

UNCLASSIFIED

IDLE CREEK
VANCOUVER ISLAND
Preliminary Field Reconnaissance
June, 1979

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SUMMARY AND RECOMMENDATIONS

Summary

The following points may briefly summarize the findings of the field reconnaissance.

- 1) Structure is simple with beds dipping at 15° to 18° to the northeast.
- 2) Three coal outcrops were found; 2 on Weldwood's property to the east and 1 at Idle Creek.
- 3) Reserves and quality are unknown although Weldwood's Hamilton Lake property immediately north contains 15 million tons of surface mineable.
- 4) The property is about 7 miles from tidewater and rail and 3 miles from nearest infrastructure.

Recommendations

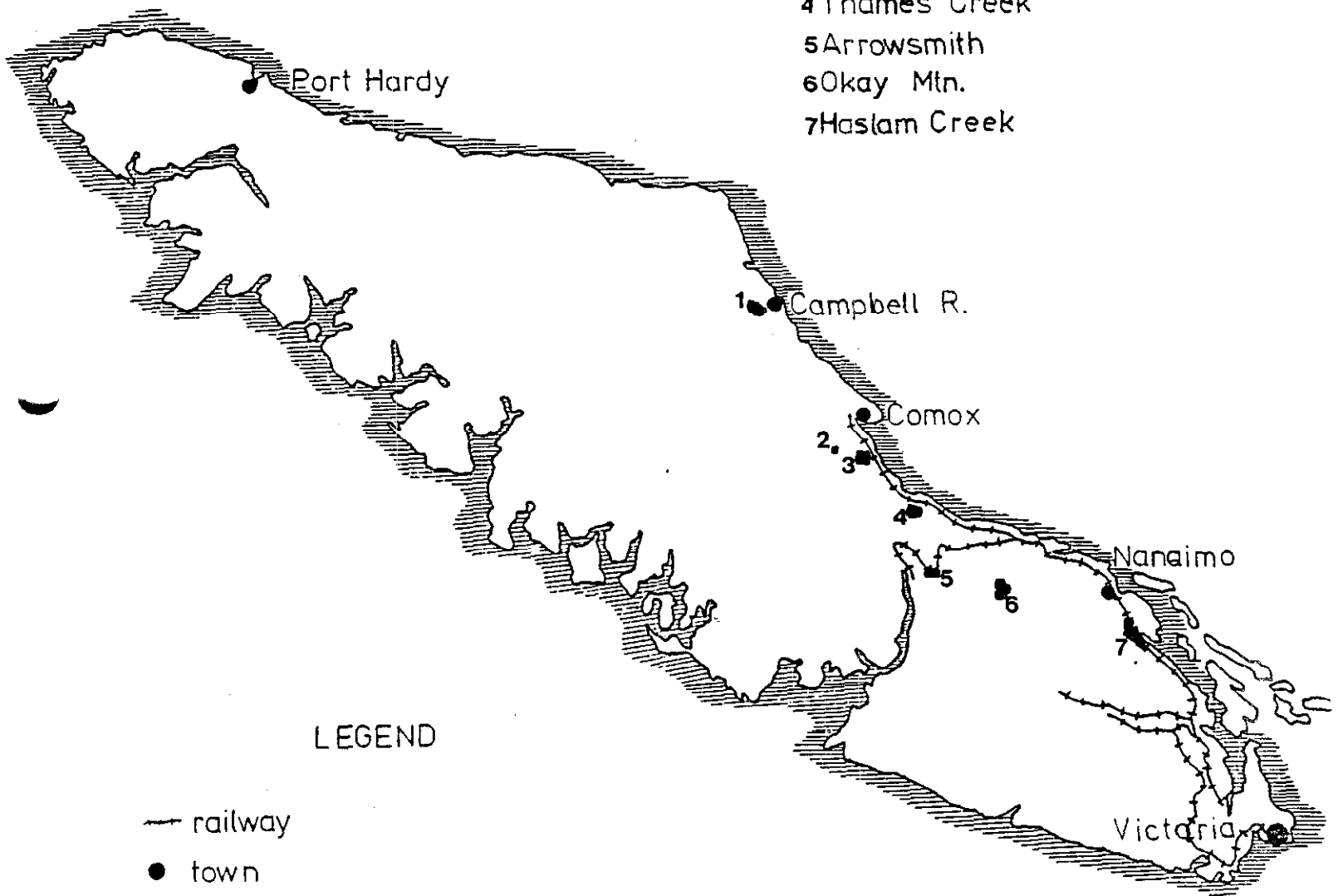
That after licenses are granted (probably in April of 1980) Esso carry out a 2 hole reconnaissance drilling program at Idle Creek as outlined in the section on proposed exploration.

