

A.R.Archer

July 28, 1964

Calumet

E.J.Wade

Calumet

YUKON COAL CO., CARBONACEOUS Y.T. - Tantalus Butte Property

PURPOSE

To carry out surface geological mapping over the mine area and to discover, if possible, any coal seams not yet located underground.

To check and up-date previous underground geological mapping so that a structural interpretation may be made of existing seams and to locate, if possible, any new seams.

CONCLUSIONS:

SURFACE

Two possible seams of coal were located in the hanging wall of the mined seam, the nearer being indicated by coal and mudstone overburden lying between two ridges of outcrop on the butte face. The surface showing which may indicate the other seam consists of a deep depression, on the hill top, lying in a direction parallel to the strike of the sediments.

UNDERGROUND

Mapping of the No.16 raise and the north end of the main gangway shows that we are presently advancing on what may be a new seam. However, there is a possibility that this is the original seam, back-faulted to its present position. The geology is quite complex because of numerous small faults.

TERRAIN

Tantalus Butte consists of a northerly trending oval, flat-topped hill with quite steep sides. The difference in elevation between the adit and the hill top is approximately 510 feet.

The flat hill top is cut by two east-west depressions which may represent faults. Incompetent beds such as coal and mudstone may also indicate their presence on surface by sharp depressions.

The south side of the butte consists of several ridges of resistant outcrop which are badly eroded and in danger of collapsing. In the centre of the butte there are one or two small, but deep, cracks in the overburden.

The plane table work was complicated by a lack of control stations and movement of existing stations due to soil creep.

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## GEOLOGY

### Structure:

The stratigraphy at Tantalus Butte consists of a series of thick to thin bedded sediments. The strike is quite uniform at 5 to 10 degrees east of North becoming more northerly to the North. The dip is slightly variable at 65 to 70 degrees West.

The only faults observed were underground and these appeared as thin slips and narrow gouge zones up to 6 inches thick. The thickness of gouge seems to be proportional to the amount of offset along the faults.

Most of the faults have right hand movement, and there is little dragging of either coal or sediments along the faults. Faults on surface may or may not be represented by depressions of topography.

Another minor structure affecting the coal seams are the upthrows and downthrows. The hanging wall (or the footwall) jumps up or down causing the seam to thicken or thin. This structure is very difficult to recognize unless encountered at right angles.

In most cases where the hanging wall of the large seams can be observed it is gently undulating and irregular on a small scale.

### ROCK TYPES:

There is a complete gradation between sandstone, pebbly sandstone and conglomerate based on grain size. It is almost impossible to separate pebbly sandstone and conglomerate, in many instances, as they grade back and forth both vertically and laterally.

For mapping purposes conglomerate is grouped with pebbly sandstone, but where possible pebbly sandstone has been shown.

The conglomerate is a highly eroded, dirty, buff coloured rock with pebbles up to seven centimeters in diameter in a coarse sandstone matrix. The pebbles are generally cherty, and consist of quartz, quartzite and some granite with the former predominating. The pebbles constitute 60 to 70 percent of the rock.

The pebbly sandstone is similar in all respects to the conglomerate except for a smaller grain size. Pebbles with a diameter of approximately one millimeter make up about 80 percent of the rock, and are found in a dirty sandstone matrix.

Sandstone is found as thin discontinuous beds interbedded in pebbly sandstone and conglomerate. These beds do not extend along strike for any appreciable distances, and do not form any significant outcrops. The sandstone is fine grained, clean and a white to buff colour.

Thin bedded mudstone is a dark brown, very fine grained, massive rock and is seen on surface only when associated with coal. Even then it is found reduced to overburden and seldom outcropping. Underground mudstone is found interbedded, in thin beds, with all other rock types, and in one or two instances forms thick beds itself. Occasionally it may be seen grading into sandstone. In rare cases plant fossils may be found, but they are generally poor and incomplete.

On surface coal is found mixed with mudstone in small outcrops or reduced to overburden with a soil-like texture. It is impossible to recognize any similarity between the coal on surface and that seen underground.

Underground the coal is dark brown, friable and thin bedded, and may contain some interbedded mudstone. Correlation of seams on appearance alone is impossible and further experimental work will be needed to determine whether different seams have distinctive BTU contents which can be used in correlation.

Respectively submitted



E.J. Wade

EJW:rl  
cc:(4)

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Mr. A. E. Pike

July 30, 1964

Elsa, Y. T.

A. Archer

Calumet

E. Wade report "Yukon Coal Co., Carmacks, Y.T. - Tantalus Butte Property"

COMMENTS

1. The two postulated coal seams lie 450 and 800 feet into the hanging wall of the seam presently being mined. The closest seam is indicated on the basis of one poorly defined outcrop. The furthest seam is indicated by a surface linear.
2. Because of the hypothetical nature of both seams, any further work on them should be done on surface to conclusively prove their existence.
3. Tantalus Butte has a steep south-westerly slope which is being rapidly eroded and has a history of rock falls. Mining has undercut the Butte and the consequent rock subsidence on the hanging wall of the seam is working uphill toward the Butte. This subsidence may eventually, if it hasn't already, create a landslide hazard along the south-easterly slope of the Butte. The company surveyors report that survey stations have moved several degrees in relation to each other on this slope within the last few years. This extremely rapid solifluction is indicative of a very unstable situation.

