

PR-SUKUNKA RIVER 7(C)B

PRELIMINARY EXPLORATION REPORT
ON
SUKUNKA RIVER COAL PROPERTIES

T. N. YOUNG

MARCH 1972

OPEN FILE

GEOLOGICAL BRANCH
ASSESSMENT REPORT

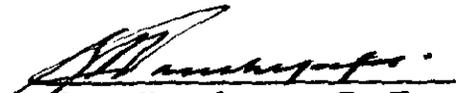
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I certify that the contents of the attached report represent accurately the work done on the subject coal licences in 1971 and that I have full knowledge of the data presented therein.


E.J. Panchysyn, P. Eng.

Preliminary Exploration Report

on

Sukunka River Coal Properties

To

The Department of Mines and
Petroleum Resources, Province
of British Columbia

Master Explorations Ltd.
Calgary, Alberta

By: T. N. Yoon
Project Resident Geologist
March, 1972

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*See 1976 2 A
PR-Sukunka River*

Introduction

This brief report on the Sukunka River coal properties (36 coal licences, approximately 34 square miles) of Master Explorations Ltd. was prepared for the Department of Mines and Petroleum Resources, British Columbia.

The exploration area is located in the eastern inner foothills of the Rocky Mountains approximately 65 miles southwest of Dawson Creek, British Columbia. Access to the area is by the logging road up the Sukunka River Valley from the Town of Chetwynd. (See Figures 1 and 2)

This report presents the result of our drilling operation and geological mapping in the Master Creek area, Sukunka River Valley, B.C. The stream, north of the Skeeter Creek, which is flowing into the Sukunka River through licences 1913, 1914, 1915, 1916 and 1917 area in our exploration area was named by the writer as Master Creek for our own convenience. (See Figure 4)

Master Explorations Ltd. has drilled along the newly constructed, five-mile long trail, a total of 2,318 feet, during September and October, 1971. This trail is started from the oil and gas well (Triad B.P. Sukunka A-43-B) to the east. (See Figure 4)

The drilling equipment consisted of a Model CFD-1B Failing Drill using an air-water combination to retrieve the cuttings. This equipment was mounted on a tandem truck. The drill hole diameter was $4\frac{1}{2}$ inches.

General Geology

The Lower Cretaceous rocks, Bullhead and Fort St. John Groups, are exposed along the Foothills of Alberta and British Columbia. These sedimentary rocks were deposited along the western margin of the western Canadian sedimentary basin. They show a maximum thickness of about 6,500 feet. (See Figure 3)

The Bullhead Group, containing only the Gething and Cadomin Formations, includes conglomerates, sandstones, shales and coal that were deposited in an alluvial plain environment. The overlying Fort St. John Group comprises a thick succession of inter-tonguing marine and continental sediments. The Moosebar Formation includes mainly marine shales. The Commotion Formation, consisting of the Gates, Hulcross and Boulder Creek Members, is mainly marine and alluvial plain deposits. Overlying marine beds are assigned to the Shaftesbury Formation in the Plains. (See Figure 3)

The Bullhead Group lies above rocks dated as Valanginian and below those dated as middle Albian. The Fort St. John Group ranges in age from the middle Albian to Cenomanian.

The Foothills in this region are essentially formed by a large anticlinorium lying west of a broad shallow synclinorium. It is within the anticlinorium that Lower Cretaceous rocks are exposed. That structure includes complex, northwesterly trending folds cut by southwest-dipping strike-thrust faults.

General Geology...cont'd

The strata in the inner foothills of the Rocky Mountains are commonly folded and faulted. The coal properties of Master Explorations Ltd. are crossed by one major thrust fault which basically divides the properties into two distinct areas. The easterly area is almost wholly underlain by Commotion Formation which is highly folded. West of the major fault, the Gething and Commotion Formations appear to be less disturbed. Numerous fold axes cross the licences but the dips are much less severe. (See Figure 4)

