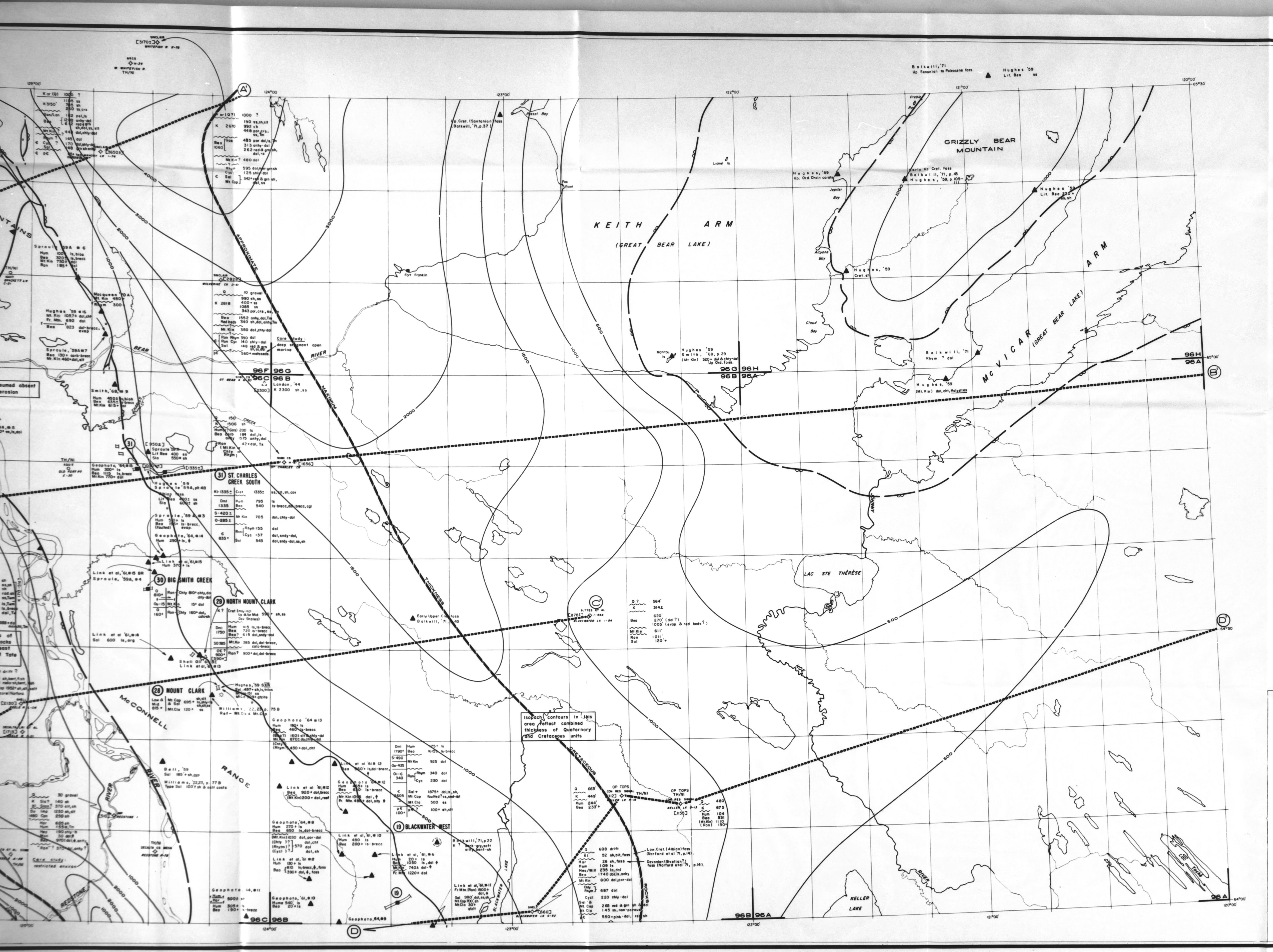
GRIZZLY BEAR MOUNTAIN
KEITH ARM (GREAT BEAR LAKE)
McVICAR ARM (GREAT BEAR LAKE)
FRANKLIN MOUNTAINS
NORMAN RANGE
MAHONY LAKE
BRACKETT LAKE
GREAT BEAR RIVER
LAC STE THÉRÈSE
KELLER LAKE
McCONNELL RANGE
KEELE RIVER
REDSTONE RIVER
MACKENZIE RIVER
GAMBILL MTNS
34 IMPERIAL RIVER
DODO MOUNTAIN
32 BEAR ROCK
31 ST. CHARLES CREEK SOUTH
30 BIG SMITH CREEK
29 NORTH MOUNT CLARK
28 MOUNT CLARK
27 MACKAY RANGE
26 NATION CREEK
25 LITTLE BEAR RIVER
24 SUMMIT ANTICLINE
22 KEELE SOUTH I
KEELE SOUTH II
19 BLACKWATER WEST
Fort Franklin
Fort Norman
A
B
C
D
96E 96F
96D 96C
96F 96G
96C 96B
96G 96H
96B 96A
64°00'
127°00'
126°00
125°00
124°00
123°00
122°00
121°00
Cretaceous rocks presumed absent due to pre-Eocene erosion
Thickness unknown Probably less than 500 feet
The thickness of Cretaceous rocks is unknown east and west of Tate Lake
Isopach contours in this area reflect combined thickness of Quaternary and Cretaceous units
Depositional limit of early Upper Cretaceous rocks after Stott (1970, p.449)
APPROXIMATE MAXIMUM THICKNESS
CRETACEOUS ROCKS
500
1000
1500
2000
3000
4000
5000
6000
7000
8000

1 of 2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29 NORTH MOUNT CLARK
28 MOUNT CLARK
19 BLACKWATER WEST
Isopach contours in this area reflect combined thickness of Quaternary and Cretaceous units
96F 96G
96C 96B
96G 96H
96B 96A
A'
B'
C
D
D'
500
1000
1500
2000
3000
4000

L E G E N D

Mt Kindle / Whittaker	Nomenclature change
	Depositional or erosional limit of stratigraphic unit prior to burial by overlying strata
	Present erosional or depositional (subaerial) limit of stratigraphic unit
dol / sh	Facies change
1000 / 5000	Isopach contours in feet
f u f	Fault, u showing upthrown side
Ⓐ▪▪▪▪▪▪▪Ⓐ	Geologic cross section
	Source for terrigenous clastic rocks
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ø	Suspended well

DRILLSTEM TEST SYMBOLS

NTI	No test information
NT	Not drillstem tested
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Tm	Tested mud
Tg	Tested gas
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Txw	Tested salt water
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▲ [1560+]

