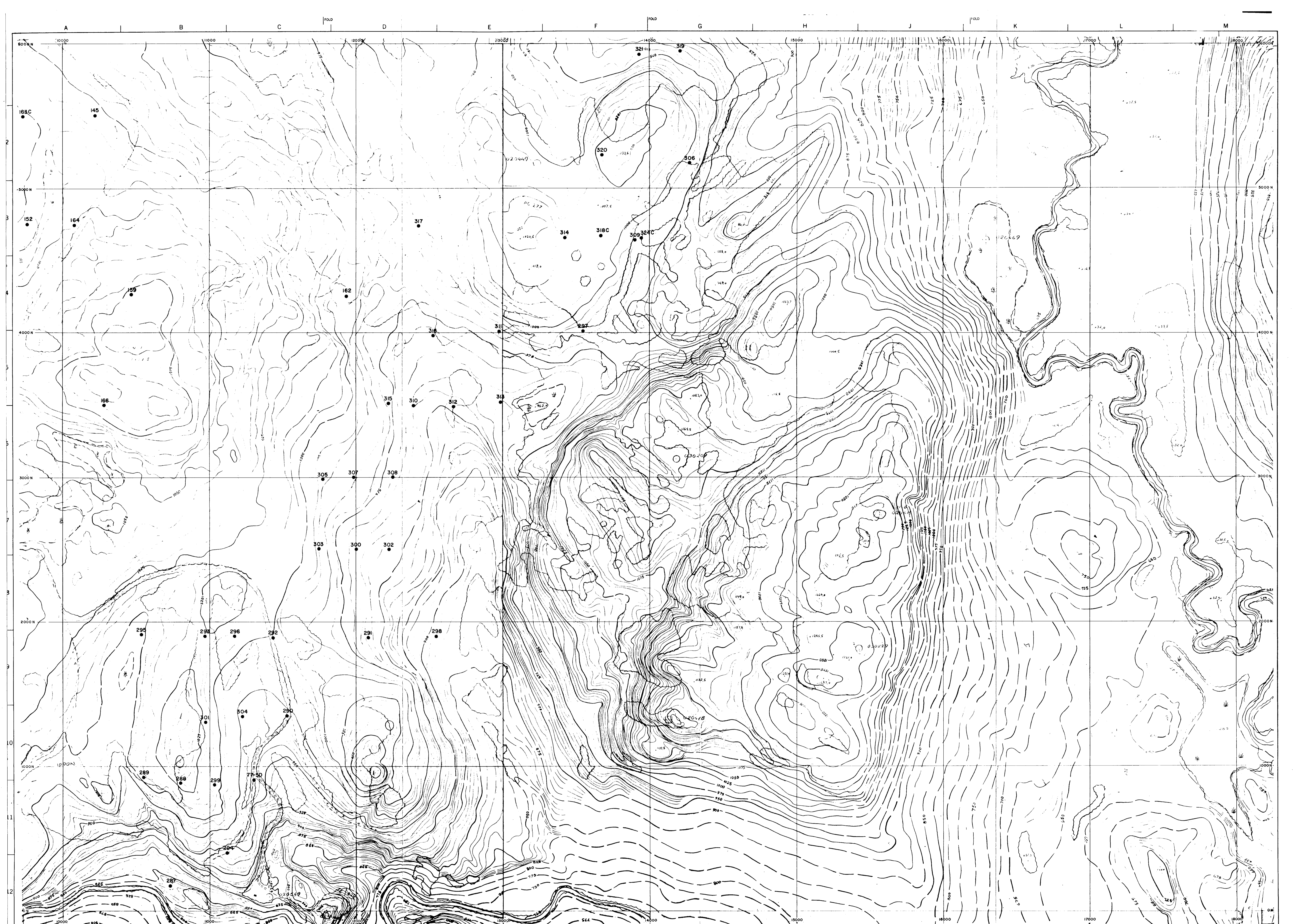


**QUINSAM  
COAL PROJECT**

**EXPLORATION POTENTIAL  
FOR SEAMS I TO 3**

~~DIAGRAM 9~~  
NAP # 5





| REFERENCE DRAWINGS |                                                  | ISSUE | DATE    | INITL  | REVISIONS                   |  | ISSUE | DATE | INITL | REVISIONS |  |
|--------------------|--------------------------------------------------|-------|---------|--------|-----------------------------|--|-------|------|-------|-----------|--|
| SHT. INDEX 1:2000  | SUPPLEMENTARY MAPPING COMBINATION OF SHEET B & D | A     | 10/4/78 | G.B.S. | BASE TAKEN FROM 006/06/81.3 |  |       |      |       |           |  |
|                    | REFERENCE DRAWING: QS.G. 056/GF.13               |       |         |        |                             |  |       |      |       |           |  |
|                    |                                                  |       |         |        |                             |  |       |      |       |           |  |
|                    |                                                  |       |         |        |                             |  |       |      |       |           |  |

**LUSCAR LTD.**

QUINSAM PROJECT

| SCALE      | 0        | 100 | 200          | FEET |
|------------|----------|-----|--------------|------|
| DRAWN      | BY       |     | DATE         |      |
| CHECKED    | G. B. S. |     | FEB 20, 1979 |      |
| APPROVED   |          |     |              |      |
| 1st ISSUED |          |     |              |      |

TITLE

**PIT 7  
DRILLHOLE LOCATION PLAN**

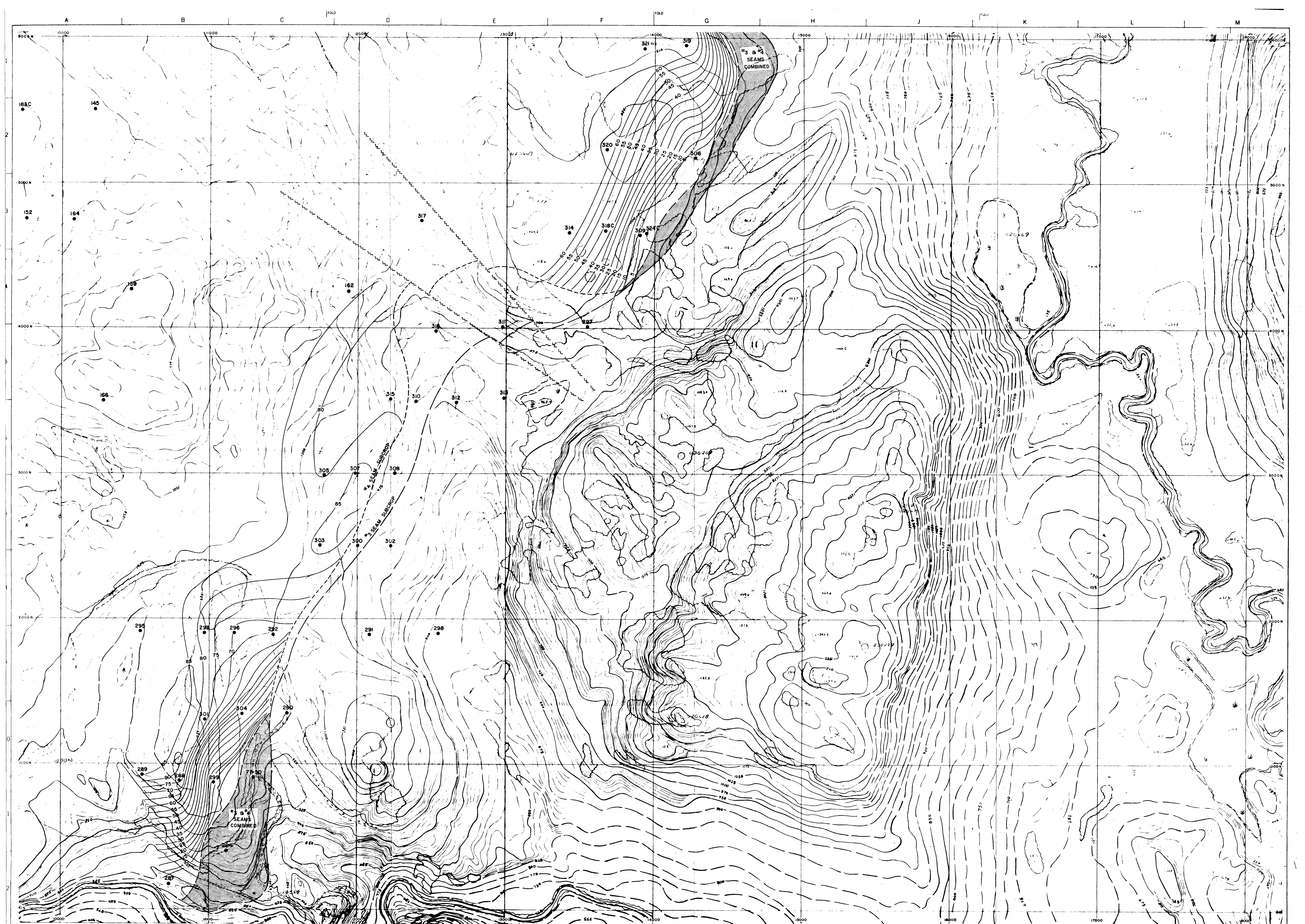
**71**  
M2

DRAWING NO.

**QS.G. 211 GF.13**

ISSUE

*ex. Quinsam 78 & 81 (see 4)*



REFERENCE DRAWINGS

ISSUE DATE INITI

REVISIONS

ISSUE DATE INITI

REVISIONS

LUSCAR LTD.

QUINSAM PROJECT

|            |             |      |               |      |
|------------|-------------|------|---------------|------|
| SCALE      | 0           | 100  | 200           | FEET |
| DRAWN      | T. CHRUSIEL | DATE | FEB. 16, 1979 |      |
| CHECKED    |             |      |               |      |
| APPROVED   |             |      |               |      |
| 1st ISSUED |             |      |               |      |

TITLE

PIT 7  
PARTING THICKNESS ISOPACH  
FOR  
SEAMS NO. 3 & NO. 4  
CI=5 FEET

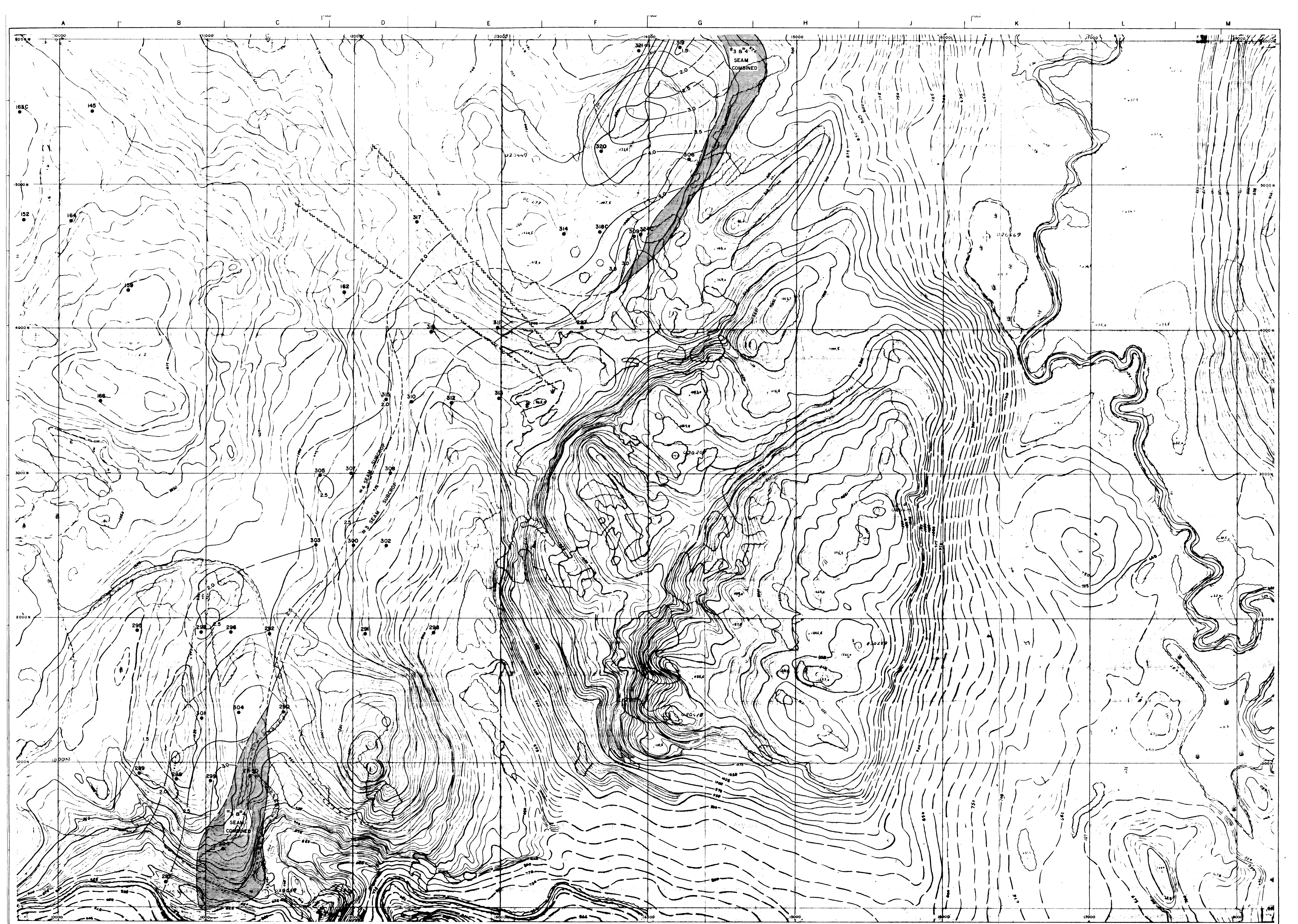
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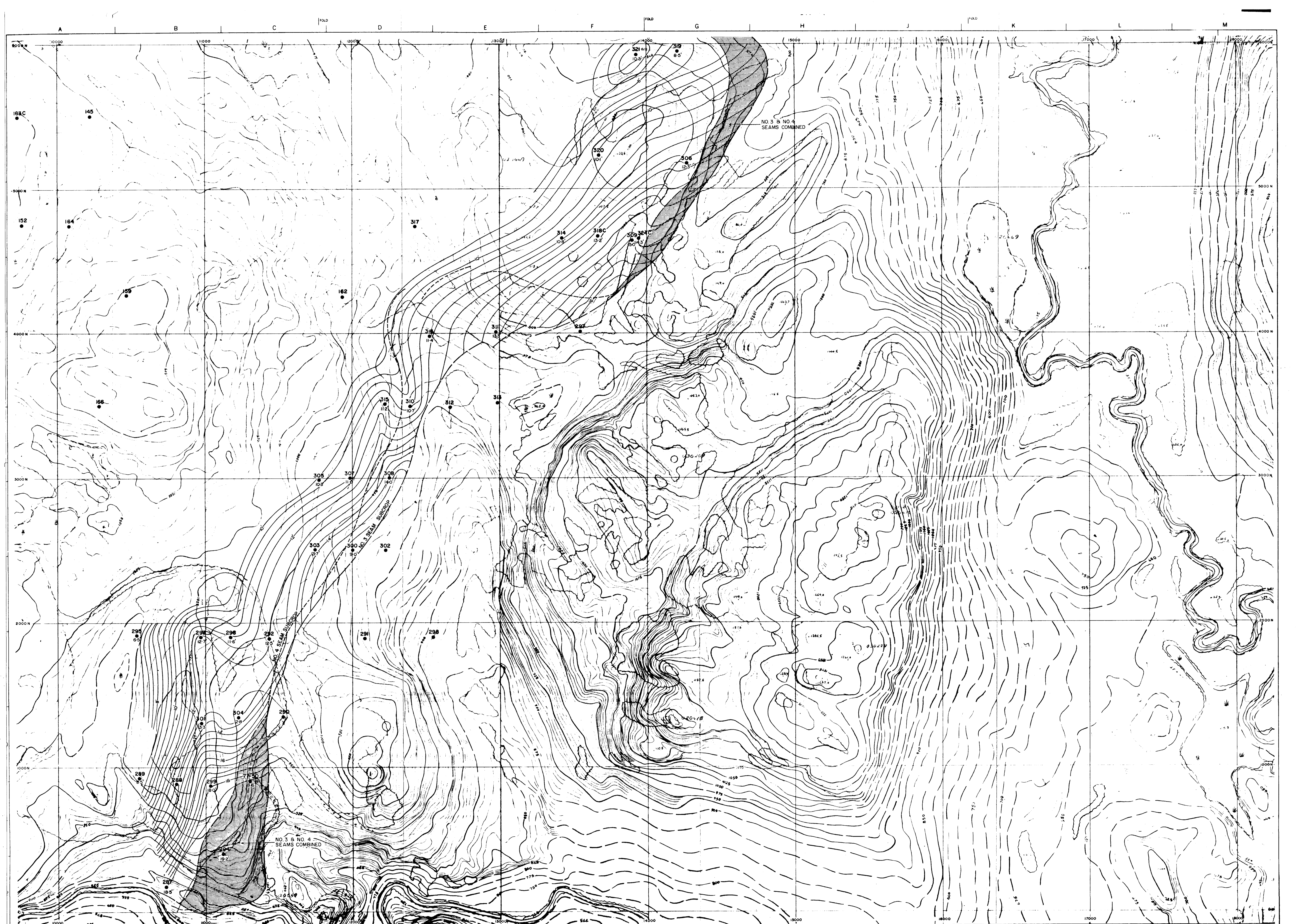
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THICKNESS ISOPACH  
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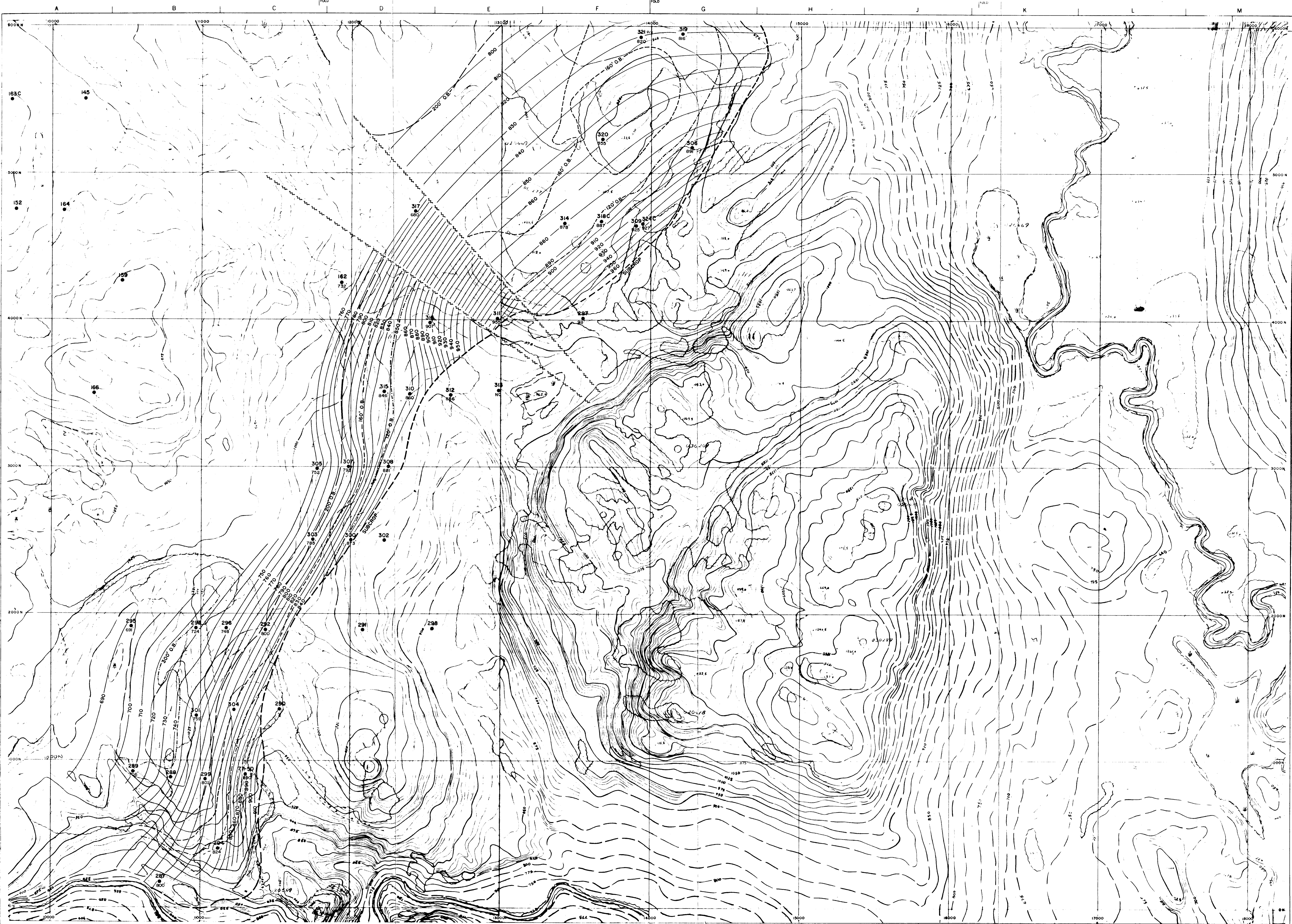
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**PIT 7**

**STRUCTURE MAP**

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GEOLOGY OF THE COAL RESERVE  
IN THE AREA OF  
PIT 2 NORTH AND PIT 2 NORTH EXTENSION

CX- QUINSAM 78(6)(SEC. 1) A

**OPEN FILE**

Submitted by:

R. Ronaghan

S. Gardner

**GEOLOGICAL BRANCH**  
ASSESSMENT REPORT

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                            120+00 (Pit 2 North and 2 North Extension)

## INTRODUCTION

Area Worked

The location of proposed Pit 2 North and 2 North Extension is on the north side of Middle Quinsam Lake as shown on Map 1. This area falls between Lines 70+00 to 120+00. Total length of the proposed pit is approximately 4800 feet, and its average width is 1200 feet. Total area of the pit is approximately 125 acres. This includes the area from the subcrop limit of the coal on the south and west to the 200 foot highwall limit on the north and east.

Topography and Drainage

The proposed pit is situated on a high promontory or plateau overlooking the north shore of Middle Quinsam Lake. The top of the plateau is relatively flat, with a slight slope away from the lake to the north into a low swampy area. The sides of the plateau fall away abruptly on the south east where the Quinsam River drains the lake, and along the north shore of the lake. Highest point on the plateau is near the south end of the proposed pit, at 1150 ft. above sea level.

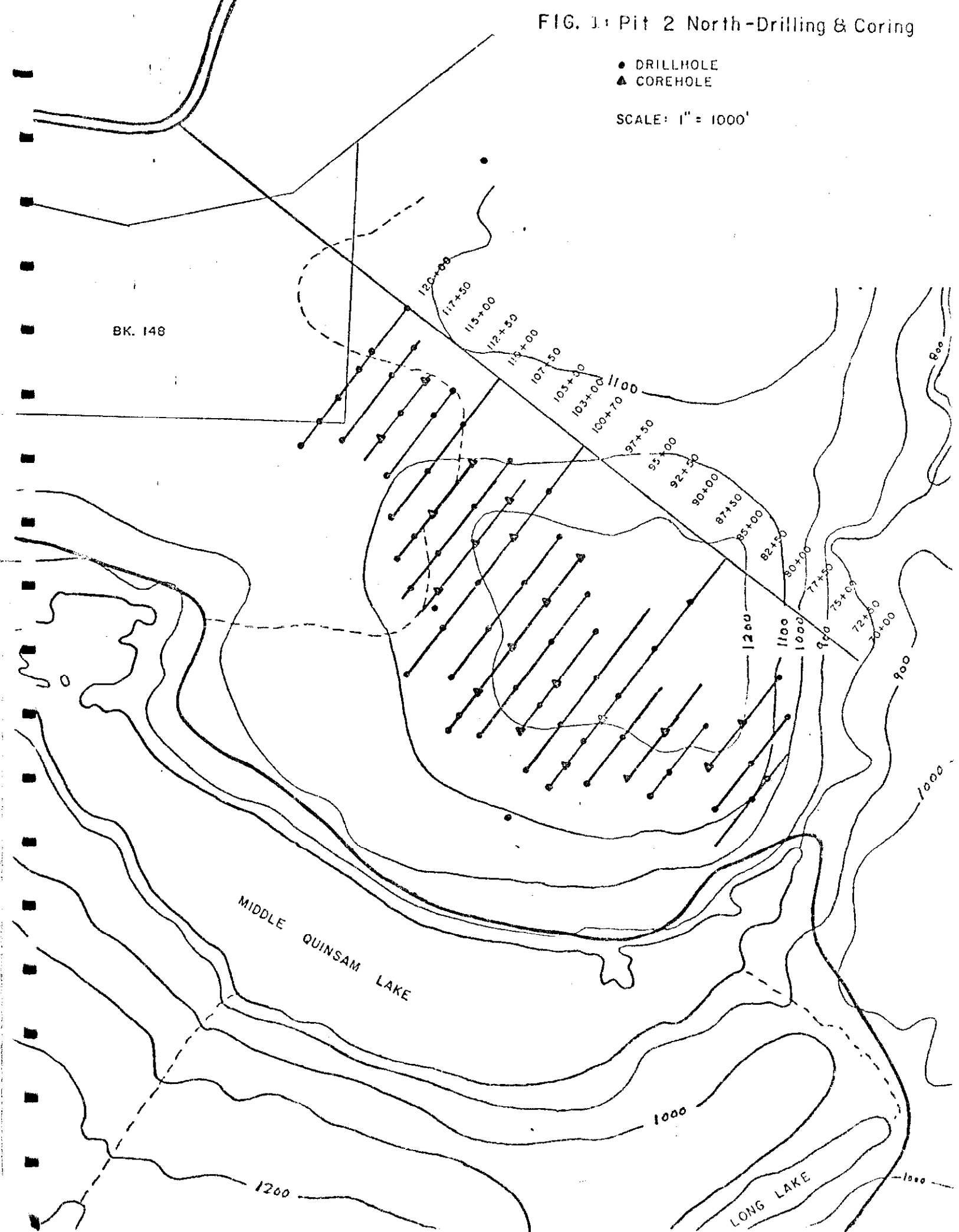
Much of the pit area drains into the low swamps away from the lake. The southern and western margins of the pit area drain into the Quinsam River and Middle Quinsam Lake respectively. Runoff occurs very rapidly after rainfall. One to two

FIG. 1: Pit 2 North-Drilling & Coring

- DRILLHOLE
- ▲ COREHOLE

SCALE: 1" = 1000'

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inches of rain may fall in a two or three day period, and surface runoff will occur one or two days after this, at which time the ground is relatively dry again.

Technical Investigations

Drilling and coring operations commenced in the proposed pit 2 North area in mid-February and was completed in mid-April. A total of 43 drillholes (6850 ft. drilled) and 21 coreholes (1068 ft. cored) were completed during 41 working days. Total field costs amounted to approximately \$112,600.00. This work was undertaken with Lexco Testing Ltd. Rigs 06 and 07. Support equipment and services included a D-6 Caterpillar, a geophysical logging unit, a two man survey crew, a contract line cutting crew and two staff geologists.

In addition to drilling and coring operations, an experimental seismic survey will be conducted on Line 85+00 and Line 100+70. The data and interpretation from this seismic survey will be included as an addendum to this report.



## SUMMARY AND CONCLUSIONS

A total of 2.54 million tons of surface recoverable coal (average ratio 12.7:1) is outlined in the area of proposed Pit 2 North. Of this total, 2.23 million tons has sulphur values averaging less than 1%. This is the total reserve from the No. 1 Seam. The remaining .31 million tons may be of the high sulphur variety (greater than 2%) found in the No.1 rider. The No. 1 Rider is separated from the top of the No. 1 seam by one to two feet of mudstone parting.

This reserve encompasses the proposed pit area to the north of Middle Quinsam Lake, from Line 72+00 to Line 120+00 (see Fig. 1 ). Reserve calculations include three categories: 0 to 120 ft. overburden limits, 120 to 160 ft. overburden limits and 160 to 200 ft. overburden limits.

Structural regime over the proposed pit area conforms to earlier findings over the entire North block: a series of high angle normal faults running almost due west dissects the pit into two pairs of upthrown-downthrown blocks. A total of five of these subparallel normal faults dissect the pit at approximately  $60^{\circ}$  to the general strike of the formation; two of the faults form pit boundaries, one on the north west, the other on the south east. Vertical displacements average between ten and twenty feet. The north western end of the proposed pit is subjected to a greater amount of stress.

In addition to these normal faults, the coal seams may have been gently folded and rolled in places.

Two basalt highs affect deposition in the proposed pit area or directly adjacent to it. One is located just behind the 200 ft. highwall on Line 85+00, 1500 ft. left of B/L, the other is located within the actual pit limits on Line 115+00 and 112+50, approximately 700 ft. left of B/L. A closely spaced drill pattern in this area has proven that the interruption in deposition is localized, being approximately 350 feet long by 200 feet wide.

Glacial overburden over the majority of the pit area is minimal, with thicknesses from 0-10 feet throughout the southeastern two thirds of the area. It is only over the northwestern one third, and in particular along the subcrop edge, that till thicknesses reach 70 feet or more and average at least 40 feet. It is in this area that much of the near surface reserve has been eroded off by glacial action.

## COAL GEOLOGY

Economically recoverable coal in the Pit 2 North area is confined to the No. 1 seam and its top rider. While the No. 2 seam is present over the majority of the pit area, it exists chiefly as a marker unit, with seam thicknesses ranging from a few inches to 1.8 feet, the average being 0.5 feet. The No. 3 seam has been identified behind the highwall limit in the region of Line 85+00 and the baseline. However, to assess its economic potential a good deal of drilling would be required that is beyond the scope of the present program.

The No. 1 seam is typically 9.2 feet thick, of which the bottom 1.5 feet is usually of inferior quality, being laced with thin shaly laminations or at times mudstone partings up to 4 or 5 inches in thickness. Except for this bottom zone, the remainder of the seam is very clean, with only one thin bony layer of one to two inches in thickness sometimes present about midway through the seam. Throughout Pit 2 North Extension and the southern part of Pit 2 North up to approximately Line 100+00 the No. 1 seam appears massive, very hard, fairly heavy with some visible pyrite. North of Line 100+00 and approaching the disturbed zone bounding the north end of the pit, the No. 1 seam is lighter, much softer and easy to break, and the visible pyrite content is noticeably reduced. In the south half of Pit 2 North the No. 1 rider above the No. 1 seam is separated from the No. 1

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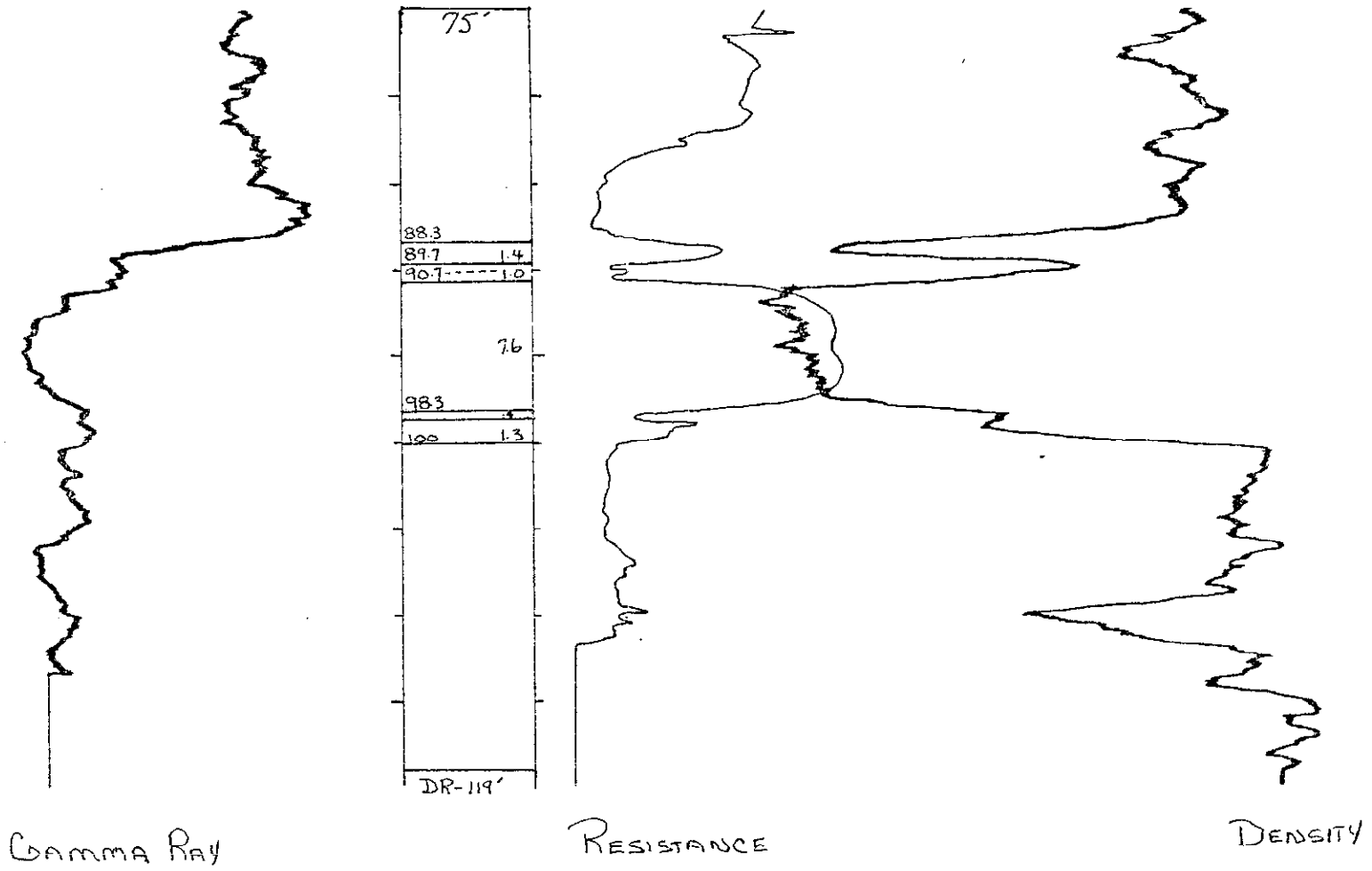


FIGURE 2

Typical coal section of No. 1 seam and top rider, Pit 2 North and 2 North Extension

seam by an average of 1.2 feet of soft pliable mudstone. North of Line 100+00, the mudstone parting increases to over 2 feet in some locations. The No. 1 rider averages 1.3 feet in thickness. It is generally massive, hard clean coal with abundant visible pyrite on the cleat surfaces, but exhibits the same quality trend as the No. 1 seam; becoming softer and lighter as the disturbed belt is approached in the North end of the pit. The No. 1 rider is capped by a greenish grey medium hard uniform siltstone.

Examination of the cores in the northern part of the pit (north of Line 100+00) indicated that the coal in this area has been subjected to either tensile or compressional stress. The coal was crushed and rolled, slickensides were common and core recoveries were lessened. In addition to this, the hard, brittle siltstone roof rock exhibited high angle fracturing. It is possible that, in this disturbed area, the softer, less competent coal and mudstone has step folded and flowed, while at the same location the brittle, competent siltstones and sandstones have actually faulted and cracked. This will be dealt with in greater detail in the section entitled "Structure".

## SURFICIAL GEOLOGY

Because Pit 2 North is situated on one side of a glacial valley that is now occupied by Middle Quinsam Lake, the surficial geology of the area is of considerable importance. Appendix Map 2 isopachs the thickness of glacial overburden over the total pit area. It should be noted that the majority of the pit area is covered by minimal thicknesses of till (less than 10 feet). The downthrown structural block north of Line 110+00 is responsible for the much thicker till thicknesses in this northern area of the pit-glacial action essentially levelled the topography by depositing great volumes of overburden in this structurally low area, while very little overburden was laid down on the topographic highs. The western and southern edges of the pit abut onto the walls of the glacial Middle Quinsam valley : till cover picks up rapidly in a southerly and westerly direction. The relatively flat escarpment between Pit 2 and Middle Quinsam Lake results from all the sediments being eroded off, leaving the basement covered by a thin mantle of overburden, as evidenced by the drillhole at 3000' Lt. on Line 86+00. This bench was probably covered by glacial meltwater at one time.

The glacial overburden covering the area of Pit 2 North and 2 North Extension can be described as a boulder till. Numerous granite boulders from a few inches to three or four feet in diameter are common. The till matrix consists of a sandy clay mixture that oxidizes to a distinct brownish orange color. This sandy clay mixture can be classed as impervious,

but when excavated and exposed to rainfall, it becomes very mucky and prone to slumping.

Glacial erosion on the subcrop edge of the No. 1 seam north of line 100+00 has effectively reduced some of the near surface coal reserve of the pit 2 North area. The No. 1 seam subcrops at depths of 60 and 70 feet in this area, and numerous drillholes went through the overburden directly into the No. 1 seam.

There may be structural disturbance of the coal measures resulting from glacial action. Movement of the ice was most certainly down the Middle Quinsam Valley in a south-easterly direction. The solid granite wall between Middle Quinsam Lake and the Long Lake to the south may have induced a funnelling effect and a massive buildup of ice where the valley wedges into a narrow corridor at the south-east end of Middle Quinsam Lake. Pressures would then transmit to the valley walls, and resulting compressive stresses may have been powerful enough to bend the softer formations into slight rolls and waves, without actually creating fault zones. An examination of Appendix Map 1 (Top of seam contoured elevations, No. 1 rider) shows that bends or rolls are common all along the southwestern edge of the pit. This would be the edge that was in direct contact with the advancing ice front. Stresses were not great enough to transmit very far laterally-bends or rolls would thus be confined to the margins.

## THE GROUNDWATER REGIME

Only cursory observations of groundwater characteristics in the area of Pit 2 North have been undertaken at this point (measurements of water levels in drillholes), however it may be of some value to comment on these observations.

The groundwater regime in this area is confined to the bedrock - only a minimal amount of surface seepage percolates through the areas of deep overburden. But where the bedrock is covered by only a thin layer of till, it is reasonable to assume that a large amount of surface runoff is absorbed by numerous fractures, faults and joints that occur in the bedrock formations. While the medium and coarse grained sandstone of the upper cycle possess some porosity, large volumes of ground-water appear to be limited to areas of secondary porosity : fault planes and fracture patterns.

In the excavation of the bulk sample pits it became evident that the coal seams, in particular the No. 1 seam, are aquifers. Pits had to be pumped during the sampling process. Groundwater discharge from the No. 1 seam at Pit No. 1 North on Line 85+00, 2500' Lt. was estimated at 50 i.g.p.m. from pump times and discharge volumes.

The majority of drillholes over the area of Pit 2 North were producing water at less than 2 i.g.p.m. The only flowing hole was QU-78-50c at 107+46, 1257' Lt. Hydrostatic heads in most holes less than two hours after completion were stable at an average 10 foot level. Only 3 holes out of the total number drilled in the area were blind.



## BEDROCK GEOLOGY

The Comox Formation strata in the area of Pit 2 North and 2 North Extension exhibits all the characteristics that have been closely examined in R. Engler's Phase 1 Report entitled Geology and Coal Resources of the Quinsam Property, Vancouver Island. The two main cycles of deposition are well defined in both the cored sections and in the geophysical logs. The upper cycle, in which the No. 2 seam is found, consists primarily of light to medium grey, medium to coarse grained arkosic sandstone that is a product of the weathering of the granitic uplift of the Insular Mountains to the west. The No. 2 seam is always found approximately 10 to 15 feet above the base of this upper cycle. The lower cycle, in which the No. 1 seam is found, consists of a series of fine grained sandstones and siltstones whose characteristic greenish color denotes a basaltic parent, which in this area is the Triassic basement rock upon which the Comox Formation has been deposited. The unconformable contact between these Triassic basalts and the Comox formation signifies a period of erosional uplift, at which time the basaltic topography was eroded and subsequently deposited in the troughs and valleys, initiating the period of Comox deposition that includes the coal forming accumulations of vegetation in the coastal swamps and lowland areas which produced the No. 1 seam.

On the south half of the pit area up to Line 100+00 the stratigraphic bedrock section remains relatively constant as illustrated in the geophysical logs. The split between the base of the No. 2 seam and the top of the No. 1 seam is between 55 and 65 feet. On the north half of the pit area this split increases to between 70 and 80 feet. This is because the northern part of the pit is not actually inparallel strike with the southern part. It appears that the stratigraphic pile is increasing in thickness across strike and down dip. This can be illustrated further by referring to hole QU-77-69 (Line 90+00 1061.7 Rt. of B/L) located about 3000 feet directly downdip from south half of the pit. Here the split has increased to 80 feet, the mudstone parting between the No. 1 rider and No. 1 seam has increased to 4 feet. Naturally individual layers tend to thicken and splay toward the centre of the basin, while on the margins the sedimentary beds tend to thin and pinch together. One other detail that may become important in the assessment of the downdip underground potential is the fact that the hiatus in deposition between the upper and lower cycles is migrating downward towards the centre of the basin. Instead of the usual 10 to 15 foot spread between the No. 2 seam and the base of the upper cycle that was common at pit 2, Hole QU-77-69 shows a 50 foot spread- the hiatus between the upper and lower cycle is now only 30 feet above the No. 1 zone. This may indicate that even further down-dip, the lower cycle maybe entirely absent, and with it the No.1 seam.

## BASEMENT GEOLOGY

When dealing with the basaltic basement, the single most important factor that we must be concerned with is the presence of basement "highs". These paleotopographic highs interrupt the normal sequence of deposition of the lower cycle and are responsible for the non-deposition or restricted deposition of the No. 1 seam sequence in areas of close proximity to them. They may affect large areas or relatively small areas. Because they occur randomly, these highs are difficult to map even with a closely spaced drill pattern. The forthcoming seismic experiments, if successful, will do much to alleviate the guesswork involved in accurately plotting these highs on plan maps and sections.

There are two areas in pit 2 North that are affected by basement highs. The largest is located in the area of Line 85+00 and Line 87+50 approximately 1500 feet left of the original baseline. On Line 85+00, 1500 Lt. the No. 1 seam is missing completely, except for the No. 1 rider at the top of the interval, and on Line 87+50, 1500' Lt. total thickness of the No. 1 seam has been reduced to 3.3 feet (refer to sections 85+00 and 87+50 in the Appendix). The coal interval is replaced by a shale or siltstone, and the volcanic basement lies only 15 feet below the coaly zone. A smaller, more localized area has been affected by another basement high at Line 112+50, 700 Lt. Here again only the No. 1 rider is present, the No. 1 seam being replaced by a green siltstone.

## STRUCTURE

Structure in the area of Pit 2 N. and Pit 2 N. Extension conforms to the overall structural regime of the area to the north and east of Middle Quinsam Lake: a series of relatively closely spaced high angle normal faults that originate in the basaltic basement. These faults are subparallel to each other and are aligned in an East West trend. They result from a combination of vertical and horizontal stresses generated by Cretaceous and Tertiary volcanic activity that initiated a series of granitic and rhyolitic intrusions, and Tertiary and Recent isostatic uplift and emergence.

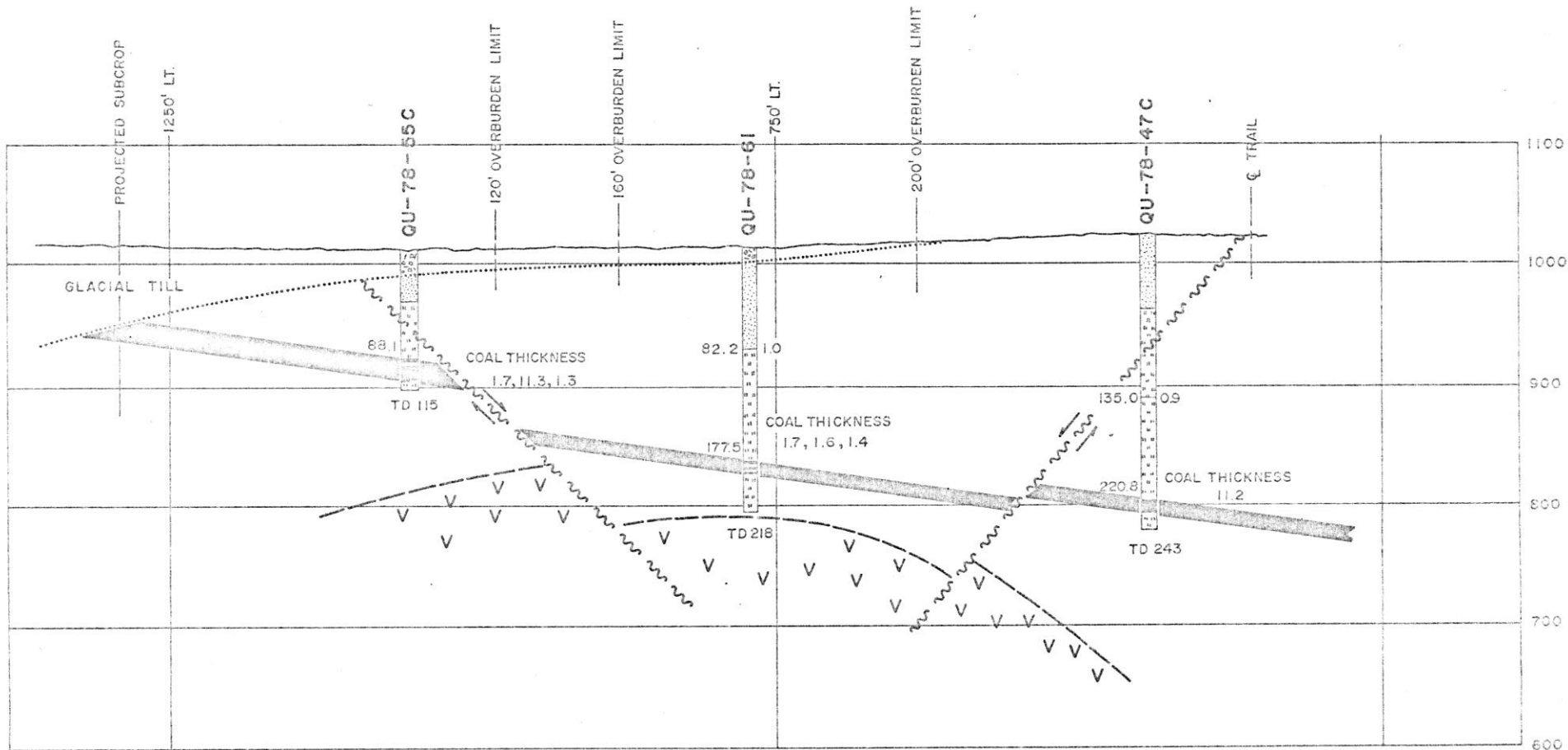
In addition to these normal faults, the sedimentary pile, and in particular the softer, less competent coals and mudstones, exhibit slight rolls or bends that may result from either local imbalance in the uplifting process, or a lateral compressive stress generated by glacial action down the Middle Quinsam Valley, or both. In cases where the stresses that generate the normal faults are locally dissipated, the faulting is replaced by a monoclinial folding that bends the softer formation without actually shearing it.

In examining the area of Pit 2 N. and Pit 2 N. Extension more closely, one finds a total of 5 high angle normal faults as shown on Appendix Map. The north western and south-eastern limits of the pit are bounded by two of these faults. The remaining faults trend due west and dissect the pit at approximately  $60^{\circ}$  to the general strike of the formation. These faults divide the pit into a series of up-

thrown and downthrown blocks that are tilted along their length, thus varying the vertical displacements. These vertical displacements vary from less than 10 feet to approximately 50 feet, depending on location. The north-western end of the pit, between lines 110+00 and 120+00 appears to have been subjected to the most stress. In this area a pair of subparallel normal faults 500 to 600 feet apart have resulted in a graben structure that can easily be recognized topographically. Displacements along these faults vary between 20 and 50 feet. In addition to these large displacements, mining will be complicated by a localized basement high interfering with No. 1 seam deposition. Figure 3 illustrates the structure across this area at Line 115+00.

The other area that has been locally affected by a basement high is just downdip from the 200 ft. overburden limit on Line 85+00 and Line 87+50. It is not known whether the No. 1 seam has shaled out completely on Line 85+00 at 1500 ft. left of B/L, or whether this drillhole intersected a fault that has separated the No. 1 rider from the No. 1 seam. However, on Line 87+50 at 1500 ft. left of B/L, the total thickness of the No. 1 seam, excluding the No. 1 rider, is only 3.3 feet. This signifies that the minimum area affected by the high is 350 feet long by approximately 200 feet wide. A similar situation exists on Line 115 +00 (see Figure 3 ).

The normal fault that intersects the basement high at Line 85+00 1600 ft. left of B/L dissipates into a slight flexure at Line 92+50: its displacement varies from 0 feet to approximately 25 feet.




|                      |                                                                                                              |
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Fig 3

The large fault that bounds the southern end of the pit has not been fully examined because of topography and adverse hole conditions, however present data indicates that this fault may be a major structure, with a large vertical displacement.

Fig 4

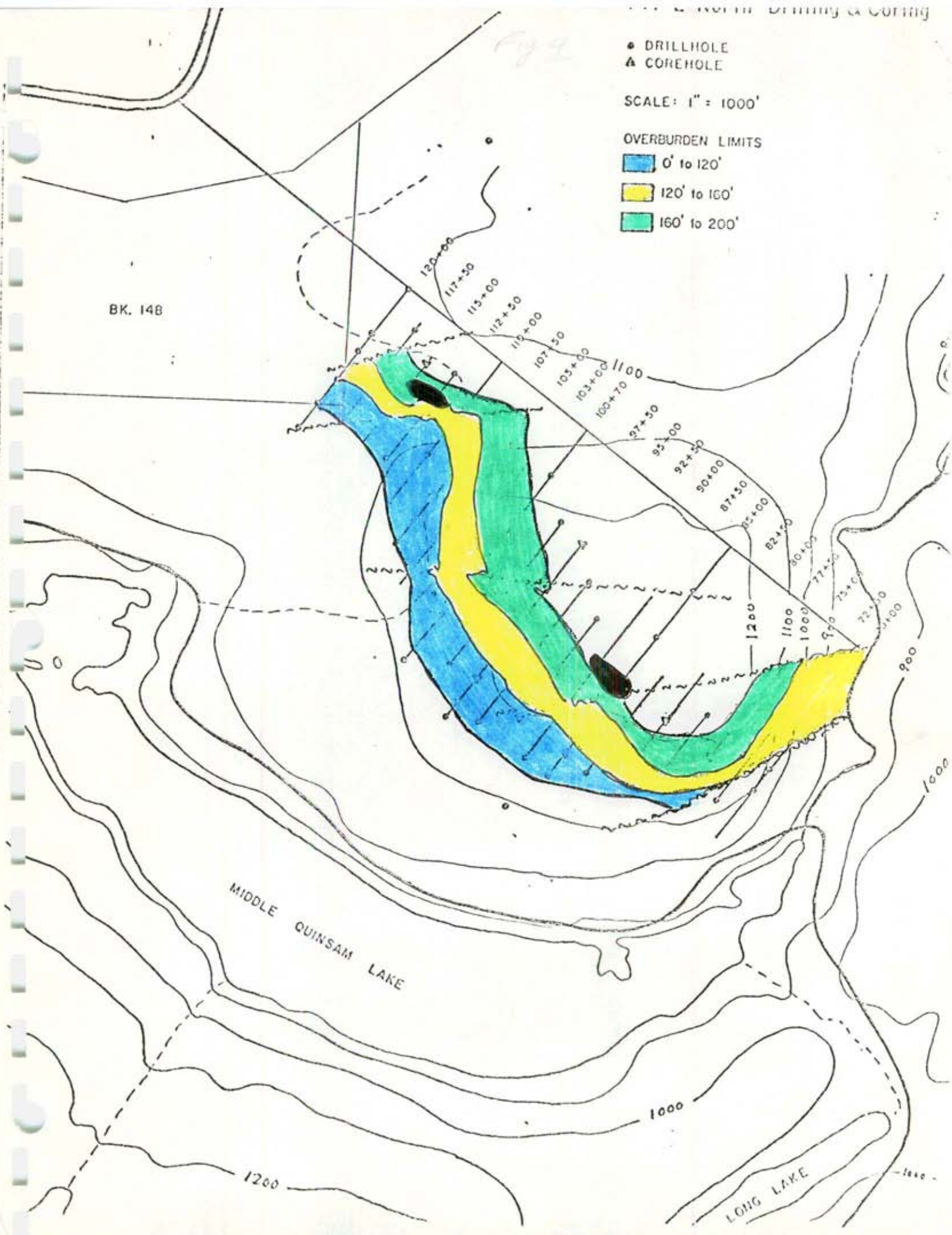
- DRILLHOLE
- ▲ COREHOLE

SCALE: 1" = 1000'

OVERBURDEN LIMITS

- 0' to 120'
- 120' to 160'
- 160' to 200'

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RESERVES

Reserves over the pit area have been broken down into two types:

1. High sulphur coal of the top rider located one to two feet above the No. 1 seam.
2. Low sulphur coal of the No. 1 seam, including the bottom zone.

Reserves were calculated as in place, and were broken down into the three standard reserve categories as used by Lexco Testing Ltd.:

- a) 0-120 feet of overburden
- b) 120-160 feet of overburden
- c) 160-200 feet of overburden

The in-place reserve in each category was calculated by planimetry of the areas of each, averaging the seam thickness over these areas by summing the raw coal thicknesses and dividing by the number of holes in each area. The basement high at Line 115+00 as outlined on Appendix Map 1 has been subtracted from the reserve area. The same is true for the calculation of the No. 1 Seam rider in the area of Line 75+00 where it is missing.

A sample calculation is as follows:

EXAMPLE: 0-120 ft. overburden limits

- average overburden thickness: 85 ft.

- average No. 1 seam thickness: 9.8 ft.

- average No. 1 rider thickness: 1.3 ft.

total area (millions of sq. ft.) : 1.85 M. sq. ft.

No. 1 Seam Volume

1.85 M. sq.ft. x 9.8 ft. ÷ 27

= 0.67 M. cu. yds. x 1.2 tons/cu.yd.

No. 1 seam tonnage : 0.80 M. tons

No. 1 rider volume

1.85 M. sq. ft. x 1.3 ft. ÷ 27

= 0.09 M. cu. yds. x 1.2 tons/cu.yd.

No. 1 rider tonnage : 0.11 M. tons

No. 1 interval total tonnage : 0.91 M. tons

Overburden volume

1.85 M. sq. ft. x 85 ft. ÷ 27

= 5.82 M. cu. yds.

Ratio

Overburden/coal = 5.82 ÷ (.67 + .09)

= 7.66 : 1

The following tabulates volumes and tonnages as calculated over the area of Pit 2 N. and Pit 2 N. Extension ( see Appendix Map 1).

TOTAL IN PLACE RESERVE No. 1 seam and No. 1 rider

= 2.54 MILLION TONS

AVERAGE COMBINED RATIO : 12.73 : 1

TABLE : TABLE OF IN PLACE RESERVES

| 8<br>Reserve<br>Category | Average Raw<br>Coal Thickness<br>(Feet) |               | Reserve Areas<br>(x 10 <sup>6</sup> sq.ft.) |               | Reserve Vol.<br>(x 10 <sup>6</sup> cu.yds) |               | Overburden Reserve<br>Volume<br>(x10 <sup>6</sup> ) Short | Reserve<br>Tonnage<br>(x10 <sup>6</sup> Short<br>tons) |               | Combined<br>Ratio |
|--------------------------|-----------------------------------------|---------------|---------------------------------------------|---------------|--------------------------------------------|---------------|-----------------------------------------------------------|--------------------------------------------------------|---------------|-------------------|
|                          | No. 1<br>Rider                          | No. 1<br>Seam | No. 1<br>Rider                              | No. 1<br>Seam | No. 1<br>Rider                             | No. 1<br>Seam |                                                           | No. 1<br>Rider                                         | No. 1<br>Seam |                   |
| 0-120 ft.                | 1.3                                     | 10.1          | 1.85                                        | 1.85          | 0.09                                       | 0.69          | 5.82                                                      | 0.11                                                   | 0.83          | 7.46:1            |
| 120-160                  | 1.31                                    | 9.1           | 1.55                                        | 1.64          | 0.07                                       | 0.55          | 8.50                                                      | 0.09                                                   | 0.66          | 13.71:1           |
| 160-200                  | 1.31                                    | 8.9           | 1.83                                        | 1.88          | 0.09                                       | 0.62          | 12.53                                                     | 0.11                                                   | 0.74          | 17.65:1           |
| TOTALS                   |                                         |               | 5.23                                        | 5.37          | 0.25                                       | 1.86          | 26.85                                                     | .31                                                    | 2.23          | 12.73:1           |

Pit 2 N. and 2 N. Extension : 0 - 120 ft. overburden limits

| Hole No. | Line   | Location | No. 1 rider (ft.) | No. 1 seam (ft.) |
|----------|--------|----------|-------------------|------------------|
| 78-24    | 82+50  | 2150 Lt. | 1.0               | 7.4              |
| 78-4c    | 85+00  | 2250 Lt. | 1.1               | 8.4              |
| 78-19    | 87+50  | 2500 Lt. | 1.2               | 8.5              |
| 78-6c    | 90+00  | 2250 Lt. | 1.4               | 8.9              |
| 78-3     | 92+50  | 2500 Lt. | .9                | 8.5              |
| 78-15    | 95+00  | 2500 Lt. | 1.1               | 8.7              |
| 78-21c   | 95+00  | 2250 Lt. | 1.4               | 10.7             |
| 78-18    | 97+50  | 2250 Lt. | 1.3               | 10.3             |
| 78-41    | 102+00 | 2000 Lt. | --                | 11.2             |
| 78-44c   | 103+00 | 1750 Lt. | 1.3               | 11.9             |
| 78-43    | 105+00 | 1900 Lt. | --                | 11.2             |
| 78-37    | 105+00 | 1400 Lt. | 1.4               | 11.4             |
| 78-35    | 107+50 | 1750 Lt. | --                | 12.2             |
| 78-50c   | 107+50 | 1250 Lt. | 1.3               | 10.6             |
| 78-48    | 112+50 | 1400 Lt. | --                | 10.0             |
| 78-55c   | 115+00 | 1050 Lt. | 1.7               | 11.3             |
| 78-57    | 117+50 | 1200 Lt. | 1.5               | 10.4             |
| 78-56    | 117+50 | 800 Lt.  | 1.8               | 5.4              |

average thickness No. 1 rider : 1.3 feet

average thickness No. 1 seam : 10.1 feet

Pit 2 N. and 2 N. Extension : 120 - 160 ft. overburden limits

| Hole No. | Line   | Location | No. 1 Rider(ft.) | No.1 seam(ft.) |
|----------|--------|----------|------------------|----------------|
| 78-29    | 72+50  | 800 Lt.  | .9               | 7.6            |
| 78-28    | 72+50  | 1250 Lt. | 1.8              | 7.1            |
| 78-1c    | 80+00  | 2000 Lt. | 1.3              | 8.3            |
| 78-8     | 87+50  | 2000 Lt. | 1.2              | 7.5            |
| 78-7     | 92+50  | 2000 Lt. | 1.2              | 8.9            |
| 78-49c   | 95+00  | 1750 Lt. | 1.3              | 10.0           |
| 78-11    | 97+50  | 1750 Lt. | 1.3              | 11.2           |
| 78-45c   | 103+00 | 1250 Lt. | 1.4              | 10.2           |
| 78-52c   | 107+50 | 725 Lt.  | 1.4              | 10.8           |
| 78-51    | 112+50 | 750 Lt.  | .8               | --             |
| 78-56    | 117+50 | 800 Lt.  | 1.8              | 5.4            |

average thickness No. 1 rider: 1.3

average thickness No. 1 seam : 9.1

Pit 2 N. and 2 N. Extension: 160 - 200 ft. overburden limits

| Hole No. | Line   | Location | No. 1 Rider(ft.) | No. 1 seam(ft.) |
|----------|--------|----------|------------------|-----------------|
| 78-34    | 75+00  | 550 Lt.  | --               | 8.8             |
| 78-31c   | 75+00  | 1050 Lt. | 1.3              | 7.8             |
| 78-30c   | 75+00  | 1500 Lt. | 1.5              | 8.5             |
| 78-22    | 77+50  | 1750 Lt. | 1.2              | 7.2             |
| 78-23    | 82+50  | 1750 Lt. | 1.1              | 6.7             |
| 78-39c   | 85+00  | 1750 Lt. | 1.4              | 6.6             |
| 78-9c    | 90+00  | 1750 Lt. | 1.3              | 8.8             |
| 78-5     | 92+50  | 1500 Lt. | 1.4              | 9.7             |
| 78-13c   | 95+00  | 1250 Lt. | 1.1              | 10.8            |
| 78-12    | 97+50  | 1250 Lt. | 1.3              | 10.6            |
| 78-46c   | 103+00 | 750 Lt.  | 1.3              | 10.1            |
| 78-40    | 105+00 | 500 Lt.  | 1.5              | 10.9            |

average thickness No. 1 rider : 1.3

average thickness No. 1 seam : 8.9

## COAL QUALITY

At the time of writing, analytical results from the recent coring were not available. When analyses are complete, current results will be tabulated and examined in an Addendum to this report.