*A. Archer*

A. Archer,  
Chief Geologist.

/nc

c.c. J. J. Hogan  
File - 2

*I have sent the maps to  
Mr. Pike and will forward to  
you as soon as I can.*

092073

# United Keno Hill Mines Limited

ELSA, YUKON TERRITORY

*Executive Offices*

~~XXXXXXXXXXXXXXXXXXXX~~  
TORONTO 1, ONTARIO

7 King Street East

*Mine Office*

ELSA, YUKON TERRITORY

August 21, 1964

Dr. L. Green,  
Geological Survey of Canada,  
P.O. Box 969,  
Whitehorse, Y. T.

Dear Lou:-

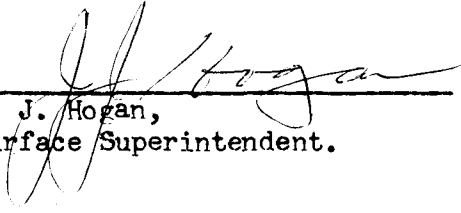
I am enclosing the following:

1. Underground plan of Yukon Coal Mine.
2. Underground plan of the northerly section of Yukon Coal Mine

I have sketched in pencil the area mined in the southerly area.

Yours very truly,

UNITED KENO HILL MINES LIMITED

  
\_\_\_\_\_  
J. J. Hogan,  
Surface Superintendent.

/nc  
Encl.

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CANADA

Department  
of Northern Affairs  
and National Resources Northern Administration Branch

Ministère  
du Nord canadien et  
des Ressources nationales Direction des régions septentrionales

Box 2703,  
Whitehorse, Yukon,  
February 4, 1965.

Dr. L. H. Green

our file / notre dossier M.I. C-253  
your file / votre dossier

Tantalus Butte Mine - Carmacks

Channel samples have been taken from the Yukon Coal Company's Tantalus Butte Coal Mine from what they consider a new seam. Samples taken on the face of No. 1 Room 50 feet north from 18 raise. The seam was 16 feet wide at the location the sample was taken from the hanging wall to the foot wall. Because faults are nearby the thickness of the seam is quite irregular. The channel taken was 6 inches by 2 inches. The hanging wall sample was taken at the top 18 feet of the seam and the foot wall sample taken at the bottom 8' FOOT of the seam. The coal face was homogeneous and showed no definite signs of partings and it showed no particular banding. Elliptical shaped stone troubles from approximately two feet long occurred in the coal but the occurrences were very irregular. Sample was taken about 2.30 P.M., February 2, 1965.

A. D. Oliver,  
Resident Mining Inspector.

GC 522 A, AI  
B, BI  
C  
D

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Department of Mines and Technical Surveys  
Ministère des Mines et des Relevés techniques

Mines Branch  
Direction des mines

File Number  
N° à rappeler

Fuels and Mining Practice  
Division

562 Booth Street,  
Ottawa 1, Ontario,  
May 31st, 1965.

Dr. L.H. Green,  
Geological Survey of Canada,  
Box 969,  
WHITEHORSE, Yukon Territory.

Dear Dr. Green:

The analyses of samples from the Tantalus Butte Mine which we received from you in April have been completed and a report by T.E. Tibbetts is enclosed.

We would appreciate any additional information available on the sampling locations, and if you wish to pursue this matter we would suggest other samples be taken, preferably channel with divisions at partings (with logs supplied).

Yours very truly,

A. Ignatieff, Chief,  
Fuels and Mining Practice Div.

Encl.

AI:BR

cc Mr. K.J. Christie,  
Resources Division,  
Department of Northern Affairs  
and National Resources,  
OTTAWA, Ontario.

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CANADA  
DEPARTMENT OF MINES AND TECHNICAL SURVEYS  
MINES BRANCH  
OTTAWA

FUELS AND MINING PRACTICE DIVISION  
DIVISIONAL REPORT FMP 65/71-PREP

EVALUATION OF YUKON TERRITORY COAL RESOURCES  
SAMPLES FROM TANTALUS BUTTE MINE

by

T. E. Tibbetts

May 1965

092073

**EVALUATION OF YUKON TERRITORY COAL RESOURCES  
SAMPLES FROM TANTALUS BUTTE MINE**

On April 8, 1965 four samples of coal were received from Dr. L. H. Green, Geological Survey of Canada, Whitehorse, Y.T. with a request for analysis by the Mines Branch. The samples were four of six taken from "new seam currently being mined at Yukon Coal Company's Tantalus Butte Mine, Carmacks, Y.T.". Two of the six samples taken were apparently lost somewhere between the sampling points and the Mines Branch. Of the four samples received, one had no identification but was noted as being very fine, soft coal.

The proximate and ultimate analyses, calorific values and "equilibrium" moisture of the samples received follow:

Identification FMP Laboratory No.	522A 2251-65	522A1 2252-65	522B 2253-65	- 2254-65
<u>Proximate Analyses (Dry Basis)</u>				
Ash .....	% 24.1	15.1	16.5	14.1
Volatile Matter .....	% 31.8	32.2	33.6	33.8
Fixed Carbon .....	% 44.1	52.7	49.9	52.1
<u>Ultimate Analysis (Dry Basis)</u>				
Carbon .....	% 61.0	69.5	67.1	69.2
Hydrogen .....	% 3.9	4.1	4.3	4.3
Sulphur .....	% 0.3	0.2	0.3	0.5
Nitrogen .....	% 0.8	0.9	0.9	0.9
Ash .....	% 24.1	15.1	16.5	14.1
Oxygen (by difference) %	9.9	10.2	10.9	11.0
Equilibrium Moisture ... %	2.4	3.1	2.9	5.5
Calorific Value.... Btu/lb	10,580	11,720	11,240	11,870

The coal is classified as high volatile B bituminous according to the ASTM System of Classification of Coal by Rank. All samples are agglomerating and have a swelling index of 1 (ASTM). Coals of this type would not be expected to yield metallurgical grade coke.