Series	Group	Formation	Thickness (feet)	Lithology	
Upper Cretaceous	Fort St. John	Dunvegan	300-1200	Marine and non-marine sandstone and shale	
		Cruiser Fm. ¹	350- 800	Dark grey marine shale with sideritic concretions; some sandstone	
Goodrich Fm. ¹		50-1350	Fine-grained, crossbedded sandstone; shale and mudstone		
Hasler Fm. ¹		500?-1500	Silty, dark grey marine shale with sideritic concretions; siltstone and sandstone in lower part; minor conglomerate		
Lower Cretaceous		Commotion 1080-1600'	Boulder Creek Member	240- 560	Fine-grained, well sorted sandstone; massive conglomerate; non-marine sandstone and mudstone
			Hulcross Member	0- 450	Dark grey marine shale with sideritic concretions
	Gates Member ²		220- 900	Fine-grained, marine and non-marine sandstones; conglomerate; coal; shale and mudstone	
	Moosebar	100-1000	Dark grey marine shale with sideritic concretions; glauconitic sandstone and pebbles at base		
Bullhead	Gething	75-1000	Fine- to coarse-grained, brown, calcareous, carbonaceous sandstone; coal, carbonaceous shale, and conglomerate		
	Cadomin	45- 600	Massive conglomerate containing chert and quartzite pebbles		

¹The Hasler, Goodrich, and Cruiser Formations are recognized in the Foothills. Equivalent shales in the Plains are included in the Shaftesbury Formation.

²Gates sandstones in Peace River region are considered as a formation; farther south, they are included in Gates Member of Commotion Formation.

Figure 3. Table of Formations
(after D. F. Stott, 1968)

Economic Geology of Coal Deposits

Coals are known to occur in mainly two geological horizons, the Gates Member of the Commotion Formation and the Gething Formation, in the area.

The stratigraphic horizon of the Gates Member contains the coals which are the northwesterly continuation of the coals found in the Luscar Formation in Alberta. No economic coal seam of the Gates Member was found west of the major fault of our exploration area.

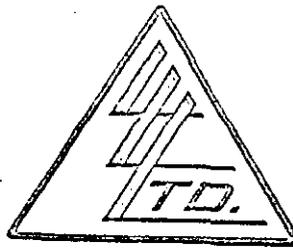
The Gething Formation contains the main prospective coal seams in the area. Two major coal seams are recognized by the drilling in this formation. The upper seam has been named the Skeeter seam and the lower has been called the Chamberlain seam by Brameda Resources Ltd.

The coal of the Skeeter zone varies from 5-16 feet, average 13.7', in thickness with several partings and the coal of the Chamberlain zone varies from 6-10 feet, average 7.7', in thickness with less partings than the Skeeter zone.

The samples for the analysis were taken randomly from the clean coal seam of each zone of trenches No. 6 and No. 7. (See Figure 4) The result of the analysis is listed on the following page.

Four individual cross-sections (A-B, C-D, E-F and G-H) along the newly-constructed exploration road, north of Master Creek, indicate the relationship between coal horizon and topography. (See Figures 5 and 6)

To: ALBERTA COAL LTD.
P.O. Box 2680
Calgary 2, Alberta
Mr. W. B. Wasson



File No. 4694
Date October 20th 1971
Samples Coal

**Certificate of
ASSAY of**

RECEIVED OCT 27 1971

LORING LABORATORIES LTD.

SAMPLE No.	Received H2O %	Inherent H2O %	Vol. Matter %	Ash %	Fixed Carbon %	S %
<u>AS RECEIVED</u>						
<u>RAW COAL</u>						
# 1 - S. Seam	17.7	---	18.50	6.11	57.69	.46
# 2 - C. Seam	7.6	---	15.29	3.55	73.56	.44
<u>AIR DRIED</u>						
<u>RAW COAL</u>						
# 1 - S. Seam	---	3.09	22.48	<u>7.43</u>	67.00	.56
# 2 - C. Seam	---	1.54	16.55	<u>3.84</u>	78.07	.48

SAMPLES ANALYSED
DO NOT INCLUDE PARTINGS
IN THE SEAM - THEREFORE
ASH CONTENTS ARE NOT
REPRESENTATIVE OF TOTAL SEAM
THICKNESS.
I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE
ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES EJP

Rejects Retained one month.
Pulps Retained one month
unless specific arrangements
made in advance.