In summary, the property may have surface mineable potential, but reserves would be small and would have to be mined in conjunction with Weldwood's Hamilton Lake.

VANCOUVER ISLAND

Index Map 1

- 1 McIvor Lake
- 2 Idle Creek
- 3 Fanny Bay
- 4 Thames Creek
- 5 Arrowsmith
- 6 Okay Mtn.
- 7 Haslam Creek



LEGEND

- railway
- town
- ESSO (application)
- ESSO (licence)

scale
0 20 40
km

INTRODUCTION

Purpose and Scope

The purpose of this report is to document and summarize the findings of the preliminary field reconnaissance of the Idle Creek prospect on Vancouver Island. Also to propose a preliminary drilling program for the prospect when licenses are granted.

Location and Access

The Idle Creek prospect is located in the east central portion of Vancouver Island (Map 1). The Canadian Pacific, Esquimalt-Nanaimo Railway runs north-south approximately 7 miles to the east of the prospect. Major all-weather gravelled lumbering roads run east-west throughout the property as well as many branches from the main roads. Access is excellent (Maps 2 & 3).

Infrastructure

The major towns of Comox and Courtenay are located approximately 15 miles northeast of the prospect and the smaller town of Cumberland (once a coal mining town) is located only 3 miles to the northeast (Map 2).

The nearest tidewater is 7 miles to the east on the Straits of Georgia.

Geography

Relief is low on the portions of the property underlain by the Comox formations (300 feet). Elevations vary from 2000 feet a.s.l. in the central portions to 1700 feet a.s.l. in the northeast with the land sloping gently northeast.

The land has been extensively lumbered and much of it is covered with second growth.

The property is drained by two major creeks; Tremain in the north and Idle in the south. They both flow into the Trent River to the northeast which in turn flows east to the Straits of Georgia.

GEOLOGY

Till and Gravel

In the road cuts and creek beds on the Idle Creek prospect, only minor amounts of till were encountered. Maximum thicknesses may have been in the order of 30 feet. This may or may not be true for the entire area of the property.

Stratigraphy

Here as in all of the Cumberland coal basin, the coal-bearing Comox formation has been deposited unconformably upon the pre-Cretaceous basement volcanics. The Comox formation is Upper Cretaceous in age and was formed in a coastal lowland area. The environment was probably lagoonal, separated from the sea by sandbars.

The basement is usually highly irregular and in parts of the basin displays relief of up to 500 feet.

Here at Idle Creek, the basement appears to be quite regular. Where contact between the basement and Comox was observed, there is a fairly thick conglomeritic unit overlain by massive coarse-grained sandstones. This in turn is overlain by interbedded shales, sandstones, and coal seams of unknown thickness.

Coal Measures

Coal was observed at three location (Map 2) although thicknesses were undetermined because of slumping, two of these outcrops occur on Weldwood's licenses to the east of Idle Creek and one occurs on our Idle Creek prospect, about halfway up the hillside.