Sufficient quantities of the samples were not available for washability studies.

Box 969,  
Whitehorse, Yukon,  
June 4th, 1965.

Mr. A. E. Pike,  
Manager,  
United Keno Hill Mines Limited,  
ELSA, Yukon.

Dear Al:

I enclose four analyses of Carmacks coal which may be of interest to you. They appear very close to those of Bostock in the Carmacks memoir. Either Ab Oliver or I hope to collect additional samples in the near future and I will let you know the results.

Yours very truly,

L. H. Green,  
Resident Geologist.

LHG/mt

Encs.

c.c. Mr. W. Hibbert,  
Carmacks, Y.T.

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Box 969,  
Whitehorse, Yukon,  
June 4th, 1965.

Mr. A. Ignatieff, Chief,  
Fuels and Mining Practice Division,  
Mines Branch,  
562 Booth Street,  
OTTAWA 1, Ontario.

Dear Mr. Ignatieff:

Thank you very much for the analyses of coal samples taken from the Tantalus Butte Mine, Carmacks, Yukon. Information on the location and nature of the samples is enclosed. Unfortunately in the two faces sampled the seam lacks definite partings. True thickness of the seam is uncertain due to faulting.

What weight of sample is required for washability studies and would it be possible to undertake these? I expect to visit the property sometime during the summer and can take additional samples at that time.

Yours very truly,

L. H. Green,  
Resident Geologist.

LHG/mt

Enc.

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X

NOTES ON LOCATION OF COAL SAMPLES  
TANTALUS BUTTE MINE  
CARMACKS, YUKON

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GSC No.	FMP No.	
GC 522A	2251-65	Footwall portion (8 feet) of a 2 inch by 6 inch channel taken across the seam in No. 1 Room, 50 feet north from 18 Raise on No. 2 Counter. Section lacks partings except for small elliptical shaped siliceous lenses. Seam has an apparent thickness of 16 feet at this location. Taken 2 February 1965.
GC 522A1	2252-65	Hangingwall portion (8 feet) as above.
GC 522B	2253-65	Footwall portion (6½ feet) of a rough channel taken across the seam in the Main Entry at the approximate location of 20 Raise. At this location, 13½ feet of coal in the face with footwall not exposed. A few siliceous area but no definite partings. Taken 11 February 1965.
	2254-65	Probably a sample of coal dust from the tipple.

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Department of Mines and Technical Surveys  
Ministère des Mines et des Relevés techniques

*Mines Branch  
Direction des mines*

*File Number  
N° à rappeler*

*London*

Fuels and Mining Practice Division

562 Booth Street,  
Ottawa 1, Ontario,  
June 8, 1965.

Dr. L.H. Green,  
Resident Geologist,  
Geological Survey of Canada,  
Box 969,  
WHITEHORSE, Yukon.

Dear Dr. Green:

Thank you for your letter of June 4th and the information on location of the channel samples taken earlier at the Tantalus Butte Mine. A plan of the mine with these locations indicated would be useful if available.

We will be able to undertake washability studies; samples of about fifty pounds will be sufficient.

Yours very truly,

A. Ignatieff, Chief,  
Fuels and Mining Practice Division.

TET:PH

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Dr. C.S. Lord,  
Chief Geologist.

L.H. Green,  
Resident Geologist.

Box 969,  
Whitehorse, Y.T.,  
June 25, 1965.

Coal Samples from Tantalus Butte Mine Yukon Coal Company

1. These samples were taken by Mr. A.D. Oliver, Mining Inspector, but it is planned to include the analyses in the 1965 Mineral Industry Paper.

2. Locations and notes on the samples are as follows:

GC 522 S1 to S4 (Channel Sample 2 x 6 inches across the face of the main entry as of 11 June 1965)

Hanging Wall

S1: 1.7 feet from the hanging wall; coal with about 1 inch of bone about 1.6 feet from h.w.

S2: 5.4 feet of uniform coal with small lenses of "trouble" or "siliceous material".

S3: 1.9 feet of soft clay bands and dirty coal.

S4: 4.4 feet of uniform coal with small lenses of "trouble" or "siliceous material".

Footwall

GC 522 S5: Sample of dust from tipple.

GC 522 S6: Run of mine sample for washability test.

3. A plan of the mine showing the location of these and the previous set of samples will be forwarded to Mr. Ignatieff at a later date.

L.H. Green,  
Resident Geologist.

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CANADA

Department of Northern Affairs and National Resources  
Resource Development Branch  
~~Northern Administration Branch~~

Ministère du Nord canadien et des Ressources nationales  
Direction du Développement des Ressources  
~~Direction des régions septentrionales~~

Box 2703,  
Whitehorse, Yukon,  
July 14th, 1965.

Dr. L. H. Green,  
Resident Geologist,  
Box 969,  
WHITEHORSE, Yukon Territory.

our file / notre dossier M.I. M-252  
your file / votre dossier

Dear Dr. Green:

On June 11th, 1965 a channel sample of coal was taken at the face of the Tantalus Butte Mine of the Yukon Coal Company at Carmacks. Attempts were made to divide the coal sample according to the natural partings. However it may be noted that these partings at the face of the sample may only be a temporary condition. In addition to this channel sample, the mine operator took a run of coal samples from the cars over a period of a week or two until he had two sacks of approximately 200 pounds of coal. The reason for the large bulk samples is so that a washing test may be made on the coal.