Existing quality data over the pit area is available from three previous reports:

1. Geology and Coal Resources of the Quinsam Property, Vancouver Island, Phase 1 Report by R. Engler (1976)
2. A Study of Quality, Quinsam Property, Vancouver Island by Ali Eldin (1977)
3. Analysis of Bulk Samples from Quinsam Coal Project  
by Cyclone Engineering Sales Ltd (1978)

The following table illustrates raw coal analyses on an air dried basis for the three holes that were cored in the pit area during the 1976 Phase 1 drilling :

TABLE 1 : PROXIMATE ANALYSES ON RAW COAL : PIT 2 NORTH

| CORE HOLE NO. | LOCATION                 | SEAM THICKNESS            | MOISTURE | ASH   | VOL. MATTER | FIXED CARBON | TOTAL SULPHUR | FSI | BTU/LB. |
|---------------|--------------------------|---------------------------|----------|-------|-------------|--------------|---------------|-----|---------|
| 3             | Line 110+00<br>1000' Lt. | 108.7-110.4<br>#1 rider   | 2.45     | 14.58 | 38.33       | 44.64        | 2.54          | 1.5 | 11,999  |
|               |                          | 113.1-123.3<br>#1 seam    | 2.82     | 9.88  | 37.30       | 50.00        | 0.20          | 1.5 | 12,626  |
| 5             | Line 100+70<br>1000' Lt. | 183.6-184.6<br>#1 rider   | 2.10     | 25.09 | 34.76       | 38.05        | 0.41          | 1.0 | 10,199  |
|               |                          | 187.3-198.0<br>#1 seam    | 2.73     | 11.54 | 36.40       | 49.33        | 0.27          | 1.5 | 12,105  |
| 6             | Line 85+00<br>1000' Lt.  | 254.0-255.6<br>#1 rider   | 2.09     | 20.32 | 38.21       | 39.38        | 2.92          | 2   | 10,903  |
|               |                          | 255.3-264.0<br>#1 seam    | 2.66     | 13.23 | 36.25       | 47.86        | 0.34          | 1.5 | 11,923  |
|               |                          | 264.5-265.4<br>lower seam | 2.43     | 25.39 | 31.91       | 40.27        | 1.76          | 1.5 | 9,826   |
|               | average ( No. 1 Rider )  |                           | 2.21     | 20.00 | 37.10       | 40.69        | 1.96          | 1.5 | 11,034  |
|               | average ( No. 1 Seam )   |                           | 2.74     | 11.55 | 36.65       | 49.06        | .27           | 1.5 | 12,218  |

In October of 1977, a 20 ton bulk coal sample was extracted from sample Pit 1 North on Line 85+00 at 2500 ft. left of B/L. This sample composited the total section of the No. 1 coal zone, including:

- a) the top rider (1.1 ft.)
- b) the mudstone parting (.9 ft.)
- c) the main No. 1 seam (8.0 ft.)
- d) the bottom of the No. 1 seam (1.5 ft.)

Washability results from this sample did not match previous work in the north area. Sulphur values were much higher than expected, and the calorific value was lower. A channel sample of the No. 1 rider revealed sulphur values in excess of 4 %. A subsequent 2 ton bulk sample was then extracted from the same pit and run for washability analysis at Cyclone Laboratories. This bulk sample consisted of individual samples of the four zones, rather than just a composite sample over the total section. A comparison of the washability results for the two sampling procedures is tabulated in Appendix.



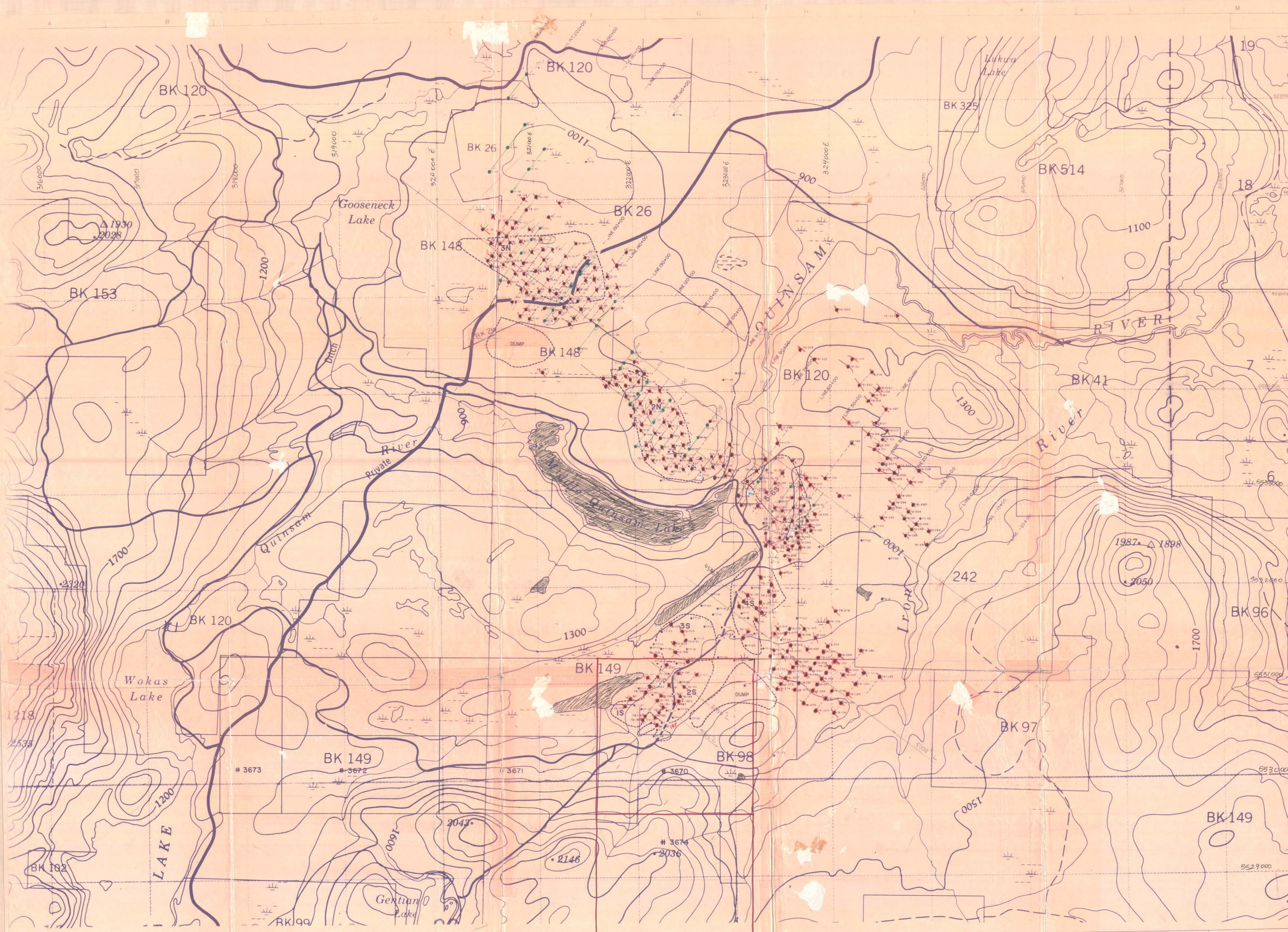
## RECOMMENDATIONS

While the area of Pit 2 North and 2 North Extension has been adequately drilled from both a structural standpoint and a quality one, there are three areas of interest that remain to be interpreted. Either of these areas may yield surface mineable coal:

Area 1. The upthrown block from 450 feet. left of B/L on line 115+00 north east as far as the topographic high at 1500 ft. right of B/L. This topographic high may conceal an old basement uplift that has essentially warped the sediments. 4 drillholes spaced at 500 foot intervals would essentially prove or disprove this theory, while at the same time establishing underground possibilities for the No. 1 seam or possibilities of a No. 3 seam near the surface.

Area 2. Line 75+00 and 77+50 at 500 ft. left of B/L. Additional drilling in the vicinity of the base line in this area would almost certainly intersect the No. 1 seam within the 200 foot highwall limit, although mining this close to the river bank may not be allowed for environmental reasons. Here again there is a possibility of intersecting the No. 3 seam near surface.

Area 3. Line 72+50, 1750 ft. left of B/L.; At least one hole should be placed on the downthron side of the fault that marks the boundary of the proposed pit in order to determine displacement. If the No. 1 seam is intersected near subcrop in this area, pit limits might not be able to encompass the area because of close proximity to the lake.



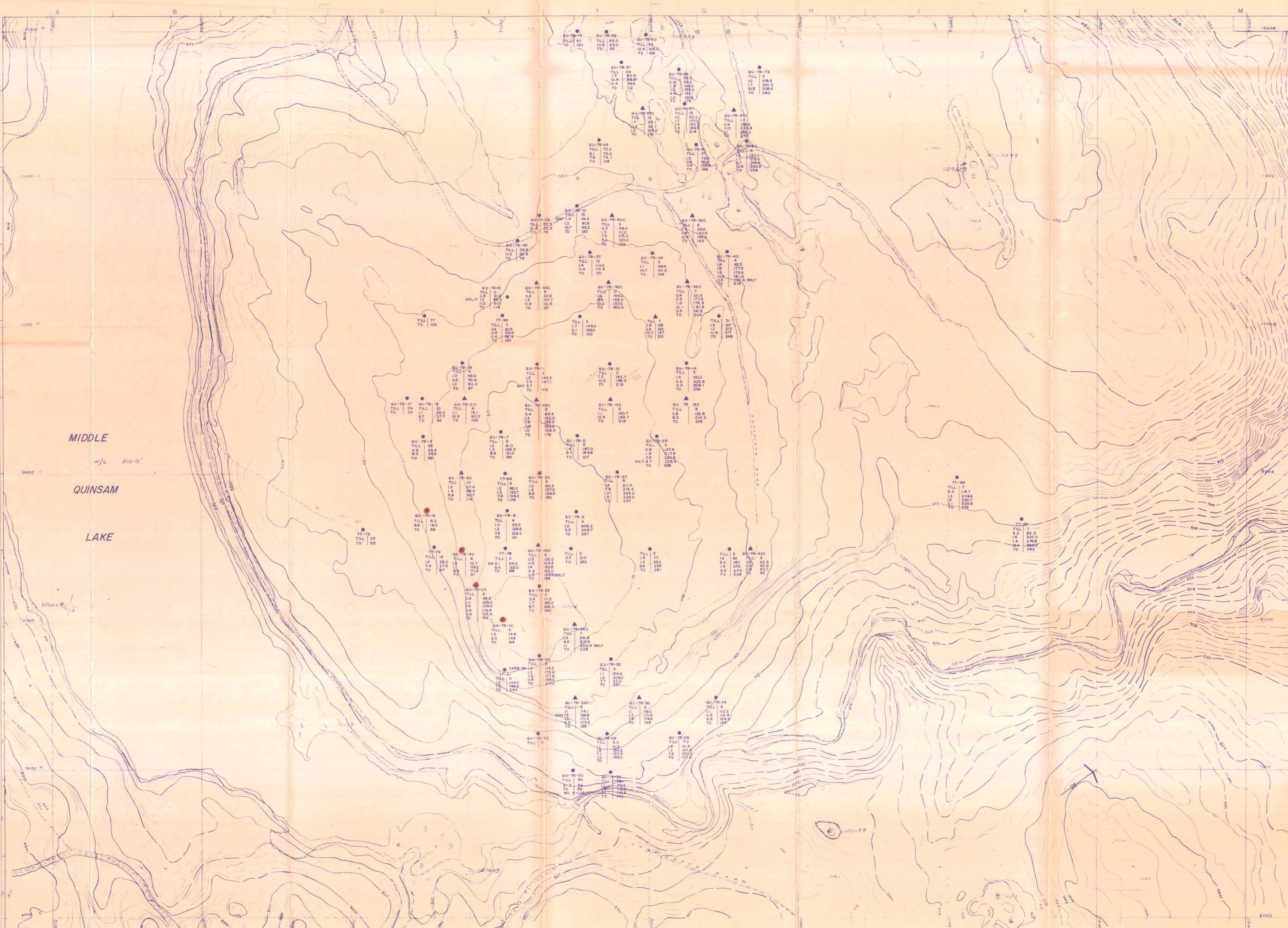
| REFERENCE DRAWINGS                                                                                                                                                                                                        |                                     | ISSUE DATE INIT. |          | REVISIONS |          | ISSUE DATE INIT. |          | REVISIONS |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------|----------|-----------|----------|------------------|----------|-----------|----------|
| 1013/09/13                                                                                                                                                                                                                | MIDDLE QUINSAM AREA - BASE 1"=1000' | 1                | 10/13/78 | 1         | 10/13/78 | 1                | 10/13/78 | 1         | 10/13/78 |
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LUSCAR LTD.  
 QUINSAM COAL COMPANY

|            |          |                      |  |
|------------|----------|----------------------|--|
| SCALE      |          | TITLE                |  |
| 1"=12,000' |          | QUINSAM COAL PROJECT |  |
| BY         | DATE     | 71                   |  |
| S.S.N.     | 07/06/78 | (m)                  |  |
| CHECKED    |          | ISSUE C              |  |
| APPROVED   |          |                      |  |
| ISSUED     |          |                      |  |

|                   |  |       |  |
|-------------------|--|-------|--|
| DRAWING NO        |  | ISSUE |  |
| QS.G. 096, GF. 13 |  | C     |  |

By: Quinsam 71(a)2



MIDDLE

w/L 310.0'

QUINSAM

LAKE

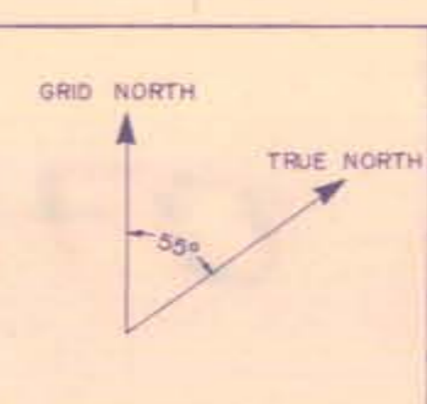
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|-------|------|-------|-----------|
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| ISSUE | DATE | INITL | REVISIONS |
|-------|------|-------|-----------|
|       |      |       |           |
|       |      |       |           |

**LEGEND**

- DRILL HOLE - E-LOGGED
- ▲ CORE HOLE - E-LOGGED



SCALE 1" = 200'

| DRAWN      | BY  | DATE   |
|------------|-----|--------|
| CHECKED    | CMH | 5-5-78 |
| APPROVED   |     |        |
| 1st ISSUED |     |        |

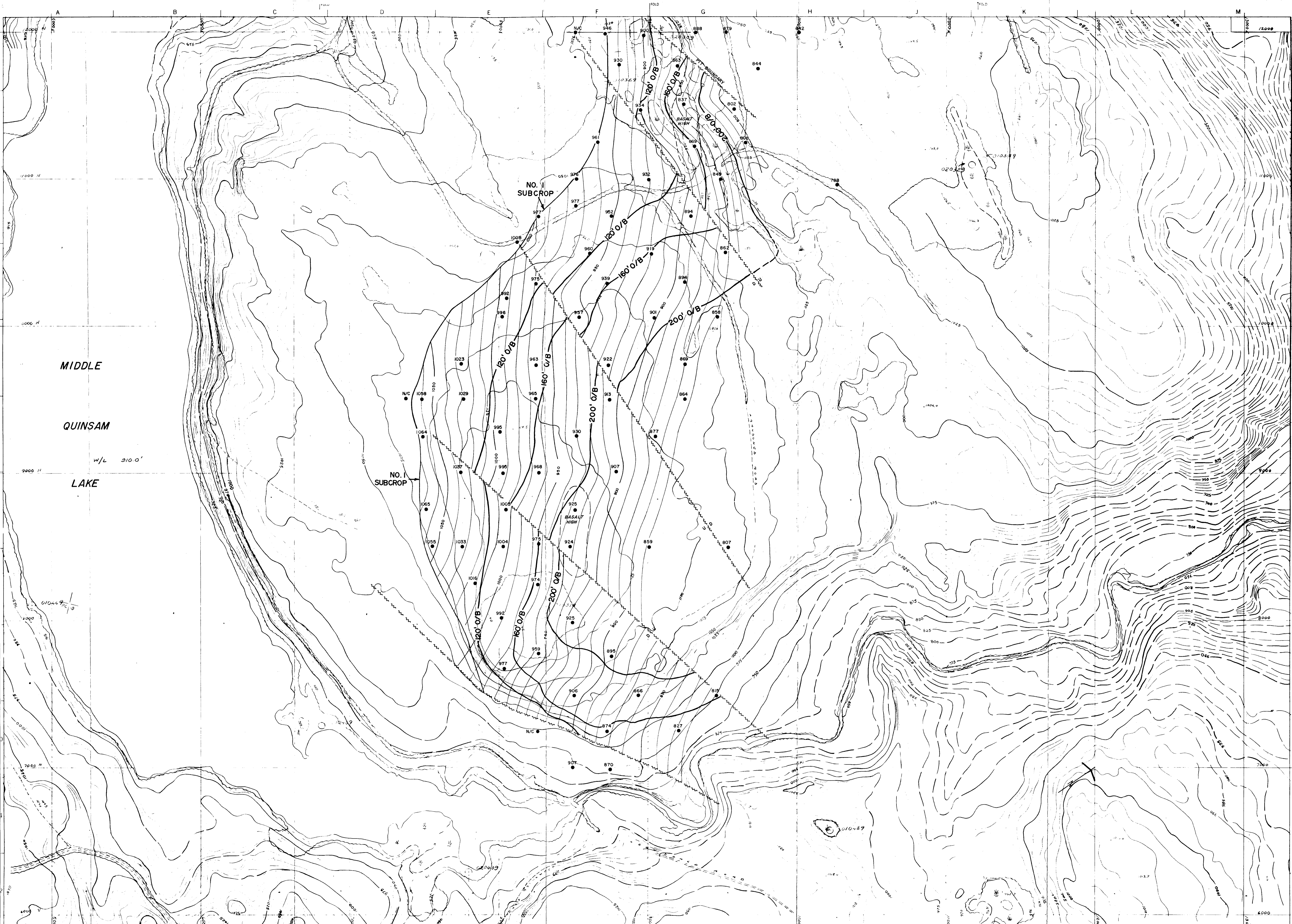
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**QUINSAM PROJECT**  
**DRILL AND CORE INFORMATION**  
**PIT 2N AND 2N EXTENSION**

ex. Quinsam 78 (2)A (see 1)

DRAWING NO. **3**

**071**  
m2

ISSUE



MIDDLE  
QUINSAM  
LAKE  
w/L 310.0'

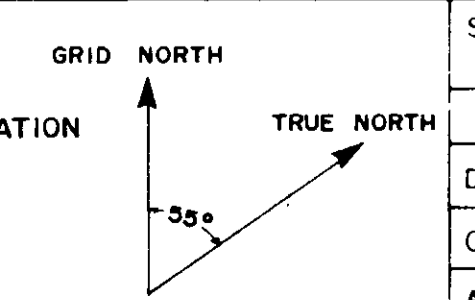
NO. I  
SUBCROP

NO. II  
SUBCROP

BASALT  
HIGH

| REFERENCE DRAWINGS | ISSUE | DATE | INTL | REVISIONS | ISSUE | DATE | INTL | REVISIONS |
|--------------------|-------|------|------|-----------|-------|------|------|-----------|
|                    |       |      |      |           |       |      |      |           |
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|                    |       |      |      |           |       |      |      |           |
|                    |       |      |      |           |       |      |      |           |

LEGEND  
● 827 TOP OF SEAM ELEVATION

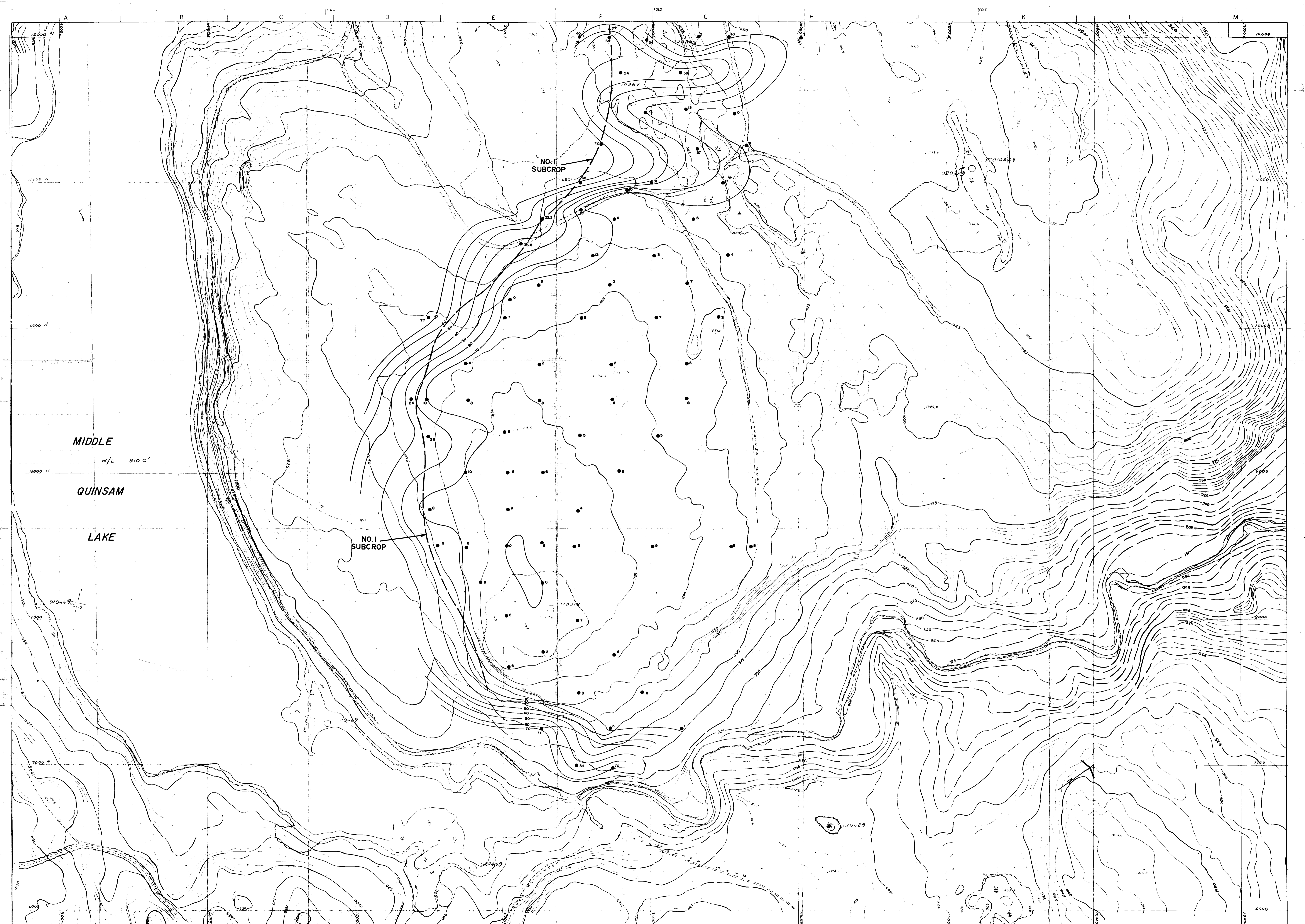


| SCALE 1"=200' |     | DATE   |  |
|---------------|-----|--------|--|
| DRAWN         | BY  |        |  |
| CHECKED       | CMH | 4-5-78 |  |
| APPROVED      |     |        |  |
| 1st ISSUED    |     |        |  |

TITLE  
**QUINSAM PROJECT**  
OVERBURDEN LIMITS AND STRUCTURE  
CONTOURS - TOP OF NO.1 SEAM: PIT 2N  
AND 2N EXTENSION

DRAWING NO. 1  
**071**  
ISSUE

By: Quinsam 7/21/78 (see 1)



MIDDLE  
w/L 310.0'  
QUINSAM  
LAKE

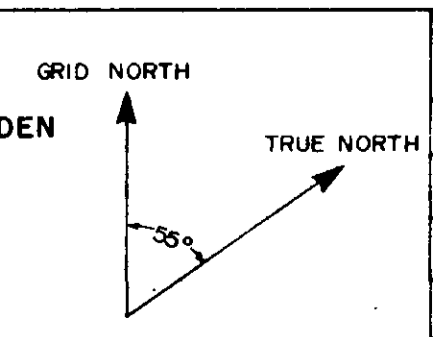
NO. 1  
SUBCROP

NO. 1  
SUBCROP

| REFERENCE DRAWINGS | ISSUE DATE | INITL | REVISIONS | ISSUE DATE | INITL | REVISIONS |
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|                    |            |       |           |            |       |           |
|                    |            |       |           |            |       |           |
|                    |            |       |           |            |       |           |
|                    |            |       |           |            |       |           |

LEGEND

● 8 THICKNESS OF OVERBURDEN

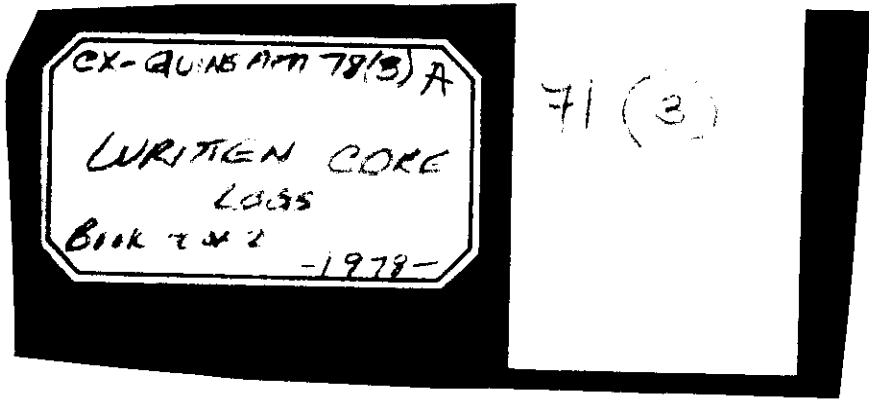


|               |     |        |
|---------------|-----|--------|
| SCALE 1"=200' | BY  | DATE   |
| DRAWN         | CMH | 9-5-78 |
| CHECKED       |     |        |
| APPROVED      |     |        |
| 1st ISSUED    |     |        |

TITLE  
QUINSAM PROJECT  
ISOPACH OF GLACIAL OVERBURDEN THICKNESS  
PIT 2N AND 2N EXTENSION

DRAWING NO. 2  
071  
ISSUE

or Quinsam 2(a) (see 1)



# LUSCAR LTD. corehole log

Line 55+00 250' Lt. of B/L

HOLE NO. QU-78-163C  
PAGE 1 OF 3

| CORE NO. | CORE FOOTAGES |       |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-------|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |       |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO    | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X     |      | X         |      |                                                                                                                                             |            |
| 1        | 132           | 140   | 8.0' |           |      |                                                                                                                                             |            |
|          |               |       |      | .8        |      | Siltstone; medium grey; hard; fractured                                                                                                     |            |
|          | 132.8         | 134.2 |      | 1.4       |      | coal; bright and blocky; massive and hard but bony in places                                                                                | Sample #1  |
|          |               |       |      | .25       |      | Siltstone; medium grey; hard; thin coaly bands throughout                                                                                   |            |
|          |               |       |      | .40       |      | Siltstone; medium brown to black; carbonaceous; fractured                                                                                   |            |
|          |               |       |      | 2.15      |      | Siltstone; med. brown; hard and massive; sandy in places; fractured;                                                                        |            |
|          | 137.0         | 138.6 |      | .40       |      | Coal; bright and blocky; hard and massive; pyritic blebs at top of contact                                                                  | Sample #2  |
|          |               |       |      | .10       |      | Sandstone; medium grey; fine-grained and hard;                                                                                              |            |
|          |               |       |      | 1.10      |      | Coal; bright and blocky; hard and massive; visible pyrite throughout                                                                        |            |
|          |               |       |      | 1.0       |      | Siltstone; as above                                                                                                                         |            |
|          | 139.7         | 141.7 |      | .3        |      | Coal; crushed and milled by coring action                                                                                                   | Sample #3  |
| 2        | 140           | 148   | 8.0  | 1.70      |      | Coal; bright and blocky; massive; abundant pyrite;                                                                                          |            |
| X        | TOTALS        |       |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|          |               |       |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |

# LUSCAR LTD. corehole log

CHECKED AUG 2 5 1978

HOLE NO. QU-78-163C  
PAGE 2 OF 3

| CORE NO. | CORE FOOTAGES |       |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-------|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |       |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO    | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|          |               |       |      |           |      |                                                                                                                                             |            |
|          |               |       |      | .55       |      | Mudstone; med. to dark brown; soft, fractured                                                                                               |            |
|          |               |       |      | .25       |      | Coal; bony; dirty; soft; dull                                                                                                               |            |
|          |               |       |      | .10       |      | Sandstone; med. brownish grey; hard; fine grained;                                                                                          |            |
|          |               |       |      | .5        |      | Coal; soft; crushed; dirty; dull                                                                                                            |            |
|          |               |       |      | .9        |      | Sandstone; as above                                                                                                                         |            |
| 143.95 - | 147.5         |       |      | 3.55      |      | Coal; bright & blocky; hard and massive; light; abundant calcite; some pyrite                                                               | Sample #4  |
|          |               |       |      | .50       |      | Siltstone; as above                                                                                                                         |            |
| 3        | 148           | 152   | 4.0  | 3.5       |      | Siltstone; as above                                                                                                                         |            |
| 4        | 311           | 320   | 9.0  | 9.3       |      | Siltstone; med. grey; hard; massive but fractured; coaly lenses throughout                                                                  |            |
| 5        | 320           | 329   | 9.0  |           |      |                                                                                                                                             |            |
|          |               |       |      | 3.6       |      | Siltstone; as above                                                                                                                         |            |
|          |               |       |      | .4        |      | Coal; bright and blocky; massive; hard                                                                                                      | Sample #5  |
|          |               |       |      | .15       |      | Mudstone; med. brown; carbonaceous                                                                                                          |            |
|          | 323.6         | 325.8 |      | 1.65      |      | Coal; bright and blocky; massive and clean; hard                                                                                            |            |
|          |               |       |      | .90       |      | Mudstone; med. to dark brown; carbonaceous; soft; pliable; coaly lenses throughout                                                          |            |
|          |               |       |      | 2.25      |      | Coal; as above                                                                                                                              |            |
|          | TOTALS        |       |      |           |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |       |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |



# LEXCO TESTING LTD.

CHS - 11 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM DATE: June 26/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-1636

APPROX. LOCATION: 55 + 00 250 LT. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION:     

ELEVATION:     

DRILLER: R. Selk

| FROM | TO  | LOG                  | REMARKS          |
|------|-----|----------------------|------------------|
| 326  | 339 | Coal                 | E-LOG S. Gardner |
| 339  | 343 | Brown & carbon shale | QU-78-163C 128.3 |
| 343  | 358 | Grey shale           | 353 .4           |
|      |     |                      | .7               |
|      |     |                      | .5               |
|      |     |                      | .1               |
|      |     |                      | .7               |
|      |     |                      | 2.8 1.5 #3 seam  |
|      |     |                      | 1.0 9.3 coal     |
|      |     |                      | 1.1 2.0          |
|      |     |                      | .9               |
|      |     |                      | .7 3.3           |
|      |     |                      | 148.3            |
|      |     |                      | 1.7 #2 seam      |
|      |     |                      | .7 shaly 292.3   |
|      |     |                      | 26.3             |
|      |     |                      | .3 shaly         |
|      |     |                      | 1.7 #1 rider     |
|      |     |                      | 1.1 321.3        |
|      |     |                      | 3.9              |

COMMENTS:      .2 #1 seam 6.3'

     5.1 2.4

     .6 shaly

WATER HORIZON:      FT. 358'

# LEXCO TESTING LTD.

COMPLETED AUG 25 1978  
**-coring report**

PROSPECT: QUINSAM LAKE

DATE: JUNE 26/78

LOCATION: 55+00 250 L.T.

HOLE# QU-78-163C

CONTRACTOR: LEXCO TESTING

RIG# 06

| CORE | FOOTAGE |     | TIME |    | MIN. | CUT | REC.  | TUBES | REMARKS |
|------|---------|-----|------|----|------|-----|-------|-------|---------|
|      | FROM    | TO  | FROM | TO |      |     |       |       |         |
| 1    | 132     | 140 |      |    |      | 8'  | 8'    | 1     |         |
| 2    | 140     | 148 |      |    |      | 8'  | 8'    | 1     |         |
| 3    | 148     | 152 |      |    |      | 4'  | 3'5"  | 1     |         |
| 4    | 311     | 320 |      |    |      | 9'  | 9'4"  | 1     |         |
| 5    | 320     | 329 |      |    |      | 9'  | 9'1"  | 1     |         |
| 6    | 329     | 337 |      |    |      | 8'  | 8'3"  | 1     |         |
| 7    | 337     | 345 |      |    |      | 8'  | 8'1"  | 1     |         |
| 8    | 345     | 350 |      |    |      | 5'  | 5'    | 1     |         |
| 9    | 350     | 358 |      |    |      | 8'  | 7'5"  |       |         |
|      |         |     |      |    |      |     |       |       |         |
|      |         |     |      |    |      |     |       |       |         |
|      |         |     |      |    |      |     |       |       |         |
|      |         |     |      |    |      |     |       |       |         |
|      |         |     |      |    |      |     |       |       |         |
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|      |         |     |      |    |      |     |       |       |         |
|      |         |     |      |    |      |     |       |       |         |
|      |         |     |      |    |      | 67' | 66'5" | 8     | 99%     |

SUPERVISOR: Clive Gardner

CHE 000001 80

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: QUINSAM PROJECT DATE: JUNE 24/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-163C

APPROX. LOCATION: 55 250 L.T. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 55 + 05 272' L.T.

ELEVATION: 1056'

DRILLER: R. Creamer - overburden

| FROM | TO   | LOG                  | REMARKS |
|------|------|----------------------|---------|
| 0    | 20   | Clay gravel boulders |         |
| 20   | 30   | Sand gravel          |         |
| 30   | 74   | Fine silty sand      |         |
| 74   | T.D. | Sandstone            |         |
|      |      |                      |         |
|      |      |                      |         |
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|      |      |                      |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: QUINSAM DATE: JUNE 22/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-163C

APPROX. LOCATION: 55 + 00 250 L.T. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 55 + 05 272' L.T.

ELEVATION: 1056'

DRILLER: R. Selk

| FROM | TO  | LOG                  | REMARKS |
|------|-----|----------------------|---------|
| 0    | 70  | Till                 |         |
| 70   | 131 | Sandstone            |         |
| 131  | 132 | Brown shale          |         |
| 132  | 133 | Carbonated shale     |         |
| 133  | 135 | Coal                 |         |
| 135  | 137 | Carbon shale         |         |
| 137  | 148 | Coal                 |         |
| 148  | 161 | Brown shale          |         |
| 161  | 287 | Sandstone            |         |
| 287  | 297 | Brown shale          |         |
| 297  | 298 | Coal                 |         |
| 298  | 299 | Brown shale          |         |
| 299  | 300 | Coal                 |         |
| 300  | 305 | Brown shale          |         |
| 305  | 309 | Sandstone            |         |
| 309  | 326 | Brown & carbon shale |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 45' (311' drilled) FT. 358

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: \_\_\_\_\_ DATE: \_\_\_\_\_

COMPANY: \_\_\_\_\_

HOLE No.: QU-78-164

APPROX. LOCATION: \_\_\_\_\_ SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: \_\_\_\_\_

ELEVATION: \_\_\_\_\_

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG        | REMARKS                       |
|------|-----|------------|-------------------------------|
| 179  | 180 | Coal       | 250' fracture approx.         |
| 180  | 189 | Shale      | 5 gpm                         |
| 189  | 256 | Sandstone  |                               |
| 256  | 257 | Shale      | <u>E-LOG S. GARDNER</u>       |
| 257  | 279 | Sandstone  | <u>QU-78-164</u> <u>167.2</u> |
| 279  | 297 | Shale      | 370'      2.5      .5         |
| 297  | 298 | Shaly Coal | .5      3.6      #3 seam      |
| 298  | 300 | Shale      | 1.6      2.2      8.5' clea   |
| 300  | 325 | Sandstone  | .7      .5      coal          |
| 325  | 327 | Shaly Coal | 2.2                           |
| 327  | 348 | Shale      | .6 shaly                      |
| 348  | 357 | Shaly Coal |                               |
| 357  | 364 | Shale      |                               |
| 364  | 370 | Sandstone  |                               |
|      | 370 | TD         |                               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CH 1001 1978

COAL FIELD: QUINSAM PROJECT DATE JUNE 26/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-164

APPROX. LOCATION: 47+50 150' RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 47+48 86' RT

ELEVATION: 1054'

DRILLER: R. Creamer

| FROM | TO   | LOG        | REMARKS |
|------|------|------------|---------|
| 0    | 28   | Sandstone  |         |
| 28   | 29   | Shale      |         |
| 29   | 62   | Sandstone  |         |
| 62   | 63   | Shaly Coal |         |
| 63   | 65   | Sandstone  |         |
| 65   | 66   | Coal       |         |
| 66   | 67   | Shale      |         |
| 67   | 164  | Sandstone  |         |
| 164  | 167  | Coal       |         |
| 167  | 170  | Shale      |         |
| 170  | 173  | Coal       |         |
| 173  | 174  | Shale      |         |
| 174  | 176  | Coal       |         |
| 176  | 178  | Shale      |         |
| 178  | 178½ | Coal       |         |
| 178½ | 179  | Shale      |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LUSCAR LTD. corehole log

QUICK-LOG-1-1-1978

Line 42+50 750' Lt. of B/L

HOLE NO. QU-78-165C  
PAGE 1 OF 1

| CORE NO. | CORE FOOTAGES |    |      |           |         | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH   |
|----------|---------------|----|------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|          | DRILLED       |    |      | RECOVERED |         |                                                                                                                                             |              |
|          | FROM          | TO | TOT. | SEC.      | TOT.    |                                                                                                                                             |              |
| X        | X             | X  |      | X         |         |                                                                                                                                             |              |
| 1        | 70            | 78 | 8.2  | 3.3       |         | Coal; soft; fractured; light and crushed; wet;                                                                                              |              |
|          |               |    |      | .9        |         | mudstone; dark brown to black;                                                                                                              | Sample No. 1 |
|          |               |    |      | .9        |         | carbonaceous; soft; fractured                                                                                                               |              |
|          |               |    |      | 3.0       |         | Coal; as above                                                                                                                              |              |
|          |               |    |      |           |         | mudstone; medium brown; soft; fractured.                                                                                                    |              |
| 2        | 78            | 81 | 2.5  | 2.5       |         | siltstone; med. brown; fairly hard; some thin coaly laminae throughout fractured.                                                           |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
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|          |               |    |      |           |         |                                                                                                                                             |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
|          |               |    |      |           |         |                                                                                                                                             |              |
| X        | TOTALS        |    | X    | +         | X 100 = | % REC.                                                                                                                                      | SEAM         |
|          |               |    |      | +         | X 100 = | % TOT. REC.                                                                                                                                 | SEAM(S)      |

# LEXCO TESTING LTD.

CHECKED AUG 25 1978  
-coring report

PROSPECT: QUINSAM LAKE  
 LOCATION: 42 + 50 750 L.T.  
 CONTRACTOR: LEXCO TESTING

DATE: JUNE 27/78  
 HOLE\*\* QU-78-12.5C  
 RIG\*\* 06

| CORE | FOOTAGE |    | TIME |    | MIN. | CUT | REC. | TUBES | REMARKS |
|------|---------|----|------|----|------|-----|------|-------|---------|
|      | FROM    | TO | FROM | TO |      |     |      |       |         |
| 1    | 70      | 78 |      |    |      | 8   | 8'3" | 1     |         |
| 2    | 78      | 81 |      |    |      | 3   | 2'6" | 1     |         |
|      |         |    |      |    |      |     |      |       |         |
|      |         |    |      |    |      |     |      |       |         |
|      |         |    |      |    |      |     |      |       |         |
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|      |         |    |      |    |      |     |      |       |         |
|      |         |    |      |    |      |     |      |       |         |
|      |         |    |      |    |      | 11  | 10.9 | 2     | 99%     |

SUPERVISOR: Clive Gardner



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 25 1978

COAL FIELD: QUINSAM PROJECT DATE: JUNE 27/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-165(C)

APPROX. LOCATION: 42+50 750' LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 42+40 701' LT

ELEVATION: 1052'

DRILLER: R. Selk

| FROM | TO  | LOG                                             | REMARKS                        |
|------|-----|-------------------------------------------------|--------------------------------|
| 0    | 70  | Sandstone, water @ 20' E-LOG                    | S. Gardner                     |
| 70   | 75  | Coal QU-78-165C                                 | 7.05                           |
| 75   | 80  | Carbonated Shale 205                            | 3.3<br>4.2 #3 seam             |
| 80   | 133 | Sandstone, water @ 104'                         | .9<br>90.4                     |
| 133  | 135 | Brown Shale                                     |                                |
| 135  | 160 | Sandstone                                       | 1.0 #1 rider 166               |
| 160  | 164 | Brown Shale                                     | 4.2                            |
| 164  | 165 | Coal                                            | 1.0 Shaly #1 seam<br>Coal 171. |
| 165  | 180 | Brown & Carbonated Shale (Coal Stringer @ 174') |                                |
| 180  | 200 | Sandstone                                       | 2.6                            |
| 200  | 205 | Basalt                                          | 1.4 Shaly<br>Coal              |
|      |     |                                                 |                                |
|      |     |                                                 |                                |
|      |     |                                                 |                                |
|      |     |                                                 |                                |
|      |     |                                                 |                                |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 20' FT. 205'

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 29 1978

COAL FIELD: QUINSAM PROJECT DATE: \_\_\_\_\_

COMPANY: \_\_\_\_\_

HOLE No.: QU-78-166

APPROX. LOCATION: \_\_\_\_\_ SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: \_\_\_\_\_

ELEVATION: \_\_\_\_\_

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG        | REMARKS |
|------|-----|------------|---------|
| 289  | 291 | Shale      |         |
| 291  | 339 | Sandstone  |         |
| 339  | 341 | Coal       |         |
| 341  | 347 | Shale      |         |
| 347  | 360 | Shaly coal |         |
| 360  | 370 | Shale      |         |
|      |     |            |         |
|      |     |            |         |
|      |     |            |         |
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|      |     |            |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

Page 1 of 2  
 CHECKED SEP 22 1978  
 CHECKED SEP 7 1978

COAL FIELD: QUINSAM PROJECT DATE: JUNE 26/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-166

APPROX. LOCATION: 35+00 250 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 35+08 283' Rt.

ELEVATION: 1080'

DRILLER: R. Creamer

| FROM  | TO    | LOG        | REMARKS                |
|-------|-------|------------|------------------------|
| 0     | 46    | Sandstone  |                        |
| 46    | 47    | Shale      | E-Log                  |
| 47    | 123   | Sandstone  | R. J. Ronaghan         |
| 123   | 126   | Shale      | <u>QU-78-166</u> 281.5 |
| 126   | 148   | Sandstone  | 2.3                    |
| 148   | 149   | Shale      | 1.5 } #3 seam          |
| 149   | 151   | Sandstone  | 54.6 } 3.3 } 5.6       |
| 151   | 151.5 | Shale      | 4.8 } 1.0 } 0.4 dirty  |
| 151.5 | 167   | Sandstone  | 1.1                    |
| 167   | 168   | Coal       | 0.2 dirty              |
| 168   | 171   | Shale      |                        |
| 171   | 173   | Sandstone  |                        |
| 173   | 175   | Shale      |                        |
| 175   | 276   | Sandstone  |                        |
| 276   | 285   | Coal       |                        |
| 285   | 289   | Shaly coal |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 25 1978

COAL FIELD: QUINSAM PROJECT DATE: JUNE 27/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-167

APPROX. LOCATION: 60+00 1950' LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 59+69 1964' LT

ELEVATION: 979'

DRILLER: R. Creamer

| FROM | TO | LOG       | REMARKS  |
|------|----|-----------|----------|
| 0    | 4  | Clay      |          |
| 4    | 6  | Coal      |          |
| 6    | 10 | Shale     |          |
| 10   | 37 | Sandstone | No E-Log |
| 37   | 44 | Granite   |          |
|      |    |           |          |
|      |    |           |          |
|      |    |           |          |
|      |    |           |          |
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|      |    |           |          |
|      |    |           |          |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

0-11-11-11 11:073

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JUNE 28/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-168

APPROX. LOCATION: 40.00 17.50 LT. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 39+96 1989' LT.

ELEVATION: 1024'

DRILLER: H. Vincett

| FROM | TO  | LOG                    | REMARKS               |
|------|-----|------------------------|-----------------------|
| 0    | 5   | Till                   |                       |
| 5    | 95  | Grey sandstone         | E-LOG                 |
| 95   | 106 | Coal                   | S. GARDNER            |
| 106  | 218 | Grey sandstone         | <u>QU-78-168 93.6</u> |
| 218  | 224 | Carb shale             | 240 5.1               |
| 224  | 237 | Grey sandstone         | .6 3.7 11.3           |
| 237  | 240 | Green Sandstone Basalt | .4 1.6 #3 seam        |
|      |     |                        | 1.2 .9                |
|      |     |                        | 112.9                 |
|      |     |                        | 1.2 #2 seam 220.0     |
|      |     |                        | 4.6                   |
|      |     |                        | .5 shaly #1 ride      |
|      |     |                        | 225.8                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 18 1978

COAL FIELD: QUINSAM PROJECT DATE: June 28/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-170

APPROX. LOCATION: 62+50 1800' LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 62+60 1766' LT

ELEVATION: 966'

DRILLER: R. Creamer

| FROM | TO | LOG         | REMARKS |
|------|----|-------------|---------|
| 0    | 35 | Clay Gravel |         |
| 35   | 37 | Sandstone   |         |
| 37   | 44 | Coal        |         |
| 44   | 45 | Shale       |         |
| 45   | 46 | Coal        |         |
| 46   | 47 | Shale       |         |
| 47   | 49 | Coal        |         |
| 49   | 60 | Shale       |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
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|      |    |             |         |
|      |    |             |         |
|      |    |             |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

ONE 101 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM DATE: June 29/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-171

APPROX. LOCATION: 35+00 3500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 35 + 41 3511 LT

ELEVATION: 1091'

DRILLER: R. Selk

| FROM | TO  | LOG                  | REMARKS   |
|------|-----|----------------------|-----------|
| 0    | 7   | Till E-LOG           |           |
| 7    | 55  | Sandstone S. GARDNER |           |
| 55   | 57  | Coal QU-78-171       | 209.0     |
| 57   | 85  | Grey shale 240       | 1.0       |
| 85   | 206 | Sandstone            | .3        |
| 206  | 212 | Carbonated shale     | 1.4 shaly |
| 212  | 221 | Coal                 | .3        |
| 221  | 227 | Grey shale           | 1.8       |
| 227  | 240 | Sandstone            | 1.5       |
|      |     |                      | .7 shaly  |
|      |     |                      | 1.6       |
|      |     |                      | .5        |
|      |     |                      | .4 shaly  |
|      |     |                      | .6        |
|      |     |                      | .7 shaly  |
|      |     |                      | 1.6       |
|      |     |                      | 1.1       |
|      |     |                      | 1.0 carby |
|      |     |                      |           |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. 240'



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JULY 5/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-172

APPROX. LOCATION: 42.50 22 50 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 42 + 54 2082' Lt.

ELEVATION: 1041

DRILLER: H. Vincett

| FROM | TO  | LOG                           | REMARKS          |
|------|-----|-------------------------------|------------------|
| 0    | 18  | Till E-LOG                    |                  |
| 18   | 89  | Grey sandstone R. J. RONAGHAN |                  |
| 89   | 94  | Coal QU-78-172                | 85.2             |
|      |     | 192                           |                  |
| 94   | 105 | Shale                         | 11.3 1.8         |
| 105  | 135 | Grey sandstone                | 0.3 0.5          |
| 135  | 140 | Shale Coal Partings           | 27.7 0.4         |
| 140  | 193 | Sandstone                     | 0.4 shaly<br>0.4 |
| 193  | 200 | Basalt                        | 15.7 0.5         |
|      |     |                               | 1.0 0.8          |
|      |     |                               |                  |
|      |     |                               |                  |
|      |     |                               |                  |
|      |     |                               |                  |
|      |     |                               |                  |
|      |     |                               |                  |
|      |     |                               |                  |
|      |     |                               |                  |
|      |     |                               |                  |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 1 8 1978

COAL FIELD: QUINSAM PROJECT DATE: JULY 5/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-173

APPROX. LOCATION: 40+00 3500 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 39 + 96 3526' LT.

ELEVATION: 1060'

DRILLER: R. Creamer

| FROM | TO  | LOG       | REMARKS         |
|------|-----|-----------|-----------------|
| 0    | 115 | Sandstone |                 |
| 115  | 116 | Coal      | E-LOG           |
| 116  | 162 | Sandstone | R. J. RONAGHAN  |
| 162  | 165 | Coal      | QU-78-173 165.2 |
| 165  | 166 | Sandstone | 205 2.8         |
| 166  | 174 | Coal      | 0.4             |
| 174  | 178 | Shale     | 2.0             |
| 178  | 179 | Sandstone | 0.9             |
| 179  | 180 | Coal      | .7 shaly        |
| 180  | 187 | Sandstone | 2.2             |
| 187  | 188 | Shale     | 0.8             |
| 188  | 205 | Sandstone | 0.5 shaly       |
|      | 205 | T.D.      | 0.8             |
|      |     |           | 1.9             |
|      |     |           |                 |
|      |     |           |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED AUG 2 5 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM DATE: JULY 5/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-174

APPROX. LOCATION: 40+00 4750 LT. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 39+82 4735' LT.

ELEVATION: 1098'

DRILLER: R. Selk

| FROM | TO  | LOG         | REMARKS                       |
|------|-----|-------------|-------------------------------|
| 0    | 3   | Till        |                               |
| 3    | 25  | Sandstone   | E-LOG                         |
| 25   | 31  | Brown shale | S. GARDNER                    |
| 31   | 132 | Sandstone   | <u>QU-78-174</u> <u>136.7</u> |
| 132  | 140 | Coal        | 170' 1.3                      |
| 140  | 155 | Grey shale  | .9 .7 shaly } 3.              |
| 155  | 170 | Basalt      | 2.0 2.1 }<br>1.9 shaly        |
|      |     |             |                               |
|      |     |             |                               |
|      |     |             |                               |
|      |     |             |                               |
|      |     |             |                               |
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|      |     |             |                               |
|      |     |             |                               |
|      |     |             |                               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. 170'

# LEXCO TESTING LTD.

CHECKED AUG 25 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM PROJECT DATE: JULY 6/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-175

APPROX. LOCATION: 45+00 1000' LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 45+00 977' LT

ELEVATION: 1062'

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG        | REMARKS               |
|------|-----|------------|-----------------------|
| 0    | 49  | Sandstone  | 166-168 Coal          |
| 49   | 54  | Coal       | 168-175 Shale         |
| 54   | 55  | Shale      | 175-185 Basalt        |
| 55   | 56  | Coal       | 185 T.D.              |
| 56   | 57  | Shale      |                       |
| 57   | 58  | Coal       | E-LOG S. GARDNER      |
| 58   | 59  | Sandstone  | QU-78-175 52.4        |
| 59   | 62  | Coal       | 190 3.9               |
| 62   | 69  | Shale      | 1.1                   |
| 69   | 70  | Shaly Coal | .3 1.7 7.9' clean #3  |
| 70   | 149 | Sandstone  | .8 .8 shaly clean #3  |
| 149  | 156 | Shale      | 2.3                   |
| 156  | 159 | Coal       | 95.7                  |
| 159  | 161 | Shale      | 1.2 1.1 shly #2 159.0 |
| 161  | 162 | Coal       | .4 " #1 rider         |
| 162  | 166 | Shale      | 1.6 1.7 " ?           |
|      |     |            | 3.0 .6 "              |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

CHECKED AUG 18 1978

# LEXCO TESTING LTD. DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JULY 6/78

COMPANY: LEXCO

HOLE No.: QU-78-176

APPROX. LOCATION: 35.00 2500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 35 + 22 2468' Lt.

ELEVATION: 1088'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                       |
|------|-----|----------------|-------------------------------|
| 0    | 4   | Till           |                               |
| 4    | 267 | Grey sandstone | E-LOG                         |
| 267  | 276 | Coal           | S. GARDNER                    |
| 276  | 283 | Shale          | <u>QU-78-176</u> <u>265.8</u> |
| 283  | 300 | Grey sandstone | 300 3.1                       |
|      |     |                | .9 shaly                      |
|      |     |                | 1.8 #3 sea                    |
|      |     |                | .2 2.6 10.0' elec             |
|      |     |                | .7 shaly                      |
|      |     |                | 1.1                           |
|      |     |                | 1.4                           |
|      |     |                | 2.7                           |
|      |     |                | 1.1                           |
|      |     |                |                               |
|      |     |                |                               |
|      |     |                |                               |
|      |     |                |                               |
|      |     |                |                               |
|      |     |                |                               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED AUG 2 5 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM PROJECT DATE: JULY 7/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-177

APPROX. LOCATION: 45+00 600' LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 44+99 598' LT

ELEVATION: 1048

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG         | REMARKS                      |
|------|-----|-------------|------------------------------|
| 0    | 13  | Clay Gravel | 195-196 Coal                 |
| 13   | 64  | Sandstone   | 196-198 Shaly Coal           |
| 64   | 67  | Shale       | 198-212 Shale                |
| 67   | 71  | Coal        | 212-216 Sandstone            |
| 71   | 72  | Coal        | 216-225 Basalt<br>225 TD     |
| 72   | 74  | Coal        |                              |
| 74   | 75  | Shale       | E-LOG R. J. RONAGHAN         |
| 75   | 78  | Coal        | <u>QU-78-177</u> <u>71.8</u> |
| 78   | 84  | Shale       | 225' 3.4                     |
| 84   | 166 | Sandstone   | 0.8 2.0                      |
| 166  | 170 | Shale       | 0.4 0.7                      |
| 170  | 173 | Coal        | 0.9 1.8                      |
| 173  | 182 | Shale       | 93.4 1.2                     |
| 182  | 184 | Coal        |                              |
| 184  | 187 | Shale       |                              |
| 187  | 195 | Sandstone   |                              |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 18 1978

COAL FIELD: QUINSAM DATE: JULY 6/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-178

APPROX. LOCATION: 40+00 4250 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 39+75 4280' LT

ELEVATION: 1091'

DRILLER: R. Selk

| FROM | TO  | LOG                               | REMARKS                      |
|------|-----|-----------------------------------|------------------------------|
| 0    | 42  | Sandstone                         |                              |
| 42   | 45  | Brown shale                       |                              |
| 45   | 51  | Coal (stringers of carbon. shale) |                              |
| 51   | 54  | Brown shale                       |                              |
| 54   | 73  | Sandstone                         | E-LOG                        |
| 73   | 74  | Carbon. shale                     | S. GARDNER                   |
| 74   | 76  | Sandstone                         | <u>QU-78-178</u> <u>39.3</u> |
| 76   | 82  | Brown carbonated shale            | 214' .9                      |
| 82   | 160 | Sandstone                         | 1.6                          |
| 160  | 162 | Brown shale                       | 1.2                          |
| 162  | 162 | Brown shale                       | 1.0                          |
| 162  | 179 | Sandstone                         | 1.7 #3 seam                  |
| 179  | 185 | Coal                              | 1.1 8.4' clean               |
| 179  | 185 | Coal                              | 1.4                          |
| 185  | 202 | Carbonated shale & coal stringers | 1.8                          |
| 202  | 208 | Grey shale                        | 1.0                          |
| 208  | 208 | Grey shale                        | 1.2 shaly                    |
| 208  | 215 | Basalt                            | 1.0                          |
|      |     |                                   | 1.0                          |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 124' FT. 215'





# LUSCAR LTD. corehole log

CHECKED SEP 7 1978

Line 50+00 9750' Lt. of B/L

HOLE NO. QU-78-179

PAGE 1 OF 2

| CORE NO. | CORE FOOTAGES |       |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-------|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |       |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO    | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X     |      | X         |      |                                                                                                                                             |            |
| 1        | 14            | 22    | 7.9  |           |      |                                                                                                                                             |            |
|          |               |       |      | 5.8       |      | COAL: bright and blocky; clean; fairly hard; abundant calcite, minor visible pyrite                                                         |            |
|          |               |       |      | .2        |      | MUDSTONE: fairly soft; dark grey to black; minor coaly lenses; wet, friable                                                                 |            |
|          | 14.0          | 27.95 |      | .30       |      | COAL: as above                                                                                                                              |            |
|          |               |       |      | .15       |      | COAL: dirty; bright and dull banded, soft                                                                                                   |            |
|          |               |       |      | 1.50      |      | COAL: as above; minor visible pyrite                                                                                                        | Sample #1  |
| 2        | 22            | 30    | 8.6  | 1.25      |      | COAL: as above                                                                                                                              |            |
|          |               |       |      | .10       |      | COAL: bony; dark brown to black; massive; hard; abundant visible pyrite; minor calcite                                                      |            |
|          |               |       |      | 1.45      |      | COAL: as above                                                                                                                              |            |
|          |               |       |      | .10       |      | MUDSTONE: grey-brown; soft, massive                                                                                                         |            |
|          | 27.95         | 29.65 |      | 3.05      |      | COAL: as above                                                                                                                              |            |
|          |               |       |      | .30       |      | COAL: bony; bright and dull banded; massive; hard                                                                                           |            |
|          |               |       |      | .15       |      | MUDSTONE: grey to grey brown; soft numerous slickensides; minor coaly lenses                                                                | Sample #2  |
|          |               |       |      | .25       |      | COAL: bright; blocky; massive; hard clean                                                                                                   |            |
|          |               |       |      | .20       |      | MUDSTONE: carbonaceous; dark brown to black; numerous coal laminae; soft                                                                    |            |
| X        | TOTALS        |       |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|          |               |       |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED 7 7 1978

COAL FIELD: QUINSAM DATE: JULY 7/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-180

APPROX. LOCATION: 50+00 9500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 50+06 - 9448 Lt

ELEVATION: 1146

DRILLER: R. Selk

| FROM | TO | LOG                      | REMARKS         |
|------|----|--------------------------|-----------------|
| 0    | 13 | Till                     | E-LOG           |
| 13   | 26 | Grey shale               | R. J. RONAGHAN  |
| 26   | 32 | Brown shale              | QU-78-180 32.2  |
| 32   | 46 | Coal                     | 81 2.0          |
| 46   | 60 | Brown & carbonated shale | 0.2 4.7         |
| 60   | 68 | Grey shale               | 0.6 4.0 #1 seam |
| 68   | 83 | Basalt                   | 2.6 dirty       |
|      |    |                          |                 |
|      |    |                          |                 |
|      |    |                          |                 |
|      |    |                          |                 |
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|      |    |                          |                 |
|      |    |                          |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. 83'





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JULY 7/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-183

APPROX. LOCATION: 40.00 9500 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 39+58 - 9467

ELEVATION: 1155

DRILLER: H. Vincett

| FROM | TO | LOG        | REMARKS |
|------|----|------------|---------|
| 0    | 24 | Till       |         |
| 24   | 80 | Grey shale |         |
|      |    |            |         |
|      |    |            |         |
|      |    |            |         |
|      |    |            |         |
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|      |    |            |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_







# LEXCO TESTING LTD.

CHECKED AUG 18 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM PROJECT DATE: July 8/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-186

APPROX. LOCATION: 45+00 2400' LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 44+97 2400' LT

ELEVATION: 1067'

DRILLER: R. Creamer

| FROM | TO  | LOG        | REMARKS              |
|------|-----|------------|----------------------|
| 0    | 32  | Sandstone  | 165-185 Basalt       |
| 32   | 33  | Shaly Coal |                      |
| 33   | 34  | Shale      | E-LOG S. Gardner     |
| 34   | 39  | Sandstone  | QU-78-186 74.9       |
| 39   | 40  | Shale      | 180' 2.1             |
| 40   | 50  | Sandstone  | .4 1.7 .7 shaly      |
| 50   | 53  | Shale      | .4 .4 shaly } 3.7 #2 |
| 53   | 75  | Sandstone  | .5 shaly } 2.6 clea  |
| 75   | 77  | Coal       | .5 shaly             |
| 77   | 83  | Shaly Coal | 1.6                  |
| 83   | 87  | Shale      |                      |
| 87   | 107 | Sandstone  |                      |
| 107  | 110 | Shale      |                      |
| 110  | 127 | Shaly Coal |                      |
| 127  | 128 | Coal       |                      |
| 128  | 165 | Sandstone  |                      |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 2 2 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 8/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-187

APPROX. LOCATION: 37.50 8750 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 37+05 - 8694 Lt.

ELEVATION: 1178

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                                                              |
|------|-----|----------------|----------------------------------------------------------------------|
| 0    | 5   | Till           | E-Log<br>R. J. Ronaghan                                              |
| 5    | 35  | Grey sandstone | <u>QU 78 187</u> <u>29.8</u>                                         |
| 35   | 38  | Coal           | 117' <u>0.2 2.1</u> } #2 seam                                        |
| 38   | 67  | Shale          | <u>34.7 1.3</u> }                                                    |
| 67   | 80  | Coal           | <u>0.3 2.0</u> }                                                     |
| 80   | 120 | Sandstone      | <u>0.4 4.6</u> } #1 seam<br><u>0.9 1.0</u> } shaly<br><u>0.7</u> } " |
|      |     |                |                                                                      |
|      |     |                |                                                                      |
|      |     |                |                                                                      |
|      |     |                |                                                                      |
|      |     |                |                                                                      |
|      |     |                |                                                                      |
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|      |     |                |                                                                      |
|      |     |                |                                                                      |
|      |     |                |                                                                      |
|      |     |                |                                                                      |
|      |     |                |                                                                      |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 18 1978

COAL FIELD: QUINSAM PROJECT DATE: JULY 8/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-190

APPROX. LOCATION: 45+00 1500' LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 45+00 1460' LT

ELEVATION: 1070'

DRILLER: R. Creamer

| FROM | TO  | LOG                    | REMARKS                        |
|------|-----|------------------------|--------------------------------|
| 0    | 33  | Clay, Gravel, Boulders |                                |
| 33   | 70  | Sandstone              |                                |
| 72   | 74  | Shale                  | <u>E-LOG</u> <u>S. Gardner</u> |
| 74   | 103 | Sandstone              |                                |
| 103  | 132 | Corby Shale            | <u>QU-78-190</u> <u>112.1</u>  |
|      |     | 165                    | .9                             |
| 132  | 134 | Coal                   | 5.0                            |
| 134  | 136 | Shaly Coal             | 1.2 shaly                      |
| 136  | 148 | Shale with some coal   | 4.8                            |
| 148  | 154 | Sandstone              | 1.0 shaly                      |
| 154  | 164 | Basalt                 | 6.3                            |
|      | 164 | T.D.                   | .9 shaly                       |
|      |     |                        | 1.8                            |
|      |     |                        |                                |
|      |     |                        |                                |
|      |     |                        |                                |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 7 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 8/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-191

APPROX. LOCATION: 42.50 8250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 42+61 - 8290 Lt.