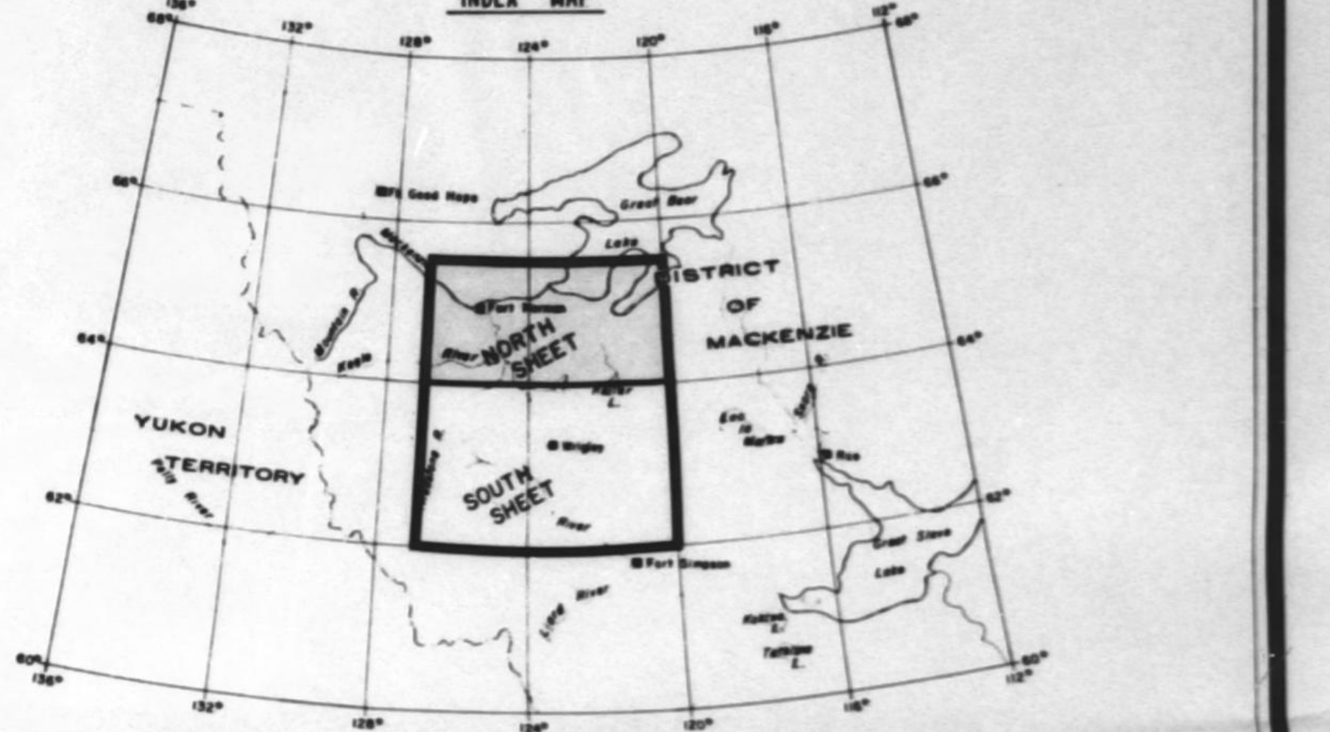
Gabrielse et al, '65

Nah	260	ls
Hea	300	ls, sh
Lan	400	ls
(Arn)	600+	dol

Example of data, showing location and source as listed in bibliography; formation or group names abbreviated to first three letters, thickness & gross lithology for units and total isopached interval in brackets. Formation or group names in parenthesis are Veezay correlation.

WELL LOCATIONS AND GEOLOGIC DATA
AS OF FEB. 1, 1973.

INDEX MAP


YUKON TERRITORY
DISTRICT OF MACKENZIE
NORTH SHEET
SOUTH SHEET
Fort Simpson
Great Slave Lake
136°
132°
128°
124°
120°
116°
112°
60°
62°
64°
66°
68°

CRETACEOUS
NORTH SHEET

CRETACEOUS
ISOPACH MAP
MACKENZIE PLAIN AREA

DISTRICT OF MACKENZIE

Showing present day distribution and thickness
Includes Quaternary where present
CONTOUR INTERVAL: 500 & 1000 feet

Miles 5 0 5 10 15 20 Miles
Kilometres 5 0 5 10 15 20 25 30 Kilometres

SCALE 1 INCH TO 4 MILES (6.44km)
1:253,440

—Prepared by—

V. ZAY SMITH ASSOCIATES LTD. AND VEEZAY GEODATA LTD.
CALGARY, ALBERTA
1973

2 of 2

MAXIMUM THICKNESS CRETACEOUS ROCKS
95 M | 95 N
95 N | 95 O
95 O | 95 P
95 M | 95 N
95 L | 95 K
95 N | 95 O
95 K | 95 J
95 O | 95 P
95 J | 95 I
D
D'
E
F
KEELE SOUTH I
NAINLIN SOUTHEAST
WRIGLEY LAKE WEST
REDSTONE RANGE
MT. HAYWOOD
TABLE MTN.
MT. KINDLE - CAP MTN.
DUSKY RANGE
DAL LAKE
NORTH CAMSELL RANGE
RIVER BETWEEN TWO MTNS.
LANDRY CREEK
NORTH DELORME RANGE
NORTH THUNDERCLOUD RANGE
NORTH CARLSON CREEK
SOUTH CARLSON CREEK
WHITTAKER ANTICLINE
YOHIN SYNCLINE
SOUTH THUNDERCLOUD RANGE
FLOOD CREEK
TIGONANKWEINE RANGE
REDSTONE
RANGE
DUSKY
RANGE
ROUGE
PAINTED MOUNTAINS
RANGE
PAINTED
MOUNTAINS
THUNDERCLOUD
RANGE
SOMBRE
MOUNTAINS
MANETOE
RANGE
WHITTAKER
DELORME
IVERSON
RANGE
CAMSELL
RANGE
MACKENZIE
MC CONNELL
RANGE
NAHANNI
RANGE
CAMSELL BEND
APPROXIMATE MAXIMUM THICKNESS CRETACEOUS
KELLER LAKE
BLACKWATER LAKE
FISH LAKE
WILLOWLAKE
BULMER LAKE
RIVER
NORTH
SOUTH
ROOK
DAHADINNI
JOHNSON
OCHRE
WRIGLEY
MOUNTAIN
BLACKWATER
500
1000
1500
2000
250
64°00'
63°30'
63°00'
62°30'
127°00'
126°00'
125°00'
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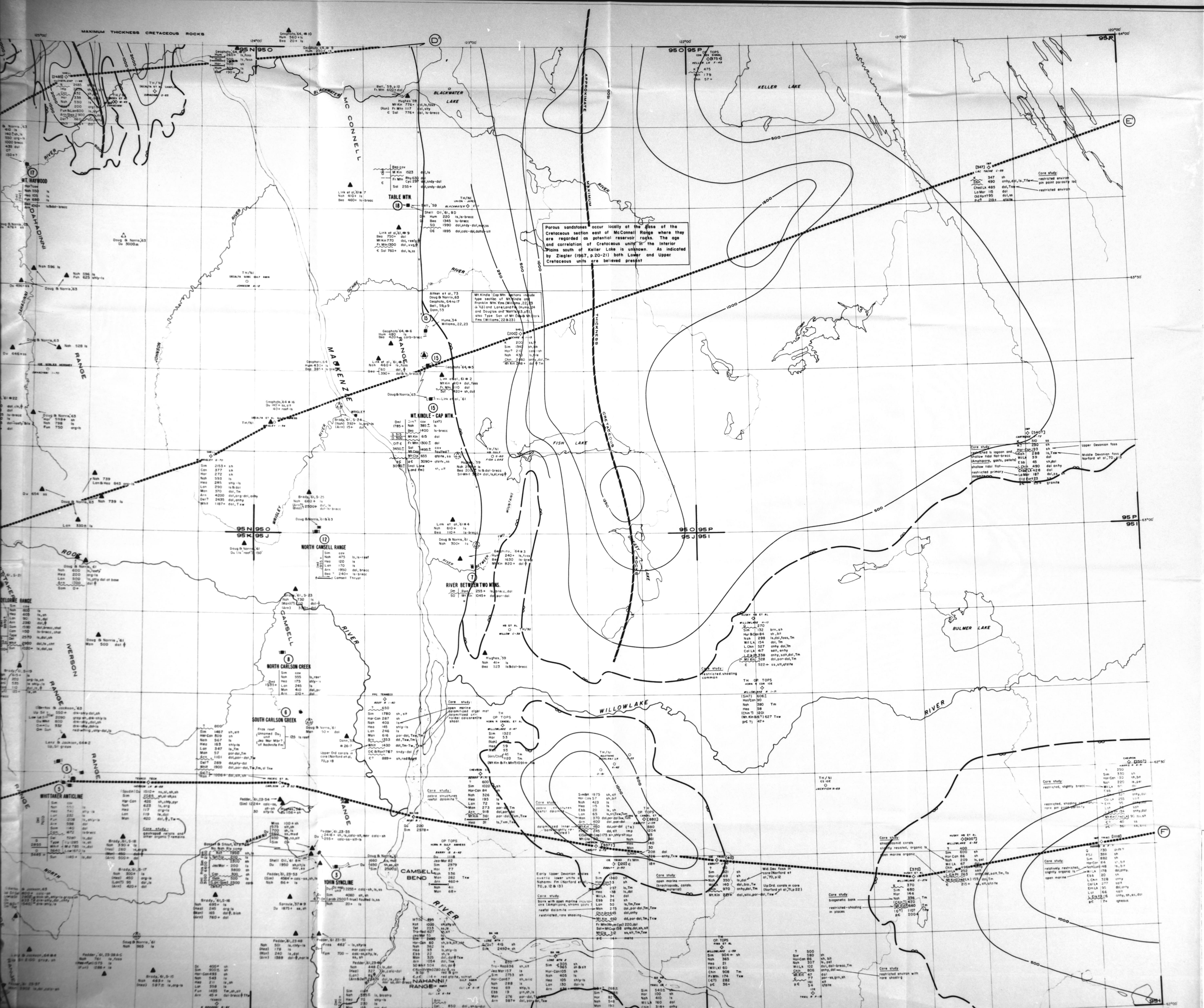
MAXIMUM THICKNESS CRETACEOUS ROCKS
95 N
95 O
95 P
95 K
95 J
95 I
95 R
D'
E
F
MC CONNELL
RANGE
MACKENZIE
APPROXIMATE MAXIMUM THICKNESS
CRETACEOUS ROCKS
BLACKWATER LAKE
KELLER LAKE
FISH LAKE
BULMER LAKE
WILLOWLAKE RIVER
TABLE MTN.
MT. KINDLE - CAP MTN.
NORTH CAMSELL RANGE
RIVER BETWEEN TWO MTNS.
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SOUTH CARLSON CREEK
CAMSELL
IVERSON RANGE
WHITTAKER ANTICLINE
YOHIN SYNCLINE
CAMSELL BEND
NAHANNI RANGE
MT. HAYWOOD
250
500
1000
1500
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Gabrielse et al, '65

