

BRITISH COLUMBIA GOVERNMENT

007552

PAGE 1 OF 1 PAGES

MESSAGE FORM

FILE NUMBER

TO:
 MR. T. DOYLE
 HUDSON'S BAY OIL & GAS COMPANY LTD.
 CALGARY, ALBERTA
 TELEX # 038-21794

FROM:
 E.R. MACGREGOR
 ASSISTANT DEPUTY MINISTER
 MINERAL RESOURCES BRANCH
 MINISTRY OF ENERGY, MINES & PET. RES.
 PROV. OF B.C. VICTORIA, B.C.

ACTION PRECEDENCE

PRIORITY

ORIGINATOR'S NUMBER

168641

DATE AND TIME OF ORIGIN

9:00 a.m. APR. 26/79

CONSENT TO THE ASSIGNMENT OF COAL LICENCES NUMBERED 4284 TO 4303, INCLUSIVE, FROM RAMM VENTURE CORPORATION TO HUDSON'S BAY OIL AND GAS COMPANY LIMITED WAS GIVEN BY MR. R. ILLING, DEPUTY MINISTER, FOR THE MINISTER OF ENERGY, MINES AND PETROLEUM RESOURCES ON APRIL 25, 1979.

DRAFTER'S NAME

E.R. MACGREGOR

OFFICE

ADM

TEL. NO.

5489

RELEASING AUTHORITY SIGNATURE

E.R. Macgregor

FOR COMMUNICATIONS PERSONNEL USE ONLY

DATE AND TIME OF DISPATCH:

SYSTEM:

FORM DCT 1175

Original to Message Centre

Copy for Your File

TYPE IN UPPER CASE CHARACTERS

Hudson's Bay Oil and Gas Company Limited



Telephone (403) 231-3711 - 700 Second Street S.W. - Calgary, Alberta, Canada T2P 0X5

1979-03-28

Mr. E. R. MacGregor
Assistant Deputy Minister, Mineral Resources
Ministry of Energy, Mines
and Petroleum Resources
617 Government Street
Victoria, B. C.
V8V 1X4

Dear Mr. ^{ED} MacGregor:

Further to our telephone conversation, we are enclosing a copy of an ammendment to the Option and Sale Agreement - Ash River Coal Licenses between Hudson's Bay Oil and Gas and Ramm Venture Corporation.

We trust that the ammendment will remove all obstacles to the transfer of the coal licenses from Ramm to Hudson's Bay.

Yours very truly,

T. D. Doyle
General Manager
Minerals and Coal

TDD:ma
Encl.

ASSISTANT DEPUTY MINISTER MINERAL RESOURCES		
REC'D 102 FEB 27 1979		
REFERRED TO	DATE	INITIAL
D.M.		

2326

orig to P. Meyers - A-G
to EJB

To all to whom these presents may come, be seen or known

I, Murray Fraser Mackintosh

A NOTARY PUBLIC IN AND FOR THE PROVINCE OF Alberta

BY ROYAL AUTHORITY DULY APPOINTED, residing at the City of Calgary

in the said Province DO CERTIFY AND ATTEST that the paper writing hereunto annexed is a TRUE COPY of a document produced to me and purporting to be

an Amending Agreement made the 22nd day of March, A.D. 1979 between Ramm Venture Corporation and Hudson's Bay Oil and Gas Company Limited, relating to the "Option and Sale Agreement - Ash River Coal Licenses" made as of the 30th day of September, A.D. 1978.

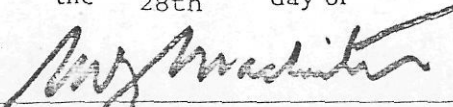
THE SAID COPY having been compared by me with the said original document, an act whereof being requested, I HAVE GRANTED the same under my notarial form and seal of office to serve and avail as occasion shall or may require.

IN TESTIMONY WHEREOF I have hereto subscribed my name and affixed my seal of office at

the City of Calgary,
A Notary Public in and for
the Province of Alberta

the 28th day of March

A.D. 19 79.



My Commission expires at
Her Majesty's pleasure,

A Notary Public in and for the Province of
Alberta

AMENDING AGREEMENT

THIS AGREEMENT made this 22nd day of March, A.D. 1979

BETWEEN:

RAMM VENTURE CORPORATION, a body corporate,
duly incorporated under the laws of the
Province of British Columbia, with head office
at the City of Vancouver, in the Province of
British Columbia,

(hereinafter called "Ramm")

- and -

HUDSON'S BAY OIL AND GAS COMPANY LIMITED, a
body corporate with a registered office at the
City of Vancouver, in the Province of British
Columbia, carrying on business under the firm
name and style of Hudbay Coal Company,

(hereinafter called "Hudson's Bay")

WHEREAS Ramm and Hudson's Bay are the parties to that certain
"Option and Sale Agreement - Ash River Coal Licenses" made as of the 30th
day of September, A.D. 1978 (hereinafter referred to as the "Ash River
Agreement"); and

WHEREAS Hudson's Bay and Ramm wish to amend the Ash River Agreement;

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of
the covenants and agreements of the parties hereto it is agreed as follows:

1. The Ash River Agreement is amended by the deletion of Clause 10 "AFTER-ACQUIRED PROPERTY" in its entirety.

2. The parties hereto do hereby ratify and confirm the Ash River Agreement as amended hereby.

IN WITNESS WHEREOF the parties hereto have caused their corporate seals to be affixed and attested by their duly authorized officers in that behalf.