It is important, for the future economic life of the coal mine, to determine if a simple beneficiation process could remove some of the ash content. It has been mentioned in early reports that the coal at the Tantalus Butte Mine across the river from the present mine, when washed indicated coking properties. It is desirable to know the coking characteristics of the clean coal obtained from results of the washing tests.

The samples were packed and shipped on Friday, July 9th, 1965 to:

Dr. Lord, Chief, Geologist, Geological Survey of Canada,  
Department of Mines and Technical Surveys, 601 Booth Street, OTTAWA, Ontario.

Yours truly,  
*A. D. Oliver*  
A. D. Oliver,  
Resident Mining Inspector.

cc: Mr. A. Ignatief, Chief,  
Fuels & Mining Practice Division,  
562 Booth Street, OTTAWA 1, Ontario.

Director, Resource Development Branch  
Attention: Mr. K. J. Christie, Resource Management Division

Superintendent of Resources

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**CANADA**  
**DEPARTMENT OF MINES AND TECHNICAL SURVEYS**  
**MINES BRANCH**  
**OTTAWA**

**FUELS AND MINING PRACTICE DIVISION**  
**DIVISIONAL REPORT FMP 65/152-PREP.**

**EVALUATION OF YUKON COAL RESOURCES:  
SAMPLES FROM TANTALUS BUTTE MINE  
YUKON COAL COMPANY LIMITED**

**by**

**T. E. Tibbetts and T. A. Lloyd**

**October 1965**

**092073**

**EVALUATION OF YUKON COAL RESOURCES:  
SAMPLES FROM TANTALUS BUTTE MINE  
YUKON COAL COMPANY LIMITED**

by

**T. E. Tibbetts and T. A. Lloyd**

**INTRODUCTION**

In February 1965 a request was submitted to the Department by the Yukon Research and Development Institute for assistance in obtaining more accurate information on the nature and extent of known deposits of coal in the Yukon. The Institute expressed particular interest in the coking properties of the coal from the Carmacks area.

Subsequently, in April 1965, four samples of coal were received from Dr. L. H. Green, Geological Survey of Canada with a request for analysis by the Mines Branch. The samples were from "a new seam currently being mined by Yukon Coal Company Ltd., Tantalus Butte Mine, Carmacks, Y. T." Evaluation of these samples was reported in Divisional Report FMP 65/71, May 1965.

On June 11, 1965 a channel sample of coal was taken at the face of the Tantalus Butte mine by A. D. Oliver, Resident Mining Inspector. In correspondence Mr. Oliver states:

"..... Attempts were made to divide the coal sample according to the natural partings. However it may be noted that these partings at the face ..... may only be a temporary condition. In addition to this channel sample the mine operator took a run of coal samples from the cars over a period of a week or two until he had two sacks of approximately 200 pounds of coal. The reason for the large bulk samples is so that a washing test may be made on the coal".

The samples were packed and shipped to Ottawa, July 9, 1965. This report is an evaluation of the samples received at this laboratory late in July 1965.

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### SAMPLES STUDIED

The following locations and notes on the samples were given by Dr. L. H. Green, Resident Geologist, G. S. C.

GC 522  
S1 to S4 Channel Sample 2 x 6 inches across the face of the main entry as of June 11, 1965.

#### Hanging Wall

- S1: 1.7 ft. from the hanging wall; coal with about 1 in. of bone about 1.6 ft. from h.w.
- S2: 5.4 ft. of uniform coal with small lenses of "trouble" or "siliceous material".
- S3: 1.9 ft. of soft clay bands and dirty coal.
- S4: 4.4 ft. of uniform coal with small lenses of "trouble" or "siliceous material".

#### Footwall

- Some air in the middle of the sample*
- GC 522 S5: Sample of dust from tipple.
- GC 522 S6: Run of mine sample for washability test.

### SUMMARY OF RESULTS

Details of the results of the evaluation of the samples are presented in Tables 1 to 4 below.

The analyses are similar to those reported in the earlier study mentioned above and more or less confirm the earlier appraisal of this coal. The coal is classified as high volatile B bituminous according to the ASTM System of Classification of Coal by Rank. All samples are agglomerating and have a swelling index of 1 (ASTM). Coals of this type would not be expected to yield metallurgical grade coke.

Float-and-sink tests on the Plus 48 mesh size fraction indicate that the coal would not be difficult to beneficiate with high yields. However cleaning would not be expected to significantly improve the coking properties, as indicated by the swelling indices of the various gravity fractions. The relatively low yield of 1.30 specific gravity material with FSI of 3 would not make such a separation favourable.