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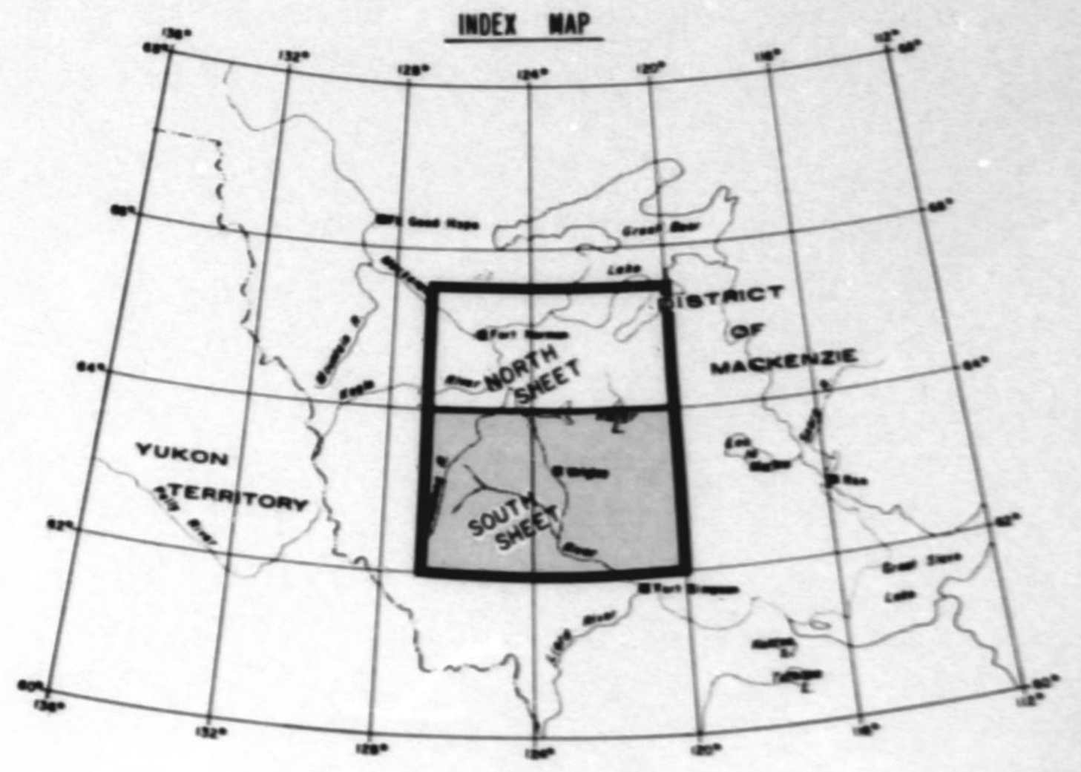
INDEX MAP
YUKON TERRITORY
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SOUTH SHEET

CRETACEOUS
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ISOPACH MAP
MACKENZIE PLAIN AREA
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2 of

Showing present day distribution and thickness
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1:253,440

95 M 95 N
95 N 95 O
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DELORME
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NORTH THUNDERCLOUD RANGE
THUNDERCLOUD
RANGE
SOMBRE
MOUNTAINS
SOUTH THUNDERCLOUD RANGE
FLOOD CREEK
IVERSON
RANGE
WHITTAKER ANTICLINE
MANETOE
RANGE
NORTH CAMSELL RANGE
NORTH CARLSON CREEK
SOUTH CARLSON CREEK
CAMSELL
RIVER
YOHIN SYNCLINE
NAHANNI
CAMSELL BEND
LITTLE DOG LAKE
RED ROCK PASS
MC CONNELL
BLACKWATER LAKE
TABLE MTN.
MACKENZIE
RANGE
WRIGLEY
MT. KINDLE - CAP MTN.
RIVER BETWEEN TWO MTNS.
FISH LAKE
MONTANA
APPROXIMATE
MAXIMUM
THICKNESS
CRETACEOUS
KELLER LAKE
BULMER LAKE
WILLOWLAKE
RIVER
D
E
F
250
500
1000
1500