ELEVATION: 1165

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS               |
|------|-----|----------------|-----------------------|
| 0    | 4   | Till           | E-LOG                 |
| 4    | 92  | Grey sandstone | R. J. Ronaghan        |
| 92   | 95  | Coal           | <u>QU-78-191</u> 56.2 |
| 95   | 120 | Shale          | 178 2.2 } #2 seam     |
|      |     |                | 0.3 } #2 seam         |
| 120  | 137 | Coal           | 1.6 } #2 seam         |
| 137  | 180 | Sandstone      | 58.9                  |
|      |     |                | 6.6 } #1 seam         |
|      |     |                | 0.3 } #1 seam         |
|      |     |                | 4.1 } #1 seam         |
|      |     |                | 2.8 dirty } #1 seam   |
|      |     |                | 3.0 shaley } #1 seam  |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LUSCAR LTD. corehole log

HOLE NO. QU-78-192 C  
PAGE 2 OF 3

| CORE NO. | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION.                          | TRUE DEPTH |
|----------|---------------|----|------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |    |      | RECOVERED |      |                                                                                                                                                                        |            |
|          | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                                                        |            |
|          |               |    |      |           |      |                                                                                                                                                                        |            |
|          |               |    |      | 0.05      |      | MUDROCK: dark brown black, soft, massive                                                                                                                               |            |
|          |               |    |      | 0.10      |      | COAL; as above                                                                                                                                                         |            |
| 93.2     | 6             | 89 | 97   | 8.2       | 4.2  | COAL: bright blocky, flaggy, occ. band pyrite rich, some amber, light, early broken                                                                                    |            |
|          |               |    |      | 0.9       |      | MUDROCK: dark brown black, crushed milled, some powdery, slicks, coaly                                                                                                 |            |
| 93.2     |               |    |      | 1.0       |      | COAL: bright blocky, highly broken, fractured at 30° some pyrite, light, easily broken                                                                                 |            |
| Sample#3 |               |    |      | 1.0       |      | MUDROCK: dark brown black top end broken crushed, milled, numerous coal laminae, slicks, more massive than upper unit                                                  |            |
|          |               |    |      | 0.2       |      | COAL: bright blocky, massive                                                                                                                                           |            |
| 98       | 7             | 97 | 105  | 7.8       | 1.0  | COAL: bright blocky, flaggy, light, easily broken                                                                                                                      |            |
|          |               |    |      | 6.3       |      | MUDROCK: Siltstone, dark brown, flaggy, platy, top contact crushed, milled bottom contact has some sandstone clasts, numerous bright coal stringers, calcite on cleats |            |
|          | TOTALS        |    |      |           |      | ÷ X 100 = % REC. SEAM                                                                                                                                                  |            |
|          |               |    |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                                                          |            |

# LUSCAR LTD. corehole log

CHECKED SEP 7 1978

QUINSAM  
37+50 - 8500 Lt.

HOLE NO. QU-78-192C

PAGE 1 OF 3

| CORE NO.               | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|------------------------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|                        | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |            |
|                        | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X                      | X             | X  |      | X         |      |                                                                                                                                             |            |
| 1                      | 49            | 57 | 7.2  | 3.35      |      | COAL: bright blocky, #2 seam, hard, massive, some visible pyrite, jointing at 45° to core angle                                             |            |
| Sample#1<br>49.0-43.35 |               |    |      |           |      |                                                                                                                                             |            |
|                        |               |    |      | 3.7       |      | SILTSTONE: dark brown to brown, med. hard, mass, top end numerous coaly laminae, some pyrite blotches, fissile                              |            |
| 2                      | 57            | 65 | 7.5  |           |      | Stored                                                                                                                                      |            |
| 3                      | 65            | 73 | 8.5  |           |      | Stored                                                                                                                                      |            |
| 4                      | 72            | 81 | 8.0  |           |      | Stored                                                                                                                                      |            |
| 5                      | 81            | 89 | 8.1  | 3.5       |      | SILTSTONE: as above                                                                                                                         |            |
|                        |               |    |      | 2.2       |      | SANDSTONE: dark green, massive hard, occ. light brown blotch                                                                                |            |
|                        |               |    |      | 0.45      |      | SANDSTONE and COAL: inter-banded, coal contorted, poor contact milled                                                                       |            |
| 87.25                  |               |    |      | 1.75      |      | COAL: bright blocky, #1 seam, light easily broken, visible pyrite                                                                           |            |
|                        |               |    |      | 0.5       |      | SILTSTONE: dark brown, massive, med. hard, contacts milled (excluded from sample) 100% ash                                                  |            |
| Sample                 |               |    |      | 0.4       |      | COAL: as above                                                                                                                              |            |
| X                      | TOTALS        |    |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|                        |               |    |      |           |      | ÷ X 100 = % TOT.REC. SEAM(S)                                                                                                                |            |

# LEXCO TESTING LTD.

CHECKED SEP 7 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM LAKE DATE: JULY 9/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-192C

APPROX. LOCATION: 37+50 8500 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 37+04 - 8538 Lt.

ELEVATION: 1180'

DRILLER: R. Selk

| FROM | TO  | LOG                                  | REMARKS                   |
|------|-----|--------------------------------------|---------------------------|
| 0    | 10  | Till                                 | E-Log                     |
| 10   | 50  | Sandstone                            | R. J. Ronaghan            |
| 50   | 56  | Carbonated shale & stringers of coal | QU-78-192C 49.5           |
| 56   | 86  | Brown shale                          | 119' 33.8 3.3 - #2sear    |
| 86   | 99  | Coal (shale stringer @ 94')          | 1.6 0.4                   |
| 99   | 104 | Brown & carbonated shale             | 0.3 <sup>0.4</sup>        |
| 104  | 120 | Cemented sandstone                   | 0.6 <sup>4.3</sup>        |
|      |     |                                      | 0.5 <sup>0.4</sup> #1sear |
|      |     |                                      | 1.1                       |
|      |     |                                      |                           |
|      |     |                                      |                           |
|      |     |                                      |                           |
|      |     |                                      |                           |
|      |     |                                      |                           |
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|      |     |                                      |                           |
|      |     |                                      |                           |
|      |     |                                      |                           |
|      |     |                                      |                           |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. 120'

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 7 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 8/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-193

APPROX. LOCATION: 42.50 9000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 42+44 - 8934 Lt.

ELEVATION: 1196

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS               |
|------|-----|-----------|-----------------------|
| 0    | 3   | Till      | E-LOG                 |
| 3    | 21  | Sandstone | R. J. Ronaghan        |
| 21   | 24  | Coal      | <u>QU-78-193</u> 20.0 |
| 24   | 80  | Shale     | 118 3.6 #2 seam       |
| 80   | 97  | Coal      | 56.0 6.6              |
| 97   | 120 | Sandstone | 0.3 3.6               |
|      |     |           | 1.4 1.6 #1 seam       |
|      |     |           | 0.7 0.8               |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |
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|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 7 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 8/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-194

APPROX. LOCATION: 47.50 9000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 47+63 - 8962 Lt

ELEVATION: 1160

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                      |
|------|-----|-----------|------------------------------|
| 0    | 8   | Till      |                              |
| 8    | 20  | Sandstone | E-LOG                        |
| 20   | 68  | Shale     | R. J. Ronaghan               |
| 68   | 83  | Coal      | <u>QU-78-194</u> <u>65.6</u> |
| 83   | 100 | Sandstone | 6.4                          |
|      |     |           | 0.3                          |
|      |     |           | 3.8                          |
|      |     |           | 0.9                          |
|      |     |           | 4.0 #1 seam                  |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
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|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

CHECKED SEP 7 1978

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JULY 10/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-196

APPROX. LOCATION: 47.50 8250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 47+42 - 8293 Lt

ELEVATION: 1138

DRILLER: H. Vincett

| FROM | TO  | LOG                  | REMARKS                 |
|------|-----|----------------------|-------------------------|
| 0    | 32  | Sandstone E-Log      |                         |
| 32   | 38  | Shale R. J. Ronaghan |                         |
| 38   | 41  | Coal QU-78-196       | 37.3                    |
| 41   | 109 | Shale 158            | 1.1 dirty               |
| 109  | 127 | Coal                 | 2.4 } #2 seam           |
| 127  | 160 | Shale                | 0.3 }<br>1.5 }          |
|      |     |                      | 67.6                    |
|      |     |                      | 6.9 }<br>0.3 }<br>3.6 } |
|      |     |                      | 0.7 dirty #1 seam       |
|      |     |                      | 3.7 }<br>3.7 dirty }    |
|      |     |                      |                         |
|      |     |                      |                         |
|      |     |                      |                         |
|      |     |                      |                         |
|      |     |                      |                         |
|      |     |                      |                         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 25 1978

COAL FIELD: QUINSAM PROJECT DATE: JULY 10/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-197

APPROX. LOCATION: 40+00 2100 LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 40+04 2098' LT.

ELEVATION: 1016'

DRILLER: R. Creamer

| FROM | TO  | LOG                         | REMARKS          |
|------|-----|-----------------------------|------------------|
| 0    | 40  | Sand, gravel, clay boulders |                  |
| 40   | 87  | Sandstone                   |                  |
| 87   | 102 | Coal<br>E-LOG               |                  |
| 102  | 108 | Shale<br>S. GARDNER         |                  |
| 108  | 125 | Sandstone<br>QU-78-197      | 89.5             |
|      | 125 | T.D.<br>125                 | 5.3              |
|      |     |                             | .9 3.8 } 11.0'   |
|      |     |                             | .4 1.9 } #3 seam |
|      |     |                             | 1.2 .8 }         |
|      |     |                             |                  |
|      |     |                             |                  |
|      |     |                             |                  |
|      |     |                             |                  |
|      |     |                             |                  |
|      |     |                             |                  |
|      |     |                             |                  |
|      |     |                             |                  |
|      |     |                             |                  |

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LUSCAR LTD. corehole log

CHECKED SEP 7 1978

HOLE NO. QU-78-198C  
PAGE 2 OF 3

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
| 107.6    |               |     |      | 0.4       |      | COAL: bright, blocky, massive to broken, #1 seam                                                                                            |            |
|          | 13            | 108 | 116  | 7.6       | 5.25 | COAL: bright blocky, soft, easily broken visible pyrite                                                                                     |            |
|          |               |     |      | 0.15      |      | MUDROCK: dark brown, soft, mushy, wet                                                                                                       |            |
|          |               |     |      | 1.85      |      | COAL: as above                                                                                                                              |            |
| 117.5    |               |     |      |           |      |                                                                                                                                             |            |
|          | 14            | 116 | 124  | 7.9       | 1.7  | COAL: as above                                                                                                                              |            |
|          |               |     |      | 1.85      |      | COAL: bright and dull banded, highly crushed, visible pyrite slicks                                                                         |            |
| Sample#3 |               |     |      | 0.15      |      | MUDROCK: dark brown, soft, crushed, minor coaly laminae                                                                                     |            |
| 124.0    |               |     |      | 5.15      |      | COAL: bright & dull banded slicks, abundant pyrite crushed, flaggy, dirty                                                                   |            |
|          | 15            | 124 | 132  | 7.8       | 4.7  | SILTSTONE: grey brown, med hard, massive minor carby bands                                                                                  |            |
|          |               |     |      | 0.55      |      | COAL: bright blocky, highly broken to crushed                                                                                               |            |
|          |               |     |      | 1.15      |      | MUDROCK: carbonaceous, dark brown, soft, broken to crushed, numerous coaly laminae                                                          |            |
|          | TOTALS        |     |      |           |      | ÷ X 100 = % REC. SEAM                                                                                                                       |            |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |

# LUSCAR LTD. corehole log

42+50 - 8750 Lt.  
Quinsam

HOLE NO. QU-78-198C  
PAGE 1 OF 3

| CORE NO.                  | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|---------------------------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|                           | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|                           | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X                         | X             | X   |      | X         |      |                                                                                                                                             |            |
|                           |               |     |      |           |      | CORES 1-3 stored                                                                                                                            |            |
| 4                         | 43            | 50  | 8.2  | 8.2       |      | SANDSTONE: dark green, massive hard, med. grained                                                                                           |            |
| 5                         | 50            | 54  | 4.6  | 4.3       |      | SANDSTONE: as above                                                                                                                         |            |
|                           |               |     |      | 0.2       |      | COAL: bright, blocky, massive, hard                                                                                                         |            |
| 54.0<br>Sample #1<br>56.3 | 6             | 54  | 62   | 64        | 2.3  | COAL: bright blocky, med. hard, massive to broken, abundant pyrite #2 seam                                                                  |            |
|                           |               |     |      | 0.65      |      | MUDROCK: dark brown, broken minor coal laminae, some slicks                                                                                 |            |
|                           |               |     |      | 0.15      |      | COAL: bright, blocky, crushed                                                                                                               |            |
|                           |               |     |      | 3.3       |      | SILTSTONE: grey brown, massive, locally broken, medium hard                                                                                 |            |
|                           |               |     |      |           |      | Cores 7-10 stored.                                                                                                                          |            |
| 11                        | 93            | 100 | 7.8  | 7.8       |      | SILTSTONE: dark green brown, massive, med. hard.                                                                                            |            |
| 12                        | 100           | 108 | 7.8  | 6.7       |      | SILTSTONE: grey brown, massive, med. hard, lower end coal stringer at 30° to bedding                                                        |            |
|                           |               |     |      | 0.7       |      | COAL & MUDROCK: mixed 50% coal, mudrock soft, dark brown                                                                                    |            |
| X                         | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|                           |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 22 1978

COAL FIELD: QUINSAM LAKE DATE: JULY 10/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-198C

APPROX. LOCATION: 42+50 8750 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 42+64 8744 Lt.

ELEVATION: 1191

DRILLER: R. Selk

| FROM | TO  | LOG                            | REMARKS                            |
|------|-----|--------------------------------|------------------------------------|
| 0    | 14  | Till                           |                                    |
| 14   | 53  | Sandstone                      | (water @ 22')                      |
| 53   | 57  | Coal                           |                                    |
| 57   | 60  | Brown shale                    | E-LOG                              |
| 60   | 105 | Grey shale                     | R. J. Ronaghan                     |
| 105  | 124 | Coal                           | <u>QU-78-198C</u> 54.3             |
| 124  | 130 | Brown shale                    | 148 2.8 #2 sear                    |
| 130  | 135 | Carbonated shale               | 51.2                               |
| 135  | 148 | Siltstone & cemented sandstone | 9.5 } #1 sear<br>7.2 } dirty (very |
|      |     |                                |                                    |
|      |     |                                |                                    |
|      |     |                                |                                    |
|      |     |                                |                                    |
|      |     |                                |                                    |
|      |     |                                |                                    |
|      |     |                                |                                    |
|      |     |                                |                                    |
|      |     |                                |                                    |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 22' FT. 148



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: QUINSAM PROJECT DATE: July 11/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-200

APPROX. LOCATION: 45+00 SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 45+09 8' LT

ELEVATION: 1054'

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG       | REMARKS                        |
|------|-----|-----------|--------------------------------|
| 0    | 4   | Gravel    | 168-177 Shale                  |
| 4    | 38  | Sandstone | 177-185 Sandstone              |
| 38   | 39  | Shale     | 185 T.D.                       |
| 39   | 41  | Sandstone |                                |
| 41   | 43  | Coal      | <u>E-LOG</u> <u>S. Gardner</u> |
| 43   | 46  | Sandstone | <u>QU-78-200</u> <u>159.7</u>  |
| 46   | 47  | Shale     | 185 0.9                        |
| 47   | 48  | Sandstone | 0.4                            |
| 48   | 49  | Shale     | 3.0                            |
| 49   | 153 | Sandstone | 0.6                            |
| 153  | 157 | Shale     | 2.5                            |
| 157  | 163 | Coal      | 0.5                            |
| 163  | 164 | Shale     | 1.0                            |
| 164  | 165 | Coal      | 0.3                            |
| 165  | 167 | Sandstone | 2.0                            |
| 167  | 168 | Coal      |                                |

#3 seam

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_









# LUSCAR LTD. corehole log

CHECKED SEP 22 1978

47+50 - 8750 Lt.  
Quinsam

HOLE NO. QU-78-202C  
PAGE 1 OF 3

| CORE NO.  | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|-----------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|           | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |            |
|           | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|           |               |    |      |           |      |                                                                                                                                             |            |
| 1         | 18            | 26 | 8.0  | 0.25      |      | SILTSTONE: dark brown, flaggy, soft, minor coaly laminae                                                                                    |            |
|           |               |    |      | 0.15      |      | COAL: bright blocky flaggy medium hard, some visible pyrite                                                                                 |            |
|           |               |    |      | 0.5       |      | MUDROCK: carbonaceous, broken dark brown, coaly laminae                                                                                     |            |
| 18.9      |               |    |      | 2.4       |      | COAL: bright blocky, massive med. hard, abundant visible pyrite, light, easy to break                                                       |            |
| Sample #1 |               |    |      | 0.1       |      | BONE COAL: bright and dull, banded, med. hard                                                                                               |            |
| 22.9      |               |    |      | 1.5       |      | COAL: as above                                                                                                                              |            |
|           |               |    |      | 1.9       |      | MUDROCK: dark brown, soft wet contact with coal carbonaceous                                                                                |            |
|           |               |    |      | 1.2       |      | SILTSTONE: brown, med. soft, flaggy to platy                                                                                                |            |
|           |               |    |      |           |      | Core 2-3-4 stored                                                                                                                           |            |
|           | TOTALS        |    |      |           |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|           |               |    |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 7 1978

COAL FIELD: QUINSAM DATE: JULY 11/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-202C

APPROX. LOCATION: 47+50 8750 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 47+26 - 8770 Lt

ELEVATION: 1173

DRILLER: R. Selk

| FROM | TO  | LOG                                | REMARKS                                 |
|------|-----|------------------------------------|-----------------------------------------|
| 0    | 18  | Sandstone E-Log                    |                                         |
| 18   | 19  | Brown shale S. Gardner             |                                         |
| 19   | 23  | Coal QU-78-202C                    | 20.0                                    |
| 23   | 26  | Carbonated shale 140               | 3.6 #2 seam                             |
| 26   | 100 | Grey shale                         | 77.2 } #1 seam                          |
| 100  | 116 | Coal                               | 12.0 }<br>.4 }<br>2.0 }<br>100.8 }<br>} |
| 116  | 122 | Brown shale (coal stringer @ 118') |                                         |
| 122  | 123 | Coal                               |                                         |
| 123  | 126 | Brown shale                        |                                         |
| 126  | 129 | Carbonated shale                   |                                         |
| 129  | 134 | Brown shale                        |                                         |
| 134  | 140 | Siltstone & cemented sandstone     |                                         |
|      |     |                                    |                                         |
|      |     |                                    |                                         |
|      |     |                                    |                                         |
|      |     |                                    |                                         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED AUG 18 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM PROJECT DATE: JULY 11/78

COMPANY: KEN'S DRILLING #2

HOLE No.: QU-78-203

APPROX. LOCATION: 50+00 1250' LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 50+12 1349' LT

ELEVATION: 1054'

DRILLER: \_\_\_\_\_

| FROM | TO   | LOG                  | REMARKS                               |
|------|------|----------------------|---------------------------------------|
| 0    | 4    | Sand boulders        |                                       |
| 4    | 62   | Sandstone            | <u>E-LOG</u><br><u>R. J. Ronaghan</u> |
| 62   | 63   | Shale                | <u>QU-78-203</u><br><u>135.5</u>      |
| 63   | 63.5 | Shaly coal           | <u>164</u><br><u>1.1</u>              |
| 63.5 | 83   | Sandstone            | <u>1.1</u>                            |
| 83   | 84   | Shale                | <u>5.9</u>                            |
| 84   | 113  | Sandstone            |                                       |
| 113  | 126  | Shale                |                                       |
| 126  | 127  | Coal                 |                                       |
| 127  | 133  | Shale with some coal |                                       |
| 133  | 135  | Coal                 |                                       |
| 135  | 136  | Shale                |                                       |
| 136  | 142  | Coal                 |                                       |
| 142  | 160  | Sandstone            |                                       |
| 160  | 165  | Basalt               |                                       |
|      | 165  | TD                   |                                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 7 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 12/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-204

APPROX. LOCATION: 50.00 7000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 49+93 - 7017 Lt.

ELEVATION: 1147

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS               |
|------|-----|----------------|-----------------------|
| 0    | 2   | Till           | E-LOG                 |
| 2    | 88  | Grey Sandstone | R. J. RONAGHAN        |
| 88   | 92  | Coal           | <u>QU-78-204</u> 79.2 |
| 92   | 144 | Shale          | 177 1.6 }<br>0.2      |
| 144  | 154 | Coal           | 0.7 } #2 seam<br>0.4  |
| 154  | 175 | Shale          | 1.4 }<br>64.0         |
| 175  | 180 | Sandstone      |                       |
|      |     |                | 6.1 } #1 seam<br>1.8  |
|      |     |                | 1.2 }                 |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 7 1973

COAL FIELD: CAMPBELL RIVER DATE: JULY 12/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-206

APPROX. LOCATION: 5250 7750 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 52+30 7743 Lt.

ELEVATION: 1123'

DRILLER: H. Vincett

| FROM | TO  | LOG                    | REMARKS             |
|------|-----|------------------------|---------------------|
| 0    | 18  | Sandstone E-LOG        |                     |
| 18   | 22  | Coal R. J. RONAGHAN    |                     |
| 22   | 89  | Shale <u>QU-78-206</u> | <u>17.0</u>         |
| 89   | 99  | Coal 119'              | 0.3 2.3 } #2 seam   |
| 99   | 120 | Shale                  | 0.4 } #1 seam       |
|      |     |                        | 69.4                |
|      |     |                        | 0.4 1.9 } #1 seam   |
|      |     |                        | 5.3 } #1 seam       |
|      |     |                        | 0.9 shaly } #1 seam |
|      |     |                        |                     |
|      |     |                        |                     |
|      |     |                        |                     |
|      |     |                        |                     |
|      |     |                        |                     |
|      |     |                        |                     |
|      |     |                        |                     |
|      |     |                        |                     |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED SEP 13 1978

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JULY 13/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-207

APPROX. LOCATION: 5500 6500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 54+61 6583 Lt.

ELEVATION: 1103'

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                      |
|------|-----|-----------|------------------------------|
| 0    | 37  | Sandstone | E-Log                        |
| 37   | 41  | Coal      | R. J. Ronaghan               |
| 41   | 105 | Shale     | <u>QU-78-207</u> <u>38.3</u> |
| 105  | 116 | Coal      | 1.1                          |
| 116  | 140 | Shale     | 0.6 } #2 seam                |
|      |     |           | 0.7 } #2 seam                |
|      |     |           | 0.3 } #2 seam                |
|      |     |           | 1.5 } #2 seam                |
|      |     |           | 63.7                         |
|      |     |           | 1.3 } #1 seam                |
|      |     |           | 0.6 } #1 seam                |
|      |     |           | 3.4 } #1 seam                |
|      |     |           | 0.3 } #1 seam                |
|      |     |           | 3.9 } #1 seam                |
|      |     |           | 1.3 } #1 seam                |
|      |     |           | 1.6 } #1 seam                |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
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|      |     |           |                              |
|      |     |           |                              |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LUSCAR LTD. corehole log

CHECKED 22 1973

42+50 - 7250 Lt.  
Quinsam

HOLE NO. QU-78-208C  
PAGE 1 OF 2

| CORE NO.     | CORE FOOTAGES |              |      |              |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH   |
|--------------|---------------|--------------|------|--------------|------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|              | DRILLED       |              |      | RECOVERED    |      |                                                                                                                                             |              |
|              | FROM          | TO           | TOT. | SEC.         | TOT. |                                                                                                                                             |              |
| <del>X</del> | <del>X</del>  | <del>X</del> |      | <del>X</del> |      |                                                                                                                                             |              |
| 1            | 181           | 189          | 7.2  | 4.9          |      | SILTSTONE: light green grey, massive, med. hard, becoming coaly and broken towards contact                                                  |              |
|              |               |              |      | 2.3          |      | COAL: bright blocky, #1 seam broken to crushed, minor visible pyrite, upper contact has minor bony laminae                                  |              |
| 2            | 189           | 197          | 7.2  | 2.5          |      | COAL: as above crushed milled                                                                                                               |              |
|              |               |              |      | 0.1          |      | BONE COAL: dull brown, med. hard, evidence of milling                                                                                       |              |
|              |               |              |      | 1.25         |      | COAL: as above                                                                                                                              |              |
|              |               |              |      | 0.10         |      | BONY COAL: as above                                                                                                                         |              |
|              |               |              |      | 0.8          |      | COAL: milled, crushed, some slicks, crushed contact minor bony layers                                                                       |              |
|              |               |              |      | 1.9          |      | SILTSTONE (mudrock): crushed milled recemented shear, calcite on sticks, mylonite                                                           |              |
|              |               |              |      | 0.5          |      | COAL: crushed milled dirty locally powdery                                                                                                  |              |
| 3            | 197           | 205          | 5.7  | 0.85         |      | POORLY CEMENTED: shear zone, soft calcite stringer throughout, slicks throughout, angular to sub angular fragments                          |              |
| <del>X</del> | TOTALS        |              |      | <del>X</del> |      | ÷ X 100 = % REC. SEAM                                                                                                                       | <del>X</del> |
|              |               |              |      |              |      | ÷ X 100 = % TOT.REC. SEAM(S)                                                                                                                |              |

185.9

192.75

# LEXCO TESTING LTD.

CHECKED SEP 2 1978  
**-coring report**

PROSPECT: QUINSAM LAKE

DATE: JULY 12/78

LOCATION: 42+50 7250 Lt.

HOLE\*\* U-78 - 208C

CONTRACTOR: LEXCO TESTING

RIG\*\* 06

| CORE  | FOOTAGE |     | TIME |    | MIN. | CUT | REC.   | TUBES | REMARKS |
|-------|---------|-----|------|----|------|-----|--------|-------|---------|
|       | FROM    | TO  | FROM | TO |      |     |        |       |         |
| 1     | 181     | 189 |      |    |      | 8   | 7' 2"  | 1     |         |
| 2     | 189     | 197 |      |    |      | 8   | 7' 3"  | 1     |         |
| 3     | 197     | 205 |      |    |      | 8   | 5' 9"  | 1     |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
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|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
|       |         |     |      |    |      |     |        |       |         |
| TOTAL |         |     |      |    |      | 24' | 20' 2" | 3     | 84%     |

SUPERVISOR: Clive Gardner

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 22 1978

COAL FIELD: QUINSAM DATE: JULY 12/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-208C

APPROX. LOCATION: 42+50 7250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 42+67 - 7289 Lt.

ELEVATION: 1161

DRILLER: R. Selk

| FROM | TO  | LOG                 | REMARKS            |
|------|-----|---------------------|--------------------|
| 0    | 12  | Till                | E-LOG              |
| 12   | 132 | Sandstone           | QU-78-208C         |
| 132  | 135 | Coal                | 133.0<br>217 1.8 # |
| 135  | 138 | Brown shale         | 52.5<br>8.4 #2     |
| 138  | 186 | Grey shale          |                    |
| 186  | 195 | Coal                |                    |
| 195  | 197 | Brown shale         |                    |
| 197  | 199 | Coal                |                    |
| 199  | 203 | Grey shale          |                    |
| 203  | 204 | Carbonated shale    |                    |
| 204  | 220 | Fractured sandstone |                    |
|      |     |                     |                    |
|      |     |                     |                    |
|      |     |                     |                    |
|      |     |                     |                    |
|      |     |                     |                    |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. 220'

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CORRECTED AUG 7 1978

Page 2 of 2

COAL FIELD: QUINSAM REPORT DATE: JULY 12, 1978

COMPANY: KEN'S DRILLING

HOLE No.: QU-78-209

APPROX. LOCATION: 40+00 1350' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 29+65 1376' Lt.

ELEVATION: 1053

DRILLER: R. Creamer

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 236  | 240 | Shale          |         |
| 240  | 242 | Sandstone      |         |
| 242  | 246 | Shale and coal |         |
| 246  | 247 | Shale          |         |
| 247  | 250 | Shale & coal   |         |
| 250  | 255 | Shale          |         |
| 255  | 257 | Shale and coal |         |
| 257  | 260 | Shale          |         |
| 260  | 262 | Shale and coal |         |
| 262  | 265 | Coal           |         |
| 265  | 270 | Shale          |         |
| 270  | 285 | Basalt         |         |
| 285  |     | T.D.           |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: QUINSAM REPORT DATE: JULY 12/78  
 COMPANY: KEN'S DRILLING  
 HOLE No.: QU-78-209  
 APPROX. LOCATION: 40+00 1350' Lt. SEC.      TWP.      RGE.      W.       
 SURVEYED LOCATION: 39+65 1376' Lt.  
 ELEVATION: 1053  
 DRILLER: R. Creamer

| FROM | TO  | LOG            | REMARKS         |
|------|-----|----------------|-----------------|
| 0    | 34  | Sandstone      | E-LOG           |
| 34   | 35  | Coal           | QU-78-209 128.1 |
| 35   | 43  | Sandstone      | 88.7 1.4        |
| 43   | 45  | Shale          | 6.9 2.1 shaly   |
| 45   | 127 | Sandstone      | 2.4 1.8 shaly   |
| 127  | 129 | Coal           | 12.0 4.1        |
| 129  | 134 | Shale          | 0.7 1.5 } #:    |
| 134  | 185 | Sandstone      | 9.0 1.3 } #:    |
| 185  | 200 | Shale          | 3.5 1           |
| 200  | 210 | Sandstone      |                 |
| 210  | 220 | Shale and coal |                 |
| 220  | 226 | Coal           |                 |
| 226  | 228 | Shale          |                 |
| 228  | 229 | Shaly Coal     |                 |
| 229  | 234 | Shale          |                 |
| 234  | 236 | Coal           |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 2 2 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 18/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-210

APPROX. LOCATION: 62.50 500 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 62+47 - 470 Rt.

ELEVATION: 1000

DRILLER: H. Vincett

| FROM | TO  | LOG                  | REMARKS                     |
|------|-----|----------------------|-----------------------------|
| 0    | 15  | Till                 | E-LOG                       |
| 15   | 138 | Sandstone            | QU-78-210 135.5             |
| 138  | 148 | Coal Shale stringers | 358 2.0 }<br>3.0 }<br>1.8 } |
| 148  | 160 | Shale                | 0.7 }<br>0.8 }              |
| 160  | 242 | Sandstone            | 1.1 } #3                    |
| 242  | 244 | Coal                 | 1.3 }<br>0.5 }              |
| 244  | 318 | Shale                | 0.6 }<br>94.7 }             |
| 318  | 330 | Coal Shale Partings  | 0.5 } #                     |
| 330  | 360 | Shale                | 0.3 }<br>0.4 }              |
|      |     |                      | 45.6 }<br>1.3 }             |
|      |     |                      | 1.6 } #1                    |
|      |     |                      | 4.5 }<br>0.3 }              |
|      |     |                      | 2.7 }                       |
|      |     |                      |                             |
|      |     |                      |                             |
|      |     |                      |                             |
|      |     |                      |                             |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED BY 7 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 19/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-211

APPROX. LOCATION: 37:50 8000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 37+28 8017' Lt.

ELEVATION: 1184'

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS                |
|------|-----|---------------------|------------------------|
| 0    | 12  | Till                | E-LOG                  |
| 12   | 117 | Grey sandstone      | R. J. Ronaghan         |
| 117  | 121 | Coal                | <u>QU-78-211</u> 117.4 |
| 121  | 168 | Shale               | 198 2.2 } #2 seam      |
| 168  | 176 | Coal                | 0.6 1.3 } #2 seam      |
| 176  | 182 | Shale               | 54.8 2.1 } 4.4         |
| 182  | 200 | Soft grey sandstone | 1.2 2.3 } 4.4          |
|      |     |                     | 5.1 1.9 dirty          |
|      |     |                     |                        |
|      |     |                     |                        |
|      |     |                     |                        |
|      |     |                     |                        |
|      |     |                     |                        |
|      |     |                     |                        |
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|      |     |                     |                        |
|      |     |                     |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 7 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 19/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-212

APPROX. LOCATION: 37.50 7500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 37+20 7466' Lt.

ELEVATION: 1191

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                        |
|------|-----|----------------|--------------------------------|
| 0    | 185 | Grey sandstone | E-LOG                          |
| 185  | 188 | Coal           | R. J. Ronaghan                 |
| 188  | 223 | Shale          | QU-78-212 183.8                |
| 223  | 231 | Coal           | 258' 0.9 }<br>0.3 } #2 seam    |
| 231  | 240 | Shale          | 0.3 }<br>1.0 } #2 seam         |
| 240  | 260 | Sandstone      | 1.3 }<br>35.5 }<br>0.6 } dirty |
|      |     |                | 1.5 }<br>0.4 } #1 seam         |
|      |     |                | 5.2 } #1 seam                  |
|      |     |                | 1.0 }<br>1.5 }<br>0.7 } dirty  |
|      |     |                | 0.9 } dirty                    |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |
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|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LUSCAR LTD. corehole log

CHECKED SEP 7 1978

HOLE NO. QU-78-213C

PAGE 2 OF 2

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
| 168.1    |               |     |      | 4.2       |      | COAL: bright blocky, light and easy to break, flaggy                                                                                        |            |
| 4        | 172           | 180 | 8.1  | 0.2       |      | COAL : as above                                                                                                                             |            |
|          |               |     |      | 0.2       |      | CARBONACEOUS MUDROCK: some bone lenses soft flaky                                                                                           |            |
| 175.8    |               |     |      | 3.4       |      | COAL: bright blocky, massive to broken, some pyrite, calcite on cleats                                                                      |            |
|          |               |     |      | 0.3       |      | BONE COAL: bright and dull banded, broken                                                                                                   |            |
|          |               |     |      | 1.25      |      | MUDROCK: broken, grey brown, minor coaly laminae                                                                                            |            |
|          |               |     |      | 1.0       |      | BONE: bright and dull banded, massive to broken                                                                                             |            |
|          |               |     |      | 0.6       |      | SILTSTONE: Grey brown, broken minor coaly laminae                                                                                           |            |
| 5        | 180           | 188 | 6.3  | 0.15      |      | SILTSTONE: as above                                                                                                                         |            |
|          |               |     |      | 1.6       |      | CARBONACEOUS MUDROCK: dark brown, numerous coaly laminae                                                                                    |            |
|          |               |     |      | 0.2       |      | COAL: bright blocky, massive, soft fissile                                                                                                  |            |
|          |               |     |      | 4.3       |      | SILTSTONE: grey brown massive hard, minor coaly blotches.                                                                                   |            |
|          | TOTALS        |     |      |           |      | ÷ X 100 = % REC. SEAM                                                                                                                       |            |
|          |               |     |      |           |      | ÷ X 100 = % TOT.REC. SEAM(S)                                                                                                                |            |

# LUSCAR LTD. corehole log

CHECKED SEP 7 1978

47+50 - 6750 Lt.

Quinsam

HOLE NO. QU-78-213C

PAGE 1 OF 2

| CORE NO      | CORE FOOTAGES  |                |                |                 |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH   |
|--------------|----------------|----------------|----------------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|              | DRILLED        |                |                | RECOVERED       |      |                                                                                                                                             |              |
|              | FROM           | TO             | TOT.           | SEC.            | TOT. |                                                                                                                                             |              |
| <del>1</del> | <del>112</del> | <del>121</del> | <del>6.9</del> | <del>0.75</del> |      |                                                                                                                                             |              |
| 1            | 112            | 121            | 6.9            | 0.75            |      | SILTSTONE: grey brown massive to platy                                                                                                      |              |
|              |                |                |                | 0.15            |      | COAL: bright blocky banded numerous mudstone laminae                                                                                        | 112.75       |
|              |                |                |                | 0.95            |      | COAL: bright blocky, massive, locally broken, light, easily broken, some calcite on cleats                                                  |              |
|              |                |                |                | 0.05            |      | MUDROCK: grey brown soft wet                                                                                                                |              |
|              |                |                |                | 0.45            |      | COAL: as above, more broken                                                                                                                 |              |
|              |                |                |                | 0.10            |      | MUDROCK: as above                                                                                                                           |              |
|              |                |                |                | 0.9             |      | COAL: bright blocky, massive, med. hard, minor mudstone laminae                                                                             | 115.35       |
|              |                |                |                | 1.8             |      | CARBONACEOUS MUDROCK: dark brown to black, numerous coaly laminae                                                                           |              |
|              |                |                |                | 2.7             |      | SILTSTONE: grey brown, soft, flaggy                                                                                                         |              |
| 2            | 121            | 128            | 8.9            |                 |      | Stored                                                                                                                                      |              |
|              |                |                |                |                 |      |                                                                                                                                             | 166.0        |
| 3            | 166            | 172            | 5.3            | 1.65            |      | COAL: bright, blocky, crushed to powdery, some pyrite, calcite on cleats                                                                    | 167.65       |
|              |                |                |                | 0.45            |      | MUDSTONE: brown, grey soft wet                                                                                                              |              |
| <del>X</del> | TOTALS         |                |                | <del>X</del>    |      | ÷ X 100 = % REC. SEAM                                                                                                                       | <del>X</del> |
|              |                |                |                |                 |      | ÷ X 100 = % TOT.REC. SEAM(S)                                                                                                                |              |

# LEXCO TESTING LTD.

CHECKED SEP 7 1978  
**-coring report**

PROSPECT: QUINSAM LAKE  
 LOCATION: 47+50 6750 Lt.  
 CONTRACTOR: LEXCO TESTING LTD

DATE: JULY 19/78  
 HOLE# QU-78- 213C  
 RIG# 06

| CORE  | FOOTAGE |      | TIME |    | MIN. | CUT | REC.  | TUBES | REMARKS |
|-------|---------|------|------|----|------|-----|-------|-------|---------|
|       | FROM    | TO   | FROM | TO |      |     |       |       |         |
| 1     | 112'    | 121' |      |    |      | 9   | 6'10" | 1     |         |
| 2     | 121'    | 128' |      |    |      | 7   | 9'0"  | 1     |         |
| 3     | 166'    | 172' |      |    |      | 6   | 5'4"  | 1     |         |
| 4     | 172'    | 180' |      |    |      | 8   | 7'1"  | 1     |         |
| 5     | 180'    | 188' |      |    |      | 8   | 6'4"  | 1     |         |
| 6     | 188'    | 196' |      |    |      | 8   | 8'9"  |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
|       |         |      |      |    |      |     |       |       |         |
| TOTAL |         |      |      |    |      | 46  | 43'4" | 5     | 95%     |

SUPERVISOR: Clive Gardner

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 22 1978

COAL FIELD: QUINSAM DATE: JULY 19/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-213(C)

APPROX. LOCATION: 47+50 6750 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 47+23 - 6720' Lt.

ELEVATION: 1147

DRILLER: R. Selk

| FROM | TO  | LOG                                  | REMARKS               |
|------|-----|--------------------------------------|-----------------------|
| 0    | 14  | Till                                 |                       |
| 14   | 112 | Sandstone                            | E-LOG                 |
| 112  | 113 | Brown shale                          | R. J. Ronaghan        |
| 113  | 118 | Coal (shale stringers @ 114' & 115') | QU-78-213C 112.5      |
| 118  | 120 | Brown shale                          | 194 0.1 1.1 } #2 seam |
| 120  | 166 | Grey shale                           | 48.8 0.9 } #2 seam    |
| 166  | 178 | Coal                                 | 0.4 1.8 } #1 seam     |
| 178  | 180 | Carbonated shale                     | 2.0 8.5 } #1 seam     |
| 180  | 181 | Coal                                 | 0.9 } dirty           |
| 181  | 185 | Brown shale                          |                       |
| 185  | 196 | Grey shale                           |                       |
|      |     |                                      |                       |
|      |     |                                      |                       |
|      |     |                                      |                       |
|      |     |                                      |                       |
|      |     |                                      |                       |
|      |     |                                      |                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 110' FT. 196'







# LUSCAR LTD. corehole log

CHECKED OCT 17 1978

HOLE NO. QU-78-215C

PAGE 2 OF 3

| CORE NO.  | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|-----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|           | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|           | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X         | X             | X   |      | X         |      |                                                                                                                                             |            |
| 2         | 39            | 46  | 5.5  | 5.5       |      | Stored                                                                                                                                      |            |
| 3         | 90            | 98  | 7.5  | 7.5       |      | SILTSTONE: grey brown, massive, med. hard, fractured at 65°                                                                                 |            |
| 4         | 98            | 106 | 7.0  | 3.42      |      | SILTSTONE: as above                                                                                                                         |            |
|           |               |     |      | 0.48      |      | CARBONACEOUS MUDSTONE: med. brown hard with coaly stringers                                                                                 |            |
|           |               |     |      | 0.61      |      | BONY COAL, mostly bright, flaggy with thin mudstone lenses, numerous flakes on bedding planes 80% coal                                      |            |
| 102.51    |               |     |      | 1.73      |      | COAL: #1 seam, bright med. hard, blocky to flaggy with numerous amber blebs and pyrite on bedding plains, calcite on vertical cleats.       |            |
| Sample #3 |               |     |      | 0.07      |      | PYRITE Nodules                                                                                                                              |            |
|           |               |     |      | 0.67      |      | COAL: bright hard, blocky, flaggy with pyrite flakes along bedding and small fractures                                                      |            |
| X         | TOTALS        |     |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|           |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |

# LUSCAR LTD. corehole log

47+50 - 7750 Lt.

QUINSAM

HOLE NO. QU-78-2150

PAGE 1 OF 3

| CORE NO.  | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|-----------|---------------|----|------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
|           | DRILLED       |    |      | RECOVERED |      |                                                                                                                                               |            |
|           | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                               |            |
|           |               |    |      |           |      |                                                                                                                                               |            |
|           |               |    |      |           |      |                                                                                                                                               |            |
| 31.00     | 1             | 31 | 39   | 7.8       | 1.3  | COAL: #2 seam, bright, blocky, very pyritic on cleats                                                                                         |            |
|           |               |    |      |           | 0.05 | MUDSTONE: Med. brown with coaly fragments                                                                                                     |            |
| Sample #1 |               |    |      |           | 0.79 | COAL: as above with calcite on cleats also.                                                                                                   |            |
|           |               |    |      |           | 0.12 | MUDSTONE: as above with pyrite, coal stringers                                                                                                |            |
| 34.3      |               |    |      |           | 1.67 | COAL: as above, minor amber becoming more flaggy near bottom                                                                                  |            |
| Sample #2 |               |    |      |           | 0.99 | BONY COAL: dull and bright banded, flaggy, becoming more shaley towards bottom                                                                |            |
| 35.92     |               |    |      |           | 0.24 | MUDSTONE: med. brown, hard, minor plant fragments                                                                                             |            |
|           |               |    |      |           | 0.23 | COAL: bright, bony and hard, numerous pyrite flakes on cleats                                                                                 |            |
|           |               |    |      |           | 2.32 | SILTSTONE: med. hard to hard, med. grey, minor coaly stringers                                                                                |            |
|           | TOTALS        |    |      |           |      | ÷ X 100 = % REC.                                                                                                                              | SEAM       |
|           |               |    |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                         | SEAM(S)    |



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 22 1978

COAL FIELD: QUINSAM DATE: JULY 20/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-215(C)

APPROX. LOCATION: 47+50 7750 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 47+37 - 7792 Lt.

ELEVATION: 1124

DRILLER: R. Selk

| FROM | TO  | LOG              | REMARKS       |
|------|-----|------------------|---------------|
| 0    | 4   | Till             | E-Log         |
| 4    | 31  | Sandstone        | QU-78-215C    |
| 31   | 32  | Carbonated shale | 145 31.0 2.3  |
| 32   | 36  | Coal             | 0.1 1.9       |
| 36   | 38  | Carbonated shale | 66.0 0.9 shly |
| 38   | 42  | Brown shale      | 0.2 2.3       |
| 42   | 102 | Grey shale       | 4.6 4.7 shly  |
| 102  | 118 | Coal             |               |
| 118  | 120 | Carbonated shale |               |
| 120  | 122 | Brown shale      |               |
| 122  | 128 | Gray shale       |               |
| 128  | 130 | Carbonated shale |               |
| 130  | 132 | Brown shale      |               |
| 132  | 146 | Grey shale       |               |
|      |     |                  |               |
|      |     |                  |               |

#2

#1

COMMENTS: \_\_\_\_\_

WATER HORIZON: 40' FT. 146'

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 22 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 20/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-216

APPROX. LOCATION: 32.50 4750 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 32+67 4756' Lt.

ELEVATION: 1091

DRILLER: H. Vincett

| FROM | TO  | LOG                     | REMARKS    |
|------|-----|-------------------------|------------|
| 0    | 14  | Till<br>E-LOG           |            |
| 14   | 33  | Sandstone<br>QU-78- 216 | 31.5       |
| 33   | 35  | Coal<br>178             | 1.1        |
| 35   | 117 | Sandstone               | 1.3<br>0.3 |
| 117  | 120 | Carb Shale              | 82.5       |
| 120  | 135 | Shale                   | 1.1        |
| 135  | 150 | Sandstone               |            |
| 150  | 180 | Basalt                  |            |
|      |     |                         |            |
|      |     |                         |            |
|      |     |                         |            |
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|      |     |                         |            |
|      |     |                         |            |
|      |     |                         |            |
|      |     |                         |            |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LUSCAR LTD. corehole log

CHECKED SEP 5 1978

32+50 - 5250 Lt.  
QUINSAM

HOLE NO. QU-78-217C

PAGE 1 OF 2

| CORE NO.          | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|-------------------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|                   | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |            |
|                   | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| 36.0<br>Sample #1 | 36            | 44 | 6.8  | .45       |      | COAL: bright and blocky; abundant pyrite,<br>broken and fractured;                                                                          |            |
| 36.45             |               |    |      | 2.05      |      | MUDSTONE: carbonaceous; dark brown;<br>locally wet and pliable; becoming<br>more carbonaceous at base; soft to<br>medium hard               |            |
| 38.5<br>Sample #2 |               |    |      | .55       |      | COAL: bright and blocky; massive;<br>light; easily broken; abundant<br>pyrite; calcite on cleats                                            |            |
| 39.05             |               |    |      | .40       |      | SANDSTONE: greenish grey; massive;<br>hard; coaly lenses and plant fragments                                                                |            |
|                   |               |    |      | .05       |      | COAL: bright and blocky; medium hard                                                                                                        |            |
| 40.55             |               |    |      | 1.05      |      | SANDSTONE: as above                                                                                                                         |            |
|                   |               |    |      | .90       |      | COAL: as above                                                                                                                              |            |
| Sample #3         |               |    |      | .10       |      | SANDSTONE: as above                                                                                                                         |            |
|                   |               |    |      | .40       |      | COAL: as above; fractured at 80°<br>to core axis                                                                                            |            |
|                   |               |    |      | .20       |      | SANDSTONE: as above                                                                                                                         |            |
| 44.0              | 2             | 44 | 52   | 6.65      |      | COAL: as above                                                                                                                              |            |
|                   |               |    |      | 1.55      |      | SANDSTONE: as above                                                                                                                         |            |
|                   |               |    |      | .25       |      | COAL: bright and blocky; hard; visible<br>pyrite disseminated                                                                               |            |
|                   |               |    |      | .05       |      | COAL: bony coal; bright and dull banded;<br>sandy matrix                                                                                    |            |
|                   |               |    |      | 1.50      |      | SANDSTONE: as above                                                                                                                         |            |
|                   |               |    |      | .30       |      | COAL: as above                                                                                                                              |            |
|                   |               |    |      | .05       |      | COAL: bright and dull banded; sandy matrix                                                                                                  |            |
|                   |               |    |      | 2.55      |      | SANDSTONE: as above; fractured at 10° to                                                                                                    |            |
| TOTALS            |               |    |      |           |      | ÷ X 100 = % REC. vertical SEAM                                                                                                              |            |
|                   |               |    |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |



# LEXCO TESTING LTD.

CHECKED BY 5 10770  
**-coring report**

PROSPECT: QUINSAM LAKE

DATE: JULY 20/78

LOCATION: 32+50 5200 Lt.

HOLE\*\* QU-78- 217C

CONTRACTOR: LEXCO TESTING LTD

RIG\*\* 06

| CORE  | FOOTAGE |    | TIME |    | MIN. | CUT | REC.  | TUBES | REMARKS |
|-------|---------|----|------|----|------|-----|-------|-------|---------|
|       | FROM    | TO | FROM | TO |      |     |       |       |         |
| 1     | 36      | 44 |      |    |      | 8   | 6'9"  | 1     |         |
| 2     | 44      | 52 |      |    |      | 8   | 6'9"  | 1     |         |
| 3     | 52      | 58 |      |    |      | 6   | 6'4"  | 1     |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
|       |         |    |      |    |      |     |       |       |         |
| TOTAL |         |    |      |    |      | 22  | 19'8" | 3     | 90%     |

SUPERVISOR: Clive Gardner

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 5 1978

COAL FIELD: QUINSAM DATE: JULY 21/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-217(C)

APPROX. LOCATION: 32+50 5250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 32+46 5250' Lt

ELEVATION: 1147

DRILLER: R. Selk

| FROM | TO | LOG              | REMARKS         |
|------|----|------------------|-----------------|
| 0    | 35 | Sandstone        | E.LOG           |
| 35   | 36 | Carbonated shale | R. J. RONAGHAN  |
| 36   | 37 | Coal             | QU-78-217C 36.8 |
| 37   | 39 | Carbonated shale | 73              |
| 39   | 40 | Coal             | 1.1 1.4         |
| 40   | 41 | Sandstone        | 1.6 0.7         |
| 41   | 43 | Coal             | 1.7 2.1         |
| 43   | 47 | Sandstone        | 1.6 0.3         |
| 47   | 48 | Coal             | 2.8 0.6         |
| 48   | 50 | Sandstone        | 1.1 0.4         |
| 50   | 51 | Coal             | 0.3             |
| 51   | 52 | Sandstone        |                 |
| 52   | 53 | Coal             |                 |
| 53   | 54 | Sandstone        |                 |
| 54   | 57 | Grey shale       |                 |
| 57   | 58 | Carbonated shale |                 |
| 58   | 74 | Sandstone        |                 |
|      |    |                  |                 |
|      |    |                  |                 |

#3 seam

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. 74'

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: July 21, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-218

APPROX. LOCATION: 1750-4750 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 17+50 4720'

ELEVATION: 1139'

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS         |
|------|-----|-----------|-----------------|
| 0    | 10  | Till      |                 |
| 10   | 106 | Sandstone |                 |
| 106  | 114 | Coal      |                 |
| 114  | 120 | Shale     |                 |
| 120  | 160 | Sandstone | QU-78-218 106.0 |
|      |     |           | 2               |
|      |     |           | .2 2.9 } #3     |
|      |     |           | 3.2 5.0 } 10.6  |
|      |     |           | 2.7 }           |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |

COMMENTS: \_\_\_\_\_

CHECKED OCT 17 1978

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED 270 7 1978

COAL FIELD: QUINSAM DATE: JULY 22/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-220

APPROX. LOCATION: 32+50 4500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 32+53 4460' Lt.

ELEVATION: 1087'

DRILLER: R. Selk

| FROM | TO  | LOG              | REMARKS               |
|------|-----|------------------|-----------------------|
| 0    | 8   | Till             |                       |
| 8    | 48  | Sandstone        | Water @ 45'           |
| 48   | 54  | Coal             |                       |
| 54   | 58  | Sandstone        | E-Log                 |
| 58   | 62  | Coal             | R. J. Ronaghan        |
| 62   | 66  | Sandstone        | <u>QU-78-220 48.2</u> |
| 66   | 67  | Coal             | 121' 2.3              |
| 67   | 71  | Carbonated shale | .7 .4 shaly           |
| 71   | 123 | Sandstone        | .7 1.7 8.3            |
|      |     |                  | .4 .6 #3 seam         |
|      |     |                  | .1 .7                 |
|      |     |                  | 2.0 1.2               |
|      |     |                  | 4.5 1.8               |
|      |     |                  | .9                    |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 45 FT. 123



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: July 22/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-222

APPROX. LOCATION: 17+50 4000 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 17+30 4020' LT

ELEVATION: 1110'

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS             |
|------|-----|---------------------|---------------------|
| 0    | 192 | SANDSTONE           | E - Log S. Gardner  |
| 192  | 204 | COAL Shale Partings |                     |
| 204  | 210 | SHALE               | QU-78-222 191.2     |
| 210  | 220 | SANDSTONE           | 220' 4.6            |
|      |     |                     | .4 } #3 seam        |
|      |     |                     | 2.8 } 9.6           |
|      |     |                     | 1.0 }               |
|      |     |                     | 2.2 }               |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     | CHECKED OCT 17 1978 |
|      |     |                     |                     |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 23 1978

COAL FIELD: QUINSAM DATE: JULY 22/78

COMPANY: LEXCO TESTING LTD

HOLE No.: QU-78-223

APPROX. LOCATION: 32+50 5500 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 32+46 5500 Lt.

ELEVATION: 1171'

DRILLER: R. Selk

| FROM | TO  | LOG                              | REMARKS        |
|------|-----|----------------------------------|----------------|
| 0    | 31  | Sandstone                        |                |
| 31   | 32  | Coal                             | E-Log          |
| 32   | 34  | Carbonated shale                 | R. Ronaghan    |
| 34   | 35  | Coal                             | QU-78-223 30.4 |
| 35   | 37  | Sandstone                        | 120' 2.0 .7    |
| 37   | 40  | Carbonated Shale                 | 2.2 1.0        |
| 40   | 56  | Sandstone - coal stringers @ 41' | 2.2 2.0 5.2    |
| 56   | 60  | Carbonated Shale @ 44'           | 2.2 .6 #3 seam |
| 60   | 94  | Sandstone @ 46'                  | 2.2 .9         |
| 94   | 98  | Brown shale @ 51'                |                |
| 98   | 120 | Sandstone @ 95'                  |                |
|      |     |                                  |                |
|      |     |                                  |                |
|      |     |                                  |                |
|      |     |                                  |                |
|      |     |                                  |                |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 105' FT. 120



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED AUG 29 1978

COAL FIELD: Campbell River DATE: July 23/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-224

APPROX. LOCATION: 2500 4500 Lt SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 24+89 4571' Lt.

ELEVATION: 1127'

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                  |
|------|-----|-----------|--------------------------|
| 0    | 3   | Till      |                          |
| 3    | 96  | Sandstone | <u>E. Log S. Gardner</u> |
| 96   | 106 | Coal      |                          |
| 106  | 110 | Shale     | <u>QU-78-224 92.2</u>    |
| 110  | 140 | Sandstone | 140' 2.3                 |
|      |     |           | 1.0                      |
|      |     |           | 1.7                      |
|      |     |           | .5                       |
|      |     |           | .5' } 9.1' #3 seam       |
|      |     |           | .2                       |
|      |     |           | 2.2                      |
|      |     |           | 1.4                      |
|      |     |           | .6 shaly                 |
|      |     |           | 2.4                      |
|      |     |           |                          |
|      |     |           |                          |
|      |     |           |                          |
|      |     |           |                          |
|      |     |           |                          |
|      |     |           |                          |
|      |     |           |                          |
|      |     |           |                          |
|      |     |           |                          |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 22 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 23/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-225

APPROX. LOCATION: 2500 47.50 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 24+76 4777' Lt.

ELEVATION: 1123'

DRILLER: H. Vincett

| FROM | TO  | LOG       | E-LOG<br>S. Gardner | REMARKS     |
|------|-----|-----------|---------------------|-------------|
| 0    | 75  | Sandstone | <u>QU-78-225</u>    | <u>73.3</u> |
| 75   | 85  | Coal      | 118                 | 2.3         |
| 85   | 90  | Shale     |                     | .6<br>1.8   |
| 90   | 120 | Sandstone |                     | .4<br>.7    |
|      |     |           |                     | .2<br>.6    |
|      |     |           |                     | .2<br>1.1   |
|      |     |           |                     | 4.5<br>2.4  |
|      |     |           |                     |             |
|      |     |           |                     |             |
|      |     |           |                     |             |
|      |     |           |                     |             |
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|      |     |           |                     |             |
|      |     |           |                     |             |
|      |     |           |                     |             |
|      |     |           |                     |             |

8.9  
#3 seam

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED BY: 2 - 1373

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JULY 24/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-226

APPROX. LOCATION: 35.00 4250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 35+05 4215' Lt.

ELEVATION: 1088

DRILLER: H. Vincett

| FROM | TO | LOG                  | REMARKS        |
|------|----|----------------------|----------------|
| 0    | 43 | Sandstone            |                |
| 43   | 55 | Coal Shale Stringers |                |
| 55   | 80 | Sandstone            |                |
|      |    | E-Log                |                |
|      |    | S. Gardner           |                |
|      |    | QU-78-226            | 43.8           |
|      |    | 78'                  | 2.2            |
|      |    |                      | .9             |
|      |    |                      | 1.6            |
|      |    |                      | .7             |
|      |    |                      | 2.6            |
|      |    |                      | .6             |
|      |    |                      | .2             |
|      |    |                      | .9             |
|      |    |                      | .4             |
|      |    |                      | .1             |
|      |    |                      | 1.0            |
|      |    |                      | 6.3            |
|      |    |                      | .9             |
|      |    |                      | 1.9            |
|      |    |                      | .7 coaly shale |

8.0' #8

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LUSCAR LTD. corehole log

Line 17+50 5000'LT

HOLE NO. QH-78-228C  
PAGE 1 OF 1

| CORE NO. | CORE FOOTAGES |     |      |           |                     | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH   |
|----------|---------------|-----|------|-----------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|          | DRILLED       |     |      | RECOVERED |                     |                                                                                                                                             |              |
|          | FROM          | TO  | TOT. | SEC.      | TOT.                |                                                                                                                                             |              |
|          |               |     |      |           |                     |                                                                                                                                             |              |
| 1        | 90            | 98  | 4.7  |           |                     |                                                                                                                                             |              |
|          |               |     |      | .7        |                     | SANDSTONE: medium grey; medium grained, hard, massive                                                                                       |              |
|          | 91.7          |     |      | 1.0       |                     | COAL: Bright and blocky; crushed and milled                                                                                                 | Sample NO. 1 |
|          | 98.4          |     |      | .90       |                     | COAL; bright and blocky; massive but fractured                                                                                              |              |
|          |               |     |      | .20       |                     | COAL: Bony; sandy matrix                                                                                                                    |              |
|          |               |     |      | .6        |                     | COAL: Bright and blocky, broken up                                                                                                          |              |
|          |               |     |      | .20       |                     | COAL: Bony; sandy matrix                                                                                                                    |              |
|          |               |     |      | .30       |                     | COAL: Bright and blocky; crushed and broken                                                                                                 |              |
|          |               |     |      | .10       |                     | COAL: Bony, sandy matrix                                                                                                                    |              |
|          |               |     |      | .30       |                     | COAL: Bright and blocky; crushed; broken                                                                                                    |              |
|          |               |     |      | .15       |                     | COAL: Bony; sandy matrix                                                                                                                    |              |
|          |               |     |      | .10       |                     | COAL: Bright and blocky; broken up                                                                                                          |              |
| 2        | 98            | 103 | 4.6  |           |                     |                                                                                                                                             |              |
|          |               |     |      | .4        |                     | COAL: as above                                                                                                                              |              |
|          |               |     |      | .3        |                     | MUDSTONE: Soft; pliable; crushed and milled with coal fragments                                                                             |              |
|          |               |     |      | 3.9       |                     | MUDSTONE: Flaggy; med. brown; fragmented and broken                                                                                         |              |
| 3        | 103           | 111 | 6.0  |           |                     |                                                                                                                                             |              |
|          |               |     |      | 1.2       |                     | SILTSTONE: Medium grey, hard; broken and fractured                                                                                          | Sample NO. 2 |
|          | 104.2         |     |      | 1.0       |                     | COAL: Bright and blocky; fractured and broken, milled                                                                                       |              |
|          | 107.2         |     |      | 1.5       |                     | SILTSTONE: Medium grey; broken and fractured; milled; coaly chunks throughout                                                               |              |
|          |               |     |      | .5        |                     | COAL: Bright and blocky; crushed                                                                                                            |              |
|          |               |     |      | 1.6       |                     | SILTSTONE: As above                                                                                                                         |              |
|          |               |     |      |           |                     |                                                                                                                                             |              |
|          | TOTALS        |     |      |           |                     |                                                                                                                                             |              |
|          |               |     |      |           | $\div \times 100 =$ | % REC.                                                                                                                                      | SEAM         |
|          |               |     |      |           | $\div \times 100 =$ | % TOT. REC.                                                                                                                                 | SEAM(S)      |







# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: August 22, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-230

APPROX. LOCATION: 1250 5250 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 12+50 5277LT

ELEVATION: 1172

DRILLER: H. Vincett

| FROM | TO  | LOG                           | REMARKS         |
|------|-----|-------------------------------|-----------------|
|      |     | Deeper hole drilled by rig 06 |                 |
| 104  | 107 | Sandstone                     |                 |
| 107  | 112 | Coal                          |                 |
| 112  | 120 | Shale                         |                 |
| 120  | 122 | Coal                          |                 |
| 122  | 130 | Shale                         |                 |
| 130  | 175 | Sandstone                     | QU-78-230 160.6 |
|      |     |                               | 169 6.0         |
|      |     |                               | 7.4 0.5         |
|      |     |                               | 0.6 0.3 } 6.0   |
|      |     |                               | 1.0 0.3 } #3    |
|      |     |                               | 1.0 0.6         |
|      |     |                               |                 |
|      |     |                               |                 |
|      |     |                               |                 |
|      |     |                               |                 |
|      |     |                               |                 |
|      |     |                               |                 |
|      |     |                               |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



CHECKED 103 2 - 1978

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JULY 23/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-231

APPROX. LOCATION: 35.00 4500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 34+86 4460' Lt.

ELEVATION: 1084'

DRILLER: H. Vincett

| FROM | TO  | LOG                       | REMARKS         |
|------|-----|---------------------------|-----------------|
| 0    | 24  | Sandstone                 | E-Log           |
| 24   | 39  | Coal Shale Partings       | S. Gardner      |
| 39   | 122 | Sandstone                 | QU-78-231 23.1  |
| 122  | 126 | Coal                      | 180' 1.0        |
| 126  | 130 | Shale                     | 1.2 .9          |
| 130  | 140 | Green Sandstone           | 1.0 1.8 #3 seam |
| 140  | 180 | Basalt                    | 1.0 .7 7.2'     |
|      |     |                           | .3 1.0          |
|      |     |                           | .5 1.3          |
|      |     |                           | .5 .5           |
|      |     | Underground Stream at 98' | 1.7 .5          |
|      |     |                           | .7 shaly        |
|      |     |                           |                 |
|      |     |                           |                 |
|      |     |                           |                 |
|      |     |                           |                 |
|      |     |                           |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED AUG 2 1978

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: JULY 25/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-232

APPROX. LOCATION: 2750 + 1500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 37+38 1366' Lt.