DETAILS OF RESULTS

TABLE 1

Chemical and Physical Properties

Type of Sample GC Number	CHANNEL					DUST	MINE RUN
	522 -	S1	S2	S3	S4	S5	S6
Laboratory Number		2596-65	2597-65	2598-65	2599-65	2600-65	2601-65
<u>Proximate Analysis</u>							
Moisture .....	%	1.4	2.1	1.9	2.0	2.3	2.0
Ash .....	%	9.1	11.1	15.8	17.8	14.1	13.7
Volatile Matter .....	%	35.8	33.3	32.0	30.6	32.8	33.1
Fixed Carbon .....	%	53.7	53.5	50.3	49.6	50.8	51.2
<u>Ultimate Analysis (Dry Basis)</u>							
Carbon .....	%	73.2	73.1	67.9	66.7	69.4	70.7
Hydrogen .....	%	4.9	4.6	4.3	4.1	4.4	4.4
Sulphur .....	%	0.3	0.3	0.6	0.5	0.5	0.3
Nitrogen .....	%	1.0	1.0	0.9	0.9	1.0	0.9
Ash .....	%	9.2	11.3	16.1	18.2	14.5	14.0
Oxygen .....	%	11.4	9.7	10.2	9.6	10.2	9.7
<u>Calorific Value (Moist Basis)</u>							
Btu/lb.		12,590	12,290	11,210	11,100	11,680	11,850
<u>Grindability</u>							
		46	46	73	61	61	60
<u>Ash Fusibility</u>							
Initial Deformation Temp.	°F	2070	2030	2070	2050	2120	2100
Softening Temp. Spherical	°F	2130	2120	2150	2140	2240	2210
Softening Temp. Hemispherical	°F	2210	2190	2200	2160	2310	2260
Fluid Temp.	°F	2280	2210	2260	2240	2370	2340
Equilibrium Moisture	%	2.9	2.8	3.0	2.8	4.3	3.3
Classification by Rank (ASTM)							High volatile B bituminous

TABLE 2

Screen Analysis of Mine Run Coal and  
Ash Contents of Size Fractions

	<u>Yield %</u>	<u>Ash %</u>
Plus 48 M	93.1	13.4
Minus 48 M	6.9	14.4
Mine Run (calculated)	100.0	13.5

TABLE 3

Float-and-Sink Data on Mine Run Coal (Plus 48 Mesh)

			Yield %	Ash %	Cumulative			
					Float		Sink	
					Yield %	Ash %	Yield %	Ash %
	Float	1.30	9.3	3.3	9.3	3.3	100.0	13.4
Sink	"	1.35	26.3	4.6	35.6	4.3	90.7	14.4
"	"	1.40	19.7	8.4	55.3	5.7	64.4	18.4
"	"	1.50	18.7	14.5	74.0	7.9	44.7	22.8
"	"	1.60	12.5	20.6	86.5	9.8	26.0	28.8
"	"	1.80	9.0	28.6	95.5	11.5	13.5	36.5
"	"	1.80	4.5	52.3	100.0	13.4	4.0	52.3

TABLE 4  
Coking Properties\*

A. <u>Raw Coal</u>		CHANNEL				DUST MINE RUN	
		S1	S2	S3	S4	S5	S6
Sample Type .....							
GC Number .....	522 -						
Free Swelling Index (ASTM)		1	1	1	1	1	
<u>Plastic Properties (Gieseler Plasticity)</u>							
Start (b) .....	°C	410	417	-	-	-	417
Fusion Temp. ....	°C	-	-	-	-	-	-
Maximum Fluid Temp. ....	°C	423	426	429	429	-	426
Final Fluid Temp. (a) ....	°C	435	432	-	-	-	435
Solid Temp. ....	°C	450	444	447	450	-	447
Melting Range (a-b) ....	°C	25	15	-	-	-	18
Maximum Fluidity ....	dd/m	2.1	1.3	0.9	0.6	-	1.7
B. <u>Washed Coal (Mine Run)</u>		Free Swelling Index					
Floats 1.30		3					
Sinks 1.30		1½					
Sinks 1.35		1½					
Sinks 1.40		1					
Sinks 1.50		1					
Sinks 1.60		N.A.*					

\*Analyses conducted by Carbonization Section. \*Non agglomerate.

840260

Box 969,  
Whitehorse, Y.T.,  
Oct. 18, 1965.

Mr. A. Ignatief, Chief,  
Fuels & Mining Practice Division,  
562 Booth Street,  
Ottawa 1, Ont.

Re: Analyses of Coal Samples from the  
Tantalus Butte Mine of Yukon Coal  
Company

Dear Mr. Ignatief,

Six samples of coal (Nos. GC 522, 1 to 6) were shipped to the Geological Survey for forwarding on 9 July 1965. Can these results be expected in the near future?

In addition to the analyses given on the previous samples (Divisional Report FMP 65-71-Prep) could information also be supplied on the softening temperature of the ash and whether the coal contains unusual amounts of elements such as germanium?

Yours very truly,

L.H. Green,  
Resident Geologist.

LHG:ep



Department of Mines and Technical Surveys  
Ministère des Mines et des Relevés techniques

File Number  
N° à rappeler

Ottawa, October 22, 1965.

Fuels and Mining Practice Division,  
562 Booth Street.

Dr. L.H. Green,  
Resident Geologist,  
Geological Survey of Canada,  
Box 969,  
Whitehorse, Yukon.

Dear Dr. Green:

Re: Analyses of Coal Samples from the  
Tantalus Butte Mine of Yukon Coal  
Company.

In reply to your letter of Oct. 18 a report  
on the evaluation of the coal samples is presently being  
prepared and will be forwarded to you very shortly.

Yours very truly,

A. Ignatieff,  
Chief of Fuels and Mining Practice  
Division.

AI/PG

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Department of Mines and Technical Surveys  
Ministère des Mines et des Relevés techniques

Mines Branch

File Number  
N° à rappeler

Fuels and Mining Practice Division

562 Booth Street,  
Ottawa 1, Ontario,  
November 1st, 1965.

Dr. L.H. Green,  
Resident Geologist,  
Geological Survey of Canada,  
Box 969,  
WHITEHORSE, Y.T.

Dear Dr. Green:

Re: Analyses of Coal Samples from the  
Tantalus Butte Mine of Yukon Coal Co.