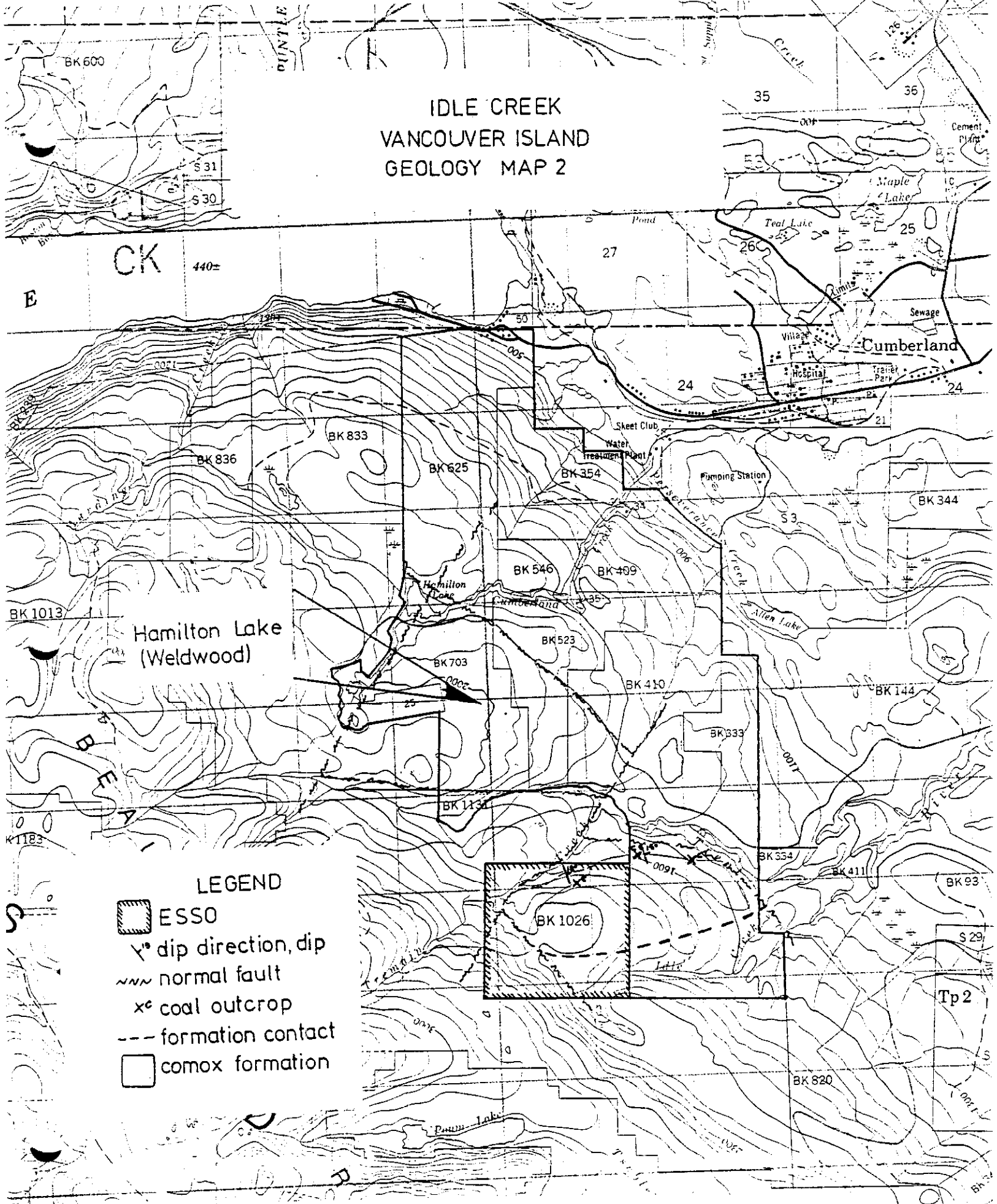
On Weldwood's Hamilton Lake prospect (Map 2) on a separate fault block to the north 2 to 3 seams were encountered in drilling giving a surface mineable reserve of about 15 million tons. Hopefully, drilling will encounter seams thick enough to surface mine at Idle Creek although it would have to be mined in conjunction with Hamilton Lake.

Structure

Structure on a large scale is quite simple with the Comox being preserved in a downdrop fault block dipping to the northeast at about 16° (Map 2 & 3).

