

COAL ACT

(Section 19 & B.C. Reg. #436/75)

Exploration & Development Work Report Cover Sheet

Property name: East Mount Gething Coal Map No. 94B-1

Location: 35 miles N.W. of Chetwynd, B.C. Land District Peace River

Coal Licence No.(s) 3506-3529

Licensee: Utah Mines Ltd.

Operator: Utah Mines Ltd.

CONFIDENTIAL

Title of Report: 1975 Report of Exploration Activities on the East Mount Gething Property

Period covered by Report: April 21 to May 18, 1975

Category of work covered in report

Geological Mapping \$1,687.56

Surveys: Geophysical _____

Geochemical _____

Other _____

Road Construction _____

Surface work _____

Underground work _____

Drilling \$43,071.00

Logging _____

Sampling } \$2,873.48

Testing } _____

Reclamation \$3,336.00

Other work _____

Other expenditures \$42,971.85

Total value of work reported \$ 93,939.89

Comments:

Value of work approved \$ 93,939.89

Signature: *KRC James*
Senior Inspector of Mines

Date Jan 7/76

Accepted: *J. Baul*
Chief Geologist
Mineral Production Branch

Date Jan 8/76

1975 REPORT OF EXPLORATION ACTIVITIES

on the EAST MOUNT GETHING PROPERTY

Coal licenses 3506 to 3529

in the LIARD MINING DIVISION

35 miles northwest of Chetwynd, B.C.

56° 02'N, 122° 20'W

Owned by: Utah Mines Ltd.

by

D.N. le Nobel, P.Eng.

and R.H. Karst

of Utah Mines Ltd.

1600-1050 West Pender Street

Vancouver, B.C.

V6E 3S7

Work performed between 21st April and 18th May, 1975

10 DEC 1975

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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REPORT OF EXPLORATION ACTIVITIES

EAST MOUNT GETHING PROJECT

1975

ABSTRACT

During April and May of 1975, Utah Mines Ltd., a wholly owned subsidiary of Utah International Incorporated, conducted a diamond core drilling program on their East Mount Gething block of coal licences located near the W.A.C. Bennett Dam in northeastern British Columbia. This progress report provides additional information with alteration of previous ideas resulting from the 1972 and 1973 programs.

The 1975 program was designed to test the lower part of the coal-bearing Lower Cretaceous Gething Formation for economically mineable coal seams, particularly the Grant Seam, located near the top of the lower half of the section. This coal bed is exposed in the nearby Peace River Canyon and prior to 1975 was thought to have been intersected once at the top of drill hole EMG 73-3.

One thousand one hundred and fifty (1,150) stratigraphic feet of Gething Formation and three hundred (300) feet of Cadomin Formation was cored by drilling three (3) test-holes for a total of two thousand four hundred and twenty-nine (2,429) feet. Two (2) holes spudded into the Gething Formation approximately one hundred and fifty (150) feet below the base of the overlying Moosebar shale to test the upper part of the section and one hole spudded in one thousand three hundred (1,300) feet below the Moosebar shale to test the lower part of the section.

Subsequent work on the data, with supporting field mapping indicates the drill hole data prior to the 1975 field season may have been improperly correlated. ✓ Present data suggests the lower half of the Gething Formation was not drilled in 1973 as suspected. However, the 1975 program partially completed this objective and drilling to date has likely tested close to the maximum thickness of coal-bearing formation available on the property.

PROPERTY

Twenty-four (24) coal licences, Number 3506-3529 inclusive, for a total of 17,149 acres (Figure 1) comprise the East Mt. Gething property. These licences were acquired through negotiated agreement in late 1970.

Details as to the ownership and interests concerning the licences are not contained in this report. Utah Mines Ltd. is the owner of the licences at this time and has all available information concerning working agreements.

LOCATION AND ACCESS

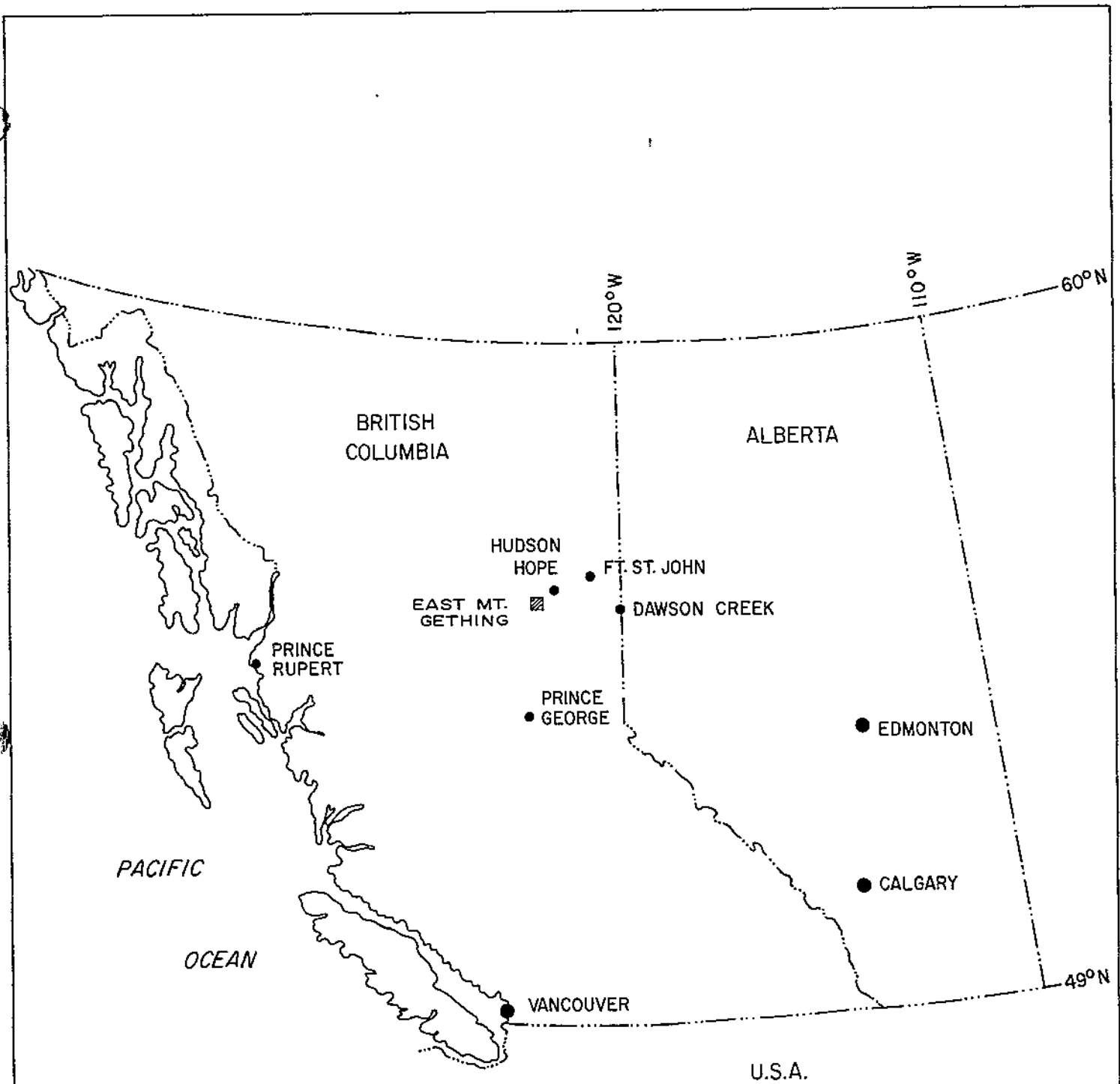
The property lies adjacent to Williston reservoir in northeastern British Columbia or one mile west of the W.A.C. Bennett Dam. (Figure 2) Geographically, it is 480 miles north of Vancouver, 80 miles due west of Fort St. John and 35 miles northwest of Chetwynd. The property lies within the Hudson's Hope District Municipality. Latitude and longitude for the center of the licence block is $56^{\circ} 02'N$ and $122^{\circ} 20'W$, respectively.