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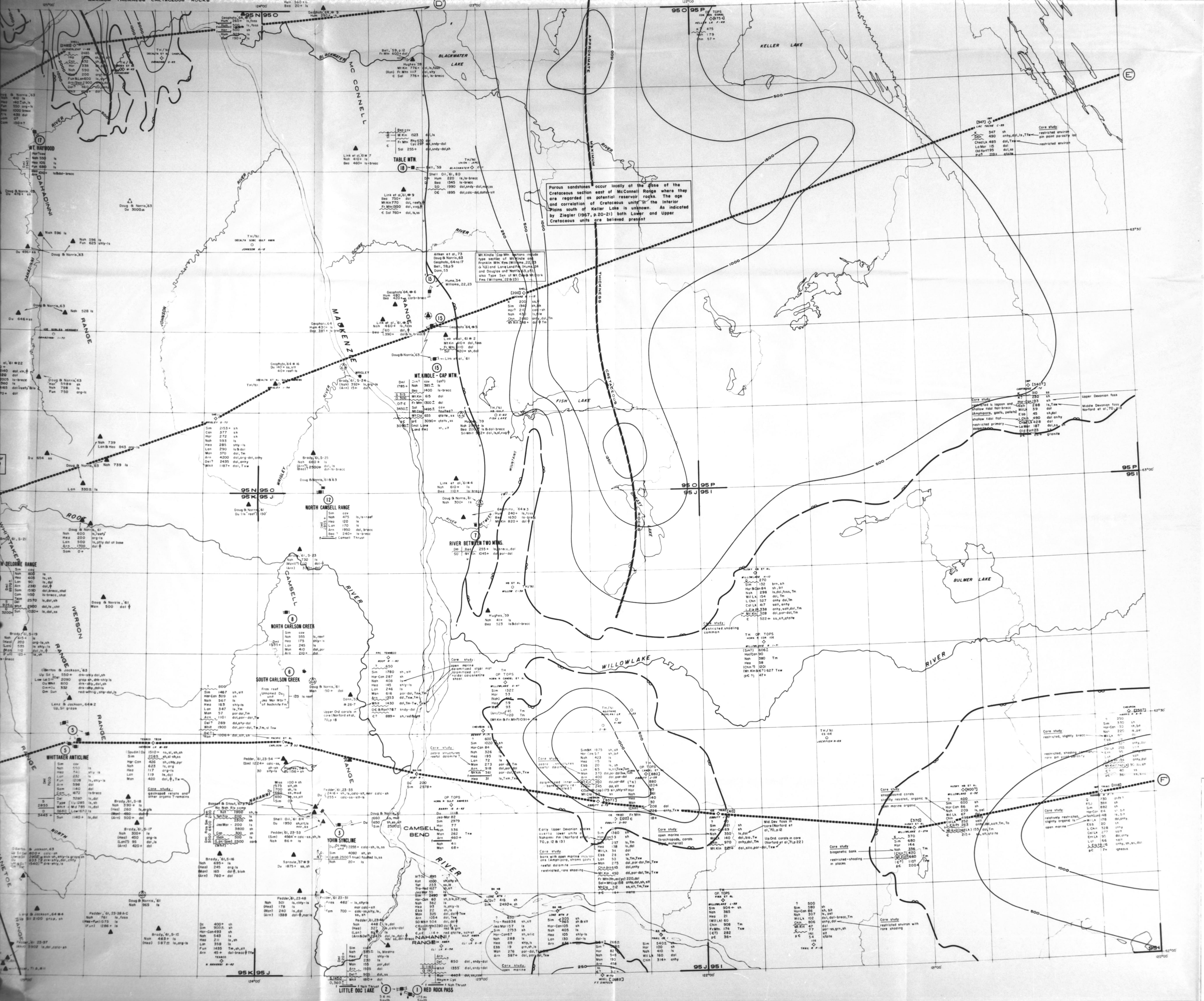
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TABLE MTN.
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NORTH CAMSELL RANGE
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NORTH CARLSON CREEK
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WHITTAKER ANTICLINE
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MACKENZIE RANGE
CAMSELL RANGE
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BULMER LAKE
WILLOWLAKE RIVER
ROOT RIVER
APPROXIMATE MAXIMUM THICKNESS CRETACEOUS
95 N | 95 O
95 O | 95 P
95 K | 95 J
95 J | 95 I
E
F
250
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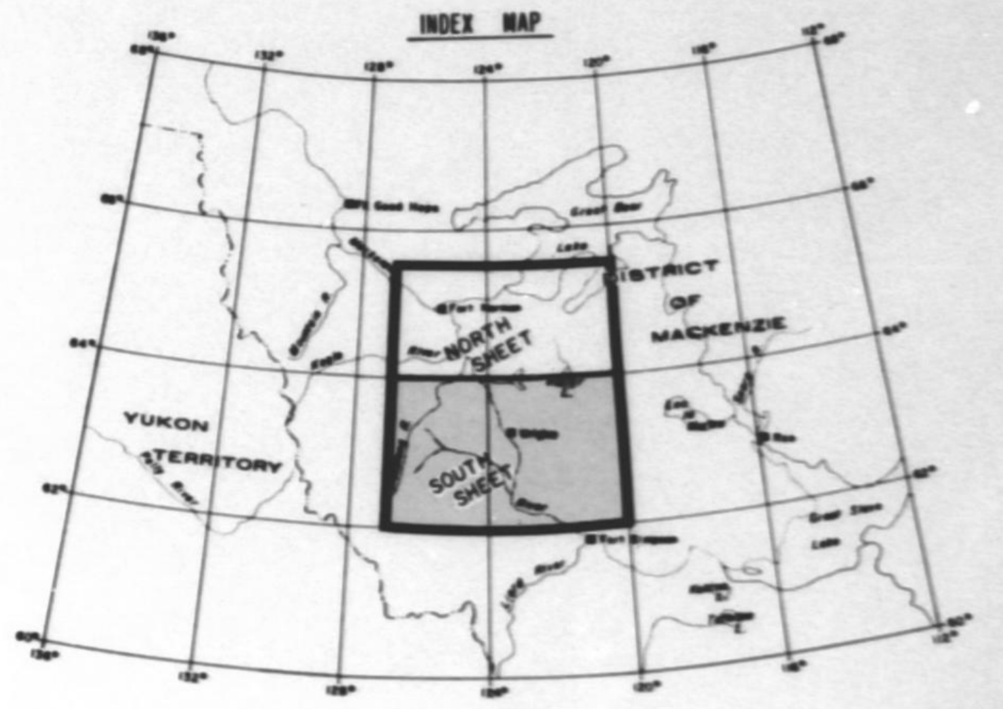
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95 M 95 N
95 N 95 O
95 O 95 P
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95 O 95 P
95 J 95 I
95 J 95 I
D
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E
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63°30'
63°00'
62°30'
127°00'
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FISH LAKE
MACKENZIE
RESTORED
SUB - CRETACEOUS
ERODED EDGE
MISSISSIPPIAN
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MOUNTAINS
SOUTH THUNDERCLOUD RANGE
FLOOD CREEK
NAHANNI
CAMSELL BEND
YOHIN SYNCLINE
MANETOE RANGE
LIARD UPLIFT
INFERRED
REDSTONE
RIVER
NORTH
SOUTH
JOHNSON