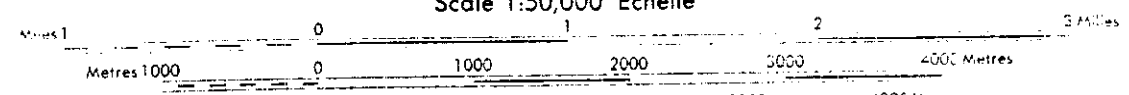
There may be other minor faults although none were observed in the field and drilling would have to identify them.

IDLE CREEK VANCOUVER ISLAND GEOLOGY MAP 2

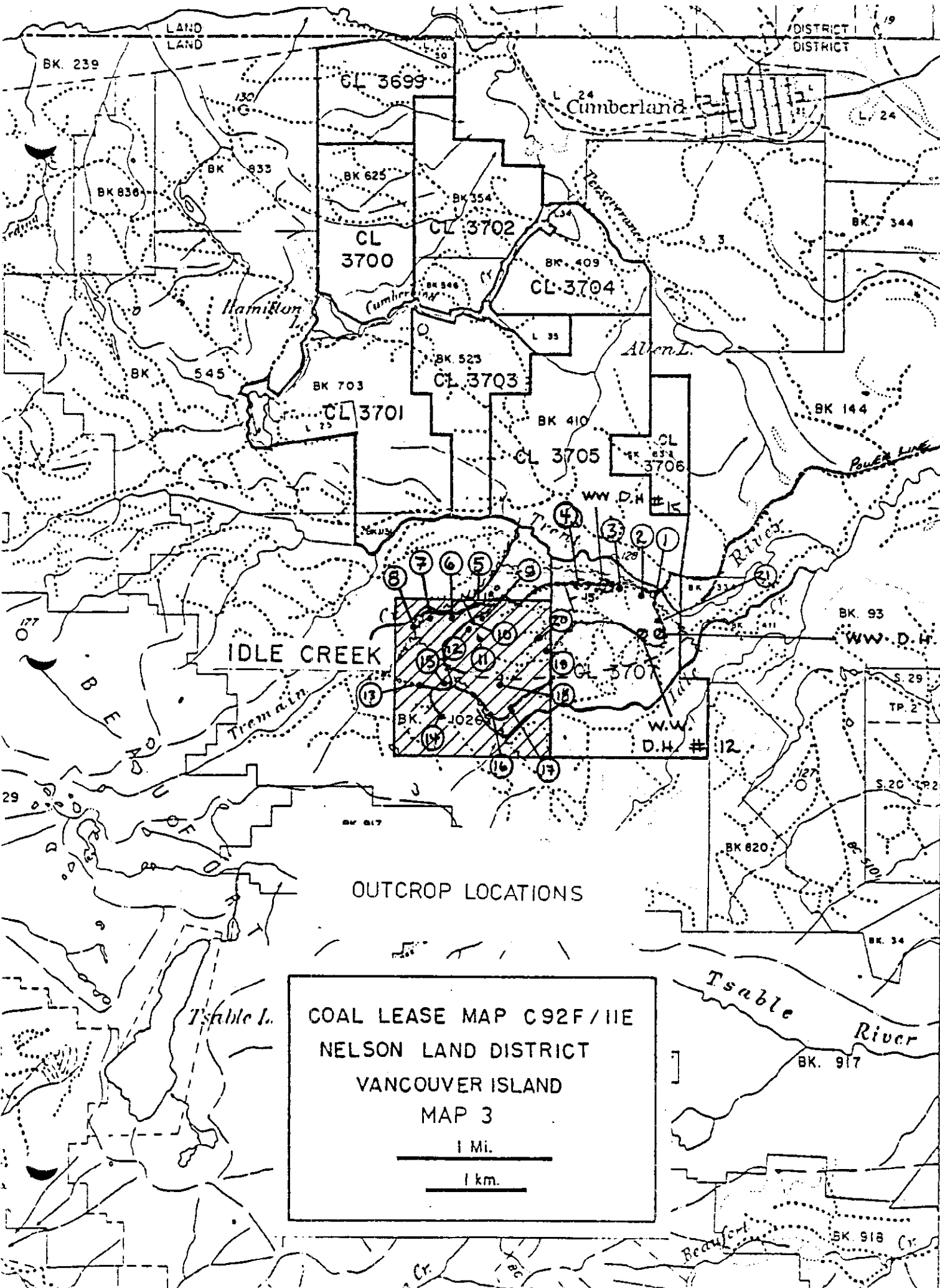


- LEGEND**
- ESSO
 - γ° dip direction, dip
 - $\sim\sim\sim$ normal fault
 - $\times c$ coal outcrop
 - formation contact
 - comox formation