ELEVATION: 1072

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                |
|------|-----|-----------|------------------------|
| 0    | 5   | Till      | E-Log                  |
| 5    | 216 | Sandstone | S. Gardner             |
| 216  | 220 | Coal      | QU-78-232 215.4        |
| 220  | 222 | Shale     | 240 3.9 }<br>2.2       |
| 222  | 225 | Coal      | 1.8 } 6.6 }<br>#3 seam |
| 225  | 230 | Shale     | .8 } shaly<br>1.1      |
| 230  | 240 | Sandstone | .9                     |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

0-7-78 1102 933

COAL FIELD: CAMPBELL RIVER DATE: AUG. 16/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-238

APPROX. LOCATION: 3750 1100 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 36+90 - 1109 Lt

ELEVATION: 1080

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS         |
|------|-----|-----------|-----------------|
| 0    | 239 | Sandstone | E-Log           |
| 239  | 250 | Coal      | R. J. Ronaghan  |
| 250  | 272 | Sandstone | QU-78-238 238.5 |
|      |     |           | 4.7             |
|      |     |           | 1.4             |
|      |     |           | 1.8             |
|      |     |           | 0.6             |
|      |     |           | 0.2 #3 seam     |
|      |     |           | 9.2             |
|      |     |           | 0.8             |
|      |     |           | 1.7             |
|      |     |           | 0.2             |
|      |     |           | 0.8             |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 22 1978

COAL FIELD: CAMPBELL RIVER DATE: JULY 26/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-233

APPROX. LOCATION: 37.50 750 L.T. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 37+64 734' Lt.

ELEVATION: 1072'

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS                       |
|------|-----|---------------------|-------------------------------|
| 0    | 80  | Sandstone           |                               |
| 80   | 90  | Shale               | E-Log                         |
| 90   | 176 | Sandstone           | S. Gardner                    |
| 176  | 192 | Coal Shale Partings | <u>QU-78-233</u> <u>176.3</u> |
| 192  | 200 | Shale               | 220 .8                        |
| 200  | 220 | Sandstone           | 1.0 3.9                       |
|      |     |                     | 1.8 1.4 #3 seam               |
|      |     |                     | .5 shaly 8.8'                 |
|      |     |                     | .7 .4 shaly                   |
|      |     |                     | 2.7                           |
|      |     |                     |                               |
|      |     |                     |                               |
|      |     |                     |                               |
|      |     |                     |                               |
|      |     |                     |                               |
|      |     |                     |                               |
|      |     |                     |                               |
|      |     |                     |                               |
|      |     |                     |                               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED: 29 1978

COAL FIELD: QUINSAM DATE: JULY 26/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-234

APPROX. LOCATION: 37+50 1000 L.t. (offset to Rt) SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 38+59 1037 Lt.

ELEVATION: 1077

DRILLER: R. Selk

| FROM | TO  | LOG                        | REMARKS          |
|------|-----|----------------------------|------------------|
| 0    | 7   | Till E-Log                 |                  |
| 7    | 63  | Sandstone S. Gardner       |                  |
| 63   | 64  | Carbonated shale QU-78-234 | 270.5            |
| 64   | 68  | Sandstone 300'             | 1.2 shaly coal   |
| 68   | 69  | Carbonated shale           | .5 } #2 sea      |
| 69   | 76  | Grey shale                 | 2.8 " " } #2 sea |
| 76   | 203 | Sandstone                  | 5.5 } #1 sea     |
|      |     |                            | 1.1 } #1 sea     |
| 203  | 206 | Carbonated shale           | 4.9 " "          |
| 206  | 247 | Sandstone                  |                  |
| 247  | 254 | Brown shale                |                  |
| 254  | 258 | Grey shale                 |                  |
| 258  | 262 | Coal                       |                  |
| 262  | 268 | Carbonated shale           |                  |
| 268  | 272 | Coal                       |                  |
| 272  | 276 | Carbonated shale           |                  |
| 276  | 284 | Coal                       |                  |

284 298 Sandstone

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. 298'

# LEXCO TESTING LTD.

CHECKED AUG 29 1978

## DRILLHOLE REPORT

COAL FIELD: CAMPBELL RIVER DATE: July 26/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-235

APPROX. LOCATION: 42.50 1000 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 42+61 923' Lt.

ELEVATION: 1048'

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS                  |
|------|-----|---------------------|--------------------------|
| 0    | 19  | Till                | E-Log S. Gardner         |
| 19   | 63  | Sandstone           | <u>QU-78-235</u> 61.2 .6 |
| 63   | 77  | Coal Shale Partings | 100' .4 3.5              |
| 77   | 81  | Shale               | .9 1.5 #3 sec<br>7.7'    |
| 81   | 100 | Sandstone           | .3 .6<br>.6 1.5          |
|      |     |                     | .3 .9 shaly              |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |
|      |     |                     |                          |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: QUINSAM DATE: JULY 27/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-237

APPROX. LOCATION: 37+50 2000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 37+39 2041' Lt.

ELEVATION: 1026'

DRILLER: R. Selk

| FROM | TO  | LOG              | REMARKS         |
|------|-----|------------------|-----------------|
| 0    | 56  | Sandstone        |                 |
| 56   | 58  | Carbonated shale |                 |
| 58   | 170 | Sandstone        | E-Log           |
| 170  | 178 | Brown shale      | S. Gardner      |
| 178  | 189 | Coal             | QU-78-237 177.6 |
| 189  | 191 | Sandstone        | 6.3             |
| 191  | 194 | Coal             | .8              |
| 194  | 195 | Carbonated shale | 3.6             |
| 195  | 196 | Coal             | 1.2             |
| 196  | 200 | Brown shale      | 2.5             |
| 200  | 204 | Grey shale       | 2.1             |
| 204  | 215 | Sandstone        | 1.6             |
|      |     |                  |                 |
|      |     |                  |                 |
|      |     |                  |                 |
|      |     |                  |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 30' FT. 215

# LEXCO TESTING LTD.

CHECKED SEP 22 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM LAKE DATE: Aug. 16/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-239

APPROX. LOCATION: 38+20 - 1630 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 38+96 -1597 Lt.

ELEVATION: 1072

DRILLER: C. Gardner

| FROM | TO  | LOG              | REMARKS                              |
|------|-----|------------------|--------------------------------------|
| 0    | 55  | Sandstone        |                                      |
| 55   | 75  | Grey Shale       | E-Log                                |
| 75   | 192 | Sandstone        | R. J. Ronaghan<br>QU-78-239<br>189.1 |
| 192  | 200 | Coal             | 220' } 3.5                           |
| 200  | 201 | Sandstone        | 0.8 } 3.0                            |
| 201  | 206 | Carbonated Shale | 0.6 } 2.4 } #3 seam                  |
| 206  | 211 | Brown shale      | 0.7 } 1.1 } 10.0                     |
| 211  | 217 | Sandstone        |                                      |
| 217  | 218 | Brown shale      |                                      |
| 218  | 226 | Sandstone        |                                      |
|      |     |                  |                                      |
|      |     |                  |                                      |
|      |     |                  |                                      |
|      |     |                  |                                      |
|      |     |                  |                                      |
|      |     |                  |                                      |
|      |     |                  |                                      |
|      |     |                  |                                      |
|      |     |                  |                                      |

COMMENTS: Water at 136 ft. and 174 ft.

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED SEP 2 2 1978

COAL FIELD: CAMPBELL RIVER DATE: AUG. 17/78

COMPANY: LEXCO TESTING LTD.

HOLE No.: QU-78-241

APPROX. LOCATION: 42.50 2400 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 42+06 - 2438 Lt.

ELEVATION: 1005

DRILLER: H. Vincett

| FROM | TO  | LOG                       | REMARKS       |
|------|-----|---------------------------|---------------|
| 0    | 19  | Till                      | E-LOG         |
| 19   | 30  | Sandstone                 | QU-78-241     |
| 30   | 42  | Coal Shale Parting        | 158 29.8 0.8  |
| 42   | 97  | Sandstone                 | 0.1 1.5       |
| 97   | 110 | Carb. Shale Coal Partings | 0.5 2.0       |
| 110  | 117 | Shale                     | 2.6 1.4       |
| 117  | 141 | Sandstone                 | 60.0          |
| 141  | 160 | Basalt                    | 1.7 1.3 0.6   |
|      |     |                           | 1.7 0.3 shaly |
|      |     |                           | 0.3 0.6 shly  |
|      |     |                           | 1.2 0.6 shly  |
|      |     |                           | 0.1 0.7 shly  |
|      |     |                           | 0.9 2.3       |
|      |     |                           | 1.3 2.2       |
|      |     |                           |               |
|      |     |                           |               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: August 18, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-242

APPROX. LOCATION: 570 4500 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 7+39 4527 LT

ELEVATION: 1150

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS         |
|------|-----|-----------|-----------------|
| 0    | 3   | Till      |                 |
| 3    | 166 | Sandstone |                 |
| 166  | 175 | Coal      |                 |
| 175  | 178 | Shale     |                 |
| 178  | 180 | Coal      |                 |
| 180  | 185 | Shale     |                 |
| 185  | 200 | Sandstone | QU-78-242 166.7 |
|      |     |           | 198 4.1         |
|      |     |           | 0.3             |
|      |     |           | 2.9 } #3        |
|      |     |           | 3.9 } 10.0      |
|      |     |           | 2.4 } 10.0      |
|      |     |           | 1.2 } 10.0      |
|      |     |           | 0.6 } 10.0      |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LUSCAR LTD. corehole log

CHECKED SEP 2 2 1978

Quinsam

37+50

1750 Lt.

HOLE NO. QU-78-243C

PAGE 2 OF 2

| CORE NO.          | CORE FOOTAGES |              |              |              |              | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH   |
|-------------------|---------------|--------------|--------------|--------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|                   | DRILLED       |              |              | RECOVERED    |              |                                                                                                                                             |              |
|                   | FROM          | TO           | TOT.         | SEC.         | TOT.         |                                                                                                                                             |              |
| <del>211.73</del> | <del>X</del>  | <del>X</del> | <del>X</del> | <del>X</del> | <del>X</del> |                                                                                                                                             |              |
|                   |               |              |              | 0.95         |              | COAL: Bright blocky, broken, visible pyrite, light, easy to break                                                                           |              |
|                   |               |              |              | 0.1          |              | CARBONACEOUS MUDROCK: dark brown, abundant coaly bits                                                                                       |              |
| <del>212.33</del> | <del>X</del>  | <del>X</del> | <del>X</del> | <del>X</del> | <del>X</del> |                                                                                                                                             |              |
|                   |               |              |              | 0.5          |              | SANDSTONE: grey, massive, hard, medium grained                                                                                              |              |
| <del>213.93</del> | <del>X</del>  | <del>X</del> | <del>X</del> | <del>X</del> | <del>X</del> |                                                                                                                                             |              |
|                   |               |              |              | 1.6          |              | COAL: bright, blocky, abundant pyrite stringers and disseminated, calcite on cleats, light and easily broken                                |              |
| 4                 | 215           | 223          | 8.2          | 2.15         |              | SILTSTONE: dark brown, carbonaceous, broken, fissile, minor coaly laminae.                                                                  |              |
|                   |               |              |              | 1.05         |              | COAL: bright blocky, broken, light, easy to break, abundant pyrite, some boney laminae in top half                                          |              |
|                   |               |              |              | 4.95         |              | SILTSTONE: grey brown, soft, fissile, minor coal laminae                                                                                    |              |
| <del>X</del>      | TOTALS        |              | <del>X</del> | <del>X</del> |              | ÷ X 100 = % REC. SEAM                                                                                                                       | <del>X</del> |
|                   |               |              |              |              |              | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |              |

# LUSCAR LTD. corehole log

CHECKED 2 2 1978

37+50-1750 Lt.

QUINSAM

HOLE NO. QU-78-243C

PAGE 1 OF 2

| CORE NO.          | CORE FOOTAGES  |                |                |                |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH  |         |
|-------------------|----------------|----------------|----------------|----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|
|                   | DRILLED        |                |                | RECOVERED      |      |                                                                                                                                             |             |         |
|                   | FROM           | TO             | TOT.           | SEC.           | TOT. |                                                                                                                                             |             |         |
| <del>2</del>      | <del>199</del> | <del>207</del> | <del>7.3</del> | <del>1.1</del> |      |                                                                                                                                             |             |         |
| 200.1             |                |                |                | 3.8            |      | SANDSTONE: green grey, massive, hard medium grained                                                                                         |             |         |
| Sample 1          |                |                |                | 0.1            |      | COAL: bright, blocky, abundant visible pyrite, coal broken to crushed, single veinlet of pyrite.                                            |             |         |
|                   |                |                |                | 0.1            |      | MUDROCK: grey brown, soft, broken                                                                                                           |             |         |
| <del>205.15</del> |                |                |                | 1.15           |      | COAL: bright blocky, visible pyrite on cleats, more massive                                                                                 |             |         |
|                   |                |                |                | 0.1            |      | CARBONACEOUS MUDROCK, dark brown coaly bits throughout, soft, wet                                                                           |             |         |
|                   |                |                |                | 1.55           |      | MUDROCK: dark brown to brown grey locally carbonaceous, upper ct. wet, soft                                                                 |             |         |
| 3                 | 207            | 215            | 7              | 0.85           |      | MUDROCK: (as above) very wet, minor harder siltstone bands                                                                                  |             |         |
|                   |                |                |                | 0.2            |      | SILTSTONE: brown grey, broken to crushed                                                                                                    |             |         |
| <del>208.05</del> |                |                |                | 2.6            |      | COAL: bright & blocky; broken to crushed, abundant pyrite, some amber                                                                       |             |         |
|                   |                |                |                | 0.13           |      | MUDROCK: dark brown, very wet, mushy                                                                                                        |             |         |
| <del>X</del>      | TOTALS         |                |                | <del>X</del>   | ÷    | X 100 =                                                                                                                                     | % REC.      | SEAM    |
|                   |                |                |                |                | ÷    | X 100 =                                                                                                                                     | % TOT. REC. | SEAM(S) |





# LEXCO TESTING LTD.

CHECKED AUG 23 1978

## DRILLHOLE REPORT

COAL FIELD: QUINSAM LAKE DATE: AUG. 18/78

COMPANY: LEXCO TESTING

HOLE No.: QU-78-243C

APPROX. LOCATION: 37+50 1750 L.T. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 37+61 - 1684 L.T.

ELEVATION: 1035'

DRILLER: C. Gardner

| FROM | TO  | LOG                           | REMARKS                 |
|------|-----|-------------------------------|-------------------------|
| 0    | 4   | Till                          | E-Log                   |
| 4    | 61  | Sandstone                     | R. J. Ronaghan          |
| 61   | 62  | Coal                          | <u>QU-78-243C</u> 198.2 |
| 62   | 66  | Sandstone                     | 228' 5.9                |
| 66   | 68  | Grey shale                    | 3.2 2.9 } #3 seam       |
| 68   | 154 | Sandstone                     | 0.3 1.1 } 11.4          |
| 154  | 197 | Sandstone                     | 0.5 1.5 }               |
| 197  | 200 | Grey shale                    | 2.9 1.0 Dirty           |
| 200  | 206 | Coal                          |                         |
| 206  | 208 | Grey shale                    |                         |
| 208  | 218 | Coal with Grey Shale Partings |                         |
| 218  | 231 | Grey Shale                    |                         |
|      |     |                               |                         |
|      |     |                               |                         |
|      |     |                               |                         |
|      |     |                               |                         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED OCT 17 1978

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: August 18, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-244

APPROX. LOCATION: 750 4000Lt SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 7+38 4009LT

ELEVATION: 1147

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS         |
|------|-----|-----------|-----------------|
| 0    | 4   | Till      |                 |
| 4    | 208 | Sandstone |                 |
| 208  | 216 | Coal      |                 |
| 216  | 219 | Shale     |                 |
| 219  | 221 | Coal      |                 |
| 221  | 226 | Shale     |                 |
| 226  | 240 | Sandstone | QU-78-244 208.5 |
|      |     |           | 238             |
|      |     |           | 1.5 } #3        |
|      |     |           | 6.2 } #3        |
|      |     |           | 2.1 } 8.9       |
|      |     |           | 2.7 } 8.9       |
|      |     |           | 1.6 } 8.9       |
|      |     |           | 0.8 } 8.9       |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
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|      |     |           |                 |
|      |     |           |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: August 19, 1978  
COMPANY: Lexco Testing Ltd.  
HOLE No.: QU-78-245  
APPROX. LOCATION: 1250 4500 LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_  
SURVEYED LOCATION: 12+33 4502 LT  
ELEVATION: 1152  
DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS         |
|------|-----|-----------|-----------------|
| 0    | 2   | Till      |                 |
| 2    | 166 | Sandstone |                 |
| 166  | 174 | Coal      |                 |
| 174  | 177 | Shale     |                 |
| 177  | 179 | Coal      |                 |
| 179  | 184 | Shale     |                 |
| 184  | 200 | Sandstone | QU-78-245 166.9 |
|      |     |           | 199             |
|      |     |           | 0.3 5.1         |
|      |     |           | 2.0             |
|      |     |           | 2.3 } #3        |
|      |     |           | 2.4 } 9.5       |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |
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|      |     |           |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: August 19, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-246

APPROX. LOCATION: 1250 4000LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 12+62 4035LT

ELEVATION: 1129

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS            |
|------|-----|-----------|--------------------|
| 0    | 5   | Till      |                    |
| 5    | 195 | Sandstone |                    |
| 195  | 204 | Coal      |                    |
| 204  | 207 | Shale     |                    |
| 207  | 209 | Coal      |                    |
| 209  | 214 | Shale     |                    |
| 214  | 230 | Sandstone | QU-78-246 197.0    |
|      |     |           | 197.0 0.9 7.1 } #3 |
|      |     |           | 0.2                |
|      |     |           | 1.0                |
|      |     |           | 2.6 } 10.7         |
|      |     |           | 2.0                |
|      |     |           | 0.8                |
|      |     |           |                    |
|      |     |           |                    |
|      |     |           |                    |
|      |     |           |                    |
|      |     |           |                    |
|      |     |           |                    |

COMMENTS: \_\_\_\_\_

CHECKED 8/27/78

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 20/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-247

APPROX. LOCATION: 1250 5000 LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 12+58 - ~~4095~~ IT 5095' left see geotechn  
log

ELEVATION: 1162

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                                                                       |
|------|-----|-----------|-------------------------------------------------------------------------------|
| 0    | 15  | Till      | E - Log R.J. Ronaghan                                                         |
| 15   | 116 | Sandstone |                                                                               |
| 116  | 123 | Coal      | <u>QU-78-247</u> <u>116.2</u>                                                 |
| 123  | 127 | Shale     | 159 <span style="float: right;">6.7</span>                                    |
| 127  | 130 | Coal      | <span style="float: right;">5.8</span>                                        |
| 130  | 135 | Shale     | <span style="float: right;">1.3</span> #3 sea                                 |
| 135  | 160 | Sandstone | <span style="float: right;">0.4</span> <span style="float: right;">8.8</span> |
|      |     |           | <span style="float: right;">0.8</span>                                        |
|      |     |           | <span style="float: right;">1.9</span>                                        |
|      |     |           | <span style="float: right;">0.3</span>                                        |
|      |     |           |                                                                               |
|      |     |           |                                                                               |
|      |     |           |                                                                               |
|      |     |           |                                                                               |
|      |     |           |                                                                               |
|      |     |           |                                                                               |
|      |     |           |                                                                               |
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|      |     |           |                                                                               |
|      |     |           |                                                                               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam Lake DATE: Aug. 20/78

COMPANY: Lexco Testing

HOLE No.: QU-78-248

APPROX. LOCATION: 37+50 2400 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 37+47-2417 LT

ELEVATION: 1047

DRILLER: C. Gardner

| FROM | TO  | LOG                      | REMARKS           |
|------|-----|--------------------------|-------------------|
| 0    | 210 | Sandstone                | E-Log             |
| 210  | 213 | Sandstone                | QU- 78 - 248      |
| 213  | 223 | Coal                     | 341 211.4<br>2.6  |
| 223  | 231 | Grey shale               | 1.2<br>2.8        |
| 231  | 299 | Sandstone                | 0.8<br>1.7        |
| 299  | 301 | Siltstone                | 1.6<br>6.9        |
| 301  | 306 | Sandstone                | 84.3<br>1.7       |
| 306  | 316 | Coal with shale partings | 4.8<br>0.7 dirty  |
| 316  | 345 | Grey silty shale         | 0.9<br>0.6 dirty  |
|      |     |                          | 15.7<br>1.5 dirty |
|      |     |                          |                   |
|      |     |                          |                   |
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|      |     |                          |                   |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 21, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-249

APPROX. LOCATION: 750 5250 LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 7+50 - 5205 LT

ELEVATION: 1162

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                |
|------|-----|-----------|------------------------|
| 0    | 207 | Sandstone | E - Log R.J. Ronaghan  |
| 207  | 211 | Coal      | QU-78-249 207.5        |
| 211  | 215 | Shale     | 298 1.0 Dirty }<br>2.7 |
| 215  | 220 | Coal      | 4.8                    |
| 220  | 225 | Shale     | 1.0 Dirty #3           |
| 225  | 295 | Sandstone | 2.1                    |
| 295  | 300 | Basalt    | 0.9 Dirty              |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
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|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           | CHECKED OCT 17 1978    |
|      |     |           |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam Lake DATE: Aug. 21/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-250

APPROX. LOCATION: 45+50 2600 LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 44+98 - 2527 LT

ELEVATION: 1000

DRILLER: C. Gardner

| FROM | TO  | LOG                                    | REMARKS             |
|------|-----|----------------------------------------|---------------------|
| 0    | 15  | Till                                   | E - Log             |
| 15   | 20  | Grey shale                             | QU-78-250 62.3      |
| 20   | 43  | Sandstone                              | 106 0.7 Dirty       |
| 43   | 62  | Grey shale (silty) with traces of coal | 1.0 #2 ?            |
| 62   | 97  | Grey shale                             |                     |
| 97   | 103 | Sandstone                              |                     |
| 103  | 108 | Basalt                                 |                     |
|      |     |                                        |                     |
|      |     |                                        |                     |
|      |     |                                        |                     |
|      |     |                                        |                     |
|      |     |                                        |                     |
|      |     |                                        | CHECKED OCT 17 1978 |
|      |     |                                        |                     |
|      |     |                                        |                     |
|      |     |                                        |                     |
|      |     |                                        |                     |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 22, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: OU-78-251

APPROX. LOCATION: 750 5600 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 7+55 - 5644LT

ELEVATION: 1173

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                |
|------|-----|-----------|------------------------|
| 0    | 5   | Till      | E-Log R.J. Ronaghan    |
| 5    | 157 | Sandstone |                        |
| 157  | 164 | Coal      | <u>QU-78-251 157.4</u> |
| 164  | 168 | Shale     | 218 4.0                |
| 168  | 170 | Coal      | 0.9                    |
| 170  | 175 | Shale     | 0.7                    |
| 175  | 205 | Sandstone | 0.2                    |
| 205  | 220 | Besalt    | 0.6 #3Seap             |
|      |     |           | 0.3                    |
|      |     |           | 0.7                    |
|      |     |           | 2.5                    |
|      |     |           | 0.8                    |
|      |     |           | 0.8                    |
|      |     |           | 1.1                    |
|      |     |           |                        |
|      |     |           |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 22/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-252

APPROX. LOCATION: 1750 5750 LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 17+63 - 5711LT

ELEVATION: 1195

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                |
|------|-----|-----------|------------------------|
| 0    | 4   | till      | E - Log R.J. Ronaghan  |
| 4    | 156 | Sandstone |                        |
| 156  | 162 | Coal      | <u>QU-78-252 154.0</u> |
| 162  | 180 | Shale     | <u>178'</u>            |
|      |     |           | 0.4                    |
|      |     |           | 1.2                    |
|      |     |           | 1.6                    |
|      |     |           | 0.4 dirty              |
|      |     |           | 0.8 1 & 2              |
|      |     |           | 0.8 3.8                |
|      |     |           | 0.8 dirty              |
|      |     |           | 0.6                    |
|      |     |           | 0.4                    |
|      |     |           | 1.0                    |
|      |     |           | 0.4                    |
|      |     |           | 0.6                    |
|      |     |           | 1.0                    |

COMMENTS: CHRONOLOGICAL LOG

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: August 22/78

COMPANY: Lexco Testing

HOLE No.: QU-78-253

APPROX. LOCATION: -250 5100 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: - 2 + 75 - 5145 Lt.

ELEVATION: 1180

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                      |
|------|-----|-----------|------------------------------|
| 0    | 6   | Till      |                              |
| 6    | 239 | Sandstone | E-Log<br>R. J. Romaghan      |
| 239  | 245 | Coal      |                              |
| 245  | 249 | Shale     | QU-78-253 239.0              |
| 249  | 251 | Coal      | 298<br>0.3 4.3               |
| 251  | 255 | Shale     | 2.9 2.2 Dirty #3 seam<br>8.1 |
| 255  | 285 | Sandstone | 0.4 1.3                      |
| 285  | 300 | Basalt    | 0.3                          |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           | CHECKED OCT 17 1978          |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |
|      |     |           |                              |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam Lake DATE: Aug 23/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-254C

APPROX. LOCATION: 7+50 4250C LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 7+58 - 4253 LT

ELEVATION: 1161

DRILLER: C. Gardner

| FROM | TO  | LOG                              | REMARKS             |
|------|-----|----------------------------------|---------------------|
| 0    | 4   | till                             | E-Log R.J. Ronaghan |
| 4    | 182 | Sandstone                        | QU-78-254C 180.7    |
| 182  | 190 | Coal (Fractured)                 | 205' 3.7            |
| 190  | 196 | Sandstone and grey shale (mixed) | 0.5 3.6             |
| 196  | 198 | Coal (Fractured)                 | 2.6 #3 seam 10.8    |
| 198  | 200 | Coal (Fractured)                 | 1.8 0.9             |
| 200  | 210 | Sandstone                        |                     |
|      |     |                                  |                     |
|      |     |                                  |                     |
|      |     |                                  |                     |
|      |     |                                  |                     |
|      |     |                                  |                     |
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|      |     |                                  |                     |

CHECKED OCT 17 1978

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

# -coring report

PROSPECT: Quinsam Lake

DATE: Aug. 23/78

LOCATION: 7+50 4250 L.T.

HOLE# QU-78-254C

CONTRACTOR: Lexco Testing

RIG# 06

| CORE | FOOTAGE |     | TIME |    | MIN. | CUT   | REC. | TUBES | REMARKS |     |
|------|---------|-----|------|----|------|-------|------|-------|---------|-----|
|      | FROM    | TO  | FROM | TO |      |       |      |       |         |     |
| 1    | 182     | 190 |      |    |      | 8     | 6'5" | 1     |         |     |
| 2    | 190     | 198 |      |    |      | 8     | 6'4" | 1     |         |     |
| 3    | 198     | 206 |      |    |      | 8     | 8'3" | 1     |         |     |
| 4    | 206     | 210 |      |    |      | 4     | 3'2" |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
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|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      |       |      |       |         |     |
|      |         |     |      |    |      | Total | 28'  | 247"  | 3       | 88% |

SUPERVISOR: \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 24, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-255

APPROX. LOCATION: 750 5000 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 7 + 51 - 4985 LT

ELEVATION: 1146

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                       |
|------|-----|-----------|-------------------------------|
| 0    | 35  | Till      |                               |
| 35   | 180 | Sandstone |                               |
| 180  | 184 | Coal      | Fault at 116'                 |
| 184  | 200 | Sandstone |                               |
|      |     |           | E-Log R.J. Ronaghan           |
|      |     |           | <u>QU-78-255</u> <u>181.7</u> |
|      |     |           | 1.2 #3 seam                   |
|      |     |           | 0.2      1.8                  |
|      |     |           | 0.6 sheared                   |
|      |     |           |                               |
|      |     |           |                               |
|      |     |           |                               |
|      |     |           |                               |
|      |     |           |                               |
|      |     |           |                               |
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|      |     |           |                               |
|      |     |           |                               |
|      |     |           |                               |
|      |     |           |                               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 29/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-257

APPROX. LOCATION: 1250 5750 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 12+45 - 5704 LT

ELEVATION: 1182

DRILLER: H. Vincett

| FROM | TO  | LOG                | REMARKS             |
|------|-----|--------------------|---------------------|
| 0    | 6   | till               | E-Log R.J. Ronaghan |
| 6    | 137 | Sandstone          | QU-78-257 137.3     |
| 137  | 144 | Coal Shale parting | 178 4.7             |
| 144  | 150 | Shale              | 0.4                 |
| 150  | 170 | Sandstone          | 0.6 #3 seam         |
| 170  | 180 | Green sandstone    | 0.3 6.8             |
|      |     |                    | 1.5                 |
|      |     |                    | 9.4                 |
|      |     |                    | 0.8                 |
|      |     |                    | 1.2 Bottom          |
|      |     |                    | 0.9 Rider           |
|      |     |                    | 2.7                 |
|      |     |                    | 0.7                 |
|      |     |                    |                     |
|      |     |                    |                     |
|      |     |                    |                     |
|      |     |                    |                     |
|      |     |                    |                     |

CHECKED OCT 17 1978

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

# - coring report

PROSPECT: Quinsam Lake

DATE: Aug. 29/78

LOCATION: 7+50 4800 L.T.

HOLE# QU-78-258C

CONTRACTOR: Lexco Testing

RIG# 06

| CORE | FOOTAGE |     | TIME |    | MIN. | CUT   | REC.  | TUBES | REMARKS |     |
|------|---------|-----|------|----|------|-------|-------|-------|---------|-----|
|      | FROM    | TO  | FROM | TO |      |       |       |       |         |     |
| 1    | 151     | 158 |      |    |      | 7     | 6'8"  | 1     |         |     |
| 2    | 158     | 163 |      |    |      | 5     | 4'10" | 1     |         |     |
| 3    | 163     | 171 |      |    |      | 8     | 6'2"  | 1     |         |     |
| 4    | 171     | 179 |      |    |      | 8     | 9'6"  |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      |       |       |       |         |     |
|      |         |     |      |    |      | Total | 28'   | 27'1" | 3       | 96% |

SUPERVISOR: C. Gardner

# LUSCAR LTD. corehole log

HOLE NO. QU-78-258C

PAGE 2 OF 2

| CORE NO. | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X  |      | X         |      |                                                                                                                                             |            |
|          |               |    |      | 0.6       |      | Carbonaceous, siltstone dark brown, broken, soft.                                                                                           |            |
|          |               |    |      | 3.8       |      | Sandstone, grey to light cream, fine to medium grained, hard, lithic.                                                                       |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
| X        | TOTALS        |    |      | X         |      |                                                                                                                                             |            |
|          |               |    |      |           |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |    |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LUSCAR LTD. corehole log

HOLE NO. QU-78-258C

PAGE 1 OF 2

Quinsam

7+50 - 4800 LT

| CORE NO.   | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|------------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|            | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|            | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| 151.0      |               |     |      |           |      |                                                                                                                                             |            |
| Sample # 1 | 151           | 158 | 6.6  | 3.3       |      | Coal bright, blocky, light easy to break, amber, visable pyrite                                                                             |            |
|            |               |     |      | 0.05      |      | Sandstone, carbonated, dark brown, medium grained, hard                                                                                     |            |
| 157.9      |               |     |      | 3.15      |      | Coal as above, but more massive                                                                                                             |            |
|            |               |     |      | 0.1       |      | Sandstone, brown, medium grained, hard                                                                                                      |            |
| 2          | 158           | 163 | 4.8  | 2.5       |      | Siltstone, dark brown, numerous coaly bands, medium hard                                                                                    |            |
|            |               |     |      | 0.45      |      | Coal, minor boney lenses, medium hard                                                                                                       |            |
|            |               |     |      | 0.15      |      | Coal, bright, blocky, massive, easy to break, light.                                                                                        |            |
|            |               |     |      | 0.55      |      | Boney coal, dark brown black, hard, fissile                                                                                                 |            |
|            |               |     |      | 0.73      |      | Siltstone, dark brown, broken, wet                                                                                                          |            |
|            |               |     |      | 0.45      |      | Coal, bright, blocky, medium hard.                                                                                                          |            |
| 3          | 163           | 171 | 6.15 | 0.1       |      | Siltstone, dark brown, massive, medium hard                                                                                                 |            |
|            |               |     |      | 0.8       |      | Sandstone, light brown, massive, hard.                                                                                                      |            |
|            |               |     |      | 0.8       |      | Coal, bright, blocky, broken                                                                                                                |            |
|            | TOTALS        |     |      |           |      | ÷ X 100 = % REC. SEAM                                                                                                                       |            |
|            |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 30/78

COMPANY: Lexco Testing

HOLE No.: QU-78-259

APPROX. LOCATION: 250 5000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 2 + 47 - 5023 Lt.

ELEVATION: 1157

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS              |
|------|-----|-----------|----------------------|
| 0    | 6   | Till      | E-Log                |
| 6    | 231 | Sandstone | R. J. Ronaghan       |
| 231  | 235 | Coal      | QU-78-259 231.5      |
| 235  | 239 | Shale     | 258' 4.5             |
| 239  | 241 | Coal      | 2.6 0.9 Dirty #3 se. |
| 241  | 245 | Shale     | 1.4 6.8              |
| 245  | 251 | Sandstone |                      |
| 251  | 260 | Basalt    |                      |
|      |     |           |                      |
|      |     |           |                      |
|      |     |           |                      |
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|      |     |           |                      |
|      |     |           |                      |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 30/78

COMPANY: Lexco Testing

HOLE No.: QU-78-260

APPROX. LOCATION: 250 4750 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 2+59 - 4770 Lt

ELEVATION: 1165

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS     |
|------|-----|---------------------|-------------|
| 0    | 156 | Sandstone E-Log     |             |
| 156  | 161 | Coal R. J. Ronaghan |             |
| 161  | 167 | Shale QU-78-260     | 155.6       |
| 167  | 170 | Coal                | 178<br>6.4  |
| 170  | 180 | Shale               | 1.5         |
|      |     |                     | 0.5         |
|      |     |                     | 0.2         |
|      |     |                     | 0.4         |
|      |     |                     | 2.2 #3 seam |
|      |     |                     | 0.3 6.4     |
|      |     |                     | 0.3         |
|      |     |                     | 0.7         |
|      |     |                     | 0.6         |
|      |     |                     | 1.3         |
|      |     |                     | 0.6         |
|      |     |                     |             |
|      |     |                     |             |
|      |     |                     |             |
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|      |     |                     |             |
|      |     |                     |             |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 31/78

COMPANY: Lexco Testing

HOLE No.: QU-78-261

APPROX. LOCATION: 250 4500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 2 + 60 - 4518 Lt.

ELEVATION: 1162

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                |
|------|-----|-----------|------------------------|
| 0    | 5   | Till      | E-Log                  |
| 5    | 160 | Sandstone | R. J. Ronaghan         |
| 160  | 166 | Coal      |                        |
| 166  | 170 | Shale     | <u>QU-78-261</u> 160.0 |
| 170  | 172 | Coal      | 198 6.2                |
| 172  | 176 | Shale     | 3.6 0.4                |
| 176  | 200 | Sandstone | 0.8 #3 seam 1.0 7.6    |
|      |     |           | 1.2 0.4                |
|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |
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|      |     |           |                        |
|      |     |           |                        |
|      |     |           |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT.



# LEXCO TESTING LTD.

DATE: \_\_\_\_\_

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Aug. 31/78

COMPANY: Lexco Testing

HOLE No.: QU-78-262

APPROX. LOCATION: 250 4250 Lt SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 2+50 4274 Lt.

ELEVATION: 1164

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS       |
|------|-----|---------------------|---------------|
| 0    | 5   | Till                |               |
| 5    | 183 | Sandstone E-Log     |               |
| 183  | 190 | Coal R. J. Ronaghan |               |
| 190  | 194 | Shale QU-78-262     | 183.0         |
| 194  | 196 | Coal 218            | 7.9 } #3 seam |
| 196  | 200 | Shale               | 2.5 } 8.6     |
| 200  | 220 | Sandstone           | 0.7 }         |
|      |     |                     | 1.9           |
|      |     |                     | 3.3 dirty     |
|      |     |                     |               |
|      |     |                     |               |
|      |     |                     |               |
|      |     |                     |               |
|      |     |                     |               |
|      |     |                     |               |
|      |     |                     |               |
|      |     |                     |               |
|      |     |                     |               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

















# LUSCAR LTD. corehole log

Quinsam  
2+50 - 5250 Lt.

HOLE NO. QU-78-267C  
PAGE 1 OF 2

| CORE NO.     | CORE FOOTAGES |              |      |              |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH   |
|--------------|---------------|--------------|------|--------------|------|---------------------------------------------------------------------------------------------------------------------------------------------|--------------|
|              | DRILLED       |              |      | RECOVERED    |      |                                                                                                                                             |              |
|              | FROM          | TO           | TOT. | SEC.         | TOT. |                                                                                                                                             |              |
| <del>X</del> | <del>X</del>  | <del>X</del> |      | <del>X</del> |      |                                                                                                                                             |              |
| 2            | 221           | 229          | 8.2  | 8.2          |      | Sandstone, green grey, massive, very hard                                                                                                   |              |
| 3            | 229           | 237          | 8.3  | 2.95         |      | Sandstone as above, contact with coal<br>very pyritic                                                                                       |              |
| 231.95       |               |              |      | 3.58         |      | Coal, bright blocky, massive, light and<br>easily broken, abundant pyrite<br>both disseminated and in bands or<br>veinlets                  |              |
| Sample #1    |               |              |      | 0.10         |      | Bony coal dark dull brown massive<br>numerous coaly bands                                                                                   |              |
| 235.98       |               |              |      | 1.45         |      | Coal as above                                                                                                                               |              |
|              |               |              |      | 0.32         |      | Siltstone, dark grey brown, carbonaceous,<br>soft, fissile                                                                                  |              |
| 4            | 237           | 242          | 4.95 | 0.1          |      | Siltstone                                                                                                                                   |              |
|              |               |              |      | 0.3          |      | Coal as above                                                                                                                               |              |
|              |               |              |      | 2.2          |      | Siltstone, dark, soft, minor coal lenses,<br>fissile                                                                                        |              |
|              |               |              |      | 1.02         |      | Mudrock, dark brown, soft, wet                                                                                                              |              |
| 240.52       |               |              |      | 1.3          |      | Bony coal, bright and dull banded<br>fissile, broken                                                                                        |              |
| Sample #2    |               |              |      |              |      |                                                                                                                                             |              |
| <del>X</del> | TOTALS        |              |      | <del>X</del> |      | ÷ X 100 = % REC. SEAM                                                                                                                       | <del>X</del> |
|              |               |              |      |              |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               | <del>X</del> |











# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept 4/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-273

APPROX. LOCATION: 1250 6000 LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 12+43 - 5982 LT

ELEVATION: 1196

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS               |
|------|-----|-----------|-----------------------|
| 0    | 14  | Till      | E-Log R.J. Ronaghan   |
| 14   | 92  | Sandstone | QU-78-273 93.2        |
| 92   | 97  | Coal      | <u>138</u> 1.6        |
| 97   | 99  | Shale     | 0.5 dirty             |
| 99   | 101 | Coal      | 0.7<br>0.6            |
| 101  | 109 | Shale     | 0.9 1.4 dirty #3 seam |
| 109  | 113 | Coal      | 0.5 5.8               |
| 113  | 120 | Shale     | 0.6                   |
| 120  | 140 | Sandstone | 1.2                   |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           |                       |
|      |     |           | CHECKED 007 17 1978   |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept 4/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-274

APPROX. LOCATION: 1250 6250 Lt SEC.  TWP.  RGE.  W.

SURVEYED LOCATION: 12+44 - 6183 LT

ELEVATION: 1203

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS             |
|------|-----|---------------------|---------------------|
| 0    | 74  | Sandstone           | E-Log R.J. Ronaghan |
| 74   | 78  | Coal                |                     |
| 78   | 80  | Shale               | QU-78-274 72.3      |
| 80   | 84  | Coal Shale partings | 118 1.7             |
| 84   | 87  | Shale               | 1.0 0.7             |
| 87   | 94  | Coal Shale partings | 0.8 Dirty 0.5 #3    |
| 94   | 103 | Shale               | 0.4 seam 0.8        |
| 103  | 120 | Sandstone           | 0.8 5.1 0.7         |
|      |     |                     | 0.7                 |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     |                     |
|      |     |                     | CHECKED 9/7/78      |
|      |     |                     |                     |
|      |     |                     |                     |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept 5/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-276

APPROX. LOCATION: 1250 3300 LT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 12 + 51 - 3360 LT

ELEVATION: 1132

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS                       |
|------|-----|---------------------|-------------------------------|
| 0    | 258 | Sandstone           | E-Log R.J. Ronaghan           |
| 258  | 270 | Coal Shale Partings | <u>QU-78-276</u> <u>260.1</u> |
| 270  | 275 | Shale               | 2.9                           |
| 275  | 300 | Sandstone           | 0.2<br>3.0 #3 seam            |
|      |     |                     | 0.5 8.5                       |
|      |     |                     | 2.6                           |
|      |     |                     |                               |
|      |     |                     |                               |
|      |     |                     |                               |
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|      |     |                     |                               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam Lake DATE: Sept 6/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-279

APPROX. LOCATION: 21 + 50 4250 LT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 21+41 - 4318 LT

ELEVATION: 1145

DRILLER: C. Gardner

| FROM | TO  | LOG                    | REMARKS          |
|------|-----|------------------------|------------------|
| 0    | 195 | Sandstone              | E-Log            |
| 195  | 207 | Coal (Shale Partings ) | QU - 78- 279     |
| 207  | 211 | Grey shale             | 220 192.5<br>5.0 |
| 211  | 225 | Sandstone              | 0.6<br>3.1       |
|      |     |                        | 0.8<br>3.0       |
|      |     |                        |                  |
|      |     |                        |                  |
|      |     |                        |                  |
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|      |     |                        |                  |
|      |     |                        |                  |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_









# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED NOV 0 8 1978

COAL FIELD: QUINSAM LAKE DATE: Sept. 13/78

COMPANY: Lexco Testing

HOLE No.: QU-78-283

APPROX. LOCATION: -7+50 5250 Lt. SEC. TWP. RGE. W.

SURVEYED LOCATION: -7+57 - 5270 Lt.

ELEVATION: 1191

DRILLER: C. Gardner

| FROM | TO  | LOG                      | REMARKS               |
|------|-----|--------------------------|-----------------------|
| 0    | 174 | Sandstone                |                       |
| 174  | 175 | Coal E-Log               |                       |
| 175  | 205 | Sandstone R. J. Ronaghan |                       |
|      |     | QU-78-283                | 172.3                 |
|      |     | 202                      | 0.5 ?                 |
|      |     |                          | Hole not deep enough. |
|      |     |                          |                       |
|      |     |                          |                       |
|      |     |                          |                       |
|      |     |                          |                       |
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|      |     |                          |                       |
|      |     |                          |                       |

COMMENTS:

WATER HORIZON: Ft.



# LEXCO TESTING LTD.

CHECKED NOV 0 8 1978

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept. 14/78

COMPANY: Lexco Testing

HOLE No.: QU-78-285

APPROX. LOCATION: - 1250 3750' Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: - 12 + 58 - 3792 Lt.

ELEVATION: 1147

DRILLER: H. Vincett

| FROM | TO  | LOG             | REMARKS                |
|------|-----|-----------------|------------------------|
| 0    | 199 | Sandstone E-Log |                        |
| 199  | 204 | Coal            | R. J. Ronaghan         |
| 204  | 209 | Shale           | <u>QU-78-285</u> 197.5 |
| 209  | 220 | Sandstone       | 218 1.3                |
|      |     |                 | 0.4 } #3 seam          |
|      |     |                 | 2.0 } 3.3              |
|      |     |                 |                        |
|      |     |                 |                        |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT.

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

CHECKED NOV 6 8 1978

COAL FIELD: Quinsam DATE: Sept. 14, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-286

APPROX. LOCATION: -7+50 5000 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: -7+54 - 4920 Lt.

ELEVATION: 1189

DRILLER: C. Gardner

| FROM | TO  | LOG                             | REMARKS          |
|------|-----|---------------------------------|------------------|
| 0    | 88  | Sandstone E-Log                 |                  |
| 88   | 89  | Carbonated Shale R. J. Ronaghan |                  |
| 89   | 157 | Sandstone QU-78-286             | 154.8            |
| 157  | 171 | Shale with Coal Partings 221    | 4.0<br>0.6 dirty |
| 171  | 180 | Grey Shale                      | 0.6<br>0.2 dirty |
| 180  | 220 | Sandstone                       | 0.8<br>1.3 dirty |
| 220  | 225 | Basalt                          |                  |
|      |     |                                 |                  |
|      |     |                                 |                  |
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|      |     |                                 |                  |

#3 seam  
4.8

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: Sept. 15/78

COMPANY: Lexco Testing

HOLE No.: QU-78-287

APPROX. LOCATION: 3+50 750 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 1+77 - 722 Rt

ELEVATION: 840

DRILLER: C. Gardner

| FROM | TO | LOG                      | REMARKS                          |
|------|----|--------------------------|----------------------------------|
| 0    | 18 | Till                     | E-Log                            |
| 18   | 22 | Sandstone                | R. J. Ronaghan<br>QU-78-287 39.3 |
| 22   | 45 | Shale with coal partings | 80 2.5                           |
| 45   | 71 | Coal                     | 1.5 1.6                          |
| 71   | 85 | Grey Shale               | 1.1 1.0                          |
|      |    |                          | 1.3 1.2                          |
|      |    |                          | 1.4 1.2                          |
|      |    |                          | 0.9 1.2 #3 sea                   |
|      |    |                          | 5.0 14.8                         |
|      |    |                          | 0.7 3.7 dirt                     |
|      |    |                          | 0.8 dirty                        |
|      |    |                          | 1.7 2.3 dirty                    |
|      |    |                          | 0.6 0.6 dirty                    |
|      |    |                          | 4.4 1.0                          |
|      |    |                          | 1.3 1.3                          |

COMMENTS: \_\_\_\_\_

*Handwritten notes:*  
11/22/78  
11/24/78

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

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## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept. 15/78

COMPANY: Lexco Testing

HOLE No.: QU-78-288

APPROX. LOCATION: 900 800 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 8+89 - 803 Rt.

ELEVATION: 1034

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS            |
|------|-----|---------------------|--------------------|
| 0    | 16  | Shattered Sandstone |                    |
| 16   | 217 | Sandstone           | E-Log              |
| 217  | 223 | Coal                | R. J. Ronaghan     |
| 223  | 233 | Shale               | QU-78-288 217.2    |
| 233  | 260 | Sandstone           | 0.8<br>0.6 #3 seam |
|      |     |                     | 3.0<br>2.2 3.6     |
|      |     |                     |                    |
|      |     |                     |                    |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED BY: \_\_\_\_\_

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept. 16, 1978

COMPANY: Lexco Testing

HOLE No.: QU-78-289

APPROX. LOCATION: 900 500 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 9+26 - 542 Rt.

ELEVATION: 1011 Elev.

DRILLER: H. Vincett

| FROM | TO  | LOG                      | REMARKS  |
|------|-----|--------------------------|----------|
| 0    | 3   | Till E-Log               |          |
| 3    | 38  | Sandstone R. J. Ronaghan |          |
| 38   | 43  | Shale QU-78-289          | 216.8    |
| 43   | 214 | Sandstone 378            | 88.5 1.6 |
| 214  | 218 | Coal                     | 0.6 3.2  |
| 218  | 306 | Sandstone                | 0.4 1.9  |
| 306  | 311 | Coal                     | 3.9 1.9  |
| 311  | 317 | Shale                    | 13.0 1.0 |
| 317  | 318 | Coal                     | 0.4 1.1  |
| 318  | 333 | Sandstone                | 0.7      |
| 333  | 335 | Coal                     |          |
| 335  | 355 | Sandstone                |          |
| 355  | 361 | Shale                    |          |
| 361  | 380 | Sandstone                |          |
|      |     |                          |          |
|      |     |                          |          |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_









# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept. 30/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-292 redrill

APPROX. LOCATION: 1950 1500 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 19+01 - 1429 RT

ELEVATION: 1000

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                |
|------|-----|-----------|------------------------|
| 0    | 109 | till      | E-log                  |
| 109  | 130 | Shale     | OU-78-292<br>259 129.5 |
| 130  | 131 | Coal      | 2.5                    |
| 131  | 136 | Shale     | 68.2                   |
| 136  | 200 | Sandstone | 0.4                    |
| 200  | 214 | Coal      | 3.1                    |
| 214  | 222 | Shale     | 0.7                    |
| 222  | 238 | Sandstone | 2.3                    |
| 238  | 245 | Shale     | 0.5                    |
| 245  | 260 | Sandstone | 0.8                    |
|      |     |           | 0.3 Dirty              |
|      |     |           | 0.5                    |
|      |     |           | 0.6 dirty              |
|      |     |           |                        |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept. 19/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-293

APPROX. LOCATION: 1950 1000 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 19+05 - 964 Rt

ELEVATION: 1023

DRILLER: H. Vincett

| FROM | TO  | LOG                     | REMARKS   |
|------|-----|-------------------------|-----------|
| 0    | 36  | Sandstone E-Log         |           |
| 36   | 44  | Shale R. J. Ronaghan    |           |
| 44   | 216 | Sandstone QU-78-293     | 218.2     |
| 216  | 220 | Coal Shale Partings 337 | 0.7 dirty |
| 220  | 225 | Shale                   | 1.9       |
| 225  | 299 | Sandstone               | 7.77      |
| 299  | 306 | Coal                    | 0.3       |
| 306  | 309 | Shale                   | 5.7       |
| 309  | 312 | Coal                    | 2.9       |
| 312  | 322 | Shale                   | 2.2       |
| 322  | 340 | Sandstone               | 0.4       |
|      |     |                         | 1.2       |
|      |     |                         | 0.7 dirty |
|      |     |                         |           |
|      |     |                         |           |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

CHECKED 1 6 1978

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: Sept. 19/78

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-294

APPROX. LOCATION: 5+00 1200 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 3+92 -- 1111 Rt.

ELEVATION: 948

DRILLER: C. Gardner

| FROM | TO  | LOG                           | REMARKS                       |
|------|-----|-------------------------------|-------------------------------|
| 0    | 10  | Till                          | E-Log                         |
| 10   | 124 | Sandstone                     | R. J. Ronaghan                |
| 124  | 144 | Coal                          | <u>QU-78-294</u> <u>121.4</u> |
| 144  | 173 | Grey shale                    | 240      0.8<br>1.8           |
| 173  | 183 | Grey shale with coal partings | 5.6<br>0.6                    |
| 183  | 186 | Sandstone                     | 9.8<br>0.5                    |
| 186  | 217 | Grey shale with coal partings | 2.3<br>2.2                    |
| 217  | 244 | Sandstone                     | 1.1    dirty coal<br>1.0      |
|      |     |                               | 1.5                           |
|      |     |                               |                               |
|      |     |                               |                               |
|      |     |                               |                               |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

11/16/78

# LEXCO TESTING LTD.

CHECKED NOV 1 8 1978

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Sept. 21/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-295

APPROX. LOCATION: 1950 500 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 19+13 - 532 Rt

ELEVATION: 996

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS                           |
|------|-----|---------------------|-----------------------------------|
| 0    | 206 | Sandstone           | Fault at 70'                      |
| 206  | 208 | Shale               | E-Log                             |
| 208  | 280 | Sandstone           | R. J. Ronaghan                    |
| 280  | 282 | Coal                | <u>QU-78-295</u> 280.6<br>230 1.5 |
| 282  | 294 | Shale               | 12.2 1.0                          |
| 294  | 306 | Coal Shale partings | 9.4 1.0                           |
| 306  | 315 | Shale               | 1.0 1.8                           |
| 315  | 317 | Coal                | 0.5 0.7 #3 seam                   |
| 317  | 332 | Sandstone           | 3.8 1.2 6.3                       |
|      |     |                     | 1.6 1.6                           |
|      |     |                     |                                   |
|      |     |                     |                                   |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_









# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: Oct. 1/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-299

APPROX. LOCATION: 9+00 1050 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 8+68 1051 RT

ELEVATION: 1002

DRILLER: C. Gardner

| FROM | TO  | LOG                    | REMARKS          |
|------|-----|------------------------|------------------|
| 0    | 12  | Till                   | E-Log J. Nyberg  |
| 12   | 88  | Sandstone              | <u>QU-78-299</u> |
| 88   | 89  | Shale                  | 237 183.6        |
| 89   | 172 | Sandstone              | 3.0              |
| 172  | 185 | Sandstone, shale, coal | 13.2             |
| 185  | 193 | Coal, shale            | 0.4 7.0          |
| 193  | 200 | Sandstone              | 0.8 6.2 18.0'    |
| 200  | 216 | Coal                   | 0.8 1.8 #3 seam  |
| 216  | 222 | Sandstone              | 6.0 3.0          |
| 222  | 225 | Shale                  |                  |
| 225  | 240 | Sandstone              |                  |
|      |     |                        |                  |
|      |     |                        |                  |
|      |     |                        |                  |
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|      |     |                        |                  |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 2/78

COMPANY: Lexco Testing Ltd.

HOLE No.: OU-78-300

APPROX. LOCATION: 2500 2000 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 25+04 1998 RT

ELEVATION: 966

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS         |
|------|-----|-----------|-----------------|
| 0    | 93  | Till      | E-Log J. Nyberg |
| 93   | 103 | Coal      |                 |
| 103  | 109 | Shale     | OU-78-300       |
| 109  | 120 | Sandstone | 119' 93.0       |
|      |     |           | 1.3             |
|      |     |           | 0.2             |
|      |     |           | 0.7             |
|      |     |           | 0.2             |
|      |     |           | 1.4             |
|      |     |           | 0.3 9.0' #3sea  |
|      |     |           | 1.8 (clear      |
|      |     |           | 0.3             |
|      |     |           | 2.1             |
|      |     |           | 0.2             |
|      |     |           | 1.7             |
|      |     |           | 0.3             |
|      |     |           | 0.8 silty       |
|      |     |           |                 |
|      |     |           |                 |
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|      |     |           |                 |
|      |     |           |                 |
|      |     |           |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: Oct. 3/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-301

APPROX. LOCATION: 13+00 - 1100RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 13+01 - 970 RT

ELEVATION: 1014

DRILLER: C. Gardner

| FROM | TO  | LOG                    | REMARKS   |                         |
|------|-----|------------------------|-----------|-------------------------|
| 0    | 12  | Till                   | E-Log     | R. J. Ronaghan          |
| 12   | 175 | Sandstone              | QU-78-301 | 255.4                   |
| 175  | 177 | Shale                  | 296       | 5.8                     |
| 177  | 178 | Coal                   |           | 0.4<br>2.9              |
| 178  | 180 | Shale                  |           | 0.6<br>2.1              |
| 180  | 181 | Coal                   |           | 0.3 #3 seam<br>1.5 13.3 |
| 181  | 185 | Shale                  |           | 1.0<br>4.9              |
| 185  | 187 | Shale                  |           | 1.1<br>8.3              |
| 187  | 258 | Sandstone              |           | 0.8<br>0.2              |
| 258  | 272 | Coal                   |           | 0.9                     |
| 272  | 276 | Coal, shale            |           |                         |
| 276  | 280 | Coal, shale, sandstone |           |                         |
| 280  | 300 | Sandstone              |           |                         |
|      |     |                        |           |                         |
|      |     |                        |           |                         |
|      |     |                        |           |                         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 4/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-303

APPROX. LOCATION: 2500 1750 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 25+09 - 1748 RT

ELEVATION: 991

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS   |
|------|-----|-----------|-----------|
| 0    | 48  | till      | E-Log     |
| 48   | 113 | Sandstone | QU-78-303 |
| 113  | 116 | Coal      | 238 112.8 |
| 116  | 119 | Shale     | 2.0       |
| 119  | 202 | Sandstone | 87.7      |
| 202  | 216 | Coal      | 6.5       |
| 216  | 222 | Shale     | 0.5       |
| 222  | 240 | Sandstone | 7.2 dirty |
|      |     |           |           |
|      |     |           |           |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: Oct. 5/78.

COMPANY: Lexco Testing Ltd.

HOLE No.: QU - 78 - 304.

APPROX. LOCATION: \_\_\_\_\_ SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 13 + 14 - 1223 RT

ELEVATION: 971

DRILLER: C. Gardner.

| FROM | TO  | LOG             | REMARKS           |
|------|-----|-----------------|-------------------|
| 0    | 47  | Till.           | E-Log R. Ronaghan |
| 47   | 105 | Sandstone.      |                   |
| 105  | 106 | Shale.          | QU-78-304 113.5   |
| 106  | 110 | Sandstone.      | 209 2.1 #4        |
| 110  | 111 | Shale.          | 42.7 10.9 #3seam  |
| 111  | 112 | Coal and Shale. | 0.9 1.9 12.8      |
| 112  | 114 | Shale.          |                   |
| 114  | 115 | Coal.           |                   |
| 115  | 120 | Shale.          |                   |
| 120  | 158 | Sandstone.      |                   |
| 158  | 172 | Coal.           |                   |
| 172  | 175 | Shale.          |                   |
| 175  | 210 | Sandstone.      |                   |
|      |     |                 |                   |
|      |     |                 |                   |
|      |     |                 |                   |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 11/78.

COMPANY: Lexco Testing Ltd.

HOLE No.: QU - 78 - 305

APPROX. LOCATION: 30.00 1750 RT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 29 + 82 - 1775 RT

ELEVATION: 995.

DRILLER: H. Vincett.

| FROM | TO  | LOG        | REMARKS            |
|------|-----|------------|--------------------|
| 0    | 70  | Till.      |                    |
| 70   | 139 | Sandstone. | E-Log R. Ronaghan  |
| 139  | 142 | Coal.      | QU-78-305 161.3    |
| 142  | 244 | Sandstone. | 279 2.5 #4<br>79.7 |
| 244  | 259 | Coal.      | 0.8<br>0.3         |
| 259  | 280 | Sandstone. | 4.4<br>1.2         |
|      |     |            | 1.4<br>#3          |
|      |     |            | 2.6 10.3<br>1.9    |
|      |     |            | 0.3<br>1.8         |
|      |     |            |                    |
|      |     |            |                    |
|      |     |            |                    |
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|      |     |            |                    |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: October 12/78.

COMPANY: Lexco Testing Ltd.

HOLE No.: OU - 78 - 306.

APPROX. LOCATION: 50 + 00 - 4200 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 51+72 - 4266 RT

ELEVATION: 990

DRILLER: J. Bly.

| FROM | TO  | LOG                  | REMARKS                           |
|------|-----|----------------------|-----------------------------------|
| 0    | 29  | Till.                | E-log                             |
| 29   | 100 | Grey Sandstone.      | OU-78-306<br>131.0      98.5      |
| 100  | 105 | Coal.                | 0.5 Dirty<br>1.2 #4               |
| 105  | 108 | Carbonaceous Shale.  | 1.1<br>2.5                        |
| 108  | 118 | Coal.                | 2.7<br>6.5                        |
| 118  | 135 | Dark Grey Sandstone. | 0.8<br>4.4 #3<br>1.4 Dirty<br>1.9 |
|      |     |                      | 0.8 Dirty                         |
|      |     |                      |                                   |
|      |     |                      |                                   |
|      |     |                      |                                   |
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|      |     |                      |                                   |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 12/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-307

APPROX. LOCATION: 30.00 2000 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 30+03 - 1992 RT

ELEVATION: 986

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS             |
|------|-----|-----------|---------------------|
| 0    | 89  | Till      | E - Log R. Ronaghan |
| 89   | 103 | Sandstone |                     |
| 103  | 105 | Coal      | QU-78-307 104.0     |
| 105  | 194 | Sandstone | 238 2.2             |
| 194  | 205 | Coal      | 85.9 5.2            |
| 205  | 240 | Sandstone | 0.7 0.4             |
|      |     |           | 0.6 1.0             |
|      |     |           | 0.4 1.6 #3 seam     |
|      |     |           | 1.5 1.5             |
|      |     |           | 1.0 1.3             |
|      |     |           |                     |
|      |     |           | 11.0                |
|      |     |           |                     |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 13/78.

COMPANY: Lexco Testing Ltd.

HOLE No.: QU - 78 - 308.

APPROX. LOCATION: 3000 2250 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 30 + 01 - 2259 RT.

ELEVATION: 969

DRILLER: H. Vincett.

| FROM | TO  | LOG        | REMARKS           |
|------|-----|------------|-------------------|
| 0    | 45  | Till.      | E-Log R. Ronaghan |
| 45   | 78  | Sandstone. |                   |
| 78   | 80  | Coal.      | QU-78-308 88.2    |
| 80   | 90  | Sandstone. | 178 7.1           |
| 90   | 104 | Coal       | 0.3 2.7           |
| 104  | 126 | Sandstone  | 0.4 1.9 #3 seam   |
| 126  | 127 | Coal       | 0.4 2.3           |
| 127  | 140 | Shale      |                   |
| 140  | 170 | Siltstone  |                   |
| 170  | 180 | Sandstone  |                   |
|      |     |            |                   |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: October 13/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-309

APPROX. LOCATION: 45+00 3900 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 46+43 - 3900 RT

ELEVATION: 987

DRILLER: J. Bly

| FROM | TO  | LOG            | REMARKS           |
|------|-----|----------------|-------------------|
| 0    | 6   | till           | E-Log R. Ronaghan |
| 6    | 9   | Grey sandstone | QU-78-309 70.0    |
| 9    | 14  | Till           | 141 1.5           |
| 14   | 71  | Grey sandstone | 1.5 1.5           |
| 71   | 75  | Coal           | 2.7 4.5           |
| 75   | 79  | Brown shale    | 0.3 1.0           |
| 79   | 95  | Coal           | 1.1 0.9 #3 seam   |
| 95   | 103 | Brown shale    | 0.5 5.5           |
| 103  | 116 | Sandstone      | 1.0 1.2           |
| 116  | 117 | Coal           | 1.6               |
| 117  | 145 | Grey sandstone |                   |
|      |     |                |                   |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 14/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-310

APPROX. LOCATION: 3500 2500 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 34 + 94 - 2400 RT

ELEVATION: 958

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS           |
|------|-----|-----------|-------------------|
| 0    | 44  | till      | E-Log R. Ronaghan |
| 44   | 98  | Sandstone |                   |
| 98   | 112 | Coal      | QU-78-310 98.0    |
| 112  | 140 | Sandstone | 138 5.8           |
|      |     |           | 1.2               |
|      |     |           | 1.9               |
|      |     |           | 0.8               |
|      |     |           | 1.6 #3 seam       |
|      |     |           | 0.6               |
|      |     |           | 1.4               |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT.