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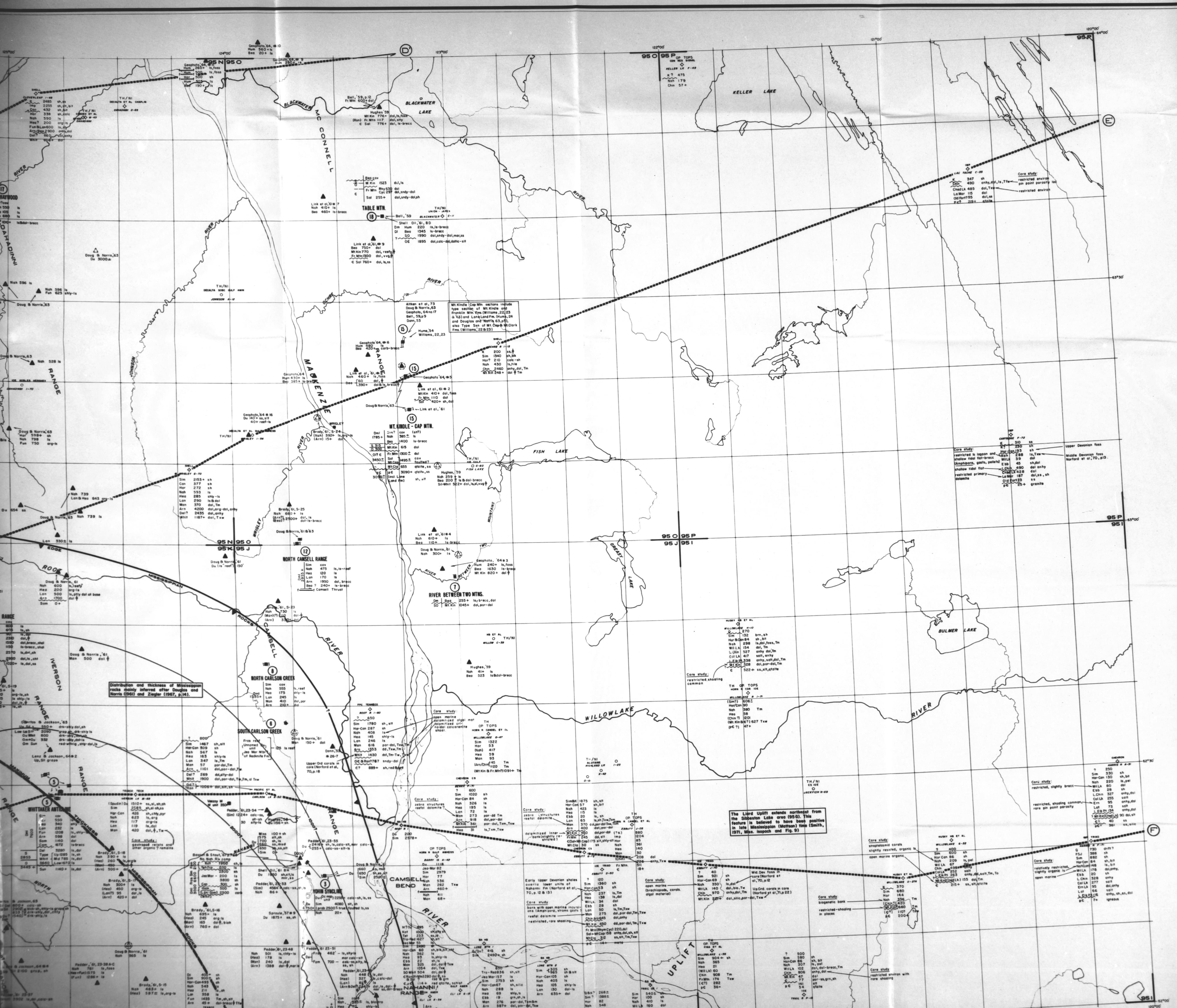
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BLACKWATER
BLACKWATER LAKE
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BULMER LAKE
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UPLIFT
MISSISSIPPIAN
ROCK EDGE
95 N 95 O
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L E G E N D

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Tsw	Tested sulfurous water
Tw	Tested water

▲ [1560+]

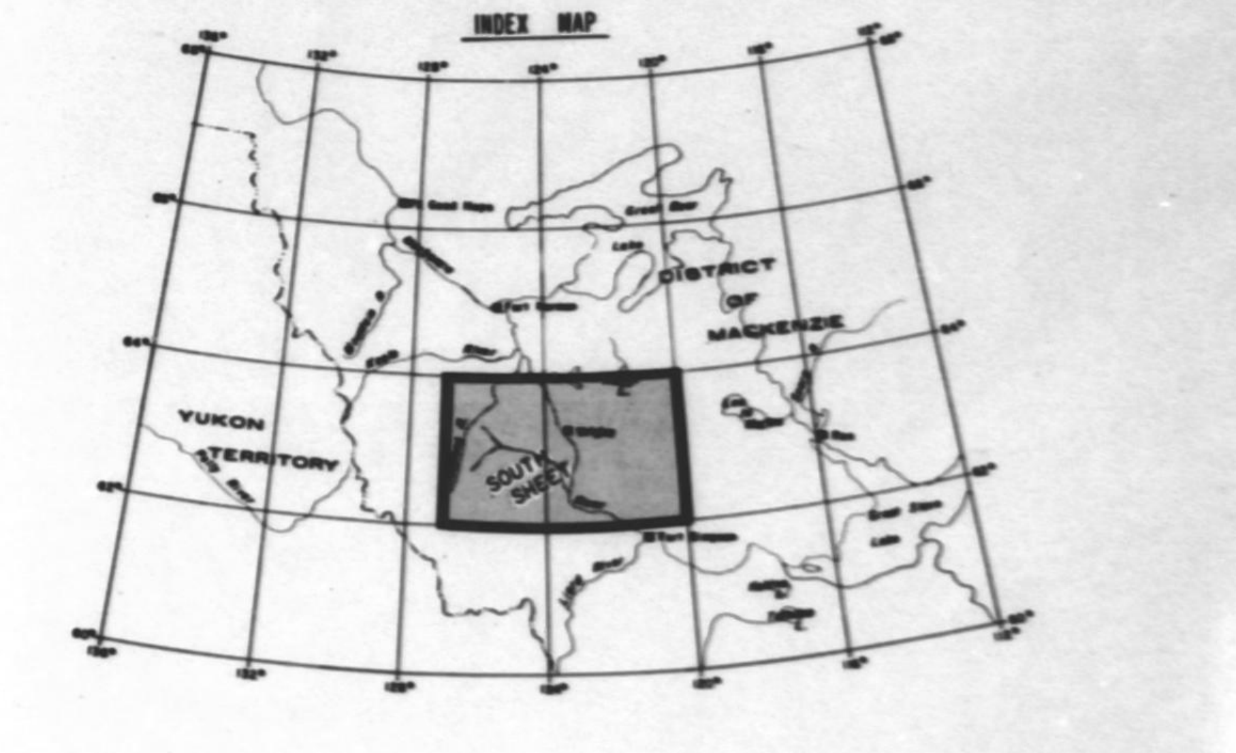
Gabrielse et al, '65

Nah	260	ls
Hea	300	ls, sh
Lan	400	ls
(Arn)	600+	dol

Example of data, showing location and source as listed in bibliography, formation or group names abbreviated to first three letters, thickness & gross lithology for units and total isopached interval in brackets. Formation or group names in parenthesis are Veezay correlation.

WELL LOCATIONS AND GEOLOGIC DATA AS OF FEB 1, '73

INDEX MAP



DISTRICT OF MACKENZIE
YUKON TERRITORY
SOUTH SHEET

MISSISSIPPIAN
SOUTH SHEET

MISSISSIPPIAN

ISOPACH MAP

MACKENZIE PLAIN AREA

DISTRICT OF MACKENZIE

showing interpreted distribution and thickness prior to Laramide deformation and subsequent erosion