Scale 1:50,000 Échelle



TO EAST SEE MAP 1



OUTCROP LOCATIONS

COAL LEASE MAP C92F/11E
 NELSON LAND DISTRICT
 VANCOUVER ISLAND
 MAP 3

1 Mi.
 1 km.

Province of British Columbia
 Ministry of Mines and Technical Surveys



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RESERVES

Reserves on the Idle Creek property are unknown but if appreciable thicknesses of coal exist (5.0 feet or greater), the shallow dips to the N.E. as well as the shallow slope of the topography to the northeast could yield surface mineable coal.

Reserves would be small because of the small area, but perhaps it could be mined in conjunction with Weldwood's Hamilton Lake property one mile to the north which has an estimated 15 mm tons of surface mineable coal (Map 2).

QUALITY

This is also an unknown but if could be comparable to the coal mined at Cumberland 3 miles to the northeast. The Cumberland coal has the following average quality for the 1, 2, and 4 seams.

Raw Coal Quality

Moisture = 1.27%

Ash = 14.78%

Sulfur = 1.4%

B.T.U.'s = 12,817

The sulfur would be considerably lower than that found at Luscar/Weldwood's proposed Quinsame Lake Mine.

EXPLORATION TO DATE

To date, the known exploration done in this area has been drilling by Weldwood as evidenced by the three holes on Map 5, which were located in the field. We don't have any information about what was encountered in these holes and it is not available.

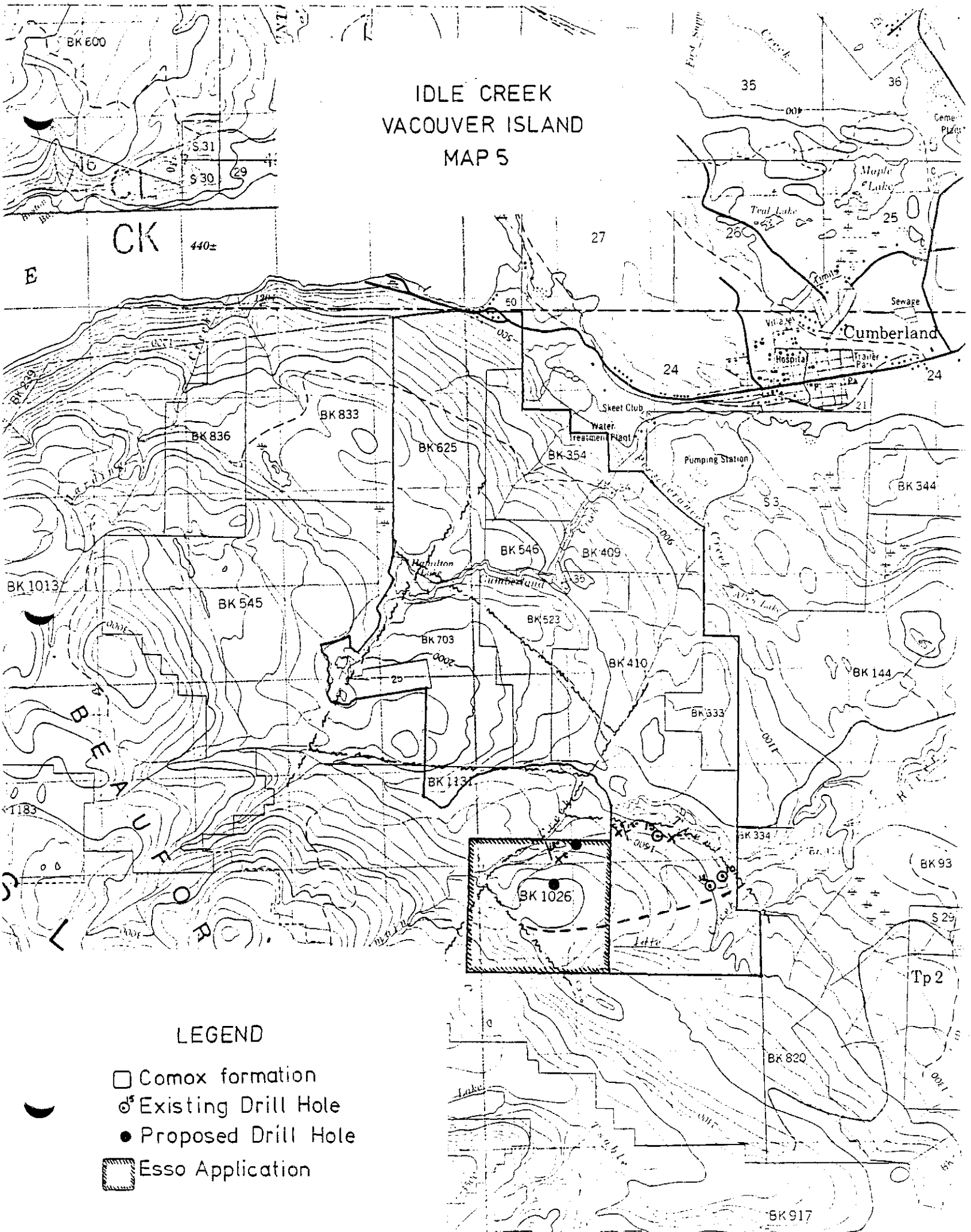
Esso Resources carried out a preliminary reconnaissance of the prospect in May of 1970 which took approximately one day.