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: October 14/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-311

APPROX. LOCATION: 40 + 00 - 3000 RT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 40 + 08 - 2975 RT

ELEVATION: 990

DRILLER: J. Bly

| FROM | TO | LOG            | REMARKS           |
|------|----|----------------|-------------------|
| 0    | 19 | till           |                   |
| 19   | 39 | Grey sandstone | E-Log R. Ronaghan |
| 39   | 55 | Coal           | QU-78-311 35.0    |
| 55   | 57 | Brown shale    | 69 6.0            |
| 57   | 58 | Coal           | 0.9 0.5           |
| 58   | 75 | Grey sandstone | 0.4 4.9 #3 seam   |
|      |    |                | 0.4 1.9           |
|      |    |                |                   |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT.



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 15/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-313

APPROX. LOCATION: 3500 3000 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 35 + 30 - 2995 RT

ELEVATION: 968

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS           |
|------|-----|-----------|-------------------|
| 0    | 41  | Till      | E-Log R. Ronaghan |
| 41   | 102 | Shale     |                   |
| 102  | 118 | Sandstone | QU-78-313 N/C     |
| 118  | 180 | Shale     | 178               |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE Oct. 15/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-314

APPROX. LOCATION: 45 + 00 - 3370 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 46 + 60 - 3432 RT

ELEVATION: 1012

DRILLER: J. Bly

| FROM | TO  | LOG            | REMARKS           |
|------|-----|----------------|-------------------|
| 0    | 11  | Till           | E-Log R. Ronaghan |
| 11   | 72  | Grey sandstone | QU-78-314 72.0    |
| 72   | 78  | Coal           | 177'              |
| 78   | 83  | Grey shale     | 1.0 2.1 #4        |
| 83   | 141 | Grey sandstone | 64.6 2.2          |
| 141  | 158 | Coal           | 2.0 5.1           |
| 158  | 180 | Grey sandstone | 0.2 4.1           |
|      |     |                | 0.6 #3 seam       |
|      |     |                | 2.1 10.8          |
|      |     |                | 1.6               |
|      |     |                |                   |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT.

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: October 15/78.

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-315.

APPROX. LOCATION: 3500 2250 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 35 + 13 - 2220 Rt

ELEVATION: 981

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                  |
|------|-----|-----------|--------------------------|
| 0    | 30  | Till      | E-Log R. Ronaghan        |
| 30   | 136 | Sandstone |                          |
| 136  | 145 | Coal      | QU-78-315 54.4           |
| 145  | 196 | Shale     | 218                      |
| 196  | 197 | Coal      | 0.6 dirty<br>1.4         |
| 197  | 220 | Siltstone | 78.8<br>4.9              |
|      |     |           | 0.5 dirty<br>0.9         |
|      |     |           | 0.7 dirty<br>1.6 #3 seam |
|      |     |           | 2.2 11.2<br>2.4          |
|      |     |           | 0.4<br>1.1               |
|      |     |           | 43.4<br>1.2              |
|      |     |           |                          |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 15/78

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-316

APPROX. LOCATION: 4000 2500 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 39 + 86 - 2526 RT

ELEVATION: 972

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS           |
|------|-----|-----------|-------------------|
| 0    | 10  | Till      | E-Log R. Ronaghan |
| 10   | 65  | Sandstone | Qu-78-316 65.2    |
| 65   | 78  | Coal      | 158 5.6           |
| 78   | 126 | Siltstone | 0.2 0.5           |
| 126  | 129 | Coal      | 0.3 2.4           |
| 129  | 160 | Siltstone | 0.8 1.5 #3 seam   |
|      |     |           | 0.5 11.4          |
|      |     |           | 1.4               |
|      |     |           | 48.0              |
|      |     |           | 1.0               |
|      |     |           | 1.2               |
|      |     |           | 0.5               |
|      |     |           |                   |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_







# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: October 17/78

COMPANY: Lexco Testing

HOLE No.: 45+00-3630 RT

APPROX. LOCATION: 45+00 - 3630 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 46+66 - 3667 RT

ELEVATION: 1013

DRILLER:     

| FROM  | TO    | LOG                           | REMARKS |
|-------|-------|-------------------------------|---------|
| 0     | 15    | Till                          |         |
| 15    | 43.5  | Gray Sandstone.               |         |
| 43.5  | 47    | Gray Shale.                   |         |
| 47    | 80    | Gray Sandstone.               |         |
| 80    | 81.5  | Gray Shale.                   |         |
| 81.5  | 86    | Coal                          |         |
| 86    | 92    | Gray Shale.                   |         |
| 92    | 93.5  | Carbonatious Shale.           |         |
| 93.5  | 99    | Gray Sandstone.               |         |
| 99    | 101   | Till                          |         |
| 101   | 126   | Gray Sandstone.               |         |
| 126   | 143   | Coal with Carbonatious Shale. |         |
| 143   | 147   | Carbonatious Shale.           |         |
| 147   | 148.5 | Coal                          |         |
| 148.5 | 160   | Gray Sandstone.               |         |
|       |       |                               |         |

COMMENTS:     

WATER HORIZON:      FT.





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: October 17/78

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-318

APPROX. LOCATION: 45 + 00 - 3630 RT SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 46 + 66 - 3667 RT

ELEVATION: 1013

DRILLER: J. Bly

| FROM  | TO    | LOG                          | REMARKS                  |
|-------|-------|------------------------------|--------------------------|
| 0     | 15    | Till                         | E-Log R.J. Ronaghan      |
| 15    | 43.5  | Grey sandstone               | Qu-78-318 80.0           |
| 43.5  | 47    | Grey shale                   | 2.1                      |
| 47    | 80    | Grey sandstone               | 1.1 #4 4.1<br>2.0        |
| 80    | 81.5  | Grey shale                   | 40.6                     |
| 81.5  | 86    | Coal                         | 5.2<br>1.3               |
| 86    | 92    | Grey shale                   | 1.2 dirty<br>3.5 #3 seam |
| 92    | 93.5  | Carbonaceous shale           | 1.7 dirty<br>13.2        |
| 93.5  | 99    | Grey sandstone               | 1.3<br>1.6               |
| 99    | 101   | Till                         |                          |
| 101   | 126   | Grey sandstone               |                          |
| 126   | 143   | Coal with carbonaceous shale |                          |
| 143   | 147   | Carbonaceous shale           |                          |
| 147   | 148.5 | Coal                         |                          |
| 148.5 | 160   | Grey sandstone               |                          |
|       |       |                              |                          |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 18/78

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-319

APPROX. LOCATION: 5950 4190 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 59 + 61 - 4210 RT

ELEVATION: 974

DRILLER: H. Vincett

| FROM | TO  | LOG                  | REMARKS               |
|------|-----|----------------------|-----------------------|
| 0    | 21  | Till                 | E-Log R. Ronaghan     |
| 21   | 81  | Sandstone            |                       |
| 81   | 82  | Coal                 | Qu-78-319 91.8        |
| 82   | 84  | Sandstone            | 378                   |
| 84   | 86  | Coal                 | 64.4<br>1.4 #4<br>5.2 |
| 86   | 158 | Sandstone            | 0.5<br>3.3 #3 8.5     |
| 158  | 180 | Coal                 | 4.0<br>1.1            |
| 180  | 205 | Sandstone            | 25.2                  |
| 205  | 210 | Coal, shale partings | 1.8 #2 2.6<br>0.4     |
| 210  | 316 | Sandstone            | 0.8                   |
| 316  | 326 | Coal                 | 105.3                 |
| 326  | 336 | Shale                | 0.5<br>0.4<br>4.2     |
| 336  | 380 | Sandstone            | 0.8<br>1.8 #1 8.8     |
|      |     |                      | 2.2                   |
|      |     |                      | 1.2 dirty             |
|      |     |                      | 1.0                   |
|      |     |                      | 2.3                   |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT.

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: October 18/78

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-320

APPROX. LOCATION: 52-00 3530 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 52 + 40 - 3671 RT

ELEVATION: 1039

DRILLER: J. Bly

| FROM | TO  | LOG                | REMARKS                      |
|------|-----|--------------------|------------------------------|
| 0    | 2   | till               | E-Log R. Ronaghan            |
| 2    | 114 | Grey sandstone     | Qu-78-320 115.0              |
| 114  | 118 | Grey shale         | 2.3                          |
| 118  | 125 | Coal               | 0.4 #4 seam<br>1.5 3.8       |
| 125  | 185 | Grey sandstone     | 64.6                         |
| 185  | 197 | Coal               | 5.1<br>1.1                   |
| 197  | 201 | Carbonaceous shale | 2.7<br>2.3 dirty # 3 seam    |
| 201  | 203 | Grey shale         | 2.5 7.8 cl.<br>1.0 2.3 dirty |
| 203  | 225 | Grey Sandstone     |                              |
|      |     |                    |                              |
|      |     |                    |                              |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 24/78

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-321

APPROX. LOCATION: 5950 3950 Rt SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 59 + 15 - 3929 Rt

ELEVATION: 980

DRILLER: H. Vincett

| FROM | TO  | LOG       | REMARKS                     |
|------|-----|-----------|-----------------------------|
| 0    | 23  | Till      | E-Lcg R. Ronaghan           |
| 23   | 83  | Sandstone | OU-78-321 82.9              |
| 83   | 87  | Coal      | 198' 2.9                    |
| 87   | 159 | Sandstone | 0.3 0.7 dirty #4seam<br>1.4 |
| 159  | 172 | Coal      | 72.5                        |
| 172  | 200 | Sandstone | 5.1                         |
|      |     |           | 0.8                         |
|      |     |           | 2.5                         |
|      |     |           | 0.4                         |
|      |     |           | 1.0 #3 seam                 |
|      |     |           | 0.5 10.5                    |
|      |     |           | 0.8                         |
|      |     |           | 1.4                         |
|      |     |           |                             |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 25/78

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-322

APPROX. LOCATION: 70 + 00 - 3450 SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 69 + 74 - 3447 Rt

ELEVATION: 957

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS                    |
|------|-----|---------------------|----------------------------|
| 0    | 24  | Till                | E-Log R. Ronaghan          |
| 24   | 118 | Sandstone           |                            |
| 118  | 119 | Coal Stringers      | Qu-78-322 146.0<br>338 0.8 |
| 119  | 144 | Sandstone           | 0.7<br>1.1 dirty           |
| 144  | 149 | Coal, with partings | 0.6                        |
| 149  | 266 | Sandstone           | 115.3<br>1.0               |
| 266  | 267 | Coal Stringer       | 0.5<br>0.9                 |
| 267  | 330 | Sandstone           | 1.2 dirty                  |
| 330  | 340 | Green Sandstone     |                            |
|      |     |                     |                            |
|      |     |                     |                            |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LUSCAR LTD. corehole log

46 - 56 3942 Rt

HOLE NO. Qu-78-324 C

PAGE 3 OF 4

| CORE NO.                 | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|--------------------------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|                          | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |            |
|                          | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|                          |               |    |      |           |      |                                                                                                                                             |            |
|                          |               |    |      |           | .7   | COAL: crushed, bright, abundant pyrite, mudstone stringers                                                                                  |            |
|                          |               |    |      |           | 0.8  | MUDSTONE: grey-brown; medium hard, massive                                                                                                  |            |
|                          |               |    |      |           | 3.3  | COAL: bright, blocky, massive, visible pyrite, locally broken, occasional minor mudstone bands.                                             |            |
| Sample #5<br>86.85-91.88 |               |    |      |           | .08  | BONEY COAL: dark brown, massive, minor coaly bits                                                                                           |            |
|                          |               |    |      |           | 1.65 | COAL: as above                                                                                                                              |            |
|                          |               |    |      |           | 0.3  | SANDSTONE: dark brown, massive and hard                                                                                                     |            |
|                          |               |    |      |           | .9   | COAL: as above                                                                                                                              |            |
|                          |               |    |      |           | .6   | SANDSTONE: light grey, massive, hard                                                                                                        |            |
|                          |               |    |      |           | .1   | COAL: as above                                                                                                                              |            |
|                          | 93            | 98 | 4.55 |           | .2   | SILTSTONE: dark brown, leaf impregnations, massive, hard                                                                                    |            |
| Sample #6<br>93.2-94.9   |               |    |      |           | 1.7  | COAL: bright and dull banded, highly broken, visible pyrite, calcite on cleats                                                              |            |
|                          |               |    |      |           |      |                                                                                                                                             |            |
|                          | TOTALS        |    |      |           |      | + X 100 = % REC. SEAM                                                                                                                       |            |
|                          |               |    |      |           |      | + X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |





# LUSCAR LTD. corehole log

46 + 56 3942 Rt.

HOLE NO. Qu-78-324 C  
PAGE 1 OF 4

| CORE NO.                 | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH  |         |
|--------------------------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|
|                          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |             |         |
|                          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |             |         |
| X                        | X             | X   |      | X         |      |                                                                                                                                             |             |         |
| 1                        | 65'           | 70' | 5.2  |           | 5.2  | SANDSTONE: grey-green, massive, hard, medium grained                                                                                        |             |         |
| Sample #1<br>70-71.6     | 2             | 70' | 78'  | 8.05'     | 1.6  | COAL: bright, blocky, broken, abundant visible pyrite, mud filled joints at 45° lower contact 87° to core angle.                            |             |         |
|                          |               |     |      |           | .75  | CARBONACEOUS MUDSTONE: dark brown, soft, locally wet, numerous small bands of coal.                                                         |             |         |
| Sample #2<br>72-74.7     |               |     |      |           | 2.4  | COAL: bright, blocky; massive to broken, abundant pyrite, abundant calcite                                                                  |             |         |
|                          |               |     |      |           | 2.75 | MUDROCK: light to dark brown, medium hard, lower contact; coarser grained, top contact, carbonaceous occasional coal stringers.             |             |         |
| Sample #3<br>77.5'-84.4' |               |     |      |           | .3   | BONEY COAL: dark brown, medium hard, numerous coaly stringers, visible pyrite.                                                              |             |         |
|                          |               |     |      |           | .2   | COA: bright, blocky; massive; bands light and dull, abundant visible pyrite.                                                                |             |         |
| 3                        | 78'           | 85' | 6.9  |           | 4.1  | COAL: bright, blocky; hard; visible pyrite locally broken, very small boney band.                                                           |             |         |
| X                        | TOTALS        |     | X    |           | ÷    | X 100 =                                                                                                                                     | % REC.      | SEAM    |
|                          |               |     |      |           | ÷    | X 100 =                                                                                                                                     | % TOT. REC. | SEAM(S) |



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Oct. 27/78

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-325

APPROX. LOCATION: 7400 5250 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 73 + 71 - 5248 RT

ELEVATION: 771

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS           |
|------|-----|----------------|-------------------|
| 0    | 18  | till           | E-Log R. Ronaghan |
| 18   | 75  | Sandstone      | Qu-78-325 75.3    |
| 75   | 83  | Coal           | 259' 5.3          |
|      |     |                | 0.8 #3 seam       |
| 83   | 90  | Shale          | 3.0 9.7           |
|      |     |                | 5.2               |
| 90   | 110 | Sandstone      | 1.4               |
| 110  | 120 | Shale          | 29.7              |
| 120  | 121 | Coal Stringers | 1.5               |
|      |     |                | 0.7 #2 seam       |
| 121  | 130 | Shale          | 0.9               |
| 130  | 230 | Sandstone      | 108.6             |
|      |     |                | 6.3               |
| 230  | 237 | Coal           | 4.5               |
|      |     |                | 0.8 dirty #1 seam |
|      |     |                | 8.5               |
| 237  | 250 | Shale          | 0.6               |
|      |     |                | 2.2               |
| 250  | 260 | Sandstone      |                   |
|      |     |                |                   |
|      |     |                |                   |
|      |     |                |                   |
|      |     |                |                   |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam East DATE: October 31/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-331

APPROX. LOCATION: 90+00 Road SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 90,300.5M - 102,195.95M

ELEVATION: 169.0M

DRILLER: J. Bly

| FROM  | TO    | LOG                                            | REMARKS             |
|-------|-------|------------------------------------------------|---------------------|
| 0     | 3     | Till                                           | E-Log - R. Ronaghan |
| 3     | 7     | Brown sandstone                                | QU-77-331 193.0     |
| 7     | 58    | Grey sandstone                                 | 242 0.8<br>5.2      |
| 58    | 65    | Grey shale                                     | 0.9<br>2.7          |
| 65    | 66.5  | Coal                                           | 2.6<br>2.0          |
| 66.5  | 109.  | Grey sandstone                                 | 2.0 dirty<br>11.2   |
| 109   | 121.5 | Grey shale                                     | 0.9<br>1.1          |
| 121.5 | 124   | Coal                                           | 0.8<br>12.4         |
| 124   | 192   | Brown shale                                    | 1.4                 |
| 192   | 201   | Carbonaceous shale with coal traces            |                     |
| 201   | 203   | Coal with carbonaceous shale throughout        |                     |
| 203   | 213   | Grey shale                                     |                     |
| 213   | 235   | Brown shale with carbonaceous shale throughout |                     |
| 235   | 237   | Coal                                           |                     |
| 237   | 245   | Grey shale                                     |                     |
|       |       |                                                |                     |

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

1 of 2

COAL FIELD: Campbell River DATE: Oct. 31/78

COMPANY: Lexco Testing Ltd.

HOLE No.: OU-78-332

APPROX. LOCATION: Quinsam East SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

Drill Hole

SURVEYED LOCATION: 90,320.21M - 101,895.47M

ELEVATION: 173.6M

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                   |
|------|-----|----------------|---------------------------|
| 0    | 7   | Gravel         | E - log R. Ronaghan       |
| 7    | 22  | Sand           | OU-78-332 79.0<br>309 2.0 |
| 22   | 33  | Clay           | 0.2<br>1.1                |
| 33   | 46  | Brown shale    | 0.7<br>0.8                |
| 46   | 56  | Grey sandstone | 7.2<br>0.4                |
| 56   | 78  | Brown shale    | 1.5<br>0.4                |
| 78   | 82  | Coal           | 3.5<br>0.3                |
| 82   | 85  | Carb. shale    | 0.7<br>0.7                |
| 85   | 98  | Brown shale    | 2.3<br>0.6                |
| 98   | 102 | Coal           | 0.2<br>0.8                |
| 102  | 104 | Carb shale     | 10.9<br>1.5               |
| 104  | 134 | brown shale    | 1.5<br>1.0                |
| 134  | 136 | Coal           |                           |
| 136  | 156 | Brown shale    |                           |
| 156  | 158 | Coal           |                           |
| 158  | 167 | Siltstone      |                           |

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

Page 2 of 2

COAL FIELD: Campbell River DATE: Oct. 31/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-332

APPROX. LOCATION: Quimsam East SEC.      TWP.      RGE.      W.     

Drill Hole

SURVEYED LOCATION: 90,320.21M - 101,895.47M

ELEVATION: 173.6M

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 167  | 193 | Sandstone      |         |
| 193  | 221 | Grey shale     |         |
| 221  | 310 | Grey sandstone |         |
|      |     |                |         |
|      |     |                |         |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam East DATE: Oct. 31/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-333

APPROX. LOCATION: 91+00 SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 90,990.6M - 102,257.7M

ELEVATION: 179.6M

DRILLER: J. Bly

| FROM | TO  | LOG                             | REMARKS               |
|------|-----|---------------------------------|-----------------------|
| 0    | 11  | Till                            | E-Log - R. Ronaghan   |
| 11   | 39  | Grey shale                      | QU-78-333 43.3        |
| 39   | 60  | Coal with grey shale throughout | 139' 0.9<br>1.1 dirty |
| 60   | 75  | Grey shale                      | 0.7<br>0.8            |
| 75   | 79  | Grey sandstone                  | 0.7<br>0.6            |
| 79   | 82  | Coal                            | 1.6<br>1.3            |
| 82   | 96  | Grey shale                      | 5.3<br>1.3            |
| 96   | 97  | Coal                            | 1.8<br>1.6            |
| 97   | 101 | Grey shale                      | 18.1<br>1.9           |
| 101  | 103 | Coal                            | 20.3<br>0.9           |
| 103  | 145 | Grey shale                      |                       |
|      |     |                                 |                       |
|      |     |                                 |                       |
|      |     |                                 |                       |
|      |     |                                 |                       |
|      |     |                                 |                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: November 1/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-334

APPROX. LOCATION: 2E 91000 M SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 91,107.15M - 101,744.97M

ELEVATION: 188.28M

DRILLER: H. Vincett

| FROM | TO  | LOG             | REMARKS |
|------|-----|-----------------|---------|
| 0    | 40  | Till            |         |
| 40   | 45  | Red Shale       |         |
| 45   | 55  | Grey Shale      |         |
| 55   | 230 | Sandstone       |         |
| 230  | 240 | Green Sandstone |         |
| 240  | 290 | Grey Sandstone  |         |
| 290  | 320 | Red Shale       |         |
| 320  | 327 | Grey Shale      |         |
| 327  | 380 | Grey Sandstone  |         |
|      |     |                 |         |
|      |     |                 |         |
|      |     |                 |         |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

PAGE 1 of 2.

COAL FIELD: Quinsam East DATE: November 1/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-335

APPROX. LOCATION: 92000 620RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 92,052.38M - 102,869.6M

ELEVATION: 186.M

DRILLER: J. Bly

| FROM  | TO    | LOG                              | REMARKS                              |
|-------|-------|----------------------------------|--------------------------------------|
| 0     | 13    | Till                             | E - Log.<br>R. J. Ronaghan           |
| 13    | 50    | Gray Sandstone                   | <u>QU-78-335 122.5</u><br><u>287</u> |
| 50    | 52    | Gray Shale                       | 4.0<br>2.2                           |
| 52    | 121   | Gray Sandstone                   | 1.2<br>11.9                          |
| 121   | 122.5 | Brown Shale                      | 0.5<br>0.7                           |
| 122.5 | 126   | Coal                             | 0.6<br>2.0                           |
| 126   | 128   | Gray Shale                       | 0.6<br>0.4                           |
| 128   | 129   | Coal                             | 0.4<br>0.9                           |
| 129   | 141   | Gray Shale                       | 0.4<br>1.0                           |
| 141   | 149.5 | Coal with Brown Shale throughout | 4.0<br>1.4                           |
| 149.5 | 152   | Gray Shale                       | 6.9<br>3.2                           |
| 152   | 154   | Coal with Brown Shale throughout | 6.2<br>2.0                           |
| 154   | 160   | Gray Shale                       | 12.4<br>1.0                          |
| 160   | 163   | Coal with Brown Shale throughout | 2.4<br>0.6                           |
| 163   | 169   | Gray Shale                       |                                      |
| 169   | 171.5 | Coal                             |                                      |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam East DATE: November 7/78.

COMPANY: Lexco Testing Ltd

HOLE No.: QU-78-336

APPROX. LOCATION: 92000 - 260 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 91,986.4M - 102,544.2M

ELEVATION: 180.6M

DRILLER: J. Bly

| FROM  | TO    | LOG                              | REMARKS                             |
|-------|-------|----------------------------------|-------------------------------------|
| 0     | 26    | Till                             | E - Log<br>R. J. Ronaghan           |
| 26    | 54.5  | Gray Shale                       | <u>QU-78-336</u> <u>71.2</u><br>201 |
| 54.5  | 56    | Coal with Brown Shale throughout | 1.0<br>0.2                          |
| 56    | 71    | Gray Shale                       | 2.9<br>2.7                          |
| 71    | 76    | Coal with Brown Shale throughout | 0.8<br>10.5                         |
| 76    | 89    | Gray Shale                       | 0.9<br>1.0                          |
| 89    | 98    | Coal with Brown Shale throughout | 3.1<br>0.5                          |
| 98    | 105   | Gray Shale                       | 0.7<br>1.0                          |
| 105   | 125   | Brown Shale with Coal partings   | 0.9<br>18.9                         |
| 125   | 154   | Brown Shale                      | 3.9<br>39.0                         |
| 154   | 155   | Coal                             | 1.3<br>3.8                          |
| 155   | 159   | Brown Shale                      | 1.9                                 |
| 159   | 161   | Coal                             |                                     |
| 161   | 165   | Brown Shale                      |                                     |
| 165   | 167.5 | Coal                             |                                     |
| 167.5 | 205   | Gray Shale                       |                                     |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 7/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-337

APPROX. LOCATION: 92000 M SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 92,019.7 M - 101,824.5M

ELEVATION: 197.3

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                         |
|------|-----|----------------|---------------------------------|
| 0    | 2   | Till           | E - Log.<br>R. J. Ronaghan      |
| 2    | 74  | Sandstone Grey | <u>QU-78-337</u> No Coal<br>277 |
| 74   | 76  | Coal           |                                 |
| 76   | 178 | Grey Sandstone |                                 |
| 178  | 185 | Red Shale      |                                 |
| 185  | 230 | Sandstone      |                                 |
| 230  | 270 | Shale          |                                 |
| 270  | 280 | Sandstone      |                                 |
|      |     |                |                                 |
|      |     |                |                                 |
|      |     |                |                                 |
|      |     |                |                                 |
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|      |     |                |                                 |

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: \_\_\_\_\_

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-338

APPROX. LOCATION: 92500M SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 92,625.7M - 101,922.6M

ELEVATION: 208.2M

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                |
|------|-----|----------------|------------------------|
| 0    | 7   | Till           | E-Log R. Ronaghan      |
| 7    | 73  | Sandstone      | QU-78-338 71.0<br>158' |
| 73   | 77  | Coal           | 1.8<br>0.5             |
| 77   | 83  | Carb. shale    | 1.7<br>2.3             |
| 83   | 108 | Grey shale     | 0.7<br>0.2             |
| 108  | 120 | Red shale      | 0.4<br>0.2             |
| 120  | 132 | Grey sandstone | 1.0<br>2.8             |
| 132  | 150 | Red shale      | 0.9<br>0.8             |
| 150  | 160 | Grey shale     | 0.7                    |
|      |     |                |                        |
|      |     | Flowing Hole   | Water at 120'          |
|      |     |                | 10 - 15 gal. min.      |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam East DATE: November 9/78.

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-340

APPROX. LOCATION: 91500 - 150 RT. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 91,504.9M - 102,400.97M

ELEVATION: 190.7M

DRILLER: J. Bly

| FROM | TO   | LOG                                     | REMARKS |
|------|------|-----------------------------------------|---------|
| 0    | 14   | Till                                    |         |
| 14   | 29   | Grey Shale                              |         |
| 29   | 30.5 | Coal                                    |         |
| 30.5 | 40   | Grey Shale                              |         |
| 40   | 43   | Coal                                    |         |
| 43   | 48   | Grey Shale                              |         |
| 48   | 49   | Coal                                    |         |
| 49   | 72   | Grey Shale                              |         |
| 72   | 76   | Coal with Brown Shale throughout        |         |
| 76   | 86   | Grey Shale                              |         |
| 86   | 89   | Brown Shale with Coal traces throughout |         |
| 89   | 93   | Grey Shale                              |         |
| 93   | 94.5 | Coal                                    |         |
| 94.5 | 96   | Grey Shale                              |         |
| 96   | 97   | Coal                                    |         |
| 97   | 121  | Grey Shale                              |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

PAGE 2 of 2.

## DRILLHOLE REPORT

COAL FIELD: Quinsam East DATE: November 9/78

COMPANY: Lexco Testing Ltd.

HOLE No.: #2 QU-78-340

APPROX. LOCATION: 91500 - 150 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: \_\_\_\_\_

ELEVATION: \_\_\_\_\_

DRILLER: J. Bly

| FROM  | TO    | LOG                          | REMARKS                           |
|-------|-------|------------------------------|-----------------------------------|
| 121   | 122   | Coal with carbonaceous shale | E-Log R. Ronaghan                 |
| 122   | 133   | Grey shale                   | QU-78-340 38.7<br><del>182'</del> |
| 133   | 134   | Coal with carbonaceous shale | 1.4<br>0.3                        |
| 134   | 135   | Grey shale                   | 3.4<br>3.6                        |
| 135   | 136   | Coal with carbonaceous shale | 1.0<br>21.9                       |
| 136   | 137   | Grey shale                   | 1.3<br>0.7                        |
| 137   | 137.5 | Coal with carbonaceous shale | 1.6<br>0.3                        |
| 137.5 | 157   | Grey shale                   | 0.7<br>0.5                        |
| 157   | 169   | Grey sandstone               | 1.2<br>0.4                        |
| 169   | 174   | Red shale                    | 0.9<br>0.7                        |
| 174   | 185   | Grey sandstone               | 1.4<br>5.5                        |
|       |       |                              | 1.0                               |
|       |       |                              | 0.5                               |
|       |       |                              | 2.5                               |
|       |       |                              | 3.9                               |
|       |       |                              | 1.4                               |
|       |       |                              | 0.8                               |
|       |       |                              | 1.2                               |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: November 10/78.

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-341

APPROX. LOCATION: #3 93500 M SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 93,399.1M - 102,041.45M.

ELEVATION: 218.0M

DRILLER: H. Vincett.

| FROM | TO  | LOG            | REMARKS                     |
|------|-----|----------------|-----------------------------|
| 0    | 13  | Till           | E - Log.<br>R. J. Ronaghan. |
| 13   | 19  | Shale          | <u>QU-78-341</u> NC.<br>257 |
| 19   | 112 | Grey Sandstone |                             |
| 112  | 185 | Red Grey Shale |                             |
| 185  | 210 | Grey Shale     |                             |
| 210  | 260 | Red Grey Shale |                             |
|      |     |                |                             |
|      |     |                |                             |
|      |     |                |                             |
|      |     |                |                             |
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|      |     |                |                             |
|      |     |                |                             |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam East DATE: November 10, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: 26 QU-78-342

APPROX. LOCATION: 91500 - 50 RT SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 91,502.7M - 102,313.4M

ELEVATION: 180,8M

DRILLER: J. Bly

| FROM | TO | LOG                                     | REMARKS                                                    |
|------|----|-----------------------------------------|------------------------------------------------------------|
| 0    | 12 | Till.                                   | E - Log.<br>R. J. Ronaghan.                                |
| 12   | 26 | Gray Shale                              | <u>QU-78-342</u> <u>24</u><br>81'                      1.5 |
| 26   | 34 | Coal with Brown Shale.                  | 0.6<br>1.8                                                 |
| 34   | 42 | Brown Shale with Coal traces throughout | 0.3<br>1.1 Dirty                                           |
| 42   | 48 | Coal                                    | 0.6<br>1.0                                                 |
| 48   | 85 | Gray Shale.                             | 8.3<br>2.4                                                 |
|      |    |                                         | 0.6<br>0.5                                                 |
|      |    |                                         | 1.7<br>0.7 Dirty                                           |
|      |    |                                         | 4.9<br>1.2                                                 |
|      |    |                                         | 0.8<br>1.3 Dirty                                           |
|      |    |                                         |                                                            |
|      |    |                                         |                                                            |
|      |    |                                         |                                                            |
|      |    |                                         |                                                            |
|      |    |                                         |                                                            |
|      |    |                                         |                                                            |
|      |    |                                         |                                                            |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 10/78

COMPANY: Lexco Testing

HOLE No.: QU-78-343

APPROX. LOCATION: 93000 M #9 SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 92,964.3 M - 102,182.6 M

ELEVATION: 201.8

DRILLER: H. Vincett

| FROM | TO  | LOG        | REMARKS                               |
|------|-----|------------|---------------------------------------|
| 0    | 7   | Till       |                                       |
| 7    | 23  | Sandstone  |                                       |
| 23   | 35  | Shale      | Coal Stringers 24'                    |
| 35   | 115 | Sandstone  |                                       |
| 115  | 119 | Coal       | E-Log<br>R.J. Ronaghan                |
| 119  | 138 | Carb Shale | Coal stringers <u>QU-78-343</u> 114.3 |
| 138  | 145 | Grey shale | 178 4.5<br>1.0 Dirty                  |
| 145  | 164 | Sandstone  | 1.2 0.6                               |
| 164  | 168 | Grey shale | 0.4 1.0                               |
| 168  | 172 | Red Shale  | 2.0 0.7                               |
| 172  | 180 | Grey Shale | 0.7 0.8                               |
|      |     |            | 1.4 0.5                               |
|      |     |            |                                       |
|      |     |            |                                       |
|      |     |            |                                       |
|      |     |            |                                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 11, 1978

COMPANY: Lexco Testing

HOLE No.: QU-78-344

APPROX. LOCATION: 93,200 M SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 93,164.1 M - 102,151.9 M

ELEVATION: 209.6 M

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS               |
|------|-----|---------------------|-----------------------|
| 0    | 3   | Till                | E-Log                 |
| 3    | 57  | Sandstone           | R.J. Ronaghan         |
| 57   | 60  | Coal                | <u>QU-78-344</u> 57.2 |
| 60   | 62  | Carb Shale          | 118' 1.4 3.6          |
| 62   | 71  | Coal Shale partings | 0.3 0.8               |
| 71   | 76  | Carb Shale          | 0.7 0.9               |
| 76   | 120 | Grey shale          | 1.9 0.3               |
|      |     |                     | 0.5 0.5               |
|      |     |                     | 0.5 0.9               |
|      |     |                     | 1.0 0.9               |
|      |     |                     | 0.3 0.9               |
|      |     |                     | 0.9                   |
|      |     |                     |                       |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 12/78

COMPANY: Lexco Testing

HOLE No.: QU-78-345

APPROX. LOCATION: #14 93500 M SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 92,489.5 M - 102,167.8 M

ELEVATION: 189.7

DRILLER: H. Vincett

| FROM | TO  | LOG                     | REMARKS         |
|------|-----|-------------------------|-----------------|
| 0    | 27  | Till                    | E-Log           |
| 27   | 45  | Grey shale              | R.J. Ronaghan   |
| 45   | 57  | Red shale               | QU-78-345 197.1 |
| 57   | 70  | Grey shale              | 238 2.6         |
| 70   | 196 | Grey sandstone          | 0.3 1.9         |
| 196  | 200 | Coal                    | 1.3 1.1 Dirty   |
| 200  | 213 | Carb Shale Coal parting | 0.3 1.0         |
| 213  | 240 | Grey shale              | 1.0 1.4         |
|      |     |                         | 1.4 0.8         |
|      |     |                         | 2.0 0.8         |
|      |     |                         | 1.0             |
|      |     |                         |                 |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 13/78

COMPANY: Lexco Testing

HOLE No.: QU-78-346

APPROX. LOCATION: #7 93500 M N SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 93,510.1 M - 102,617.1 M

ELEVATION: 211.7

DRILLER: H. Vincett

| FROM | TO  | LOG                  | REMARKS             |
|------|-----|----------------------|---------------------|
| 0    | 87  | Till                 | E-Log               |
| 87   | 146 | Grey shale           | R.J. Ronaghan       |
| 146  | 215 | Grey sandstone       | <u>QU-78-346</u> Nc |
|      |     |                      | 378                 |
| 215  | 340 | Grey shale           |                     |
| 340  | 370 | Grey green sandstone |                     |
| 370  | 380 | Grey shale           |                     |
|      |     |                      |                     |
|      |     |                      |                     |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam East DATE: November 14/78

COMPANY: Lexco Testing

HOLE No.: QU-78-347

APPROX. LOCATION: 89915 - 102485 SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 89,731.31 M 102,617.1 M

ELEVATION: 163.98 M

DRILLER: J. Bly

| FROM | TO   | LOG                              | REMARKS                |
|------|------|----------------------------------|------------------------|
| 0    | 3    | Till                             | E-Log                  |
| 3    | 38   | Gravel                           | R.J. Ronaghan          |
| 38   | 72   | Gray sandstone                   | <u>QU-78-347</u> 172.7 |
| 72   | 72.5 | Coal                             | 261 1.1<br>0.6 2.8     |
| 72.5 | 175  | Gray sandstone                   | 3.1 1.0                |
| 175  | 184  | Coal with brown shale throughout | 20.8 0.4 Dirty         |
| 184  | 202  | Gray shale                       | 2.5 0.7                |
| 202  | 205  | Coal                             | 0.9 Dirty<br>0.5       |
| 205  | 210  | Brown shale with coal traces     | 1.0 0.9                |
| 210  | 213  | Gray shale                       | 0.8 23.9               |
| 213  | 215  | Coal with brown shale throughout | 1.3 1.2                |
| 215  | 234  | Gray shale                       | 1.6 9.7                |
| 234  | 236  | Brown shale with coal            | 1.2 0.3                |
| 236  | 248  | Gray shale                       | 1.0                    |
| 248  | 250  | Coal with brown shale throughout |                        |
| 250  | 265  | Gray shale                       |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 15/78

COMPANY: Lexco Testing

HOLE No.: QU-78-348

APPROX. LOCATION: #6, 93500 M SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 93,497.89 M - 102,449.9 M

ELEVATION: 207.48 M

DRILLER: H. Vincett

| FROM | TO  | LOG                     | REMARKS |
|------|-----|-------------------------|---------|
| 0    | 64  | Till                    |         |
| 64   | 70  | Sandstone               |         |
| 70   | 95  | Shale                   |         |
| 95   | 200 | Grey sandstone          |         |
| 200  | 210 | Shale Coal stringer 202 |         |
| 210  | 212 | Coal                    |         |
| 212  | 250 | Shale                   |         |
| 250  | 260 | Sandstone               |         |
|      |     |                         |         |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 15/78

COMPANY: Lexco Testing

HOLE No.: QU-78-349

APPROX. LOCATION: 94,000 102,500.51 M SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 94,005.8 M 102,500.51 M

ELEVATION: 197.82 M

DRILLER: H. Vincett

| FROM | TO  | LOG                             | REMARKS   |
|------|-----|---------------------------------|-----------|
| 0    | 25  | Till                            |           |
| 25   | 43  | Grey shale Coal stringer at 42' |           |
| 43   | 129 | Grey sandstone Fault zone from  | 108 - 112 |
| 129  | 133 | Coal                            |           |
| 133  | 135 | Shale                           |           |
| 135  | 137 | Coal                            |           |
| 137  | 209 | Grey shale                      |           |
| 209  | 220 | Grey sandstone                  |           |
|      |     |                                 |           |
|      |     | Hole bridged at 108.            |           |
|      |     |                                 |           |
|      |     |                                 |           |
|      |     |                                 |           |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 16, 1978

COMPANY: Lexco Testing

HOLE No.: QU-78-350

APPROX. LOCATION: #1 94000 M SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 93,999.8 M - 102,259.4 M

ELEVATION: 208.8 M

DRILLER: H. Vincett

| FROM | TO  | LOG                      | REMARKS   |
|------|-----|--------------------------|-----------|
| 0    | 39  | Till E-Log               |           |
| 39   | 110 | Grey sandstone QU-78-350 | 122.4     |
| 110  | 122 | Grey shale 156'          | 2.8       |
|      |     |                          | 1.2       |
| 122  | 133 | Coal                     | 1.1       |
|      |     |                          | 0.7       |
| 133  | 160 | Grey shale               | 0.5 Dirty |
|      |     |                          | 0.9       |
|      |     |                          | 0.9       |
|      |     |                          | 2.0       |
|      |     |                          | 0.2       |
|      |     |                          | 0.8 Dirty |
|      |     |                          |           |
|      |     |                          |           |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Nov. 23/78

COMPANY: Lexco Testing

HOLE No.: Qu-78-351

APPROX. LOCATION: \_\_\_\_\_ SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 92,198.2 M - 102,235.9 M

ELEVATION: 187.1 M

DRILLER: H. Vincett

| FROM | TO  | LOG                 | REMARKS         |
|------|-----|---------------------|-----------------|
| 4    | 45  | Till                | E-Log           |
| 45   | 50  | Shale               | R.J. Ronaghan   |
| 50   | 65  | Sandstone           | QU-78-351 290.5 |
| 65   | 66  | Coal Stringer       | 318 0.3 1.6     |
| 66   | 75  | Shale               | 2.2 1.7         |
| 75   | 110 | Sandstone           | 0.8 0.8         |
| 110  | 167 | Shale               | 4.3 1.2         |
| 167  | 292 | Sandstone           | 1.4 1.7         |
| 292  | 295 | Coal                | 0.9             |
| 295  | 301 | Shale Coal Partings |                 |
| 301  | 320 | Shale               |                 |
|      |     |                     |                 |
|      |     | Water at 109 143'   |                 |
|      |     |                     |                 |
|      |     |                     |                 |
|      |     |                     |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: QUINSAM EAST DATE: Nov. 23/78

COMPANY: Lexco Testing

HOLE No.: QU-78-352 ABD

APPROX. LOCATION: DH - 92000 SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 91,839.1 M - 102,279.1 M

ELEVATION: 182.5 M

DRILLER: J. Bly

| FROM | TO  | LOG                   | REMARKS |
|------|-----|-----------------------|---------|
| 0    | 47  | Till                  |         |
| 47   | 49  | Coal with brown shale |         |
| 49   | 117 | Gray shale            |         |
| 117  | 126 | Gray sandstone        |         |
| 126  | 153 | Gray shale            |         |
| 153  | 162 | Red shale             |         |
| 162  | 225 | Gray sandstone        |         |
|      |     | Tight hole            |         |
|      |     |                       |         |
|      |     |                       |         |
|      |     |                       |         |
|      |     |                       |         |
|      |     |                       |         |
|      |     |                       |         |
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COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

BOAL FIELD: Campbell River DATE: Nov. 25/78

COMPANY: Lexco Testing

HOLE No.: QU-78-353

APPROX. LOCATION: 91000 M SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 90,929.1 M - 102,680.5 M

ELEVATION: 188.3 M

DRILLER: H. Vincett

| FROM | TO  | LOG                     | REMARKS   |
|------|-----|-------------------------|-----------|
| 0    | 6   | Till E-Log              |           |
| 6    | 23  | Sandstone R.J. Ronaghan |           |
| 23   | 54  | Shale QU-78-353         | 187.3     |
| 54   | 150 | Sandstone 255'          | 1.7       |
| 150  | 175 | Shale                   | 0.3 0.9   |
| 175  | 185 | Sandstone               | 4.4 1.1   |
| 185  | 189 | Coal                    | 17.3 1.4  |
| 189  | 213 | Shale                   | 0.8 1.1   |
| 213  | 219 | Coal                    | 1.1 dirty |
| 219  | 224 | Shale                   | 0.7 1.1   |
| 224  | 229 | Coal                    | 4.0 0.8   |
| 229  | 260 | Shale                   | 3.7 2.5   |
|      |     |                         | 0.4 0.6   |
|      |     |                         |           |
|      |     |                         |           |
|      |     |                         |           |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

| DATE      | C-CORED HOLE NO. | GRID LINE | LOCATION  | ELEV. | TILL DEPTH | NO. 3 SEAM DEPTH/THICK | NO. 2 SEAM DEPTH/THICK | NO. 1 RIDER DEPTH/THICK | NO. 1 SEAM DEPTH/THICK | BASE DEPTH | LOG-GER FEET | REMARKS                      |
|-----------|------------------|-----------|-----------|-------|------------|------------------------|------------------------|-------------------------|------------------------|------------|--------------|------------------------------|
| Feb 11/78 | QU-78-1C         | 80 + 22   | 1982' LT. | 138'  | 6'         | -----                  | -----                  | 146.2/1.3               | 148.3/8.3'             | --         | 149'         |                              |
| Feb 11/78 | QU-78-2          | 87 + 50   | 1486' LT. | 131'  | 4'         | -----                  | -----                  | 206.2/1.0'              | 208.7/3.3'             | ---        | 237'         |                              |
| Feb 12/78 | QU-78-3          | 92 + 51   | 2515' LT. | 1096' | 26'        | -----                  | -----                  | 32.4/1.9'               | 34.5/8.5'              | ---        | 89'          |                              |
| Feb 13/78 | QU-78-4C         | 84 + 86   | 2251' LT. | 1102' | 8'         | -----                  | 10.7/1.3               | 69.2/1.1'               | 70.8/8.4'              | ---        | 92'          |                              |
| Feb 13/78 | QU-78-5          | 92 + 52   | 1482' LT. | 117'  | 5'         | -----                  | -----                  | 187.0/1.4'              | 189.9/9.7'             | ---        | 217'         |                              |
| Feb 15/78 | QU-78-6C         | 90 + 04   | 2257' LT. | 125'  | 10'        | -----                  | 27.4/1.2               | 88.3/1.4'               | 90.7/8.0'              | ---        | 119'         |                              |
| Feb 15/78 | QU-78-7          | 92 + 78   | 1992' LT. | 123'  | 6'         | -----                  | 61.0/1.2               | 128.3/1.2'              | 131.9/8.9'             | ---        | 156'         |                              |
| Feb 15/78 | QU-78-8          | 87 + 55   | 1955' LT. | 132'  | 9'         | -----                  | 65.2/1.0               | 126.6/1.2'              | 129.0/7.5'             | ---        | 161'         |                              |
| Feb 15/78 | QU-78-9C         | 90 + 05   | 1735' LT. | 125'  | 6'         | -----                  | 90.2/1.0               | 157.0/1.3'              | 159.5/8.8'             | ---        | 192'         |                              |
| Feb 16/78 | QU-78-10         | 108 + 15  | 1495' LT. | 1059' | 13'        | -----                  | 19.4/1.4 dirty         | 81.8/1.2                | 85.3/10.7'             | ---        | 126'         |                              |
| Feb 16/78 | QU-78-11         | 97 + 45   | 1751' LT. | 106.6 | 2'         | -----                  | 78.6/dirty coal        | 144.3/1.3'              | 147.1/7.5cl.           | ---        | 175'         |                              |
| Feb 17/78 | QU-78-12         | 91 + 44   | 1268' LT. | 105'  | 2'         | -----                  | -----                  | 182.7/3.1               | 185.8/10.6'            | ---        | 213'         |                              |
| Feb 17/78 | QU-78-13C        | 95 + 02   | 1252' LT. | 104'  | 6'         | -----                  | -----                  | 190.7/1.1'              | 193.7/10.9'            | ---        | 219'         |                              |
| Feb 18/78 | QU-78-14         | 97 + 46   | 1756' LT. | 1075' | 5'         | -----                  | 120.2/1.4              | 205.8/1.9               | 209.1/4.9              | ---        | 239'         |                              |
| Feb 18/78 | QU-78-15         | 94 + 95   | 2520' LT. | 1083' | 3'         | -----                  | -----                  | 25.2/1.1                | 27.7/8.7               | ---        | 56'          |                              |
| Feb 19/78 | QU-78-16C        | 95 + 25   | 1761' LT. | 1078' | 8'         | -----                  | 132.9/1.8              | 214.3/1.0               | 217.5/2.5              | ---        | 236'         |                              |
| Feb 19/78 | QU-78-17         | 94 + 97   | 2621' LT. | 1080' | 24'        | -----                  | -----                  | -----                   | -----                  | ---        | 236'         | No core                      |
| Feb 19/78 | QU-78-18         | 97 + 50   | 2259' LT. | 1091' | 4'         | -----                  | -----                  | 68.0/1.3                | 70.0/10.3              | ---        | 97'          |                              |
| Feb 25/78 | QU-78-19         | 97 + 56   | 2496' LT. | 1063' | 8'         | -----                  | -----                  | 18.0/1.2                | 20.2/7.4cl.            | ---        | 59'          |                              |
| Mar 1/78  | QU-78-20         | 97 + 47   | 1253' LT. | 104'  | 6'         | -----                  | 154.5/1.1              | 209.0/1.2               | 211.2/7.3              | ---        | 237'         |                              |
| Mar 1/78  | QU-78-21C        | 95 + 19   | 1250' LT. | 109'  | 8'         | -----                  | 16.5/0.7               | 80.3/1.4                | 82.9/10.7              | ---        | 109'         |                              |
| Mar 2/78  | QU-78-22         | 97 + 58   | 1737' LT. | 1132' | 2'         | -----                  | -----                  | 175.6/1.2               | 177.9/7.2              | ---        | 217'         |                              |
| Mar 3/78  | QU-78-23         | 82 + 49   | 1744' Lt. | 1140' | 0'         | -----                  | 111.3/0.4              | 166.0/1.1               | 168.0/6.7              | ---        | 196'         |                              |
| Mar 4/78  | QU-78-24         | 82 + 48   | 2156' Lt. | 1121' | 8'         | -----                  | 48.3/1.9               | 106.0/1.0               | 108.2/7.4              | ---        | 136'         |                              |
| Mar 4/78  | QU-78-25         | 97 + 56   | 2509' Lt. | 1084' | 28'        | -----                  | -----                  | ?                       | ?                      | ---        | 236'         | No P-log abandoned           |
| Mar 5/78  | QU-78-26         | 92 + 50   | 952' Lt.  | 1094' | 3'         | -----                  | 137.4/0.4              | 217.5/1.5               | 220.8/75cl.            | ---        | 259'         |                              |
| Mar 5/78  | QU-78-27         | 90 + 10   | 1229' Lt. | 1118' | 6'         | -----                  | -----                  | 211.4/1.4               | 214.6/9.7              | ---        | 237'         |                              |
| Mar 7/78  | QU-78-28         | 72 + 46   | 1272' Lt. | 1025' | 5'         | -----                  | 91.0/1.1               | 154.2/1.8               | 157.2/7.1              | ---        | 173'         |                              |
| Mar 7/78  | QU-78-29         | 72 + 53   | 1799' Lt. | 973'  | 7'         | -----                  | 91.9/1.1               | 147.8/0.9               | 150.2/7.6              | ---        | 177'         |                              |
| Mar 8/78  | QU-78-30C        | 74 + 92   | 1499' Lt. | 1077' | 8'         | -----                  | 114.1/1.1              | 171.3/1.5               | 173.5/8.5              | ---        | 200'         | blind at 50'                 |
| Mar 8/78  | QU-78-31C        | 74 + 96   | 1066' Lt. | 1010' | 8'         | -----                  | 119.2/1.1              | 171.2/1.3               | 174.0/7.8              | ---        | 199'         |                              |
| Mar 14/78 | QU-78-32         | 69 + 94   | 1486' Lt. | 963'  | 54'        | -----                  | -----                  | 54.0/1.2                | -----                  | ---        | 79'          | Drill pipe stuck - abandoned |
| Mar 15/78 | QU-78-33         | 69 + 90   | 1255' Lt. | 975'  | 70'        | -----                  | 73.2/1.1               | 115.3/1.4               | 118.5/7.1              | ---        | 142'         |                              |
| Mar 16/78 | QU-78-34         | 75 + 04   | 552' Lt.  | 974'  | 6'         | -----                  | 110.2/1.1              | -----                   | 164.9/8.2              | ---        | 208'         |                              |
| Mar 17/78 | QU-78-35         | 107 + 44  | 1749' Lt. | 1049' | 52'        | -----                  | -----                  | -----                   | 52.3/12.2              | ---        | 79'          |                              |

QUINCY/AMH PEGASUS/NO. 1 ..... DRILLHOLE SURVEY



| DATE      | C-CORREL<br>FILE NO. | GRID LINE | LOCATION  | ELEV.  | TILL<br>DEPTH | NO. 3 SEAM<br>DEPTH/THICK | NO. 2 SEAM<br>DEPTH/THICK | NO. 1 RIDER<br>DEPTH/THICK | NO. 1 SEAM<br>DEPTH/THICK | BASE<br>DEPTH | LOG-<br>COR<br>FILE | REMARKS                     |
|-----------|----------------------|-----------|-----------|--------|---------------|---------------------------|---------------------------|----------------------------|---------------------------|---------------|---------------------|-----------------------------|
| Mar 17/78 | QU-78-36             | 79 + 85   | 1510' Lt. | 1136'  | 7'            | - - - -                   | - - - -                   | 210.8/1.9                  | 213.8/8.6                 | - -           | 235                 |                             |
| Mar 17/78 | QU-78-37             | 104 + 96  | 1407' Lt. | 1075'  | 13'           | - - - -                   | - - - -                   | 114.6/1.4                  | 117.8/11.4                | - -           | 151                 |                             |
| Mar 18/78 | QU-78-38             | 104 + 94  | 987' Lt.  | 1080'  | 3'            | - - - -                   | 88.6/1.1                  | - - - -                    | 161.0/14.7                | - -           | 198                 |                             |
| Mar 19/78 | QU-78-39             | 85 + 18   | 1764' Lt. | 1136'  | 6'            | - - - -                   | 103. /1.0sh.              | 160.8/1.4                  | 163.0/6.5                 | - -           | 192                 |                             |
| Mar 19/78 | QU-78-40             | 105 + 00  | 489' Lt.  | 1039'  | 4'            | - - - -                   | 92.5/1.4                  | 171.5/1.5                  | 181.9/10.9                | - -           | 212                 |                             |
| Mar 19/78 | QU-78-41             | 101 + 94  | 1966' Lt. | 1080'  | -             | - - - -                   | 21.2/.8                   | - - - -                    | 91.0/11.2                 | - -           | 118                 |                             |
| Mar 20/78 | QU-78-42             | 85 + 01   | 321' Lt.  | 1066'  | -             | 22.5/ 1.0Total            | - - - -                   | - - - -                    | - - - -                   | - -           | 80                  |                             |
| Mar 21/78 | QU-78-43             | 105 + 69  | 1897' Lt. | 037.9  | 36.8          | - - - -                   | - - - -                   | - - - -                    | 36.8/11.2                 | - -           | 76                  |                             |
| Mar 21/78 | QU-78-44C            | 102 + 98  | 1764' Lt. | 1083'  | 5'            | - - - -                   | 47.6/0.6                  | 107.7/1.3                  | 110.5/11.9                | - -           | 137                 |                             |
| Mar 21/78 | QU-78-45C            | 102 + 97  | 1281' Lt. | 092.9  | 0'            | - - - -                   | - - - -                   | 154.0/1.4                  | 157.0/10.2                | - -           | 120                 |                             |
| Mar 23/78 | QU-78-46C            | 103 + 16  | 755' Lt.  | 071.7  | 7'            | - - - -                   | 101.6/0.8                 | 177.6/1.3                  | 181.5/10.1                | - -           | 204                 |                             |
| Mar 29/78 | QU-78-47C            | 114 + 73  | 442' Lt.  | 1023'  | 1'            | - - - -                   | 135.0/0.9                 | - - - -                    | 220.8/1                   | - -           | 243                 |                             |
| Mar 29/78 | QU-78-48             | 112 + 62  | 1350' Lt. | 1033'  | 72'           | - - - -                   | - - - -                   | - - - -                    | 72.0/10.0                 | - -           | 105                 |                             |
| Mar 29/78 | QU-78-49C            | 94 + 86   | 1760' Lt. | 1120'  | 8'            | - - - -                   | 86.4/0.4                  | 152.0/1.3                  | 55.0/9.0+1.0              | - -           | 179                 |                             |
| Mar 31/78 | QU-78-50C            | 107 + 46  | 1257' Lt. | 058.0  | 9'            | - - - -                   | 49.0/.3                   | 111.2/1.3                  | 115.0/10.6                | - -           | 139                 |                             |
| Mar 31/78 | QU-78-51C            | 112 + 34  | 627' Lt.  | 024.0  | 27'           | - - - -                   | 79.0/1.0                  | 155.8/0.8                  | - - - -                   | - -           | 198                 |                             |
| Apr 1/78  | QU-78-52C            | 107 + 41  | 725' Lt.  | 1029.0 | 6'            | - - - -                   | 66.6/1.4                  | 140.6/1.4                  | 145.2/10.8                | - -           | 169                 |                             |
| Apr 1/78  | QU-78-53             | 72 + 45   | 1774' Lt. | 993'   | 70'           | - - - -                   | - - - -                   | - - - -                    | - - - -                   | - -           | 73                  | All till not deep<br>enough |
| Apr 2/78  | QU-78-54             | 112 + 58  | 361' Lt.  | 1023'  | 8'            | - - - -                   | 132.1/1.3                 | 215.6/1.7                  | 220.8/9.6                 | - -           | 250                 |                             |
| Apr 3/78  | QU-78-55             | 114 + 78  | 1055' Lt. | 1014'  | -             | - - - -                   | - - - -                   | - - - -                    | - - - -                   | - -           | -                   |                             |
| Apr 5/78  | QU-78-56             | 117 + 37  | 810' Lt.  | 1012'  | 58.2          | - - - -                   | 58.2/0.6                  | 149.0/1.8                  | 155.0/5.4                 | - -           | 176                 |                             |
|           | QU-78-57             | 117 + 82  | 1194' Lt. | 1014'  | 54'           | - - - -                   | - - - -                   | 83.8/1.5                   | 88.6/10.4                 | - -           | 112                 |                             |
| Apr 15/78 | QU-78-59             | 119 + 93  | 1298' Lt. | 1011'  | 65'           | - - - -                   | - - - -                   | - - - -                    | 65.0/10.1                 | - -           | 92                  |                             |
| Apr 15/78 | QU-78-60             | 119 + 78  | 1033' Lt. | 1007'  | -             | - - - -                   | - - - -                   | - - - -                    | 106.5/12.4                | - -           | 159                 |                             |
| Apr 15/78 | QU-78-61             | 115 + 06  | 772' Lt.  | 1015'  | 13'           | - - - -                   | 82.2/1.0                  | - - - -                    | 177.5/5.1                 | - -           | 212                 | Early split in<br>seam      |
| Apr 26/78 | QU-78-73             | 117 + 46  | 266' Lt.  | 1044'  | 3'            | - - - -                   | 109.8/0.9                 | 200.4/1.6                  | 208.6/11.1                | - -           | 239                 |                             |
| Apr 26/78 | QU-78-74             | 120 + 12  | 1488 Lt.  | 1024'  | 38'           | - - - -                   | - - - -                   | - - - -                    | - - - -                   | - -           | 119                 |                             |
| Apr 26/78 | QU-78-77             | 122 + 45  | 1324 Lt.  | 1062'  | 32'           | - - - -                   | 258.3/3.6split            | - - - -                    | 333.2/0.4                 | - -           | 207                 |                             |

QU-78-53  
 QU-78-54  
 QU-78-55  
 QU-78-56  
 QU-78-57  
 QU-78-59  
 QU-78-60  
 QU-78-61  
 QU-78-73  
 QU-78-74  
 QU-78-77  
 PHILLIPS SURVEY



# LUSCAR LTD. corehole log

HOLE NO. QU-78-1c

PAGE 1 OF 2

Line 80+00 2000' Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |             |         |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------|---------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |             |         |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |             |         |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |             |         |
| 1        | 100           | 108 | 8    |           | 3.1  |                                                                                                                                             |            |             |         |
|          |               |     |      | 3.0       |      | siltstone; med grey; hard but completely fractured into laminar peices measuring 3" thick                                                   |            |             |         |
|          |               |     |      | 5.1       |      | siltstone; med grey; hard; massive                                                                                                          |            |             |         |
| 2        | 108           | 116 | 8    |           | 8    |                                                                                                                                             |            |             |         |
|          |               |     |      | 8.0       |      | siltstone as above                                                                                                                          |            |             |         |
| 3        | 116           | 124 | 8    |           | 6'7" |                                                                                                                                             |            |             |         |
|          |               |     |      | 6.6       |      | siltstone as above                                                                                                                          |            |             |         |
| 4        | 124           | 132 | 8    |           | 8.8  |                                                                                                                                             |            |             |         |
|          |               |     |      | 8.8'      |      | siltstone as above only fractured into laminar peices                                                                                       |            |             |         |
| 5        | 132           | 140 | 8    |           | 8.4  |                                                                                                                                             |            |             |         |
|          |               |     |      | 8.4       |      | siltstone as above                                                                                                                          |            |             |         |
| 6        | 140           | 147 | 7    |           | 7.2  |                                                                                                                                             |            |             |         |
|          |               |     |      | 7.0       |      | siltstone as above                                                                                                                          |            |             |         |
|          |               |     |      | .15       | *    | coal; massive; hard; bright and blocky                                                                                                      |            |             |         |
| 7        | 147           | 154 | 7    |           | 7.1  |                                                                                                                                             |            |             |         |
|          |               |     |      | 1.1       | *    | coal; as above; massive and disseminated pyrite throughout                                                                                  |            |             |         |
|          |               |     |      | .8        |      | siltstone; med grey-brown; hard but badly fractured-coal lenses throughout                                                                  |            |             |         |
|          |               |     |      | 5.25      | *    | coal; massive; bright and blocky hard; visible pyrite                                                                                       |            |             |         |
| 8        | 154           | 162 | 8    |           | 7.2  |                                                                                                                                             |            |             |         |
|          |               |     |      | 3.1       | *    | coal; massive; hard; clean; bright and blocky; visible pyrite                                                                               |            |             |         |
|          |               |     |      | .4        |      | mudstone; soft; recessive; crumbly med brown; carbonaceous                                                                                  |            |             |         |
|          |               |     |      | .55       | *    | coal; soft; crumbly; mixed with mudstone                                                                                                    |            |             |         |
| X        | TOTALS        |     |      | X         |      | -                                                                                                                                           | X 100.0    | % REC       | SEAM    |
|          |               |     |      |           |      | +                                                                                                                                           | X 100.0    | % TOT. REC. | SEAM(S) |







# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 12/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-4c

APPROX. LOCATION: 85+00 2250; Lt SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 84+86 2251' Lt.