Further to my letter of October 22nd, we enclose a copy of Divisional Report FMP 65/152-Prep., "Evaluation of Yukon Coal Resources: Samples from Tantalus Butte Mine, Yukon Coal Company Limited", by T.E. Tibbetts and T.A. Lloyd.

We note your request of October 18th for information on elements such as germanium and enclose a report (IR FMP 61/174-SF) on the occurrence of germanium in Canadian coals (p. 14, Yukon).

Yours very truly,

A. Ignatieff, Chief,  
Fuels and Mining Practice Division.

Encl.  
TET:PH

092073

For Inter-office Correspondence Only

UNITED KENO HILL MINES LIMITED

TO Lew

DATE \_\_\_\_\_

ADDRESS \_\_\_\_\_

FROM A.J. MacDonald

IN REPLY TO YOURS OF \_\_\_\_\_

ADDRESS \_\_\_\_\_

SUBJECT Yukon Coal Maps & Report.

Pls return both the maps  
and the report at your  
convenience

Thanks

Allen

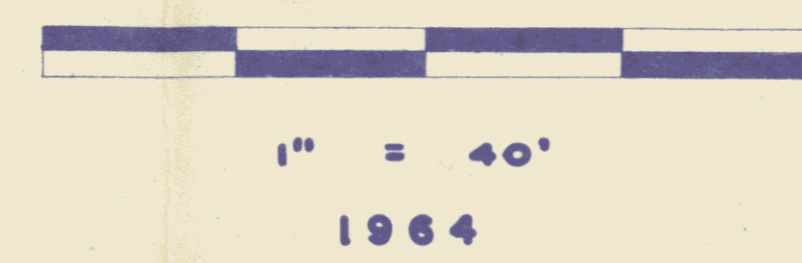
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INITIALS OF ADDRESSEE \_\_\_\_\_

DATE \_\_\_\_\_

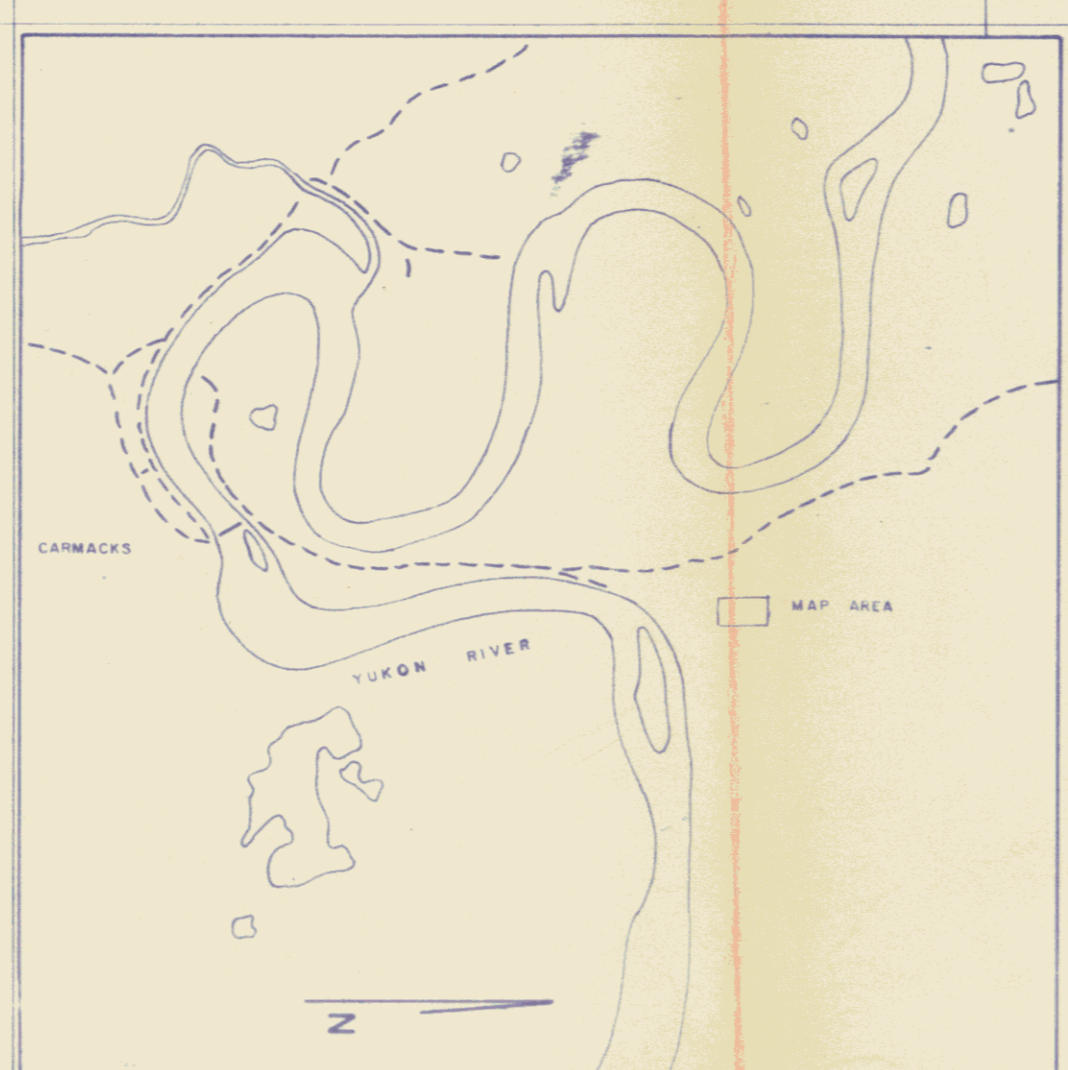
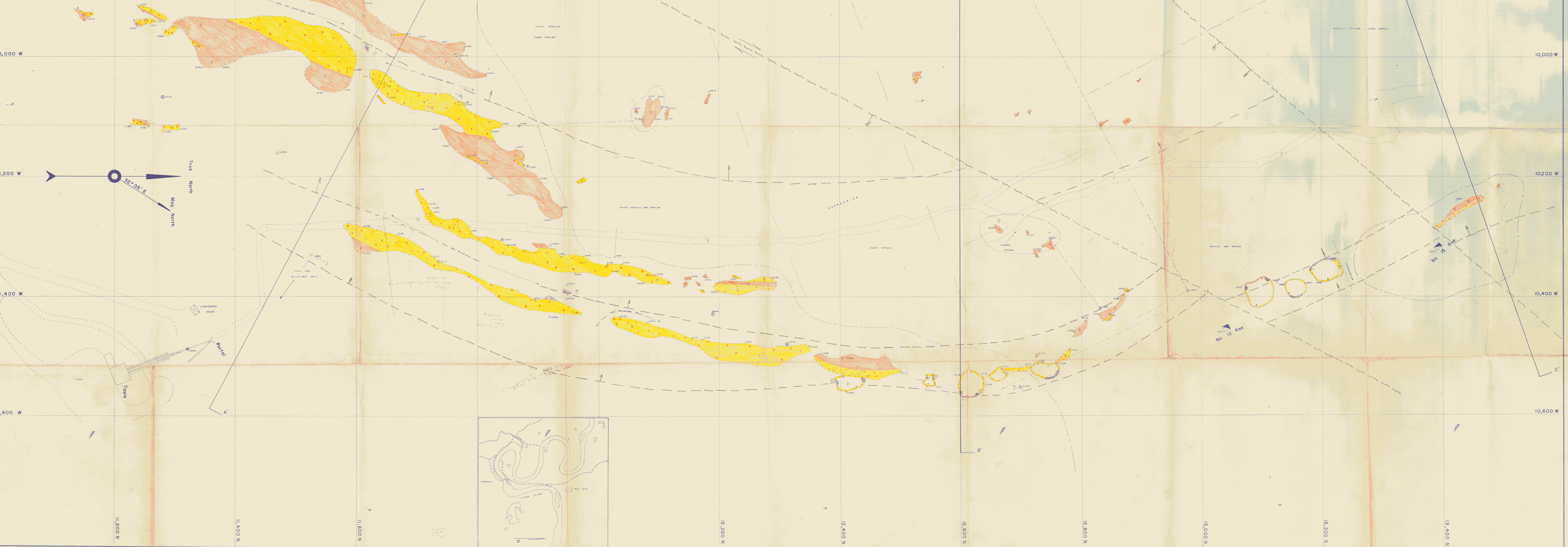
INITIALS OF SENDER \_\_\_\_\_