PROPOSED EXPLORATION

A total of \$9,000 or \$14.06/acre was budgeted in our application for licenses to cover our \$3.00/acre work commitment. This cost may be quite a bit lower depending on the depths to which we want to drill the two holes as proposed on Map 5. These holes are situated to intersect the total section of Comox on our property.

A more accurate exploration cost will be worked out when our licenses are granted which will probably happen about April of 1980.

IDLE CREEK VACOUVER ISLAND MAP 5



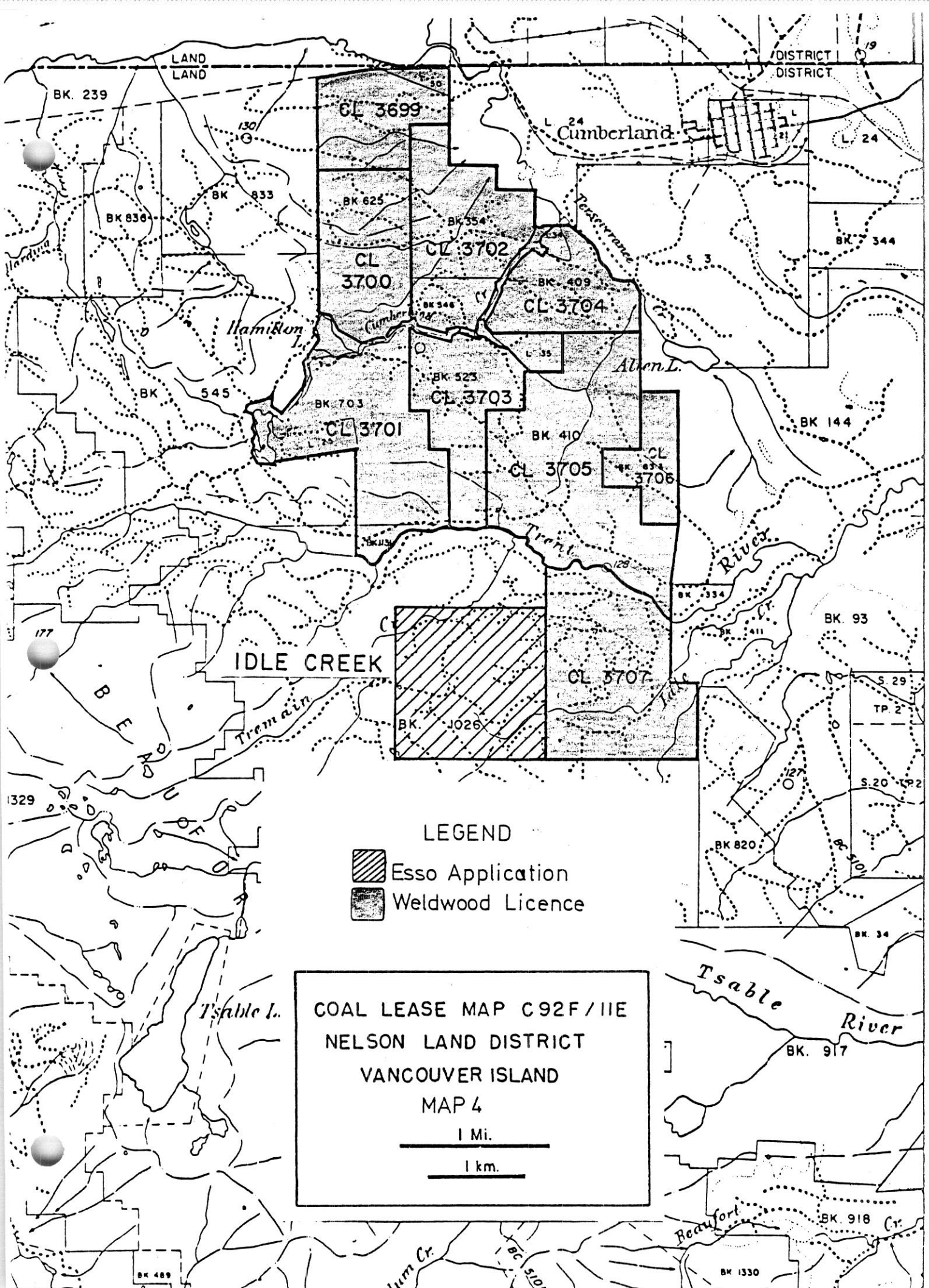
LEGEND

- Comox formation
- ⊕ Existing Drill Hole
- Proposed Drill Hole
- ▣ Esso Application

LAND LEASE

In April of 1979, Esso applied for coal licenses on 640 acres of land named the Idle Creek prospect. This acreage is adjoining coal licenses of Weldwood's (Map 4) on Vancouver Island.