ELEVATION: 1102'

DRILLER: J.L. Lodoen

| FROM | TO | LOG         | REMARKS |
|------|----|-------------|---------|
| 0    | 8  | till        |         |
| 8    | 10 | brown shale |         |
| 10   | 12 | coal        |         |
| 12   | 17 | sandstone   |         |
| 17   | 54 | brown shale |         |
| 54   | 57 | sandstone   |         |
| 57   | 69 | brown shale |         |
| 69   | 78 | coal        |         |
| 78   | 93 | brown shale |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 93

# LUSCAR LTD. CORE HOLE LOG

HOLE NO. QU-72-46  
PAGE 1 OF 1

LINE 85+00      2250' Lt.

| CORE NO. | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br><small>(LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION)</small> | TRUE DEPTH | LITH. COLUMN<br>1" = 10' |       |      |
|----------|---------------|----|------|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|-------|------|
|          | DRILLED       |    |      | RECOVERED |      |                                                                                                                                                             |            | TRUE DEPTH               | LITH. | SEC. |
|          | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                                             |            |                          |       |      |
| 1        | 52            | 69 | 7'   | 6'        | 8    |                                                                                                                                                             |            |                          |       |      |
|          |               |    |      | 6.0       |      | sst.; med grey; massive; hard                                                                                                                               |            |                          |       |      |
|          |               |    |      | .4        |      | mudstone; med brown; med hard                                                                                                                               |            |                          |       |      |
|          |               |    |      | .1        |      | carb. shale; shattered; 50% coaly; softer                                                                                                                   |            |                          |       |      |
|          |               |    |      | .3        |      | coal; massive; hard; no visible pyrite                                                                                                                      |            |                          |       |      |
| 2        | 69            | 77 | 8'   | 8.3       |      |                                                                                                                                                             |            |                          |       |      |
|          |               |    |      | .85       |      | coal; massive hard; massive pyrite on                                                                                                                       |            |                          |       |      |
|          |               |    |      |           |      | clears; bright and blocky.                                                                                                                                  |            |                          |       |      |
|          |               |    |      | .4        |      | mudstone; hard; med grey-brown                                                                                                                              |            |                          |       |      |
|          |               |    |      | 7.1       |      | coal; massive; hard; bright and blocky                                                                                                                      |            |                          |       |      |
|          |               |    |      |           |      | abundant visible pyrite                                                                                                                                     |            |                          |       |      |
| 3        | 77            | 85 | 8    | 7.9       |      |                                                                                                                                                             |            |                          |       |      |
|          |               |    |      | 1.4       |      | coal; as above                                                                                                                                              |            |                          |       |      |
|          |               |    |      | 1.3       |      | mudstone; med brown; soft but massive                                                                                                                       |            |                          |       |      |
|          |               |    |      |           |      | wet; plastic; 50% coaly                                                                                                                                     |            |                          |       |      |
|          |               |    |      | 3.5       |      | sst.; med grey; hard; uniform; massive                                                                                                                      |            |                          |       |      |
|          |               |    |      | 1.6       |      | sst.; med grey; softer; fractured and                                                                                                                       |            |                          |       |      |
|          |               |    |      |           |      | milled                                                                                                                                                      |            |                          |       |      |
| TOTALS   |               |    |      |           |      | ÷ X100 = % REC.                                                                                                                                             | SEAM       |                          |       |      |
|          |               |    |      |           |      | ÷ X100 = % TOT. REC.                                                                                                                                        | SEAM(S)    |                          |       |      |





# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Feb. 15, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-6c

APPROX. LOCATION: 90+00 2250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 90+04 2257 Lt.

ELEVATION: 1125

DRILLER: R. Lodoen

| FROM | TO  | LOG              | REMARKS |
|------|-----|------------------|---------|
| 0    | 10  | till             |         |
| 10   | 26  | sandstone        |         |
| 26   | 32  | dark brown shale |         |
| 32   | 33  | coal             |         |
| 33   | 87  | dark brown shale |         |
| 87   | 90  | coal             |         |
| 90   | 91  | brown shale      |         |
| 91   | 99  | coal             |         |
| 99   | 110 | sandstone        |         |
| 110  | 111 | coal             |         |
| 111  | 116 | sandstone        |         |
| 116  | 120 | dark brown shale |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LUSCAR LTD. corehole log

WOLE NO. 011-78-6  
PAGE 1 OF 2

Approximate Location: Line 90+00 2250' L.T.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 33            | 41  | 8    | 7.0'      |      | stored                                                                                                                                      |            |
| 2        | 41            | 49  | 8    | 8.3'      |      | stored                                                                                                                                      |            |
| 3        | 49            | 57  | 8    | 8.7'      |      | stored                                                                                                                                      |            |
| 4        | 57            | 65  | 8    | 7.9'      |      | stored                                                                                                                                      |            |
| 5        | 65            | 73  | 8    | 8.5'      |      | stored                                                                                                                                      |            |
| 6        | 73            | 81  | 8    | 8.3'      |      | stored                                                                                                                                      |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
| 7        | 81            | 89  | 8    | 7.9'      |      |                                                                                                                                             |            |
|          |               |     |      |           | 5.3  | siltstone; dark grey; hard but fractured; some massive sections near base                                                                   |            |
|          |               |     |      |           | 1.15 | siltstone; dark grey; softer; some carbonaceous bands; fractured at 60° to core axis but no evidence of slippage                            |            |
|          |               |     |      |           | .05  | coal; bright and blocky                                                                                                                     |            |
|          |               |     |      |           | .3   | mudstone; dark brown; massive; carbonaceous relatively soft                                                                                 |            |
|          |               |     |      |           | .05  | coal; as above                                                                                                                              |            |
|          |               |     |      |           | .05  | mudstone; dark brown; soft; plastic, set                                                                                                    |            |
|          |               |     |      |           | .9   | coal; bright blocky; hard; massive; abundant visible pyrite                                                                                 |            |
| 8        | 89            | 97  | 8.0  | 8.1       |      |                                                                                                                                             |            |
|          |               |     |      |           | .5   | coal; as above                                                                                                                              |            |
|          |               |     |      |           | 1.0  | mudstone; massive; fairly hard; laminar cleavage; small coal particles throughout fissile                                                   |            |
|          |               |     |      |           | 6.6  | coal; bright, blocky; massive; hard; uniform some pyrite and amber; calcite infills                                                         |            |
| 9        | 97            | 104 | 7    | 6.6       |      |                                                                                                                                             |            |
|          |               |     |      |           | 1.4  | coal; as above                                                                                                                              |            |
|          |               |     |      |           | .3   | mudstone; soft, wet; plastic; coaly                                                                                                         |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |





# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 15/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-8

APPROX. LOCATION: 87+50 2000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 87+55 1955' Lt.

ELEVATION: 1132'

DRILLER: J.B. Caswoll

| FROM | TO   | LOG          | REMARKS |
|------|------|--------------|---------|
| 0.0  | 9    | boulder till |         |
| 9.0  | 65.5 | grey shale   |         |
| 65.5 | 81   | black shale  |         |
| 81.0 | 106  | shale (grey) |         |
| 106  | 133  | black shale  |         |
| 133  | 141  | coal         |         |
| 141  | 164  | grey shale   |         |
|      | 164  | end of hole  |         |
|      |      |              |         |
|      |      |              |         |
|      |      |              |         |
|      |      |              |         |
|      |      |              |         |
|      |      |              |         |
|      |      |              |         |
|      |      |              |         |
|      |      |              |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 15/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-9c

APPROX. LOCATION: 90+00 1750' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 90+05 1735' Lt.

ELEVATION: 1125'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG              | REMARKS |
|------|-----|------------------|---------|
| 0    | 6   | till             |         |
| 6    | 31  | sandstone        |         |
| 31   | 36  | dark brown shale |         |
| 36   | 78  | sandstone        |         |
| 78   | 90  | brown shale      |         |
| 90   | 91  | coal             |         |
| 91   | 115 | dark brown shale |         |
| 115  | 150 | sandstone        |         |
| 150  | 156 | brown shale      |         |
| 156  | 157 | coal             |         |
| 157  | 160 | brown shale      |         |
| 160  | 168 | coal             |         |
| 168  | 171 | dark brown shale |         |
| 171  | 176 | sandstone        |         |
| 176  | 179 | brown shale      |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 179

# LUSCAR LTD. corehole log

HOLE NO. 9H-78 9c

PAGE 1 OF 2

Approximate Location: Line 90+00 1750 Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 80            | 88  | 8.3  |           |      |                                                                                                                                             |            |
|          |               |     |      | 4.5       |      | siltstone; greyish green; hard but fractured                                                                                                |            |
|          |               |     |      | 2.5       |      | sandstone; medium grey; medium grained; hard massive                                                                                        |            |
|          |               |     |      | 1.3       |      | siltstone; dark grey; hard but fractured                                                                                                    |            |
| 2        | 88            | 96  | 7.4  |           |      |                                                                                                                                             |            |
|          |               |     |      | 1.5       |      | sandstone; med grey; medium to fine grained; hard; massive                                                                                  |            |
|          |               |     |      | .7        |      | coal; blocky and bright but fractured and crushed; some visible sulphur                                                                     |            |
|          |               |     |      | .05       |      | siltstone; dark grey; hard                                                                                                                  |            |
|          |               |     |      | .35       |      | coal; as above                                                                                                                              |            |
| 3        | 96            | 104 | 8.0  |           |      |                                                                                                                                             |            |
|          |               |     |      | 8.0       |      | siltstone; medium to dark grey-brown; hard but fractured into thin laminar layers                                                           |            |
| 4        | 155           | 163 | 8.5  | .4        |      | mudstone; dark grey; thin coal laminae throughout; fractured                                                                                |            |
|          |               |     |      | 1.45      |      | coal; bright and blocky; massive; abundant sulf.                                                                                            |            |
|          |               |     |      | 1.65      |      | mudstone; medium brown; soft; plastic                                                                                                       |            |
|          |               |     |      | 5.0       |      | coal; bright and blocky; some visible sulfur massive and hard                                                                               |            |
| 5        | 163           | 171 | 8.0  |           |      |                                                                                                                                             |            |
|          |               |     |      | 2.55      |      | coal as above                                                                                                                               |            |
|          |               |     |      | .10       |      | mudstone; dark grey; carbonaceous                                                                                                           |            |
|          |               |     |      | .40       |      | coal; soft; dirty; crushed;                                                                                                                 |            |
|          |               |     |      | .40       |      | mudstone; soft; plastic; coaly                                                                                                              |            |
|          |               |     |      | .35       |      | coal; soft; dirty; crushed                                                                                                                  |            |
|          |               |     |      | 1.0       |      | mudstone; soft; crushed and milled; some coal mixed in                                                                                      |            |
|          |               |     |      | 3.4       |      | siltstone; medium grey; hard but fractured                                                                                                  |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |







# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 16/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-11

APPROX. LOCATION: 97+50 1750' Lt SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 97+45 1751' Lt.

ELEVATION: 1107'

DRILLER: H. Vincett

| FROM | TO  | LOG                | REMARKS |
|------|-----|--------------------|---------|
| 0    | 2   | till               |         |
| 2    | 78  | grey sandstone     |         |
| 78   | 85  | carbonaceous shale |         |
| 85   | 144 | grey shale         |         |
| 144  | 146 | coal               |         |
| 146  | 147 | shale              |         |
| 147  | 158 | coal               |         |
| 158  | 180 | grey shale         |         |
|      |     |                    |         |
|      |     |                    |         |
|      |     |                    |         |
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|      |     |                    |         |
|      |     |                    |         |

COMMENTS \_\_\_\_\_

WATER HORIZON 62 FT. 10 gals/min

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 17/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-12

APPROX. LOCATION: 97+50 1250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 97+44 1268' Lt.

ELEVATION: 1105'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 2   | fill           |         |
| 2    | 110 | grey sandstone |         |
| 110  | 182 | grey shale     |         |
| 182  | 183 | coal           |         |
| 183  | 184 | shale          |         |
| 184  | 196 | coal           |         |
| 196  | 220 | shale          |         |
|      |     |                |         |
|      |     |                |         |
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|      |     |                |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 17/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-13c

APPROX. LOCATION: 95+00 1250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 95+02 1252' Lt

ELEVATION: 1104'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                                         | REMARKS                  |
|------|-----|---------------------------------------------|--------------------------|
| 0    | 6   | till                                        | water @ 150-18.20 G.P.M. |
| 6    | 8   | sandstone                                   |                          |
| 8    | 14  | rusty red shale                             |                          |
| 14   | 31  | sandstone                                   |                          |
| 31   | 36  | brown shale                                 |                          |
| 36   | 101 | sandstone and stringers of dark brown shale |                          |
| 101  | 119 | dark brown shale                            |                          |
| 119  | 121 | sandstone                                   |                          |
| 121  | 134 | brown shale                                 |                          |
| 134  | 185 | sandstone                                   |                          |
| 185  | 191 | dark brown shale                            |                          |
| 191  | 192 | coal                                        |                          |
| 192  | 195 | dark brown shale                            |                          |
| 195  | 205 | coal                                        |                          |
| 205  | 210 | brown shale                                 |                          |
| 210  | 221 | sandstone                                   |                          |

COMMENTS \_\_\_\_\_

WATER HORIZON 150 FT. 221

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 18/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-14

APPROX. LOCATION: 97+50 750' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 97+46 756' Lt.

ELEVATION: 1075'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 5   | till           |         |
| 5    | 116 | grey sandstone |         |
| 116  | 126 | grey shale     |         |
| 126  | 160 | grey sandstone |         |
| 160  | 209 | grey shale     |         |
| 209  | 217 | coal           |         |
| 217  | 230 | grey sandstone |         |
| 230  | 240 | grey shale     |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
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|      |     |                |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_







# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 19/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-16c

APPROX. LOCATION: 95+00 750' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 95+52 761' Lt.

ELEVATION: 1078'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                          | REMARKS |
|------|-----|------------------------------|---------|
| 0    | 8   | till                         |         |
| 8    | 31  | sandstone                    |         |
| 31   | 38  | brown shale                  |         |
| 38   | 76  | sandstone                    |         |
| 76   | 84  | brown shale                  |         |
| 84   | 146 | sandstone                    |         |
| 146  | 154 | brown and carbonaceous shale |         |
| 154  | 174 | dark brown shale             |         |
| 174  | 181 | sandstone                    |         |
| 181  | 215 | brown shale                  |         |
| 215  | 217 | coal                         |         |
| 217  | 219 | brown shale                  |         |
| 219  | 226 | coal                         |         |
| 226  | 231 | brown shale                  |         |
| 231  | 237 | sandstone                    |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 237

# LUSCAR LTD. CORE HOLE LOG

LOCATION 95+00 750' Lt.

HOLE NO QU-78-16c

PAGE 1 OF 1

| CORE NO. | CORE FOOTAGES |     |      |           |         | GEOLOGICAL DESCRIPTION<br>(LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION)                         | TRUE DEPTH | LITH. COLUMN<br>1" = 10' |       |      |
|----------|---------------|-----|------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|-------|------|
|          | DRILLED       |     |      | RECOVERED |         |                                                                                                                                                                      |            | TRUE DEPTH               | LITH. | SEC. |
|          | FROM          | TO  | TOT. | SEC.      | TOT.    |                                                                                                                                                                      |            |                          |       |      |
| 1        | 205           | 213 | 6.9  |           |         |                                                                                                                                                                      |            |                          |       |      |
|          |               |     | 6.9  |           |         | siltstone; dark grey; massive; hard; uniform                                                                                                                         |            |                          |       |      |
| 2        | 213           | 221 | 7.4  |           |         |                                                                                                                                                                      |            |                          |       |      |
|          |               |     | 1.3  |           |         | siltstone; as above                                                                                                                                                  |            |                          |       |      |
|          |               |     | .7   |           |         | siltstone; dark grey; carbonaceous; fractured<br>coaly bands throughout                                                                                              |            |                          |       |      |
|          |               |     | 1.55 |           |         | coal; bright and blocky; massive hard                                                                                                                                |            |                          |       |      |
|          |               |     | 1.45 |           |         | mudstone; soft; wet; plastic; coaly throughout                                                                                                                       |            |                          |       |      |
|          |               |     | 2.5  |           |         | coal; softer than normal; massive but<br>fractured at 60° to core axis; crushed<br>zone near bottom of core - some lost core;<br>possible faulting through coal zone |            |                          |       |      |
| 3        | 221           | 229 | 5.4  | 2.7       |         | coal; as above                                                                                                                                                       |            |                          |       |      |
|          |               |     |      | .2        |         | coal and mudstone mixed - lost core                                                                                                                                  |            |                          |       |      |
|          |               |     | 2.5  |           |         | siltstone; soft; crushed and rolled; wet                                                                                                                             |            |                          |       |      |
| TOTALS   |               |     |      | X         |         |                                                                                                                                                                      |            |                          |       |      |
|          |               |     | +    |           | X 100 = | % REC.                                                                                                                                                               | SEAM       |                          |       |      |
|          |               |     | +    |           | X 100 = | % TOT. REC.                                                                                                                                                          | SEAM(S)    |                          |       |      |









# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 1/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-21C

APPROX. LOCATION: 95+00 2250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 95+19 2250 Lt.

ELEVATION: 1109'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                          | REMARKS |
|------|-----|------------------------------|---------|
| 0    | 8   | boulder till                 |         |
| 8    | 20  | brown shale                  |         |
| 20   | 23  | coal                         |         |
| 23   | 33  | brown shale                  |         |
| 33   | 78  | sandstone                    |         |
| 78   | 80  | brown and carbonaceous shale |         |
| 80   | 82  | coal                         |         |
| 82   | 83  | dark brown shale             |         |
| 83   | 93  | coal                         |         |
| 93   | 94  | dark brown shale             |         |
| 94   | 96  | coal                         |         |
| 96   | 99  | siltstone (soft)             |         |
| 99   | 113 | brown shale                  |         |
|      |     |                              |         |
|      |     |                              |         |
|      |     |                              |         |

COMMENTS \_\_\_\_\_

WATER HORIZON 57 FT. 113





# LUSCAR LTD. corehole log

WOLE NO. 00-78-21c  
PAGE 2 OF 2

Approximate Location 95+00 Line 2250' Lt

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
|          |               |     |      | .25       |      | coal; bright and blocky with some bony lamonie; calcite on cleats some visable pyrite                                                       |            |
| 3        | 82            | 90  | 7.95 |           |      |                                                                                                                                             |            |
|          |               |     |      | .85       |      | coal as above; consontration of diseminated pyrite near base                                                                                |            |
|          |               |     |      | 1.2       |      | mudstone; medium brown to grey; massive; fissle, carbonaceous lamine throughout                                                             |            |
|          |               |     |      | 4.55      |      | coal; bright and blocky; massive; hard; calcite on cleats some visable pyrite; some amber;                                                  |            |
|          |               |     |      | 0.1       |      | bone; bright and dull banded; 30% coal                                                                                                      |            |
|          |               |     |      | 1.25      |      | coal as above                                                                                                                               |            |
| 4        | 90            | 98  | 5.9  |           |      |                                                                                                                                             |            |
|          |               |     |      | 1.95      |      | coal as above                                                                                                                               |            |
|          |               |     |      | .15       |      | mudstone; medium brown; soft plastic carbonaceous                                                                                           |            |
|          |               |     |      | .35       |      | coal; soft crushed; milled mixed with mudstone                                                                                              |            |
|          |               |     |      | .7        |      | mudstone; medium brown; top is soft plastic from water penitration; bottom is dry and massive                                               |            |
|          |               |     |      | 1.25      |      | coal as at 84.05                                                                                                                            |            |
|          |               |     |      | 1.5       |      | siltstone; medium brown to grey; hard; massive; uniform coaly impregnations                                                                 |            |
| 4        | 98            | 106 | 8.1  |           |      |                                                                                                                                             |            |
|          |               |     |      | 8.1       |      | siltstone; medium grey; massive; coaly impregnations                                                                                        |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 2/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-22

APPROX. LOCATION: 77+50 1750 Left SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 77+58 1737' Lt.

ELEVATION: 1132'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS              |
|------|-----|----------------|----------------------|
| 0    | 2   | till           |                      |
| 2    | 90  | grey sandstone |                      |
| 90   | 95  | grey shale     |                      |
| 95   | 118 | grey sandstone |                      |
| 118  | 176 | grey shale     |                      |
| 176  | 186 | coal           |                      |
| 186  | 198 | grey shale     | coal stringer at 196 |
| 198  | 220 | grey sandstone |                      |
|      |     |                |                      |
|      |     |                |                      |
|      |     |                |                      |
|      |     |                |                      |
|      |     |                |                      |
|      |     |                |                      |
|      |     |                |                      |
|      |     |                |                      |
|      |     |                |                      |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 4/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-24

APPROX. LOCATION: 82+50 2250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 82+48 2156' Lt.

ELEVATION: 1121'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 8   | till           |         |
| 8    | 25  | grey sandstone |         |
| 25   | 49  | grey shale     |         |
| 49   | 50  | coal           |         |
| 50   | 104 | grey shale     |         |
| 104  | 112 | coal           |         |
| 112  | 119 | grey shale     |         |
| 119  | 140 | grey sandstone |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 5/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-27c

APPROX. LOCATION: 90+00 1250 Lt. SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 90+10 1229' Lt.

ELEVATION: 1118'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                          | REMARKS |
|------|-----|------------------------------|---------|
| 0    | 6   | till                         |         |
| 6    | 15  | brown shale                  |         |
| 15   | 130 | sandstone                    |         |
| 130  | 145 | brown shale                  |         |
| 145  | 150 | sandstone                    |         |
| 150  | 154 | brown and carbonaceous shale |         |
| 154  | 170 | sandstone                    |         |
| 170  | 210 | brown shale                  |         |
| 210  | 211 | coal                         |         |
| 211  | 212 | brown shale                  |         |
| 212  | 224 | coal                         |         |
| 224  | 227 | brown shale                  |         |
| 227  | 237 | sandstone                    |         |
|      |     |                              |         |
|      |     |                              |         |
|      |     |                              |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 237

# LUSCAR LTD. corehole log

SOLE NO. QU-78-27c

Approximate Location 90+00 Line 1250' Lt.

PAGE 1 OF 1

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 205           | 213 | 7.7  |           |      |                                                                                                                                             |            |
|          |               |     |      | 4.45      |      | siltstone; medium grey; medium hard                                                                                                         |            |
|          |               |     |      |           |      | some fissility; fractured into thin bands                                                                                                   |            |
|          |               |     |      |           |      | calcite on fractures                                                                                                                        |            |
|          |               |     |      | .40       |      | siltstone; as above but with thin coaly laminae                                                                                             |            |
|          |               |     |      | 1.45      |      | coal; bright and blocky; massive; hard                                                                                                      |            |
|          |               |     |      |           |      | abundant visible pyrite                                                                                                                     |            |
|          |               |     |      | .40       |      | mudstone; light grey; soft and plastic; wet                                                                                                 |            |
|          |               |     |      | .45       |      | mudstone; medium brown; soft; carbonaceous                                                                                                  |            |
|          |               |     |      |           |      | numerous coaly bands                                                                                                                        |            |
|          |               |     |      | .40       |      | mudstone; light grey; soft                                                                                                                  |            |
|          |               |     |      | .25       |      | coal; bright and blocky; massive; hard                                                                                                      |            |
| 2        | 213           | 221 | 8.4  |           |      |                                                                                                                                             |            |
|          |               |     |      | 7.5       |      | coal; as above; calcite on cleats; amber                                                                                                    |            |
|          |               |     |      |           |      | some pyrite                                                                                                                                 |            |
|          |               |     |      | .40       |      | mudstone; dark brown to grey; soft; minor                                                                                                   |            |
|          |               |     |      |           |      | chunks of coal                                                                                                                              |            |
|          |               |     |      | .55       |      | coal; bright and blocky; top is crushed                                                                                                     |            |
| 3        | 221           | 229 | 8.8  |           |      |                                                                                                                                             |            |
|          |               |     |      | .35       |      | coal; as above; calcite on cleats                                                                                                           |            |
|          |               |     |      | 1.20      |      | mudstone; dark brown; soft; wet and plastic                                                                                                 |            |
|          |               |     |      |           |      | some fissility; coaly towards base                                                                                                          |            |
|          |               |     |      | 1.25      |      | coal; crushed; soft; dirty; soft mudstone                                                                                                   |            |
|          |               |     |      |           |      | mixed in some amber                                                                                                                         |            |
|          |               |     |      | 1.45      |      | siltstone; light brown; soft; dry and powdery; hard lenses; minor coal bits                                                                 |            |
|          |               |     |      | 4.6       |      | siltstone; medium grey-green; medium hard                                                                                                   |            |
| 4        | 229           | 237 | 7.9  |           |      |                                                                                                                                             |            |
|          |               |     |      | 7.9       |      | siltstone; as above                                                                                                                         |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 7/78

COMPANY: LEXCO TESTING

HOLE NO.: QU-78-28

APPROX. LOCATION: 72+50 1250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 72+46 1272 Lt.

ELEVATION: 1025'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 5   | till           |         |
| 5    | 85  | grey sandstone |         |
| 85   | 95  | grey shale     |         |
| 95   | 96  | coal           |         |
| 96   | 151 | grey shale     |         |
| 151  | 154 | coal           |         |
| 154  | 155 | grey shale     |         |
| 155  | 162 | coal           |         |
| 162  | 180 | grey shale     |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 8/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-30c

APPROX. LOCATION: \_\_\_\_\_ SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 74+92 1498' Lt.

ELEVATION: 1077'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                          | REMARKS |
|------|-----|------------------------------|---------|
| 0    | 8   | till                         |         |
| 8    | 62  | sandstone                    |         |
| 62   | 65  | brown shale                  |         |
| 65   | 90  | sandstone                    |         |
| 90   | 91  | brown shale                  |         |
| 91   | 97  | sandstone                    |         |
| 97   | 99  | brown and carbonaceous shale |         |
| 99   | 107 | sandstone                    |         |
| 107  | 137 | brown shale                  |         |
| 137  | 165 | sandstone                    |         |
| 165  | 170 | brown shale                  |         |
| 170  | 172 | coal                         |         |
| 172  | 173 | brown shale                  |         |
| 173  | 183 | coal                         |         |
| 183  | 200 | sandstone                    |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 200

# LUSCAR LTD. corehole log

HOLE NO. 00-78-30c

PAGE 1 OF 1

Approximate Location 75+00 Line 1500' Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 160           | 168 | 8.2  |           |      |                                                                                                                                             |            |
|          |               |     |      | 8.2       |      | siltstone; light grey; medium hard; fissile<br>occ. coal stringer                                                                           |            |
| 2        | 168           | 176 | 8    |           |      |                                                                                                                                             |            |
|          |               |     |      | .75       |      | siltstone as above                                                                                                                          |            |
|          |               |     |      | .4        |      | carbonaceous shale; dark brown; soft to<br>medium hard; numerous coal; laminae; fissile                                                     |            |
|          |               |     |      | .25       |      | coal; bright and blocky; medium hard                                                                                                        |            |
|          |               |     |      | .4        |      | carbonaceous shale as above                                                                                                                 |            |
|          |               |     |      | 1.25      |      | coal; bright blocky; visible pyrite some<br>amber; #1 rider                                                                                 |            |
|          |               |     |      | .85       |      | siltstone; light to medium brown; some<br>coaly bits; locally fissile                                                                       |            |
|          |               |     |      | 3.7       |      | coal; bright and blocky; massive; medium<br>hard, #1 seam                                                                                   |            |
| 3        | 176           | 184 | 7.15 |           |      |                                                                                                                                             |            |
|          |               |     |      | 5.0       |      | coal as above; except highly broken;<br>some visible pyrite                                                                                 |            |
|          |               |     |      | 1.3       |      | mudrock light and dark bands soft<br>minor coaly stringers; wet                                                                             |            |
|          |               |     |      | .5        |      | siltstone; light brown; numerous coaly<br>particals; hard                                                                                   |            |
|          |               |     |      | .3        |      | mudrock light grey; soft                                                                                                                    |            |
| 4        | 184           | 192 | 8.25 |           |      |                                                                                                                                             |            |
|          |               |     |      | 5.05      |      | siltstone; light grey; soft to medium hard<br>fissile; occ band; carbonaceous                                                               |            |
|          |               |     |      | .4        |      | carbonaceous shale; dark brown; med. hard;<br>numerous coal stringers                                                                       |            |
|          |               |     |      | .25       |      | coal bright blocky; medium hard                                                                                                             |            |
|          |               |     |      | 2.5       |      | siltstone; light grey; med. hard; fissile                                                                                                   |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 6/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-31c

APPROX. LOCATION: 75+00 1000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 74+96 1066' Lt.

ELEVATION: 1040'

DRILLER: H. Vincett

| FROM | TO  | LOG                            | REMARKS |
|------|-----|--------------------------------|---------|
| 0    | 4   | till                           |         |
| 4    | 125 | grey sandstone                 |         |
| 125  | 158 | grey shale                     |         |
|      |     |                                |         |
|      |     | Drilt to core point for rig 06 |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_



# LUSGAR LTD. corehole log

HOLE NO. QU-78-31c

Approximate Location 75+00 Line 1000' Lt.

PAGE 1 OF 2

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                               |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                               |            |
| X        | X             | X   |      | X         |      |                                                                                                                                               |            |
| 1        | 160           | 168 | 7.65 |           |      |                                                                                                                                               |            |
|          |               |     |      | 7.65      |      | siltstone; light grey; medium hard; fissile<br>some calcite on joints, occas broken too<br>crushed                                            |            |
| 2        | 168           | 176 | 8.0  |           |      |                                                                                                                                               |            |
|          |               |     |      | 1.8       |      | siltstone                                                                                                                                     |            |
|          |               |     |      | .4        |      | carbonaceous shale, dark brown; medium<br>hard; coal stringers (numerous)                                                                     |            |
|          |               |     |      | 1.4       |      | coal; bright and blocky; #1 rider fractured<br>numerous streaks; pyrite visible lower end<br>of entry                                         |            |
|          |               |     |      | .9        |      | mudstone; light to dark grey; very soft;<br>wet ocas; coaly stringer                                                                          |            |
|          |               |     |      | 3.45      |      | coal; bright blocky; #1 seam massive; hard                                                                                                    |            |
| 3        | 176           | 184 | 7.9  |           |      |                                                                                                                                               |            |
|          |               |     |      | 4.5       |      | coal as above                                                                                                                                 |            |
|          |               |     |      | .3        |      | mud rock dark brown; very soft; wet ocas<br>coaly streak                                                                                      |            |
|          |               |     |      | .15       |      | coal; bright blocky; medium hard;                                                                                                             |            |
|          |               |     |      | .6        |      | mudrock as above                                                                                                                              |            |
|          |               |     |      | .2        |      | coal as above                                                                                                                                 |            |
|          |               |     |      | .6        |      | mudrock as above                                                                                                                              |            |
|          |               |     |      | 1.5       |      | siltstone; light grey; med hard numerous<br>coaly bits                                                                                        |            |
| 4        | 184           | 192 | 7.7  |           |      |                                                                                                                                               |            |
|          |               |     |      | 6.9       |      | siltstone as above                                                                                                                            |            |
|          |               |     |      | .05       |      | coal; bright blocky; hard                                                                                                                     |            |
|          |               |     |      | .6        |      | siltstone as above                                                                                                                            |            |
|          |               |     |      | .13       |      | coal as above                                                                                                                                 |            |
| X        | TOTALS        |     |      | X         |      |                                                                                                                                               |            |
|          |               |     |      |           |      | ÷ X 100 = % REC.                                                                                                                              | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                         | SEAM(S)    |

# LUSCAR LTD. corehole log

WOLE NO. QU-78-31c

PAGE 2 OF 2

Approximate Location 75400 Line 1000' Lt.

| CORE NO.                            | CORE FOOTAGES                       |                                     |                                     |                                     |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH                          |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
|                                     | DRILLED                             |                                     |                                     | RECOVERED                           |      |                                                                                                                                             |                                     |
|                                     | FROM                                | TO                                  | TOT.                                | SEC.                                | TOT. |                                                                                                                                             |                                     |
|                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |      |                                                                                                                                             |                                     |
| 5                                   | 192                                 | 200                                 | 7.3                                 |                                     |      |                                                                                                                                             |                                     |
|                                     |                                     |                                     |                                     | 7.0                                 |      | siltstone                                                                                                                                   |                                     |
|                                     |                                     |                                     |                                     | .3                                  |      | sandstone; green grey; medium hard; occ. coaly bits; coarse grained; massive                                                                |                                     |
|                                     |                                     |                                     |                                     |                                     |      |                                                                                                                                             |                                     |
|                                     |                                     |                                     |                                     |                                     |      |                                                                                                                                             |                                     |
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|                                     |                                     |                                     |                                     |                                     |      |                                                                                                                                             |                                     |
|                                     |                                     |                                     |                                     |                                     |      |                                                                                                                                             |                                     |
|                                     |                                     |                                     |                                     |                                     |      |                                                                                                                                             |                                     |
|                                     |                                     |                                     |                                     |                                     |      |                                                                                                                                             |                                     |
| <input checked="" type="checkbox"/> | TOTALS                              |                                     |                                     | <input checked="" type="checkbox"/> |      | ÷ X 100 = % REC. SEAM<br>÷ X 100 = % TOT. REC. SEAM(S)                                                                                      | <input checked="" type="checkbox"/> |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 9/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-32

APPROX. LOCATION: 70+00 1500 Left SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 6994 - 1486

ELEVATION: 963

DRILLER: H. Vincett

| FROM | TO | LOG  | REMARKS          |
|------|----|------|------------------|
| 0    | 54 | Till | Granite boulders |
| 54   | 56 | Coal |                  |
|      |    |      |                  |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 16/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-34

APPROX. LOCATION: 75+00 500' Lt SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 75+04 522 Lt.

ELEVATION: 974'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 6   | till           |         |
| 6    | 102 | grey sandstone |         |
| 102  | 109 | grey shale     |         |
| 109  | 110 | coal           |         |
| 110  | 163 | grey shale     |         |
| 163  | 173 | coal           |         |
| 173  | 200 | grey shale     |         |
|      |     |                |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 17/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-36c

APPROX. LOCATION: 80+00 1500' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 79+85 1510' Lt.

ELEVATION: 1136'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                                            | REMARKS               |
|------|-----|------------------------------------------------|-----------------------|
| 0    | 7   | till                                           |                       |
| 7    | 27  | sandstone and stringers of siltstone           | (shattered formation) |
| 27   | 35  | brown and carbonaceous shale                   |                       |
| 35   | 90  | sandstone and stringers of hard brown shale    |                       |
| 90   | 98  | brown shale                                    |                       |
| 98   | 110 | siltstone                                      |                       |
| 110  | 123 | conglomerate, looked like cemented gravel      | (very hard)           |
| 123  | 131 | siltstone                                      |                       |
| 131  | 136 | brown shale                                    |                       |
| 136  | 158 | sandstone and stringers of hard brown shale    |                       |
| 158  | 163 | brown and carbonaceous shale-stringers of coal |                       |
| 163  | 204 | sandstone and stringers of hard brown shale    |                       |
| 204  | 216 | coal                                           |                       |
| 216  | 220 | soft siltstone                                 |                       |
| 220  | 229 | sandstone and stringers of hard brown shale    |                       |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_



# LUSCAR LTD. corehole log




HOLE NO. 219-36  
PAGE 3 OF 7

PROJECT: \_\_\_\_\_ BOREHOLE LOCATION: \_\_\_\_\_ DIP: \_\_\_\_\_ BEARING: \_\_\_\_\_ R.L. SURFACE: \_\_\_\_\_ DATUM: \_\_\_\_\_

| DEPTH<br>From<br>To | LITHOLOGY | ROCK SUBSTANCE DESCRIPTION:<br>Characteristics, colour, structure, minor components. | WATER WEATHERING | STRENGTH OF R.Q.D. |       | DEFECT SPACING mm. | ROCK MASS DEFECTS:<br>thickness, type, inclination, planarity, roughness, coating.                                                                                         |
|---------------------|-----------|--------------------------------------------------------------------------------------|------------------|--------------------|-------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     |           |                                                                                      |                  | 0-25               | 25-50 |                    |                                                                                                                                                                            |
| 15 44 49            | SANDSTONE | massive, hard as to 12.0 laminations 90° TCA                                         | FR               |                    |       |                    | 35.0-35.5 broken by drill<br>rest of run broken every 1.5 to 2.3'                                                                                                          |
| 51 49 57            |           | coarse grained<br>2 cm subrounded pebble zone weakly cemented pebbles < 1.0 mm       |                  |                    |       |                    | fracture at 39.0', natural thin rust stain coating very rough 0.5 cm surface relief, 90° TCA                                                                               |
| 53 57 58            |           | SAMPLE # 1 53.5 to 53.3                                                              |                  |                    |       |                    | 4 fractures at 47.3' 2" spacings, extremely cemented and massive total 12 fractures (natural?) along run<br>51.5-52.5 RQD 30%<br>rest of run massive rare fracture 90° TCA |
| 57 57 65            |           | 8' graded bedding 2-3mm laminations 85° TCA                                          |                  |                    |       |                    | average fracture spacing 0.8-2.0' most caused by drilling<br>disking at 57.7 to 57.8<br>61.7 to 62.0<br>61.2 to 61.4                                                       |
| 68 73 75            |           | medium grained massive, laminated texture 90° TCA                                    |                  |                    |       |                    | disking at 66.9 to 67.5<br>68.0 to 69.5<br>70.9 to 72.3<br>72.4 to 73.0                                                                                                    |

### KEY

### WATER

 10. OCT. 76 WATER LEVEL  
 WATER INFLOW  
 WATER LOSS

### WEATHERING

FR - FRESH  
 SL - SLIGHTLY WEATHERED  
 MW - MODERATELY WEATHERED  
 HW - HIGHLY WEATHERED  
 EW - EXTREMELY WEATHERED

### STRENGTH (INDIRECT TENSILE STRENGTH)

EL - EXTREMELY LOW  
 VL - VERY LOW  
 L - LOW  
 M - MEDIUM  
 H - HIGH  
 VH - VERY HIGH  
 EH - EXTREMELY HIGH

LOGGED BY: KEH

DATE: May 10/78

# LUSCAR LTD. corehole log

 HOLE NO. 92-78-36

 PAGE 3 OF 7

PROJECT: \_\_\_\_\_ BOREHOLE LOCATION: \_\_\_\_\_ DIP: \_\_\_\_\_ BEARING: \_\_\_\_\_ R.L. SURFACE: \_\_\_\_\_ DATUM: \_\_\_\_\_

| Feet in core<br>/ m. core | CORE NO. | DEPTH<br>From | To  | ROCK SUBSTANCE DESCRIPTION: |                                                                                                                        | WATER | WEATHERING | STRENGTH OF R.O.D. |    |    |    |    |    |    |    |    |    | DEFECT SPACING |        |    | ROCK MASS DEFECTS: |                                                                                                          |      |
|---------------------------|----------|---------------|-----|-----------------------------|------------------------------------------------------------------------------------------------------------------------|-------|------------|--------------------|----|----|----|----|----|----|----|----|----|----------------|--------|----|--------------------|----------------------------------------------------------------------------------------------------------|------|
|                           |          |               |     | LITHOLOGY                   | specific characteristics, colour, structure, minor components.                                                         |       |            | 0                  | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100            | 100%EN | 25 | 100                | 500                                                                                                      | 1000 |
|                           |          |               |     | SANDSTONE                   | continued, as above, but less competent laminations 90° TCA                                                            |       | FR         |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    | locally massive, but overall abundant zones of disk fracturing 90° TCA. locally weakly cemented fissile. |      |
| 29                        | 9        | 73            | 81  |                             |                                                                                                                        |       |            |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    | as above massive sandstone but local diskings and decementation 90° TCA. abundant along entire run no. 9 |      |
| 54                        | 281      | 86            |     |                             | sandstone as above but finer grained                                                                                   |       |            |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    | decementation and diskings at 84.3-84.7<br>84.9-85.5                                                     |      |
|                           |          |               |     |                             | close up photo 84.0-85.5                                                                                               |       | V          |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    | water bearing zones                                                                                      |      |
| 7                         | 11       | 92            | 93  | SANDSTONE-SILTSTONE         | thin 2.2-2.0 cm alternating laminations of very weakly cemented to moderately cemented sandstone and siltstone 90° TCA |       | MW         |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    | abundant diskings to fissile 90° TCA, weak friable<br>local decementation by groundwater.                |      |
| 27                        | 12       | 93            | 94  | CLAY                        | light grey, silty plastic                                                                                              |       | EU         |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    | as above generally decemented. fissile 90° TCA                                                           |      |
|                           |          |               |     | SANDSTONE-SILTSTONE         | as to 96.0                                                                                                             |       |            |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    | parallel to laminations<br>local massive, competent sandstone @ 96.5-97.0<br>100.8-101.4                 |      |
|                           |          |               |     |                             | Sample # 2 104-105'                                                                                                    |       |            |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    |                                                                                                          |      |
| 5                         | 13       | 101           | 102 | SANDSTONE                   | Massive light grey green, hard, coarse grained 0.3-0.5 mm, hard specimen # 1 @ 102.0'                                  |       | MW         |                    |    |    |    |    |    |    |    |    |    |                |        |    |                    | permeable zone diskings 90° TCA common along entire length of core run.                                  |      |

**KEY**
**WATER**

 | 10. OCT. TO WATER LEVEL  
 | WATER INFLOW  
 | WATER LOSS

**WEATHERING**

 FR - FRESH  
 SW - SLIGHTLY WEATHERED  
 MW - MODERATELY WEATHERED  
 HW - HIGHLY WEATHERED  
 EW - EXTREMELY WEATHERED

**STRENGTH (INDIRECT TENSILE STRENGTH)**

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 VL - VERY LOW  
 L - LOW  
 M - MEDIUM  
 H - HIGH  
 VH - VERY HIGH  
 EH - EXTREMELY HIGH

 LOGGED BY: KEH

 DATE: May 10/79

# LUSCAR LTD. corehole log

HOLE NO. 2078-36  
PAGE 7 OF 7

PROJECT: \_\_\_\_\_ BOREHOLE LOCATION: \_\_\_\_\_ DIP: \_\_\_\_\_ BEARING: \_\_\_\_\_ R.L. SURFACE: \_\_\_\_\_ DATUM: \_\_\_\_\_

| DEPTH<br>From<br>To | CORE NO. | LITHOLOGY    | ROCK SUBSTANCE DESCRIPTION:<br><small>grain characteristics, colour, structure, minor components.</small>                                                                        | WATER WEATHERING | STRENGTH OF R.O.D. |      |      |      |      |      |      |      |      |       | DEFECT SPACING<br>mm. | ROCK MASS DEFECTS:<br><small>thickness, type, inclination, planarity, roughness, coating.</small> |                                                                                                                             |
|---------------------|----------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------|------|------|------|------|------|------|------|------|-------|-----------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                     |          |              |                                                                                                                                                                                  |                  | 1000               | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 | 8000 | 9000 | 10000 |                       | PARTICULAR                                                                                        | GENERAL                                                                                                                     |
|                     |          | SANDSTONE    | continued as above, thin bands of clay where diskings is found.                                                                                                                  | FR               |                    |      |      |      |      |      |      |      |      |       |                       |                                                                                                   |                                                                                                                             |
| 102.14              | 102.14   | CONGLOMERATE | graded, very coarse numerous sub-angular subrounded basalt clasts up to 5cm unconsolidated, loose 2-4" subrounded basalt clasts, no matrix interbedded with sandstone as to 109' | FR               |                    |      |      |      |      |      |      |      |      |       |                       |                                                                                                   | moderately fractured 90° TCA<br>rare single fractures 30° TCA 2-3 mm rough weathered surfaces. Compresses excellent aquifer |
| 102.15              | 102.15   | SANDSTONE    | no core drilled very hard, poor ground, possibly conglomerate.                                                                                                                   | FR               |                    |      |      |      |      |      |      |      |      |       |                       |                                                                                                   |                                                                                                                             |
| 125.25              | 125.25   | SANDSTONE    | coarse grained, hard, massive strongly laminated 90° TCA locally very fine grained; graded                                                                                       | FR               |                    |      |      |      |      |      |      |      |      |       |                       |                                                                                                   | massive fracture spacing 1-2', most caused by drill diskings @ 125.4-126.7'<br>130.5-130.9                                  |
| 133.33              | 133.33   | SILTSTONE    | very fine grained dark grey-green sandy                                                                                                                                          | MW               |                    |      |      |      |      |      |      |      |      |       |                       | friable, shaly 90° TCA, water bearing.                                                            |                                                                                                                             |
| 138.0               | 138.0    | SANDSTONE    | coarse grained, massive, fresh thin carbonaceous lamellae 80-85° TCA<br>Sample # 3 136.5-138.0                                                                                   | FR               |                    |      |      |      |      |      |      |      |      |       |                       | fracture spacing 3" to 2' parallel to laminations<br>rust coated to 2mm thick                     |                                                                                                                             |

**KEY**

**WATER**

10, OCT. 76 WATER LEVEL  
 WATER INFLOW  
 WATER LOSS

**WEATHERING**

FR - FRESH  
 SW - SLIGHTLY WEATHERED  
 MW - MODERATELY WEATHERED  
 HW - HIGHLY WEATHERED  
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**STRENGTH (INDIRECT TENSILE STRENGTH)**

EL - EXTREMELY LOW  
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 M - MEDIUM  
 H - HIGH  
 VH - VERY HIGH  
 EH - EXTREMELY HIGH

LOGGED BY: KEH

DATE: May 10/78



# LUSCAR LTD. corehole log




HOLE NO. Q278-33  
PAGE 5 OF 7

PROJECT: \_\_\_\_\_ BOREHOLE LOCATION: \_\_\_\_\_ DIP: \_\_\_\_\_ BEARING: \_\_\_\_\_ R.L. SURFACE: \_\_\_\_\_ DATUM: \_\_\_\_\_

| DEPTH<br>From<br>To | LITHOLOGY      | ROCK SUBSTANCE DESCRIPTION:<br><small>spec. characteristics, colour, structure, minor components.</small>                        | WATER WEATHERING | STRENGTH OF R.G.D. |    |    |    |    |    |    |    |    |     | DEFECT SPACING mm. | ROCK MASS DEFECTS:<br><small>thickness, type, inclination, planarity, roughness, coating.</small> |                                                                        |         |
|---------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------|----|----|----|----|----|----|----|----|-----|--------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------|
|                     |                |                                                                                                                                  |                  | 10                 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |                    | 100/100                                                                                           | PARTICULAR                                                             | GENERAL |
| 107                 | SANDSTONE      | coarse grained, massive, hard as above decreasing in grain size to mudstone                                                      | FR               |                    |    |    |    |    |    |    |    |    |     |                    |                                                                                                   | 6" - 1' fracture spacing 90° TCA                                       |         |
| 112                 | SILTY MUDSTONE | dark grey, aphanitic to very fine grained gritty                                                                                 | MU               |                    |    |    |    |    |    |    |    |    |     |                    |                                                                                                   | fissile, diskings 90° TCA water bearing                                |         |
| 117                 | SANDSTONE      | fresh, well laminated 90° TCA fine grained                                                                                       |                  |                    |    |    |    |    |    |    |    |    |     |                    |                                                                                                   | fractures 90° TCA, 2-4" spacing                                        |         |
| 122                 | CLAY-MUDSTONE  | dark grey, earthy, aphanitic, weak to moderately consolidated to mudstone local clay rich zones plastic sample #4 150.0 to 152.0 | MU               |                    |    |    |    |    |    |    |    |    |     |                    |                                                                                                   | crumbly, friable to strong when dry                                    |         |
| 127                 | MUDSTONE       | dark grey, aphanitic, competent but fissile 90° TCA, locally gritty, plant remains                                               | MU               |                    |    |    |    |    |    |    |    |    |     |                    |                                                                                                   | shale properties                                                       |         |
| 172                 |                | as above from 167' to end of run, less fractured                                                                                 |                  |                    |    |    |    |    |    |    |    |    |     |                    |                                                                                                   |                                                                        |         |
| 173                 |                | sample #5 167.3 to 169.2                                                                                                         |                  |                    |    |    |    |    |    |    |    |    |     |                    |                                                                                                   |                                                                        |         |
| 178                 |                | laminations 85° TCA                                                                                                              |                  |                    |    |    |    |    |    |    |    |    |     |                    |                                                                                                   | fracture spacing 1-4" moderately competent, friable with knife 90° TCA |         |

**KEY**

**WATER**

 10, OCT. 78 WATER LEVEL  
 WATER INFLOW  
 WATER LOSS

**WEATHERING**

FR - FRESH  
 SW - SLIGHTLY WEATHERED  
 MW - MODERATELY WEATHERED  
 HW - HIGHLY WEATHERED  
 EW - EXTREMELY WEATHERED

**STRENGTH (INDIRECT TENSILE STRENGTH)**

SL - EXTREMELY LOW  
 VL - VERY LOW  
 L - LOW  
 M - MEDIUM  
 H - HIGH  
 VH - VERY HIGH  
 EH - EXTREMELY HIGH

LOGGED BY: KEH

DATE: May 10/78

# LUSCAR LTD. corehole log

HOLE NO. Qu-72-36  
PAGE 6 OF 7

PROJECT: \_\_\_\_\_ BOREHOLE LOCATION: \_\_\_\_\_ DIP: \_\_\_\_\_ BEARING: \_\_\_\_\_ R.L. SURFACE: \_\_\_\_\_ DATUM: \_\_\_\_\_

| DEPTH<br>From<br>To | LITHOLOGY       | ROCK SUBSTANCE DESCRIPTION:<br><small>specimen characteristics, colour, structure, minor components.</small> | WATER WEATHERING | STRENGTH OF R.O.D. |   |   |   |   |   |   |   |   |    |    | DEFECT SPACING<br>mm. | ROCK MASS DEFECTS:<br><small>thickness, type, inclination, planarity, roughness, coating.</small> |            |                                                                                                         |
|---------------------|-----------------|--------------------------------------------------------------------------------------------------------------|------------------|--------------------|---|---|---|---|---|---|---|---|----|----|-----------------------|---------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------|
|                     |                 |                                                                                                              |                  | 1                  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |                       | 12                                                                                                | PARTICULAR | GENERAL                                                                                                 |
|                     | MUDSTONE        | as above                                                                                                     | ✓                | AW                 |   |   |   |   |   |   |   |   |    |    |                       |                                                                                                   |            |                                                                                                         |
| 20.00 - 20.61       | SILTY SANDSTONE | fine grained sandstone, compact laminations 90° TCA to 85° TCA dark grey                                     | ✓                | HW                 |   |   |   |   |   |   |   |   |    |    |                       |                                                                                                   |            | fractured parallel to laminations, 1-5" average spacings, occasional fracture decemented, water bearing |
| 25.21 - 25.24       |                 |                                                                                                              |                  |                    |   |   |   |   |   |   |   |   |    |    |                       |                                                                                                   |            |                                                                                                         |
| 27.19 - 27.21       | MUDSTONE        | dark grey, aphanitic, extremely friable intercalated with clay                                               | ✓                | HW                 |   |   |   |   |   |   |   |   |    |    |                       |                                                                                                   |            | shaly soil characteristics                                                                              |
| 28.20 - 28.21       | COAL            | Riden #2, seam #1                                                                                            | ✓                |                    |   |   |   |   |   |   |   |   |    |    |                       |                                                                                                   |            | friable parting frequent 90° TCA                                                                        |
| 28.21 - 28.22       | CLAY MUDSTONE   | shaly, moderate amount of clay laminated, plastic                                                            | ✓                |                    |   |   |   |   |   |   |   |   |    |    |                       |                                                                                                   |            | very friable, crumbling at 225.0 to 208.0 friable 90° TCA for rest of run 25                            |
|                     | COAL            | seam #2                                                                                                      | ✓                |                    |   |   |   |   |   |   |   |   |    |    |                       |                                                                                                   |            |                                                                                                         |

**KEY**

**WATER**

10. OCT. 78 WATER LEVEL  
 WATER INFLOW  
 WATER LOSS

**WEATHERING**

FW = FRESH  
 SW = SLIGHTLY WEATHERED  
 MW = MODERATELY WEATHERED  
 HW = HIGHLY WEATHERED  
 EW = EXTREMELY WEATHERED

**STRENGTH (INDIRECT TENSILE STRENGTH)**

EL = EXTREMELY LOW  
 VL = VERY LOW  
 L = LOW  
 M = MEDIUM  
 H = HIGH  
 VH = VERY HIGH  
 EH = EXTREMELY HIGH

LOGGED BY: KEH

DATE: May 10/78

# LUSCAR LTD. corehole log

HOLE NO. 2278-36  
PAGE 7 OF 7

PROJECT: \_\_\_\_\_ BOREHOLE LOCATION: \_\_\_\_\_ DIP: \_\_\_\_\_ BEARING: \_\_\_\_\_ R.L. SURFACE: \_\_\_\_\_ DATUM: \_\_\_\_\_

| DEPTH<br>From<br>To | LITHOLOGY         | ROCK SUBSTANCE DESCRIPTION:<br>Special characteristics, colour, structure, minor components.                        | WATER | WEATHERING | STRENGTH<br>OF<br>R.Q.D. |   |   |   |   |   |   |   | DEFECT<br>SPACING<br>mm.<br>000<br>300<br>100 | ROCK MASS DEFECTS:<br>thickness, type, inclination, planarity, roughness, coating. |    |                                                                                                                         |
|---------------------|-------------------|---------------------------------------------------------------------------------------------------------------------|-------|------------|--------------------------|---|---|---|---|---|---|---|-----------------------------------------------|------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------------|
|                     |                   |                                                                                                                     |       |            | 1                        | 2 | 3 | 4 | 5 | 6 | 7 | 8 |                                               | 9                                                                                  | 10 | PARTICULAR                                                                                                              |
|                     | COAL              | continued                                                                                                           | ✓     |            |                          |   |   |   |   |   |   |   |                                               |                                                                                    |    | disking common 90° TCA<br>one 45° TCA fracture at 209'<br>waterbearing                                                  |
| 25                  | CLAY MUD<br>STONE | dark grey very fine grained to ophanitic<br>clay, initial laminations 70° TCA<br>carbonaceous                       |       | W          |                          |   |   |   |   |   |   |   |                                               |                                                                                    |    | friable, crumbly, locally plastic                                                                                       |
| 29                  | SILTSTONE         | light grey, very fine grained, gritty<br>locally fine grained well laminated<br>90° TCA<br>Sample #6 218.5 to 220.3 |       | W          |                          |   |   |   |   |   |   |   |                                               |                                                                                    |    | average fracture spacing 3-4" 90° TCA                                                                                   |
| 27                  |                   | (core runs # 28 + 29 not able<br>to differentiate)                                                                  |       |            |                          |   |   |   |   |   |   |   |                                               |                                                                                    |    |                                                                                                                         |
| 27                  |                   | competent                                                                                                           | ✓     | W          |                          |   |   |   |   |   |   |   |                                               |                                                                                    |    | Top 2' of run friable, diskings thin clay<br>mud laminations, waterbearing<br>rest of run 1-5" fracture spacing 70° TCA |
| 237                 | MUDSTONE          |                                                                                                                     |       | W          |                          |   |   |   |   |   |   |   |                                               |                                                                                    |    | extremely friable, fissile shaly clay soil<br>properties.                                                               |
|                     |                   | FOOT OF HOLE at approximately<br>239'                                                                               |       |            |                          |   |   |   |   |   |   |   |                                               |                                                                                    |    |                                                                                                                         |

**KEY**

**WATER**

10, OCT. 76 WATER LEVEL  
WATER INFLOW  
WATER LOSS

**WEATHERING**

FR - FRESH  
SW - SLIGHTLY WEATHERED  
MW - MODERATELY WEATHERED  
HW - HIGHLY WEATHERED  
EW - EXTREMELY WEATHERED

**STRENGTH (INDIRECT TENSILE STRENGTH)**

EL - EXTREMELY LOW  
VL - VERY LOW  
L - LOW  
M - MEDIUM  
H - HIGH  
VH - VERY HIGH  
EH - EXTREMELY HIGH

LOGGED BY: KEH

DATE: May 10/78

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 17/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-37

APPROX. LOCATION: 105+00 1500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 104+96 1407' Lt.

ELEVATION: 1075'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS            |
|------|-----|----------------|--------------------|
| 0    | 13  | till           |                    |
| 13   | 54  | grey sandstone |                    |
| 54   | 119 | grey shale     | coal stringers 65' |
| 119  | 131 | coal           |                    |
| 131  | 160 | grey shale     |                    |
|      |     |                |                    |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 18/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-38

APPROX. LOCATION: 105+00 1000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 104+94 987 Lt

ELEVATION: 1080'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS              |
|------|-----|----------------|----------------------|
| 0    | 3   | till           |                      |
| 3    | 83  | grey sandstone |                      |
| 83   | 160 | grey shale     | coal stringer at 90' |
| 160  | 174 | coal           |                      |
| 174  | 200 | grey shale     |                      |
|      |     |                |                      |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 18/78

COMPANY: LEXCO TESTING

HOLE NO.: OU-78-39c

APPROX. LOCATION: 85+00 1750' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 85+18 1764' Lt

ELEVATION: 1136'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                                         | REMARKS |
|------|-----|---------------------------------------------|---------|
| 0    | 6   | till                                        |         |
| 6    | 90  | sandstone and stringers of hard brown shale |         |
| 90   | 104 | brown shale                                 |         |
| 104  | 106 | brown and carbonaceous shale                |         |
| 106  | 108 | coal                                        |         |
| 108  | 135 | brown shale                                 |         |
| 135  | 158 | sandstone and stringers of siltstone        |         |
| 158  | 160 | brown shale                                 |         |
| 160  | 162 | coal                                        |         |
| 162  | 164 | brown shale                                 |         |
| 164  | 173 | coal                                        |         |
| 173  | 180 | siltstone                                   |         |
| 180  | 190 | sandstone and stringers of brown shale      |         |
|      |     |                                             |         |
|      |     |                                             |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 190

# LUSCAR LTD. corehole log

HOLE NO. QU-78-39c

PAGE 1 OF 1

Approximate Location 85+00 Line 1750' Lt

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                               |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                               |            |
|          |               |     |      |           |      |                                                                                                                                               |            |
| 1        | 135           | 143 | 7.8  |           |      |                                                                                                                                               |            |
|          |               |     |      | 7.8       |      | siltstone; medium brown to grey; massive sandy lenses; some shell fragments; some carby bands                                                 |            |
| 2        | 143           | 151 | 8.9  |           |      |                                                                                                                                               |            |
|          |               |     |      | 8.9       |      | siltstone as above                                                                                                                            |            |
| 3        | 151           | 159 | 7.8  |           |      |                                                                                                                                               |            |
|          |               |     |      | 7.8       |      | siltstone as above                                                                                                                            |            |
| 4        | 159           | 167 | 8.9  |           |      |                                                                                                                                               |            |
|          |               |     |      | 2.2       |      | siltstone as above                                                                                                                            |            |
|          |               |     |      | .25       |      | siltstone as above but crushed and milled                                                                                                     |            |
|          |               |     |      | 1.4       |      | Coal #1 rider; bright and blocky massive abundant pyrite                                                                                      |            |
|          |               |     |      | .85       |      | mudstone; medium brown; carbonaceous top massive; bottom is crushed and wet                                                                   |            |
|          |               |     |      | 4.0       |      | coal; #1 seam; bright blocky; massive some visible pyrite                                                                                     |            |
| 5        | 167           | 174 | 6.7  |           |      |                                                                                                                                               |            |
|          |               |     |      | 2.75      |      | coal; #1 seam; bright blocky; some visible pyrite; massive some calcite stringers                                                             |            |
|          |               |     |      | .15       |      | mudstone; very soft plyable medium to dark brown; wet 100% ash                                                                                |            |
|          |               |     |      | .35       |      | coal crushed                                                                                                                                  |            |
|          |               |     |      | 1.25      |      | mudstone; carbonaceous; dark brown to black crushed and milled; wet                                                                           |            |
|          |               |     |      | .45       |      | siltstone; soft crushed and milled medium brown                                                                                               |            |
|          |               |     |      | 0.8       |      | siltstone; medium grey; massive hard; uniform fissiled                                                                                        |            |
| 6        | 174           | 182 | 8.15 | 8.15      |      | siltstone as above                                                                                                                            |            |
|          | TOTALS        |     |      |           |      | ÷ X 100 = % REC.                                                                                                                              | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                         | SEAM(S)    |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 19/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-40

APPROX. LOCATION: 105+00 500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 105 +00 489' Lt.

ELEVATION: 1039'

DRILLER: H. Vincett

| FROM | TO  | LOG                  | REMARKS             |
|------|-----|----------------------|---------------------|
| 0    | 4   | till                 |                     |
| 4    | 88  | grey sandstone       |                     |
| 88   | 104 | grey shale           | coal stringer at 92 |
| 104  | 116 | grey green sandstone |                     |
| 116  | 178 | grey shale           |                     |
| 178  | 192 | coal                 |                     |
| 192  | 205 | grey shale           |                     |
| 205  | 220 | grey green sandstone |                     |
|      |     |                      |                     |
|      |     |                      |                     |
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|      |     |                      |                     |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 20/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-42c

APPROX. LOCATION: 85+00 250' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 85+01 321' Lt.