CONTOUR INTERVAL: 1000 FEET

SCALE: 1 INCH TO 4 MILES (6.44km)
1:253,440

2 of

KEELE SOUTH I
NAINLIN SOUTHEAST
WRIGLEY LAKE WEST
TIGONANKWEINE RANGE
REDSTONE RANGE
REDSTONE
MT. HAYWOOD
TABLE MTN.
MC CONNELL
BLACKWATER
BLACKWATER LAKE
KELLER LAKE
WRIGLEY LAKE
DUSKY RANGE
DAHADINNI
MACKENZIE RANGE
MT. KINDLE - CAP MTN.
FISH LAKE
DAL LAKE
PAINTED MOUNTAINS
ROUGE
RESTORED
SUB - CRETACEOUS
ERODED
EDGE
MISSISSIPPIAN
ROCKS
LANDRY CREEK
NORTH DELORME RANGE
DELORME
NORTH THUNDERCLOUD RANGE
THUNDERCLOUD
RIVER BETWEEN TWO MTNS.
NORTH CAMSELL RANGE
NORTH CARLSON CREEK
SOUTH CARLSON CREEK
CAMSELL
IVERSON RANGE
WILLOWLAKE RIVER
BULMER LAKE
GREASY LAKE
WHITTAKER ANTICLINE
SOMBRE
RANGE
MOUNTAINS
SOUTH THUNDERCLOUD RANGE
FLOOD CREEK
MANETOE
NAHANNI
YOHIN SYNCLINE
CAMSELL BEND
RIVER
NAHANNI RANGE
LIARD UPLIFT
LITTLE DOCTOR LAKE
RED ROCK PASS
INFERRED
MAXIMUM
THICKNESS
95 M | 95 N
95 L | 95 K
95 N | 95 O
95 K | 95 J
95 O | 95 P
95 J | 95 I
63°30'
63°00'
62°30'
62°00'
127°00'
126°00'
125°00'
124°00'
123°00'
122°00'
121°00'
D
E
F

Mt. Kindle Cap Mtn. sections include type section of Mt. Kindle and Franklin Mtn. Fms. (Williams, 22, 23 & '63) and Lone Land Fm. (Hume, 24 and Douglas and Norris 63, p5), also Type Sxn of Mt. Cap & Mt. Clark Fms. (Williams, '22 & 23)

Distribution and thickness of Mississippian rocks mainly inferred after Douglas and Norris (1961) and Ziegler (1967, p. 14).

The Liard Uplift extends northeast from the Sibbeston Lake area (95G). This feature is believed to have been positive in late Mississippian (Mattson) time (Smith, 1971, Miss. isopach and Fig. 9)

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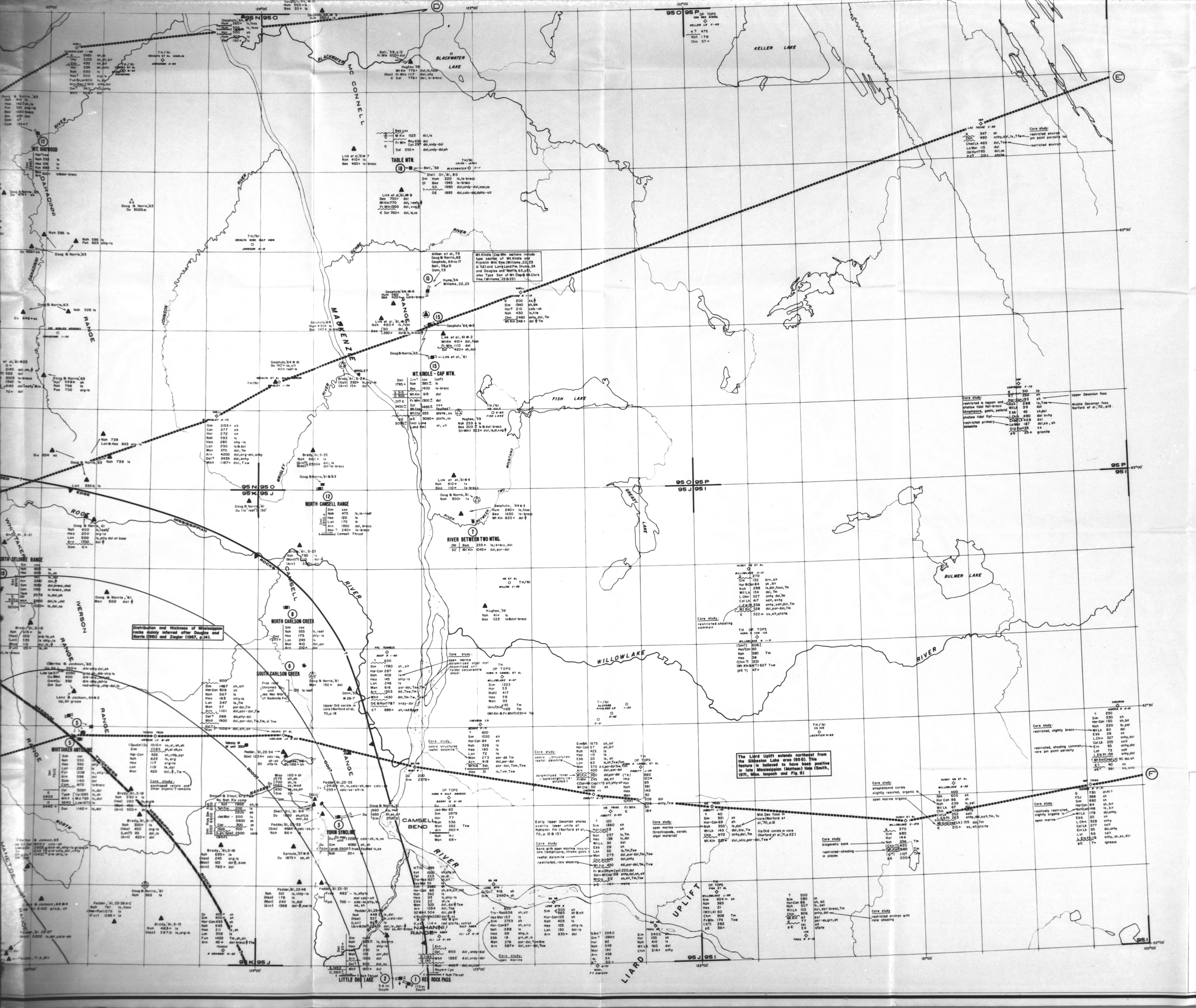
BLACKWATER LAKE
KELLER LAKE
MC CONNELL RIVER
MT. HAYWOOD
CARADINNI RANGE
TABLE MTN.
MACKENZIE RANGE
MACKENZIE RIVER
WRIGLEY
MT. KINDLE - CAP MTN.
FISH LAKE
MOUNTAINS
NORTH CAMSELL RANGE
RIVER BETWEEN TWO MTNS.
ROOT RIVER
ROCKY EDGE
MISSISSIPPIAN
WHITTAKER RANGE
NORTH DELORME RANGE
IVERSON RANGE
CAMSELL RANGE
NORTH CARLSON CREEK
SOUTH CARLSON CREEK
WHITTAKER ANTICLINE
MANETOE RANGE
YOHIN SYNCLINE
CAMSELL BEND
NAHANNI RANGE
LITTLE DOC LAKE
RED ROCK PASS
GREAT BEAR LAKE
WILLOWLAKE RIVER
BULMER LAKE
LIARD UPLIFT
95 N | 95 O
95 O | 95 P
95 K | 95 O
95 K | 95 J
95 O | 95 P
95 J | 95 I
Mt.Kindle Cap Mtn. sections include type section of Mt.Kindle and Franklin Mtn. Fms.(Williams, 22, 23 & '63) and Lone Land Fm. (Hume, 24 and Douglas and Norris 63, p5), also Type Sxn of Mt.Cap & Mt.Clark Fms. (Williams, '22 & 23)
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LEGEND