An all weather paved road extends from both Dawson Creek and Fort St. John to within two miles of the southeast corner of the coal licenced property. An existing exploration road in the southeast section of the licenced area from the vicinity of W.A.C. Bennett Dam to Gaylard Creek is also present. Access to all drill sites on the property is by helicopter or trail only.

1973 FIELD SEASON

LOGISTICS

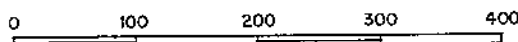
The isolated nature of the property with regards to road access and the anticipated short exploration program did not warrant



EAST MT. GETHING

LOCATION MAP

FIGURE 2



SCALE IN MILES

PR-EMG 75(1)A



Photo 1: A view looking towards the East Mount Gething area. The licence block is located over the slope in the foreground of the mountain.

constructing a field camp on the property. All personnel were accommodated in the town of Hudson Hope, fifteen (15) miles east of the property.

A B-1 helicopter was contracted for the duration of the program to mobilize personnel to and from the area. Drill targets plotted on aerial photos were located by helicopter from the air. It was necessary to fell timber at these targets and construct drill platforms to facilitate mobilization of the drilling equipment onto the platform by 204B and S55T helicopters. A Longyear "44" Diamond Drill producing 2 1/2" (HQ) drillcore was utilized for the drilling.

Men and equipment were mobilized to the property on April 21st. Drilling began with the spudding of DH 75-4 on April 27th. By May 18th, three (3) core-holes totalling 2429 feet had been completed, equipment removed from the property, and felled timber bucked according to British Columbia Forestry specifications.

GEOLOGY

The geology of the Peace River Canyon area is not described in detail in this report. Numerous excellent descriptions of the various rock formation are contained in the referred literature. However, a few comments with regard to both the general stratigraphy and structure follow.

STRATIGRAPHY

The exposed bedrock in and near the Peace River Canyon consists mostly of Lower Cretaceous Formation. Studies by noted geologists have shown the difficulty in defining stratigraphic relationships for these sediments. Numerous alternative nomenclature systems have been proposed. Some of these systems are illustrated on Table 1. The nomenclature of Stott, 1971, has been used in this report.

Cadomin Formation

The Cadomin Formation is the oldest formation occurring in the East Mount Gething area. The Cadomin Formation consists mainly of a succession of massive, crossbedded, coarse-grained, grey to brown weathering, conglomeratic sandstones and fine conglomeratic beds. Interbedded with these conglomeratic units are thin beds of buff-weathering, soft, fine-grained sandstone, dark carbonaceous shales, and thin coaly seams. Some beds consist entirely of conglomerate with sub-rounded pebbles of dark chert, white quartz, and quartzite strongly cemented in a matrix of coarse to medium-grained sandstone.

Coarse sandstones of Cadomin Formation grade laterally into interbedded coal, sandstone, and shale of the Gething Formation. The two formations are, therefore, in part lateral equivalents, although, in general, the Cadomin underlies the Gething.

Gething Formation

The Gething Formation directly overlies the Cadomin Formation. In general, the Gething Formation consists of interbedded mudstones, coals, siltstones, and sandstones. (See lithologic logs in pockets at rear of report). The sandstones are usually in thin units and the frequent repetitions of these units are a characteristic feature of the Gething. The thickness of the Gething Formation in the Peace River Canyon is believed to be approximately 1,600 feet to 1,800 feet. A detailed description of the Gething Formation of the Peace River Canyon area has been published by Stott, 1969. It is the coal beds of the Gething Formation that are the objective of the coal exploration activities being carried out in the Peace River area. These coal beds vary in thickness from a few inches up to ten to fifteen feet with isolated occurrences of greater thicknesses being reported.

TABLE 1
 LOWER CRETACEOUS
 FORMATIONAL NOMENCLATURE

PEACE RIVER CANYON AREA

STOTT 1971 (This Report)			BEACH & SPIVAK 1944	MATHEWS 1947	HUGHES 1964	McLEARN 1923	
FORT ST. JOHN GROUP	COMMOTION FM.	BOULDER CRK. MB.	GATES FM.	GATES FM.	COMMOTION FM.	FORT ST. JOHN GROUP	GATES FM.
		HULCROSS MB.					
GATES MB.							
MOOSEBAR FM.		MOOSEBAR FM.	MOOSEBAR FM.	MOOSEBAR FM.	MOOSEBAR FM.	MOOSEBAR FM.	
BULLHEAD GROUP	GETHING FM.	GETHING FM.	NON-MARINE BULLHEAD	BULLHEAD SUCCESSION	CRASSIER GROUP	BULLHEAD MOUNTAIN FORMATION	GETHING FM.
	CADOMIN FM.	DUNLEVY FM.					BRENOT FM.
MINNES GP.	MONACH FM.	DUNLEVY FM.	MARINE BULLHEAD	BULLHEAD SUCCESSION	BEAUDETTE GROUP	BULLHEAD MOUNTAIN FORMATION	MONACH FM.
	BEATTIE PEAKS FM.						BEATTIE PEAKS FM.
	MONTEITH FM.						MONTEITH FM.
	MONTEITH FM.						MONTEITH FM.
		LOWER MB.					

Moosebar Formation

The Moosebar Formation directly overlies the Gething Formation. The Moosebar Formation has been removed by erosion from the East Mount Gething area, but is present approximately three (3) miles southward from the property's southern boundary.

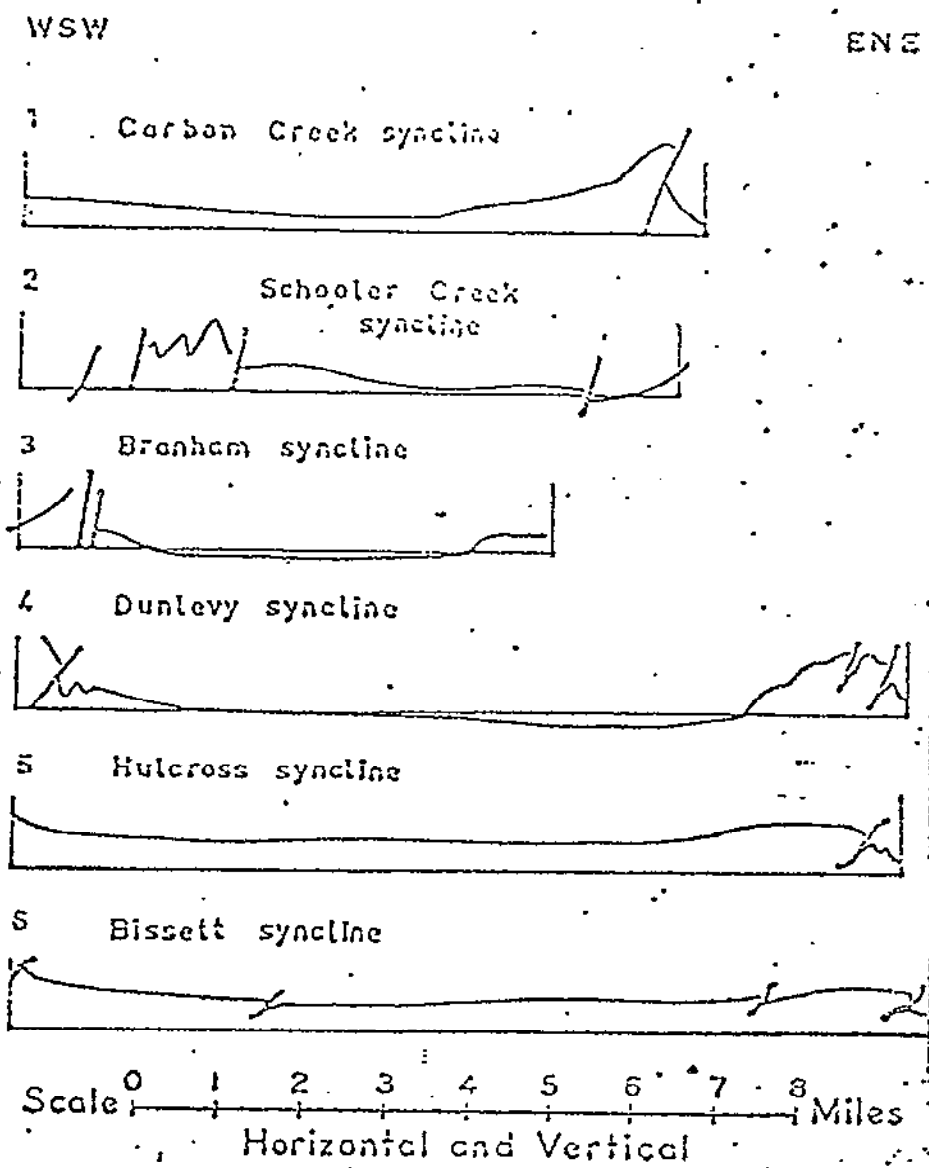
The formation consists of a monotonous sequence of dark grey to black friable shale. In places, thin layers of clayed ironstone occur and a few thin sandstone lenses are present in the upper part of the formation. The formation has been measured at 1,336 feet by Beach and Spivak, 1944, on Track Creek.