E. L. M. Wasson

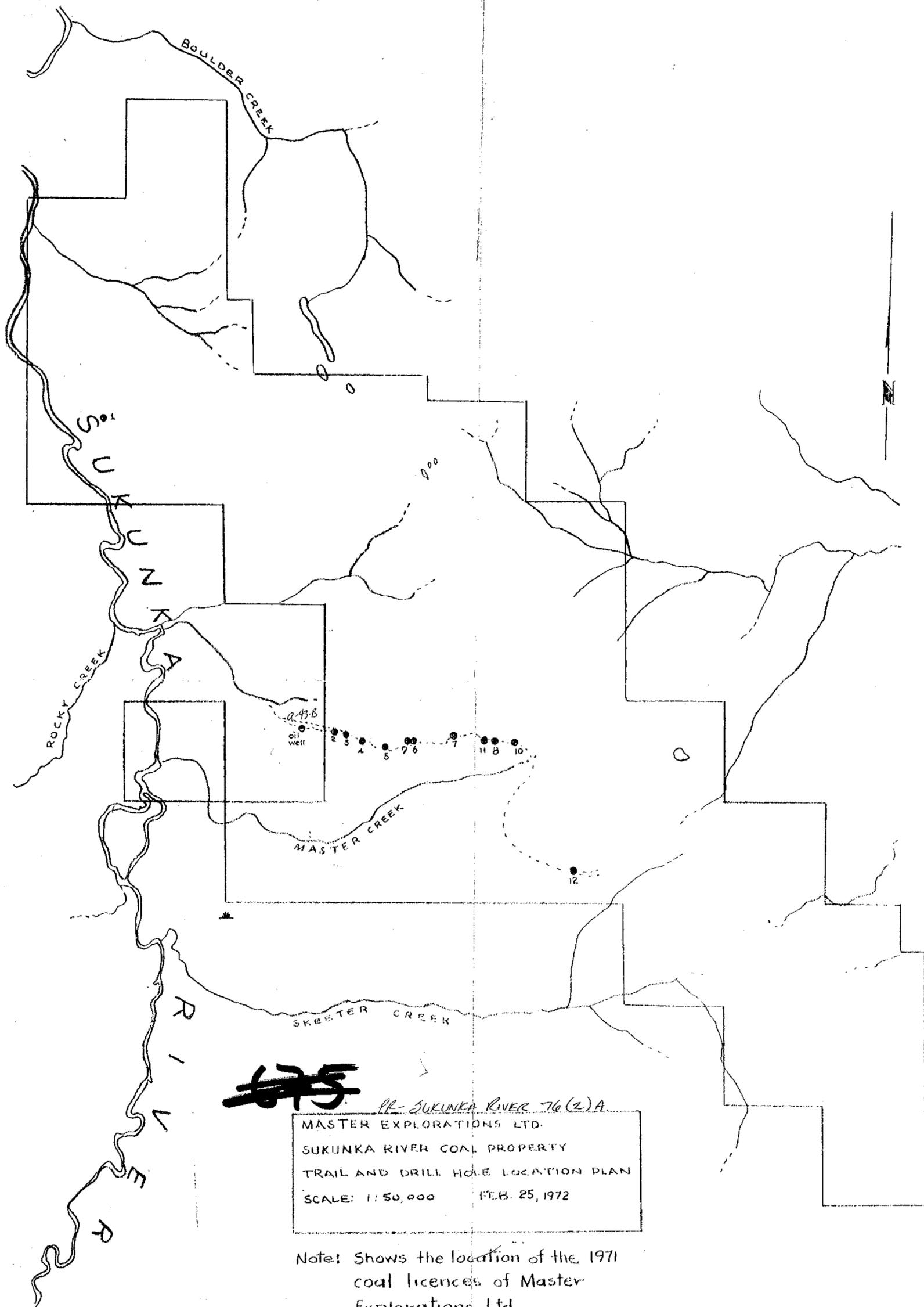
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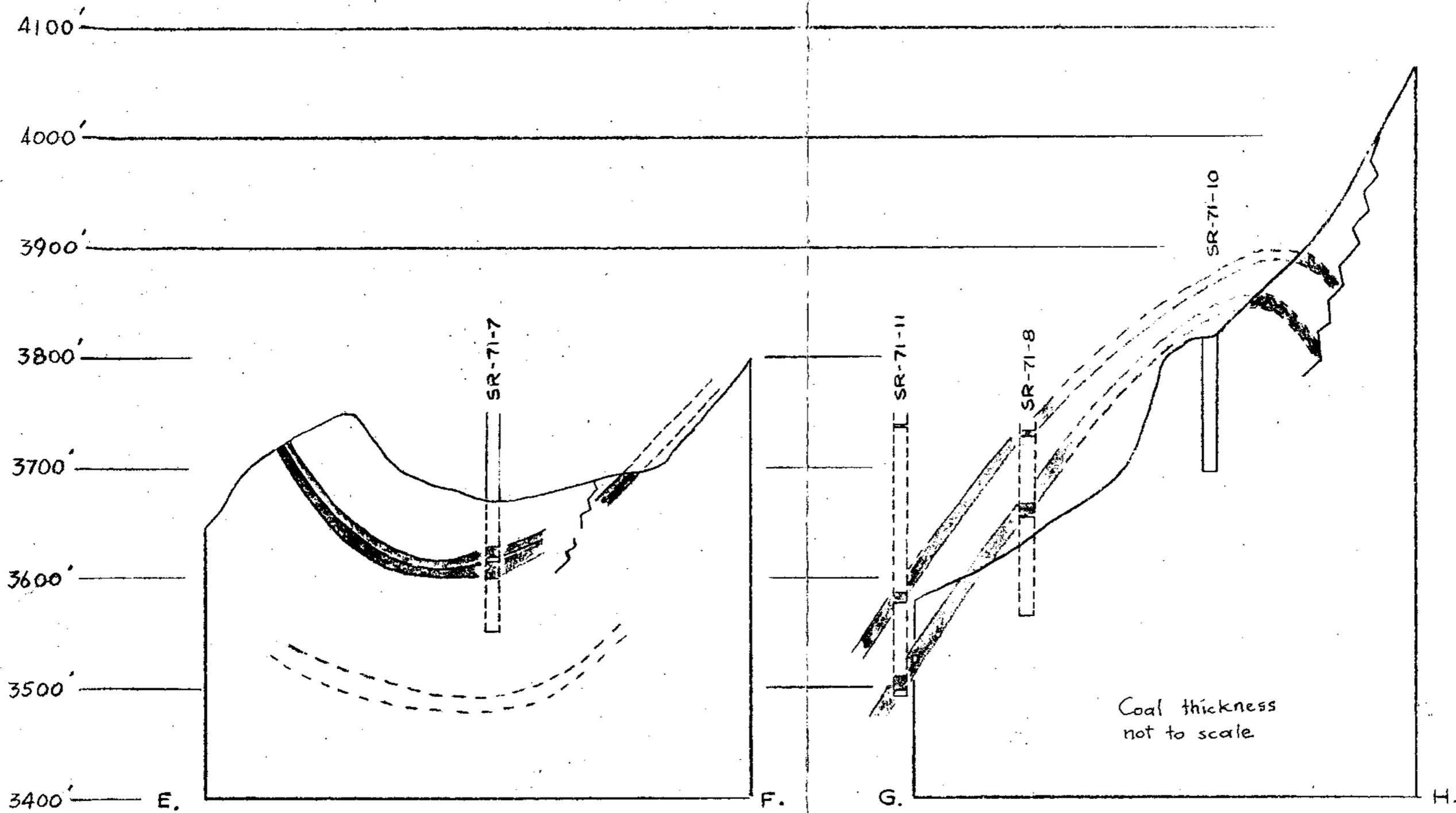
LEGEND	
TRAIL	ABBREVIATION
DRILL HOLE	
SR-71-1	1
SR-71-2	2
SR-71-3	3
SR-71-4	4
SR-71-5	5
SR-71-6	6
SR-71-7	7
SR-71-8	8
SR-71-9	9
SR-71-10	10
SR-71-11	11
SR-71-12	12