ELEVATION: 1066'

DRILLER: J.L. Lodoen

| FROM | TO | LOG                                              | REMARKS |
|------|----|--------------------------------------------------|---------|
| 0    | 8  | till                                             |         |
| 8    | 22 | very hard siltstone                              |         |
| 22   | 26 | hard siltstone and stringers of dark brown shale |         |
| 26   | 40 | hard siltstone and stringer of coal              |         |
| 40   | 44 | siltstone                                        |         |
| 44   | 45 | coal                                             |         |
| 45   | 72 | siltstone                                        |         |
| 72   | 75 | brown shale                                      |         |
| 75   | 80 | sandstone                                        |         |
|      |    |                                                  |         |
|      |    |                                                  |         |
|      |    |                                                  |         |
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|      |    |                                                  |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 80

# LUSCAR LTD. corehole log

HOLE NO. 2U-78-42c

PAGE 1 OF 2

Approximate Location Line 85+00 300' Lt.

| CORE NO. | CORE FOOTAGES |      |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|------|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |      |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO   | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X    |      | X         |      |                                                                                                                                             |            |
| 1        | 16            | 24   | 8.1  | 5.9       |      | sandstone; medium grey; medium grained; massive; very hard                                                                                  |            |
|          |               |      |      | 0.2       |      | coal; dull black; blocky                                                                                                                    |            |
|          |               |      |      | 0.25      |      | mudstone; medium to dark brown; carbonaceous                                                                                                |            |
|          |               |      |      | 0.35      |      | sandstone; greenish yellow to brown; very fine grained soft; crushed                                                                        |            |
|          |               |      |      | 0.45      |      | mudstone; medium brown; carbonaceous 25% in coal laminae                                                                                    |            |
|          |               |      |      | 0.3       |      | sandstone; medium brown; fine to coarse grained hard                                                                                        |            |
|          |               |      |      | 0.7       |      | sandstone; coarse grained; very hard and massive                                                                                            |            |
| 2        | 24            | 31.5 | 6.9  |           |      |                                                                                                                                             |            |
|          |               |      |      | 1.1       |      | mudstone; carby                                                                                                                             |            |
|          |               |      |      | 1.8       |      | sandstone; greenish grey; medium grained occasional coaly stringers; massive; harder than hell                                              |            |
|          |               |      |      | .25       |      | sandstone; as above but brownish                                                                                                            |            |
|          |               |      |      | 4.0       |      | mudstone; dark brown; hard; coaly; laminae; carbonaceous near top; 15% coaly                                                                |            |
|          |               |      |      | .2        |      | mudstone; medium brown; hard; minor coaly lenses                                                                                            |            |
| 3        | 31.5          | 38   | 6.7  |           |      |                                                                                                                                             |            |
|          |               |      |      | 1.6       |      | siltstone; light brown; very hard; no fissility fractured; coaly bits throughout                                                            |            |
|          |               |      |      | .7        |      | mudstone; carbonaceous; bright coaly laminae approximately 20%                                                                              |            |
|          |               |      |      | 4.4       |      | sandstone; medium grey; very hard; carbonaceous near top; occasional thin bands of siltstone fractured                                      |            |
| X        | TOTALS        |      |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |      |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |







# LUSCAR LTD. corehole log

WOLE NO QU-78-44c  
PAGE 1 OF 1

Approximate Location 103+00 Line 1750 Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 85            | 89  | 3.3  |           |      | core stored for geo.tech                                                                                                                    |            |
| 2        | 89            | 97  | 7.85 |           |      | core stored for geo.tech                                                                                                                    |            |
| 3        | 97            | 98  | 0.8  |           |      | siltstone; grey; medium hard; massive                                                                                                       |            |
| 4        | 107           | 111 | 3.4  |           |      |                                                                                                                                             |            |
|          |               |     |      | 0.1       |      | sandstone; coarse grained; weathered grey sluff                                                                                             |            |
|          |               |     |      | 0.9       |      | coal; #1 rider; fractured and broken; sheared; slickensides evident; abundant visible pyrite and calcite; becoming shaley near base         |            |
|          |               |     |      | 1.0       |      | mudstone; medium brown to grey; coaly laminae; massive but broken some evidence of load                                                     |            |
|          |               |     |      | 0.9       |      | mudstone; broken and mixed in core tube; high degree of stress evident sheared and rolled with slickensides; poss. faulting                 |            |
|          |               |     |      | 0.5       |      | coal; #1 seam; broken and mixed in core tube evidence of stress                                                                             |            |
| 5        | 111           | 120 | 9.35 |           |      |                                                                                                                                             |            |
|          |               |     |      | 9.35      |      | coal; #1 seam; bright and blocky; light and softer than usually; uniform and clean no visible sulphur; breaks very easy                     |            |
| 6        | 120           | 128 | 7.2  |           |      |                                                                                                                                             |            |
|          |               |     |      | 0.5       |      | coal and mudstone mixed; crushed and milled wet; soft                                                                                       |            |
|          |               |     |      | 2.6       |      | mudstone; medium grey; soft; wet; crushed; carbonaceous near base                                                                           |            |
|          |               |     |      | 1.65      |      | mudstone; medium grey fractured into thin bands; a little harder                                                                            |            |
|          |               |     |      | 2.5       |      | mudstone; med. grey; hard; massive                                                                                                          |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |





# LUSCAR LTD. corehole log

HOLE NO. QU-78-45c

PAGE 1 OF 1

Approximate Location 103+00 Line 1250' Lt

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 150           | 158 | 8.9  |           |      |                                                                                                                                             |            |
|          |               |     |      | .6        |      | mudstone; dark brown; medium hard; fissile; broken;                                                                                         |            |
|          |               |     |      | 1.65      |      | coal; #1 rider; bright; blocky; thin carb. mudstone; bands; some amber; abundant visible pyrite; fairly soft and light                      |            |
|          |               |     |      | 2.1       |      | mudstone; light to dark brown; occasional coaly zones; soft and wet                                                                         |            |
|          |               |     |      | 4.55      |      | coal; bright; blocky; massive and light except for bitrain bands; some calcite and amber minor jointing; easy to break                      |            |
| 2        | 158           | 166 | 7.4  |           |      |                                                                                                                                             |            |
|          |               |     |      | 3.7       |      | coal as above                                                                                                                               |            |
|          |               |     |      | .6        |      | coal bright but crushed; dirty; 20% mudstone                                                                                                |            |
|          |               |     |      | .55       |      | coal and mudstone mixed; coal 30%; highly crushed and milled                                                                                |            |
|          |               |     |      | 2.2       |      | mudstone; light brown to grey; dry and powdery; soft; incompetent                                                                           |            |
| 3        | 166           | 174 |      |           |      |                                                                                                                                             |            |
|          |               |     |      | 9.5       |      | siltstone; light grey; crushed and fractured surface attacked by water; surface soft and liquid; some thin; hard layers less than 6 inches  |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 23/78

COMPANY: Lexco Testing

HOLE NO.: OH-78-46c

APPROX. LOCATION: 103+00 750 Lt. SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 103+16 755 Lt.

ELEVATION: 1072'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                                     | REMARKS |
|------|-----|-----------------------------------------|---------|
| 0    | 8   | boulders                                |         |
| 8    | 92  | sandstone                               |         |
| 94   | 99  | brown shale                             |         |
| 99   | 103 | brown carbonaceous shale                |         |
| 103  | 104 | coal                                    |         |
| 104  | 106 | brown shale                             |         |
| 106  | 108 | coal                                    |         |
| 108  | 110 | brown shale                             |         |
| 110  | 178 | sandstone and stringers of brown shale  |         |
| 178  | 181 | brown shale                             |         |
| 181  | 182 | coal                                    |         |
| 182  | 183 | brown shale                             |         |
| 183  | 194 | coal                                    |         |
| 194  | 207 | siltstone stringers of dark brown shale |         |
|      |     |                                         |         |

COMMENTS \_\_\_\_\_

WATER HORIZON dryhole FT. 207

# LUSCAR LTD. corehole log

WOLE NO. QU-78-46c  
PAGE 1 OF 1

Approximate Location Line 103+00 750 Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |           | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |           |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT.      |                                                                                                                                             |            |
| X        | X             | X   |      | X         |           |                                                                                                                                             |            |
| 1        | 166           | 174 |      | 8.45      |           | siltstone; med grey to dark grey; fractured into thin bands throughout                                                                      |            |
| 2        | 174           | 182 | 9.2  | 4.6       |           | siltstone as above                                                                                                                          |            |
|          |               |     |      | .35       |           | coal; bright and blocky; minor siltstone mudstone bands; broken                                                                             |            |
|          |               |     |      | .50       |           | siltstone; carbonaceous; dark brown; broken; some fissility                                                                                 |            |
|          |               |     |      | 1.0       |           | coal; #1 rider; bright blocky; massive; minor dirt bands near base; calcite and pyrite visible                                              |            |
|          |               |     |      | 2.45      |           | mudstone; light to dark brown; coaly laminae throughout; soft; wet;                                                                         |            |
|          |               |     |      | .35       |           | coal; #1 seam; bright and blocky; massive                                                                                                   |            |
| 3        | 182           | 190 | 8.8  | 7.55      |           | coal as above; amber; calcite                                                                                                               |            |
|          |               |     |      | .05       |           | mudstone; dark brown to black; coaly; soft and plastic                                                                                      |            |
|          |               |     |      | 1.2       |           | coal; as above no visible pyrite; light and bright; easily broken                                                                           |            |
| 4        | 190           | 198 | 8.3  | 1.35      |           | coal; as above                                                                                                                              |            |
|          |               |     |      | .05       |           | mudstone; dark brown; medium soft;                                                                                                          |            |
|          |               |     |      | .35       |           | coal as above                                                                                                                               |            |
|          |               |     |      | 1.3       |           | mudstone; light to med. brown; crushed and wet; coaly leaf prints                                                                           |            |
|          |               |     |      | 2.2       |           | siltstone; light greenish brown; massive some fissility                                                                                     |            |
|          |               |     |      | 3.0       |           | siltstone; as above but wet and fractured                                                                                                   |            |
| X        | TOTALS        |     |      | X         | ÷ X 100 = | % REC.                                                                                                                                      | SEAM       |
|          |               |     |      |           | ÷ X 100 = | % TOT. REC.                                                                                                                                 | SEAM(S)    |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 5/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-47c

APPROX. LOCATION: 115+00 500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 114+73 442 Lt.

ELEVATION: 1023'

DRILLER: Roger Selk

| FROM | TO  | LOG              | REMARKS                 |
|------|-----|------------------|-------------------------|
| 0    | 1   | till             |                         |
| 1    | 60  | sandstone        |                         |
| 60   | 82  | grey shale       |                         |
| 82   | 91  | sandstone        |                         |
| 91   | 107 | grey shale       |                         |
| 107  | 109 | granite          |                         |
| 109  | 134 | grey shale       |                         |
| 134  | 136 | soft brown shale |                         |
| 136  | 137 | coal             |                         |
| 137  | 142 | soft brown shale |                         |
| 142  | 147 | grey shale       |                         |
| 147  | 181 | sandstone        | water @9' (186'drilled) |
| 181  | 189 | conglomerate     |                         |
| 189  | 195 | brown shale      |                         |
| 195  | 202 | dark grey shale  |                         |
| 202  | 211 | conglomerate     |                         |

COMMENTS \_\_\_\_\_

WATER HORIZON 9' FT. 211



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: \_\_\_\_\_

COMPANY: \_\_\_\_\_

HOLE NO.: QU-78-47c

APPROX. LOCATION: \_\_\_\_\_ SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 114+73 442' Lt

ELEVATION: \_\_\_\_\_

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG                  | REMARKS |
|------|-----|----------------------|---------|
| 211  | 221 | grey and brown shale |         |
| 221  | 232 | coal                 |         |
| 232  | 244 | grey shale           |         |
|      |     |                      |         |
|      |     |                      |         |
|      |     |                      |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 244



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 29/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-49c

APPROX. LOCATION: 95+00 1750' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 94+86 1760' Lt.

ELEVATION: 1120'

DRILLER: Roger Selk

| FROM | TO  | LOG              | REMARKS |
|------|-----|------------------|---------|
| 0    | 8   | till             |         |
| 8    | 85  | sandstone        |         |
| 85   | 88  | brown shale      |         |
| 88   | 90  | coal             |         |
| 90   | 118 | soft brown shale |         |
| 118  | 148 | sandstone        |         |
| 148  | 152 | brown shale      |         |
| 152  | 164 | coal             |         |
| 164  | 172 | soft brown shale |         |
| 172  | 182 | siltstone        |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 182



# LUSCAR LTD. corehole log

HOLE NO. 91-78-49c

PAGE 1 OF 2

Approximate Location Line 95+00 1750' Lt

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
| 1        | 150           | 158 | 7.6  |           |      |                                                                                                                                             |            |
|          |               |     |      | 1.6       |      | siltstone; medium grey; fractured and broken evidence of load but no slickensides; hard but not brittle;                                    |            |
|          |               |     |      | 1.5       |      | siltstone; medium grey; massive; thin coal bands near base; some softer zones                                                               |            |
|          |               |     |      | .35       |      | siltstone; medium grey; massive; increasingly thicker coal laminae throughout                                                               |            |
|          |               |     |      | .10       |      | mudstone; medium grey; soft plastic; wet and pliable                                                                                        |            |
|          |               |     |      | .4        |      | coal and siltstone mixed; crushed core zone soft and milled                                                                                 |            |
|          |               |     |      | .9        |      | coal; #1 rider; massive; soft, easily broken up with fingers; large chunks of pyrite throughout;                                            |            |
|          |               |     |      | 1.75      |      | mudstone; soft and powdery; wet near top swelled in core tube                                                                               |            |
|          |               |     |      | .9        |      | coal; #1 seam; massive; blocky and bright soft; easily broken; some pyrite and calcite                                                      |            |
| 2        | 158           | 166 | 8.45 |           |      |                                                                                                                                             |            |
|          |               |     |      | 7.1       |      | coal; #1 seam; massive and hard; blocky and bright; calcite on cleats some pyrite                                                           |            |
|          |               |     |      | .3        |      | mudstone; soft and wet; dark brown; pliable                                                                                                 |            |
|          |               |     |      | .75       |      | coal; as above                                                                                                                              |            |
|          |               |     |      | .25       |      | mudstone; as above                                                                                                                          |            |
| 3        | 166           | 174 | 9.5  |           |      |                                                                                                                                             |            |
|          |               |     |      | 2.1       |      | mudstone; as above but with hard siltstone chunks embedded throughout                                                                       |            |
|          |               |     |      | 1.0       |      | coal; massive; blocky and bright; some pyrite                                                                                               |            |
|          |               |     |      | .25       |      | mudstone; soft; some coal mixed; crushed                                                                                                    |            |
|          | TOTALS        |     |      |           |      | ÷ X 100 = % REC. SEAM                                                                                                                       |            |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |





# LUSCAR LTD. corehole log

HOLE NO. QH-78-50c

PAGE 1 OF 1

107+50

1250 Lt.

April 3/78

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 100           | 108 | 8.2  |           |      |                                                                                                                                             |            |
|          |               |     |      | 8.25      |      | siltstone; grey; medium hard; friable; locally broken; massive                                                                              |            |
| 2        | 108           | 116 | 9.1  |           |      |                                                                                                                                             |            |
|          |               |     |      | 2.3       |      | siltstone as above; but becoming crushed and wet at lower end                                                                               |            |
|          |               |     |      | .25       |      | carbonaceous mudrock; dark brown; soft; fine coaly stringers                                                                                |            |
|          |               |     |      | 1.25      |      | Coal; # 1 rider; bright blocky; massive; light; breaks easily not as much visible pyrite as to the south 1' in or small bands               |            |
|          |               |     |      | 0.35      |      | carbonaceous mudrock as above                                                                                                               |            |
|          |               |     |      | 2.7       |      | mudrock; light grey brown; soft; massive; carby near bottom                                                                                 |            |
|          |               |     |      | 2.25      |      | coal #1 seam bright blocky; massive light hackly appearance; easily broken, some amber; light                                               |            |
| 3        | 116           | 124 | 8.9  |           |      |                                                                                                                                             |            |
|          |               |     |      | 4.65      |      | coal as above; friable                                                                                                                      |            |
|          |               |     |      | .05       |      | mudrock; grey brown; medium soft; massive                                                                                                   |            |
|          |               |     |      | 1.3       |      | coal as above; friable                                                                                                                      |            |
|          |               |     |      | 0.3       |      | carbonaceous mudrock; black; soft; wet; plastic very fine grained                                                                           |            |
|          |               |     |      | 2.6       |      | coal as above                                                                                                                               |            |
| 4        | 124           | 129 | 5.7  |           |      |                                                                                                                                             |            |
|          |               |     |      | 0.5       |      | coal as above                                                                                                                               |            |
|          |               |     |      | 0.4       |      | mudrock dark brown; soft; wet; massive                                                                                                      |            |
|          |               |     |      | 0.6       |      | mudrock; light brown; soft; wet;                                                                                                            |            |
|          |               |     |      | 3.4       |      | mudrock as above but dry                                                                                                                    |            |
|          |               |     |      | 0.8       |      | sandstone green grey; massive hard                                                                                                          |            |
| X        | TOTALS        |     |      | X         |      | + X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | + X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 31/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-51

APPROX. LOCATION: 112+50 750 Lt. SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 112+34 697 Lt.

ELEVATION: 1024

DRILLER: H. Vincett

| FROM | TO  | LOG             | REMARKS |
|------|-----|-----------------|---------|
| 0    | 27  | till            |         |
| 27   | 78  | grey sandstone  |         |
| 78   | 80  | coal            |         |
| 80   | 157 | grey shale      |         |
| 157  | 158 | coal            |         |
| 158  | 174 | grey shale      |         |
| 174  | 185 | green sandstone |         |
| 185  | 200 | basalt          |         |
|      |     |                 |         |
|      |     |                 |         |
|      |     |                 |         |
|      |     |                 |         |
|      |     |                 |         |
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|      |     |                 |         |
|      |     |                 |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 1/78

COMPANY: Lexco Testing;

HOLE NO.: QU-78-52c

APPROX. LOCATION: 107+50 750 Lt. SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 107+41 725' Lt.

ELEVATION: 1029'

DRILLER: Roger Selk

| FROM | TO  | LOG                              | REMARKS                         |
|------|-----|----------------------------------|---------------------------------|
| 0    | 6   | till                             |                                 |
| 6    | 9   | sandstone                        |                                 |
| 9    | 65  | shale                            |                                 |
| 65   | 71  | soft brown shale (trace of coal) |                                 |
| 71   | 135 | shale                            | water level 5-' drilled ft. 120 |
| 135  | 140 | soft brown shale                 |                                 |
| 140  | 141 | coal                             |                                 |
| 141  | 145 | shale                            |                                 |
| 145  | 156 | coal                             |                                 |
| 156  | 159 | shale                            |                                 |
| 159  | 170 | siltstone                        |                                 |
|      |     |                                  |                                 |
|      |     |                                  |                                 |
|      |     |                                  |                                 |
|      |     |                                  |                                 |
|      |     |                                  |                                 |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LUSCAR LTD. corehole log

HOLE NO. QU-78-52c

107+50 750 Lt.

PAGE 1 OF 1

| CORE NO. | CORE FOOTAGES |       |      |           |         | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-------|------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |       |      | RECOVERED |         |                                                                                                                                               |            |
|          | FROM          | TO    | TOT. | SEC.      | TOT.    |                                                                                                                                               |            |
| X        | X             | X     |      | X         |         |                                                                                                                                               |            |
| 1        | 124.5         | 132.5 | 7.75 |           |         |                                                                                                                                               |            |
|          |               |       |      | 7.75      |         | siltstone; grey; medium hard; massive friable locally broken, occ. fracture at approx. 30°.                                                   |            |
| 2        | 132.5         | 140.5 | 8.5  |           |         |                                                                                                                                               |            |
|          |               |       |      | 7.8       |         | siltstone as above                                                                                                                            |            |
|          |               |       |      | 0.6       |         | carbonaceous siltstone; dark brown; medium hard; coaly flecks throughout; 20% coal                                                            |            |
|          |               |       |      | 0.15      |         | coal; #1 rider; bright blocky; visible pyrite; some slicks                                                                                    |            |
| 3        | 140.5         | 148.5 | 8.2  |           |         |                                                                                                                                               |            |
|          |               |       |      | 1.3       |         | coal #1 seam; bright blocky; light poss. some slicks; amber                                                                                   |            |
| 4        | 148.5         | 156.5 | 7.8  |           |         |                                                                                                                                               |            |
|          |               |       |      | 4.3       |         | coal as above                                                                                                                                 |            |
|          |               |       |      | .05       |         | carby mud; soft black; wet; granular                                                                                                          |            |
|          |               |       |      | 3.0       |         | coal; as above some calcite                                                                                                                   |            |
|          |               |       |      | 0.5       |         | carbonaceous mudrock; dark brown; very soft wet;                                                                                              |            |
| 5        | 156.5         | 164.5 | 8.2  |           |         |                                                                                                                                               |            |
|          |               |       |      | 1.4       |         | mudrock; light grey; soft; wet                                                                                                                |            |
|          |               |       |      | 1.6       |         | siltstone; brown; medium hard; occ. carby bit                                                                                                 |            |
|          |               |       |      | 1.5       |         | siltstone; grey blue; massive; medium hard; occ. coaly stringer                                                                               |            |
|          |               |       |      | 3.7       |         | sandstone; brown to grey; locally broken; massive; occ. coaly bit                                                                             |            |
| X        | TOTALS        |       |      | X         |         |                                                                                                                                               |            |
|          |               |       |      | ÷         | X 100 = | % REC.                                                                                                                                        | SEAM       |
|          |               |       |      | ÷         | X 100 = | % TOT. REC.                                                                                                                                   | SEAM(S)    |





# LEXCO TESTING LTD DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 2/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-54

APPROX. LOCATION: 112+50 250' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 112+59 361' Lt.

ELEVATION: 1023'

DRILLER: H. Vincett

| FROM | TO  | LOG                                | REMARKS |
|------|-----|------------------------------------|---------|
| 0    | 8   | till                               |         |
| 8    | 130 | grey sandstone                     |         |
| 130  | 134 | coal shale partings                |         |
| 134  | 216 | grey shale                         |         |
| 216  | 228 | coal shale partings on top of seam |         |
| 228  | 260 | grey shale                         |         |
|      |     |                                    |         |
|      |     |                                    |         |
|      |     |                                    |         |
|      |     |                                    |         |
|      |     |                                    |         |
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|      |     |                                    |         |
|      |     |                                    |         |
|      |     |                                    |         |
|      |     |                                    |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 3/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-55c

APPROX. LOCATION: 115+00 1000' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 114 + 78 1055' Lt.

ELEVATION: 1014'

DRILLER: Roger Selk

| FROM | TO  | LOG                 | REMARKS |
|------|-----|---------------------|---------|
| 0    | 21  | till                |         |
| 21   | 42  | sandstone           |         |
| 42   | 45  | brown shale         |         |
| 45   | 85  | grey shale          |         |
| 85   | 88  | brown shale soft    |         |
| 88   | 90  | coal                |         |
| 90   | 92  | brown shale soft    |         |
| 92   | 103 | coal                |         |
| 103  | 105 | brown shale soft    |         |
| 105  | 115 | grey shale          |         |
| 115  | 117 | reddish shale rusty |         |
|      |     |                     |         |
|      |     |                     |         |
|      |     |                     |         |
|      |     |                     |         |
|      |     |                     |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 117

# LUSCAR LTD. corehole log

HOLE NO. OU-78-55c  
 PAGE 2 OF 2

| CORE NO. | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X  |      | X         |      |                                                                                                                                             |            |
|          |               |    |      | .45       |      | coal; bright and blocky; massive very soft easily crushed with fingers                                                                      |            |
|          |               |    |      | 0.1       |      | mudstone; medium brown soft wet; and plyable                                                                                                |            |
|          |               |    |      | 1.2       |      | siltstone; medium grey; massive; very hard; sheared at 60° to core axis                                                                     |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
| X        | TOTALS        |    |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |    |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LUSCAR LTD. corehole log

WOLE NO. QU-78-55c

PAGE 1 OF 2

Approximate Location Line 115+00 1000' Lt

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 74            | 82  | 7.6  |           |      |                                                                                                                                             |            |
|          |               |     |      | 7.6       |      | siltstone; medium grey; flaggy; fractured into thin bands; broken and crushed; medium hard;                                                 |            |
| 2        | 82            | 90  | 7.8  | 5.85      |      | siltstone as above                                                                                                                          |            |
|          |               |     |      | 1.65      |      | coal; # rider; Bright and blocky; calcite on cleats; amber; cleared at 60° to core axis                                                     |            |
|          |               |     |      |           |      | evidence of load slicks throughout                                                                                                          |            |
|          |               |     |      | 0.25      |      | mudstone; hard; massive; medium grey to buff brown slicks                                                                                   |            |
| 3        | 90            | 98  | 8.2  |           |      |                                                                                                                                             |            |
|          |               |     |      | 0.65      |      | mudstone; medium to dark brown coaly impregnations; lamuner fractured                                                                       |            |
|          |               |     |      | 1.85      |      | mudstone; massive but fractured abundant evidence of load; slickersides shearing at 60°                                                     |            |
|          |               |     |      | 1.75      |      | coal; #1 seam; bright and blocky; massive; fairly hard; abundant amber; some visible pyrite calcite on cleats                               |            |
|          |               |     |      | 3.75      |      | coal; massive but fractured; high angle shears; some pyrite; calcite on cleats                                                              |            |
|          |               |     |      | .10       |      | coal hard bony layers                                                                                                                       |            |
|          |               |     |      | .15       |      | coal as at 3.75                                                                                                                             |            |
| 4        | 98            | 106 | 8.0  |           |      |                                                                                                                                             |            |
|          |               |     |      | 1.25      |      | coal as above                                                                                                                               |            |
|          |               |     |      | .05       |      | coal hard bony layer                                                                                                                        |            |
|          |               |     |      | 4.2       |      | coal as above not fractured                                                                                                                 |            |
|          |               |     |      | 0.15      |      | mudstone; dark brown; soft; wet plyable                                                                                                     |            |
|          |               |     |      | 0.6       |      | coal and mudstone mixed crushed; powdery very soft                                                                                          |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 4/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-56

APPROX. LOCATION: 117+50 750 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 117+37 810' Lt.

ELEVATION: 1012'

DRILLER: H. Vincett

| FROM | TO | LOG        | REMARKS |
|------|----|------------|---------|
| 0    | 58 | till       |         |
| 58.  | 62 | coal       |         |
| 62   | 70 | grey shale |         |
|      |    |            |         |
|      |    |            |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: April 13, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-58(C)

APPROX. LOCATION: 155+00 Base Line SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 154+99 - 4.3 Rt.

ELEVATION: 1079.5

DRILLER: Roger Selk

| FROM | TO  | LOG              | REMARKS                    |
|------|-----|------------------|----------------------------|
| 0    | 4   | Till             |                            |
| 4    | 15  | Sandstone        | E. Log                     |
| 15   | 64  | Grey shale       | R. J. Ronaghan             |
| 64   | 68  | Coal             |                            |
| 68   | 70  | Soft brown shale | QU-78-58C 65.4 2.6 #2 seam |
| 70   | 84  | Grey shale       | 157 0.6                    |
| 84   | 85  | Coal             | 16.8                       |
| 85   | 90  | Soft brown shale | 0.9                        |
| 90   | 131 | Grey shale       | 47.5                       |
| 131  | 142 | Coal             | 0.7                        |
| 142  | 145 | Soft brown shale | 0.4                        |
| 145  | 156 | Grey shale       | 2.9 #1 seam                |
|      |     |                  | 0.6                        |
|      |     |                  | 5.6                        |
|      |     |                  |                            |
|      |     |                  |                            |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. 156'





# LUSCAR LTD. corehole log

Approx. Location 155+00 B/L

HOLE NO. QU-78-58C

PAGE 1 OF 3

| CORE NO. | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X  |      | X         |      |                                                                                                                                             |            |
| 1        | 64            | 72 | 6.75 | 2.1       |      | Coal, bright & blocky, broken and crushed, some visible pyrite, some high angle fracturing                                                  | SAMPLE #1  |
|          |               |    |      | .1        |      | Mudstone, medium brown, fissile, minor coaly laminae                                                                                        |            |
|          |               |    |      | .4        |      | Coal, as above                                                                                                                              |            |
|          |               |    |      | .25       |      | Mudstone, as above                                                                                                                          |            |
|          |               |    |      | .2        |      | Bone, dark brown to black, numerous coaly laminae, med. hard                                                                                |            |
|          |               |    |      | .35       |      | Mudstone, grey brown, soft, wet, some hard chunks                                                                                           |            |
|          |               |    |      | 2.5       |      | Mudstone, carbonaceous, brown to dark brown, broken, slickensides                                                                           |            |
|          |               |    |      | .8        |      | Siltstone, grey, med. hard, massive, minor coaly bits                                                                                       |            |
|          |               |    |      | 1.0       |      | Siltstone, as above, but highly crushed and milled                                                                                          |            |
|          |               |    |      | 1.5       |      | Siltstone, as above but massive and with minor coal bands,                                                                                  |            |
|          | 72            | 84 |      |           |      | Drilled                                                                                                                                     |            |
| 2        | 84            | 92 | 7.1  |           |      |                                                                                                                                             |            |
|          |               |    |      | .4        |      | Coal, bright and blocky, abundant visible pyrite                                                                                            |            |
|          |               |    |      | .4        |      | Mudstone, carbonaceous, brown to grey brown, fissile, medium hard                                                                           |            |
|          |               |    |      | 6.3       |      | Siltstone, grey to grey brown, soft, broken in places, carbonaceous, crushed, fractured                                                     |            |
| X        | TOTALS        |    |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |    |      | X         |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LUSCAR LTD. corehole log

HOLE NO. QU-78-58C  
PAGE 2 OF 3

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 3        | 92            | 100 |      |           |      | stored                                                                                                                                      |            |
| 4        | 100           | 108 |      |           |      | "                                                                                                                                           |            |
| 5        | 108           | 116 |      |           |      | "                                                                                                                                           |            |
| 6        | 116           | 124 |      |           |      | "                                                                                                                                           |            |
| 7        | 124           | 132 | 7.1  |           |      |                                                                                                                                             |            |
|          |               |     |      | 5.7       |      | Siltstone, med. grey, massive to broken, some fissility                                                                                     |            |
|          |               |     |      | .3        |      | Mudstone, greyish green, soft, wet & pliable                                                                                                |            |
|          |               |     |      | 1.05      |      | Coal, bright & blocky, hard and massive, contact with mudstone at 45° to core angle, calcite on cleats                                      | SAMPLE #2  |
|          |               |     |      | .15       |      | Mudstone, dark brown, soft, crushed and milled, some hard chunks                                                                            |            |
| 8        | 132           | 140 | 8.5  |           |      |                                                                                                                                             |            |
|          |               |     |      | 3.0       |      | Coal, bright and blocky, massive, hard, calcite on cleats, no visible pyrite                                                                | #3         |
|          |               |     |      | .2        |      | Mudstone, soft, dark brown, minor carby laminae, wet and pliable                                                                            |            |
|          |               |     |      | .4        |      | Mudstone, brown, very soft, wet and pliable                                                                                                 |            |
|          |               |     |      | 4.95      |      | Coal, bright and blocky, as above                                                                                                           | #4         |
| 9        | 140           | 148 | 7.5  |           |      |                                                                                                                                             |            |
|          |               |     |      | .6        |      | Coal as above                                                                                                                               |            |
|          |               |     |      | .1        |      | Siltstone, carby, dark grey to black crushed                                                                                                |            |
|          |               |     |      | 1.0       |      | Mudstone, brown, soft, wet, coaly laminae                                                                                                   |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: April 15, 1978

COMPANY: \_\_\_\_\_

HOLE No.: QU-78-59

APPROX. LOCATION: 120.00 1200 lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 119 + 93 1298 Lt.

ELEVATION: 1011

DRILLER: H. Vincett

| FROM | TO  | LOG        | REMARKS |
|------|-----|------------|---------|
| 0    | 64  | till       |         |
| 64   | 76  | coal       |         |
| 76   | 100 | grey shale |         |
|      |     |            |         |
|      |     |            |         |
|      |     |            |         |
|      |     |            |         |
|      |     |            |         |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: April 15, 1978

COMPANY: \_\_\_\_\_

HOLE No.: QU-78-61

APPROX. LOCATION: 115.00 750 ft. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 115 + 06 772

ELEVATION: 1015

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 13  | till           |         |
| 13   | 80  | grey sandstone |         |
| 80   | 83  | coal           |         |
| 83   | 177 | grey shale     |         |
| 177  | 186 | coal           |         |
| 186  | 220 | grey shale     |         |
|      |     |                |         |
|      |     |                |         |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 16, 1978

COMPANY: Lexco

HOLE No.: Qu-78-62

APPROX. LOCATION: 147.50 500 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 147 + 57 - 598 Rt.

ELEVATION: 1044

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS         |
|------|-----|----------------|-----------------|
| 0    | 106 | Grey Sandstone |                 |
| 106  | 109 | Coal           | Qu-78-62        |
|      |     |                | 198             |
| 109  | 116 | Grey Shale     |                 |
| 116  | 117 | Coal           | 104.7           |
|      |     |                | 3.3 #2 Seam     |
| 117  | 166 | Grey Shale     | 7.5             |
|      |     |                | 1.3             |
| 166  | 179 | Coal           | 51.2            |
| 179  | 200 | Grey Shale     | 0.2 2.0         |
|      |     |                | 3.6             |
|      |     |                | 0.4 5.1 #1 Seam |
|      |     |                | 0.2 0.8         |
|      |     |                |                 |
|      |     |                |                 |
|      |     |                |                 |
|      |     |                |                 |
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|      |     |                |                 |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 16, 1978

COMPANY: Lexco

HOLE No.: Qu-78-63

APPROX. LOCATION: 147.50 250 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 147 + 43 - 180 Rt.

ELEVATION: 1051

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS               |
|------|-----|----------------|-----------------------|
| 0    | 12  | Till           |                       |
| 12   | 90  | Grey Sandstone | Qu-78-63<br>199       |
| 90   | 92  | Grey Shale     |                       |
| 92   | 96  | Coal           | 93.3                  |
| 96   | 158 | Grey Shale     | 1.3                   |
| 158  | 170 | Coal           | 0.2 2.1               |
| 170  | 200 | Grey Shale     | 0.2 0.3 Dirty #2 Seam |
|      |     |                | 6.6 1.3               |
|      |     |                | 53.4 2.6 #1 Seam      |
|      |     |                | 0.2 3.1               |
|      |     |                | 0.7 5.6               |
|      |     |                | 0.4 0.6 Dirty         |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |
|      |     |                |                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 17, 1978

COMPANY: Lexco

HOLE No.: Qu-78-64

APPROX. LOCATION: 157.50 250 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 157 + 55 256 Rt.

ELEVATION: 1082

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS         |
|------|-----|----------------|-----------------|
| 0    | 16  | Till           |                 |
| 16   | 88  | Grey Sandstone | Qu-78-64<br>198 |
| 88   | 95  | Grey Shale     |                 |
| 95   | 99  | Coal           |                 |
| 99   | 160 | Grey Shale     | 95.2 2.4        |
| 160  | 171 | Coal           | 0.3 1.4 #2 Seam |
| 171  | 200 | Grey Shale     | 13.7 1.1        |
|      |     |                | 46.6 4.0        |
|      |     |                | 0.5 5.8 #1 Seam |
|      |     |                | 1.0             |
|      |     |                |                 |
|      |     |                |                 |
|      |     |                |                 |
|      |     |                |                 |
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|      |     |                |                 |

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 17, 1978

COMPANY: Lexco

HOLE No.: Qu-78-65

APPROX. LOCATION: 157.50 750 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 157 + 47 724 Lt.

ELEVATION: 1076

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                    |
|------|-----|----------------|----------------------------|
| 0    | 25  | Till           |                            |
| 25   | 124 | Grey Sandstone | Ou-78-65<br>239            |
| 124  | 131 | Grey Shale     |                            |
| 131  | 135 | Coal           |                            |
| 135  | 197 | Grey Shale     | 131.3                      |
| 197  | 207 | Coal           | 3.4<br>0.3 0.4 #2 Seam     |
| 207  | 240 | Grey Shale     | 5.1 1.5 #2 Bottom<br>Rider |
|      |     |                | 60.6 5.3                   |
|      |     |                | 0.8 5.4 #1 Seam            |
|      |     |                |                            |
|      |     |                |                            |
|      |     |                |                            |
|      |     |                |                            |
|      |     |                |                            |
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|      |     |                |                            |
|      |     |                |                            |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 18, 1978

COMPANY: Lexco

HOLE No.: DH-QU-78-66

APPROX. LOCATION: 157.50 1250 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 157 + 56 1216 Rt.

ELEVATION: 1053

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                |
|------|-----|----------------|------------------------|
| 0    | 32  | Till           |                        |
| 32   | 123 | Grey Sandstone | Qu-78-66<br>239        |
| 123  | 133 | Grey Shale     |                        |
| 133  | 137 | Coal           |                        |
| 137  | 207 | Grey Shale     | 135.4                  |
| 207  | 211 | Coal           | 1.6<br>0.4 #2 Seam     |
| 211  | 240 | Grey Shale     | 1.4<br>4.8             |
|      |     |                | 1.2 #2 Bottom<br>Rider |
|      |     |                | 60.9                   |
|      |     |                | 1.6                    |
|      |     |                | 0.5                    |
|      |     |                | 2.4 #1 Seam            |
|      |     |                | 1.0                    |
|      |     |                | 4.5                    |
|      |     |                | 0.8                    |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: April 18/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-67 C

APPROX. LOCATION: 155+00 - 1000 Right SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 155 + 23 - 964 R

ELEVATION: 1063

DRILLER: Roger Selk

| FROM | TO  | LOG                | REMARKS           |
|------|-----|--------------------|-------------------|
| 0    | 35  | till               |                   |
| 35   | 42  | sandstone          |                   |
| 42   | 96  | grey shale         | E-Log             |
| 96   | 137 | sandstone          | R. J. Ronaghan    |
| 137  | 139 | brown shale        |                   |
| 139  | 145 | coal               | QU-78-67(C) 140.0 |
| 145  | 147 | brown shale (soft) | 2.9 } #2 seam     |
| 147  | 148 | coal               | 0.2 0.6 }         |
| 148  | 154 | brown shale        | 4.4 1.5           |
| 154  | 172 | dark gray shale    | 55.4 2.3 }        |
| 172  | 195 | sandstone          | 0.2 3.2 } #1 seam |
| 195  | 200 | brown shale & coal | 0.6 5.4 }         |
| 200  | 205 | brown shale        |                   |
| 205  | 217 | coal               |                   |
| 217  | 221 | brown shale        |                   |
| 221  | 228 | grey shale         |                   |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 28' (124 ft. drilled) FT. 228'

# LEXCO TESTING LTD.

# -coring report

PROSPECT: Quinsam Lake - Van Isle  
 LOCATION: 155 + 00 1000' - RT  
 CONTRACTOR: Lexco Testing Ltd.

DATE: April 18/78  
 HOLE<sup>\*\*</sup>: \_\_\_\_\_  
 RIG<sup>\*\*</sup>: 06

| CORE                   | FOOTAGE |       | TIME |    | MIN.   | CUT  | REC.  | TUBES   | REMARKS |            |
|------------------------|---------|-------|------|----|--------|------|-------|---------|---------|------------|
|                        | FROM    | TO    | FROM | TO |        |      |       |         |         |            |
| 1                      | 85'     | 92'   |      |    |        | 7'   | 6'7"  | 1       |         |            |
| 2                      | 92'     | 97'6" |      |    |        | 5'6" | 8'6"  | 1       |         |            |
| 3                      | 97'6"   | 101'  |      |    |        | 3'6" | 4'1"  | 1       |         |            |
| 4                      | 101'    | 108'  |      |    |        | 7'   | 7'9"  | 1       |         |            |
| 5                      | 108'    | 116'  |      |    |        | 8'   | 7'5"  | 1       |         |            |
| 6                      | 116'    | 124'  |      |    |        | 8'   | 8'7"  | 1       |         |            |
| 7                      | 124'    | 130'  |      |    |        | 6'   | 6'0"  | 1       |         |            |
| 8                      | 130'    | 138'  |      |    |        | 8'   | 8'5"  | 1       |         |            |
| 9                      | 138'    | 146'  |      |    |        | 8'   | 7'9"  | 1       |         |            |
| 10                     | 146'    | 154'  |      |    |        | 8'   | 7'11" | 1       |         |            |
| 11                     | 196'    | 204'  |      |    |        | 8'   | 7'9"  | 1       |         |            |
| 12                     | 204'    | 212'  |      |    |        | 8'   | 8'0"  | 1       |         |            |
| 13                     | 212'    | 220'  |      |    |        | 8'   | 8'1"  | 1       |         |            |
| 14                     | 220'    | 228'  |      |    |        | 8'   | 8'0"  | 0       |         |            |
|                        |         |       |      |    | Totals | -    | 101'  | 104'10" | 13      | Rec - 100% |
| Footage 4' out at 200' |         |       |      |    |        |      |       |         |         |            |
| Geo = 196'             |         |       |      |    |        |      |       |         |         |            |
| Core string = 200'     |         |       |      |    |        |      |       |         |         |            |

SUPERVISOR: \_\_\_\_\_

# LUSCAR LTD. corehole log

HOLE NO. Qu-78-67C

Approx Location : Line 155 + 00 1000 R/PAGE 1 OF 3

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 8        | 130           | 138 | 8.5  | 6.1       |      | Siltstone, grey, massive, occasional light grey concretions, hard                                                                           |            |
|          |               |     |      | .3        |      | Siltstone, brownish grey, numerous thin coal laminae, hard, sandy sections,                                                                 |            |
|          |               |     |      | ↑ ↑       |      | sheared contact at 45°, slickensided                                                                                                        |            |
|          |               |     |      | .2        |      | Coal, bright & banded, numerous sand or silt bands, calcitic cement                                                                         |            |
|          |               |     |      | 1.9       |      | Coal, bright and blocky, hard and massive, some bone laminations, amber, abundant, visible disseminated pyrite.                             |            |
| 9        | 138           | 146 | 7.8  |           |      |                                                                                                                                             |            |
|          |               |     |      | 1.7       |      | Coal, as above                                                                                                                              |            |
|          |               |     |      | .1        |      | Siltstone, carby, dark brown, numerous coal laminae, soft, 30% coal                                                                         |            |
|          |               |     |      | .35       |      | Siltstone, light grey, fissile, hard, numerous coaly laminae                                                                                |            |
|          |               |     |      | .1        |      | Coal, highly broken, soft, crushed, slickensides, sheared                                                                                   |            |
|          |               |     |      | .5        |      | Mudstone, grey to grey brown, crushed and milled, soft, wet                                                                                 |            |
|          |               |     |      | 3.15      |      | Siltstone, sandy interbeds, coaly laminae throughout getting more abundant near base, occas. bands of disseminated pyritic material         |            |
|          |               |     |      | .9        |      | Coal, bright, blocky, visible pyrite, thin bone layers                                                                                      |            |
|          |               |     |      | .25       |      | Sandstone, laminated with silty material, hard, not sampled                                                                                 | #2 SAMPLE  |
|          |               |     |      | .4        |      | Coal, bright, blocky, massive, some calcite and pyrite.                                                                                     |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LUSCAR LTD. corehole log

HOLE NO. QU-78-67C

PAGE 2 OF 3

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
|          |               |     |      | .15       |      | Siltstone, light grey, soft, minor coaly streaks                                                                                            |            |
|          |               |     |      | .3        |      | Siltstone, brown to grey brown, banding evident, some calcite, slickensides, sheared at 45°                                                 |            |
| 10       | 146           | 154 | 7.9  |           |      |                                                                                                                                             |            |
|          |               |     |      | 7.9       |      | Siltstone, med greyish green, massive, hard, some thin coaly laminae,                                                                       |            |
| 11       | 196           | 204 |      |           |      | Siltstone, med greyish green, massive, hard, occasional leaf prints (broad leafed deciduous)                                                |            |
| 12       | 204           | 212 | 8.0  |           |      |                                                                                                                                             |            |
|          |               |     |      | 0.9       |      | Siltstone as above becoming crushed near base                                                                                               |            |
|          |               |     |      | 2.3       |      | Coal massive, bright blocky, some bony material, hard, abundant calcite, no visible pyrite.                                                 |            |
|          |               |     |      | 0.2       |      | Mudstone medium brown, soft crushed, coal mixed not sampled                                                                                 | #3         |
|          |               |     |      | 2.7       |      | Coal as above.                                                                                                                              |            |
|          |               |     |      | 0.15      |      | Bony coal, dark brown to black, 50% coal, very hard, sampled                                                                                |            |
|          |               |     |      | 0.15      |      | Coal, bright blocky, hard                                                                                                                   |            |
|          |               |     |      | 0.25      |      | Mudstone med. to dark brown, not sampled.                                                                                                   |            |
|          | TOTALS        |     |      |           |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |

# LUSCAR LTD. corehole log

HOLE NO. QU-78-67 C

PAGE 3 OF 3

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
|          |               |     |      |           |      | Some coal mixed                                                                                                                             |            |
|          |               |     |      | 0.35      |      | Mudstone medium brown, massive coaly laminae throughout, not sampled.                                                                       |            |
|          |               |     |      | 0.85      |      | Coal as above                                                                                                                               |            |
| 13       | 212           | 220 | 8.0  |           |      |                                                                                                                                             |            |
|          |               |     |      | 3.8       |      | Coal as above                                                                                                                               |            |
|          |               |     |      | 0.1       |      | Mudstone medium brown, fissile sampled.                                                                                                     |            |
|          |               |     |      | 0.65      |      | Coal as above                                                                                                                               |            |
|          |               |     |      | 0.25      |      | Bone coal medium brown to black hard 70% coal, sampled                                                                                      |            |
|          |               |     |      | 0.25      |      | Siltstone medium brown, massive and hard.                                                                                                   |            |
|          |               |     |      | 0.7       |      | Siltstone, medium to dark brown, massive hard, thin laminae throughout                                                                      |            |
|          |               |     |      | 1.2       |      | Siltstone med. grey, massive hard                                                                                                           |            |
|          |               |     |      | 1.0       |      | Siltstone as above, fractured, massive at 60° to core axis, abundant slicks (faul-?)                                                        |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 19, 1978

COMPANY: Lexco

HOLE No.: DH-QU-78-68

APPROX. LOCATION: 157.50 1750 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 157 + 44 1806 Rt.

ELEVATION: 1025.0

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                      |
|------|-----|----------------|------------------------------|
| 0    | 25  | Till           |                              |
| 25   | 130 | Grey Sandstone | Qu-78-68<br>238              |
| 130  | 139 | Grey Shale     |                              |
| 139  | 142 | Coal           | 139.0 1.2                    |
| 142  | 190 | Grey Sandstone | 0.2 1.1 #2 Seam<br>0.5 Shly. |
| 190  | 214 | Grey Shale     |                              |
| 214  | 225 | Coal           | 4.5 1.1 #2 Bottom<br>Rider   |
| 225  | 240 | Grey Shale     | 67.4                         |
|      |     |                | 1.9                          |
|      |     |                | 0.3                          |
|      |     |                | 2.8                          |
|      |     |                | 0.7 #1 Seam                  |
|      |     |                | 2.6                          |
|      |     |                | 0.7                          |
|      |     |                | 1.1                          |
|      |     |                | 0.7                          |
|      |     |                | 0.9 Shly.                    |
|      |     |                |                              |
|      |     |                |                              |
|      |     |                |                              |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 20, 1978

COMPANY: Lexco

HOLE No.: Qu-78-69

APPROX. LOCATION: 162.50 250 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 162+46 156R

ELEVATION: 1091'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS        |
|------|-----|----------------|----------------|
| 0    | 30  | Till           |                |
| 30   | 90  | Grey Sandstone |                |
| 90   | 102 | Grey Shale     |                |
| 102  | 105 | Coal           | Shale Partings |
| 105  | 164 | Grey Shale     |                |
| 164  | 174 | Coal           |                |
| 174  | 200 | Grey Shale     |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |
|      |     |                |                |

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 25, 1978

COMPANY: Lexco

HOLE No.: Qu-78-70

APPROX. LOCATION: 162.50 750 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 162 + 53 711 Rt.

ELEVATION: 1081

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                |
|------|-----|----------------|------------------------|
| 0    | 40  | Till           | Qu-78-70               |
| 40   | 120 | Grey Sandstone |                        |
| 120  | 127 | Grey Shale     | 125.0 1.5              |
| 127  | 128 | Coal           | 0.5 0.7 #2 Seam        |
| 128  | 194 | Grey Shale     | 0.4 0.5                |
| 194  | 203 | Coal           | 5.4 1.4 #2 Bottom Ride |
| 203  | 220 | Grey Shale     | 64.8                   |
|      |     |                | 0.3 2.1                |
|      |     |                | 2.7                    |
|      |     |                | 1.2 2.9 #1 Seam        |
|      |     |                | 0.6                    |
|      |     |                | 1.0                    |
|      |     |                | 0.6Shly                |
|      |     |                | 0.4                    |
|      |     |                | 0.5Shly                |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: April 26, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: Qu-78-71c

APPROX. LOCATION: 160 + 00 500 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 159 + 76 511 Rt.

ELEVATION: 1088

DRILLER: Roger Selk

| FROM | TO  | LOG                | REMARKS                 |
|------|-----|--------------------|-------------------------|
| 0    | 33  | Till               | Qu-78-71c               |
| 33   | 75  | Grey Shale         | 213                     |
| 75   | 116 | Sandstone          | 125.8                   |
| 116  | 125 | Brown Shale        | 1.7                     |
| 125  | 130 | Coal               | 0.1 1.0                 |
| 130  | 137 | Soft Brown Shale   | 1.0 0.5 Shly            |
| 137  | 139 | Coal               | 7.3 1.4 #2 Bottom Rider |
| 139  | 143 | Soft Brown Shale   | 53.4 2.4                |
| 143  | 165 | Grey Shale         | 0.2 3.1 #1 Seam         |
| 165  | 180 | Sandstone          | 0.6 5.9                 |
| 180  | 191 | Brown & Grey Shale |                         |
| 191  | 204 | Coal               |                         |
| 204  | 209 | Brown Shale        |                         |
| 209  | 216 | Grey Shale         |                         |
|      |     |                    |                         |
|      |     |                    |                         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 60 ft. (175' drld.) FT. 216'





# LUSCAR LTD. corehole log

HOLE NO. QU-78-71C

Approx. Location: Line 160+00 500'Rt.

PAGE 1 OF 3

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 125           | 133 | 8.0' |           |      |                                                                                                                                             |            |
|          |               |     |      | .85       |      | Siltstone, med. to dark grey, massive, hard, numerous coaly & pyritic laminae becoming coaly near base                                      |            |
|          |               |     |      | 1.85      |      | Coal, bright & blocky, massive, calcite on cleats, visible pyrite both massive and disseminated, some amber                                 |            |
|          |               |     |      | .10       |      | Bone coal, dark brown to black, hard and massive, some visible pyrite                                                                       | SAMPLE     |
|          |               |     |      | 1.10      |      | Coal, as above                                                                                                                              |            |
|          |               |     |      | .10       |      | Mudstone, med. grey, soft, numerous, coaly imprints                                                                                         |            |
|          |               |     |      | .35       |      | Coal, as above                                                                                                                              |            |
|          |               |     |      | .25       |      | Bone coal, dark brown to black, abundant pyrite, 50% coaly                                                                                  |            |
|          |               |     |      | 3.45      |      | Siltstone, light to medium grey, hard, massive, coaly laminae near top (gradational contact) leaf imprints throughout                       |            |
| 2        | 133           | 141 | 8.0' |           |      |                                                                                                                                             |            |
|          |               |     |      | .90       |      | Siltstone, as above                                                                                                                         |            |
|          |               |     |      | .20       |      | Coal, bright and blocky, calcite on cleats                                                                                                  |            |
|          |               |     |      | 2.50      |      | Siltstone, as above, becoming carbonaceous near base                                                                                        |            |
|          |               |     |      | 1.4       |      | Coal, bright, blocky, massive, hard, some visible pyrite, becoming bony near base                                                           | SAMPLE 2   |
| X        | TOTALS        |     | X    |           |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |

125 35

125 35

133.0  
# 5  
# 2  
# 10  
# 15

# LUSCAR LTD. corehole log

HOLE NO. QU-78-71C

PAGE 2 OF 3

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH  |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |             |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |             |
|          |               |     |      |           |      |                                                                                                                                             |             |
|          |               |     |      | 3.15      |      | Siltstone, light grey, massive, fairly hard, some thin coaly laminae, fractured, slickensides at 30° to core axis                           |             |
| 1        | 180           | 185 |      |           |      | Stored                                                                                                                                      |             |
| 2        | 185           | 193 | 7.8  |           |      |                                                                                                                                             |             |
|          |               |     |      | 3.10      |      | Siltstone, greyish green, massive, uniform, minor coaly laminae, occas. sandy stringers                                                     |             |
|          |               |     |      | 2.30      |      | Siltstone, med. grey to brownish near base, med. hard, massive, becoming slightly carbonaceous near base                                    |             |
|          |               |     |      | .10       |      | Coal, bright and blocky, crushed,                                                                                                           |             |
|          |               |     |      | .20       |      | Mudstone, numerous coaly bits, some slickensides evident.                                                                                   |             |
|          |               |     |      | 2.0       |      | Coal, bright and blocky, light and easily broken, some calcite on cleats, abundant visible pyrite                                           | SAMPLE<br>3 |
| 3        | 193           | 201 | 7.9  |           |      |                                                                                                                                             |             |
|          |               |     |      | 2.65      |      | Coal, as above                                                                                                                              |             |
|          |               |     |      | .10       |      | Bone coal, black to greyish black, calcite on cleats, very hard                                                                             |             |
|          |               |     |      | .20       |      | Coal, as above                                                                                                                              |             |
|          |               |     |      | .50       |      | Mudstone, light grey to brown, minor coaly laminae, soft, pliable, wet                                                                      |             |
|          |               |     |      | 3.0       |      | Coal, bright, blocky, massive, hard some very hard lenses                                                                                   |             |
|          |               |     |      | .05       |      | Bone coal, dark brown, hard.                                                                                                                |             |
|          | TOTALS        |     |      |           |      | ÷ X 100 = % REC.                                                                                                                            | SEAM        |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)     |

191.0

191.0

195.95

195.95







# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 21, 1978

COMPANY: Lexco Testing

HOLE No.: Qu-78-73

APPROX. LOCATION: 117.50 250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 117 + 46 266 Lt.

ELEVATION: 1040'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                     |
|------|-----|----------------|-----------------------------|
| 0    | 3   | Till           |                             |
| 3    | 109 | Grey Sandstone |                             |
| 109  | 111 | Coal           |                             |
| 111  | 208 | Grey Shale     | Coal Stringers at 158' 200' |
| 208  | 220 | Coal           |                             |
| 220  | 240 | Grey Shale     |                             |
|      |     |                |                             |
|      |     |                |                             |
|      |     |                |                             |
|      |     |                |                             |
|      |     |                |                             |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 26, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-74

APPROX. LOCATION: 120=00 1500 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 120+12 1488 Lt.

ELEVATION: 1024

DRILLER: H. Vincett

| FROM | TO  | LOG                  | REMARKS |
|------|-----|----------------------|---------|
| 0    | 40  | Till                 |         |
| 40   | 45  | Grey Shale           |         |
| 45   | 80  | Grey Green sandstone |         |
| 80   | 97  | Red Siltstone        |         |
| 97   | 120 | Green Sandstone      |         |
|      |     |                      |         |
|      |     |                      |         |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam Project DATE: April 26, 1978

COMPANY: Ken's Drilling #2

HOLE No.: Qu-78-75

APPROX. LOCATION: 142 + 50 100 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 142 + 64 - 116Rt

ELEVATION: 1048

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG                  | REMARKS                |
|------|-----|----------------------|------------------------|
| 0    | 23  | Sand gravel boulders | Ou-78-75               |
| 23   | 33  | Gravel clay          | 204                    |
| 33   | 37  | Sand gravel          | 89.2                   |
| 37   | 45  | Clay gravel          | 4.2 1.1 #2 Seam        |
| 45   | 82  | Sandstone            | 5.6 1.5 #2 Bottom      |
| 82   | 86  | Shale                | 64.2 5.3 Rider #1 Seam |
| 86   | 87  | Shaly Coal           | 0.6 5.1                |
| 87   | 90  | Shale                |                        |
| 90   | 92  | Shaly coal           |                        |
| 92   | 98  | Shale                |                        |
| 98   | 100 | Shaly coal           |                        |
| 100  | 165 | Shaly coal           |                        |
| 165  | 167 | Coal                 |                        |
| 167  | 170 | Shale                |                        |
| 170  | 176 | Coal                 |                        |
| 176  | 204 | Shale                |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 26/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU - 78 - 77

APPROX. LOCATION: 122+50 1300' SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 122+45 1324'

ELEVATION: 1062

DRILLER: H. Vincett

| FROM | TO                 | LOG            | REMARKS |
|------|--------------------|----------------|---------|
| 0    | 32                 | till           |         |
| 32   | 257                | grey sandstone |         |
| 257  | 259                | coal           |         |
| 259  | <del>275</del> 274 | grey shale     |         |
| 334  | <del>345</del>     | coal           |         |
| 345  | 360                | grey shale     |         |
|      |                    |                |         |
|      |                    |                |         |
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COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 28, 1978

COMPANY: Lexco

HOLE No.: Qu-78-78

APPROX. LOCATION: 152.40 - Baseline SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 152 + 52 - 28 Rt.

ELEVATION: 1072

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                  |
|------|-----|----------------|--------------------------|
| 0    | 5   | Till           |                          |
| 5    | 80  | Grey Sandstone | Qu-78-78<br>158          |
| 80   | 83  | Coal           |                          |
| 83   | 134 | Grey shale     | 80.8      1.3    #2 Seam |
| 134  | 145 | Coal           | 50.6      5.8    #1 Seam |
| 145  | 160 | Grey Shale     | 0.6      6.3             |
|      |     |                |                          |
|      |     |                |                          |
|      |     |                |                          |
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|      |     |                |                          |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: April 28/78  
 COMPANY: Lexco Testing Ltd.  
 HOLE No.: QU-78-79 C  
 APPROX. LOCATION: 165+00 1000 RT SEC.      TWP.      RGE.      W.       
 SURVEYED LOCATION: 165 + 04 980 Rt  
 ELEVATION: 1070  
 DRILLER: Roger Selk

| FROM | TO  | LOG         | REMARKS                       |
|------|-----|-------------|-------------------------------|
| 0    | 42  | till        |                               |
| 42   | 106 | sandstone   | E-Log                         |
| 106  | 120 | grey shale  | R. J. Ronaghan                |
| 120  | 132 | brown shale |                               |
| 132  | 137 | coal        | <u>QU-78-79C</u> <u>130.6</u> |
| 137  | 145 | brown shale | 210' 3.0 #2 seam              |
| 145  | 156 | grey shale  | 52.3                          |
| 156  | 176 | sandstone   | 0.3                           |
| 176  | 184 | grey shale  | 0.15                          |
| 184  | 187 | brown shale | 1.25                          |
| 187  | 200 | coal        | 0.25                          |
| 200  | 204 | brown shale | .38                           |
| 204  | 212 | grey shale  | 1.0 #1 seam                   |
|      |     |             | 3.2                           |
|      |     |             | 0.6                           |
|      |     |             | 1.3                           |
|      |     |             | 0.3                           |
|      |     |             | 1.6                           |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 105 ft (133' drilled) FT. 212



# LUSCAR LTD. corehole log

165+00 - 980 RT

April 29/78

HOLE NO. Qu-78-79C

PAGE 1 OF 4

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                               |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                               |            |
| X        | X             | X   |      | X         |      |                                                                                                                                               |            |
| 1        | 126           | 133 | 7.4  | 6.30      |      | Siltstone, grey brown, massive, hard, locally fractured, some slicks                                                                          |            |
|          |               |     |      | 0.35      |      | Siltstone, carbonaceous, dark brown, inter-banded with small stringers of coal                                                                |            |
|          |               |     |      | 0.80      |      | Coal, bright blocky, calcite on cleats light, disseminated pyrite, broken                                                                     |            |
| 2        | 133           | 141 | 8.3  |           |      |                                                                                                                                               | #1         |
|          |               |     |      | 1.15      |      | Coal as above except more massive                                                                                                             | SAMPLE     |
|          |               |     |      | 0.10      |      | Bone dark brown, medium hard, crushed                                                                                                         |            |
|          |               |     |      | 1.3       |      | Coal, bright blocky, massive, hard                                                                                                            |            |
|          |               |     |      | 0.3       |      | Coal, crushed, milled some slicks some siltstone mixed                                                                                        |            |
|          |               |     |      | 0.5       |      | Siltstone, dark brown, shear zone at 35° to core, angle, rock crushed, milled slicks, very good load structures                               |            |
|          |               |     |      | 1.15      |      | Siltstone dark brown, massive, numerous and stringers, Jointed slicks 35°                                                                     |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                         | X          |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                                 |            |

# LUSCAR LTD. corehole log

HOLE NO. \_\_\_\_\_  
PAGE 2 OF 4

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
|          |               |     |      | 0.15      |      | Coal bright blocky massive good contacts                                                                                                    |            |
|          |               |     |      | 2.0       |      | Siltstone as above crushed towards contact with coal                                                                                        |            |
|          |               |     |      | 0.3       |      | Coal bright blocky, some stringers of siltstone, some slicks                                                                                |            |
|          |               |     |      | 1.4       |      | Siltstone as above slicks 40°                                                                                                               |            |
| 3        | 141           | 149 | 8.4  |           |      |                                                                                                                                             |            |
|          |               |     |      | 8.4       |      | Siltstone as above                                                                                                                          |            |
| 4        | 180           | 188 | 7.4  |           |      |                                                                                                                                             |            |
|          |               |     |      | 6.9       |      | Siltstone, blue grey, massive, coal stringers throughout, most not sedimentary (there through movement).                                    |            |
|          |               |     |      | 0.15      |      | Coal bright blocky, hard, mass.                                                                                                             |            |
|          |               |     |      | 0.15      |      | Mudrock brown crushed, slicks medium hard (excluded from sample)                                                                            |            |
|          |               |     |      | 0.3       |      | Coal as above                                                                                                                               |            |
| 5        | 188           | 196 | 9.45 |           |      |                                                                                                                                             |            |
|          |               |     |      | 0.15      |      | Bone dark brown massive medium hard (not included in sample)                                                                                |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       | X          |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               |            |

# LUSCAR LTD. corehole log

HOLE NO.

PAGE 3 OF 4

| CORE NO. | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|          |               |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      | 1.8       |      | Coal, bright, blocky, fractured locally, massive, minor calcite, minor amber.                                                               |            |
|          |               |    |      | 0.25      |      | Siltstone, light brown, massive, med hard                                                                                                   | SAMPLE #2  |
|          | SAMPLE #2     |    |      |           |      | top 90° to core angle bottom 60° to core angle, bottom slicks                                                                               |            |
|          |               |    |      | 2.60      |      | Coal, bright blocky, fractured down core, some calcite on cleats, minor amber ct not early broken                                           |            |
|          |               |    |      | 0.2       |      | Siltstone, grey medium grained, massive hard diff contact angles                                                                            |            |
|          |               |    |      | 0.15      |      | Coal bright blocky massive                                                                                                                  |            |
|          |               |    |      | 0.75      |      | Mudrock, brown, crushed at upper contact with coal, fractured, slicks                                                                       |            |
|          |               |    |      | 2.6       |      | Coal bright blocky hard massive                                                                                                             |            |
|          |               |    |      | 0.05      |      | Mudrock, brown, massive, medium hard                                                                                                        |            |
|          | SAMPLE #3     |    |      |           |      |                                                                                                                                             |            |
|          |               |    |      | 0.4       |      | Coal as above, logs of visible amber                                                                                                        |            |
|          | TOTALS        |    |      |           |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |    |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 28, 1978

COMPANY: Lexco

HOLE No.: Qu-78-80

APPROX. LOCATION: 152.50 500 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 152 + 56 - 490 Rt.