YUKON COAL CO. LTD.  
CARMACKS, Y.T.  
GEOLOGICAL MAP  
TANTALUS BUTTE



- LEGEND**
- DATA STATION
  - INTERMEDIATE SHOT
  - OUTCROP
  - WIRE WORKINGS
  - DOT LINE
  - WIRE CRYSTAL
  - TRAIL LINE
  - OUTLINE OF DEPRESSION
  - POLE LINE

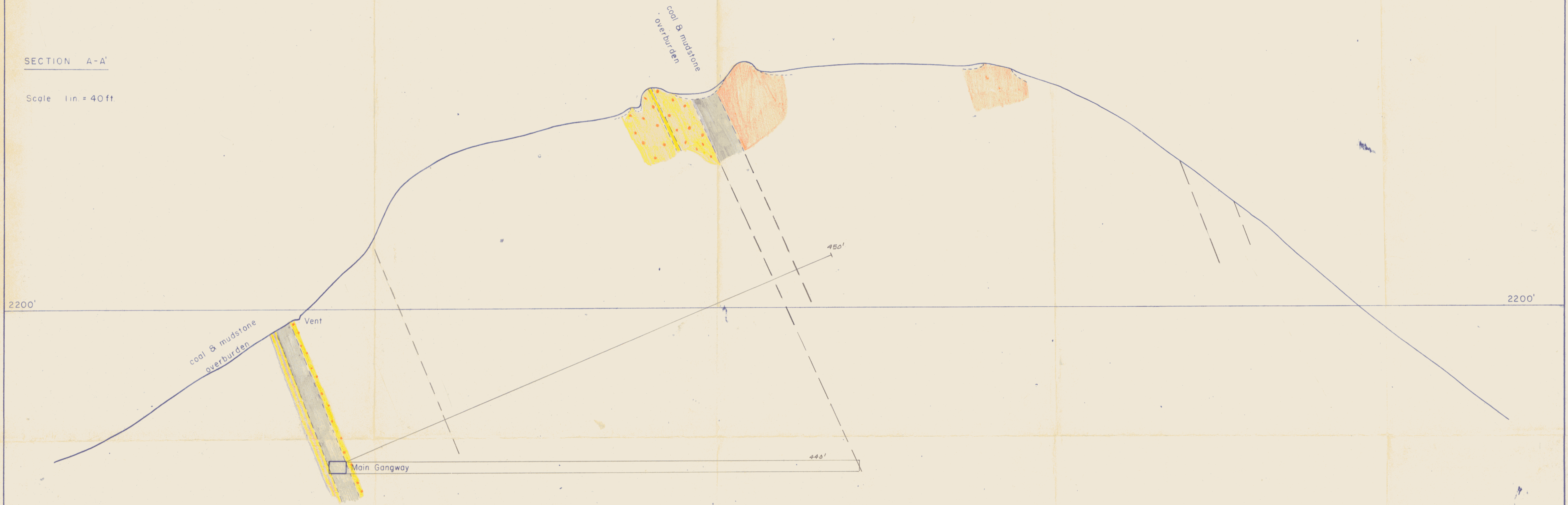
- COAL
- CONGLOMERATE WITH INTERBEDDED PERALY SANDSTONE
- WOODSTONE
- SANDSTONE
- PERALY SANDSTONE



092073

SECTION A-A'

Scale 1 in. = 40 ft.