RAMM VENTURE CORPORATION

[Signature]
H. L. Wilson

HUDSON'S BAY OIL AND GAS COMPANY LIMITED

R. F. [Signature]
Executive Vice-President
L. [Signature]
Assistant Secretary

H.S.O.G.
Approved
<i>[Signature]</i>
Loy
<i>[Signature]</i>

M M O

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

~~ERM~~ - FYI

4/4/79

EJB was in touch with Mr. Douglas.
Everything OK with Transfer according
to Peter Meyers.

*Miss
Coal*

lj

File Ash River Coal project.



To: Mr. E. R. MacGregor,
Associate Deputy Minister,
Ministry of Energy, Mines
& Petroleum Resources,
Parliament Buildings,
Victoria, B.C.

Date: April 2, 1979

FILE NO. C 410-2

Further to our memorandum of March 29, 1979. This is to advise that we are in receipt of a copy of amendment of the Option and Sale Agreement - Ash River Coal Licences between Hudson's Bay Oil and Gas and Ramm Venture Corporation, which deletes Clause 10 entitled "After-Acquired Property" in its entirety.

In view of this amendment, the Minister is in our opinion in a position to now consent to the assignment of the subject licences.

P.D. Meyers
Manager, Resource Section
Civil Law

PDM:et

ASSISTANT DEPUTY MINISTER
MINERAL RESOURCES

REC'D APR - 4'79 2331

REFERRED TO	DATE	INITIAL
		2342

MESSAGE

to.

date.

~~3/4/79~~

time.

~~10:50~~

from M.

~~r Douglas~~

of.

~~Ramp Venture~~

Van

~~682-2744~~

telephoned

returned your call

wants to see you

called to see you

please call

will call again

message.

~~Transfer of~~

~~boat leases~~

~~EJB handle~~

~~3/4/79~~

received by.

Hilroy
LTD • LTÉE

pink 46-501
yel. 46-502

ETB

SEP 1950
DUK 40201

Not in touch with Douglas
Everything OK with
Transfer according
to P Meyer

JP

MESSAGE



To: Mr. A. R. Corner,
Administrator for Coal,
Ministry of Energy, Mines
& Petroleum Resources,
Parliament Buildings,
Victoria, B.C.

M
file

Date: March 29, 1979

FILE NO. C 410-2

You have requested the writer's opinion as to whether the wording of Clause 10, of an Option and Sale Agreement made on September 30, 1978, between Ramm Venture Corporation (Ramm) & Hudson's Bay Company Limited (Hudson's Bay) entitled "After-Acquired Property" would prevent the Minister from transferring certain coal licences from Ramm to Hudson's Bay.

Under the provisions of the Option and Sale Agreement (Agreement) referred to above Ramm agrees to grant an option to Hudson's Bay to purchase 20 coal licences held by it in the Ash River area, north of Port Alberni. In consideration of the option Hudson's Bay agrees to pay them the following amounts:

1. \$16,000 on execution of the Agreement,
2. \$135,000 to be deposited in trust for Ramm upon receipt of Cabinet Approval to remain on deposit until Ramm has transferred title of the licences to Hudson's Bay.
3. \$150,000 on the first day of the third year after Cabinet Approval and on the first day of each year thereafter up to and including the twelfth year.

The sum of \$135,000 is to be delivered to Ramm upon it transferring the coal licences to Hudson's Bay in trust. Such a transfer will require the consent of the Minister. Hudson's Bay will become the operator of the coal licences and will carry out all exploration and drilling operations. It will also pay all rentals required with respect to the licences. Provision is also made for Hudson's Bay to explore the licences for a two year period after Cabinet Approval. After that date the option is continued on a yearly basis for a period

. . . 2

ASSISTANT DEPUTY MINISTER MINERAL RESOURCES		
REC'D APR - 27 1979 2331		
REFERRED TO	DATE	INITIAL
D.M		

of ten years provided Hudson's Bay pays Ramm the sum of \$150,000 each year. Hudson's Bay may terminate the Agreement by giving notice to Ramm in writing not less than 30 days prior to the end of the second year after Cabinet Approval or each subsequent year thereafter. If Hudson's Bay does terminate the Agreement it must re-assign the licences to Ramm. Upon completion of the option payments to Ramm, Hudson's Bay will be entitled to an assignment from Ramm of the beneficial interest. This assignment will also require the Minister's consent.