Mt Kindle / Whittaker	Nomenclature change
	Depositional or erosional limit of stratigraphic unit prior to burial by overlying strata
	Present erosional or depositional (subaerial) limit of stratigraphic unit
dol / sh	Facies change
1000 / 5000	Isopach contours in feet
f — u — f	Fault, u showing upthrown side
Ⓐ ■■■■■■■■ Ⓐ	Geologic cross section
	Source for terrigenous clastic rocks
■ Veezay 24	Composite surface section measured photogrammetrically by V. Zay Smith Associates Ltd. No detail log or samples
⑧ ■	Surface stratigraphic section no. 8 V. Zay Smith Associates Ltd, 1973
▲	Published or open file surface stratigraphic section measured or observed in field
◌	Geographic location of stratigraphic data indefinite
(Nah) 500± ls, sh	Approx. 500 ft. of limestone and shale interpreted to be Nahanni Formation
	Composite stratigraphic section measurement, published (▲) or in this report (■)
Douglas & Norris 1961	Published or open file reference, see bibliography of report
•	Data derived by surface elevation relationships
◇ 280'	Thickness of unit completely penetrated in well
◇ 260'+	Unit not completely penetrated
◇ OR	Older rocks at the surface
OP. TOPS	Only operators tops available
◇ TH/NI	Tight hole / No information
◇ NR	Not reached
◇ 0'	Unit absent because of nondeposition or erosion
○	Well location or drilling well
◇	Dry and abandoned test
●	Oil well
●	Capped oil well
☼	Gas well
☼	Capped gas well
✹	Oil and gas well
✹	Capped oil and gas well
ø	Suspended well

DRILLSTEM TEST SYMBOLS

NTI	No test information
NT	Not drillstem tested
NAT	Not adequately drillstem tested
NATm	Not adequately drillstem tested because of misrun
Tm	Tested mud
Tg	Tested gas
To	Tested oil
Tsw	Tested salt water
Tfw	Tested fresh water
Tsw	Tested sulfurous water
Tw	Tested water

▲ [1560+]

Gabrielse et al, '65

Nah	260	ls
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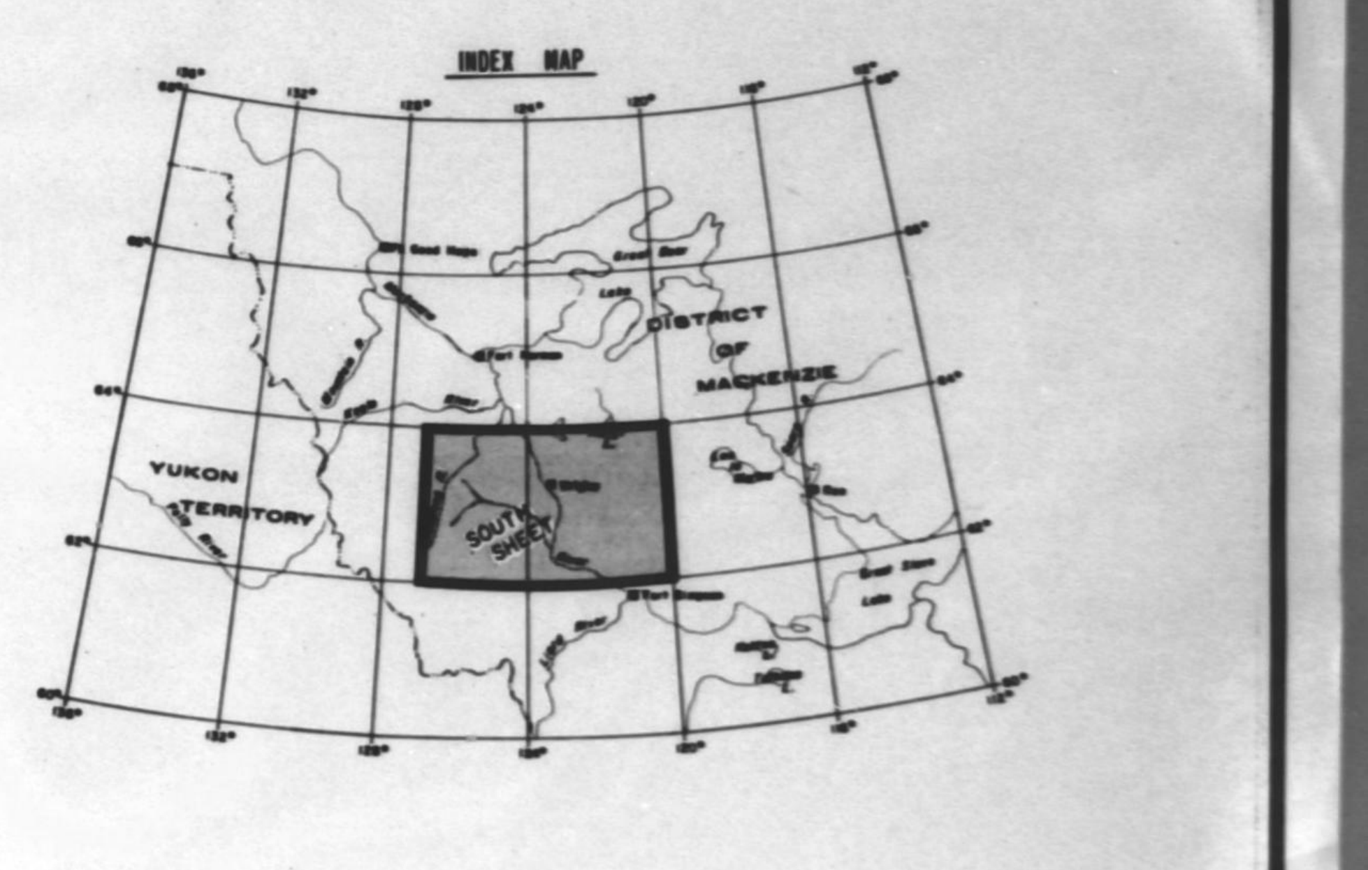
Example of data, showing location and source as listed in bibliography, formation or group names abbreviated to first three letters, thickness & gross lithology for units and total isopached interval in brackets. Formation or group names in parenthesis are Veezay correlation.

WELL LOCATIONS AND GEOLOGIC DATA AS OF FEB 1, '73

INDEX MAP


YUKON TERRITORY
DISTRICT OF MACKENZIE
SOUTH SHEET

MISSISSIPPIAN
SOUTH SHEET

MISSISSIPPIAN
ISOPACH MAP
MACKENZIE PLAIN AREA
DISTRICT OF MACKENZIE

showing interpreted distribution and thickness prior to Laramide deformation and subsequent erosion
CONTOUR INTERVAL: 1000 FEET