STRUCTURE

The East Mount Gething coal licences lie within the foothills structural belt of the Rocky Mountains. The structural belt extends from the United States border to the Yukon along the east side of the Rocky Mountains. It is characterized by a series of anticlines, synclines and west-dipping thrust faults. The intensity of deformation varies from one area to another and the Peace River area is characterized by a particular structural style. This structural pattern has been well illustrated by Hughes, 1967, (Figure 3) with detailed discussions by Irish, 1969, and Fitzgerald, 1968. Essentially, the Peace River area consists of a large relatively broad syncline between sharply faulted anticlines. (See Figure 4)

In Figure 4 a prominent anticline is shown on the west side of the East Mt. Gething block, while on the east side of the map, west dip is prominent. The axis of Dunlevy Syncline is shown by the heavy dashed line through the property. The East Mt. Gething property occupies part of the western flank of the Dunlevy Syncline, south of the Williston Reservoir. Geological field work has confirmed the gentle dipping of the syncline which is illustrated in cross sections A-B and C-D, Figure 4.

FIGURE 3



Structural Styles, Peace River Area (Hughes 1967)

PR-ENG 75(1)A

RESULTS OF EXPLORATION WORK - 1975

GENERAL DISCUSSION

The 1972, 1973 and 1975 exploration programs in the East Mount Gething area have intended to evaluate the block of licences for economically recoverable metallurgical grade coal.

Two (2) diamond core holes in 1972 tested the upper part of the Lower Cretaceous coal bearing Gething Formation. A third core hole in 1973 supposedly tested the lower half of the formation. The results of both programs indicated a poor potential for the development of an economic mining venture. It was concluded that no further work be done on the property.

Contrary to the aforementioned remarks, the lack of conclusive data, together with favorable market changes in the coal industry during the interim 1974 period, prompted a further evaluation of the property in 1975.

A program was designed to test the lower part of the Lower Cretaceous Gething Formation for economically mineable coal seams, particularly the Grant Seam, located near the top of the lower half of the section. This seam is exposed in the nearby Peace River Canyon and, prior to 1975, was thought to have been cored once at the top of drill hole 73-3.

Two (2) core holes were planned to accomplish a test of this seam and the lower half of the formation and one hole was planned to test again the upper half of the formation. A change in plans midway through the field program altered the drill hole locations. As a result, two (2) holes tested the upper part of the section and one hole tested the lowest part of the section.

RESULTS

One thousand one hundred and fifty (1,150) feet of Gething Forma-



Photo 2: Drillhole EMG 75-6.

tion was cored by drilling three (3) test holes totalling two thousand four hundred and twenty-nine (2,429) feet. Drill holes 75-5 and 75-6 spudded into the section approximately one hundred and fifty (150) feet below the base of the overlying Moosebar Shale. Drill hole 75-4 spudded in one thousand three hundred (1,300) feet below this contact and appeared to bottom in conglomeratic sandstone typical of the Cadomin Formation. The bottom three hundred (300) feet of this hole is tentatively labelled as the Cadomin Formation.

Subsequent work on the data, with supporting field traverses, indicated drill hole 73-3 was mis-correlated prior to 1975. (See East Mount Gething, Report of Exploration Activities, 1973, Figure 4). The present correlation of this hole into the section is not a good fit (with regards to coal and gamma ray comparison) compared to drill holes 72-1, 72-2, 75-4, 75-5 and 75-6, but structural control and photogeological work indicates this to be the most likely position of hole 73-3 within the section. The seam previously designated the Grant Seam of the lower half of the section has now been re-correlated to a coal horizon higher in the section. (See Figure 5 this report) However, this re-correlation with the addition of the 1975 data indicated the target "Grant" seam was still cored, but in drill hole 75-5 and possibly the base of 73-3. The foregoing conclusions, mainly seam nomenclature assume the East Mount Gething group of test holes are properly correlated to sections measured by the Geological Survey of Canada in the Peace River Canyon.

One thousand two hundred and seventy feet (1,270') of Gething Formation and three hundred feet (300') of Cadomin Formation have now been drilled to date on the property. Results indicate the stratigraphically highest section of Gething Formation available on the licences has been drilled and the lowermost section and some Cadomin Formation has been tested. Assuming correct drill hole correlation, both as a group and to published data, two hundred feet (200') of Gething section, which includes the Riverside,

Knight and Twin coal seams remain to be drilled on the property.

The results of the core holes follows. Strip logs and geo-physical logs for these test holes are located in the back of this report.

CORE HOLE	EMG 75-4
COAL LICENCE	3528
LOCATION	1,000' FWL X 3,250' FNL
ELEVATION	3,350'
TOTAL DEPTH	637'

<u>COAL SAMPLE</u>	<u>BED NAME</u>	<u>THICKNESS</u>	<u>DEPTH</u>
1	?	1.9	164.1
2	Murray ?	2.7	214.0
3	?	1.2	231.5

CORE HOLE	EMG 75-5
COAL LICENCE	3516
LOCATION	1,000' FWL X 300' FNL
ELEVATION	2,950'
TOTAL DEPTH	945'

<u>COAL SAMPLE</u>	<u>BED NAME</u>	<u>THICKNESS*</u>	<u>DEPTH</u>
1	Little Mogul	2.8 / <u>3.1</u>	180.5-190.7 190.0-192.6
2	?	2.6	308.0
3	Milligan	2.0	336.6
4	Louise	3.8/4.7	461.9-463.1 463.8-465.0 465.2-466.6
5	?	2.3	902.7

* x/y, x = net thickness of seam, y = gross thickness

gross thickness = thickness of coal plus shale split thickness.