Clause 10 of the Agreement reads as follows:

10. After-Acquired Property

- (a) For the purposes of this clause "After-acquired Property" means any coal licences acquired from time to time by Hudson's Bay directly from the Crown in right of British Columbia during the term of this Agreement which lie wholly within a line three miles from the boundary of the Coal Licences;
- (b) Subject to the proviso contained in subclause (d) of this clause 10, After-acquired Property shall be deemed conclusively to be included in the Coal Licences for the purposes of clause 9 of this agreement providing for a gross overriding royalty payable to Ramm;
- (c) In no event shall this clause apply to any after-acquired property, whether freehold or Crown, acquired by Hudson's Bay from any party other than the Crown in right of British Columbia, in any arms length transaction;
- (d) Provided that Ramm's right to participation in any After-acquired Property is entirely subject to the discretion of the Crown in right of British Columbia with respect to the granting of coal licences on the After-acquired Property. Hudson's Bay makes no warranty whatsoever that the Crown in right of British Columbia will issue coal licences in which Ramm would be entitled to an overriding royalty interest under Clause 10.

This clause, in the writer's opinion, is an example of the very provision referred to in sub-paragraph (ii) paragraph (c) subsection (2) of section 9 of the Coal Act which prohibits

the Minister from granting his consent.

Section 9, subsection (2) paragraph (c) (ii) reads as follows:

9 (2) The Minister shall withhold his consent under subsection (1) only where

(c) the assignment, transfer or sublease contains

(ii) a provision under which the person acquiring the interest promises to pay a private royalty, money or other economic consideration in respect of coal land, a part of which is disposed of by the Crown.

Coal land is defined in the Coal Act as land with respect of which coal or the right to explore for, develop, and produce coal, is vested in or reserved to the Crown.

Paragraph (c) above refers to a provision in a document described as an assignment transfer or sublease under which a person (Hudson's Bay) promises if it acquires an interest in any coal land presently undisposed of by the Crown to pay a private royalty, money or other economic consideration. Under Clause 10 of the Agreement, an area is delineated of three miles from the boundary of the licences. Should Hudson's Bay acquire any coal licences directly from the Crown within this area it promises to pay a gross overriding royalty for Ramm.

It can be argued an no doubt will be argued strongly, that the offending provision is not contained in the transfer but in the basic Agreement and therefore, the statement does not offend sub paragraph (ii) paragraph (c) of subsection (2) section 9 of the Coal Act. Such provisions are customarily found in the basic agreement and rarely if ever appear in an assignment of transfer. In this instance, the form of transfer used is one prescribed by the Ministry which contains a space for the Minister to sign if he consents to the transfer.

In rebuttal to such an arguement it is my opinion that the Legislature intended to prohibit after acquired clauses generally whether they appear in an assignment, transfer, sublease or other document relating thereto.

Paragraph (b) of subsection (2) prohibits the Minister from consenting where all documents relating to the assignment, transfer or sublease have not been submitted to him. One of the reasons for such a provision is to enable the Minister to determine whether the provisions of paragraph (c) have been complied with by the applicant.

DEPUTY MINISTER M. & P. R.		
REC'D OCT 20 '77		
REFERRED TO	DATE	INITIAL
A.D.M.	20/10	M
A.D.P.		
A.S.		
M.R.		
FILE		

October 19, 1977

2301

Mr. M. M. Menzies,
Director,
Norco Resources Ltd.,
2050 Granville Square,
200 Granville Street,
VANCOUVER, B. C.
V6C 1S4.

Dear Mr. Menzies:

I wish to acknowledge and thank you for providing me with a copy of your preliminary report on the "Ash River Coal Basin, Alberni Area, British Columbia".

In the event you have not provided officials of my Ministry with a copy of this report, I will pass on a copy for their information.

Best regards.

Yours sincerely,

James R. Chabot,
MINISTER.

✓ bcc: Dr. J. T. Fyles

ASSISTANT DEPUTY MINISTER MINERAL RESOURCES		
REC'D OCT 31 '77		
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R E P O R T
- ON THE -

MINISTER'S OFFICE
RECEIVED

OCT 17 1977

PARLIAMENT BUILDINGS
VICTORIA, B.C.

ASH RIVER COAL BASIN,
ALBERNI AREA, B. C.

- FOR -

RAMM VENTURE CORPORATION,
#2050-200 GRANVILLE STREET,
VANCOUVER, B. C.

PREPARED BY:
KERR, DAWSON & ASSOCIATES LTD.,
#1-219 VICTORIA STREET,
KAMLOOPS, B. C.
JOHN R. KERR, P. ENG.,
OCTOBER 3, 1977.

INDEX

	<u>Page No.</u>
SUMMARY	1
INTRODUCTION	2
General State	2
Location and Access	3
Topography and Vegetation	4
Property	5
History	5
GEOLOGY	7
ECONOMIC POTENTIAL	10
RECOMMENDATIONS	15

APPENDICES:

- APPENDIX A - Cost Estimates
- APPENDIX B - Writer's Certificate
- APPENDIX C - Coal Analyses

LIST OF MAPS:

- Figure #164 - 1 - Location Map
- Figure #164 - 2 - Index Map with Project Area
 and General Geology

SUMMARY

Ramm Venture Corporation has entered into agreement with two prospectors to initiate exploration in the Ash River sedimentary coal basin north of Alberni, B. C. on Vancouver Island. The sedimentary basin is analagous to the known coal measures in the Comox and Nanaimo areas of Vancouver Island. Five outcrops containing coal have been documented in geological reports of the basin; however, only one was located and examined by the writer. Coal seams are reported to be .1 meter to 6.0 meters in width, and samples taken indicate a good quality thermal coal, ranked as High Volatile A Bituminous.