It has been stated by the B.C. government that these applications won't go into the license stage for at least one year or not until April of 1980. At that time, our application fee will cover the 1980-81 \$2/acre rental and we will have to carry out our \$3/acre work commitment.



LAND LAND

DISTRICT DISTRICT

BK. 239

CL 3699

L 24 Cumberland

L 24

BK 836

BK 833

BK 625

BK 554

CL 3702

CL 3700

BK 409

CL 3704

BK 344

Hamilton

BK 545

BK 703

BK 523

CL 3703

Allen L.

BK 144

CL 3701

BK 410

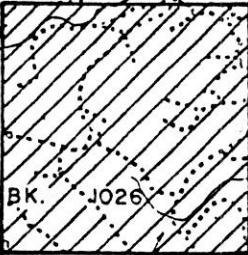
CL 3705

CL 3706

177

IDLE CREEK

CL 3707



BK 1026

BK 93

S. 29

TP 2

S. 20

BK 820

BK 510

BK 34

Tsalale River

BK. 917

Tsalale L.

COAL LEASE MAP C92F/11E
 NELSON LAND DISTRICT
 VANCOUVER ISLAND
 MAP 4

1 Mi.

1 km.

BK 489

lum Cr.

Cr. 510

Beaufort

BK 918 Cr.

BK 1330

EXPENDITURES

Expenditures to date amount to \$1,290.00. This covers our \$2/acre application fee and will be out first year's rental payment when licenses are finally granted.

Preliminary reconnaissance expenses were very minimal and have not been budgeted to this property.