CORE HOLE EMG 75-6
 COAL LICENCE 3511
 LOCATION 1,500' FNL X 0' FWL
 ELEVATION 2,850'
 TOTAL DEPTH 847'

<u>COAL SAMPLE</u>	<u>BED NAME</u>	<u>THICKNESS</u>	<u>DEPTH</u>
1	Gething	4.7/5.1	55.8-59.9 60.3-60.9
2	?	2.1	101.2
3	Little Mogul	2.2	222.6
4	?	2.3	268.7
5	Milligan	3.1	365.5
6	Louise	3.1	473.9
7	?	1.3	488.0
8	Ferro Point	1.3?	510.8

Table II summarizes statistics for the major coal seams cored to date since exploration work began on the property in 1972.

It is evident from the revised correlation that certain seams were cored in more than one drill hole. Again, it should be emphasized that a seam labelled "Murray", for example, may, in fact, not be the Murray seam. Drill holes can be correlated to one another so the identical nomenclature of seams from different test holes infers primarily continuity and correlation. The nomenclature arises after the test holes are correlated as a group to published data on the surrounding area.

ASSAYS

All cored coal samples one foot thick and greater were analyzed for their various properties. The head analysis for the cored coal samples tested from the East Mount Gething area are summarized in Tables III, IV and V. The samples were submitted to Utah International Inc. laboratories in Palo Alto, California

TABLE II
SUMMARY OF STATISTICS
FOR MAJOR COAL SEAMS CORED TO DATE

	<u>DRILLHOLE</u>					
	1	2	3	4	5	6
LOUISE SEAM*						
Thickness	1.7	3.9/5.2**	0.8	nd***	3.8/4.7	4.0/5.2
Depth to coal top	168.6	503.3	340.7	nd	461.9	471.8
MILLIGAN SEAM						
Thickness	1.9	3.8	2.5	nd	2.0	3.1
Depth to coal top	49.2	378.4	195.6	nd	336.6	365.5
LITTLE MOGUL SEAM						
Thickness	nd	2.4	1.2	nd	2.8/3.1	2.2
Depth to coal top	nd	227.4	65.6	nd	189.5	222.6
GETHING SEAM						
Thickness	nd	(2)	nd	nd	(3)	4.7/5.1
Depth to coal top	nd	(2)	nd	nd	(3)	55.8
FERRO POINT						
Thickness	1.0	1.0	1.9/2.7	nd	0.9	1.4
Depth to coal top	203.8	537.0	372.3	nd	495.6	510.8

*See remarks under section headed "RESULTS"

** $3.9/5.2 = \frac{\text{net seam thickness}}{\text{gross seam thickness}}$

-where gross thickness equals net thickness plus thickness of shale partings

***nd indicates the drillhole did not penetrate this particular zone of the Gething Formation

(1) A 6.4 foot seam at a depth of 122.6 was cored in this hole. It has not been correlated as yet, to other seams in the area.

(2) The Gething seam was triconed but not cored and recovered in DH 72-2. It appears on the gamma ray log near the glacial till-bedrock interface. Thickness and depth are 4.5 and 58.0 feet respectively.

(3) The Gething seam has been glacially eroded in the vicinity of DH 75-5.

for Free Swelling Indices and proximate natural and dry basis analysis.

CONCLUSIONS AND RECOMMENDATIONS

The fluvial-deltaic nature of deposition or constantly fluctuating depositional environment of the Lower Cretaceous Gething delta has resulted in varying cyclic lithologies, from one area to the next at any given point in time. Combining this with the drill hole spacing of one mile, and the proximity of the test holes as a group to the nearest measured section of Gething outcrop, three (3) miles away, raises some doubt as to the correlation of this data to published data.

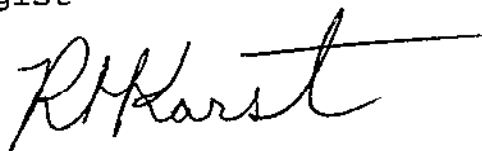
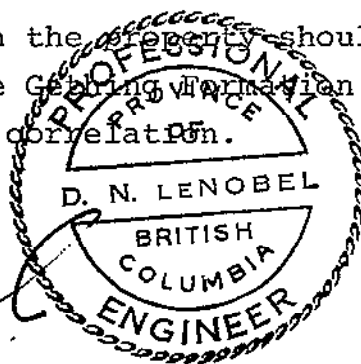
In any event, the number and thickness of coal seams and associated areal extent do not indicate potential for an economic mining venture producing metallurgical grade coal from the section of Gething Formation tested to date.

However, a complete picture and final conclusion on this property cannot be made until that zone of untested Gething Section is drilled and the data incorporated into the present information.

Further programs on the property should be directed towards the central zone of the Gething Formation and completion of a conclusive drill hole correlation.



D.N. Le Nobel, P.Eng.,
Geologist



R.H. Karst,
Geologist

10TH DECEMBER, 1975.