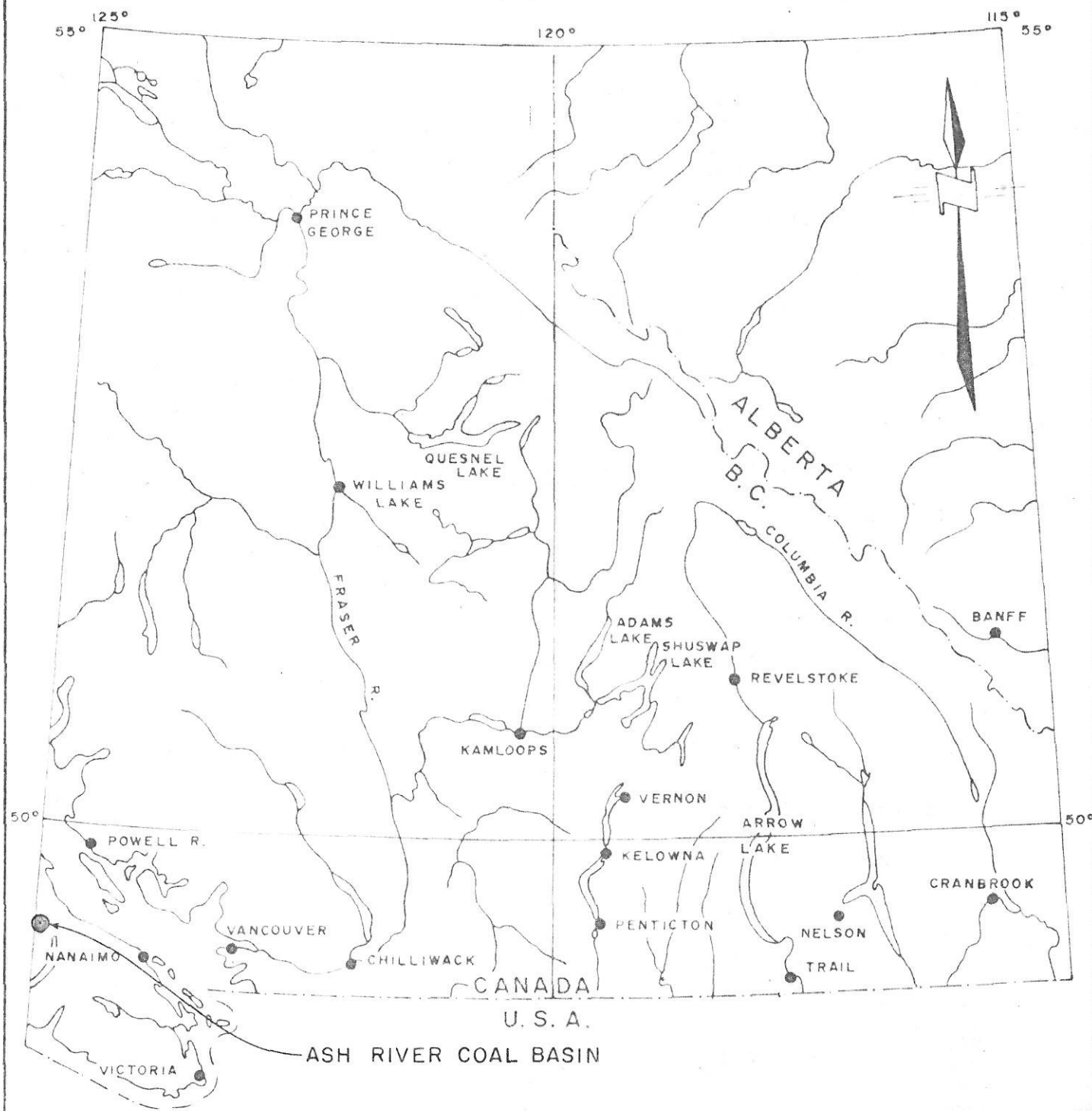
The possibility of developing coal reserves in the Ash River coal basin is excellent; however, exploration should initially be approached as a conceptual study. Recommendations include detailed stratigraphic mapping, test drilling for stratigraphic and structural control, and limited geophysical studies. Costs for the initial programme are estimated at \$50,000.00.

INTRODUCTION

General Statement:

Ramm Venture Corporation has entered into agreement with two coal prospectors, M. Curcio and S. Gardner, to investigate the viability of coal measures within the Ash River sedimentary basin, Vancouver Island. The stratigraphy and nature of known outcroppings of coal correlates with the known coal measures in the Nanaimo and Comox areas. It is evident that very little exploration has been completed in the Ash River area to develop the coal measures. The prospectors have spent considerable time researching available data pertinent to the area, and have prospected portions of the basin in search of reported coal outcroppings. They have prepared a prospectus, which compiles all of the researched data.