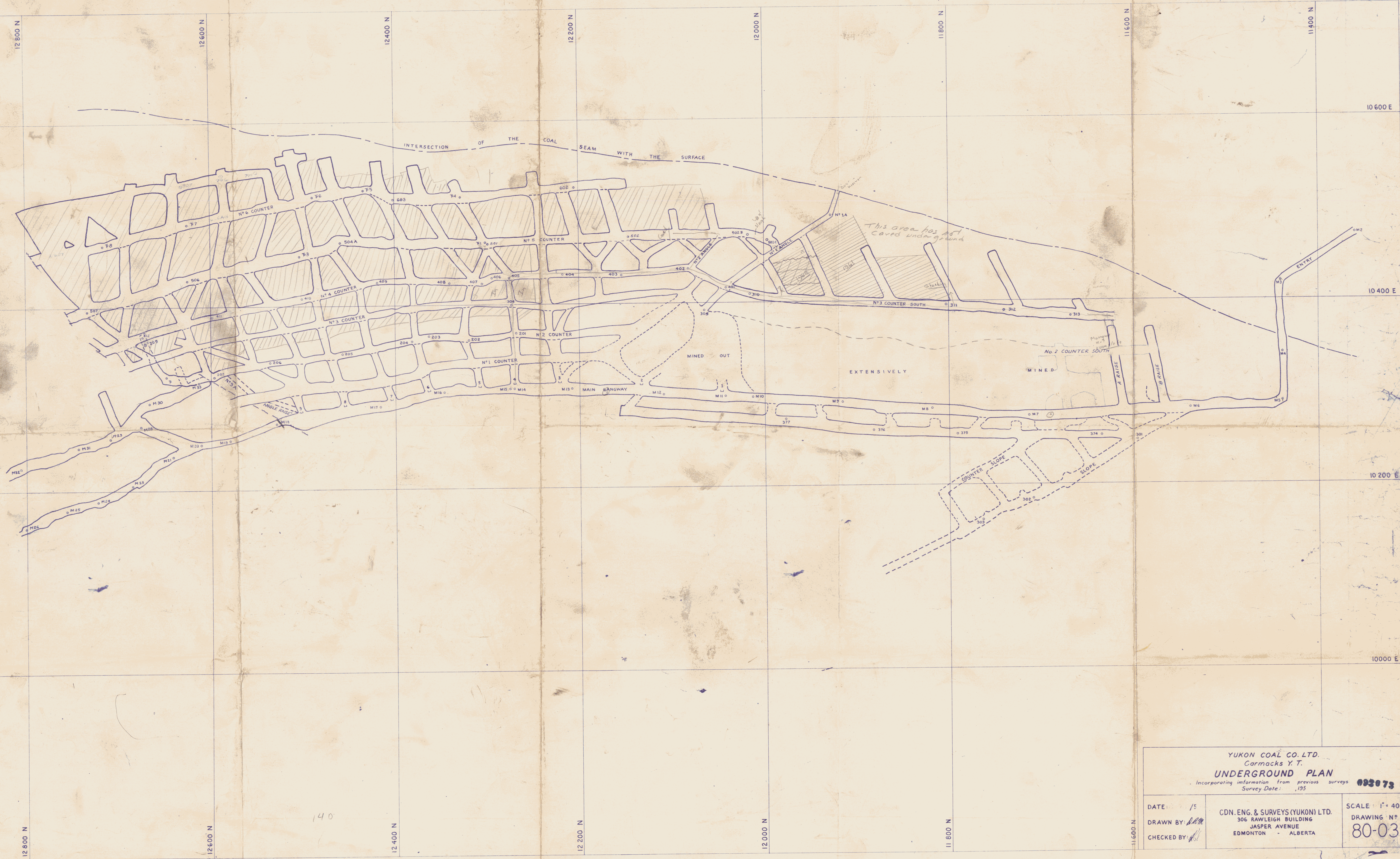
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TANTALUS BUTTE MINE  
NORTHERLY SECTION  
**UNDERGROUND PLAN**

YUKON COAL CO. LTD., CARMACKS, Y.T.

DRAWN	BY	DATE	SCALE: 1"=40'
CHECKED			DWG. No.

REVISED TO LINE 64 BY



YUKON COAL CO. LTD. Carmacks Y.T. <b>UNDERGROUND PLAN</b> <small>Incorporating information from previous surveys          Survey Date: 195</small>			<b>093073</b>
DATE: 1/5	CDN. ENG. & SURVEYS (YUKON) LTD. 306 RAWLEIGH BUILDING JASPER AVENUE EDMONTON - ALBERTA	SCALE: 1" = 40'	
DRAWN BY: <i>DM</i>		DRAWING NO:	
CHECKED BY: <i>DM</i>		80-03	

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