REFERENCES

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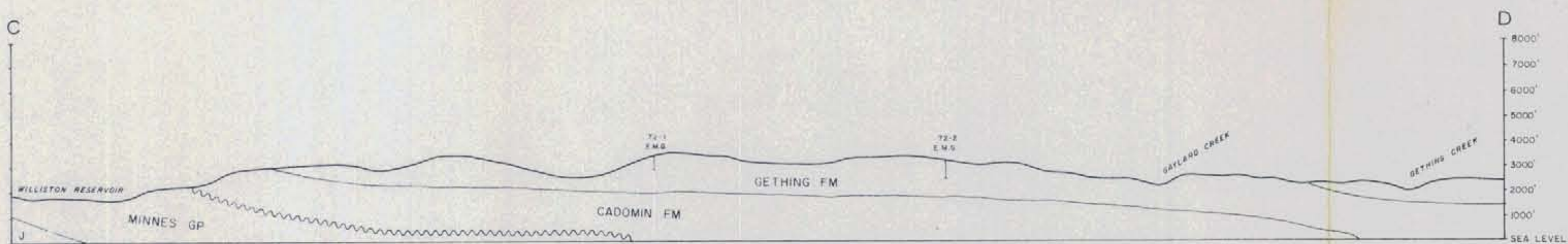
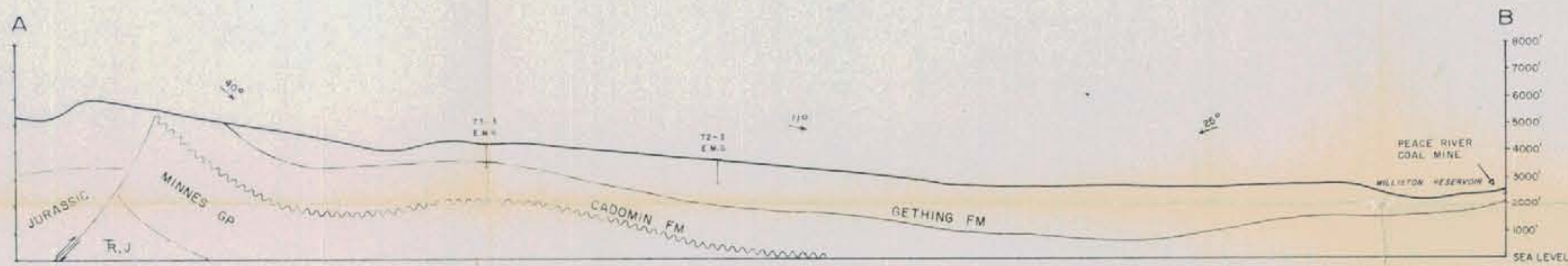
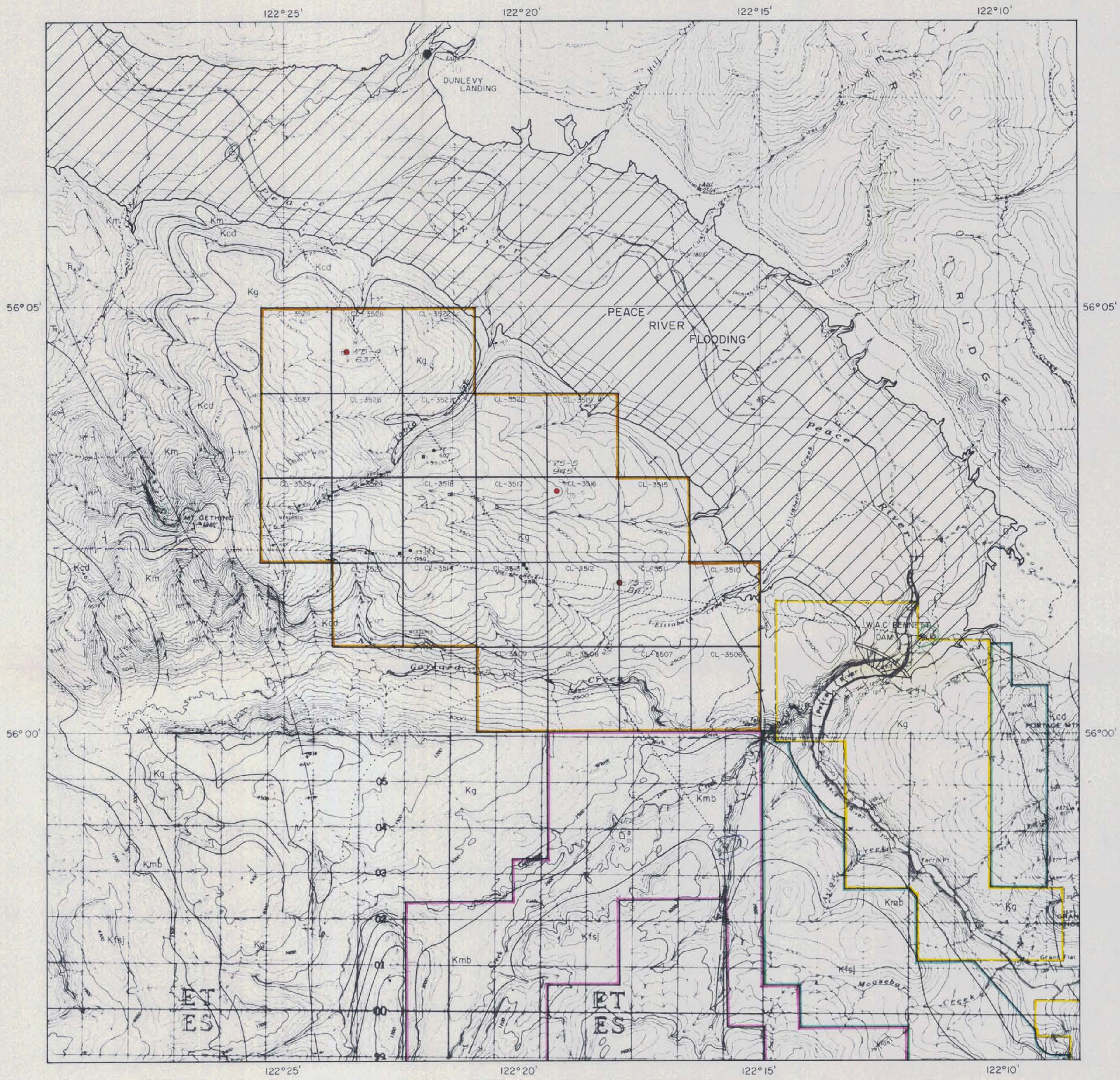
APPENDIX A

STATEMENT OF QUALIFICATIONS

R. KARST

The diamond core recovered from drill holes EMG 75-4, 75-5 and 75-6 was logged by either or both of the two (2) geologists who worked on the property. They were:

- a) D.N. le Nobel, P.Eng., Geologist
- b) R, Karst, B.Sc., Graduated from the Faculty of Science, in the discipline of Geology from the University of Alberta in 1974. One year experience as a field geologist on coal properties. He has worked in Alberta and British Columbia.



LEGEND

RECENT	Qol	STREAM ALLUVIUM
UPPER CRETACEOUS	Kdu	SANDSTONE & CONGLOMERATE DUNVEGAN FORMATION
FORT ST JOHN GROUP	Kfsj	FORT ST JOHN GROUP UNDIVIDED
	Kmb	MOOSEBAR SHALE
LOWER CRETACEOUS	Kg	COAL, SANDSTONE & MUDSTONE GETHING FORMATION
	Kcd	SANDSTONES, SHALES & CONGLOMERATES CADOMIN FORMATION
MINNES GROUP	Km	SANDSTONES, SHALES & MINOR COALS MINNES GROUP UNDIVIDED
		UNCONFORMITY

GEOLOGY

- FORMATION BOUNDARY
- ⊕ ANTICLINE
- ⊖ SYNCLINE
- ⊥ THRUST FAULT
- STRIKE and DIP - PUBLISHED
- STRIKE and DIP - MEASURED
- COAL MINE - ABANDONED
- DRILL HOLE
- ROADS - EXISTING