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 MASTER EXPLORATIONS LTD.
 SUKUNKA RIVER COAL PROPERTY
 TRAIL AND DRILL HOLE LOCATION PLAN
 SCALE: 1:50,000 FEB. 25, 1972

Note: Shows the location of the 1971 coal licences of Master Explorations Ltd.

Figure 2

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SECTION E-F

SECTION G-H

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Figure 6 ~~675~~

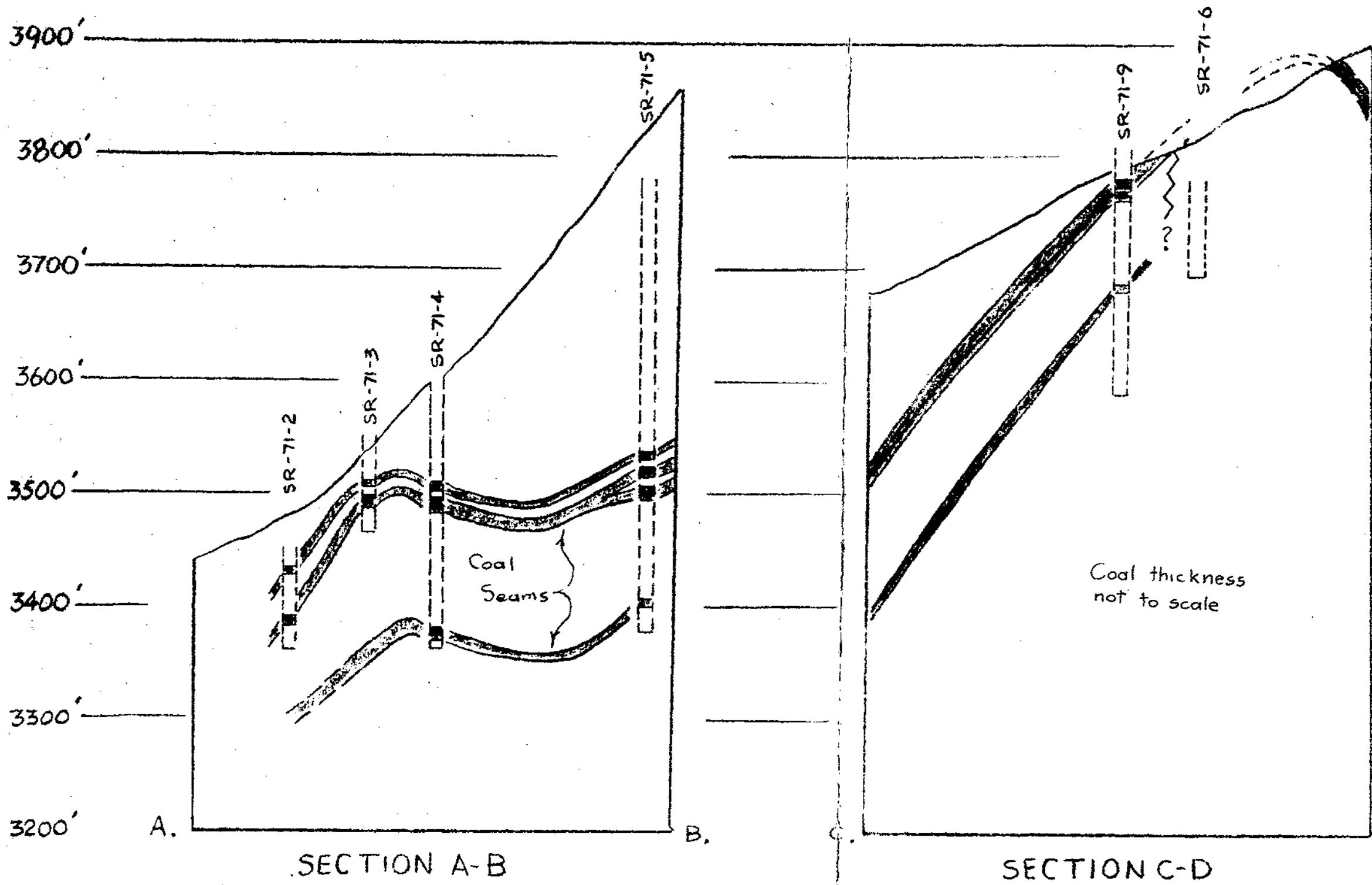
PK - SUKUNKA RIVER 76(2)A.

Scale: Vertical - 1" = 100'
 Horizontal - 1" = 400'

T. Yoon
 Feb. 1972

3200'

3300'



Scale:
Vertical - 1" = 100'
Horizontal - 1" = 400'

T. YOON
FEB. 1972

Figure 5

D. PR-SUKUNKA RIVER
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