SCALE: 1 INCH TO 4 MILES (6.44km)
1:253,440

—Prepared by—
V. ZAY SMITH ASSOCIATES LTD. AND VEEZAY GEODATA LTD.
CALGARY, ALBERTA
1973

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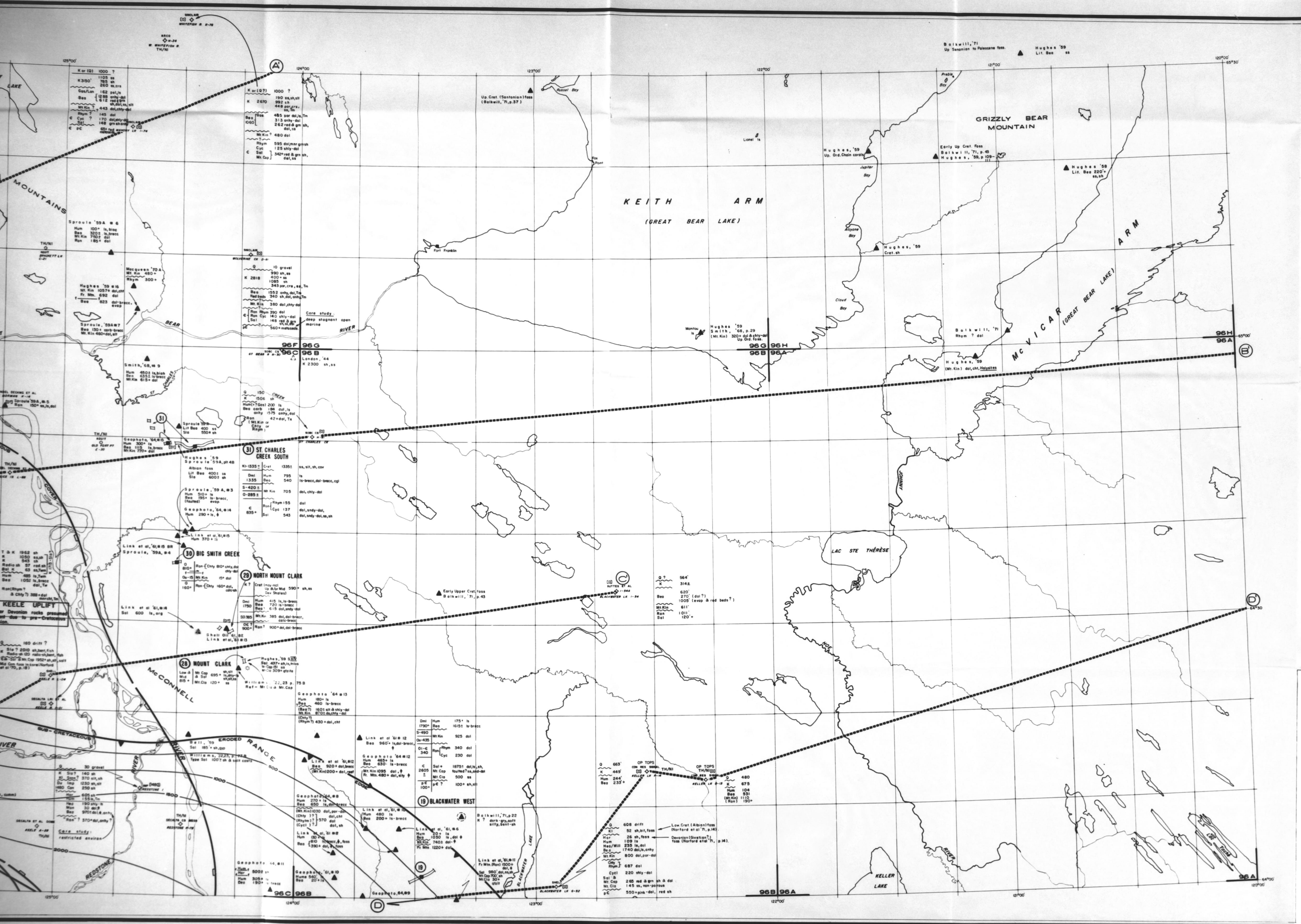
IMPERIAL RIVER
DODO MOUNTAIN
NORMAN RANGE
FRANKLIN MOUNTAINS
MAHONY LAKE
BRACKETT LAKE
BEAR ROCK
GREAT BEAR RIVER
KEITH ARM
(GREAT BEAR LAKE)
GRIZZLY BEAR MOUNTAIN
McVICAR ARM (GREAT BEAR LAKE)
RATION CREEK
MACKAY RANGE
ST CHARLES CREEK SOUTH
BIG SMITH CREEK
NORTH MOUNT CLARK
MOUNT CLARK
SUMMIT ANTICLINE
GAMBILL MTNS
LITTLE BEAR RIVER
KEELE UPLIFT
Upper Devonian rocks presumed absent due to pre-Cretaceous erosion.
LIMIT OF CRETACEOUS
McCONNELL RANGE
SUB-CRETACEOUS ERODED EDGE
KEELE RIVER
KEELE SOUTH I
KEELE SOUTH II
BLACKWATER WEST
REDSTONE
LAC STE THÉRÈSE
KELLER LAKE
96E 96F
96D 96C
96G 96H
96B 96A
A
B
C
D
A'
Core study

1 of 2


KEITH ARM
(GREAT BEAR LAKE)
McVICAR ARM
(GREAT BEAR LAKE)
GRIZZLY BEAR MOUNTAIN
MOUNTAINS
BEAR RIVER
LAC STE THÉRÈSE
KELLER LAKE
McCONNELL
ERODED RANGE
KEELE UPLIFT
31 ST. CHARLES CREEK SOUTH
30 BIG SMITH CREEK
29 NORTH MOUNT CLARK
28 MOUNT CLARK
19 BLACKWATER WEST
Fort Franklin
96F 96G
96C 96B
96G 96H
96B 96A
96H
96A
Ⓐ
Ⓑ
Ⓒ
Ⓓ
125°00'
124°00'
123°00'
122°00'
121°00'
120°00'
65°30'
65°00'
64°30'
64°00'
500
1000
1500
2000

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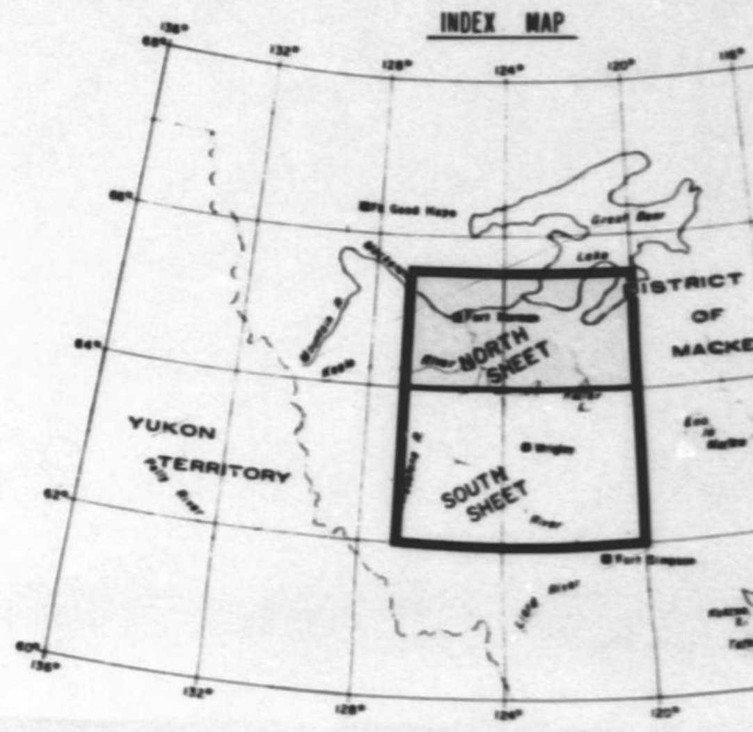
NORTH SHEET
SOUTH SHEET
DISTRICT OF MACKENZIE
YUKON TERRITORY
136°
132°
128°
124°
120°
116°
112°
68°
66°
62°
60°

UPPER DEVONIAN

NORTH SHEET

UPPER DEVONIAN

ISOPACH MAP

MACKENZIE PLAIN AREA

DISTRICT OF MACKENZIE

Imperial and Canol Fms; does not include reef limestones of Kee Scarp Formation.

showing interpreted distribution and thickness prior to Laramide deformation and subsequent erosion

CONTOUR INTERVAL: 500 & 1000 FEET

Miles 5 0 5 10 15 20 Miles

Kilometres 5 0 5 10 15 20 25 30 Kilometres

SCALE 1 INCH TO 4 MILES (6.44km)
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