COAL LICENCES

- UTAH MINES LTD.
- CINNABAR PEAK MINES LTD.
- BOW RIVER RESOURCES and RAHNER ENERGY RESOURCES INC.
- COAL ALIENATED

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PR-EMG 75(2)A

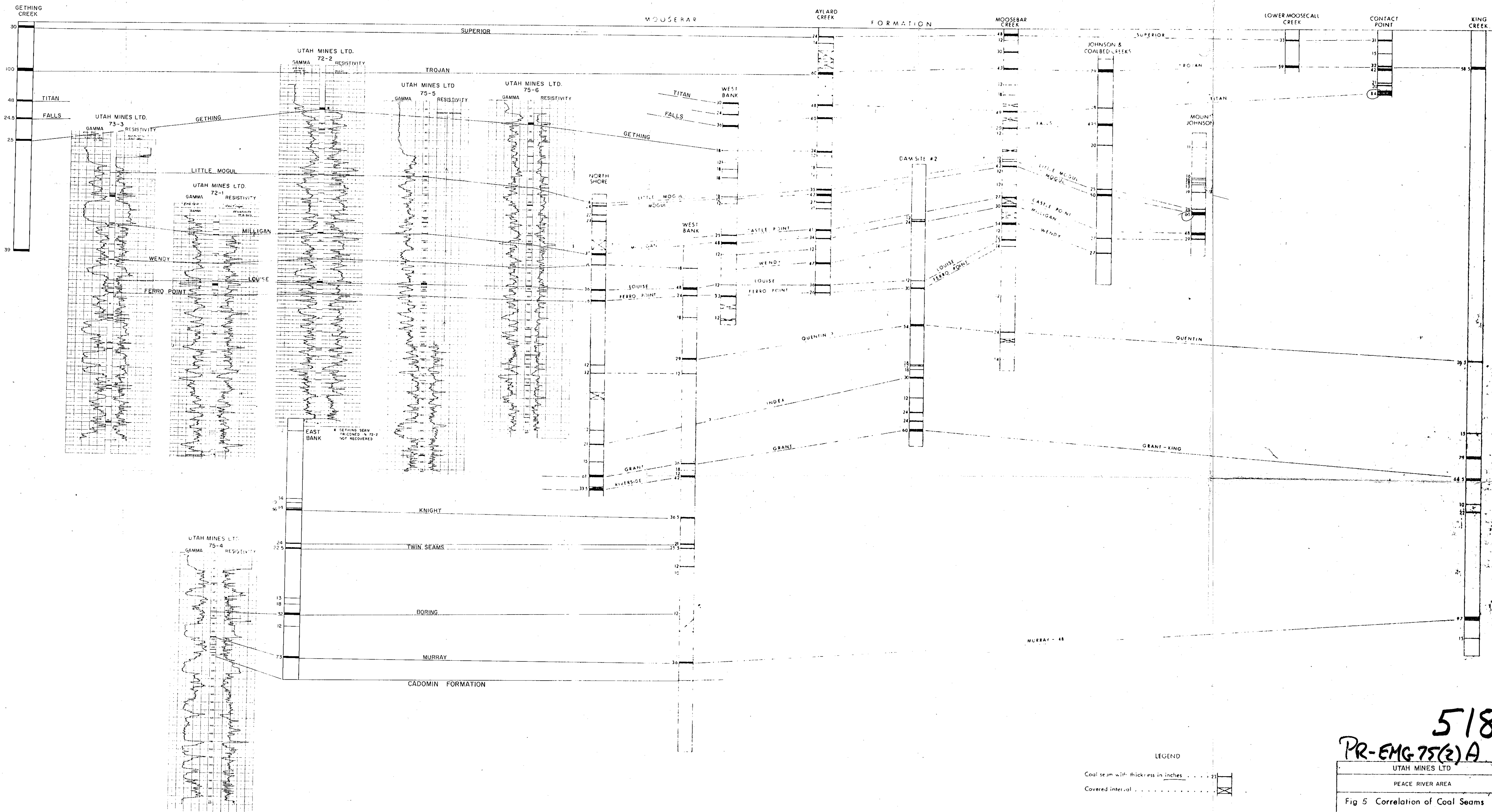
FIGURE 4

UTAH MINES LTD.
EXPLORATION DEPARTMENT
VANCOUVER BRITISH COLUMBIA

EAST MT. GETTING
GEOLOGY & LICENCE LOCATION

Work by: D.N. LE NOBEL	Date: NOVEMBER 1975	NTS Ref: 34.6/1
Drawn by: GAIL SMEETON	Revised:	Scale: 1:50,000

SCALE IN MILES



LEGEND
 Coal seam with thickness in inches
 Covered interval

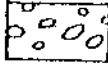
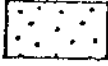

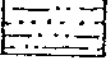
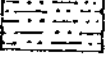
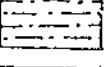
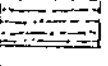
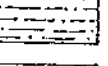
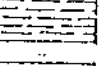
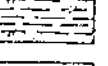
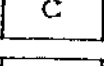
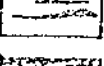
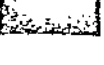
This chart has been modified and amplified from data by McLearn (1923), McLean and Kindle (1950), B.C. Hydro drilling in 1958, and Stott (1968) and (1969).
 Most coal seams less than 12 inches thick have been omitted.



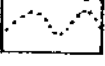
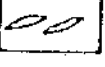
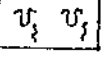
518

PR-EMG 75(2) A

UTAH MINES LTD	
PEACE RIVER AREA	
Fig 5 Correlation of Coal Seams	
EAST MT. GETHING PROJECT	
100	200
VERTICAL SCALE IN FEET	
NOVEMBER 1975	

LEGEND

-  Conglomerate
-  Med. gr. sandstone
-  V.f. - fine grain sandstone
-  Silty sandstone
-  Sandy siltstone
-  Siltstone
-  Muddy siltstone
-  Silty mudstone
-  Mudstone
-  Carbonaceous mudstone
-  Coal, coaly or carbonaceous debris
-  Coaly streaks
-  Coal

-  Small cross-beds
-  Large cross-beds
-  Contorted bedding
-  Pelecypods
-  Burrows

~~CONFIDENTIAL~~
CONFIDENTIAL
FILE

75-4

JTAH MINES LTD.
DRILL & CORE LOG

HOLE NO. EMG 75-4

HOLE NO. EMG 75-4

LOG BY DN/EN

ELEV 3350 ±

HOLE SIZE HQ 2 1/2

PROJECT East Mt. Getting

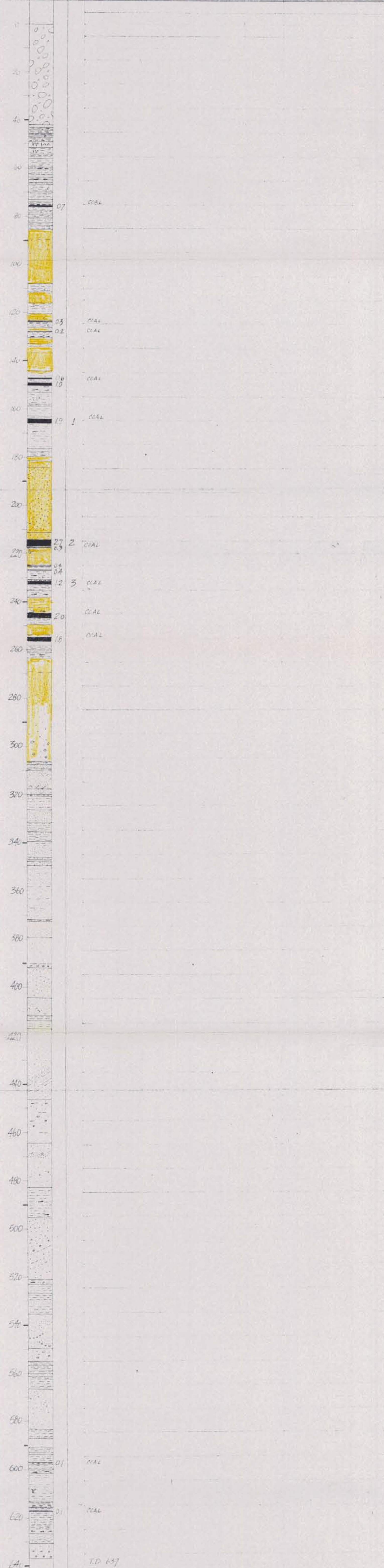
DATE April 30, 1975

AIR WATER

LEASE 3528

REC	DEPTH	STRIP LOG	THICK	SAMPLE NO.
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LITHOLOGY



518

PR-EMG 75(3)A

HOLE NO. *EMG 75-5*

HOLE NO. *EMG 75-5*

LOG BY *DN leNobel*

ELEV *2950±*

HOLE SIZE *HQ 1 1/2"*

PROJECT *East Mt Getting*

DATE *May 5 1975*

N

AIR WATER

LEASE *3516*

DEPTH

STRIP LOG

T.D. *345* P.D.

SEC T R

DEPTH	STRIP LOG	THICK	SAMPLE NO	LITHOLOGY
0				
20				
40				
60				
80				
100				
120				
140				Casing to 135'
150				Rhyolite
160				7
170				Calcrete in fract @ 175.0
180				Coal 28/31
190		12	1	
200		0.1		pyritic coal
210		0.1		
220		0.4		
230		0.6		Rhyolite 241.0 & 243.3
240				Calcareous sst laminae 254-261.0
250		0.3		Calcrete fract @ 271.3
260		0.9		
270		2.6	2	Calcrete fract @ 319.7 to 320
280		0.3		Calcareous marl 331.6
290		2.0	3	
300		0.8		
310		0.4		
320		1.0		soft & pepper text
330				Calcrete fract @ 377.0
340				
350		1.2	4	38.47
360		0.8		
370		0.3		
380		0.9		
390		0.5		Calc vit @ 10' CA @ 516.0
400		0.3		6
410				
420		0.4		
430		0.1		White mica @ 582
440		0.8		
450		0.5		
460		0.9		Carbonate v/s & fract. 637.0-637.6
470		0.4		
480		0.3		
490		0.7		Numerous <u>ultram</u> buttons
500		0.7		
510				
520				Carbonate v/s 803-805.4
530		0.4		
540		0.1		
550		2.3	5	
560				
570				
580				
590				
600				
610				
620				
630				
640				
650				
660				
670				
680				
690				
700				
710				
720				
730				
740				
750				
760				
770				
780				
790				
800				
810				
820				
830				
840				
850				
860				
870				
880				
890				
900				
910				
920				
930				
940				T.D. 945