On September 22nd. and 23rd., the writer, in accompaniment of Messers. Gardner and M. M. Menzies, director of Ramm, visited the project area. At the request of Mr. Menzies, this report summarizes the examination.



RAMM VENTURE CORPORATION

LOCATION MAP
 ASH RIVER COAL BASIN
 ALBERNI, B. C.

Date: OCT 3, 1977

Scale: 1" = 64 Miles

Dwn by: W.G.

Dwg no. 164-1

Location and Access:

The Ash River basin comprises an area of approximately 80 square kilometers, located 16-32 kilometers northwest of Alberni, B. C. in the central portion of Vancouver Island. Geographic coordinates of the center of the basin are 49°27'N and 125°02'W.

Access into the project area is good via a well maintained gravel logging road along the western margin of the basin. Access to this road is possible from Alberni via Highway #4 west 10 km to the Sproat Lake Provincial Park, and thence north along the logging road. The northern limits of the area are 35 km. along this road.

Alberni is the major logging and pulp mill center on Vancouver Island. Good highways and an existing rail line link Alberni with major routes on the east coast of the Island. The deep seaport facilities accommodate all shipping requirements for the west coast and central portions of Vancouver Island.

Topography and Vegetation:

The Alberni valley is elongated in a general northwest-southeast direction, and is bounded on both sides by the rugged Beaufort Mountains. These mountains form the backbone of Vancouver Island, and attain heights of 1,600-1,800 meters a.s.l. The floor of the valley rises from tidewater at Alberni to over 400 meters a.s.l. to the northwest. The Ash River basin is the northern third of the Alberni valley.

The Ash River flows in a southeasterly direction, joining the Stamp River in the southern limits of the project area. The valley floor is gently rolling terrain with local 50 meter topographic variations. Many small tributary creeks of the Ash River cross the valley floor flowing in a south-westerly direction.

Vegetation in the area is typical west coast Vancouver Island dense cedar and fir forests. Underbrush is thick fern, alder and devil's club. Much of the project area has been logged.

Property:

There is no recorded title to the fossil fuels in the Ash River basin. An area comprising 9,000 hectares has been delineated on the accompanying map (Figure #164-2), which contains all known coal outcroppings, and is considered to offer most potential for development of coal reserves. Application for coal licenses covering this area should be submitted to the Provincial Government immediately.

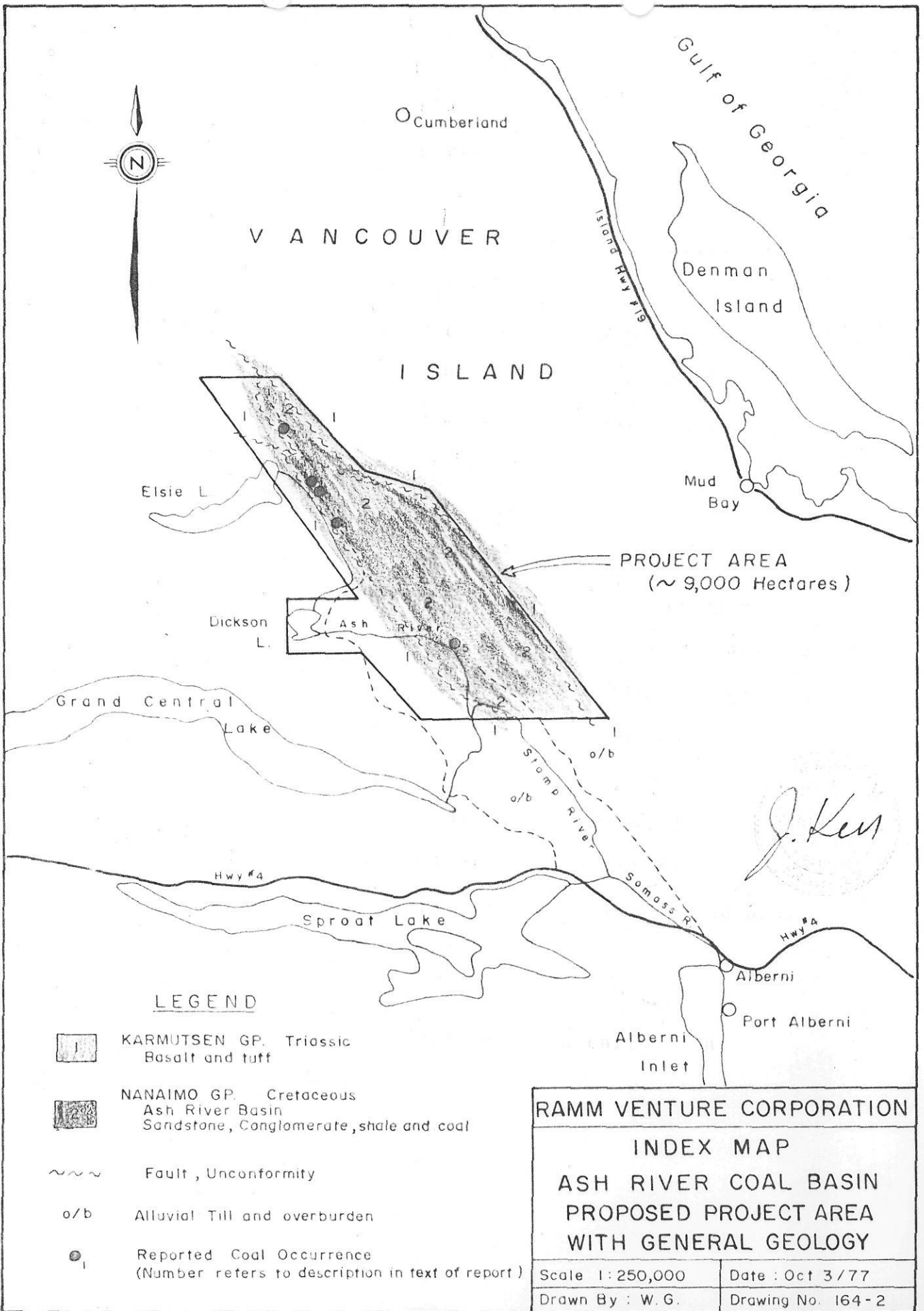
History:

Approximately 72,000,000 tons of coal have been mined from the Nanaimo and Comox areas of Vancouver Island continuously during the period 1869-1953. Due to the slumping markets of thermal coal in the early fifties, all coal mining operations ceased. Renewed interest in coal during the early-mid seventies sparked exploration and development of the coal field on the east coast of the Island. Lusar Ltd. and Weldwood Ltd. are jointly developing major open-pit coal reserves in the Comox area.

Coal in the Ash River basin was reported as early as 1905 by early surveyors of the Esquimalt and Nanaimo Railway Company. C. H. Clapp

mapped the Nanaimo-Comox-Alberni area from 1911-1914, and published "Geology of the Nanaimo Map Area" (G.S.C. Memoir 51, 1914). In this, Clapp made reference to coal outcroppings in the Ash River valley. Subsequent geological publications by the G.S.C. and B.C.D.M. reports coal in the area.

Records and data reviewed to date indicate that no major exploration or development of the coal reserves has been completed in the Ash River area.



VANCOUVER

ISLAND

Gulf of Georgia

Denman Island

Mud Bay

PROJECT AREA
(~ 9,000 Hectares)

Dickson L. Ash River

Grand Central Lake

Hwy #4

Sproat Lake

Stamp River o/b

Somass R.

Hwy #4






J. Ken

Alberni

Port Alberni

Alberni Inlet

LEGEND

-  KARMUTSEN GP. Triassic
Basalt and tuff
-  NANAIMO GP. Cretaceous
Ash River Basin
Sandstone, Conglomerate, shale and coal
-  Fault, Unconformity
-  Alluvial Till and overburden
-  Reported Coal Occurrence
(Number refers to description in text of report)

RAMM VENTURE CORPORATION

INDEX MAP
ASH RIVER COAL BASIN
PROPOSED PROJECT AREA
WITH GENERAL GEOLOGY

Scale 1:250,000	Date: Oct 3/77
Drawn By: W.G.	Drawing No. 164-2

GEOLOGY

The general geology of the Ash River basin is best documented in G.S.C. Paper 68-50 "Geology and Mineral Deposits of the Alberni Map Area, British Columbia" by J. E. Muller and D. J. T. Carson. The geology from the accompanying map sheet is generalized on Figure #164-2.

Principle coal measures on Vancouver Island occur in the lower formations of the Upper Cretaceous Nanaimo Group. The Nanaimo Group, as described by Muller and Carson, is subdivided into 8 formations. Three of these formations have been recognized in the Ash River area. The sediments unconformably overly basalt flows, tuffs, and breccia of the Triassic Karmutsen Formation. Thickness of the overlying sediments in the center of the basin is unknown.

A description of the rock units is as follows:

NANAIMO GROUP - Upper Cretaceous

Extension Formation - thickness 0-575 meters

Sandstone, conglomerate, shale, and coal.

Haslam Formation - thickness 80-300 meters

Shale, siltstone, fine sandstone

Comox Formation - thickness 90-600 meters

Sandstone, shale, coal

Benson Member - basal conglomerate

-----Unconformity -----

KARMUTSEN FORMATION - Triassic

All reported coal outcroppings in the Ash River area are located along the western margin of the basin, and are believed to be part of the basal Comox Formation. Five different outcrops are reported; however, the writer was only able to examine one occurrence. Two other outcrops were briefly prospected for; however, were not located. It is believed that thick underbrush and subsequent road building may have covered these outcrops.

The sediments are believed to be deposited in a cyclical lagoonal-marine shoreline environment. It is within the lagoonal phase of the cycle that swamp conditions prevailed giving rise to the existing coal beds. The basin was formed by graben block faults, caused from nearby volcanic and tectonic activity during the Cretaceous Age. Tectonic activity continued through sedimentation giving rise to uplift and subsidence during and after deposition. Block faults are interpreted within the sediments.