ELEVATION: 1058

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                |
|------|-----|----------------|------------------------|
| 0    | 6   | Till           |                        |
| 6    | 101 | Grey Sandstone | Qu-78-80<br>198        |
| 101  | 104 | Coal           |                        |
| 104  | 165 | Grey Shale     | 100.5                  |
| 165  | 176 | Coal           | 1.5 #2 Seam<br>0.2 1.8 |
| 176  | 200 | Grey Shale     |                        |
|      |     |                | 5.5 1.1 #2 Bottom Ride |
|      |     |                | 55.6 5.7               |
|      |     |                | 0.6 #1 Seam<br>5.6     |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |
|      |     |                |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam Project DATE: April 29, 1978

COMPANY: Ken's Drilling #2

HOLE No.: Qu-78-81

APPROX. LOCATION: 142 + 50 1000'Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 142 + 17 - 975R

ELEVATION: 1025

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG                     | REMARKS                     |
|------|-----|-------------------------|-----------------------------|
| 0    | 11  | Sand gravel boulders    | Qu-78-81<br>22.3            |
| 11   | 19  | Brown sand gravel water |                             |
| 19   | 120 | Sandstone               | 125.5 2.3<br>1.8 #2 Seam    |
| 120  | 125 | Shale                   |                             |
| 125  | 127 | Coal                    | 14.2 1.2 #2 Bottom<br>Rider |
| 127  | 184 | Shale                   |                             |
| 184  | 188 | Coal                    | 39.0 2.0 #1 Seam            |
| 188  | 193 | Shale                   |                             |
| 193  | 224 | Red Shale               |                             |
|      |     |                         |                             |
|      |     |                         |                             |
|      |     |                         |                             |
|      |     |                         |                             |
|      |     |                         |                             |
|      |     |                         |                             |
|      |     |                         |                             |
|      |     |                         |                             |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 29, 1978

COMPANY: Lexco

HOLE No.: Qu-78-82

APPROX. LOCATION: 152.50 1000' Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 152 + 66 989 Rt.

ELEVATION: 1060

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                  |
|------|-----|----------------|--------------------------|
| 0    | 30  | Till           |                          |
| 30   | 135 | Grey Sandstone | Qu-78-82<br>239          |
| 135  | 140 | Grey Shale     |                          |
| 140  | 142 | Coal           |                          |
| 142  | 200 | Grey Shale     | 133.2 3.6 #2 Seam<br>5.0 |
| 200  | 211 | Coal           | 1.3 #2 Bottom<br>Rider   |
| 211  | 240 | Grey Shale     |                          |
|      |     |                | 57.1 1.8                 |
|      |     |                | 0.2 3.1 #1 Seam          |
|      |     |                | 0.7 5.2                  |
|      |     |                |                          |
|      |     |                |                          |
|      |     |                |                          |
|      |     |                |                          |
|      |     |                |                          |
|      |     |                |                          |
|      |     |                |                          |
|      |     |                |                          |
|      |     |                |                          |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 30, 1978

COMPANY: Lexco

HOLE No.: Qu-78-83

APPROX. LOCATION: 152.50 4500 Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 152 + 45 - 1618 *L.R.*

ELEVATION: 1035

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                 |
|------|-----|----------------|-------------------------|
| 0    | 21  | Till           |                         |
| 21   | 140 | Grey Sandstone | Qu-78-83<br>240         |
| 140  | 143 | Coal           |                         |
| 143  | 203 | Grey Shale     |                         |
| 203  | 214 | Coal           | 140.6                   |
| 214  | 240 | Grey Shale     |                         |
|      |     |                | 0.4 1.8 #2 Seam         |
|      |     |                | 1.5                     |
|      |     |                | 4.9 1.3 #2 Bottom Rider |
|      |     |                | 54.8 1.9                |
|      |     |                | 0.4 3.0                 |
|      |     |                | 0.6 2.9 #1 Seam         |
|      |     |                | 0.2 1.9                 |
|      |     |                | 0.2 1.0                 |
|      |     |                |                         |
|      |     |                |                         |
|      |     |                |                         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: April 30, 1978

COMPANY: Lexco

HOLE No.: Ou-78-84

APPROX. LOCATION: 162.50 1250 Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 162 + 33 1194 Rt.

ELEVATION: 1058

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                    |
|------|-----|----------------|----------------------------|
| 0    | 46  | Till           |                            |
| 46   | 140 | Grey Sandstone | Ou-78-84<br>240            |
| 140  | 144 | Coal           |                            |
| 144  | 203 | Grey Shale     |                            |
| 203  | 214 | Coal           | 140.6                      |
| 214  | 240 | Grey Shale     | 2.0<br>0.4 1.3 #2 Seam     |
|      |     |                | 4.9 1.4 #2 Bottom<br>Rider |
|      |     |                | 51.0 2.1                   |
|      |     |                | 0.3 3.0                    |
|      |     |                | 1.0                        |
|      |     |                | 3.1 #1 Seam                |
|      |     |                | 0.3 1.5                    |
|      |     |                | 0.1 1.3                    |
|      |     |                |                            |
|      |     |                |                            |
|      |     |                |                            |
|      |     |                |                            |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam Project DATE: April 30, 1978

COMPANY: Ken's Drilling #2

HOLE No.: Qu-78-85

APPROX. LOCATION: 137 + 50 500' RT. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 137 + 72 - 548 Rt.

ELEVATION: 1024

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG                       | REMARKS               |
|------|-----|---------------------------|-----------------------|
| 0    | 7   | Sand gravel               | 176 182 Coal          |
| 7    | 11  | Clay gravel               | 182 183 Shale         |
| 11   | 19  | Sand Gravel Water 1/2 GPM | 183 189 Coal          |
| 19   | 27  | Clay gravel               | 189 190 Shale         |
| 27   | 34  | Sand gravel               | 190 204 Sandstone     |
| 34   | 43  | Clay                      | 204 T.D.              |
| 43   | 55  | Gravel clay               |                       |
| 55   | 57  | Brown sand                | 109.2 1.8             |
| 57   | 94  | Sandstone                 | 0.5 1.1 #2            |
| 94   | 95  | Shale water 35 GPM        | 0.4 1.8 Seam          |
| 95   | 106 | Sandstone                 | 9.0 1.5 #2            |
| 108  | 112 | Coal                      | 52.7 Bottom 2.3 Rider |
| 112  | 121 | Sandstone                 | 0.2 #1 3.0 Seam       |
| 121  | 122 | Coal                      | 0.6 5.4               |
| 122  | 140 | Shale                     | 0.8                   |
| 140  | 176 | Siltstone                 |                       |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: May 1, 1978

COMPANY: Lexco

HOLE No.: Qu-78-86

APPROX. LOCATION: 162.50 250 Lt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 162 + 49 294 Lt.

ELEVATION: 1081

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS          |
|------|-----|----------------|------------------|
| 0    | 17  | Till           |                  |
| 17   | 36  | Grey Sandstone |                  |
| 36   | 38  | Coal           | Qu-78-86<br>157  |
| 38   | 118 | Grey Shale     |                  |
| 118  | 130 | Coal           |                  |
| 130  | 160 | Grey Shale     | 35.2             |
|      |     |                | 80.0 2.4 #2 Seam |
|      |     |                | 1.4 2.0          |
|      |     |                | 0.7 2.8 #1 Seam  |
|      |     |                | 5.5              |
|      |     |                |                  |
|      |     |                |                  |
|      |     |                |                  |
|      |     |                |                  |
|      |     |                |                  |
|      |     |                |                  |
|      |     |                |                  |
|      |     |                |                  |
|      |     |                |                  |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: May 1, 1978

COMPANY: Lexco

HOLE No.: Qu-78-87

APPROX. LOCATION: 162.50 500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 162 + 49 548 Lt.

ELEVATION: 1079

DRILLER: H. Vincett

| FROM | TO  | LOG        | REMARKS     |
|------|-----|------------|-------------|
| 0    | 18  | Till       |             |
| 18   | 96  | Grey Shale |             |
| 96   | 108 | Coal       | Qu-78-87    |
| 108  | 140 | Grey shale | 138         |
|      |     |            | 97.6        |
|      |     |            | 1.3         |
|      |     |            | 1.1 2.9     |
|      |     |            | 0.8 #1 Seam |
|      |     |            | 5.6         |
|      |     |            | 0.3 0.4     |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |
|      |     |            |             |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: May 1, 1978

COMPANY: Lexco

HOLE No.: Ou-78-88

APPROX. LOCATION: 157.50 250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 157 + 41 - 242 Lt.

ELEVATION: 1079

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                  |
|------|-----|----------------|--------------------------|
| 0    | 16  | Till           |                          |
| 16   | 36  | Grey Sandstone | Ou-78-88<br>160          |
| 36   | 38  | Coal           |                          |
| 38   | 62  | Grey Sandstone |                          |
| 62   | 118 | Grey Shale     | Coal Stringer at 62'     |
| 118  | 130 | Coal           |                          |
| 130  | 140 | Grey Shale     |                          |
|      |     |                | Ou-78-88<br>160          |
|      |     |                |                          |
|      |     |                | 37.6 3.0                 |
|      |     |                | 0.2 #2 Seam<br>0.4       |
|      |     |                | 24.3 0.9 #2 Bottom Rider |
|      |     |                | 54.8                     |
|      |     |                | 1.9                      |
|      |     |                | 0.5 #1 Seam              |
|      |     |                | 3.0                      |
|      |     |                | 0.9                      |
|      |     |                | 5.2                      |
|      |     |                | 0.3                      |
|      |     |                | 0.7                      |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: May 2, 1978

COMPANY: Lexco

HOLE No.: Qu-78-90

APPROX. LOCATION: 147.50 1000' Rt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 147 + 68 - 1000 Rt.

ELEVATION: 1048

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                        |
|------|-----|----------------|--------------------------------|
| 0    | 17  | Till           |                                |
| 17   | 122 | Grey Sandstone | Qu-78-90                       |
| 122  | 128 | Grey shale     |                                |
| 128  | 130 | Coal           | 126.3                          |
| 130  | 188 | Grey Shale     | 0.2 1.7 #2 Seam<br>1.8         |
| 188  | 199 | Coal           | 4.5                            |
| 199  | 220 | Grey Shale     | 0.5 1.3 #2 Bottom Rider<br>0.9 |
|      |     |                | 54.0 2.9                       |
|      |     |                | 0.5                            |
|      |     |                | 4.1 #1 Seam                    |
|      |     |                | 0.3 0.4                        |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |
|      |     |                |                                |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsan Project DATE: May 2, 1978

COMPANY: Ken's Drilling #2

HOLE No.: Qu-78-91

APPROX. LOCATION: \_\_\_\_\_ SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 137 + 55 - 12 Rt.

ELEVATION: 1029

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG                              | REMARKS                |
|------|-----|----------------------------------|------------------------|
| 0    | 6   | Clay and gravel                  |                        |
| 6    | 8   | Brown sand clay gravel           | 150.8                  |
| 8    | 35  | Grey sand clay gravel            | 0.2 2.0                |
| 35   | 110 | Grey sand clay gravel some water | 0.4 2.9 #1 Seam<br>5.2 |
| 110  | 115 | Sand                             | 0.9 Shly.              |
| 115  | 140 | Fractured Sandstone              |                        |
| 140  | 150 | Sandstone                        |                        |
| 150  | 160 | Coal                             |                        |
| 160  | 164 | Shale                            |                        |
| 165  | 175 | Sandstone                        |                        |
| 175  | 184 | Red shale                        |                        |
|      | 184 | T.D.                             |                        |
|      |     |                                  |                        |
|      |     |                                  |                        |
|      |     |                                  |                        |
|      |     |                                  |                        |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam DATE: May 3/78

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-92C

APPROX. LOCATION: 170+00 Base line SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 169+89 7' Rt.

ELEVATION: 1095'

DRILLER: Roger Selk

| FROM | TO  | LOG         | REMARKS                 |
|------|-----|-------------|-------------------------|
| 0    | 50  | Till        |                         |
| 50   | 65  | Sandstone   | E-Log                   |
| 65   | 71  | Grey shale  | R. J. Ronaghan          |
| 71   | 76  | Coal        | <u>QU-78-92</u> 72.8    |
| 76   | 80  | Brown shale | 2.0                     |
| 80   | 90  | Grey shale  | 0.1 } #2 seam           |
| 90   | 108 | Sandstone   | 1.0 }<br>0.4 }<br>0.5 } |
| 108  | 118 | Brown shale | 65.5                    |
| 118  | 135 | Grey shale  |                         |
| 135  | 140 | Brown shale | 2.0                     |
| 140  | 153 | Coal        | 0.1 }<br>0.7 }<br>0.6 } |
| 153  | 160 | Brown shale | 2.6 } #1 seam           |
| 160  | 168 | Grey shale  | 1.0 }<br>3.5 }<br>0.1 } |
|      |     |             | 2.8 }                   |
|      |     |             |                         |
|      |     |             |                         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: 15 ft (86 drilled) FT. 168'



# LUSCAR LTD. corehole log

HOLE NO. OU-78-92C

QUINSAM - 170 + 00

PAGE 1 OF 4

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                               |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                               |            |
|          |               |     |      |           |      |                                                                                                                                               |            |
| 1        | 72            | 80  | 6.25 | 1.5       |      | Coal #2 seam bright, blocky, massive, medium hard, visible pyrite.                                                                            |            |
|          |               |     |      | 0.05      |      | Mudrock, grey brown soft                                                                                                                      |            |
|          |               |     |      | 0.95      |      | Coal as above                                                                                                                                 |            |
|          |               |     |      | 0.40      |      | Coal and mudrock mixed milled, poss shear zone. (NOT RECOVERED)                                                                               |            |
|          |               |     |      | 0.55      |      | Coal as above                                                                                                                                 |            |
|          |               |     |      | 0.40      |      | Carbonaceous mudrock, dark brown, numerous coal laminae                                                                                       |            |
|          |               |     |      | 2.40      |      | Siltstone green grey, some coaly stringers                                                                                                    |            |
| 2        | 80            | 86  | 6.9  | 4.3       |      | Siltstone as above                                                                                                                            |            |
|          |               |     |      | 1.5       |      | Sandstone - green, massive bottom end interbanded with sandstone                                                                              |            |
|          |               |     |      | 1.0       |      | Siltstone, dark green, massive, hard                                                                                                          |            |
| 3        | 108           | 116 | 5.3  | .5        |      | Mudrock carbonaceous dark brown, med. hard numerous coaly lenses                                                                              |            |
|          | TOTALS        |     |      |           |      | ÷ X 100 = % REC. SEAM                                                                                                                         |            |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                                 |            |

SAMPLE #1





# LUSCAR LTD. corehole log

HOLE NO.  
PAGE 4 OF 4

| CORE NO.  | CORE FOOTAGES |     |      |           |         | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|-----------|---------------|-----|------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|           | DRILLED       |     |      | RECOVERED |         |                                                                                                                                             |            |
|           | FROM          | TO  | TOT. | SEC.      | TOT.    |                                                                                                                                             |            |
| X         | X             | X   |      | X         |         |                                                                                                                                             |            |
|           |               |     |      | 3.6       |         | Coal bright blocky massive med. hard                                                                                                        |            |
|           |               |     |      | .01       |         | Mudstone, brown minor coally bits                                                                                                           |            |
| SAMPLE #3 |               |     |      | 2.8       |         | Coal as above                                                                                                                               |            |
| 9         | 153           | 161 | 7.8  | .1        |         | Bone as above                                                                                                                               |            |
|           |               |     |      | .75       |         | Siltstone, brown occas. coally lamin. broken                                                                                                |            |
|           |               |     |      | .5        |         | Carbonaceous siltstone dark brown coally stringers                                                                                          |            |
|           |               |     |      | 1.8       |         | Siltstone brown, med. hard occas. coally lamin. slicks                                                                                      |            |
|           |               |     |      | 4.7       |         | Siltstone green grey massive med. hard                                                                                                      |            |
| X         | TOTALS        |     | X    | ÷         | X 100 = | % REC.                                                                                                                                      | SEAM       |
|           |               |     |      | ÷         | X 100 = | % TOT. REC.                                                                                                                                 | SEAM(S)    |

# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Quinsam Project DATE: May 3, 1978

COMPANY: Ken's Drilling #2

HOLE No.: Qu-78-93

APPROX. LOCATION: 137 + 50 1000' Rt. SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 137 + 43 1076' Rt.

ELEVATION: 1005'

DRILLER: \_\_\_\_\_

| FROM | TO  | LOG              | REMARKS             |
|------|-----|------------------|---------------------|
| 0    | 30  | Sand Gravel Clay |                     |
| 30   | 90  | Sandstone        | 116.8 1.2           |
| 90   | 92  | Coal?            | 0.2 0.6 #2 Seam     |
| 92   | 115 | Sandstone        | 0.3 1.5             |
| 115  | 117 | Shale            | 6.0                 |
| 117  | 120 | Coal             | 1.4 #2 Bottom Rider |
| 120  | 129 | Siltstone        | 49.4 2.1            |
| 129  | 133 | Shale            | 0.2 2.9 #1 Seam     |
| 133  | 143 | Siltstone        | 0.6 4.8             |
| 143  | 176 | Shale            | 1.5 Shly.           |
| 176  | 188 | Coal             |                     |
| 188  | 190 | Shale            |                     |
| 190  | 204 | Siltstone        |                     |
|      | 204 | T.D.             |                     |
|      |     |                  |                     |
|      |     |                  |                     |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: May 9, 1978

COMPANY: Lexco

HOLE No.: Wash out old hole Qu-78-94

APPROX. LOCATION: Echo Lake #1 SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 155 + 17 -1113 Lt.

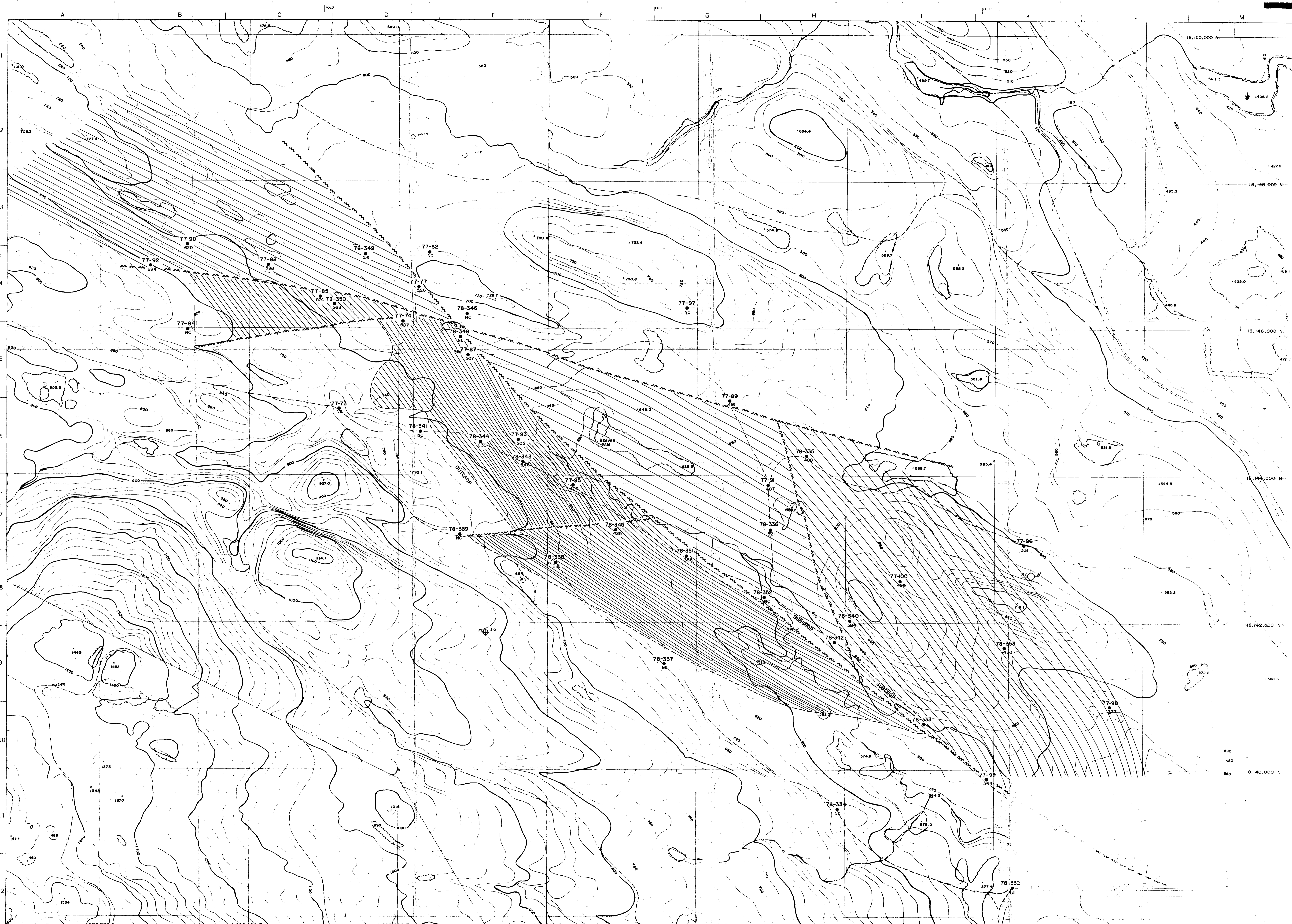
ELEVATION: 1096

DRILLER: H. Vincett

| FROM | TO  | LOG                       | REMARKS |
|------|-----|---------------------------|---------|
| 0    | 120 | Casing                    |         |
| 120  | 204 | Old Hole                  |         |
| 204  | 220 | Basalt                    |         |
|      |     |                           |         |
|      |     | Echo Lake #1 Drillers Log |         |
| 0    | 102 | Gravel & Clay             |         |
| 102  | 132 | Grey Siltstone            |         |
| 132  | 147 | Red Shale                 |         |
| 147  | 148 | Sandstone                 |         |
| 148  | 153 | Coal                      |         |
| 153  | 183 | Grey Shale & Siltstone    |         |
| 183  | 205 | Basalt                    |         |
|      |     |                           |         |
|      |     |                           |         |
|      |     |                           |         |

COMMENTS: \_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_




| REFERENCE DRAWINGS |               | ISSUE | DATE | INITIALS | REVISIONS |  | ISSUE | DATE | INITIALS | REVISIONS |  |
|--------------------|---------------|-------|------|----------|-----------|--|-------|------|----------|-----------|--|
| GS G 202 GF 13     | THIS BASE MAP |       |      |          |           |  |       |      |          |           |  |
|                    |               |       |      |          |           |  |       |      |          |           |  |

**LUSCAR LTD.**

**QUINSAM PROJECT**

|            |              |       |               |
|------------|--------------|-------|---------------|
| SCALE      | 0' = 400'    | TITLE |               |
| DRAWN      | T. CHRUSCIEL | BY    | DATE          |
| CHECKED    |              |       | MARCH 1, 1979 |
| APPROVED   |              |       |               |
| 1st ISSUED |              |       |               |

**QUINSAM EAST**  
**STRUCTURE MAP**


 coal assessment report  
 GS. G. 220 GF. 13

*APPENDIX #3*



# LUSCAR LTD. corehole log

HOLE NO. 20-78-1c

PAGE 1 OF 2

Line 80+00 2000' Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 100           | 108 | 8    |           | 3.1  |                                                                                                                                             |            |
|          |               |     |      | 3.0       |      | siltstone; med grey; hard but completely fractured into laminar peices measuring 1/2" thick                                                 |            |
|          |               |     |      | 5.1       |      | siltstone; med grey; hard; massive                                                                                                          |            |
| 2        | 108           | 116 | 8    |           | 8    |                                                                                                                                             |            |
|          |               |     |      | 8.0       |      | siltstone as above                                                                                                                          |            |
| 3        | 116           | 124 | 8    |           | 6'7" |                                                                                                                                             |            |
|          |               |     |      | 6.6       |      | siltstone as above                                                                                                                          |            |
| 4        | 124           | 132 | 8    |           | 8.8  |                                                                                                                                             |            |
|          |               |     |      | 8.8'      |      | siltstone as above only fractured into laminar peices                                                                                       |            |
| 5        | 132           | 140 | 8    |           | 8.4  |                                                                                                                                             |            |
|          |               |     |      | 8.4       |      | siltstone as above                                                                                                                          |            |
| 6        | 140           | 147 | 7    |           | 7.2  |                                                                                                                                             |            |
|          |               |     |      | 7.0       |      | siltstone as above                                                                                                                          |            |
|          |               |     |      | .15       |      | coal; massive; hard; bright and blocky                                                                                                      |            |
| 7        | 147           | 154 | 7    |           | 7.1  |                                                                                                                                             |            |
|          |               |     |      | 1.1       |      | coal; as above; massive and disseminated pyrite throughout                                                                                  |            |
|          |               |     |      | .8        |      | siltstone; med grey-brown; hard but badly fractured-coal lenses throughout                                                                  |            |
|          |               |     |      | 5.25      |      | coal; massive; bright and blocky hard; visible pyrite                                                                                       |            |
| 8        | 154           | 162 | 8    |           | 7.2  |                                                                                                                                             |            |
|          |               |     |      | 3.1       |      | coal; massive; hard; clean; bright and blocky; visible pyrite                                                                               |            |
|          |               |     |      | .4        |      | mudstone; soft; recessive; crumbly med brown; carbonaceous                                                                                  |            |
|          |               |     |      | .55       |      | coal; soft; crumbly; mixed with mudstone                                                                                                    |            |
| X        | TOTALS        |     |      | X         |      |                                                                                                                                             |            |
|          |               |     |      |           |      | X 100 %                                                                                                                                     | SEAM       |
|          |               |     |      |           |      | X 100 %                                                                                                                                     | SEAM(S)    |
|          |               |     |      |           |      | % REC.                                                                                                                                      |            |
|          |               |     |      |           |      | % TOT. REC.                                                                                                                                 |            |







# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Cambell River DATE: February 12/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-4c

APPROX. LOCATION: 85+00 2250; Lt SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 84+86 2251' Lt.

ELEVATION: 1102'

DRILLER: J.L. Lodoen

| FROM | TO | LOG         | REMARKS |
|------|----|-------------|---------|
| 0    | 8  | till        |         |
| 8    | 10 | brown shale |         |
| 10   | 12 | coal        |         |
| 12   | 17 | sandstone   |         |
| 17   | 54 | brown shale |         |
| 54   | 57 | sandstone   |         |
| 57   | 69 | brown shale |         |
| 69   | 78 | coal        |         |
| 78   | 93 | brown shale |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |
|      |    |             |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 93







# LEXCO TESTING LTD.

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: Feb. 15, 1978

COMPANY: Lexco Testing Ltd.

HOLE No.: QU-78-6c

APPROX. LOCATION: 90+00 2250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 90+04 2257 Lt.

ELEVATION: 1125

DRILLER: R. Lodoen

| FROM | TO  | LOG              | REMARKS |
|------|-----|------------------|---------|
| 0    | 10  | till             |         |
| 10   | 26  | sandstone        |         |
| 26   | 32  | dark brown shale |         |
| 32   | 33  | coal             |         |
| 33   | 87  | dark brown shale |         |
| 87   | 90  | coal             |         |
| 90   | 91  | brown shale      |         |
| 91   | 99  | coal             |         |
| 99   | 110 | sandstone        |         |
| 110  | 111 | coal             |         |
| 111  | 116 | sandstone        |         |
| 116  | 120 | dark brown shale |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |
|      |     |                  |         |

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

WATER HORIZON: \_\_\_\_\_ FT. \_\_\_\_\_

# LUSCAR LTD. corehole log

HOLE NO. 911-78-6

PAGE 1 OF 2

Approximate Location: Line 90+00 2250' D.T.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                               |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                               |            |
| X        | X             | X   |      | X         |      |                                                                                                                                               |            |
| 1        | 33            | 41  | 8    | 7.0'      |      | stored                                                                                                                                        |            |
| 2        | 41            | 49  | 8    | 8.3'      |      | stored                                                                                                                                        |            |
| 3        | 49            | 57  | 8    | 8.7'      |      | stored                                                                                                                                        |            |
| 4        | 57            | 65  | 8    | 7.9'      |      | stored                                                                                                                                        |            |
| 5        | 65            | 73  | 8    | 8.5'      |      | stored                                                                                                                                        |            |
| 6        | 73            | 81  | 8    | 8.3'      |      | stored                                                                                                                                        |            |
|          |               |     |      |           |      |                                                                                                                                               |            |
| 7        | 81            | 89  | 8    | 7.9'      |      |                                                                                                                                               |            |
|          |               |     |      |           | 5.3  | siltstone; dark grey; hard but fractured; some massive sections near base                                                                     |            |
|          |               |     |      |           | 1.15 | siltstone; dark grey; softer; some carbonaceous bands; fractured at 60° to core axis but no evidence of slippage                              |            |
|          |               |     |      |           | .05  | coal; bright and blocky                                                                                                                       |            |
|          |               |     |      |           | .3   | mudstone; dark brown; massive; carbonaceous relatively soft                                                                                   |            |
|          |               |     |      |           | .05  | coal; as above                                                                                                                                |            |
|          |               |     |      |           | .05  | mudstone; dark brown; soft; plastic, set                                                                                                      |            |
|          |               |     |      |           | .9   | coal; bright blocky; hard; massive; abundant visible pyrite                                                                                   |            |
| 8        | 89            | 97  | 8.0  | 8.1       |      |                                                                                                                                               |            |
|          |               |     |      |           | .5   | coal; as above                                                                                                                                |            |
|          |               |     |      |           | 1.0  | mudstone; massive; fairly hard; laminar cleavage; small coal particles throughout fissile                                                     |            |
|          |               |     |      |           | 6.6  | coal; bright, blocky; massive; hard; uniform some pyrite and amber; calcite infills                                                           |            |
| 9        | 97            | 104 | 7    | 6.6       |      |                                                                                                                                               |            |
|          |               |     |      |           | 1.4  | coal; as above                                                                                                                                |            |
|          |               |     |      |           | .3   | mudstone; soft, wet; plastic; coaly                                                                                                           |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                              | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                         | SEAM(S)    |





# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 15/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-8

APPROX. LOCATION: 87+50 2000 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 87+55 1955' Lt.

ELEVATION: 1132'

DRILLER: J.B. Caswoll

| FROM | TO   | LOG          | REMARKS |
|------|------|--------------|---------|
| 0.0  | 9    | boulder till |         |
| 9.0  | 65.5 | grey shale   |         |
| 65.5 | 81   | black shale  |         |
| 81.0 | 106  | shale (grey) |         |
| 106  | 133  | black shale  |         |
| 133  | 141  | coal         |         |
| 141  | 164  | grey shale   |         |
|      | 164  | end of hole  |         |
|      |      |              |         |
|      |      |              |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 15/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-9c

APPROX. LOCATION: 90+00 1750' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 90+05 1735' Lt.

ELEVATION: 1125'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG              | REMARKS |
|------|-----|------------------|---------|
| 0    | 6   | till             |         |
| 6    | 31  | sandstone        |         |
| 31   | 36  | dark brown shale |         |
| 36   | 78  | sandstone        |         |
| 78   | 90  | brown shale      |         |
| 90   | 91  | coal             |         |
| 91   | 115 | dark brown shale |         |
| 115  | 150 | sandstone        |         |
| 150  | 156 | brown shale      |         |
| 156  | 157 | coal             |         |
| 157  | 160 | brown shale      |         |
| 160  | 168 | coal             |         |
| 168  | 171 | dark brown shale |         |
| 171  | 176 | sandstone        |         |
| 176  | 179 | brown shale      |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 179



# LUSGAR LTD. corehole log

HOLE NO. 91-78 90  
PAGE 1 OF 2

Approximate Location: Line 90+00 1750 Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X   |      | X         |      |                                                                                                                                             |            |
| 1        | 80            | 88  | 8.3  |           |      |                                                                                                                                             |            |
|          |               |     |      | 4.5       |      | siltstone; greyish green; hard but fractured                                                                                                |            |
|          |               |     |      | 2.5       |      | sandstone; medium grey; medium grained; hard massive                                                                                        |            |
|          |               |     |      | 1.3       |      | siltstone; dark grey; hard but fractured                                                                                                    |            |
| 2        | 88            | 96  | 7.4  |           |      |                                                                                                                                             |            |
|          |               |     |      | 1.5       |      | sandstone; med grey; medium to fine grained; hard; massive                                                                                  |            |
|          |               |     |      | .7        |      | coal; blocky and bright but fractured and crushed; some visible sulphur                                                                     |            |
|          |               |     |      | .05       |      | siltstone; dark grey; hard                                                                                                                  |            |
|          |               |     |      | .35       |      | coal; as above                                                                                                                              |            |
| 3        | 96            | 104 | 8.0  |           |      |                                                                                                                                             |            |
|          |               |     |      | 8.0       |      | siltstone; medium to dark grey-brown; hard but fractured into thin laminar layers                                                           |            |
| 4        | 155           | 163 | 8.5  | .4        |      | mudstone; dark grey; thin coal laminae throughout; fractured                                                                                |            |
|          |               |     |      | 1.45      |      | coal; bright and blocky; massive; abundant sulf.                                                                                            |            |
|          |               |     |      | 1.65      |      | mudstone; medium brown; soft; plastic                                                                                                       |            |
|          |               |     |      | 5.0       |      | coal; bright and blocky; some visible sulfur massive and hard                                                                               |            |
| 5        | 163           | 171 | 8.0  |           |      |                                                                                                                                             |            |
|          |               |     |      | 2.55      |      | coal as above                                                                                                                               |            |
|          |               |     |      | .10       |      | mudstone; dark grey; carbonaceous                                                                                                           |            |
|          |               |     |      | .40       |      | coal; soft; dirty; crushed;                                                                                                                 |            |
|          |               |     |      | .40       |      | mudstone; soft; plastic; coaly                                                                                                              |            |
|          |               |     |      | .35       |      | coal; soft; dirty; crushed                                                                                                                  |            |
|          |               |     |      | 1.0       |      | mudstone; soft; crushed and milled; some coal mixed in                                                                                      |            |
|          |               |     |      | 3.4       |      | siltstone; medium grey; hard but fractured                                                                                                  |            |
| X        | TOTALS        |     |      | X         |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAM(S)    |





# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 16/78  
 COMPANY: Lexco Testing  
 HOLE NO.: OU-78-11  
 APPROX. LOCATION: 97+50 1750' Lt SEC.      TWP.      RGE.      W.       
 SURVEYED LOCATION: 97+45 1751' Lt.  
 ELEVATION: 1107'  
 DRILLER: H. Vincett

| FROM | TO  | LOG                | REMARKS |
|------|-----|--------------------|---------|
| 0    | 2   | till               |         |
| 2    | 78  | grey sandstone     |         |
| 78   | 85  | carbonaceous shale |         |
| 85   | 144 | grey shale         |         |
| 144  | 146 | coal               |         |
| 146  | 147 | shale              |         |
| 147  | 158 | coal               |         |
| 158  | 180 | grey shale         |         |
|      |     |                    |         |
|      |     |                    |         |
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COMMENTS \_\_\_\_\_  
 \_\_\_\_\_

WATER HORIZON 62 FT. 10 gals/min



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 17/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-13c

APPROX. LOCATION: 95+00 1250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 95+02 1252' Lt

ELEVATION: 1104'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                                         | REMARKS                  |
|------|-----|---------------------------------------------|--------------------------|
| 0    | 6   | till                                        | water @ 150-18.20 G.P.M. |
| 6    | 8   | sandstone                                   |                          |
| 8    | 14  | rusty red shale                             |                          |
| 14   | 31  | sandstone                                   |                          |
| 31   | 36  | brown shale                                 |                          |
| 36   | 101 | sandstone and stringers of dark brown shale |                          |
| 101  | 119 | dark brown shale                            |                          |
| 119  | 121 | sandstone                                   |                          |
| 121  | 134 | brown shale                                 |                          |
| 134  | 185 | sandstone                                   |                          |
| 185  | 191 | dark brown shale                            |                          |
| 191  | 192 | coal                                        |                          |
| 192  | 195 | dark brown shale                            |                          |
| 195  | 205 | coal                                        |                          |
| 205  | 210 | brown shale                                 |                          |
| 210  | 221 | sandstone                                   |                          |

COMMENTS \_\_\_\_\_

WATER HORIZON 150 FT. 221

# LUSCAR LTD. corehole log

HOLE NO. U-78-13c

PAGE 1 OF 1

Approximate Location: 95+00 1250' Lt

| CORE NO. | CORE FOOTAGES |       |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-------|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |       |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO    | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
| X        | X             | X     |      | X         |      |                                                                                                                                             |            |
| 1        | 110           | 118   | 8    | 7.9       |      | stored                                                                                                                                      |            |
| 2        | 118           | 126.5 | 8.5  | 8.5       |      | " "                                                                                                                                         |            |
| 3        | 126.5         | 134   | 7.5  | 6.9       |      | " "                                                                                                                                         |            |
| 4        | 134           | 142   | 8    | 8.1       |      | " "                                                                                                                                         |            |
| 5        | 190           | 198   | 8    | 8.4       |      |                                                                                                                                             |            |
|          |               |       |      |           | .95  | siltstone; med greenish grey; hard but fractured and milled                                                                                 |            |
|          |               |       |      |           | 1.65 | coal; hard; bright and blocky; massive; large chunks of pyrite visible                                                                      |            |
|          |               |       |      |           | 1.5  | mudstone; med brown; crushed and fractured                                                                                                  |            |
|          |               |       |      |           | 4.4  | coal; hard; massive; bright and blocky; some pyrite calcite on cleats; amber visible                                                        |            |
| 6        | 198           | 206   | 8.0  | 7.6       |      |                                                                                                                                             |            |
|          |               |       |      |           | 3.8  | coal; as above                                                                                                                              |            |
|          |               |       |      |           | .2   | coal; crushed and fractured into chunks; bright and dull banded; shaly                                                                      |            |
|          |               |       |      |           | .1   | mudstone; med brown; soft                                                                                                                   |            |
|          |               |       |      |           | 1.15 | coal; bright and blocky; massive and hard amber and calcite on cleats                                                                       |            |
|          |               |       |      |           | .35  | coal; crushed into a very fine powder                                                                                                       |            |
|          |               |       |      |           | .85  | coal; bright and blocky; massive and hard                                                                                                   |            |
|          |               |       |      |           | .40  | coal and mudstone mixed; a fine powder; milled by coring action                                                                             |            |
|          |               |       |      |           | .7   | siltstone; med grayish brown; fractured and milled; soft                                                                                    |            |
| 7        | 206           | 213   | 7    | 6.4       |      |                                                                                                                                             |            |
|          |               |       |      |           | 6.4  | siltstone; med grey; badly fractured and crushed into fine powder; some 6" massive lenses but majority of core is powder                    |            |
| X        | TOTALS        |       |      | X         |      | ÷ X 100 = % REC. SEAM                                                                                                                       |            |
|          |               |       |      |           |      | ÷ X 100 = % TOT. REC. SEAM(S)                                                                                                               | X          |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 18/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-14

APPROX. LOCATION: 97+50 750' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 97+46 756' Lt.

ELEVATION: 1075'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 5   | till           |         |
| 5    | 116 | grey sandstone |         |
| 116  | 126 | grey shale     |         |
| 126  | 160 | grey sandstone |         |
| 160  | 209 | grey shale     |         |
| 209  | 217 | coal           |         |
| 217  | 230 | grey sandstone |         |
| 230  | 240 | grey shale     |         |
|      |     |                |         |
|      |     |                |         |
|      |     |                |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_





# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 19/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-16c

APPROX. LOCATION: 95+00 750' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 95+52 761' Lt.

ELEVATION: 1078'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                          | REMARKS |
|------|-----|------------------------------|---------|
| 0    | 8   | till                         |         |
| 8    | 31  | sandstone                    |         |
| 31   | 38  | brown shale                  |         |
| 38   | 76  | sandstone                    |         |
| 76   | 84  | brown shale                  |         |
| 84   | 146 | sandstone                    |         |
| 146  | 154 | brown and carbonaceous shale |         |
| 154  | 174 | dark brown shale             |         |
| 174  | 181 | sandstone                    |         |
| 181  | 215 | brown shale                  |         |
| 215  | 217 | coal                         |         |
| 217  | 219 | brown shale                  |         |
| 219  | 226 | coal                         |         |
| 226  | 231 | brown shale                  |         |
| 231  | 237 | sandstone                    |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 237

# LUSCAR LTD. CORE HOLE LOG

LOCATION 95+00 750' Lt.

HOLE NO DU-78-16c

PAGE 1 OF 1

| CORE NO. | CORE FOOTAGES |     |           |      |      | GEOLOGICAL DESCRIPTION<br>(LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION)                | TRUE DEPTH | LITH. COLUMN<br>1" = 10' |         |      |
|----------|---------------|-----|-----------|------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------|------|
|          | DRILLED       |     | RECOVERED |      |      |                                                                                                                                                             |            | TRUE DEPTH               | LITH.   | SEC. |
|          | FROM          | TO  | TOT.      | SEC. | TOT. |                                                                                                                                                             |            |                          |         |      |
| 1        | 205           | 213 | 6.9       |      |      |                                                                                                                                                             |            |                          |         |      |
| 2        | 213           | 221 | 7.4       |      |      |                                                                                                                                                             |            |                          |         |      |
|          |               |     | 1.3       |      |      | siltstone; dark grey; massive; hard; uniform                                                                                                                |            |                          |         |      |
|          |               |     | 7         |      |      | siltstone; as above                                                                                                                                         |            |                          |         |      |
|          |               |     | 1.55      |      |      | siltstone; dark grey; carbonaceous; fractured; coaly bands throughout                                                                                       |            |                          |         |      |
|          |               |     | 1.45      |      |      | coal; bright and blocky; massive hard                                                                                                                       |            |                          |         |      |
|          |               |     | 2.5       |      |      | mudstone; soft; wet; plastic; coaly throughout                                                                                                              |            |                          |         |      |
|          |               |     |           |      |      | coal; softer than normal; massive but fractured at 60° to core axis; crushed zone near bottom of core - some lost core; possible faulting through coal zone |            |                          |         |      |
| 3        | 221           | 229 | 42.7      |      |      |                                                                                                                                                             |            |                          |         |      |
|          |               |     | .2        |      |      | coal; as above                                                                                                                                              |            |                          |         |      |
|          |               |     | 2.5       |      |      | coal and mudstone mixed - lost core                                                                                                                         |            |                          |         |      |
|          |               |     |           |      |      | siltstone; soft; crushed and rolled; wet                                                                                                                    |            |                          |         |      |
| TOTALS   |               |     |           |      |      |                                                                                                                                                             |            |                          |         |      |
|          |               |     |           |      |      | ÷ X100 = % REC.                                                                                                                                             |            |                          | SEAM    |      |
|          |               |     |           |      |      | ÷ X100 = % TOT REC.                                                                                                                                         |            |                          | SEAM(S) |      |



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 19/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-18

APPROX. LOCATION: 97+50 2250' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 97+50 2259' Lt.

ELEVATION: 1091'

DRILLER: H. Vincett

| FROM | TO  | LOG        | REMARKS |
|------|-----|------------|---------|
| 0    | 4   | till       |         |
| 4    | 68  | grey shale |         |
| 68   | 79  | coal       |         |
| 79   | 100 | grey shale |         |
|      |     |            |         |
|      |     |            |         |
|      |     |            |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: February 28/78

COMPANY: LEXCO TESTING

HOLE NO.: QU-78-19

APPROX. LOCATION: 87+50 2500 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 87+56 2496' Lt.

ELEVATION: 1083'

DRILLER: H. Vincett

| FROM | TO | LOG        | REMARKS |
|------|----|------------|---------|
| 0    | 8  | till       |         |
| 8    | 17 | grey shale |         |
| 17   | 27 | coal       |         |
| 27   | 60 | grey shale |         |
|      |    |            |         |
|      |    |            |         |
|      |    |            |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 1/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-20

APPROX. LOCATION: 77+50 1250' Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 77+47 1253' Lt.

ELEVATION: 1104

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                    |
|------|-----|----------------|----------------------------|
| 0    | 6   | till           |                            |
| 6    | 154 | grey sandstone |                            |
| 154  | 215 | grey shale     | carbonaceous shale at 166' |
| 215  | 222 | coal           |                            |
| 222  | 240 | grey shale     |                            |
|      |     |                |                            |
|      |     |                |                            |
|      |     |                |                            |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 1/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-21c

APPROX. LOCATION: 95+00 2250 Lt. SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 95+19 2250 Lt.

ELEVATION: 1109'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                          | REMARKS |
|------|-----|------------------------------|---------|
| 0    | 8   | boulder till                 |         |
| 8    | 20  | brown shale                  |         |
| 20   | 23  | coal                         |         |
| 23   | 33  | brown shale                  |         |
| 33   | 78  | sandstone                    |         |
| 78   | 80  | brown and carbonaceous shale |         |
| 80   | 82  | coal                         |         |
| 82   | 83  | dark brown shale             |         |
| 83   | 93  | coal                         |         |
| 93   | 94  | dark brown shale             |         |
| 94   | 96  | coal                         |         |
| 96   | 99  | siltstone (soft)             |         |
| 99   | 113 | brown shale                  |         |
|      |     |                              |         |
|      |     |                              |         |
|      |     |                              |         |

COMMENTS \_\_\_\_\_

WATER HORIZON 57 FT. 113



# LUSCAR LTD. corehole log

HOLE NO. 20-7R-21C

PAGE 1 OF 2

Approximate Location 95+00 Line 2250' Lt.

| CORE NO. | CORE FOOTAGES |    |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH  |         |
|----------|---------------|----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|
|          | DRILLED       |    |      | RECOVERED |      |                                                                                                                                             |             |         |
|          | FROM          | TO | TOT. | SEC.      | TOT. |                                                                                                                                             |             |         |
|          |               |    |      |           |      |                                                                                                                                             |             |         |
| 1        | 20            | 28 | 7.9  |           |      |                                                                                                                                             |             |         |
|          |               |    |      | 2.7       |      | siltstone; medium grey; massive                                                                                                             |             |         |
|          |               |    |      |           |      | hard; coaly lenses                                                                                                                          |             |         |
|          |               |    |      | 2.6       |      | siltstone; carbonaceous; dark grey                                                                                                          |             |         |
|          |               |    |      |           |      | to black; fractured; milled; bright and dull                                                                                                |             |         |
|          |               |    |      |           |      | coaly bands;                                                                                                                                |             |         |
|          |               |    |      | 1.2       |      | siltstone; medium grey massive; hard;                                                                                                       |             |         |
|          |               |    |      |           |      | coaly lenses throughout                                                                                                                     |             |         |
|          |               |    |      | .55       |      | siltstone; carbonaceous with bright and                                                                                                     |             |         |
|          |               |    |      |           |      | dull coaly bands; hard                                                                                                                      |             |         |
|          |               |    |      | 1.25      |      | siltstone; medium grey; massive and hard;                                                                                                   |             |         |
|          |               |    |      |           |      | thin coal laminations                                                                                                                       |             |         |
|          |               |    |      | 1.4       |      | siltstone; medium grey; fractured                                                                                                           |             |         |
|          |               |    |      |           |      | carbonaceous zone throughout                                                                                                                |             |         |
|          |               |    |      | 0.1       |      | coal; bright and blocky but some dirt bands                                                                                                 |             |         |
| 2        | 74            | 82 | 8.5  |           |      |                                                                                                                                             |             |         |
|          |               |    |      | 1.1       |      | siltstone; medium grey; massive; hard                                                                                                       |             |         |
|          |               |    |      | 0.65      |      | siltstone; medium grey; fractured into thin                                                                                                 |             |         |
|          |               |    |      |           |      | plats less than 1/2 inch thickness                                                                                                          |             |         |
|          |               |    |      | 5.8       |      | siltstone; medium grey; massive; hard                                                                                                       |             |         |
|          |               |    |      | 0.3       |      | siltstone; carbonaceous thin coaly                                                                                                          |             |         |
|          |               |    |      |           |      | lamonie throughout.                                                                                                                         |             |         |
|          |               |    |      | .45       |      | coal; bright blocky, fractured with some                                                                                                    |             |         |
|          |               |    |      |           |      | thin bony layers                                                                                                                            |             |         |
|          |               |    |      | .25       |      | coal; bright and blocky with some bony                                                                                                      |             |         |
|          |               |    |      |           |      | lamonic; calcite on cleats; some visable                                                                                                    |             |         |
|          |               |    |      |           |      | pyrite                                                                                                                                      |             |         |
|          |               |    |      |           |      |                                                                                                                                             |             |         |
| X        | TOTALS        |    |      | X         |      | ÷ X 100 =                                                                                                                                   | % REC.      | SEAM    |
|          |               |    |      |           |      | ÷ X 100 =                                                                                                                                   | % TOT. REC. | SEAM(S) |

# LUSGAR LTD. corehole log

WOLE NO. 00-78-21c

PAGE 2 OF 2

Approximate Location 95+00 Line 2250' Lt

| CORE NO. | CORE FOOTAGES |     |      |           |         | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |         |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT.    |                                                                                                                                             |            |
| X        | X             | X   |      | X         |         |                                                                                                                                             |            |
|          |               |     |      | .25       |         | coal; bright and blocky with some bony lamonic; calcite on cleats some visible pyrite                                                       |            |
| 3        | 82            | 90  | 7.95 |           |         |                                                                                                                                             |            |
|          |               |     |      | .85       |         | coal as above; consontration of disseminated pyrite near base                                                                               |            |
|          |               |     |      | 1.2       |         | mudstone; medium brown to grey; massive; fissile, carbonaceous lamine throughout                                                            |            |
|          |               |     |      | 4.55      |         | coal; bright and blocky; massive; hard; calcite on cleats some visible pyrite; some amber;                                                  |            |
|          |               |     |      | 0.1       |         | bone; bright and dull banded; 30% coal                                                                                                      |            |
|          |               |     |      | 1.25      |         | coal as above                                                                                                                               |            |
| 4        | 90            | 98  | 5.9  |           |         |                                                                                                                                             |            |
|          |               |     |      | 1.95      |         | coal as above                                                                                                                               |            |
|          |               |     |      | .15       |         | mudstone; medium brown; soft plastic carbonaceous                                                                                           |            |
|          |               |     |      | .35       |         | coal; soft crushed; milled mixed with mudstone                                                                                              |            |
|          |               |     |      | .7        |         | mudstone; medium brown; top is soft plastic from water penitration; bottom is dry and massive                                               |            |
|          |               |     |      | 1.25      |         | coal as at 84.05                                                                                                                            |            |
|          |               |     |      | 1.5       |         | siltstone; medium brown to grey; hard; massive; uniform coaly impregnations                                                                 |            |
| 4        | 98            | 106 | 8.1  |           |         |                                                                                                                                             |            |
|          |               |     |      | 8.1       |         | siltstone; medium grey; massive; coaly impregnations                                                                                        |            |
| X        | TOTALS        |     | X    | ÷         | X 100 = | % REC.                                                                                                                                      | SEAM       |
|          |               |     |      | ÷         | X 100 = | % TOT. REC.                                                                                                                                 | SEAM(S)    |

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 2/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-22

APPROX. LOCATION: 77+50 1750 Left SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 77+58 1737' Lt.

ELEVATION: 1132'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS              |
|------|-----|----------------|----------------------|
| 0    | 2   | till           |                      |
| 2    | 90  | grey sandstone |                      |
| 90   | 95  | grey shale     |                      |
| 95   | 118 | grey sandstone |                      |
| 118  | 176 | grey shale     |                      |
| 176  | 186 | coal           |                      |
| 186  | 198 | grey shale     | coal stringer at 196 |
| 198  | 220 | grey sandstone |                      |
|      |     |                |                      |
|      |     |                |                      |
|      |     |                |                      |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 3/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-23

APPROX. LOCATION: 82+50 1750 Lt. SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 82+49 1744' Lt

ELEVATION: 1140'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 105 | grey sandstone |         |
| 105  | 175 | grey shale     |         |
| 175  | 179 | coal           |         |
| 179  | 200 | grey shale     |         |
|      |     |                |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 5/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-26

APPROX. LOCATION: 92+50 1000 Lt. SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 92+50 952 Lt.

ELEVATION: 1094'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS                    |
|------|-----|----------------|----------------------------|
| 0    | 3   | till           |                            |
| 3    | 131 | grey sandstone |                            |
| 131  | 219 | grey shale     | coal stringers at 139'+156 |
| 219  | 231 | coal           |                            |
| 231  | 260 | grey shale     |                            |
|      |     |                |                            |
|      |     |                |                            |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_

# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 5/78

COMPANY: Lexco Testing

HOLE NO.: OU-78-27c

APPROX. LOCATION: 90+00 1250 Lt. SEC.     TWP.     RGE.     W.    

SURVEYED LOCATION: 90+10 1229' Lt.

ELEVATION: 1118'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                          | REMARKS |
|------|-----|------------------------------|---------|
| 0    | 6   | till                         |         |
| 6    | 15  | brown shale                  |         |
| 15   | 130 | sandstone                    |         |
| 130  | 145 | brown shale                  |         |
| 145  | 150 | sandstone                    |         |
| 150  | 154 | brown and carbonaceous shale |         |
| 154  | 170 | sandstone                    |         |
| 170  | 210 | brown shale                  |         |
| 210  | 211 | coal                         |         |
| 211  | 212 | brown shale                  |         |
| 212  | 224 | coal                         |         |
| 224  | 227 | brown shale                  |         |
| 227  | 237 | sandstone                    |         |
|      |     |                              |         |
|      |     |                              |         |
|      |     |                              |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 237

# LUSCAR LTD. corehole log

HOLE NO. QU-78-27c  
PAGE 1 OF 1

Approximate Location 90+00 Line 1250' Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>: LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH  |         |
|----------|---------------|-----|------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                               |             |         |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                               |             |         |
|          |               |     |      |           |      |                                                                                                                                               |             |         |
| 1        | 205           | 213 | 7.7  |           |      |                                                                                                                                               |             |         |
|          |               |     |      | 4.45      |      | siltstone; medium grey; medium hard<br>some fissility; fractured into thin bands<br>calcite on fractures                                      |             |         |
|          |               |     |      | .40       |      | siltstone; as above but with thin coaly laminae                                                                                               |             |         |
|          |               |     |      | 1.45      |      | coal; bright and blocky; massive; hard<br>abundant visible pyrite                                                                             |             |         |
|          |               |     |      | .40       |      | mudstone; light grey; soft and plastic; wet                                                                                                   |             |         |
|          |               |     |      | .45       |      | mudstone; medium brown; soft; carbonaceous<br>numerous coaly bands                                                                            |             |         |
|          |               |     |      | .40       |      | mudstone; light grey; soft                                                                                                                    |             |         |
|          |               |     |      | .25       |      | coal; bright and blocky; massive; hard                                                                                                        |             |         |
| 2        | 213           | 221 | 8.4  |           |      |                                                                                                                                               |             |         |
|          |               |     |      | 7.5       |      | coal; as above; calcite on cleats; amber<br>some pyrite                                                                                       |             |         |
|          |               |     |      | .40       |      | mudstone; dark brown to grey; soft; minor<br>chunks of coal                                                                                   |             |         |
|          |               |     |      | .55       |      | coal; bright and blocky; top is crushed                                                                                                       |             |         |
| 3        | 221           | 229 | 8.8  |           |      |                                                                                                                                               |             |         |
|          |               |     |      | .35       |      | coal; as above; calcite on cleats                                                                                                             |             |         |
|          |               |     |      | 1.20      |      | mudstone; dark brown; soft; wet and plastic<br>some fissility; coaly towards base                                                             |             |         |
|          |               |     |      | 1.25      |      | coal; crushed; soft; dirty; soft mudstone<br>mixed in some amber                                                                              |             |         |
|          |               |     |      | 1.45      |      | siltstone; light brown; soft; dry and powd-<br>ery; hard lenses; minor coal bits                                                              |             |         |
|          |               |     |      | 4.6       |      | siltstone; medium grey-green; medium hard                                                                                                     |             |         |
| 4        | 229           | 237 | 7.9  |           |      |                                                                                                                                               |             |         |
|          |               |     |      | 7.9       |      | siltstone; as above                                                                                                                           |             |         |
| X        | TOTALS        |     |      | X         | ÷    | X 100 =                                                                                                                                       | % REC.      | SEAM    |
|          |               |     |      |           | ÷    | X 100 =                                                                                                                                       | % TOT. REC. | SEAM(S) |



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 7/78

COMPANY: LEXCO TESTING

HOLE NO.: QU-78-28

APPROX. LOCATION: 72+50 1250 Lt. SEC.      TWP.      RGE.      W.     

SURVEYED LOCATION: 72+46 1272 Lt.

ELEVATION: 1025'

DRILLER: H. Vincett

| FROM | TO  | LOG            | REMARKS |
|------|-----|----------------|---------|
| 0    | 5   | till           |         |
| 5    | 85  | grey sandstone |         |
| 85   | 95  | grey shale     |         |
| 95   | 96  | coal           |         |
| 96   | 151 | grey shale     |         |
| 151  | 154 | coal           |         |
| 154  | 155 | grey shale     |         |
| 155  | 162 | coal           |         |
| 162  | 180 | grey shale     |         |
|      |     |                |         |
|      |     |                |         |
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COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. \_\_\_\_\_



# LEXCO TESTING LTD

## DRILLHOLE REPORT

COAL FIELD: Campbell River DATE: March 8/78

COMPANY: Lexco Testing

HOLE NO.: QU-78-30c

APPROX. LOCATION: \_\_\_\_\_ SEC. \_\_\_\_\_ TWP. \_\_\_\_\_ RGE. \_\_\_\_\_ W. \_\_\_\_\_

SURVEYED LOCATION: 74+92 1498' Lt.

ELEVATION: 1077'

DRILLER: J.L. Lodoen

| FROM | TO  | LOG                          | REMARKS |
|------|-----|------------------------------|---------|
| 0    | 8   | till                         |         |
| 8    | 62  | sandstone                    |         |
| 62   | 65  | brown shale                  |         |
| 65   | 90  | sandstone                    |         |
| 90   | 91  | brown shale                  |         |
| 91   | 97  | sandstone                    |         |
| 97   | 99  | brown and carbonaceous shale |         |
| 99   | 107 | sandstone                    |         |
| 107  | 137 | brown shale                  |         |
| 137  | 165 | sandstone                    |         |
| 165  | 170 | brown shale                  |         |
| 170  | 172 | coal                         |         |
| 172  | 173 | brown shale                  |         |
| 173  | 183 | coal                         |         |
| 183  | 200 | sandstone                    |         |

COMMENTS \_\_\_\_\_

WATER HORIZON \_\_\_\_\_ FT. 200

# LUSCAR LTD. corehole log

WOLE NO. 9U-78-30c

PAGE 1 OF

Approximate Location 75+00 Line 1500' Lt.

| CORE NO. | CORE FOOTAGES |     |      |           |      | GEOLOGICAL DESCRIPTION<br>LITHOLOGY, COLOR, SIZE, TEXTURE, HARDNESS, SHEARING, CONTACTS, BEDDING ANGLE, ALTERATION, WETNESS, CONTAMINATION. | TRUE DEPTH |
|----------|---------------|-----|------|-----------|------|---------------------------------------------------------------------------------------------------------------------------------------------|------------|
|          | DRILLED       |     |      | RECOVERED |      |                                                                                                                                             |            |
|          | FROM          | TO  | TOT. | SEC.      | TOT. |                                                                                                                                             |            |
|          |               |     |      |           |      |                                                                                                                                             |            |
| 1        | 160           | 168 | 8.2  |           |      |                                                                                                                                             |            |
|          |               |     |      | 8.2       |      | siltstone; light grey; medium hard; fissile<br>occ. coal stringer                                                                           |            |
| 2        | 168           | 176 | 8    |           |      |                                                                                                                                             |            |
|          |               |     |      | .75       |      | siltstone as above                                                                                                                          |            |
|          |               |     |      | .4        |      | carbonaceous shale; dark brown; soft to<br>medium hard; numerous coal; laminae; fissile                                                     |            |
|          |               |     |      | .25       |      | coal; bright and blocky; medium hard                                                                                                        |            |
|          |               |     |      | .4        |      | carbonaceous shale as above                                                                                                                 |            |
|          |               |     |      | 1.25      |      | coal; bright blocky; visible pyrite some<br>amber; #1 rider                                                                                 |            |
|          |               |     |      | .85       |      | siltstone; light to medium brown; some<br>coaly bits; locally fissile                                                                       |            |
|          |               |     |      | 3.7       |      | coal; bright and blocky; massive; medium<br>hard, #1 seam                                                                                   |            |
| 3        | 176           | 184 | 7.15 |           |      |                                                                                                                                             |            |
|          |               |     |      | 5.0       |      | coal as above; except highly broken;<br>some visible pyrite                                                                                 |            |
|          |               |     |      | 1.3       |      | mudrock light and dark bands soft<br>minor coaly stringers; wet                                                                             |            |
|          |               |     |      | .5        |      | siltstone; light brown; numerous coaly<br>particals; hard                                                                                   |            |
|          |               |     |      | .3        |      | mudrock light grey; soft                                                                                                                    |            |
| 4        | 184           | 192 | 8.25 |           |      |                                                                                                                                             |            |
|          |               |     |      | 5.05      |      | siltstone; light grey; soft to medium hard<br>fissile; occ band; carbonaceous                                                               |            |
|          |               |     |      | .4        |      | carbonaceous shale; dark brown; med. hard;<br>numerous coal stringers                                                                       |            |
|          |               |     |      | .25       |      | coal bright blocky; medium hard                                                                                                             |            |
|          |               |     |      | 2.5       |      | siltstone; light grey; med. hard; fissile                                                                                                   |            |
|          | TOTALS        |     |      |           |      | ÷ X 100 = % REC.                                                                                                                            | SEAM       |
|          |               |     |      |           |      | ÷ X 100 = % TOT. REC.                                                                                                                       | SEAMS      |