518

UTAH MINES LTD.
DRILL & CORE LOG

75-6

HOLE NO. EMG 75-6

HOLE NO. EMG 75-6

LOG BY: D.N. LeNobel

ELEV: 2950

HOLE SIZE: HQ 3 25/32

PROJECT: East Mt. Gethung

DATE: May 10 1975

N: _____

AIR WATER

LEASE: _____

W. REC. _____

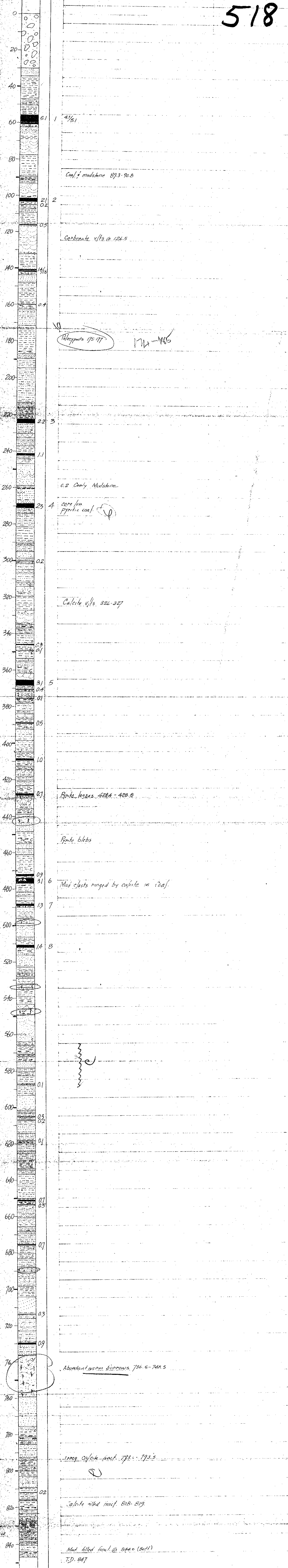
E: _____

T.D. 847

SEC. _____ T. _____ R. _____

DEPTH	STRIP LOG	THICK	SAMPLE NO.	LITHOLOGY
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518



PR-EMG 75(3)A

HOLE NO.

Widco WELL LOG

COMPANY Utah Mines Ltd.
 AREA East Mount Getting
 WELL 75 - 4
 COUNTY STATE British Columbia

518

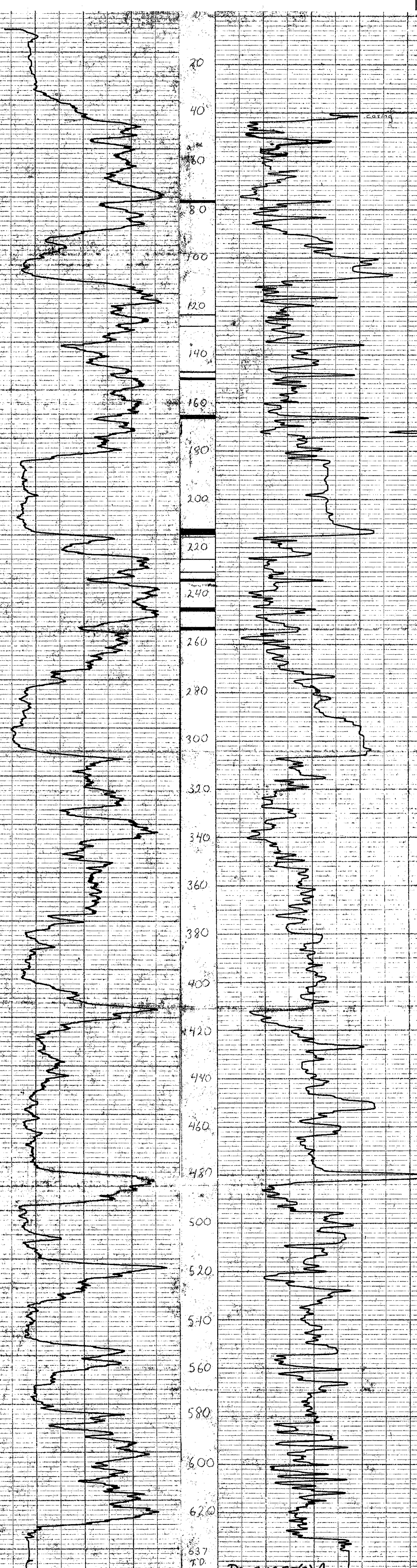
COORDINATES C.L. 3528
 N 1000' P.M.E. X
 S 3250' P.M.E.
 ELEVATION:
 D.F.
 K.B.
 G.I. 3350 ±

COMPANY Utah Mines Ltd.
 WELL 75 - 4
 LOCATION EAST MOUNT GETTING

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	April 30, 1975				
First Reading	637'		Nature		
Last Reading	42'		Density		
Footage Logged	595'		Viscosity	@ °F	@ °F
Bottom (Driller)			Res. @ BHT	@ °F	@ °F
Casing (From Log)			pH		
Casing (Driller)			Circ. Temp.		
Casing Size	4 1/2"		B.H. Temp.		
Bit Size:					
Bit Size:					
			Logged by	D.S. Le Nobel	
			Witnessed by	P. KIRST	

REMARKS:

Gamma 200/SIC
 219 12/13
 Resistivity
 200 OHMS/ft



PR-EMG-75(3)A

75-5

Widco WELL LOG

COMPANY Utah Mines Ltd.
 AREA 75-5
 WELL East Mount Gething
 COUNTY _____ STATE British Columbia

518

COORDINATES, C.L. 3516
 N 1300' INT. X
 S 300' FNL.
 ELEVATION:
 D.F. _____
 K.B. _____
 G.I. 2950 ±

COMPANY Utah Mines Ltd.
 WELL 75-5
 LOCATION East Mt. Gething

Date	Run No. 1	Run No. 2	MUD	Run No. 1		Run No. 2	
First Reading	May 3, 1975		Nature				
Last Reading	2.151		Density				
Footage Logged	137		Viscosity	@	OF	@	OF
Bottom (Driller)	666		Resistivity	@	OF	@	OF
Casing (From Log)			Res. @ BHT	@	OF	@	OF
Casing (Driller)			pH				
Casing Size	4 1/2"		Circ. Temp.				
Bit Size:			B.H. Temp.				
Bit Size:			Logged by	D.N. le Nobel			
			Witnessed by	R. Karst			

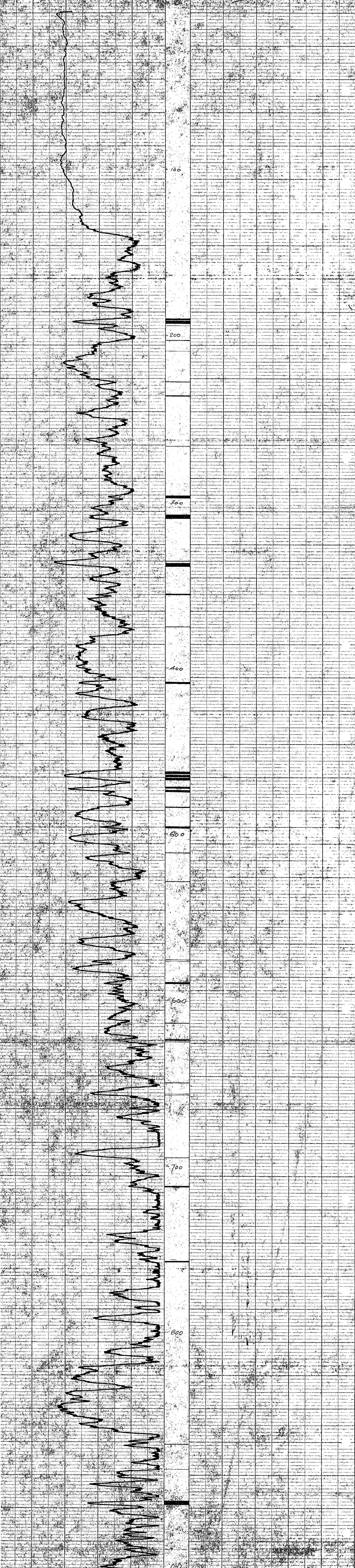
REMARKS

* Reg. U.S. Pat. Off.