In the area of the basin examined by the writer, the sediments strike in a general north to northwest direction, parallel to the long axis of the valley. Measured dips indicate 12° - 25° east; however, flatter dips are recorded by Muller, 7° east (minimum). In the eastern flank of the basin, reported dips are steep to the west (45° - 60° ?) which suggests a true basin formation with the unconformity exposed on both flanks.

ECONOMIC POTENTIAL

At this time, the economic potential of the Ash River coal basin can only be regarded as a very good exploration concept. Based on the one examined outcrop, and other reported coal outcroppings, it is not possible to even "guesstimate" potential reserves. A brief description of each outcrop is as follows (numbers refer to location on Figure #164-2).

Outcrop #1 (Examined by writer) The coal seam is exposed on both sides of creek over widths of .25-1.82 meters. The full width of the seam is not exposed due to rubble in the creek bed. Measured strike - 110°-150°; dip 20°-25° east.

The coal contains many shale and boney partings. Rusting^{is} possibly due to weathered pyrite (pyrite noted on fresh fracture faces). Three samples were collected from the exposed seam:

A-1, #01, Channel Sample True Width - .61 meters.

	<u>As Received</u>	<u>Dry Basis</u>
% Moisture	9.72	-----
% Ash	40.74	45.13
% Volatile	22.30	24.70
% Fixed Carbon	27.24	30.17
Calorific Value	5995 BTU/lb.	6640 BTU/lb.
% Sulphur	0.62	0.69

A-1, #02 Channel Sample True Width - 1.21 meters

	<u>As Received</u>	<u>Dry Basis</u>
% Moisture	6.74	-----
% Ash	35.49	38.05
% Volatile	23.35	25.04
% Fixed Carbon	34.42	36.91
Calorific Value	7778 BTU/lb.	8340 BTU/lb.
% Sulphur	0.96	1.03

A-1, #03 Selected Sample - Clean Coal True Width - .25 meters

	<u>As Received</u>	<u>Dry Basis</u>
% Moisture	7.00	-----
% Ash	4.04	4.34
% Volatile	28.32	30.45
% Fixed Carbon	60.64	65.21
Calorific Value	13,373 BTU/lb.	14,380 BTU/lb.
% Sulphur	0.53	0.57

Samples A-1, #01 and #02 represent the full exposed 1.82 meters width of the coal seam.

Outcrop #2 - Searched for by writer; however, not located. Float in creek bed suggests outcrop may be obscured by recent road construction.

The outcrop is described by C. H. Clapp, 1914, to contain coal over a measured width of 6.0 meters. Many shale and bone layers are reported.

George Hannay is reported to have sampled this outcrop (selected or grabbed?) in 1951, the results reported as follows:

% Moisture	1.22
% Ash	29.91
% Volatile	29.06
% Fixed Carbon	39.81
Calorific Value	9,548 BTU/lb.
% Sulphur	1.07

Outcrop #3 - Location unknown, may, in fact, be the same as Outcrop #1. Coal and boney coal is reported over a width of .81 meters. No samples are reported.

Outcrop #4 - Location uncertain. Coal and shaley coal in bands .10 - .45 meters thick.

Outcrop #5 - Location well documented; however, not found. No information regarding the coal available.

It is interesting to note that all coal outcroppings fall along the general strike plane of the Nanaimo Group, and near the western margin of the basin. It would be mere coincidence that all outcrops represent the same seam, as many seams are present in the Comox Formation of the Nanaimo Group in the Comox and Nanaimo areas. It is believed that all outcroppings of the coal are in the basal portion of the Comox Formation, within 75 meters of the basement unconformity.

From results of sample analysis, the natural coal contains 30 - 45% ash, with a calorific value 6,600 to 9,600 BTU/lb., and 0.5 to 1.0% sulphur. As these are surface samples, it is expected that both the calorific value and sulphur content (pyrite) will be greater in unweathered coal. A clean coal product (A-1, #03) indicates a potential calorific value of 14,400 BTU/lb.

On the basis of the few sample analysis completed, it would appear the Rank would be a High Volatile "A" Bituminous coal product. This rank would suggest an excellent quality thermal coal, and could conceivably meet specifications as a blend for metallurgical coal.

Two features of the known coal exposures detract from embarking on immediate development of coal reserves:

- (1). Measured dips of 12 - 25° of the sediments may be intolerable for economic underground or surface mining methods.

- (2). The width of the exposed coal seam is very erratic.

The concept of developing coal reserves in the Ash River basin is excellent; however, should be considered a very preliminary exploration "bet". The objective of a preliminary exploration programme would be twofold:

- (1). To select areas within the basin where thickness and dip of the coal measures are tolerable for initial surface mining methods.
- (2). Ascertain as much stratigraphic and structural information about the basin to provide gross coal reserve estimations.

The programme should undertake a very academic approach, oriented at compiling a very detailed stratigraphic map and sections of the entire basin. Diamond drilling should be incorporated into the programme; however, the objective of the drilling is to gather further stratigraphic and structural control.

RECOMMENDATIONS

The first phase of exploration in the Ash River coal basin is justified and the following work programme is recommended.