IDLE CREEK

Field Reconnaissance Notes

- O.C. 1 Vancouver group - Volcanics.
- O.C. 2 Pieces of coal found in float in small creek along south side of road.
- O.C. 3 Comox formation. 330/19 not a very good orientation. Shales extend 100 to 200 feet up the road from 3. Coaly bands and carbonaceous shale evident. One coal seam 1.0 foot thick. Shales weather a medium grey to rusty brown. Very friable, thinly laminated and fall apart easily.
- NOTE: Took a small coal sample from the 1.0 foot seam.
- NOTE: Weldwood's drill hole #15 is located on the road between O.C. 3 and O.C. 4. Very few cuttings with no coal evident. Must be shallow hole.
- O.C. 4 Comox Formation - 70°/15° good orientation. Usual medium-grained massive sandstone of the Comox weathering buff. Quite resistant and hard. Overlies shales which probably extend down to O.C. 3. Also small coal stringers evident in the shales but thickness is unknown. Outcrop is in the south bank of the road cut. Orientation is better than the one at O.C. 3 since it is from the sandstone. Outcrop extends 100 feet laterally and sandstone is about 10 feet thick overlying 20 feet of shales and coal.
- O.C. 5 Comox Formation - 65°/18°. Conglomerate (Benson?) overlain by medium to coarse grained buff weathering sandstones. Conglomerate looks metamorphosed at this spot and is underlain by what could be a stock. Basement volcanics of the Vancouver group outcrop down the hillside in the creek valley of Tremain Creek. These volcanics extend up the creek valley to O.C. 8.
- A good sandstone outcrop overlying the conglomerate occurs just up the road and up the hill so updip. It is medium greenish-grey fresh and is about 20 feet thick.
- O.C. 6 Comox Formation - Conglomerate (Benson?). Good outcrop with pebbles in sandstone matrix. Coarse sandstone. Pebbles well rounded to subrounded and up to 5 inches in diameter.
- NOTE: Siltstone concretions are found between O.C. 5 and O.C. 6. They can be very large; up to 3 feet in diameter, made from thin 2 mm thick layers of siltstone. Are very proliferate in this area.
- O.C. 7 Comox Formation - Located at top of hill above O.C. 6 on road cut. Medium to coarse grained sandstone weathering buff.
- O.C. 8 Vancouver Group - Volcanics. Located where road ends in Tremain Creek.

- O.C. 9 Comox Formation - Located on road higher up the hill and running parallel to the one O.C. 5 to O.C. 8 were located on. Shale outcrops all along the road. Small coal stringers were again found in shales at this location. Coal thicknesses unknown. Good lamps of bright coal are evident in the ditch.
- O.C. 10 Comox Formation - Fine grained sandstone. Fresh medium grey weathering buff. No orientation possible found stratigraphically higher than O.C. 9.
- O.C. 11 Comox Formation - Shales outcropping all over the top of the hill. Washed out in gulleys in the road.
- O.C. 12 Comox Formation - Small 4 foot thick sandstone. Medium to coarse grained weathering buff. No orientation.
- O.C. 13 Vancouver Group - Volcanics.
- O.C. 14 Vancouver Group - Volcanics.
- O.C. 15 Vancouver Group - Volcanics.
- O.C. 16 Vancouver Group - Volcanics.
- O.C. 17 Vancouver Group - Volcanics.
- O.C. 18 Vancouver Group - Volcanics.
- O.C. 19 Comox Formation - Sandstone, massive coarse-grained extending along ditch in road. Weathers buff.
- O.C. 20 Comox Formation - Coarse-grained sandstone overlying black shales. Good outcrop. Sandstone 3 feet thick and shales thickness unknown. Medium bedded sandstone weathering buff. Outcrop is flat lying. Extends 40 feet laterally.
- NOTE: Drill hole #12 of Weldwood's. No coal in cuttings, just sandstone.
- NOTE: Weldwood - Drill hole #10. No coal in cuttings, just greenish-grey sandstone. The same as drill hole #12.
- O.C. 21 Comox Formation - Sandstones, medium to coarse grained weathering buff. No orientation possible.

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