Gamma
 37C/51C
 .010 MR/HR

CO 139

75-5



PR-ENG 75(3)A

75-6

UTAH MINES LTD. 412-510 WEST HASTINGS

Widco WELL LOG

COMPANY Utah Mines Ltd.
 AREA East Mount Bethune
 WELL 75-6
 COUNTY STATE British Columbia

518

COORDINATES: C.L. 3511
 N 1000' 00"
 S 400' 00"
 ELEVATION:
 D.F.
 K.B.
 G.L. 2250 ±

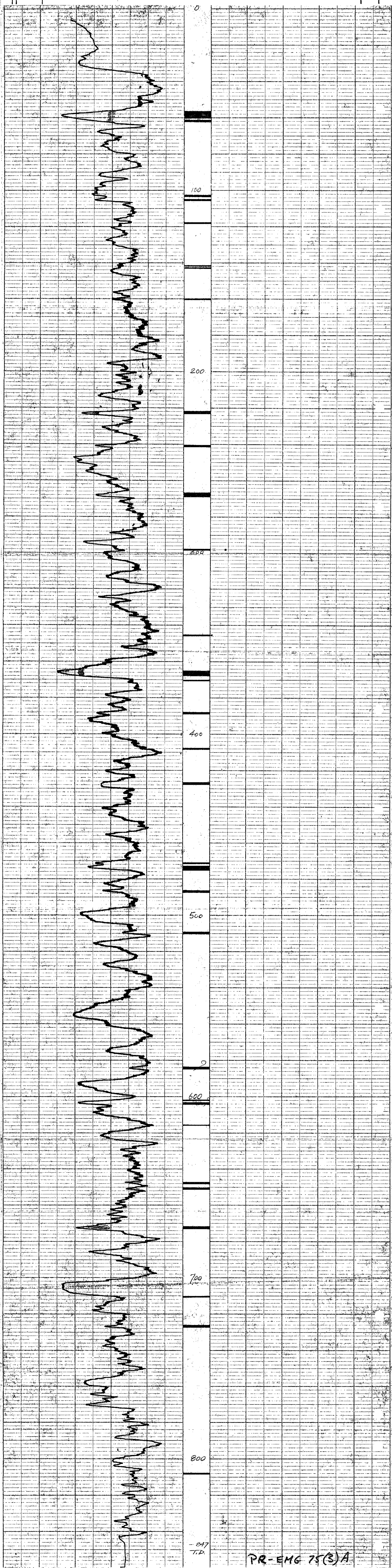
COMPANY
 WELL
 LOCATION

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	May 15, 1975		Nature		
First Reading	720'		Density		
Last Reading	70'		Viscosity	@ °F	@ °F
Footage Logged	510'		Resistivity	@ °F	@ °F
Bottom (Driller)			Res. @ BHT	@ °F	@ °F
Casing (From Log)			pH		
Casing (Driller)			Circ. Temp.		
Casing Size	4 1/2"		B.H. Temp.		
Bit Size			Logged by	M. J. In 1975	
			Witnessed by	S. Barst	

REMARKS

* Reg. U.S. Pat. Off.

FO-139



PR-EMG 75(3)A

TABLE III

EAST MT. GETHING

HEAD ANALYSIS OF COAL SAMPLES

FROM DRILLHOLE CORE-HOLE 75-4

CONFIDENTIAL

Sample No.	Depth	No. of Feet	Grams Received	Air Dry Basis							Moisture Free Basis				
				%H2O	%Ash	%S	%VM	%FC	Btu	FSI	%Ash	%S	%VM	%FC	Btu
1	164.1'-166.0'	1.9	1278	0.96	21.87	0.63	20.56	56.61	11777	4 1/2	22.08	0.64	20.76	57.16	11891
2	214.0'-216.7'	2.7	388	0.92	8.50	0.77	27.02	63.56	13893	8 1/2	8.58	0.78	27.27	64.15	14022
3	231.5'-232.7'	1.2	1165	1.26	6.99	0.81	23.66	68.09	14019	5 1/2	7.08	0.82	23.96	68.96	14198

TABLE IV

EAST MT. GETHING

HEAD ANALYSIS OF COAL SAMPLES

FROM DRILLHOLE EMG 75-5

Sample No.	Depth	Feet	Grams Received	Air Dry Basis							Moisture Free Basis				
				%H2O	%Ash	%S	%VM	%FC	Btu	FSI	%Ash	%S	%VM	%FC	Btu
1	189.5'-192.6'	3.1	2031	2.15	3.69	0.91	24.23	69.93	14093	1	3.77	0.93	24.76	71.47	14403
2	308.0'-310.6'	2.6	2645	1.59	13.82	0.91	22.93	61.66	12630	1 1/2	14.04	0.92	23.30	62.66	12843
3	336.6'-338.6'	2.0	2297	2.08	5.91	0.79	23.11	68.90	12433	1 1/2	6.04	0.81	23.60	70.36	12697
4	461.9'-466.6'	4.7	4545	1.75	13.65	0.62	23.60	61.00	12683	1 1/2	13.89	0.63	24.02	62.09	12909
5	902.7'-905.0'	2.3	2019	1.21	7.37	0.85	26.76	64.66	13996	3	7.46	0.86	27.09	65.45	14167

TABLE V
EAST MT. GETHING
HEAD ANALYSIS OF COAL SAMPLES
FROM DRILLHOLE EMG 75-6

Sample No.	Depth	No. of Feet	Grams Received	Air Dry Basis						Moisture Free Basis					
				%H2O	%Ash	%S	%VM	%FC	Btu	FSI	%Ash	%S	%VM	%FC	Btu
1	55.8'-60.9'	5.1	3779	1.85	5.77	0.76	25.06	67.32	13902	1 1/2	5.88	0.77	25.53	68.59	14164
2	101.2'-103.3'	2.1	737	1.70	4.07	0.83	24.70	69.53	14442	1 1/2	4.14	0.84	25.13	70.73	14692
3	222.6'-224.8'	2.2	1972	1.83	11.81	0.98	27.39	58.97	13024	1	12.03	1.00	27.90	60.07	13267
4	268.7'-271.0'	2.3	957	1.07	6.65	1.05	29.17	63.11	13944	1	6.72	1.06	29.49	63.79	14095
5	365.5'-368.6'	3.1	2376	1.89	5.27	0.76	20.54	72.30	14031	1 1/2	5.37	0.77	20.94	73.69	14291
6	473.9'-477.0'	3.1	2731	1.12	25.27	0.58	31.13	42.48	10044	1 1/2	25.56	0.59	31.48	42.96	10158
7	488.0'-489.3'	1.3	1035	1.51	3.90	0.81	20.28	74.31	14404	1	3.96	0.82	20.59	75.45	14625
8	510.8'-512.1'	1.3	860	1.34	1.85	0.86	20.67	76.14	14650	1	1.88	0.87	20.95	77.17	14849