- (1). Application for coal licenses to cover 9,000 hectares of the Ash River basin. Seeking approval of and a letter of intent to issue licenses at a later date from the Minister of Mines would probably suffice as interim measures of land title.
- (2). Detailed stratigraphic mapping of all exposed outcrop in the project area on 1:5,000 scale detail.
- (3). Photo geological studies of the project area.
- (4). Diamond drilling for detailed stratigraphic and structural interpretations. Allow 300 meters (1 or 2 holes). Drill holes are to be geophysically logged. Consideration should be given to study

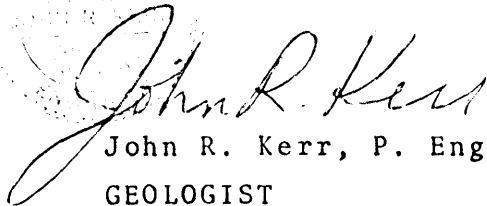
the known stratigraphic succession at drill sites with seismic equipment.

(5). Compilation of all data in report form.

The costs for this initial exploration programme are estimated at \$50,000.00 (See Appendix A for details). The scope and costs of continued work would be totally contingent upon the results of the first phase.

Respectfully Submitted By:

KERR, DAWSON & ASSOCIATES LTD.,



John R. Kerr, P. Eng.,
GEOLOGIST

October 3rd., 1977,

KAMLOOPS, B. C.

APPENDIX A

COST ESTIMATES

COST ESTIMATES

LABOUR:

1 Geologist - 5 months @ \$3,000.00/mo.	\$15,000.00	
1 Assistant - 4 months @ \$1,500.00/mo.	<u>6,000.00</u>	\$21,000.00

DIAMOND DRILLING - all inclusive:

300 meters @ \$45.00/meter		13,500.00
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<u>ROOM AND BOARD</u>		5,000.00
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<u>MISC. TRAVEL, TRUCK, SERVICES AND SUPPLIES</u>		6,000.00
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<u>~ 10% CONTINGENCIES</u>		<u>4,500.00</u>
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TOTAL		<u><u>\$50,000.00</u></u>
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Allowance should be made for cost of issuance of coal licenses for the total 9,000 hectares, or a portion thereof, at the rate of \$2.50/hectare.

APPENDIX B

WRITER'S CERTIFICATE

JOHN R. KERR, P.ENG.
GEOLOGICAL ENGINEER

9-219 VICTORIA STREET
KAMLOOPS, B.C.

PHONE (604) 374-6427

CERTIFICATE

I, JOHN R. KERR, OF THE CITY OF KAMLOOPS, B. C. DO HEREBY
CERTIFY THAT:

- (1). I am a member of the Association of Professional Engineers of British Columbia, and a Fellow of the Geological Association of Canada.
- (2). I am employed by Kerr, Dawson & Associates Ltd., with my office at #1 - 219 Victoria Street, Kamloops, B. C.
- (3). I have practised as a geologist continuously since graduation from the University of British Columbia in 1964 with a B.A. Sc. in Geological Engineering.
- (4). I have not directly or indirectly received nor do I expect to receive any interest, direct or beneficial in the properties or securities of Ramm Venture Corporation.
- (5). This report is based on an exhaustive study of all available data, published and unpublished reports, and my examination of the subject area on September 22nd. and 23rd., 1977.
- (6). Permission is hereby granted to Ramm Venture Corporation to use this report to satisfy requirements of Securities Commission and/or Stock Exchanges.



John R. Kerr, P. Eng.,
GEOLOGIST

Kamloops, B. C.,
October 3rd., 1977.

APPENDIX C

COAL ANALYSES

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 228 NORTH LA SALLE STREET, CHICAGO, ILLINOIS 60601 • AREA CODE 312 728-8434

Please address all correspondence to:
17 Riverside Dr., North Vancouver, B.C. V7H 1T6



Office: Tel. (604) 929-2228

September 29, 1977

Mr. J. R. Kerr, P. Eng.
Ste. #1 - 219 Victoria Street
KAMLOOPS, BC
V2C 2A1

Report No. 64-16154 - 56

Sample Identification:

A2-01; A2-02; A2-03

PROXIMATE ANALYSES

<u>SAMPLE NO.</u>		<u>AS RECEIVED</u>	<u>DRY BASIS</u>
A2-01	% Moisture	9.72	xxxxx
	% Ash	40.74	45.13
	% Volatile	22.30	24.70
	% Fixed Carbon	27.24	30.17
		<u>100.00</u>	<u>100.00</u>
	BTU	5995	6640
	% Sulphur	0.62	0.69
A2-02	% Moisture	6.74	xxxxx
	% Ash	35.49	38.05
	% Volatile	23.35	25.04
	% Fixed Carbon	34.42	36.91
		<u>100.00</u>	<u>100.00</u>
	BTU	7778	8340
	% Sulphur	0.96	1.03
A2-03	% Moisture	7.00	xxxxx
	% Ash	4.04	4.34
	% Volatile	28.32	30.45
	% Fixed Carbon	60.64	65.21
		<u>100.00</u>	<u>100.00</u>
	BTU	13373	14380
	% Sulphur	0.53	0.57

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

C. D. Saville

C. D. Saville
Manager

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